Appendix y-E: Marsh Park, Phase II Supporting Documents

(Please see Appendix CD for documents)

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Community Fact Finder

The California State Parks Community Fact Finder:
Innovative Technology from the Office of Grants and Local Services

- **California State Parks Community Fact Finder**
- **California State Parks LWCF Community Fact Finder**

Community Fact Finder Process Tool Kit

What is the Community Fact Finder and why was it created?
This web based tool combines mapping and demographic data to calculate the total population, median household income, number of people below poverty, and ratio of park acres per 1,000 residents within a half-mile radius of any project location in California.

This data is required to evaluate grant applications for the $368,000,000 Statewide Park Development and Community Revitalization Program of 2008, an exciting new grant program prioritizing the creation of new parks in park deficient, economically disadvantaged communities.

The Community Fact Finder provides the following benefits:

- **Fair and Consistent Grant Process:** Enables a consistent method for identifying median household income, number of residents below poverty, and ratio of park acres per 1,000 residents, within a half-mile radius of any project location throughout California.

- **Technical assistance:** Gives applicants a user-friendly resource for all required data in a one-stop location. The data above would normally require complicated, multi-layered research.

Why is the half-mile radius used?
The priority is to fund projects in critically underserved communities.
The use of the half-mile radius is two-fold.
(1) Help steer applicants towards placing projects in areas that best meet the program's highest priority.
(2) Uniformly quantify the ratio of park space per 1,000 residents, number of residents below poverty, and the median household income in proximity to projects using consistent data available statewide.

If the radius were larger, it could encompass higher income areas, or greater park acreage areas, which would disadvantage or disqualify many statewide applications.

Related Pages

Grants and Local Services

California State Parks
Office of Grants & Local Services
PO Box 942896
Sacramento, CA 94296-0001

TEL 916-653-7423
FAX 916-653-6511
localservices@parks.ca.gov

Staff Contacts

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Office of Grants and Local Services
Statewide Park Program
Round Two

Location Finder:

Enter project address or zoom to location and click on map

90039 Go

Community Fact Finder

Restricted - Permit needed

Protected Lands Updates

Park added or revised

Park deleted

Interactive mapping by GreenInfo Network

Community Fact Finder Process Tool Kit for Applicants

Prop. 84 Statewide Park Program

Technical Assistance

State of California

Department of Parks and Recreation

Office of Grants and Local Services (OGALS)

Community Fact Finder Overview

This web based tool combines satellite view, mapping (public open space parcel information from local, state, and federal agencies stored in California's Protected Area Database) and demographic data (2010 Claritas projections) to calculate required information within a half-mile radius of all project locations in California.

The use of the half-mile radius is two-fold.

(1) Help steer applicants towards placing projects in areas that best meet the Prop. 84 Statewide Park Program's highest priority.

(2) Uniformly quantify the ratio of park space per 1,000 residents, number of families below poverty, and the median household income in proximity to projects using consistent data available statewide.

If the radius were larger, it could encompass higher income areas, or greater park acreage areas, which would disadvantage or disqualify many statewide applications.

The Community Fact Finder will provide the following benefits:

- **Fair and Consistent Grant Process:** Enables a consistent method for identifying median household income, number of families below poverty, and ratio of park acres per 1,000 residents, within a half-mile radius of all project locations throughout California.

- **Technical assistance:** Gives applicants the required data in a one-stop location. The data above would normally require complicated, multi-layered research.

Tool Kit Overview

By following steps one through eight, you will submit a complete and competitive Community Fact Finder report in the Application Packet.

OGALS also uses these steps to review all statewide Community Fact Finder reports after the July 1, 2011 application deadline.

Project site examples are included. These examples do not intend to promote a specific project or region.

Step 1	**Find the Community Fact Finder - Round Two - edition at OGALS website**	**Tool Kit Pages 3**
Step 2	**Locate an area using the Community Fact Finder**	**Tool Kit Pages 4**
Step 3	**Understand the Community Fact Finder data tools**	**Tool Kit Pages 5-8**
Step 4	**Understand what type of land should or should not be counted as park acreage**	**Tool Kit Pages 9**
Step 5	**Look for acreage that should or should not be counted**	**Tool Kit Pages 10-11**
Step 6	**Report acreage that should or should not be counted**	**Tool Kit Pages 12-13**
Step 7	**Select a specific point of the project site for purpose of Project Selection Criteria □1 and □2**	**Tool Kit Pages 14-17**
Step 8	**Create and submit a final Community Fact Finder report for Project Selection Criteria □1 and □2**	**Tool Kit Pages 18-19**

Step 1	Find the Community Fact Finder at the OGALS website	Tool Kit page 3

1. Go to http:□www.parks.ca.gov□grants

2. The Community Fact Finder link is on the left side. Click on the link.

3. This will take you to a Community Fact Finder web page. Click on the: **California State Parks Community Fact Finder** link.

4. A Community Fact Finder - Round Two - edition will be posted by late February, 2011. The Community Fact Finder heading will state □Round Two□.

   The Community Fact Finder - Round Two - edition will contain 2010 Claritas demographic projections. The Round One edition contained 2008 Claritas demographic projections.

Step 2	Locate an area using the Community Fact Finder	Tool Kit page 4

If you are searching for a community or have a predetermined project site that does not have a street address:

1. Enter the nearest city and "CA" in the "type project address" box.
   Example: Sunnyvale, CA

2. Click on "GO", which is a tab to the right of the "type project address" box.

3. The Community Fact Finder will display a satellite view with a light blue circle showing the " mile radius.

4. To zoom the satellite view in or out, move the hand cursor to the zoom bar. Left click the mouse and drag it up or down the zoom bar. Release the left clicker once you select the zoom level on the bar.

5. To move the satellite view to other parts of the community, left click your mouse and drag the hand cursor to a desired location.

6. Once the hand cursor is pointing to a selected site, click the left side of your mouse. This will move the " mile radius to the selected site.

If you have a predetermined project site with a street address:

1. Enter the project site address in the "type project address" box.

   Example Address: 525 Inverness Way, Sunnyvale, CA 94087

2. Include the state and zip code when entering the address

3. Click on "GO", which is a tab to the right of the "type project address" box.

4. The Fact Finder will display a satellite view with a light blue circle showing the " mile radius.

Step 3	Understand the Community Fact Finder data tools	Tool Kit pages 5-8

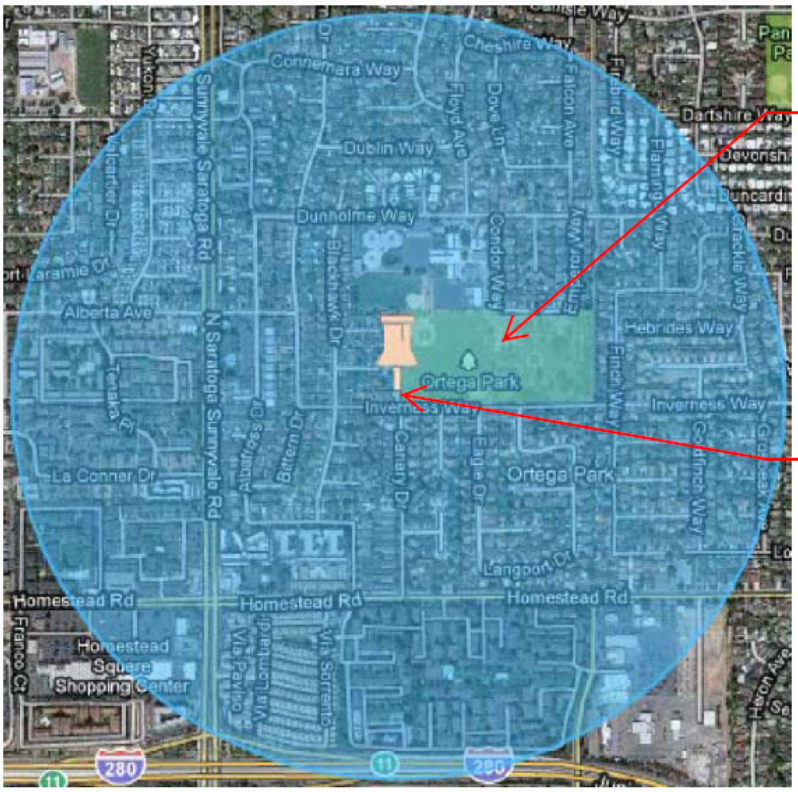
Step 3 covers the following tools:

1. The □ mile radius starting point
2. □ mile radius demographic and park acreage data sources
3. The green overlay

The □ mile radius starting point:

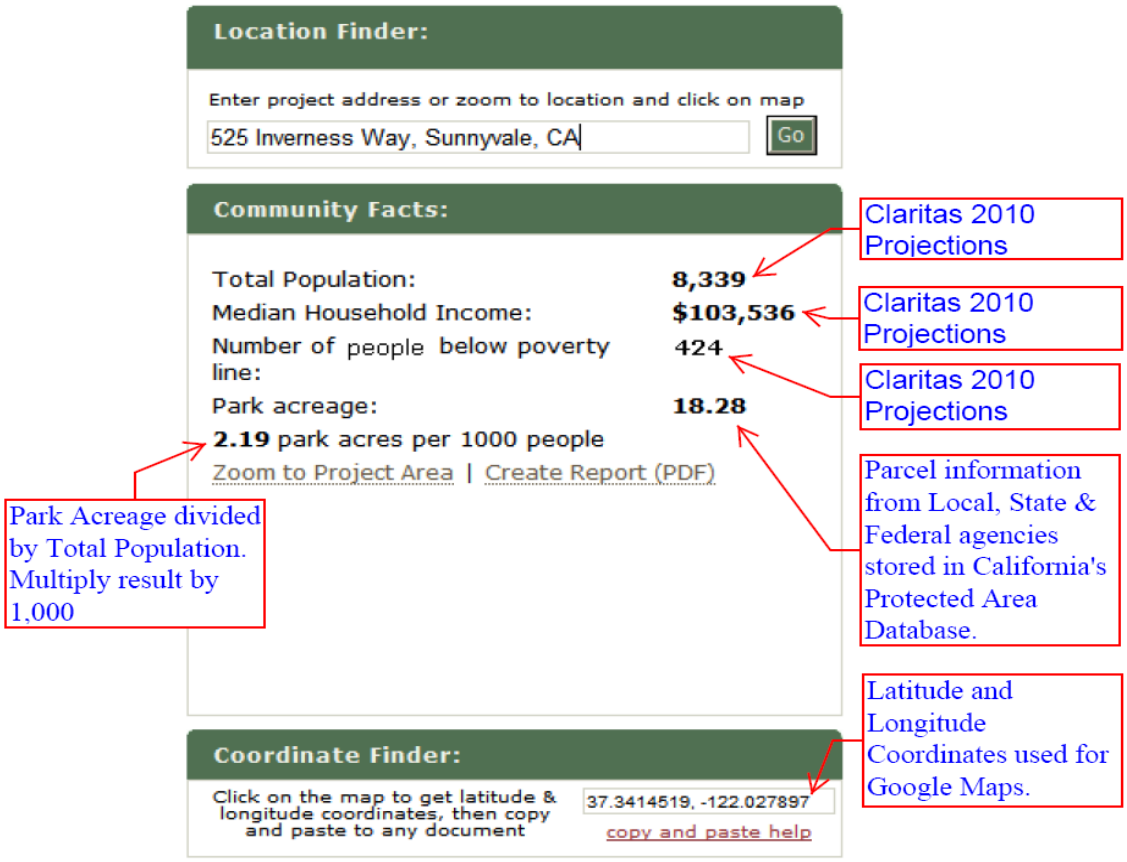
When you move the hand cursor and click on the left side of your mouse, a push pin will appear.

The push pin needle tip is inserted at the starting point of the □ mile radius.



Step 3 (continued)

□ mile radius demographic and park acreage data source
Demographic and park acreage data will appear on the left side. It may take a few moments for the data to be generated. The demographic and park acreage data represents the □ mile radius of the push pin  using the information sources shown below:



Park acreage source of information: Calif. Protected Areas Database v. 1.6 (Feb. 2011).
The California Protected Areas Database (CPAD) contains data about lands that are permanently protected for open space purposes: http:□www.calands.org□

Demographic source of information: Claritas Pop-Facts, block group level (2010)
Claritas combines the 2009 American Community Survey and 2000 Census block groups and block population counts to create 2010 projections. Statewide Park Program legislation (AB 31) requires OGALS to evaluate median household income, and the 2010 Census did not gather median household income data.

Application Guide page 28 states □families□not □people□below poverty:
The Round One and Two Community Fact Finder number reported was always the number of people below poverty, and will be used for all statewide applications for Criteria □2 □B. Although the label□name is different in the Application Guide, the demographic function has been consistent.

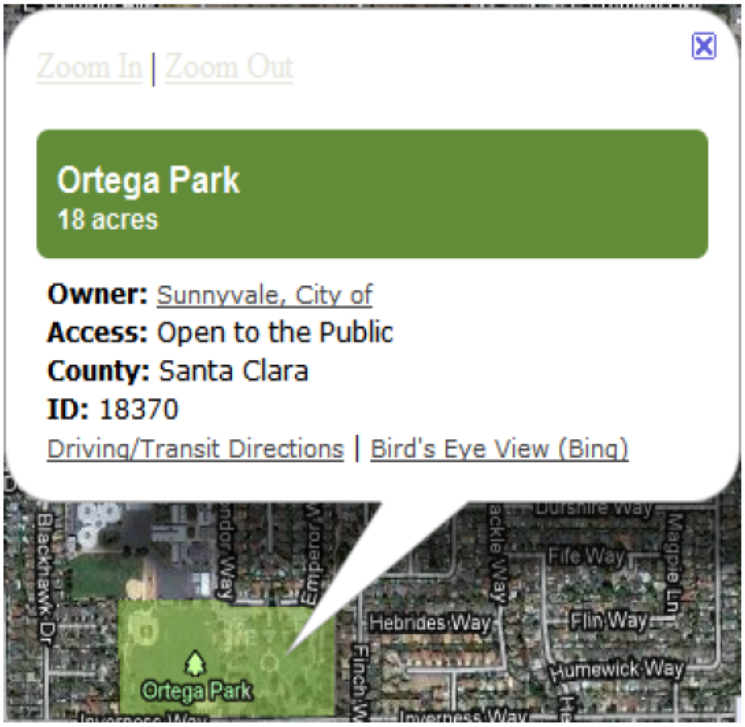
Step 3 (continued)

Green overlay

A green overlay may appear on the Community Fact Finder satellite interface within or close to the □ mile radius. It may take a few moments for the green overlay to download.

Follow these steps to get information about green overlay property appearing on the Community Fact Finder satellite interface:

1. Click on the leaf symbol  to the left of the Community Fact Finder satellite interface.
2. The hand cursor will become a plus □ symbol. Use the mouse to move the □ symbol to the green overlay property and left click the mouse.
3. Property information will be shown. See the example below.



Step 3 (continued)

Community Fact Finder acreage updates are needed if:

- public park acreage exists within the □ mile radius, without a green overlay

- green overlay is showing within the □ mile radius but all or a portion of the acreage needs to be updated.

Review the entire □ mile radius and report the addition or removal of acreage that should or should not be counted by the Community Fact Finder.

See steps 4, 5, and 6 on pages 9 through 13 for guidance.

Step 4	Understand what type of land should or should not be counted as park acreage	Tool Kit page 9

Should: Land that should be counted as park acreage by the Community Fact Finder contains all 3 combined elements below:

1. The property includes a portion of outdoor open-space.
2. The property is open for authorized public recreational use.
3. The property is owned by a local, state, or federal public agency.

See definition of "park" on page 61 of the Application Guide.

Should not: Land that should not be counted as park acreage:

1. Land that does not include all 3 combined elements above.
2. Outdoor open-space owned by a private entity (not owned by a local, state, or federal public agency).
3. Schools.

Applicant Questions

We have a 10 acre park with two acres that have no facilities. Can that portion be removed from being counted by the Community Fact Finder?
If the two acres with no facilities are part of the publicly owned park, it must be counted by the Community Fact Finder.

We have (federal or state) land, but it is a forest (or desert, or a mountain). Can it be removed from being counted?
If it meets 1-3 above, the acreage must be counted by the Community Fact Finder.

For example, if an authorized trail exists within the publicly owned land, the land will be counted. In this example, the purpose and function of the property is for the public to experience nature through a trail. Publicly protected nature surrounding the trail is part of the trail's recreational experience.

After understanding what type of land should or should not be counted by the Community Fact Finder, as explained above, it is the applicant's responsibility to review the entire ½ mile radius and report park acreage additions or removals.

See steps 5 and 6 on pages 10 through 13 for guidance.

Step 5	Look for acreage that should or should not be counted by the Community Fact Finder.	Tool Kit pages 10-11

Review all property within the entire □ mile radius to determine if there is acreage that should or should not be counted by the Community Fact Finder. This includes reviewing property without or with a green overlay

Reviewing property without a green overlay:

Look for land in the □ mile radius that could be a park, but lacks a green overlay on the Community Fact Finder satellite interface. If you find land that looks like it could be a park, there are several methods for you to make a final determination:

1. **Drive to the property in question**. If it is public recreation land, there will likely be a sign at the property showing what type of use it has, and what public agency operates it.

2. **Satellite using Google Maps to get a street view:**

   A. Using the Community Fact Finder satellite interface, move the hand cursor to the land in question and double click on the left side of your mouse. The push pin  will now be on the land in question.

   B. Latitude and longitude coordinates for the land in question will appear on the bottom left section of the Community Fact Finder. (Tool Kit page 6 shows were the Lat□Long coordinates are located)

   C. Copy and paste the latitude and longitude coordinates from the Community Fact Finder into the Google maps □Search Maps□text box. Google maps**:** http:□maps.google.com□maps?hl□en□tab□wl

   D. You will now be able to get a street view of the land in question. A street address will also appear in Google Maps, and you can enter the street address in the Google search engine at www.google.com to get more information about the property in question.

Reviewing property with a green overlay:

Follow the green overlay explanation on page 7 of the Tool Kit to get property acreage and land owner information.

If Step 5 leads to identifying land that should or should not be counted by the Community Fact Finder as described in Step 4 on page 9, it is the applicant's responsibility to report it.

To report it, see Step 6 on pages 12-13 for guidance.

Step 6	Report park acreage addition or removal	Tool Kit pages 12-13

Send an email to parkupdates parks.ca.gov.

1. Include a description explanation of the issue in the email.

2. To give a reference point for the property in question, create a report

using the Community Fact Finder. Place the push pin  on the property in question, then click the Create Report tab found under the park acres per 1,000 people statistic. A PDF report will be created. Save the PDF report to your computer (like you would save a Word document), attach it to the email, and send it.

- Keep a copy of your email request for your records.
- You can include a copy of the request in your Application Packet.

Please try to send acreage addition or removal reports by May 2, 2011.

- Within two weeks of receiving the report, OGALS will send an email to the applicant providing a determination.
- It then will take one to two months for updates to be made to the Community Fact Finder after OGALS approves the request.
- If OGALS receives a high volume of requests right before the July 1, 2011, application deadline, the application review process will be delayed.

Applicants that report an acreage addition prior to the application deadline will be able to submit a new Community Fact Finder report after the Community Fact Finder update is complete.

See the following questions and answers below.

Step 6 (continued)

Applicant Question: What happens <u>if I don't report</u> the addition of acreage that should be counted by the Community Fact Finder?

It is the applicant's responsibility to thoroughly review the project's ½ mile radius before submitting the Application Packet, and report the addition or at least ask OGALS at parkupdates@parks.ca.gov if the land in question will be added to the Community Fact Finder.

OGALS will also thoroughly review the ½ mile radius of all statewide applications after the July 1, 2011, application deadline. If acreage exists within the ½ mile radius that should be counted, <u>but is not reported by the applicant</u>, OGALS will add the acreage to the Community Fact Finder. <u>OGALS will not accept a new Fact Finder report from the applicant</u> after the acreage is added. Once the acreage is added to the Community Fact Finder, a new report will be generated by OGALS using the same exact origin of the ½ mile radius and the new acreage ratio per 1,000 residents will be used for Project Selection Criteria #1.

Applicant Question: What happens <u>if I do report</u> the addition or removal of acreage, but the update is not shown on the Community Fact Finder by the July 1, 2011, application deadline?

1. Include a copy of the request in your Application Packet

2. If OGALS approves the request, you will be notified by email when the Community Fact Finder acreage update is complete.

3. OGALS will request a new Community Fact Finder report. You can then use the same or a different origin of the ½ mile radius at the project site (see Tool Kit Steps 7-8)

4. OGALS will use the new report for Project Selection Criteria #1.

5. Again, please try to email the request to parkupdates@parks.ca.gov by May 2, 2011.

Step 7	Select a specific point of the project site for purpose of Project Selection Criteria □1 and □2	Tool Kit pages 14-17

Pages 14-17 will provide three fictional project site examples. The examples do not intend to promote a specific project site in a specific region.

1. The three examples explain push pin placement at the project site to be eligible and competitive. The push pin  needle tip must be inserted on the project site, not one or more blocks outside the project site.

Eligible:

- less than 3 park acres per 1,000 people
  OR (does not need to be both)
- less than $47,331 median household income

Competitive:

All statewide applications will be ranked based on the:

- median household income (Project Selection Criteria □2-A),
  AND
- number below poverty (Project Selection Criteria □2-B),
  AND
- park acres per 1,000 people (Project Selection Criteria □1)

See the examples on the next pages and read Application Guide pages 26-29 and 45 for more information about Project Selection Criteria □1 and □2.

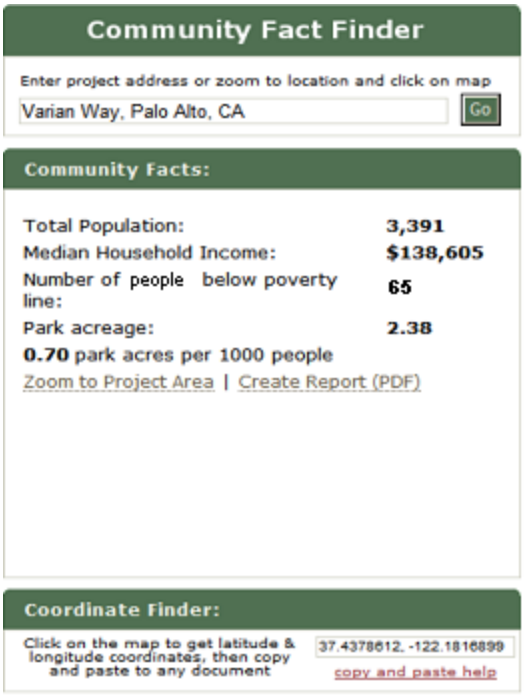
2. The three examples explain push pin  placement at the project site for different types of projects under Project Selection Criteria □3 (Application Guide pages 30-31, 46-48).

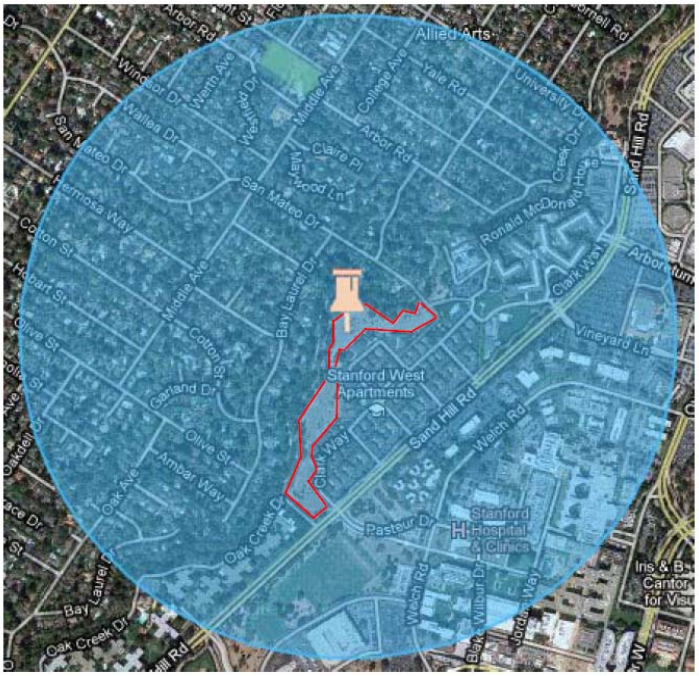
The three project type examples are:

A. Creating a new park (12 of 12 points - Project Selection Criteria □3)

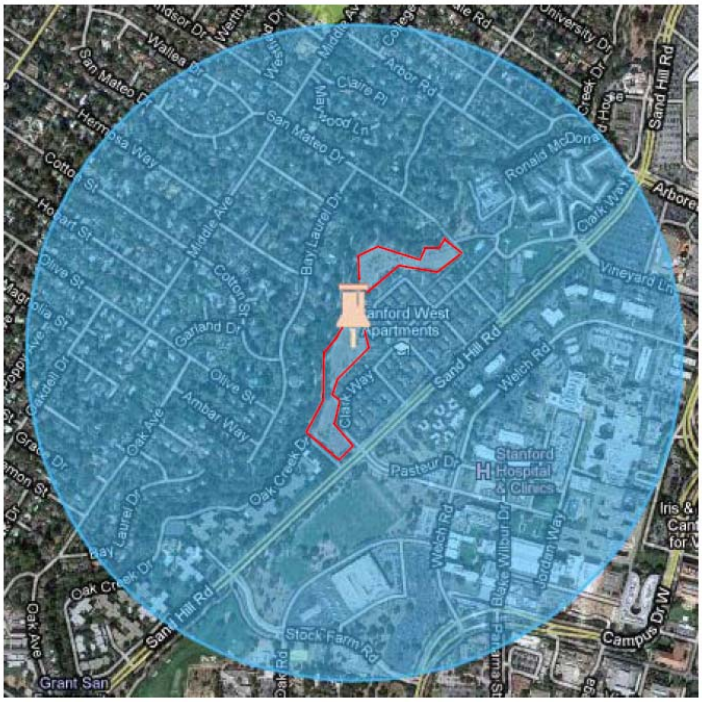
B. Adding new park space to expand an existing park (10 of 12 points - Project Selection Criteria □3)

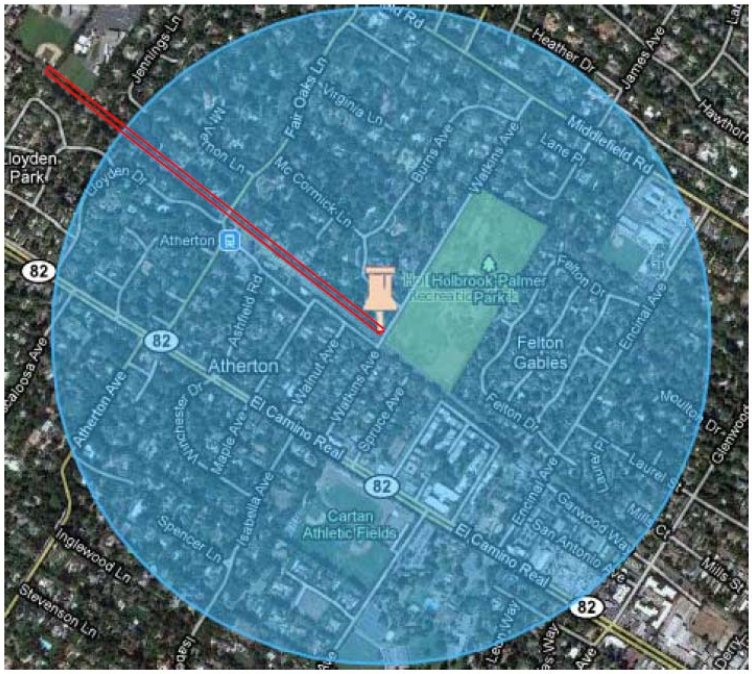
C. Substantially improving existing park space (8 of 12 points - Project Selection Criteria □3)



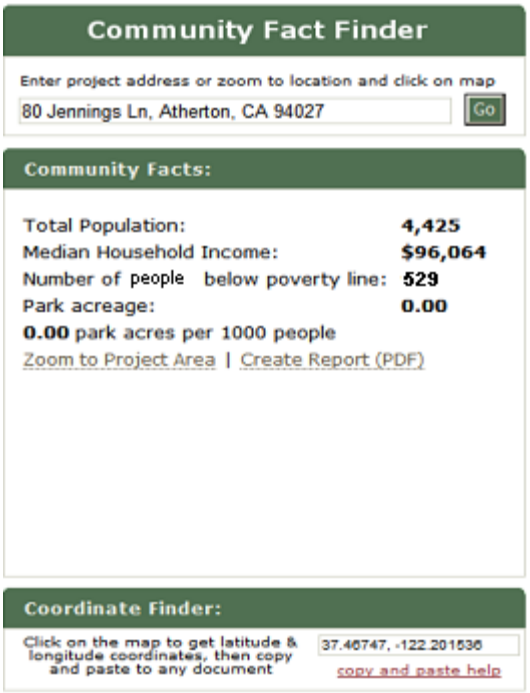


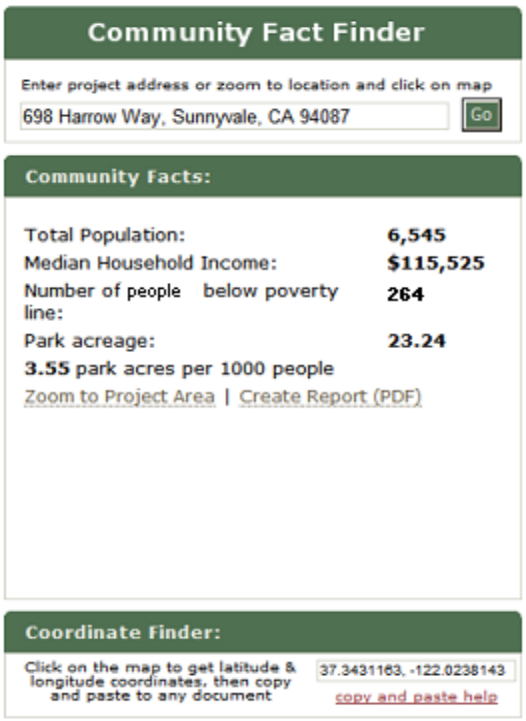
Type of Project example A: The Project site is the creation of a new park (shown in red border).
Eligible point: In the top example, the project site is eligible for a grant award due to .70 park acres per 1,000 people within the mile radius.
Competitive point: In the bottom example, the acreage drops down to 0 per 1,000 residents, and the median household income drops by $19,000. The push pin placement below is more competitive than the above example.

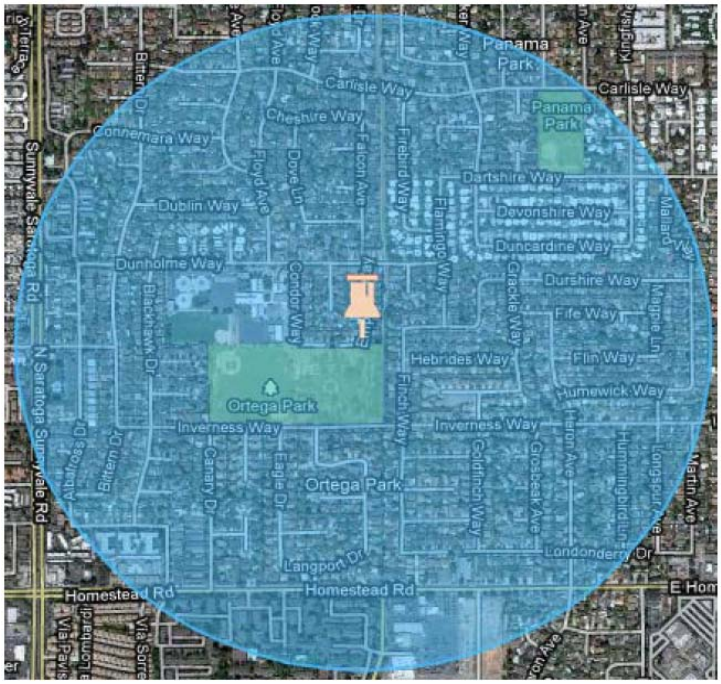




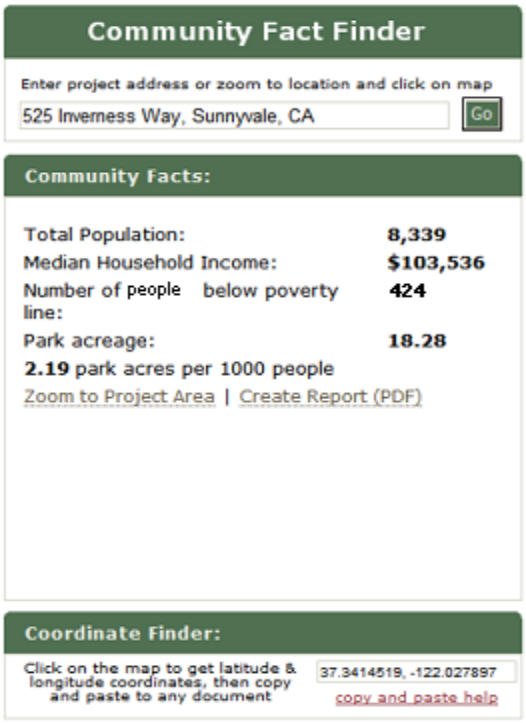
Type of Project example B: The Project site is the improvement of an existing park (green overlay) by constructing a new playground, and, expansion of the park by constructing a greenway (shown in red) with jogging path and exercise stations connecting a school to the existing park.
Ineligible point: In the top example, the project site is not eligible for a grant award due to more than 3 park acres per 1,000 people and median household income above $47,330.
Competitive point: In the bottom example, the acreage drops to 0 per 1,000 residents. The median household income also drops significantly. The push pin placement below makes the project site eligible, and more competitive, than the above example.

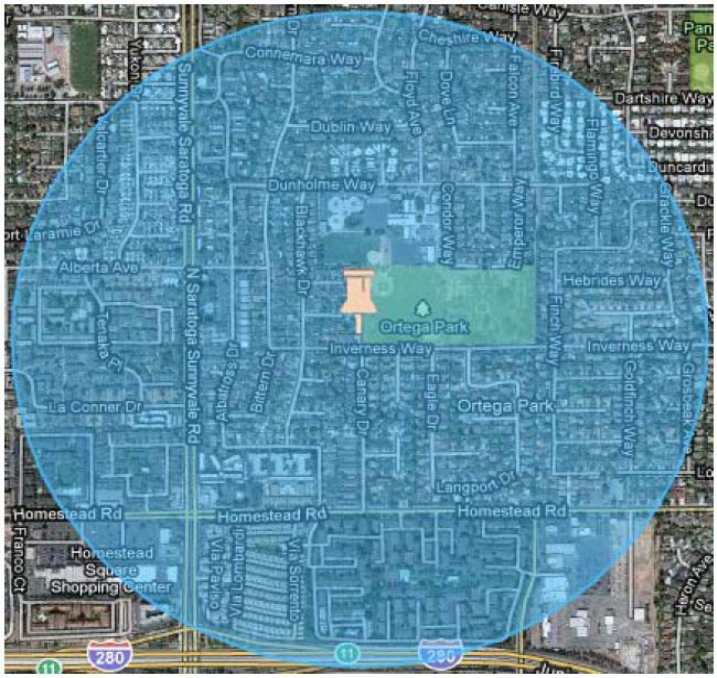






Type of Project example C: The Project site is the improvement of an existing park (green overlay).
Ineligible point: In the top example, the project site is not eligible for a grant award due to more than 3 park acres per 1,000 people and median household income above $47,330.
Competitive point: In the bottom example, the acreage drops to 2.19 per 1,000 residents. The median household income also drops. The push pin placement below makes the project site eligible.





Step 8	Create and submit a final Community Fact Finder report for Project Selection Criteria □1 and □2	Tool Kit page 18-19

After completing steps 1 through 7 above, you are now ready to provide a complete and competitive Community Fact Finder report in your Application packet!

Before creating the final report, make sure the push pin  **needle tip is inserted at the project site, not one, or two, or three blocks outside of the project site.**

When applications are submitted, OGALS enters the Community Fact Finder Report Project ID number into satellite interface which takes OGALS to the precise point where the Community Fact Finder report was created. This ensures that all statewide applicants submit Community Fact Finder Reports with the push pin  needle tip inserted at the project site.

To create the Community Fact Finder report:

1. Move your hand cursor and click the □Create Report (PDF)□tab found under the park acres per 1,000 people statistic.

2. A window will appear. This may take a few moments. Select □Open□and then print.

3. Make sure the top portion of the report states □Round Two□.

4. Include the report in your Application Packet postmarked by July 1, 2011.

Step 8 (continued)

Applicant Questions:

Can I create more than one report?
You can create an unlimited amount of reports for your own internal use. However, only one can be submitted in your Application Packet.

When I printed the map on the Community Fact Finder Report, I noticed the streets (or green overlay or park boundaries) are different than the Community Fact Finder satellite interface. What should I do?
Don't worry: while the Community Fact Finder Report map may differ compared to the Community Fact Finder satellite interface, the demographic and park acreage is the same. Using satellite interface, the Community Fact Finder Report Project ID number takes OGALS to the precise push pin  needle tip insertion where the Community Fact Finder report was created. OGALS only uses the map on the Community Fact Finder Report as a minor reference, and relies primarily on the Community Fact Finder satellite interface to review the ½ mile radius.

If my project site is the same as my round one application, can I submit the same Community Fact Finder report?
Create and submit a new report for your Round Two application because it will contain 2010 projections from Claritas. The Round One report contained 2008 projections from Claritas. The new Community Fact Finder - Round Two ½ edition will state "Round Two" in the title section and will be posted at www.parks.ca.gov/grants by late February, 2011.

Where do I include the Community Fact Finder Report in the Application?
Page 7 of the Application Guide provides an Application Packet Checklist. To organize your Application, follow the directions on the top of page 7 of the Application Guide. Checklist Item 11 (Project Location Map) references page 24 of the Application Guide, which directs applicants to include the Community Fact Finder Report.

Applicant Checklist

Use this checklist to make sure Community Fact Finder steps 1-8 below are completed before submitting the Application Packet to OGALS. This checklist is a technical assistance tool and does not need to be included in the Application Packet.

Step 1	**Find the Community Fact Finder at OGALS website**	**Tool Kit Page 3**	☐
Step 2	**Locate an area using the Community Fact Finder**	**Tool Kit Page 4**	☐
Step 3	**Understand the Community Fact Finder data tools**	**Tool Kit Pages 5-8**	☐
Step 4	**Understand what type of land should or should not be counted as park acreage**	**Tool Kit Page 9**	☐
Step 5	**Look for acreage that should or should not be counted**	**Tool Kit Pages 10-11**	☐
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Step 7	**Select a specific point of the project site for purpose of Project Selection Criteria □1 and □2**	**Tool Kit Pages 14-17**	☐
Step 8	**Create and submit a final Community Fact Finder report for Project Selection Criteria □1 and □2**	**Tool Kit Pages 18-19**	☐

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TEXT-ONLY VERSION

Los Angeles County

General Plan

2035

Los Angeles County General Plan
Public Review Draft
Text-Only Version 5/2012

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Los Angeles County General Plan
Public Review Draft
Text-Only Version 5/2012

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Cover: *Topographical Map*, Joseph Young, 1962, Hall of Records, Los Angeles, CA.

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Part I: General Plan Framework

Foreword

With over 10 million people, Los Angeles County is one of the great metropolises of the world. One million residents live within the unincorporated areas, which combined is effectively the third largest "city" in California behind Los Angeles and San Diego.

For more than a century, the unincorporated areas of the County have been places where people have come to realize the California dream. From the cool breezes along the Pacific Ocean, to the hot winds of the Mojave Desert; from the banks of the Los Angeles River, to the foothills of the San Gabriel Mountains, the County's diverse settings have offered a wide range of choices about where and how to live. For most of those years, the California dream has primarily been realized in the County through the creation of new human settlements out of raw land. The basis of the dream has been the subdivision of land and the creation of thousands of single family lots to accommodate cottages, bungalows and farms.

Today, the County as a whole is a crowded and expensive place to live, and increasingly one whose fragility has become more obvious with the incidences of wildfires, water shortages, climate change and aging infrastructure. Planning tomorrow's great places in the unincorporated areas will be a much more complex process than it was in the days of shaping new neighborhoods and communities from raw land. For this reason, the role of planning in shaping the future of the County must evolve to meet changing conditions and circumstances.

The General Plan addresses a range of issues shaped by one overarching theme—sustainability. Sustainability was originally conceived of as an environmental notion—the idea that we must meet current needs without compromising the ability of future generations to meet their own needs. Over time, this idea has been expanded to include economic sustainability, quality of life, human health and social equity. In a rapidly maturing area such as the County, the best way to think about sustainability is in the context of creating and reinforcing great places. Creating a sustainable future is best achieved by pursuing the principles of smart growth—protecting and conserving the County's natural and cultural resources and rural areas; protecting and enhancing its well-established and diverse neighborhoods, commercial centers, cultural amenities, and landscapes; and investing in its underserved urban communities.

A source of pride and economic stability in the County is the great diversity of places under its jurisdiction—and its relationship to the great places located in adjacent cities. Tomorrow's great places will evolve from existing communities. Within some communities in the southern and eastern portions of the County, this will require increasing permissible densities to pair land use patterns with emerging transit opportunities that will provide increasing access to jobs; and it will also require combining land use planning, transportation planning and economic development efforts to stimulate needed improvements within these neighborhoods. In the northern portion of the County, this will require protecting natural and scenic resources, and strengthening the interconnected system of human settlements and natural areas.

The General Plan is not an end in itself. The ultimate measure of the General Plan's success will not be the policies and actions contained within it, but rather, the quality of the great places—urban, suburban, rural, natural—that emerge throughout the County over the next 30 years.

Executive Summary

The Los Angeles County General Plan provides the policy framework for how and where the unincorporated areas of Los Angeles County will grow through the year 2035. This document represents a comprehensive effort to update the County's 1980 General Plan. The General Plan recognizes and celebrates the County's wide diversity of cultures, abundant natural resources, and status as an international economic center. The County unincorporated areas are comprised of approximately 2,650 square miles, and over one million people.

The General Plan has been designed to utilize, promote and implement policies that promote healthy, livable, and sustainable communities.

I. General Plan Elements

The General Plan is comprised of the following elements:

Land Use Element

The Land Use Element provides strategies and planning tools to facilitate and guide future development and revitalization efforts in the County. In accordance with the California Government Code, the Land Use Element "designates the proposed general distribution and general location and extent of uses of land for housing, business, industry, open space, including agriculture, natural resources, recreation, and enjoyment of scenic beauty, education, public buildings and grounds, solid and liquid waste disposal facilities, and other categories of public and private uses of land." In addition, the Government Code states that the "location and designation of the extent of the uses of the land for public and private uses shall consider the identification of land and natural resources..." and "include a statement of the standards of population density and building intensity recommended for the various districts and other territory covered by the plan." Furthermore, the Government Code requires the exchange of project related information pertinent to military operations, and considerations for "the impact of new growth on military readiness activities carried out on military bases, installations, and operation 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."

Mobility Element

The California Complete Streets Act of 2008 requires the General Plan to demonstrate how the County will provide for the routine accommodation of all users of a road or street, including pedestrians, bicyclists, users of public transit, motorists, children, seniors, and the disabled. The Mobility Element addresses this requirement with policies and programs that consider all modes of travel, with the goal of making streets safer, accessible and more convenient to walk, ride a bicycle, or take transit.

The Mobility Element provides an overview of the transportation infrastructure and strategies for developing an efficient and multimodal transportation network. The Element assesses the challenges and constraints of the County's transportation system, and offers policy guidance to reach the County's long-term mobility goals.

Air Quality Element

The South Coast Air Basin, which includes the majority of Los Angeles County, continues to have among the worst air quality ratings in the country. Additionally, climate change, caused by an increase in greenhouse gas emissions, is one the most pressing environmental issues faced by all levels of government. Air pollution and climate change pose serious threats to the environment, economy, and public health.

The Air Quality Element summarizes air quality issues and outlines the goals and policies in the General Plan that will improve air quality and reduce the greenhouse gas emissions.

Conservation and Natural Resources Element

The protection, conservation and preservation of the County's natural resources and open space areas is vital as the County is heavily urbanized, and most of the natural resources and open space areas are located within the unincorporated areas. The County must act as the steward for the County's natural resources and available open space areas, and conserve and protect these lands and resources from inappropriate development patterns.

The Conservation and Natural Resources Element guides the long-term conservation of the County's natural resources and preservation of available open space areas. The Conservation and Natural Resources Element addresses the following conservation areas: Open Space Resources; Biological Resources; Water Resources; Agricultural Resources; Mineral and Energy Resources; Scenic Resources; and Historic, Cultural and Paleontological Resources.

Parks and Recreation Element

The parks and recreational facilities of the County play a vital role in maintaining a high quality of life for County residents. The County owns and operates parks and recreational facilities in both unincorporated areas and cities in the County. These facilities serve the local needs of communities in the unincorporated areas, as well as regional needs countywide.

The purpose of the Parks and Recreation Element is to plan and provide for an integrated parks and recreation system that meets the needs of residents in the County. The goals and policies set forth in this Element address the growing and diverse recreation needs of the communities served by the County.

Noise Element

Excessive noise levels can have a significant impact on quality of life. As a public policy issue, excessive levels of noise result in increased neighborhood annoyance, dissatisfaction, and in some cases, health and safety hazards. Due to the County's geographic, environmental, and cultural diversity, the levels and types of noise issues vary significantly throughout the County.

The purpose of the Noise Element is to reduce and limit the exposure of the general public to excessive noise levels. The Noise Element sets the goals and policy direction for the management of noise in the County.

Safety Element

Development in the County has extended into areas with environmental hazards, such as hillsides, floodplains, and seismic areas. If this pattern of growth continues, it will further increase the vulnerability of County residents to seismic, geotechnical, flood, and fire hazards. In addition, studies suggest that climate change will increase the risk of natural hazards, particularly related to wildland fires and flooding.

The purpose of the Safety Element is to reduce the potential risk of death, injuries, and economic damage resulting from natural and man-made hazards. The California Government Code requires the General Plan to address "the protection of the community from any unreasonable risks associated with the effects of seismically induced surface rupture, ground shaking, ground failure, tsunami, seiche, and dam failure; slope instability leading to mudslides and landslides; subsidence, liquefaction, and other seismic hazards...; flooding; and wildland and urban fires."

Public Services and Facilities Element

As the County continues to grow, the demand for public facilities and infrastructure will increase. This Element provides a summary of some of the major public services and facilities that serve the County, and establishes policies that guide the provision of public services and facilities in conjunction with the County’s projected growth.

The Public Services and Facilities Element promotes the orderly and efficient planning of public facilities and infrastructure in conjunction with development and growth. This Element focuses on services and facilities that are affected the most by development and growth: Water; Wastewater and Sewer; Solid Waste; Utilities; Early Care and Education; and Libraries. The Element also discusses the key role of collaboration among County agencies in efficient and effective service provision and facilities planning.

Economic Development Element

From its origins as a sparsely populated agricultural area, the County has developed into a national and global economic center. Today, the County's economy is diverse and fast-changing, and faces global competition for economic resources.

The Economic Development Element outlines the County's economic development goals, and provides strategies that contribute to the economic well-being of the County. The overall performance of the economy and economic development efforts strongly impact land use and development patterns. Through the implementation of this Element, the County is planning for the economic health and prosperity of its physical and social environments, and planning strategically for the future economy.

Housing Element

The purpose of the Housing Element is to analyze existing, and to plan for future housing needs. The Housing Element must address the housing needs of all income levels and accommodate a diversity of housing types and special needs.

II. Planning Areas Framework

The unincorporated areas of the County represent a large and diverse planning context. The General Plan organizes the County into 11 Planning Areas, which make up the Planning Areas Framework. The purpose of the Planning Areas Framework is to plan for the County's diversity,

facilitate the planning of all unincorporated areas, and systematically address planning issues at a subregional level. The 11 Planning Areas are:

- Antelope Valley Planning Area
- Coastal Islands Planning Area
- East San Gabriel Valley Planning Area
- Gateway Planning Area
- Metro Planning Area
- San Fernando Planning Area
- Santa Clarita Valley Planning Area
- Santa Monica Mountains Planning Area
- South Bay Planning Area
- West San Gabriel Valley Planning Area
- Westside Planning Area

III. Major Policies

Major policies in the General Plan include the following:

Transit Oriented Districts

Transit Oriented Districts (TODs) are areas within a ½ mile radius from a transit station, where the General Plan encourages infill development, high-density mixed use developments along commercial corridors, and pedestrian-friendly and community-serving uses. The goal of the TODs is to encourage walking, bicycling, and transit use. TODs are located along the Metro Gold Line, Gold Line Extension, Blue Line, Green Line, and near the Silver Line.

Significant Ecological Areas

A Significant Ecological Area (SEA) designation is given to land that contains irreplaceable biological resources. Individual SEAs include undisturbed or lightly disturbed habitat supporting valuable and threatened species, linkages and corridors to promote species movement, and are sized to support sustainable populations of its component species. The objective of the SEA Program is to preserve the genetic and physical diversity of the County by designing biological resource areas capable of sustaining themselves into the future. However SEAs are not wilderness preserves. Much of the land in SEAs is privately held, used for public recreation or abutting developed areas. The SEA Program is intended to ensure that privately held lands within the SEAs retain the right of reasonable use, while avoiding activities and developments that are incompatible with the long term survival of the SEAs.

Employment Protection Districts

The Employment Protection Districts (EPDs) are economically viable industrial and employment-rich lands to be preserved as major employment centers. These areas are protected by policies to prevent the conversion of industrial land to non-industrial uses.

Agricultural Resource Areas

Agricultural Resource Areas (ARAs) are areas where the General Plan promotes the preservation of agricultural land. The ARAs consist of areas that have been historically farmed in the County, as well as farmland identified by the California Department of Conservation. These areas are protected by policies to prevent the conversion of farmland to incompatible uses.

Chapter 1: Introduction

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The Los Angeles County General Plan is the guide for growth and development for the unincorporated areas of Los Angeles County. The General Plan guides the long-term physical development and conservation of the County's land and environment through a framework of goals, policies, and implementation programs. The California Government Code requires that each city and county 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." Long-range planning provides the opportunity to responsibly manage and direct future development, conserve natural areas and cultural resources, support economic development objectives, and improve mobility in the region.

The Government Code requires that all general plans contain elements that address the following: land use, circulation, housing, conservation, open space, noise, and safety. The Government Code also provides flexibility to local jurisdictions to address additional issues that are of local importance. The County's General Plan addresses all of these requirements and issues of local importance through the following elements:

- Land Use Element
- Mobility Element
- Air Quality Element
- Housing Element (adopted and certified in 2008)
- Conservation and Natural Resources Element
- Parks and Recreation Element
- Noise Element
- Safety Element
- Public Services and Facilities Element
- Economic Development Element

The County's efforts to prepare a general plan for the unincorporated areas began in the 1970s with the creation of the Environmental Development Guide. In 1973, the County adopted its first general plan, followed by a comprehensive update in 1980.

This document represents a comprehensive effort to update the County's 1980 General Plan, and to guide development in the unincorporated areas through the year 2035. The goals, policies and programs of this document have been shaped by the input received from stakeholders, including residents, businesses, property owners, and staff from regional agencies and adjacent cities.

I. How to Use the General Plan

The goals and policies in the General Plan guide future land use, as well as the public investment decisions within the unincorporated areas to strengthen existing neighborhoods, contribute to a strong and diverse economy, protect and conserve natural resources, and provide housing for residents that can be sustainable for generations to come.

The General Plan provides a general policy framework for community-based plans, such as area plans, community plans and coastal land use plans, and works in conjunction with several planning documents, including strategic plans and master plans. The General Plan is implemented by the Los Angeles County Code, in particular, Titles 21 (Subdivisions) and 22 (Planning and Zoning). The California Government Code requires that all zoning ordinances, zone changes, subdivisions, capital improvement plans, and public works projects be consistent with the General Plan.

Furthermore, the General Plan serves as an advisory countywide document to coordinate land use planning, public service and facilities planning, circulation, environmental management and regional land use and transportation initiatives with the 88 cities within the County and with special districts and regional agencies, such as the Southern California Association of Governments (SCAG), the Los Angeles County Metropolitan Transportation Authority (Metro), Los Angeles County Sanitation Districts, air quality districts, water districts and suppliers, and school districts.

II. Applicability

Completed applications filed prior to the effective date of this General Plan shall be allowed to be reviewed for consistency with the previously adopted General Plan. Projects may be maintained as originally approved provided the approval is still valid and has not expired. Any subsequent change(s) of use or intensity shall be subject to the policies of this General Plan.

III. General Plan Guiding Principles

Sustainability requires that planning practices meet the County's needs without compromising the ability of future generations to realize their economic, social, and environmental goals. The General Plan has been designed to utilize, promote and implement policies that promote healthy, livable, and sustainable communities.

The following five guiding principles—Smart Growth; Sufficient Community Services and Infrastructure; Strong and Diversified Economy; Environmental Resource Management; and Healthy, Livable and Equitable Communities—are supported by community-identified goals and stakeholder input, and further the overall goal of sustainability throughout the General Plan. Where applicable, all components of the General Plan shall encompass these principles. Please refer to Appendix B for a

summary of community and stakeholder identified issues that informed the development of these principles.

1. Smart Growth

Smart growth promotes compact, sustainable, healthy and walkable communities. The primary objectives of smart growth are to 1) shape new development to improve existing and new communities and align housing, jobs and services; and 2) protect and conserve the County's natural and cultural resources, and rural communities.

The General Plan implements smart growth by using strategies that are tailored to each community. Strategies, such as transit-oriented development, will create vibrant centers around transit stations that promote neighborhoods where people can live, work, and shop without the need to drive to each destination. Another smart growth strategy is to facilitate the creation of vibrant and active corridors that connect major centers and destinations, and thriving neighborhood centers within the unincorporated areas. These work in conjunction with other smart growth strategies to "green" the County's streets and buildings, and protect and conserve its natural resources.

2. Sufficient Community Services and Infrastructure

Community services and infrastructure serve as the backbone of a community. Quality of life is dependent upon the quality and availability of schools, parks, libraries, police and fire services, cultural facilities, and community gathering places; as well as circulation systems, water, sewers, flood control, utilities, communication, and waste management. Successful land use planning and growth management rely on the orderly and efficient planning of community services and infrastructure. The key to growth management is the commitment to proactively coordinate with public and private partners to provide and maintain sufficient services and infrastructure that are commensurate with growth.

The General Plan establishes policies and programs to address existing deficiencies in community services and infrastructure, and to ensure the provision of sufficient community services and infrastructure for new developments.

3. Strong and Diversified Economy

Southern California is one of the world's largest economic regions, and the County is the heart of this highly developed and diversified industrial and service-based economy. The County is home to an internationally recognized entertainment industry, one of the world's largest concentrations of high technology, the aerospace industry, and the sixth busiest seaport (Ports of Los Angeles and Long Beach combined) in the world. The economic base of Southern California consists of professional services, manufacturing activities, transportation and wholesale trade, tourism, and defense-related and resource-based industries. The creative economy, including arts and entertainment, also plays an important role in the region's economic vitality. In addition, the County has developed into a center of international business and finance. Furthermore, a significant portion of the County's economic growth in the last 15 years has been in the informal economy, as well as the growth of small and minority-owned businesses.

Ensuring the economic vitality and long-term competitiveness of the unincorporated areas requires policies that will promote a stable and well-educated job base, generate tax revenues to support quality services, provide for jobs-housing balance, and accommodate the businesses and industries that represent the jobs of the future. As planning for future growth and the appropriate land use mix has major impacts on the local and regional economy, the General Plan addresses the protection of

the remaining industrial land in the unincorporated areas. The General Plan also provides policies and programs to foster economic development.

4. Environmental Resource Management

Stewardship of the County's natural resources, such as air, water, wildlife habitats, mineral resources, agricultural land, forests, and open space, is essential to a successful sustainability strategy. The County as a whole is highly urbanized, and the majority of its natural resources are located in the unincorporated areas. The General Plan provides policy guidance to protect and conserve the County's natural resources and to improve the quality of its air, water and biological resources.

The General Plan also includes goals, policies and programs to minimize risks, manage and discourage development in areas that are prone to safety hazards, such as earthquakes, floods and wildfires.

5. Healthy, Livable and Equitable Communities

Land use and community design play a pivotal role in creating healthy environments that facilitate relationships between people and their environments. Places with multiple destinations within close proximity, where the streets and sidewalks balance all forms of transportation, provide communities with the basic framework for a walkable and bikeable community. Walkable and bikeable communities encourage residents to be more physically active, which in turn, reduce obesity rates and lower the risk of heart disease and diabetes. These environments also improve health by reducing vehicle emissions, which are a major contributor to health ailments including asthma, respiratory illness, cardiovascular disease and impaired lung function.

Food systems are a critical component of planning for healthy, livable, and equitable communities. Ensuring that opportunities exist to grow, sell, and consume healthy foods promotes public health and supports efforts to reduce obesity rates. Land use patterns that encourage access to healthy food provide the foundation necessary to build healthier communities and address equitable access to healthy food. Also, artistic and cultural resources are key to the overall quality of life of a community. Civic art contributes significantly to the vitality of a region by improving the quality of the environment and fostering a positive community identity. Equitable communities also mean increased attention to safety and environmental justice issues. Environmental conditions, such as poor air quality, polluted stormwater runoff, deteriorated housing conditions, and ground and surface contamination are all influenced by planning and have an effect on public health.

The General Plan protects the public health, safety and welfare through the promotion of pedestrian planning; environments that improve physical and mental health; sustainable development and agricultural practices, including the building of community gardens and the use of organic farming techniques; and the use of healthy materials and building practices and low impact development techniques in construction and development activities.

IV. Community Participation

The General Plan reflects a comprehensive effort to facilitate stakeholder participation and garner local input in the development of its goals, policies and programs. Table 1.1 provides an overview and timeline of the recent outreach activities and drafts of the General Plan that have been released to the public.

Table 1.1 Recent General Plan Community and Stakeholder Outreach

General Plan Update Visioning/EIR Scoping (1999-2003)	SEA workshops and community meetings, 1999-2001. General Plan visioning workshops, 2001. EIR scoping meetings, 2003.
Shaping the Future 2025 (2003-2005)	Draft General Plan goals and policies released to the public, December 2003. 2004 Outreach Campaign: • Public release of Shaping the Future 2025. • *Shaping the Future 2025* mailed out to stakeholders. • Draft posted on the Department of Regional Planning's (DRP) web site and mailed out to County libraries. • Community meetings and invited stakeholder meetings.
Preliminary Draft General Plan (2007)	*Preliminary Draft General Plan* released to public, June 2007. 2007 Outreach Campaign: • Postcard announcements, newspaper advertisements, and press release. • Draft posted on DRP's web site and mailed out to County libraries. • Los Angeles County Regional Planning Commission presentation. • Community meetings and invited stakeholder meetings. • County interdepartmental meetings.
Planning Tomorrow's Great Places (2008)	Planning for Tomorrow's Great Places released to the public, July 2008. 2008 Outreach Campaign: • Postcard announcements, newspaper advertisements, and press release. • Draft posted on DRP's web site and mailed out to County libraries. • Los Angeles County Regional Planning Commission presentation, September 2008. • Stakeholder meetings. • Board office and interdepartmental meetings. • Poster plan released to the public, January 2009.

	• Los Angeles County Regional Planning Commission presentation.
Draft General Plan 2035/EIR Scoping (2011)	Draft General Plan 2035 released to the public, April 2011. 2011 Outreach Campaign: • Postcard and email announcements. • Draft posted on the DRP's web site and mailed out to County libraries. • Los Angeles County Regional Planning Commission presentation, May 2011. • Board office and interdepartmental meetings. • EIR scoping meetings, September 2011. • Stakeholder meetings, September to November 2011.

[TEXT BOX]

What is the Difference Between a Goal, Policy, and Implementation Action?

Goal

A goal is a general direction-setter. It is an ideal future end related to public health, safety, or general welfare. A goal is a general expression of community values and may be abstract in nature. A goal is generally not quantifiable or time dependent.

Policy

A policy is a specific statement that guides decision-making. It indicates a commitment of the local legislative body to a particular course of action. A policy is based on and helps implement a General Plan's goals and objectives. A policy is carried out by implementation actions. For a policy to be useful as a guide to an action, it must be clear and unambiguous.

Implementation Action

An implementation action can be a procedure, program, or technique that carries out General Plan policies.

Source: State of California, Office of Planning and Research, *General Plan Guidelines 2003.*

Chapter 2: Background

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I. Location and Description

With approximately 4,083 square miles, Los Angeles County is geographically one of the largest counties in the country. The County stretches along 75 miles of the Pacific Coast of Southern California, and is bordered to the east by Orange County and San Bernardino County, to the north by Kern County, and to the west by Ventura County. The County also includes two offshore islands, Santa Catalina Island and San Clemente Island. Figure 2.1 shows the regional location of the County.

Figure 2.1: Regional Location of Los Angeles County

County Setting

The unincorporated areas account for approximately 65 percent of the total land area of the County, as shown in Table 2.1.

Table 2.1: Los Angeles County Distribution of Land Area

County Land Components	Cities (sq. miles)	Unincorporated (sq. miles)	Total (sq. miles)
Mainland	1,423.7	2,528.3	3,952
San Clemente Island	0	56.4	56.4
Santa Catalina Island	2.9	71.9	74.8
Total	**1,426.6**	**2,656.6**	**4,083.2**

Source: Los Angeles County Department of Public Works

The unincorporated areas in the northern portion of the County are covered by large amounts of sparsely populated land, and include the Angeles National Forest, part of the Los Padres National Forest, and the Mojave Desert. The unincorporated areas in the southern portion of the County consist of 58 non-contiguous land areas, which are often referred to as the County's unincorporated urban islands.

The County's governmental structure is comprised of five Supervisorial Districts. The Los Angeles County Board of Supervisors is the governing body of the County, and makes legislative land use decisions for the unincorporated areas. Figure 2.2 shows the unincorporated areas of the County, and Figure 2.3 shows the County's Supervisorial Districts.

Figure 2.2: Los Angeles County Unincorporated Areas

Figure 2.3: Los Angeles County Supervisorial Districts

Climate and Topography

The County is a land of beaches, valleys, mountains, and deserts. Overall, the climate can be characterized as "Mediterranean," with hot, dry summers and mild, wet winters. The diversity of the County's topography results in localized climate zones that are roughly divided by the Transverse Ranges (Santa Monica Mountains and San Gabriel Mountains). The climate zones are closely tied to geologic landforms and vary based on elevation changes and distance from the ocean. These climate zones can be grouped into three broad categories:

Coastal Plain

The coastal plain includes the beaches, valleys, and canyons that occupy the Los Angeles Basin and terminate at the Transverse Ranges. During the dry season, the determining factor in coastal plain weather is the proximity to the Pacific Ocean and the resultant marine layer. The marine layer acts as a buffer, which is evidenced by relatively cool and constant temperatures, low clouds, fog, and haze. The marine layer settles over the Basin during the evening and early morning before being burned off by sunshine midday. Due to the dominance and stability of the high pressure area in the Basin, precipitation is rare between May and November.

Mountain

Climates in the mountains are characterized by lower average temperatures and heavier rainfall than in the coastal plain. The Transverse Ranges are further removed from the climatic influences of marine wind patterns and experience the additional influence of altitude.

High Desert

The high desert includes the Antelope Valley, which is the westernmost portion of the Mojave Desert. The high desert is located more than 50 miles inland, and is removed from marine influences and experiences a more extreme type of climate. The Transverse Ranges act as a barrier to rain-bearing clouds moving inland. In addition, the Antelope Valley is home to several wildlife and wildflower sanctuaries that thrive in the often inhospitable climate found in the high desert.

Regional Context

The Southern California Association of Governments (SCAG) is the Metropolitan Planning Organization that represents the counties of Los Angeles, Orange, Ventura, Imperial, San Bernardino, and Riverside, and 190 cities. The County is further divided into nine SCAG subregions: North Los Angeles County; San Fernando Valley Council of Governments; Las Virgenes Malibu Conejo Council of Governments; Arroyo Verdugo; Westside Cities Council of Governments; South Bay Cities Council of Governments; City of Los Angeles; San Gabriel Valley Council of Governments; and Gateway Cities Council of Governments. Table 2.2 shows population growth in the SCAG region, by county, between 2000 and 2010.

Table 2.2 Population for the SCAG Region, County, 2000 and 2010

County	2000 Population	Percent of Region	2010 Population	Percent of Region
Los Angeles	9,519,000	57.6%	9,819,000	54.4%
Orange	2,846,000	17.2%	3,010,000	16.7%
Riverside	1,545,000	9.4%	2,190,000	12.1%
San Bernardino	1,709,000	10.4%	2,035,000	11.3%
Ventura	753,000	57.6%	823,000	4.6%
Imperial	142,000	0.9%	175,000	1.0%
Total	16,516,000	100.0%	18,052,000	100.0%

Source: SCAG 2012-2035 RTP/SCS

Existing Population

There are approximately 10 million people in the County as a whole, with approximately one million living in the unincorporated areas of the County. Table 2.3 shows the percent change in population for the years 2000 and 2010.

Table 2.3: Los Angeles County Population, 2000 and 2010

Area	Population 2000	Population 2010	Increase (%)
Los Angeles County	9,519,338	9,818,605	3%
Unincorporated Areas	986,050	1,057,088	7%

Source: 2000 and 2010 U.S. Census

Race and Ethnicity

The cultural diversity of residents plays a significant role in defining the character of the unincorporated areas of the County. Influenced by migratory patterns, the approximately 10 million residents of the County comprise one of the most diverse communities in the country. The California Department of Finance estimates that by the year 2050, the Hispanic and Asian populations will account for more than 80 percent of the residents in the County. Planning efforts must acknowledge and account for the diversity and social values that accompany these demographic shifts. Table 2.4 shows the racial and ethnic composition of the unincorporated areas.

Table 2.4: Unincorporated Los Angeles County, Race and Ethnicity, 2010

Race	Population	Percentage
White	512,219	48%
Black or African-American	96,384	9%
American Indian or Alaska Native	8,851	1%
Asian	124,109	12%
Native Hawaiian and Other Pacific Islander	2,037	0.2%
Some Other Race	271,531	26%
Two or More Races	41,957	4%
Total	1,057,088	100%

Ethnicity	Population	Percentage
Hispanic or Latino	602,045	57%
Not Hispanic or Latino	455,043	43%
Total	1,057,088	100%

Source: 2010 U.S. Census

II. Growth Forecast

Population, housing, and employment projections play a critical role in the planning process and can help identify and guide future development patterns in the County. The County's growth forecast includes population projections, household projections, and employment projections. It is important to note that the General Plan uses a regional strategy to guide growth in a way that plans for more efficient and sustainable land use patterns to address climate change, mobility, and community development. The General Plan plans for the County's total growth by encouraging development in areas with infrastructure and access to transit, and discouraging growth in greenfields and environmentally-sensitive and hazardous areas.

The General Plan's growth forecast is from the SCAG 2012 Regional Transportation Plan (RTP). The growth projections in Tables 2.5, 2.6 and 2.7 provide a picture of probable occurrences rather than assured outcomes. Furthermore, the projections do not account for unforeseen future events, as well as changes in General Plan policies.

Table 2.5: Los Angeles County Population Projections

	Population 2008	Population 2035	Increase (%)
Los Angeles County	9,778,000	11,353,000	16%
Unincorporated Areas	1,052,800	1,399,500	33%

Source: SCAG 2012-2035 RTP/SCS

Table 2.6: Los Angeles County Household Projections

	Households 2008	Households 2035	Increase (%)
Los Angeles County	3,228,000	3,852,000	19%
Unincorporated Areas	298,100	405,500	36%

Source: SCAG 2012-2035 RTP/SCS

Table 2.7: Los Angeles County Employment Projections

	Employment 2008	Employment 2035	Increase (%)
Los Angeles County	4,340,000	4,827,000	11%
Unincorporated Areas	237,000	318,100	34%

Source: SCAG 2012-2035 RTP/SCS

III. Community-Based Plans

Planning Areas Framework

The unincorporated areas of the County represent a large and diverse planning context. As shown in Figure 2.4, the General Plan organizes the County into 11 Planning Areas, which make up the Planning Areas Framework. The purpose of the Planning Areas Framework is to plan for the County's diversity, facilitate the planning of all unincorporated areas, and systematically address planning issues at a subregional level. The 11 Planning Areas are:

- Antelope Valley Planning Area
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- West San Gabriel Valley Planning Area
- Westside Planning Area

Figure 2.4 Planning Areas Framework

The General Plan provides goals and policies to achieve countywide planning objectives, and serves as the foundation for all community-based plans, such as area plans, community plans, and coastal land use plans. Area plans focus on land use and policy issues that are specific to the Planning Area. Community plans cover smaller geographic areas within the Planning Area, and address neighborhood and/or community-level policy issues. Coastal land use plans are components of local

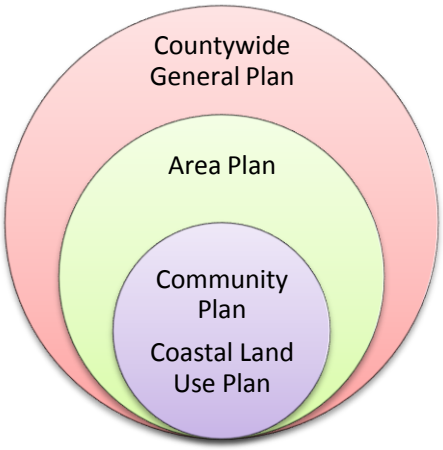
coastal programs, and regulate land use and establish policies to guide development in the coastal zone.

Figure 2.5 shows the relationship of the General Plan to community-based plans. All community-based plans are components of the General Plan and must be consistent with General Plan goals and policies.

The following is a list of existing community-based plans:

- Altadena Community Plan (adopted 1986)
- Antelope Valley Area Plan (adopted 1986)
- East Los Angeles Community Plan (adopted 1988)
- Hacienda Heights Community Plan (adopted 1978)
- Marina Del Rey Coastal Land Use Plan (adopted; certified Local Coastal Program 1996)
- Malibu Coastal Land Use Plan (adopted 1986)
- Rowland Heights Community Plan (adopted 1981)
- Santa Monica Mountains North Area Plan (adopted 2000)
- Santa Catalina Island Coastal Land Use Plan (adopted; certified Local Coastal Program 1983)
- Santa Clarita Valley Area Plan (adopted 1984)
- Twin Lakes Community Plan (adopted 1991)
- Walnut Park Neighborhood Plan (adopted 1987)
- West Athens-Westmont Community Plan (adopted 1990)

Figure 2.5: Relationship of General Plan to Community-Based Plans



Planning Areas Framework Implementation

In order to implement the General Plan, an area plan shall be prepared or updated for each of the 11 Planning Areas. The geographic, demographic, and social diversity of the unincorporated areas will guide the development of each area plan, and its goals and policies will represent the long-term planning objectives for each Planning Area. Area plans provide opportunities to update existing community-based plans, as well as existing implementation tools of the General Plan, such as specific plans and community standards districts.

The creation of new community plans will be reserved for those communities in the unincorporated areas that are identified through the area plan process as having planning needs that go beyond the scope of the area plan. Community plans, as well as coastal land use plans, shall be incorporated as chapters of area plans.

Each area plan shall be developed using the following guidelines:

- Involve major stakeholders, including but not limited to residents, businesses, property owners, County departments, regional agencies, and adjacent cities.
- Explore the role of the arts and culture, and consider beautification efforts.
- Set priorities for transportation, housing, open space, and public safety.
- Analyze the transportation network, and assess the transportation and community improvement needs. Utilize the street design considerations outlined in the Mobility Element as a tool for street improvements that meet the needs of all potential users, promote active transportation, and address the unique characteristics of the Planning Area.
- Review and consider the opportunity areas identified below, as appropriate.
- Develop a land use policy map that considers the local context, existing neighborhood character, and the General Plan Hazard, Environmental and Resource Constraints Map.
- Consider the concurrent development of area-wide zoning tools.
- Update specific plans and zoning ordinances, as needed, to ensure consistency and plan implementation.

At a minimum, each area plan shall consist of the following components:

- A comprehensive policy document with area-specific elements, as needed, that incorporates community-based plans as chapters.
- A land use policy map that utilizes the General Plan Land Use Legend;
- A zoning map that is consistent with the area plan;
- A capital improvement plan developed in partnership with Los Angeles County Department of Public Works; and
- An environmental review document that uses the General Plan Programmatic EIR as a starting point to assess the environmental impacts of the area plan.

Planning Areas Descriptions

The following are profiles of the 11 Planning Areas. They include the identification of opportunity areas, which are important areas within each Planning Area due to their potential for infill development or redevelopment; access to public services and infrastructure; central role within a community; or potential for increased design and improvements to promote bike-friendly and pedestrian-friendly streets. Opportunity areas should be considered for further study when preparing community-based plans. The different types of opportunity areas are described in Table 2.8.

Table 2.8: Opportunity Area Typologies

Transit Centers	Areas that are supported by major public transit infrastructure. Transit centers are identified based on opportunities for a mix of higher intensity development, including multifamily housing, employment and commercial uses; infrastructure improvements; access to public services and infrastructure; central role within a community; or potential for increased design, and improvements that promote living streets and active transportation, such as trees, lighting, and bicycle lanes.
Neighborhood Centers	Areas with opportunities suitable for community-serving uses, including commercial only and mixed use development that combines housing with retail, service, office and other uses. Neighborhood centers are identified based on opportunities for a mix of uses, including housing and commercial uses; access to public services and infrastructure; central role within a community; or potential for increased design, and improvements that promote living streets and active transportation, such as street trees, lighting, and bicycle lanes.
Corridors	Areas along boulevards or major streets that provide connections between neighborhoods, employment and community centers. Corridors are identified based on opportunities for a mix of uses, including housing and commercial uses; access to public services and infrastructure; central role within a community; or potential for increased design, and improvements that promote living streets and active transportation, such as trees, lighting, and bicycle lanes.
Industrial Flex Districts	Industrial areas that provide opportunities for non-industrial uses and mixed uses, where appropriate, and also light industrial or office/professional uses that are compatible with residential uses.
Rural Town Centers	Focal points of rural communities, serving the daily needs of residents and providing local employment opportunities. Rural town centers are identified based on the opportunities for new public facilities and new commercial uses.

Antelope Valley Planning Area

Figure 2.6: Antelope Valley Planning Area

Planning Area Profile

Location

The Antelope Valley is located approximately 60 miles north of downtown Los Angeles. The unincorporated portion of the Antelope Valley Planning Area covers 1,800 square miles, or 44 percent of the 4,083 square miles in the County. The unincorporated Antelope Valley surrounds the City of Palmdale and City of Lancaster, and borders San Bernardino County to the east, Ventura County to the west, and Kern County to the north.

Population and Housing

Table 2.9: Antelope Valley Planning Area Population and Housing, 2010

	Entire Planning Area	Unincorporated Area	Percentage Unincorporated
Population	382,868	73,488	19%
Housing Units	125,317	26,939	21%

Source: 2010 U.S. Census

Table 2.10: Unincorporated Antelope Valley Planning Area, Race and Ethnicity,2010

Race	Population	Percentage
White	51,555	70%
Black or African American	4,505	6%
American Indian and Alaska Native	887	1%
Asian	1,475	2%
Native Hawaiian and Other Pacific Islander	132	0%
Some Other Race	11,692	16%
Two or More Races	3,242	4%
Total (Unincorporated)	73,488	100%

Ethnicity	Population	Percentage
Hispanic or Latino	27,069	37%
Not Hispanic or Latino	46,419	63%
Total (Unincorporated)	73,488	100%

Source: 2010 U.S. Census

Geography

The Antelope Valley Planning Area contains many diverse vegetative communities, geologic forms and climatic conditions. The Angeles National Forest, and the Liebre and Sierra Pelona Mountain Ranges, are located in the Planning Area. A large portion of the Planning Area includes mountain ranges, but the main land feature is flat desert, or the "High Desert," with elevations between 2,300 and 2,400 feet above sea level. The Planning Area contains the majority of the County's active agricultural land uses. The Antelope Valley Significant Ecological Area (SEA), San Andreas SEA, Joshua Tree Woodlands SEA, and Santa Clara River SEA also cover large portions of the Planning Area. The San Andreas Seismic Fault Zone, which cuts across the Planning Area, poses many significant hazards. In addition, a significant portion of the Planning Area faces threats of wildfires and floods.

Infrastructure

Two major freeways provide access to the Planning Area: Interstate-5, which is located in the western portion of the Planning Area, and links Northern and Southern California; and State Route-14, which connects the adjacent Santa Clarita Valley just north of metropolitan Los Angeles, to the eastern portion of the Antelope Valley. The High Desert Corridor project will connect State Route-14 with State Route-18 in San Bernardino County, and promote connectivity, traffic safety and goods movement.

In addition, Metrolink's Antelope Valley Line has three station stops in the Antelope Valley, which are located in unincorporated Acton, the City of Palmdale, and the City of Lancaster. Palmdale Regional Airport, General William J. Fox Airfield and Edwards Air Force Base are also located in the unincorporated Antelope Valley. Antelope Valley Transit Authority includes four local routes, two special routes, and three commuter routes that connect the Antelope Valley to other areas.

Economy

The largest economic sectors in the Antelope Valley include government, retail services, and manufacturing, in large part due to the major concentration of aerospace research and development activity. The government employs nearly 20 percent of all employed persons in the Planning Area. The Planning Area has a lower cost of doing business than many other cities in the County, with a pro-business environment in addition to special incentive zones. The Planning Area economy is affected by the availability of affordable land, and the prospect of locating an "inland port" to handle trade near the Palmdale Regional Airport, which may provide the Antelope Valley with an important economic opportunity.

Challenges to the Planning Area economy include limited transportation options; perceived problems with crime; a significant jobs-housing imbalance; and environmental constraints, such as extreme water shortages.

Planning Area Issues

The Planning Area is predominately rural in nature and has major constraints, including natural hazards, environmental issues, lack of infrastructure, and limited water supply. It is critical that existing rural communities, agriculture, natural resources, and biological diversity remain protected. In addition, incorporating water conservation strategies and encouraging the recycling of water is important. In the Planning Area, water comes from naturally occurring sources that accumulate from rain or snow and imported surface water collected in Northern California and piped down through the State Water Project.

As thousands of acres of desert lands have been subdivided over the past decade, the population of the Planning Area has increased significantly. While much of the growth has been at urban densities in and adjacent to the City of Palmdale and the City of Lancaster, the desirability of rural living and the availability of affordable housing has seen significant growth in the many unincorporated communities. In turn, many residents have had to commute further distances to access employment opportunities.

Figure 2.7: Opportunity Areas—Acton

Figure 2.8: Opportunity Areas—Antelope Acres

Figure 2.9: Opportunity Areas—Gorman

Figure 2.10: Opportunity Areas—Lake Hughes

Figure 2.11: Opportunity Areas—Lake Los Angeles

Figure 2.12: Opportunity Areas—Leona Valley

Figure 2.13: Opportunity Areas—Littlerock

Figure 2.14: Opportunity Areas—Pearblossom

Figure 2.15: Opportunity Areas—Quartz Hill

Figure 2.16: Opportunity Areas—Roosevelt

Figure 2.17: Opportunity Areas—Sun Village

The opportunity areas in the Planning Area are Rural Town Centers, as shown in Figures 2.7-2.17. Rural Town Centers represent focal points and community centers, and serve the daily needs of residents, provide local employment opportunities, and increase quality of life through aesthetics and cultural experiences. Rural Town Centers are intended to provide pedestrian-friendly environments, be accessible by a range of transportation options to reduce vehicle trips, and allow for a mix of commercial and residential uses.

Coastal Islands Planning Area

Figure 2.18: Coastal Islands Planning Area

Planning Area Profile

Location

San Clemente Island lies approximately 63 miles south of the City of Long Beach and 78 miles west of the City of San Diego. San Clemente Island is approximately 24 miles long and 5 miles across at its widest point. It has a land area of approximately 57 square miles. Since 1934, San Clemente Island has been owned and operated by the U.S. Navy. More than a dozen range and operational areas are clustered within a 60 mile radius of San Clemente Island. The Commander-in-Chief, Naval Forces, Pacific (CINCPACFLT) is the major claimant for San Clemente Island, and Naval Air Station North Island (NASNI) is responsible for its administration.

Santa Catalina Island is the only significantly inhabited island near the California coast. It is located approximately 22 miles south of the Palos Verdes Peninsula and 27 miles southwest of the Orange County shoreline. Santa Catalina Island is approximately 21 miles long and 8 miles wide. It has a land area of approximately 74 square miles.

Population and Housing

Table 2.11: Coastal Islands Planning Area Population and Housing, 2010

	Entire Planning Area	Unincorporated Area	Percentage Unincorporated
Population	4,096	368	9%
Housing Units	2,483	217	9%

Source: 2010 U.S. Census

Table 2.12: Unincorporated Costal Islands Planning Area, Race and Ethnicity, 2010

Race	Population	Percentage
White	300	82%
Black or African American	4	1%
American Indian and Alaska Native	4	1%
Asian	9	2%

Native Hawaiian and Other Pacific Islander	0	0%
Some Other Race	37	10%
Two or More Races	14	4%
Total (Unincorporated)	368	100%

Ethnicity	Population	Percentage
Hispanic or Latino	72	20%
Not Hispanic or Latino	296	80%
Total (Unincorporated)	368	100%

Source: 2010 U.S. Census

Geography

Santa Catalina Island is characterized by its rugged landscape and a cliffed shoreline. Level terrain is limited to the floors of a few large coastal canyons, such as Avalon, Pebbly Beach, White's Landing, Middle Ranch, Two Harbors, and Emerald Bay. Mt. Orizaba, which is located in the central part of Santa Catalina Island, is the highest peak with an elevation of 2,069 feet.

Infrastructure

The City of Avalon and the unincorporated community of Two Harbors are the major ports of entry, and the primary communities on Santa Catalina Island in terms of population and services. The actual roadway distance is 26 miles through rugged terrain, with an average driving time of 1 hour and 15 minutes. In addition, Santa Catalina Island is accessed via ferry or plane. Santa Catalina Island contains the Coastal Islands Planning Area's one airport–the Catalina Airport. Roads in the unincorporated areas of Santa Catalina Island are privately-owned, and access is restricted.

Economy

Over 80 percent of Santa Catalina Island has been set aside by the Catalina Island Conservancy, which is dedicated to conservation, recreation, education, and research programs. The primary economic driver on Santa Catalina Island is tourism and recreational-related activities, such as boating and fishing. The majority of visitor activities in the unincorporated areas occur in the Two Harbors area.

Planning Area Issues

San Clemente Island supports a number of endemic species as well as other species of special interest. Land use activities on the Island are regulated by the U.S. Navy.

For Santa Catalina Island, the County and the Santa Catalina Island Company signed a 50-year Open Space Easement Agreement in 1974, which calls for the preservation of Santa Catalina Island's natural character, and improvements to access and recreational opportunities. The Santa

Catalina Island Local Coastal Program (LCP), which was created in 1983 to meet the provisions of the California Coastal Act, implements the goals and requirements of this agreement and ensures that the vast majority of Santa Catalina Island remains in its natural state for future generations to enjoy. The LCP provides multiple policies to improve access to and increase the range of recreational and open space activities, as well as to preserve, protect and conserve Santa Catalina Island's open space and natural resources.

East San Gabriel Valley Planning Area

Figure 2.19: East San Gabriel Valley Planning Area

Planning Area Profile

Location

The East San Gabriel Valley Planning Area contains the easternmost areas of the County, and is located south of the Angeles National Forest, north of the Orange County border, and east of Interstate-605. The Planning Area's eastern border is the San Bernardino County line.

Population and Housing

Table 2.13: East San Gabriel Valley Planning Area Population and Housing, 2010

	Entire Planning Area	Unincorporated Area	Percentage Unincorporated
Population	933,116	234,251	25%
Housing Units	275,604	63,357	23%

Source: 2010 U.S. Census

Table 2.14: Unincorporated East San Gabriel Valley Planning Area, Race and Ethnicity, 2010

Race	Population	Percentage
White	102,440	44%
Black or African American	4,362	2%
American Indian and Alaska Native	1,791	1%
Asian	61,297	26%
Native Hawaiian and Other Pacific Islander	342	0%

Some Other Race	55,603	24%
Two or More Races	8,416	4%
Total (Unincorporated)	234,251	100%

Ethnicity	Population	Percentage
Hispanic or Latino	136,104	58%
Not Hispanic or Latino	98,147	42%
Total (Unincorporated)	234,251	100%

Source: 2010 U.S. Census

Geography

The Planning Area's geography is characterized by valleys and rolling, dry hills. The San Gabriel River runs along the Interstate-610 and the western boundary of the Planning Area. The Puente Hills form the southern border for the Planning Area, and include natural areas and recreational opportunities for the region. The northern portion of the Planning Area is characterized by the steep upgrade and urban-wildland interface with the Angeles National Forest and San Gabriel Mountains.

Infrastructure

The Planning Area is served by several major transportation infrastructure systems. The Interstate-10, Interstate/State Route-210 and State Route-60 all provide east-west access and the Interstate-605 and State Route-57 provide north-south access. The Planning Area is also served by the Metrolink commuter rail Riverside and San Bernardino lines, and Foothill Transit's local and regional bus services.

Economy

Over the past decades, the San Gabriel Valley has lost jobs in manufacturing, while gaining jobs in the international trade sectors. The biggest economic sectors in the Planning Area are professional and business services, retail, educational and health services, and international trade. The major educational institutions in the Planning Area include California State Polytechnic University Pomona, University of La Verne, Azusa Pacific University and the Claremont McKenna Colleges, which are important economic generators in the area.

Planning Area Issues

Transportation improvements will be critical for the long-term economic health of the Planning Area. The Planning Area is characterized primarily by single family residences. Traffic on the major east-west freeways, including the Interstate-10, Interstate-210 and State Route-60, is heavily congested during peak hours, with commuters generally traveling west in the morning for work and east in the evening to return home.

The primary constraints in the Planning Area are a growing shortage of large blocks of developable land and worsening traffic congestion. Many of the traditional suburbs within the Planning Area are

maturing and facing infrastructure capacity issues and limited mobility options. Specifically, solid waste and sewerage disposal are concerns: one of the primary landfills where solid waste is disposed will be closing in 2013. In addition, portions of the City of Diamond Bar, City of Pomona, City of San Dimas, City of Walnut, and the unincorporated areas are on septic systems, which are subject to failure and potential groundwater contamination if not properly maintained.

The Planning Area also includes environmental and hazardous constraints. The Puente Hills, which include portions of Rowland Heights and Hacienda Heights, contain fault traces and wildfire threats. Wildfires and landslides also pose safety hazards in the foothill communities. In addition, the Planning Area contains multiple SEAs.

Opportunity Areas

Figure 2.20: Opportunity Area—Avocado Heights

A portion of Valley Boulevard in Avocado Heights, which is located between Temple Avenue and Vineland Avenue, is identified as an Industrial Flex District. This area is shown in Figure 2.20. Although these parcels are currently used for industrial purposes, the shallow parcel sizes will make it difficult for any future high-use industrial redevelopment. There is an opportunity to encourage the redevelopment of this area as a supportive commercial use district to adjacent, high-employment work sites.

Figure 2.21: Opportunity Area—Charter Oak

Figure 2.21 identifies a corridor opportunity area along Arrow Highway in Charter Oak. Arrow Highway is a major thoroughfare that extends across many local jurisdictions in the San Gabriel Valley, including unincorporated areas of the County. In the community of Charter Oak, Arrow Highway includes mostly residential and a few commercial land uses, and has the potential for improved street and pedestrian improvements. In 2008, SCAG conducted a study on multi-jurisdictional corridor planning that analyzed Arrow Highway. The purpose of the study was to develop strategies to improve multi-jurisdictional coordination, transportation linkages, economic development, and overall street design and amenities.

Figure 2.22: Opportunity Area—Covina Islands

A small portion of Arrow Highway in the Covina Islands includes a mix of commercial, light industrial and automobile repair related services. This area, identified in Figure 2.22, is isolated due to the San Dimas Wash to the south, and the current industrial parcels are not viable in their current state for future employment-rich uses. The area at the intersection of Arrow Highway and Barranca Avenue as an Industrial Flex District with the potential to transition in the future to higher uses. There are highly-utilized industrial uses to the east in the City of Glendora, while residential, commercial and public uses surround this area in other directions.

Gateway Planning Area

Figure 2.23: Gateway Planning Area

Planning Area Profile

Location

The Gateway Planning Area is located in the southeastern portion of the County. The eastern border of the Planning Area is the Orange County line. The Planning Area contains a number of cities, including the City of Long Beach, as well as a large corridor of industrial areas that lead out of the Ports of Los Angeles and Long Beach into downtown Los Angeles. Unincorporated Rancho Dominguez consists primarily of industrially-designated land.

Population and Housing

Table 2.15: Gateway Planning Area Population and Housing, 2010

	Entire Planning Area	Unincorporated Area	Percentage Unincorporated
Population	1,666,588	103,094	6%
Housing Units	523,365	29,586	6%

Source: 2010 U.S. Census

Table 2.16: Unincorporated Gateway Planning Area, Race and Ethnicity, 2010

Race	Population	Percentage
White	61,748	60%
Black or African American	2,477	2%
American Indian and Alaska Native	1,265	1%
Asian	4,049	4%
Native Hawaiian and Other Pacific Islander	241	0%
Some Other Race	29,029	28%
Two or More Races	4,285	4%

Total (Unincorporated)	103,094	100%

Ethnicity	Population	Percentage
Hispanic or Latino	76,782	74%
Not Hispanic or Latino	26,312	26%
Total (Unincorporated)	103,094	100%

Source: 2010 U.S. Census

Geography

The Planning Area is built out, with little vacant land, and a large percentage of industrial land. Both the Los Angeles and San Gabriel rivers flow through the Planning Area, but there are few other distinguishing natural features.

Infrastructure

The Interstate-710, which is the primary trucking route for cargo moving to and from the Ports of Los Angeles and Long Beach, has increasingly become congested. Projects such as the Alameda Corridor demonstrate the importance of inter-jurisdictional efforts to aid in the region's economic development. The Planning Area is also bisected by the Interstate-405, State Route-91, Interstate-5, and Interstate-105. The Port of Long Beach, which combined with the Port of Los Angeles in the South Bay Planning Area, are the busiest container ports in the country, and create high volumes of truck and cargo traffic in the Planning Area along the Interstate-710. The region is served by Metro and Metrolink rail service.

Economy

The Planning Area has evolved from an expanse of citrus orchards to one of the most important and busiest industrial and logistical hubs in the country. This region contains the largest concentration of manufacturing jobs in the County, and is a hub for wholesale trade, warehousing and logistics. It is also home to three heavily-industrialized cities: Commerce, Santa Fe Springs, and Vernon. Although manufacturing is still a large part of the Planning Area's economy, over the years, the number of manufacturing jobs has declined. In addition, the Planning Area lacks high-tech industries and modern office and industrial space. Furthermore, because it is an older region, the Planning Area lacks large blocks of developable land, which constrains the growth of the region's industries.

Planning Area Issues

Industrial uses and trade and logistics from the Ports are an important part of the economy of Planning Area; however, the concentration of industrial uses and high truck traffic raises concerns over air and water pollution. As a large economic center with high-wage jobs, it is important to balance environmental and economic concerns in the Planning Area.

The Planning Area also suffers from a lack of parks and recreational opportunities. In certain communities, there is also a lack of multifamily housing opportunities and the need for revitalization.

Opportunity Areas

Figure 2.24: Opportunity Areas—Rancho Dominguez

In the industrial community of Rancho Dominguez, the area around the Del Amo Station for the Metro Blue Line can be used to encourage a transit-oriented jobs district, where employees can commute to work using the Metro. This transit center opportunity area is depicted in Figure 2.24.

Figure 2.25: Opportunity Areas—West Whittier-Los Nietos

Whittier Boulevard in West Whittier-Los Nietos, which is shown in Figure 2.25, is a major commercial corridor in which recent streetscape improvements have reactivated the street and could spur future redevelopment opportunities.

Metro Planning Area

Figure 2.26: Metro Planning Area

Planning Area Profile

Location

The Metro Planning Area is located in the geographic center of the County. The Planning Area is also home to and heavily defined by its proximity to downtown Los Angeles, which includes major corporations and professional firms, tourist and convention hotels, restaurants, retail, and the largest concentration of government offices outside of Washington D.C.

Population and Housing

Table 2.17: Metro Planning Area Population and Housing, 2010

	Entire Planning Area	Unincorporated Area	Percentage Unincorporated
Population	1,819,084	306,768	17%
Housing Units	586,832	79,236	14%

Source: 2010 U.S. Census

Table 2.18: Unincorporated Metro Planning Area, Race and Ethnicity, 2010

Race	Population	Percentage
White	118,358	39%
Black or African American	46,725	15%

American Indian and Alaska Native	3,000	1%
Asian	1,829	1%
Native Hawaiian and Other Pacific Islander	332	0%
Some Other Race	126,439	41%
Two or More Races	10,085	3%
Total (Unincorporated)	306,768	100%

Ethnicity	**Population**	**Percentage**
Hispanic or Latino	254,135	83%
Not Hispanic or Latino	52,633	17%
Total (Unincorporated)	306,768	100%

Source: 2010 U.S. Census

Geography

The majority of the Planning Area is heavily urbanized, with little variation in elevation. There are no large areas of natural open space, and there are few other distinguishing geographic features. All open space areas are contained with parks and recreational areas. The concrete-lined Los Angeles River and the Compton Creek tributary flow through the Planning Area. These waterways provide an opportunity for enhancement and serve as community assets.

Infrastructure

The Planning Area is transit-rich, in bus services and rail transit. The Planning Area also includes a heavily transit-dependent population. However, the Planning Area still suffers from a number of mobility issues, including the need for improved pedestrian safety and more bicycle facilities, and traffic congestion.

The presence of industrial districts in the Planning Area provides a strong foundation for job recovery and job growth. The Metro Blue Line traverses South Los Angeles on a north-south route, with stops in the heart of Willowbrook and three stops in Florence-Firestone. The Metro Green Line travels east-west along the Interstate-105, with stops in Willowbrook, Westmont-West Athens, and Lennox. Furthermore, the Gold Line runs along the Third Street corridor in unincorporated East Los Angeles, which presents additional opportunities for transit-oriented development. Many of these districts present opportunities for reinvestment and jobs.

Economy

The Planning Area has seen significant losses in the manufacturing sector over the last 20 years, and little to no overall economic or job growth. It is estimated that current unemployment rates in

some unincorporated communities are very high. The California Employment Development Department estimates Florence-Firestone to have a 25 percent unemployment rate, and West Athens-Westmont to have a 15 percent unemployment rate. The East Los Angeles area has had very little recent economic growth, and experienced a significant loss of manufacturing, which historically had been a stable economic presence in the area, in addition to government employment and educational and health services.

Planning Area Issues

Communities in the Planning Area are urbanized and are generally characterized by challenging physical and economic conditions. In terms of land use issues, several residential communities abut industrial uses, which create land use compatibility conflicts. Although housing affordability is an issue throughout the County, the Planning Area, in particular, faces issues of overcrowding. In addition, the Planning Area contains very few natural areas and open spaces. In particular, many of the constraints and challenges for planning and economic development are located in South Los Angeles. Although infill opportunities exist, many sites have a combination of environmental issues that affect their redevelopment potential. Much of the South Los Angeles is characterized by economically disadvantaged conditions that further hamper private investment and redevelopment. Public investment in redevelopment activities will be an important factor in the economic turnaround of South Los Angeles. For example, many opportunities exist for public-private partnerships to revitalize many of the older, commercial corridors with pedestrian amenities and mixed uses. There are also opportunities along the Metro Gold Line through East Los Angeles.

Opportunity Areas

The Planning Area has a number of opportunity areas, including:

Figure 2.27: Opportunity Areas—East Los Angeles

East Los Angeles is an older, urban community that is rich in history and culture. The community's transit center opportunity area, depicted in Figure 2.27, covers an area along 3rd Street and includes four transit stations along the Metro Gold Line. This area is ripe for complete street improvements, as well as pedestrian-scale and mixed use development that incorporate local commercial-serving uses and multifamily housing.

Figure 2.28: Opportunity Areas—East Rancho Dominguez

The Planning Area has opportunities for future planning efforts to improve its economic health. Atlantic Avenue and East Compton Boulevard are major commercial corridors with local-serving uses in the community of East Rancho Dominguez.

Figure 2.29: Opportunity Areas—Florence-Firestone

The community of Florence-Firestone is home to many opportunity areas, which are depicted in Figure 2.29. Central Avenue, which was once a hub of jazz culture, is in need of investment and redevelopment. The three-mile corridor is along the western border of the Florence-Firestone community, and abuts the City of Los Angeles. The northern portion of the corridor is primarily comprised of industrial and auto-related uses, and the southern portion of the corridor is predominantly commercial and residential. An abundant amount of vacant and underutilized land, coupled with the City of Los Angeles' efforts in the corridor, and the location of the Slauson, Florence

and Firestone stations for the Metro Blue Line, make the area prime for transit-oriented development and economic revitalization.

Figure 2.30: Opportunity Areas—Walnut Park

Figure 2.30 identifies the opportunity areas in the community of Walnut Park. Florence Avenue and Pacific Boulevard are active local commercial corridors that border the City of Huntington Park and the City of South Gate. The area supplies much of the retail, restaurants and services to the residents who live nearby. These corridors are considered opportunity areas because of their proximity to the Florence Station for the Metro Blue Line and the opportunity for increased design, pedestrian and bicyclist improvements, such as street trees, lighting and bicycle lanes.

Figure 2.31: Opportunity Areas—West Athens-Westmont

The transit center around the Vermont Station for the Metro Green Line in West Athens-Westmont presents an opportunity to capitalize on infrastructure investments in a community with high ridership, as identified in Figures 2.31. Vermont Avenue has the potential for increased economic vitality through the creation of employment-rich activities along the commercial corridors that are adjacent to the Metro station. In addition, the residential areas within the transit center would benefit from increased pedestrian amenities and design improvements. The width of Vermont Avenue, in particular, provides major opportunities for pedestrian and bicyclist improvements. Imperial Highway also connects the transit center opportunity area to the areas around the intersection of Western Avenue and Imperial Highway, which provide additional opportunities for design improvements.

Figure 2.32: Opportunity Areas—West Rancho Dominguez-Victoria

The intersection of El Segundo Boulevard and Avalon Boulevard in West Rancho Dominguez-Victoria, shown in Figure 2.32, has the potential to become an active local neighborhood center. The surrounding community is rich with public amenities, such as the Irvin Magic Johnson Park and the A.C. Bilbrew Library. In addition, the area has many multifamily sites, as well as vacant and underutilized commercial sites, along El Segundo Boulevard.

Figure 2.33: Opportunity Areas—Willowbrook

Significant opportunities exist in Willowbrook, particularly in the area surrounding the Martin Luther King, Jr. Multi-Service Ambulatory Care Center (MLK-MACC), as identified in Figure 2.33. The hospital is a public urgent care center and outpatient clinic that was originally founded as major public hospital, with over 500 beds. There are plans to reopen a smaller hospital in 2013 under a partnership between the County and the University of California as a non-profit organization. The rehabilitation and reuse of the site could be a catalyst for further redevelopment. Neighborhood amenities that support healthcare services and office uses, as well as connectivity with the nearby Rosa Parks Metro Blue/Green Line Station will be important factors in future planning activities in the area.

San Fernando Valley Planning Area

Figure 2.34: San Fernando Valley Planning Area

Planning Area Profile

Location

The San Fernando Valley Planning Area is bordered by the Santa Clarita Valley and the Angeles National Forest to the north, and the Santa Monica Mountains Planning Area and Westside Planning Area to the south. The Ventura County line is the western border of the Planning Area, and the San Gabriel Valley and downtown Los Angeles make up the eastern border.

Population and Housing

Table 2.19: San Fernando Valley Planning Area Population and Housing, 2010

	Entire Planning Area	Unincorporated Area	Percentage Unincorporated
Population	1,768,978	24,790	1%
Housing Units	637,906	9,545	1%

Source: 2010 U.S. Census

Table 2.20: Unincorporated San Fernando Valley Planning Area, Race and Ethnicity, 2010

Race	Population	Percentage
White	16,662	67%
Black or African American	290	1%
American Indian and Alaska Native	105	0%
Asian	5,873	24%
Native Hawaiian and Other Pacific Islander	20	0%
Some Other Race	854	3%
Two or More Races	986	4%

Total (Unincorporated)	24,790	100%

Ethnicity	Population	Percentage
Hispanic or Latino	3,350	14%
Not Hispanic or Latino	21,440	86%
Total (Unincorporated)	24,790	100%

Source: 2010 U.S. Census

Geography

The San Fernando Valley Planning Area has several distinguishing geographic characteristics. Almost the entire Planning Area is ringed with distinct hillsides and mountain ranges, including the Santa Susana Mountains to the northwest, the Simi Hills to the west, the Santa Monica Mountains and Chalk Hills to the south, the Verdugo Mountains to the east, and the San Gabriel Mountains to the northeast. Looking southeast, highrises from Downtown Los Angeles can be seen from higher neighborhoods, passes, and parks in the San Fernando Valley.

The Los Angeles River begins at the confluence of Calabasas Creek and Bell Creek and flows eastward along the southern regions of the Planning Area. One of the River's two unpaved sections can be found at the Sepulveda Basin. The seasonal river, the Tujunga Wash, drains much of the western facing San Gabriel Mountains, and passes through the Hansen Dam Recreation Center in Tujunga, south along the Verdugo Mountains, through the eastern communities of the Planning Area to join the Los Angeles River in Studio City. Mulholland Drive, which runs along the ridgeline of the Santa Monica Mountains, marks the boundary between the Planning Area and Hollywood and the westside of the City of Los Angeles.

Infrastructure

The development pattern in the Planning Area is almost exclusively suburban, and the automobile is the dominant mode of transportation. Several freeways cross the Planning Area, most notably, the Interstate-405, U.S. Route-101, State Route-118, and Interstate-5. The Planning Area includes the Universal City Station and North Hollywood Station along the Metro Red Line. The Metro Orange Line, an east-west rapid transit busway, connects the North Hollywood Station to points west of the Planning Area. Two Metrolink commuter rail lines connect the Planning Area to downtown Los Angeles. Amtrak's Pacific Surfliner has stations at Burbank Airport, Van Nuys and Chatsworth. Several Metro Rapid bus lines also serve the area.

Economy

The Planning Area is a major center for entertainment, tourism, professional and business services, education, health services, and manufacturing. California State University Northridge and four community colleges work closely with the private sector to train the Valley’s workforce of more than 750,000 people. Universal City is unincorporated land that houses the Universal Studios filming lot and is a large economic center within the Planning Area.

Planning Area Issues

Only a small portion of the Planning Area is unincorporated. These communities are primarily low-density, suburban communities, with the exception of Universal City, which houses Universal Studios, and Oat Mountain, which is primarily vacant land except for utility facilities. Many of these communities are near environmentally sensitive and hazardous areas. One of the main hazards facing these communities is wildfires. Sylmar Island, Lopez Canyon, Kagel Canyon, and large portions of La Crescenta–Montrose, Oat Mountain, Westhills, and Universal City are located within Very High Fire Hazard Severity Zones. In addition, portions of the Planning Area include SEAs. Economic challenges facing the Planning Area include an ongoing decline in manufacturing jobs, a shortage of new or improved industrial and office space, and worsening traffic congestion.

Opportunity Areas

Figure 2.35: Opportunity Area—La Crescenta-Montrose

Foothill Boulevard in La Crescenta-Montrose, as shown in Figure 2.35, is an active local commercial corridor. The corridor supplies much of the retail, restaurants and services to nearby residents. This corridor is considered an opportunity area for increased design, pedestrian and bicyclist improvements, such as street trees, lighting and bicycle lanes.

Santa Clarita Valley Planning Area

Figure 2.36: Santa Clarita Valley Planning Area

Planning Area Profile

Location

The Santa Clarita Planning Area is bordered to the west by the Ventura County line, to the north by the Los Padres National Forest and Angeles National Forest, to the east by the Angeles National Forest, and to the south by a major ridgeline that separates the Santa Clarita Valley from the San Fernando Valley. The Planning Area includes over 480 square miles, of which about 195 square miles are unincorporated. The Planning Area is located approximately 30 to 40 miles northwest of downtown Los Angeles.

Population and Housing

Table 2.21: Santa Clarita Valley Planning Area Population and Housing, 2010

	Entire Planning Area	Unincorporated Area	Percentage Unincorporated
Population	271,227	94,907	35%
Housing Units	91,094	29,039	32%

Source: 2010 U.S. Census

Table 2.22: Unincorporated Santa Clarita Valley Planning Area, Race and Ethnicity, 2010

Race	Population	Percentage
White	58,135	61%
Black or African American	6,283	7%
American Indian and Alaska Native	464	0%
Asian	13,230	14%
Native Hawaiian and Other Pacific Islander	135	0%
Some Other Race	12,001	13%
Two or More Races	4,659	5%
Total (Unincorporated)	94,907	100%

Ethnicity	Population	Percentage
Hispanic or Latino	26,041	27%
Not Hispanic or Latino	68,866	73%
Total (Unincorporated)	94,907	100%

Source: 2010 U.S. Census

Geography

The Planning Area is framed by the San Gabriel, Santa Susana, and Sierra Pelona Mountain Ranges, and the Angeles National Forest. The Santa Clara River flows from east to west from its headwaters near Acton to the Pacific Ocean. The Planning Area contains multiple geographic constraints to development, including large swaths of land that are covered by steeps hillsides, SEAs, and Very High Fire Hazard Severity Zones.

Infrastructure

The Planning Area is located at the convergence of several major transportation and utility facilities. The Southern Pacific Railroad, Interstate-5 and State Route-14, and two major aqueducts traverse the Planning Area. In addition, the Metrolink Antelope Valley Line has three station stops, which are located in the City of Santa Clarita. The Agua Dulce Airport is also located in the unincorporated community of Agua Dulce. Additionally, major oil, natural gas, and power lines transect the Planning Area.

Economy

The Planning Area contains a wide variety of retail, office, industrial, medical, and entertainment centers that provide employment, goods, and services to both regional and local market areas. The Planning Area is experiencing an increase in jobs, but not enough economic growth to achieve a jobs-housing balance. Many people in the region still commute great distances for their employment. The largest economic sectors in the Planning Area are professional and business services, with several growing industries including biomedical, entertainment, technology, and aerospace manufacturing, due to the availability of land and facilities, as well as a qualified workforce. From 1992 to 2005, almost 40,000 new jobs were created in the Planning Area. Between 2000 and 2005, job growth averaged about 3,900 jobs per year. Most of this job growth occurred in the manufacturing, services, retail trade, and construction sectors.

Planning Area Issues

Despite the sensitive and hazardous environment, the Planning Area is one of the fastest growing areas in the County. In the last 10 years, approximately 33,500 housing units have been approved in the unincorporated portions of the Planning Area. Due to this rapid growth, the Planning Area faces multiple challenges related to infrastructure planning, preservation of open space and biological diversity, jobs-housing balance, reducing vehicle miles traveled, and coordination of public services and facilities. Environmental impacts and traffic congestion related to increased development activities will be a hindrance on economic development, especially the availability of water.

Santa Monica Mountains Planning Area

Figure 2.37: Santa Monica Mountains Planning Area

Planning Area Profile

Location

The Santa Monica Mountains Planning Area covers the scenic Santa Monica Mountains and the shoreline along the Pacific Coast to the Ventura County border to the north and west, and up to the San Fernando Valley to the north. The eastern border is the Westside Planning Area and the City of Los Angeles.

Population and Housing

Table 2.23: Santa Monica Mountains Planning Area Population and Housing, 2010

	Entire Planning Area	Unincorporated Area	Percentage Unincorporated
Population	85,785	19,222	22%
Housing Units	34,529	7,081	21%

Source: 2010 U.S. Census

Table 2.24: Unincorporated Santa Monica Mountains Planning Area, Race and Ethnicity, 2010

Race	Population	Percentage
White	16,524	86%
Black or African American	440	2%
American Indian and Alaska Native	72	0%
Asian	1,015	5%
Native Hawaiian and Other Pacific Islander	11	0%
Some Other Race	418	2%
Two or More Races	742	4%
Total (Unincorporated)	19,222	100%

Ethnicity	Population	Percentage
Hispanic or Latino	1,551	8%
Not Hispanic or Latino	17,671	92%
Total (Unincorporated)	19,222	100%

Source: 2010 U.S. Census

Geography

The Planning Area provides recreational opportunities, such as hiking, bicycling, birding, horseback riding, swimming and camping, on county, federal and state parks and beaches, as well as privately-held conservancy land. The Santa Monica Mountains contain many environmentally sensitive areas.

Infrastructure

U.S.Route-101 and the Pacific Coast Highway (Highway 1) are the two major roads that service the Planning Area. There are many scenic roads throughout the Planning Area, two of which are state-designated scenic corridors: two portions of Mulholland Highway and the Malibu Canyon-Las Virgenes Highway. The rural nature of the Planning Area precludes widespread infrastructure and public services provision, and poses constraints to new development.

Economy

Visitor-serving commercial and recreational uses are the primary economic activities in the Planning Area. The primary land uses in the Santa Monica Mountains are open space and low-density single family residential. Nodes of local-serving commercial activity are scattered among a few locations in the Santa Monica Mountains.

Planning Area Issues

The Planning Area's natural beauty comes with multiple environmental issues and numerous natural hazards. The Planning Area contains an SEA and SERAs. Development pressures, particularly in the Santa Monica Mountains, sometimes result in a conflict between habitat protection and development. Maintaining recreational areas, protecting environmentally sensitive lands, expanding public access to the coast, and protecting residents from natural hazards are priorities in the Santa Monica Mountains Planning Area. In addition, a majority of the Planning Area is designated a Very High Fire Hazard Severity Zone. The Santa Monica Mountains are frequently struck by wildfires, which threaten the safety of people living along the Mountains' winding, narrow roads, which are often in very isolated locations. The Santa Monica Mountains are also subject to slope failure due to their geology and steep topography, particularly during rainstorms. Wildfire threats combined with limited road access pose dangers for area residents.

South Bay Planning Area

Figure 2.38: South Bay Planning Area

Planning Area Profile

Location

The South Bay Planning Area is located in the southwest corner of the County and includes the Port of Los Angeles. The Pacific Ocean provides the western boundary and the Gateway Planning Area and Metro Planning Area provide the eastern and northern borders. The Westside Planning Area lies directly north of the Planning Area.

Population and Housing

Table 2.25: South Bay Planning Area Population and Housing, 2010

	Entire Planning Area	Unincorporated Area	Percentage Unincorporated
Population	1,016,674	69,612	7%
Housing Units	373,187	21,348	6%

Source: 2010 U.S. Census

Table 2.26: Unincorporated South Bay Planning Area, Race and Ethnicity, 2010

Race	Population	Percentage
White	29,592	43%
Black or African American	4,711	7%
American Indian and Alaska Native	539	1%
Asian	10,133	15%
Native Hawaiian and Other Pacific Islander	697	1%
Some Other Race	20,508	29%
Two or More Races	3,432	5%
Total (Unincorporated)	69,612	100%

Ethnicity	Population	Percentage
Hispanic or Latino	40,504	58%
Not Hispanic or Latino	29,108	42%
Total (Unincorporated)	69,612	100%

Source: 2010 U.S. Census

Geography

The majority of the Planning Area is comprised of low-level areas of the County basin. The Palos Verde Peninsula is covered with hills, open spaces and affluent communities that abut dramatic cliffs and rocky shorelines along the Pacific Coast.

Infrastructure

The Planning Area is served mainly by four major freeways: Interstate-105, Interstate-405, Interstate-110, and State Route-91. The Metro Green Line also serves the Planning Area. Other transportation facilities in the region include Torrance Municipal Airport-Zamperini Field and Hawthorne Municipal Airport. The Los Angeles International Airport (LAX) is located on the northern portion of the Planning Area. The Port of Los Angeles is also located in the Planning Area.

Economy

The Planning Area is home to numerous offices for company headquarters, research and development facilities, manufacturing, health care, telecommunications, financial services, and international trade businesses. Educational institutions, such as California State University-Dominguez Hills and several community colleges provide training and degree programs to meet the needs of industry.

Planning Area Issues

Planning issues facing the Planning Area include traffic congestion, limited public transportation options, air quality concerns, and a lack of developable land. Also, due to the region's proximity and inclusion of major transportation hubs—LAX and the Ports of Long Beach and Los Angeles—goods movement has become an important part of the Planning Area's economy. However, goods movement also creates planning and environmental challenges. While physical infrastructure improvements are needed to ensure that freeways and streets are adequate to serve increased truck volumes, the massive increase in cargo volume has created significant air pollution impacts to neighboring communities. In addition, petroleum refining and flaring is a significant source of air pollution in the region.

Although manufacturing still plays an important role in the region's economy, certain communities have witnessed a decline in manufacturing/industrial uses in recent years. This creates both brownfield redevelopment potential and land use planning challenges. For instance, in unincorporated West Carson, abandoned industrial sites have been redeveloped into multifamily residential uses, which creates land use incompatibility between the new high-density residential developments and the adjacent active industrial uses. The Planning Area's proximity to LAX, one of the busiest airports in the world, also creates a unique land use planning challenge to the region. Neighboring communities, including unincorporated Del Aire, will need to continue their efforts in mitigating the noise impacts generated by aircraft on predominately single family residential areas.

Opportunity Areas

Figure 2.39: Opportunity Area—Alondra Park

The Crenshaw Boulevard corridor, depicted in Figure 2.39, only covers a small portion of Alondra Park, but includes a range of commercial uses and has potential for pedestrian-scale and mixed use development. In addition, Alondra Park is home to El Camino Community College, which makes this corridor an important connector for commuting students, faculty and staff. Future planning efforts must be closely coordinated with the City of Gardena, which has jurisdiction over the eastern portion of Crenshaw Boulevard.

Figure 2.40: Opportunity Area—Del Aire

The Del Aire opportunity area includes the Aviation/LAX Station on the Metro Green Line and a corridor along Inglewood Avenue. The transit center around the Metro station provides opportunities to activate the land uses adjacent to the station and provide design improvements, including pedestrian and bicycle amenities. Inglewood Avenue, as an existing commercial corridor with a mix of uses, including neighborhood-serving businesses, also provides opportunities for mixed use development, as well as design improvements for pedestrians and bicyclists.

Figure 2.41: Opportunity Area—Lennox

The Metro Green Line also includes the Hawthorne Station in Lennox. The corridor along Hawthorne Boulevard and the area at the intersection of Hawthorne Boulevard and Lennox Boulevard, within the transit center, provide opportunities for mixed uses, as well as design improvements.

Figure 2.42: Opportunity Area—West Carson

West Carson is home to many opportunity areas in the South Bay Planning Area, which are identified in Figure 2.42. Portions of West Carson have undergone transition from a warehousing and distribution center servicing the Port of Los Angeles, to a higher density residential community impacted by the rapid growth of the nearby City of Torrance and City of Carson. An Industrial Flex District identifies an area with an opportunity for industrial uses to transition to non-industrial uses through future planning efforts. Harbor-UCLA Medical Center, also located in West Carson, is a major employer and activity center in the area. Planned future expansions of the medical facility, as well as its proximity to the Metro Silver Line, provide redevelopment and infill opportunities in the surrounding neighborhoods.

West San Gabriel Valley Planning Area

Figure 2.43: West San Gabriel Valley Planning Area

Planning Area Profile

Location

The Angeles National Forest is the northern border of the West San Gabriel Planning Area, while downtown Los Angeles and the Gateway Planning Area comprise the southern border. The eastern border of the Planning Area is roughly the Interstate-605.

Population and Housing

Table 2.27: West San Gabriel Valley Planning Area Population and Housing, 2010

	Entire Planning Area	Unincorporated Area	Percentage Unincorporated
Population	895,543	103,181	12%
Housing Units	311,938	35,889	12%

Source: 2010 U.S. Census

Table 2.28: Unincorporated West San Gabriel Valley Planning Area, Race and Ethnicity, 2010

Race	Population	Percentage
White	47,748	46%
Black or African American	11,606	11%
American Indian and Alaska Native	619	1%
Asian	23,963	23%
Native Hawaiian and Other Pacific Islander	109	0%
Some Other Race	14,378	14%
Two or More Races	4,758	5%
Total (Unincorporated)	103,181	100%

Ethnicity	Population	Percentage
Hispanic or Latino	34,530	33%
Not Hispanic or Latino	68,651	67%
Total (Unincorporated)	103,181	100%

Source: 2010 U.S. Census

Geography

The Planning Area includes the San Gabriel Mountains and Angeles National Forest and provides a large range of open space and recreational opportunities for area residents. The San Gabriel River flows north-south along the Planning Area's eastern border and the Interstate-605. The Planning Area is almost entirely developed with historically suburban developments.

Infrastructure

Two major east-west freeways, Interstate-10 and Interstate/State Route-210, run through the Planning Area. In addition, the Metro Gold Line traverses the City of Pasadena and terminates adjacent to unincorporated East Pasadena-East San Gabriel. Metro has also approved the expansion of the Gold Line light rail to several communities in the Planning Area. Other available transit options include Foothill Transit, which operates multiple bus lines throughout the Planning Area. The El Monte Airport is also located in the Planning Area.

Economy

The West San Gabriel Valley Planning Area is employment-rich with several major employment centers, such as Jet Propulsion Laboratory and the California Institute of Technology. The Planning Area is also located near downtown Los Angeles and is the gateway for goods movement infrastructure heading east. Economic development opportunities exist in portions of the unincorporated areas of the Planning Area. In addition, opportunities exist in some older commercial corridors to facilitate mixed use development and pedestrian amenities.

Planning Area Issues

The Planning Area is comprised of mature, suburban communities, including some in the foothills of the San Gabriel Mountains. Some of these communities contain environmental resources and others face hazardous constraints. Portions of the Altadena and San Gabriel Canyon SEAs cover the Planning Area. In addition, many of the foothill communities are designated Very High Fire Hazard Severity Zones, which reflects the increased threats of wildfires and subsequent mudslides within those areas.

Many of the unincorporated areas are isolated islands of almost entirely residential development. It is important to integrate these islands into the fabric of their surrounding communities, where many of the services and daily needs of unincorporated residents are met.

Opportunity Areas

Figure 2.44: Opportunity Area—Altadena

Located in the heart of Altadena, Lake Avenue, between Altadena Drive and New York Drive, as shown in Figure 2.44, is a commercial corridor with various community-serving businesses, such as retail commercial, restaurants, services, and small professional offices. The Altadena Community Plan, which was adopted in 1986, envisions Lake Avenue to be the principal commercial center with commercial-residential mixed use developments.

Figure 2.45: Opportunity Area—East Pasadena-East San Gabriel

The intersection of Colorado Boulevard and Rosemead Boulevard in East Pasadena–East San Gabriel is an active local commercial center. Due to its proximity to the Sierra Madre Villa Station on the Metro Gold Line, this area has the opportunity for increased pedestrian and bicyclist improvements, as well as more transit-oriented developments. In addition, along Rosemead Boulevard, there are also a variety of retail commercial, restaurants, services and apartment complexes. This corridor is considered an opportunity area because it can serve as an extension of the transit center opportunity area, both of which are identified in Figure 2.45.

Figure 2.46: Opportunity Area—South Monrovia Islands

While Live Oak Boulevard in the unincorporated South Monrovia Islands only covers a few blocks, it is part of a major corridor that runs from the City of Arcadia to the west and the City of Irwindale to the east, as shown in Figure 2.46, which provides much of the retail, restaurants and services to nearby residents. This corridor is considered an opportunity area for its potential for increased design, pedestrian and bicyclist improvements, such as street trees, lighting, and bicycle lanes.

Westside Planning Area

Figure 2.47: Westside Planning Area

Planning Area Profile

Location

The Westside Planning Area covers the coastal communities along the Pacific Ocean, including Marina Del Rey, as well as the westside of the City of Los Angeles and other small cities, such as the City of Santa Monica and City of Beverly Hills.

Population and Housing

Table 2.29: Westside Planning Area Population and Housing, 2010

	Entire Planning Area	Unincorporated Area	Percentage Unincorporated
Population	974,646	27,407	3%
Housing Units	482,821	14,564	3%

Source: 2010 U.S. Census

Table 2.30: Unincorporated Westside Planning Area, Race and Ethnicity, 2010

Race	Population	Percentage
White	9,157	33%
Black or African American	14,981	55%
American Indian and Alaska Native	105	0%
Asian	1,236	5%
Native Hawaiian and Other Pacific Islander	18	0%
Some Other Race	572	2%
Two or More Races	1,338	5%
Total (Unincorporated)	27,407	100%

Ethnicity	Population	Percentage
Hispanic or Latino	1,907	7%
Not Hispanic or Latino	25,500	93%
Total (Unincorporated)	27,407	100%

Source: 2010 U.S. Census

Geography

The Planning Area has a diverse landscape. The western portion of the Planning Area is comprised of a string of beaches and Marina Del Rey. The Planning Area contains one of the few remaining wetlands in Ballona Creek. The eastern portion of the Planning Area includes the Baldwin Hills and Kenneth Hahn State Park, which provide natural areas and recreational opportunities for area residents. Marina Del Rey is one of the largest, man-made small boat harbors in the U.S. and is bounded by the City of Los Angeles.

Infrastructure

Opportunities for new development are being explored along planned Metro line expansions that will bring rail transit to the Planning Area. Although the Planning Area is served by multiple bus routes, it is not served by rail service and suffers from poor traffic conditions. The Metro Expo Line, which will run through Culver City, is currently under construction, and Metro is also in the planning stages of other rail projects in this area. In addition, there are two airports in the Planning Area: LAX and Santa Monica Municipal Airport. Marina Del Rey is a popular and highly active small boat harbor with 19 marinas with room for 5,300 boats.

Economy

The economy of the Planning Area is based on the entertainment industry, leisure and hospitality services, professional services, entrepreneurialism and design. The Planning Area has very low office vacancy rates and high rents. Major education institutions and employers include the University of California Los Angeles and Loyola Marymount University.

Planning Area Issues

Significant environmental resources exist in the Planning Area, most notably the Ballona Wetlands, which are threatened by potential sea level rise due to climate change. Marina Del Rey faces traffic congestion and housing affordability issues; however, protection of the coastline and fish and wildlife resources is unique to this coastal community. Large portions of the area, including Marina Del Rey, are located in a liquefaction zone. Marina Del Rey is also in a Tsunami Hazard Zone and is particularly susceptible to the negative impacts of climate change. In addition, most of Ladera Heights / View Park – Windsor Hills is in a Very High Fire Hazard Severity Zone. There is also a fault trace running through this community. The Planning Area is also home to a large urban oil field in Baldwin Hills.

Traffic congestion is one of the biggest issues facing the Planning Area. The Metro Purple Expo Line will bring light rail transit through Culver City to the westside of the City of Los Angeles, but the popular and populous northern routes are not served by rail transit. Another issue is the relatively

high cost of land and housing. The Planning Area is seen as a very desirable place to live and do business, but there is little land for new development and costs are high.

Opportunity Areas

Figure 2.48: Opportunity Area—Ladera Heights/View Park—Windsor Hills

The Slauson Boulevard opportunity area in Ladera Heights/ View Park – Windsor Hills, shown in Figure 2.48 is a commercial corridor with a major commercial center at the intersection of La Brea Avenue. The area is characterized by a mix of large parcels with regional commercial activities and small, main street style retail services and offices. Significant pedestrian improvements are needed at the intersection of La Brea Avenue to create an attractive, walkable center with linkages to nearby residential neighborhoods.

[Text Box]

Environmental Justice

Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.

An environmentally just Los Angeles County is a place where:

- Environmental risks, hazards, and public service related environmental services, such as trash hauling and landfills, are distributed equitably without discrimination;
- Existing and proposed negative environmental impacts are mitigated to the fullest extent to protect the public health, safety, and well-being;
- Access to environmental investments, benefits, and natural resources are equally distributed; and,
- Information, participation in decision-making, and access to justice in environment-related matters are accessible to all.

Part II: General Plan Elements

Chapter 3: Land Use Element

Table of Contents

I. Introduction

The Land Use Element addresses the General Plan Guiding Principles by ensuring a balance of land uses to meet the diverse needs of the unincorporated areas. The goals and policies of the Land Use Element, including mixed use and transit-oriented development, implement Smart Growth practices and provide guidance for the creation of Healthy, Livable, and Equitable Communities. The Land Use Element also provides the policy framework to plan for the County's growth, in accordance with the provision of Sufficient Community Services and Infrastructure to support this new growth. The Land Use Element addresses the need for a Strong and Diversified Economy by providing policy direction and the protection of the County's valuable industrial land. Similarly, the Land Use Element provides the framework to implement the County's Environmental Resource Management policies, which regulate the considerable natural and environmental resources in the County.

The Land Use Element provides strategies and planning tools to facilitate and guide future development and revitalization efforts in the County. In accordance with the California Government Code, the Land Use Element "designates the proposed general distribution and general location and extent of uses of land for housing, business, industry, open space, including agriculture, natural resources, recreation, and enjoyment of scenic beauty, education, public buildings and grounds, solid and liquid waste disposal facilities, and other categories of public and private uses of land." In addition, the Government Code states that the "location and designation of the extent of the uses of the land for public and private uses shall consider the identification of land and natural resources..." and "include a statement of the standards of population density and building intensity recommended for the various districts and other territory covered by the plan." Furthermore, the Government Code requires the exchange of project related information pertinent to military operations, and considerations for "the impact of new growth on military readiness activities carried out on military bases, installations, and operation 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."

II. Background

Land Uses

As shown in Table 3.1, over half of the County's unincorporated land area is designated a natural resources land use category. The next highest land use is rural, which accounts for 39 percent of the unincorporated areas, followed by residential, which accounts for three percent of the unincorporated areas.

Table 3.1: Total Land Use Policy

General Land Use Category	Acres*
Residential	54,741
Rural	651,272
Commercial	5,588
Industrial	9,162
Natural Resources	881,526
Public and Semi Public	32,597
Mixed Use	758
Specific Plan	14,114
Other**	1,087
Total:	1,650,845

* Acreage includes all unincorporated territory in the County with the exception of rights-of-way. As a result of the update of Assessor Parcel data, new right-of-ways have been dedicated since the release of the EIR NOP in August of 2011; so the total acreage between this table and Table C.3 differs by 67 acres.

** Some area and community plans have special categories that do not fit into the scheme of the proposed Land Use Policy categories (such as "special use sites," parking areas, senior citizen density bonus areas, etc.)

Special Management Areas

The County's Special Management Areas require additional development regulations that are necessary to prevent the loss of life and property, and to protect the natural environment and important resources.

The General Plan minimizes risks to hazards, manages, and discourages development in Special Management Areas through goals and policies. The Hazard and Environmental Constraints Model, which is a visual representation of some of the Special Management Areas, is intended to inform land use policies that are developed as part of future community-based planning efforts; inform applicants of potential site constraints and regulations; and to direct land use policies and the development of planning regulations and procedures to address hazards, environmental and resource constraints. For more information on the Hazard, Environmental and Resource Constraints Model, please refer to Appendix C.

Figure 3.1: Special Management Areas Policy Map

Special Management Areas are comprised of the following:

Agricultural Resource Areas

Agricultural Resource Areas (ARAs) consist of areas that have been historically farmed, as well as farmland identified by the California Department of Conservation. The County encourages the preservation of agricultural land, agricultural activities and compatible uses within these areas. Agricultural Resource Areas are described in greater detail in the Conservation and Natural Resources Element.

Airport Influence Areas

Airport Influence Areas are comprised of noise contours and runway protection zones, and airport property. With certain exceptions, all developments located in an Airport Influence Area are subject to review by the Airport Land Use Commission for compliance with noise and safety regulations.

Coastal Zone

The County has five unincorporated areas in the state-designated coastal zone: Santa Catalina Island, Marina Del Rey, Santa Monica Mountains, Ballona Wetlands, and San Clemente Island. In accordance with the California Coastal Act, all development within the coastal zone must first obtain a Coastal Development Permit (CDP). Local Coastal Programs (LCPs) establish detailed land use policy and development standards within their respective coastal zone segments.

The County has certified LCPs for Santa Catalina Island and Marina Del Rey, which give the County authority over proposed developments. Prior to the certification of an LCP, specific development proposals are reviewed by the County for consistency with the General Plan, but the authority to issue CDPs lies with the California Coastal Commission.

The County has designated several types of coastal resources that must be protected. These resources include: Environmentally Sensitive Habitat Areas; Significant Woodlands and Savannahs; Significant Watersheds; Malibu Cold Creek Resource Management Area; and Wildlife Migration Corridor. Coastal zone areas are described in greater detail in the Conservation and Natural Resources Element.

Historic, Cultural and Paleontological Resources

Historic, Cultural and Paleontological Resources include historic buildings, structures, Native American artifacts or sites, and districts of historical, architectural, archaeological, or paleontological significance, which are officially recognized by the California Office of Historic Preservation or identified in authoritative surveys of archaeological societies, historical societies, or academic

studies. Historic, Cultural and Paleontological Resources are described in greater detail in the Conservation and Natural Resources Element.

Flood Hazard Zones

Flood Hazard Zones are areas subject to flooding, which are delineated as a special hazard area, or an area of moderate or minimal hazard on a Federal Emergency Management Agency (FEMA) issued flood insurance rate map. The identification of a Flood Hazard Zone does not imply that areas beyond, or the uses permitted within its boundaries will be free from flooding or flood damage. Flood Hazard Zones are described in greater detail in the Safety Element.

Mineral Resources

Mineral resources are commercially viable mineral or aggregate deposits, such as sand, gravel, and other construction aggregate, as well as crude oil and natural gas deposits. The County's Mineral Resources consist of the California Geological Survey's identified deposits of regionally significant aggregate resources. Mineral Resources are described in greater detail in the Conservation and Natural Resources Element.

Military Installations and Operation Areas

The U.S. Department of Defense is responsible for thousands of acres in the County, including installations and facilities in the interest of national security. Military Installations and Operation Areas, as shown in Figure 3.2, require coordination to ensure that adjacent land uses are compatible with military operations. The management of natural resources within the Military Installations and Operation Areas are described in greater detail in the Conservation and Natural Resources Element.

Figure 3.2 shows the boundaries and minimum altitudes for the military operation areas. A military operation area is a three-dimensional airspace designated for military training and transport activities that have a defined floor (minimum altitude) and ceiling (maximum altitude). Within the County, there are several military operation areas used by military aircraft to practice high and low altitude training exercises and routes used to traverse between military installations. Additionally, in and around the military operation areas, testing is conducted to maintain military readiness.

In guiding growth and development in the County, it is important to consider the critical role of MOAs in support of national defense. The General Plan considers all future land uses that seriously impact or hinder the military's training and testing capabilities incompatible land uses.

Figure 3.2: Military Installations and Operation Areas

National Forests

The Los Padres National Forest and Angeles National Forest encompass nearly 650,000 acres of land within the County. Nearly 40,000 acres are privately-owned. For these parcels, commonly referred to as in-holdings, the County retains responsibility for land use regulation. Any privately-owned parcels in the national forests should be regulated in a manner that is consistent with the overall mission and management plans of the national forests, which the U.S. Forest Service prepare and periodically update. The national forests are described in greater detail in the Conservation and Natural Resources Element.

Open Space Resource Areas

The County's Open Space Resource Areas refer to public and private lands, and waters that are preserved in perpetuity or for long-term open space and recreational uses. Existing open spaces in the unincorporated areas of the County include County parks and beaches, conservancy lands, state parklands, and federal lands. Open spaces can also include deed-restricted open space parcels and easements. Open Space Resource Areas are described in greater detail in the Conservation and Natural Resources Element.

Scenic Resource Areas

Hillside Management Areas (HMAs) are mountainous or foothill terrain with a natural slope of 25 percent or greater. The purpose of the Hillside Management Ordinance in Title 22 of the Los Angeles County Code is to regulate development within Hillside Management Areas to: protect the public from natural hazards associated with steep hillsides and to mitigate the effects of development and grading on the County's scenic resources. In addition to HMAs, the General Plan protects ridgelines, scenic viewsheds, and areas along scenic highways. Scenic Resource Areas are described in greater detail in the Conservation and Natural Resources Element.

Seismic and Geotechnical Hazard Zones

Seismic and Geotechnical Hazard Zones include active and potentially active faults identified by the California State Division of Mines and Geology under the provisions of the Alquist-Priolo Earthquake Fault Zones Act (California Public Resources Code, Division 2, Chapter 7.5), as well as faults that are considered active based on published and unpublished information. The Seismic and Geotechnical Hazard Zones also include seismically-induced liquefaction and landslide areas. Seismic and Geotechnical Hazard Zones are described in greater detail in the Safety Element.

Significant Ecological Areas

A Significant Ecological Area (SEA) designation is given to land in the County that contains irreplaceable biological resources. Cumulatively, the 27 SEAs and two Coastal Resource Areas represent the wide-ranging biodiversity of the County, and contain its most important biological resources. Individual SEAs include undisturbed or lightly disturbed habitat supporting valuable and threatened species, linkages and corridors to promote species movement, and are sized to support sustainable populations of its component species. The SEA Program is described in greater detail in the Conservation and Natural Resources Element.

Very High Fire Hazard Severity Zones

In conjunction with the Forestry Division of the Los Angeles County Fire Department, woodland and brush areas with high fire potential have been identified as Very High Fire Hazard Severity Zones. Very High Fire Hazard Severity Zones are discussed in greater detail in the Safety Element.

Other Considerations

As the constitution for local development, the General Plan guides all activities that affect the physical environment. The General Plan Land Use Policy Map and Land Use Legend serve as the "blueprint" for how the land in the County will be used to accommodate growth and change in the unincorporated areas.

General Plan Amendments

The General Plan should be amended periodically and through a comprehensive, community-based effort to address changes to community priorities, demographics or economic trends. Project-specific amendments must be consistent with the General Plan's overall intent, goals and policies. Amending the General Plan in a piecemeal, incremental fashion may lead to a land use pattern that is out of character with the overall intent of the General Plan.

Zoning

The General Plan Land Use Policy Map establishes the long-range vision, and general intended uses, densities and/or intensities of the land. The County's Zoning Code and Subdivision Code, and Zoning Map, are General Plan implementation tools that provide details on specific allowable uses, design and development standards, and procedures. Zoning and subdivision regulations set the standards that govern the division, design and use of individual parcels of land, including minimum lot size, lot configuration, access, height restrictions, and front and rear yard setback standards for structures. The Zoning Map is required to be consistent with the General Plan Land Use Policy Map.

For more information on the Los Angeles County Zoning and Subdivision Codes (Titles 21 and 22), please visit the Los Angeles County Department of Regional Planning's web site at http://planning.lacounty.gov.

Specific Plans

A specific plan is a tool to systematically implement the General Plan within an identified project area. Specific plans are used to ensure that multiple property owners and developers adhere to a common plan or coordinate multiple phases of a long-term development. Specific plans must further the goals and policies of the General Plan. No specific plan may be adopted or amended unless the proposed plan or amendment is consistent with the General Plan. No local public works project may be approved, no tentative map or parcel map for which a tentative map was not required may be approved, and no zoning ordinance may be adopted or amended within an area covered by a specific plan unless it is consistent with the adopted specific plan.

California Government Code Sections 65450 et seq. require specific plans to include text and a diagram(s) to detail the following:

- Distribution, location, extent of the uses of land, including open space, within the project area;

- Proposed distribution, location and extent and intensity of major components of public and private transportation, sewage, water, drainage, solid waste disposal, energy, and other essential facilities proposed to be located within the project area and needed to support the land uses described in the specific plan;

- Standards and criteria by which development will proceed and, where applicable, standards for conservation, development, and utilization of natural resources; and

- Implementation measures, including regulations, programs, public works projects, and financing measures necessary to carry out the above.

Specific plans must include a statement of the relationship of the specific plan to the General Plan, and may also include provisions regarding affordable housing, resource management, development

requirements or any other matter relevant to the project area. In addition, a specific plan must be prepared, adopted, and amended in the same manner as a general plan, except that a specific plan may be adopted by resolution or by ordinance and may be amended as often as deemed necessary by the Los Angeles County Board of Supervisors. A specific plan may be repealed in the same manner as it is required to be amended. Furthermore, a specific plan may be initiated by the public or private sector; however, the responsibility for the adoption, amendment, and repeal lies with the Los Angeles County Board of Supervisors.

The Specific Plan Overlay in the General Plan Land Use Legend identifies the boundaries and shows the relationship of specific plans to the General Plan Land Use Policy Map. For existing specific plans, which are depicted with an "SP" land use designation, the General Plan Land Use Policy Map shall be amended as part of a comprehensive area planning effort, to identify existing specific plans using the Specific Plan Overlay.

The following is a list of existing specific plans:

- Canyon Park Specific Plan (adopted 1986)
- La Viña Specific Plan (adopted 1989)
- Santa Catalina Island Specific Plan (component of Local Coastal Program; adopted 1989)
- Marina Del Rey Specific Plan (component of Local Coastal Program; adopted 1990)
- Northlake Specific Plan (adopted 1993)
- Newhall Ranch Specific Plan (adopted 1999)

Development Agreements

A development agreement is a negotiated contract between the County and a private developer that, among other things, locks in land use and zoning regulations for the duration of the agreement. A development agreement provides assurance to an applicant that a development may proceed in accordance with existing policies, rules and regulations, and conditions of approval in effect at the time the agreement is adopted. The agreement in turn allows the County to negotiate a wider range of public benefits, including but not limited to, affordable housing, civic art, open space, or other amenities not authorized by current ordinances.

A development agreement must specify the duration of the agreement, the permitted uses of the property, the density or intensity of use, the maximum height and size of proposed buildings, and provisions for reservation or dedication or land for public purposes. It may include fees, conditions, terms, restrictions, and requirements for subsequent discretionary actions. However, any future actions must not prevent the development of the land for the uses and the density or intensity of development set forth in the agreement. Furthermore, the agreement may also include timeframes for commencing or completing construction, and terms and conditions of financing necessary public facilities and subsequent reimbursement.

Government Code Sections 65865 et seq. authorize the Los Angeles County Board of Supervisors to adopt development agreements by ordinance. At the time of adoption, a development agreement must be consistent with the General Plan and any applicable specific plan. A development agreement is subject to referendum.

Intensity Calculations

Allowable Residential Units Calculation

Residential density shall be calculated using the net area of the project site, unless the property is on land that is designated Rural Land. The net area excludes dedicated streets and private easements (e.g., access) where the owner of the underlying parcel does not have the right to use the entire surface. All proposed residential densities must fit within the range specified by the land use designation in the General Plan Land Use Legend.

For any Rural Land designation, the residential density shall be calculated using the gross area of the parcel(s). The gross area of a parcel includes dedicated streets and private easements.

Floor Area Ratio (FAR) Calculation

Floor Area Ratio (FAR) is the ratio of the total covered area on all floors of all buildings to the area of the project site. As a formula, FAR = (total covered area on all floors of all buildings)/ (area of the project site).

III. Issues

1. The Impacts of Sprawl

Sprawl is a low-density land use pattern that extends development into greenfields and other undeveloped lands with limited or no infrastructure and transit options. A sprawling land use pattern puts the County at risk of losing natural resources, such as agricultural lands, and will contribute to the fragmentation and isolation of the County's open space areas. In addition, as sprawl is commonly located in areas with limited or no transit options, continuing this land use pattern contributes to traffic congestion, air pollution, and greenhouse gas emissions.

The General Plan employs a two-fold approach to land management and the creation of healthy communities:

- Discourage development in the County’s natural resource and hazardous areas; and
- Focus growth in areas with existing infrastructure, access to community services, and transit opportunities, especially within Transit Oriented Districts (TODs).

2. Creating Opportunities for Infill Development

As an alternative to sprawl, infill development focuses new development activities on sites within existing urbanized areas. Infill development contributes to a compact form of development that is less consumptive of land and resources. It also reduces the costs of providing public infrastructure and services. It is important to recognize the opportunities and challenges of facilitating infill development in the unincorporated areas.

Transit Oriented Development

Areas with access to major transit and commercial corridors have the most potential for infill development. Transit-oriented development is well-suited for higher density housing and mixed uses, and nodes of commercial and civic activities. Transit-oriented development provides

opportunities to promote regional connectivity between neighborhoods, and community and employment centers through a broad network of pedestrian, bicycle, transit, and roadway facilities.

Transit Oriented Districts (TODs)

TODs are areas that are within a 1/2 mile radius from a major transit stop, with development and design standards, and incentives to facilitate transit-oriented development. Figure 3.3 shows the location of the following 11 TODs established by the General Plan:

- Aviation/LAX Station TOD (Metro Green Line)
- Hawthorne/Lennox Station TOD (Metro Green Line)
- Vermont/Athens Station TOD (Metro Green Line)
- Willowbrook Station TOD (Metro Green Line/Blue Line)
- Slauson Station TOD (Metro Blue Line)
- Florence Station TOD (Metro Blue Line)
- Firestone Station TOD (Metro Blue Line)
- Del Amo Station TOD (Metro Blue Line)
- Sierra Madre Villa Station TOD (Metro Gold Line)
- Third Street TOD Corridor (Metro Gold Line)
- 110 Freeway/Carson Station TOD (connection to Metro Silver Line)

All TODs will be implemented by TOD station area plans, with standards, regulations, and infrastructure plans that tailor to the unique characteristics and needs of each community, and address issues such as access and connectivity, pedestrian improvements, and safety.

The TOD station area plans will need to address existing challenges within many of the County's TODs. For example, many of the transit stations that serve the unincorporated areas are located in the middle of freeways, which limit access to the station, expose residents to traffic and noise pollution, and create hostile environments for pedestrians. Another challenge to implementing TODs is the existing development patterns around the transit stations. As many of the lots are small, developments will require lot consolidation and incentives to utilize higher densities.

Figure 3.3: Transit Oriented Districts Policy Map

Vacant and Underutilized Parcels

Infill potential in urbanized areas is measured by the amount of vacant and underutilized parcels within an area. Many vacant or underutilized parcels in infill areas suffer from site constraints that make it difficult to meet current zoning regulations and development standards. For example, many infill parcels along major commercial corridors are shallow or narrow, and new parking, landscaping or drainage requirements may require more land area than physically or financially feasible. Regulatory incentives are needed to encourage development on these sites.

Brownfields

Brownfield sites are former industrial or commercial sites that are abandoned or underutilized due to real or perceived environmental contamination from previous or current uses. Brownfield redevelopment presents the County with opportunities to redevelop sites for new industries and employment sectors, increase housing and commercial infill development, and promote joint public-private development efforts, while simultaneously eliminating environmentally damaged sites in unincorporated communities.

The costs and liability associated with the remediation of brownfield sites, however, acts as a deterrent to redevelopment. Existing legislation limits the liability of existing or future owners of brownfield sites, and places the burden of the remediation costs on the past polluters of the site. The provision of technical assistance, financing and other programs are necessary to promote brownfields redevelopment.

Adaptive Reuse

Older and often historically significant buildings can be recycled and converted into other uses, such as multifamily residential developments, live and work units, mixed use developments, or commercial uses. Adaptive reuse can play a key role in revitalizing older, economically-distressed neighborhoods. However, preexisting building conditions, such as building location, footprint and size, contribute to the difficulty in meeting current zoning regulations and development standards. Regulatory incentives are needed to encourage the adaptive reuse of older buildings.

3. Land Use Compatibility and Distribution

Land Use Compatibility

Land use conflicts over noise, odor, exposure to hazards, and community character is an important consideration in land use planning. The placement and distribution of land uses has a significant impact on the quality of life. Certain intensive land uses, such as heavy industrial or heavy agricultural uses, should be segregated from residential neighborhoods for health and safety reasons. The General Plan addresses land use compatibility by mapping and regulating uses and intensities, and including policies and programs that encourage the mitigation of land use conflicts through design techniques, such as the use of landscaping, walls, building orientation, and performance standards. The General Plan also encourages developments that are compatible with community identity and character and existing conditions, such as rural and natural environmental settings.

Major facilities, such as landfills, solid waste disposal sites, energy facilities, military installations, and airports should be protected from the encroachment of incompatible uses. For example, the County's Airport Land Use Plan, which was adopted by the Airport Land Use Commission (ALUC) in 1991, addresses compatibility between airports and surrounding land uses by addressing noise, overflight, safety, and airspace protection concerns to minimize the public's exposure to excessive noise and safety hazards within Airport Influence Areas. The County's Airport Influence Areas are shown in Figure 3.4.

Figure 3.4: Airport Influence Areas Policy Map

Planning for Various Needs through Land Use Planning

As discussed in the Housing Element, there is a need to plan for denser and more compact housing types to accommodate the housing needs of the growing senior citizen population, younger individuals living alone, low-income households, and others who need and/or desire apartments, condominiums, and smaller, more affordable housing units.

As discussed in the Economic Development Element, land suitable for employment-rich businesses and industrial uses is an invaluable economic resource. The County must identify areas that are appropriate to accommodate job growth and support increased demand for goods and services. While land intensive commercial activities generally serve regional and local needs, and are best

located within major transportation corridors, there is also a need for community-serving commercial uses in proximity to residential neighborhoods. The inclusion of complementary land uses within local communities, such as local-serving grocery stores, parks and schools in residential neighborhoods, or community-serving uses near employment centers, can promote a balanced distribution of jobs, housing, and services.

Community-serving uses, such as early care and education falls short of meeting the demand. There is a need to ensure that all households in the County have access to a sufficient supply of quality early care and education and supervised school-age enrichment options for children from birth to 13. In conjunction with the goals, strategies and objectives of the County's Child Care Policy Framework and Child Care Planning Committee, the General Plan encourages and facilitates the development of early care and education in the unincorporated areas. For more information, please visit the CEO Office of Child Care web site at http://childcare.lacounty.gov.

4. Planning for Sustainable and Livable Communities

Improving and fostering good community design, understanding the importance of the arts and public health in land use planning and design, and encouraging sustainable subdivision design are important considerations in planning for sustainable and livable communities.

Community Design

Community design relates to the physical character and order of a community, and the relationship between people and their environment, and with each other. Community design is the understanding that what constitutes "good" design is entirely dependent on the context and perspective of each individual community. Community design in rural areas in the Antelope Valley could be different from community design in urbanized communities, such as East Los Angeles and Florence-Firestone.

Community design does not focus on the architectural style of a specific building or site, but rather groups of related elements and uses that when taken together, define a community. Community design considers the adjacency of building entry and sidewalk, the scale of new buildings relative to neighboring structures, and the relationship of the street to the sidewalk. Other examples include designing neighborhood gateways, streetscape improvements on a commercial corridor, consistent landscaping for streets, and uniform signage that can designate a special district within a community. Successful community design standards build upon the characteristics of both the natural and man-made environments that are unique to each community.

The General Plan establishes the foundation for general community design policies that help create a "sense of place" and uniqueness within the diverse communities of the unincorporated areas.

The Role of the Arts

Artistic and cultural resources are important components of livable places. Civic art can be used in conjunction with other community design efforts to sustain and enhance policy direction, community character, and a sense of place in planning initiatives and policies. The arts play a central role in comprehensive community revitalization efforts that include public safety, health, education, affordable housing, transportation, planning, and design.

The General Plan protects existing art and cultural assets, and promotes the creation of new art to enhance communities. The General Plan also includes implementation programs that promote creative place-making to enhance the physical and social character of healthy, livable communities.

Public Health in Land Use Planning

The General Plan addresses public health by facilitating the creation of communities in which residents can be physically active, safe, and healthy.

Land use that promotes physical activity and access to healthy food is a strategy to address the obesity epidemic and corresponding high rates of chronic diseases in the County. In addition, policies to address environmental conditions, such as poor air quality, polluted stormwater runoff, deteriorated housing conditions, and ground and surface contamination have a direct impact on public health. Furthermore, promoting safety through improvements in the County's bikeway network, the creation of pedestrian-friendly environments and complete streets that are accessible to all users produce positive outcomes from a land use and public health perspective.

Sustainable Subdivision Design

Below are techniques that could help achieve a range of sustainability objectives in subdivisions.

Energy Efficient Lot Design

The size, shape and orientation of a lot are important considerations in achieving energy-efficient building designs. Energy-efficient lot design maximizes solar access during the cooler months, while minimizing solar access during the warmer months. The slope of the land also has implications for lot design and energy-efficiency. Constructing roads to follow slope contours can reduce construction costs and minimize energy inputs to the development of the site.

Density Controlled Design, Natural Resource Conservation, and Hazard Mitigation

Density controlled subdivision design allows buildings to locate closer together on a smaller portion of land so that larger, contiguous natural resource areas may be conserved in a cohesive manner. Density controlled design can also mitigate the exposure of residential uses to hazards, such as wildfires, through the siting and design of open space.

Street Patterns, Public Transportation and Implications for Accessibility

An interconnected street pattern that minimizes cul-de-sacs and dead ends provides increased safety and a greater number of route options for pedestrians, bicyclists and motorists. Interconnected streets also provide direct access to schools and neighborhood shopping without cars. Interconnected streets disperse rather than concentrate vehicular traffic, decrease trip lengths for all road users, and improve local and regional accessibility.

IV. Land Use Legend

The General Plan Land Use Legend, Table 3.2, describes the designations that guide land use and development activities in the unincorporated areas of the County. The land use legends for existing community-based plans and existing specific plans shall be updated, as needed, to reflect the General Plan Land Use Legend as part of a comprehensive area planning effort. An exception to this is for coastal land use plans, which are subject to the California Coastal Act and to review by the California Coastal Commission.

The General Plan Land Use Legend provides general intended uses and intensities. For specific use types, development and design standards and procedures, please refer to the Zoning Code. For an estimate of population density for each land use designation, please refer to Appendix C.

When specified, and under limited circumstances, the General Plan permits deviations to the Land Use Legend and Land Use Policy Map, such as an increase in density above the maximum allowable density. These include the allowance of state-mandated density bonuses for affordable and senior citizen housing, as well as other incentive-based local ordinances that implement the goals of the General Plan.

Table 3.2: Land Use Designations

Land Use	Code	Permitted Density or FAR	Purpose
RURAL			
Rural Land	RL1	Maximum 1 du/1 gross ac Maximum FAR 0.5	Purpose: Single family residences; equestrian and limited animal uses; and limited agricultural and related activities.
	RL2	Maximum 1 du/2 gross ac Maximum FAR 0.5	
	RL5	Maximum 1 du/5 gross ac Maximum FAR 0.5	
	RL10	Maximum 1 du/10 gross ac Maximum FAR 0.5	Purpose: Single family residences; equestrian and animal uses; and agricultural and related activities.
	RL20	Maximum 1 du/20 gross ac Maximum FAR 0.5	
	RL40	Maximum 1 du/40 gross ac Maximum FAR 0.5	

Land Use	Code	Permitted Density or FAR	Purpose
RESIDENTIAL			
Residential 2	H2	0–2 du/net ac	Purpose: Low-density, single family residences.
Residential 5	H5	0–5 du/net ac	
Residential 9	H9	0–9 du/net ac	Purpose: Single family residences.
Residential 18	H18	0–18 du/net ac	Purpose: Transitional single family and small-scale multifamily residences, including duplexes, triplexes, fourplexes, rowhouses, small lot subdivisions, and townhomes.
Residential 30	H30	0–30 du/net ac	Purpose: Medium-scale, multifamily residences, and single family residences.
Residential 50	H50	0–50 du/net ac	Purpose: Large-scale, multifamily residences, and single family residences.
Residential 100	H100	50-100 du/net ac	Purpose: Large-scale, multifamily residences.
Residential 150	H150	100-150 du/net ac	

Land Use	Code	Permitted Density or FAR	Purpose
COMMERCIAL			
Rural Commercial	CR	Commercial: Maximum FAR 0.5	Purpose: Limited commercial uses that are compatible with rural, agricultural, and low-intensity visitor-serving recreational activities, including: retail, personal, and professional services; restaurants; general stores; and professional offices.
General Commercial	CG	Residential: 0-50 du/net ac Commercial: Maximum FAR 1.0 Mixed Use: 0-50 du/net ac and FAR 1.0	Purpose: Local-serving commercial uses, such as retail sales, restaurants, personal services, and small professional office complexes; single family and multifamily residences; and residential and commercial mixed uses.
Major Commercial	CM	Residential: 30-150 du/net ac Commercial: Maximum FAR 3.0 Mixed Use: 30-150 du/net ac and FAR 3.0	Purpose: Large and intense commercial uses, such as regional and destination shopping malls and centers, tourist and recreation related commercial services, hotels, and amusement activities; multifamily residences; and residential and commercial mixed uses.

Land Use	Code	Permitted Density or FAR	Purpose
MIXED USE			
Mixed Use	MU	Residential: 0-150 du/net ac Commercial: Maximum FAR 3.0 Mixed Use: 0-150 du/net ac and FAR 3.0	Purpose: Pedestrian-friendly and community-serving uses that encourage walking, bicycling, and transit use. Commercial, residential and commercial mixed uses, multifamily residences, and limited light industrial uses.
Mixed Use – Rural	MU-R	Residential: 0-5 du/net ac Commercial: Maximum FAR 0.5 Mixed Use: 0-5 du/net ac and FAR 0.5	Purpose: Limited commercial uses that are compatible with rural, agricultural, and low-intensity visitor-serving recreational activities, including: retail; personal, and professional services; restaurants; general stores; and professional offices; and residential and commercial mixed uses.

Land Use	Code	Permitted Density or FAR	Purpose
INDUSTRIAL			
Light Industrial	IL	Maximum FAR: 1.0	Purpose: Light industrial uses, such as industrial park activities, warehouses, distribution, assembly, disassembly, fabricating, finishing, manufacturing, packaging, and repairing or processing of materials, printing, commercial laundry, photographic film processing, vehicle repair garages, building maintenance shops, metal work, millwork, and cabinetry work.
Heavy Industrial	IH	Maximum FAR: 1.0	Purpose: Heavy industrial uses, including heavy manufacturing, refineries, and other labor and capital intensive industrial activities.
Industrial Office	IO	Maximum FAR: 2.0	Purpose: Employment centers with major office and business uses, such as technology and research centers, corporate headquarters, clean tech, and clean industry hubs.

Land Use	Code	Permitted Density or FAR	Purpose
PUBLIC AND SEMI PUBLIC			
Public and Semi Public	P	Maximum FAR: 3.0	Purpose: Public and semi public facilities and community-serving uses, including: public buildings and campuses, schools, hospitals, cemeteries, government buildings, and fairgrounds. Airports and other major transportation facilities. Major facilities, including landfills, solid and liquid waste disposal sites, multiple use stormwater treatment facilities, and major utilities. In the event that the public use of mapped facilities is terminated, alternative uses that are compatible with the surrounding development, in keeping with community character, and consistent with the goals and policies of the General Plan, are permitted without a plan amendment. However, the proposed development must be consistent with zoning.
NATURAL RESOURCES			
Conservation	OS-C	N/A	Purpose: The preservation of open space areas and scenic resource preservation in perpetuity. Can include passive trail networks. Applies only to land that is legally dedicated for open space and conservation efforts.
Parks and Recreation	OS-PR	N/A	Purpose: Open space recreational uses, such as regional and local parks, trails, athletic fields, community gardens, and golf courses.
National Forest	OS-NF	N/A	Purpose: Areas within the national forest and managed by the National Forest Service.
Bureau of Land Management	OS-BLM	N/A	Purpose: Areas that are managed by the Federal Bureau of Land Management.
Water	OS-W	N/A	Purpose: Bodies of water, such as lakes, reservoirs, natural waterways, and man-made infrastructure, such as drainage channels, floodways, and spillways. Includes active trail networks within or along drainage channels.
Mineral Resources	MR	N/A	Purpose: Areas appropriate for mineral extraction and processing.
Military Land	ML	N/A	Purpose: Military installations and land controlled by U.S. Department of Defense.

Land Use	Code	Permitted Density or FAR	Purpose
OVERLAYS			
Transit Oriented District	TOD	Determined by the station area plan for each TOD	Purpose: Pedestrian-friendly and community-serving uses near transit stops that encourage walking, bicycling, and transit use.
Special Management Areas	SMA	N/A	Purpose: Special Management Areas require additional development regulations due to the presence of natural resources, scenic resources, or identified hazards. Development regulations are necessary to prevent loss of life and property, and to protect the natural environment. Significant Ecological Areas, National Forests, Coastal Zones, Agricultural Resource Areas, Mineral Resource Zones, Hillside Management Areas, Scenic Resource Areas, Cultural Resource Areas, Seismic Hazard Zones, Flood Hazard Zones, Very High Fire Hazard Severity Zones, and Airport Influence Areas.
Specific Plan	SP	N/A	Purpose: Specific plans contain precise guidance for land development, infrastructure, amenities and resource conservation. Specific plans must be consistent with the General Plan. Detailed policy and/or regulatory requirements are contained within each adopted specific plan document.
Employment Protection District	EPD	N/A	Purpose: Economically viable industrial and employment-rich lands with policies to protect these areas from conversion to non-industrial uses.

V. Goals and Policies

Goal LU 1: A General Plan that serves as the constitution for development, and a Land Use Policy Map that implements the General Plan's Goals, Policies and Guiding Principles.	
Topic	**Policy**
General Plan Amendments	Policy LU 1.1: Support comprehensive updates to the General Plan, area plans, community plans, coastal land use plans and specific plans.
	Policy LU 1.2: Discourage project-specific amendments to the text of the General Plan, including but not limited to the Guiding Principles, Goals, Policies and Implementation Programs.

	Policy LU 1.3: In the review of project-specific amendments to the General Plan, ensure that they support the Guiding Principles of the General Plan: • Smart Growth; • Sufficient Community Services and Infrastructure; • A Strong and Diversified Economy; • Environmental Resource Management; and/or, • Healthy, Livable and Equitable Communities.
	Policy LU 1.4: In the review of a project-specific amendment(s) to the General Plan, ensure that the project-specific amendment(s): • Is consistent with the goals and policies of the General Plan; • Shall benefit the public interest and is necessary to realize an unmet local or regional need.
	Policy LU 1.5: In the review of a project-specific amendment(s) to increase residential densities in Rural Preserve Areas, ensure that the project-specific amendment(s): • Does not result in the expanded capacity of the roadway network to facilitate future growth; • Does not result in the expansion of service facilities to facilitate future growth; and • Does not result in a significant reduction of services, or a significant increase in costs to the County.
	Policy LU 1.6: In the review of a project-specific amendment(s) to convert OS-C designated lands to other land use designations, ensure that the project-specific amendment(s) does not contribute to the overall loss of open space that protects water quality, provides natural habitats, and contributes to improved air quality.
	Policy LU 1.7: In the review of a project-specific amendment(s) to convert lands within the EPD Overlay to non-industrial land use designations, ensure that the project-specific amendment(s): • Is located on a parcel that adjoins a parcel with a comparable use, at a comparable scale and intensity; • Will not negatively impact the productivity of neighboring industrial activities; • Is necessary to promote the economic value and the long-term viability of the site; and • Will not subject future residents to potential noxious impacts, such as noise, odors or dust or pose significant health and safety risks.
	Policy LU 1.8: In the review of a project-specific amendment(s) to convert lands within the ARAs to land use designations other than RL 10, RL20 and RL40, ensure that the project-specific amendment(s): • Is located on a parcel that adjoins another parcel with a comparable use, at a comparable scale and intensity; and • Will not negatively impact the productivity of neighboring agricultural activities.

	Policy LU 1.9: Limit the amendment of each mandatory element of the General Plan to four times per calendar year, unless otherwise specified in Section 65358 of the California Government Code.
	Policy LU 1.10: Allow adjustments to the General Plan Land Use Policy Map to follow an adjusted Highway Plan alignment without a General Plan amendment, when the following findings can be met: • The adjustment is necessitated by an adjusted Highway Plan alignment that was approved by the Los Angeles County Interdepartmental Engineering Committee (IEC) in a duly noticed public meeting; • The adjustment maintains the basic relationship between land use types; and • The adjustment is consistent with the General Plan.
Specific Plans	Policy LU 1.11: Require the intensity, density, and uses allowed in a new specific plan to be determined using the General Plan, including the Land Use Policy Map and Land Use Legend.
	Policy LU 1.12: Require a General Plan amendment for any deviation from the intensities, densities, and uses allowed by the General Plan (to apply the appropriate designation from the General Plan Land Use Legend), unless allowances for flexibility are specified in the specific plan.
	Policy LU 1.13: Require development regulations and zoning for new specific plans to be consistent with their corresponding General Plan land use designation.
	Policy LU 1.14: Allow specific plans to include implementation procedures for flexibility, such as development phasing, and redistribution of intensities and uses, as appropriate.
	Policy LU 1.15: Require a specific plan amendment for any deviation from the procedures and policies established by a specific plan.
Goal LU 2: Community-based planning efforts that implement the General Plan and incorporate public input, and regional and community level collaboration.	
Topic	**Policy**
Regional and Community-Based Planning Initiatives	Policy LU 2.1: Ensure that all community-based plans are consistent with the General Plan.
	Policy LU 2.2: Ensure broad outreach, public participation, and opportunities for community input in community-based planning efforts.
	Policy LU 2.3: Consult with and ensure that applicable County departments, adjacent cities and other stakeholders are involved in community-based planning efforts.
	Policy LU 2.4: Coordinate with other local jurisdictions to develop compatible land uses.
	Policy LU 2.5: Support and actively participate in inter-jurisdictional and regional planning efforts to help inform community-based planning efforts.

	Policy LU 2.6: Consider the role of arts and culture in community-based planning efforts to celebrate and enhance community character.
	Policy LU 2.7: Set priorities for Planning Area-specific issues, including transportation, housing, open space, and public safety as part of community-based planning efforts.
	Policy LU 2.8: Coordinate with the Los Angeles County Department of Public Works and other infrastructure providers to analyze and assess infrastructure improvements that are necessary for plan implementation.
	Policy LU 2.9: Utilize the General Plan Land Use Legend and the Hazard, Environmental and Resource Constraints Model to inform land use policy maps.
	Policy LU 2.10: Ensure consistency between land use policy and zoning by undergoing a comprehensive zoning consistency analysis that includes zoning map changes and zoning code amendments, as needed.
	Policy LU 2.11: Update community-based plans on a regular basis.

Goal LU 3: A development pattern that discourages sprawl and protects and conserves greenfield areas, natural resources, and SEAs.	
Topic	**Policy**
Growth Management	Policy LU 3.1: Protect and conserve greenfield areas, natural resources, and SEAs.
	Policy LU 3.2: Minimize sprawl and direct population growth and residential density to urbanized areas to reduce vehicle miles traveled (VMTs).
	Policy LU 3.3: Discourage development in areas with environmental resources and/or safety hazards.
	Policy LU 3.4: Discourage development in greenfield areas where infrastructure and public services do not exist.

Goal LU 4: Infill development and redevelopment that strengthens and enhances communities.	
Topic	**Policy**
Infill Development	Policy LU 4.1: Encourage infill development on vacant, underutilized, and/or brownfield sites.
	Policy LU 4.2: Encourage the adaptive reuse of underutilized structures and the revitalization of older, economically distressed neighborhoods.

	Policy LU 4.3: Encourage transit-oriented development with the appropriate residential density along transit corridors and within station areas.
	Policy LU 4.4: Encourage mixed use development along major commercial corridors.

Goal LU 5: Vibrant, livable and healthy communities with a mix of land uses, services and amenities.	
Topic	**Policy**
Residential Uses	Policy LU 5.1: Encourage a mix of residential land use designations and development regulations that accommodate various densities, building types and styles.
	Policy LU 5.2: Encourage compact development and increased residential density, where appropriate.
Community-Serving Uses	Policy LU 5.3: Encourage a diversity of commercial and retail services, and public facilities at various scales to meet regional and local needs.
	Policy LU 5.4: Support a mix of land uses that promote bicycling and walking, and reduce VMTs.
	Policy LU 5.5: Encourage community-serving uses, such as early care and education facilities, grocery stores, farmers' markets, restaurants, and banks to locate near employment centers.
	Policy LU 5.6: Ensure that all households in the County have access to a sufficient supply of quality early care and education and supervised school-age enrichment options for children from birth to 13.
	Policy LU 5.7: Reduce regulatory and other barriers to early care and education facilities.
Employment Generating Uses	Policy LU 5.8: Preserve industrially designated land for intensive, employment-based uses.
	Policy LU 5.9: Encourage employment opportunities and housing to be developed in proximity to one another.

Goal LU 6: Compatible land uses that complement neighborhood character and the natural environment.	
Topic	**Policy**
Land Use Compatibility	Policy LU 6.1: Reduce and mitigate the impacts of incompatible land uses where feasible using buffers and other design techniques.

	Policy LU 6.2: Protect industrial parks and districts from incompatible uses.
	Policy LU 6.3: Protect public and semi public facilities, including but not limited to major landfills, solid waste disposal sites, and mineral resource extraction facilities from incompatible uses.
	Policy LU 6.4: Ensure land use compatibility in areas adjacent to military installations and where military operations, testing, and training activities occur.
	Policy LU 6.5: Ensure airport operation compatibility with adjacent land uses through airport land use plans.
Rural Character	Policy LU 6.6: Protect rural communities from the encroachment of incompatible development.
	Policy LU 6.7: Encourage land uses and developments that are compatible with the natural environment and landscape.
	Policy LU 6.8: Encourage development in rural areas that is compatible with rural community character, preserves open space, conserves agricultural land, and promotes efficiencies in services and infrastructure.

Goal LU 7: Land uses that are compatible with military operations and military readiness, and enhance safety for military personnel and persons on the ground.	
Topic	**Policy**
Military Compatible Uses	Policy LU 7.1: Facilitate the early exchange of project-related information that is pertinent to military operations with the military for proposed actions within MOAs and within 1,000 ft of a military installation.
	Policy LU 7.2: Evaluate the potential impact of new structures within MOAs to ensure the safety of the residents on the ground and continued viability of military operations within the MOAs. In the review of development within MOAs, consider the following: • Uses that produce electromagnetic and frequency spectrum interference, which could impact military operations; • Uses that release into the air any substance such as steam, dust and smoke, which impair pilot visibility; • Uses that produce light emissions, glare or distracting lights, which could interfere with pilot vision or be mistaken for airfield lighting; • Uses that physically obstruct any portion of the MOA due to relative height above ground level; and • Uses that produce electromagnetic and frequency spectrum interference, and that could impact military operations.

Goal LU 8: Well-designed and healthy places that support a diversity of built environments.	
Topic	**Policy**
Community Design	Policy LU 8.1: Encourage community outreach and stakeholder agency input early and often in the design of projects.
	Policy LU 8.2: Design development adjacent to natural features in a sensitive manner to complement the natural environment.
	Policy LU 8.3: Consider the built environment of the surrounding area in the design and scale of new or remodeled buildings, architectural styles, and reflect appropriate features such as massing, materials, color, detailing or ornament.
	Policy LU 8.4: Promote environmentally sensitive and sustainable design.
	Policy LU 8.5: Encourage the use of distinctive landscaping, signage and other features to define the unique character of districts, neighborhoods or communities, and engender community identity, pride and community interaction.
	Policy LU 8.6: Encourage pedestrian activity through the following: • Designing the main entrance of buildings to front the street; • Incorporating landscaping features; • Limiting masonry walls and parking lots along commercial corridors and other public spaces; • Incorporating street furniture, signage, and public events and activities; and • Using wayfinding strategies to highlight community points of interest.
	Policy LU 8.7: Promote public spaces, such as plazas that enhance the pedestrian environment, and continuity along commercial corridors with transit or active pedestrian activities.
	Policy LU 8.8: Promote public art and cultural amenities that support community values and enhance community context.
	Policy LU 8.9: Encourage land uses and design that stimulate positive and productive human relations and foster the achievement of community goals.
	Policy LU 8.10: Promote architecturally distinctive buildings and focal points at prominent locations, such as major commercial intersections and near transit stations or open spaces.
	Policy LU 8.11: Facilitate the use of streets as public space for activities that promote civic engagement, such as farmers' markets, parades, etc.
	Policy LU 8.12: Discourage gated entry subdivisions ("gated communities") to improve neighborhood access and circulation, improve emergency access, and encourage social cohesion.

	Policy LU 8.13: Discourage flag lot subdivisions unless designed to be compatible with the existing neighborhood character.

Goal LU 9: Land use patterns and community infrastructure that promote health and wellness.	
Topic	**Policy**
Community Wellness	Policy LU 9.1: Promote community health for all neighborhoods.
	Policy LU 9.2: Direct resources to areas that lack amenities, such as transit, clean air, grocery stores, bikeways, parks, and other components of a healthy community.
	Policy LU 9.3: Encourage patterns of development, such as sidewalks and bikeways that promote physical activity.
	Policy LU 9.4: Encourage farmers' markets, community gardens, and proximity to other local food sources that provide access to healthful and nutritious foods.
	Policy LU 9.5: Encourage patterns of development that increase convenient, safe access to healthy foods, especially fresh produce, in all neighborhoods.

Goal LU 10: Subdivisions that utilize sustainable design techniques.	
Topic	**Policy**
Sustainable Subdivisions	Policy LU 10.1: Encourage subdivisions to utilize sustainable design practices, such as maximizing energy efficiency through lot configuration, maximizing interconnectivity, and utilizing public transit.
	Policy LU 10.2: Prohibit the use of private yards as required open space within subdivisions unless such area includes active recreation or outdoor activity areas dedicated for common and/or public use.
	Policy LU 10.3: Ensure that subdivisions in VHFHSZs site open space to minimize fire risks from flammable vegetation.
	Policy LU 10.4: Encourage the use of density controlled design techniques to conserve natural resource areas—particularly SEAs—and agricultural areas.
	Policy LU 10.5: Encourage sustainable subdivisions that meet Leadership in Energy and Environmental Design–Neighborhood Development (LEED-ND) or other green neighborhood standards.

Table 3.3: Land Use Element Implementation Programs

Planning Areas Framework Program
TOD Program
Airport Land Use Compatibility Plans
Economic Development Land Use Strategy
Growth Management Program
Civic Art Program
Transfer of Development Rights Program
Adaptive Reuse Ordinance
Art and Cultural Resources Program
Community Design Guidelines
Early Care and Education Program
Military Operation Areas Overlay Ordinance

[Text Box]

Jobs-Housing Balance

Jobs-housing balance is reached by working toward increasing opportunities for people to work and live in close proximity, and reduce long commutes that are costly both economically and environmentally. This can be quantified by taking the number of jobs divided by the number of housing units. A community with fewer jobs than residences would have a low jobs-housing ratio. Communities with a high jobs-housing ratio are usually considered major employment centers for a region. If the ratio is high or low, there is a jobs-housing imbalance.

[Text Box]

Brownfields

Data on the number of brownfield sites in unincorporated areas of the County is provided by the California Department of Toxic Substances Control (DTSC) EnviroStor public web site, which provides access to detailed information on hazardous waste permitted and corrective action facilities, as well as existing site cleanup information. For further information on particular brownfield sites, please visit the DTSC web site at http://www.dtsc.ca.gov/.

[Text Box]

Soul of the Community 2010

What makes a community a desirable place to live? What makes people stay and build a future in a community?

In 2008, Gallup and the John S. and James L. Knight Foundation set out to answer these questions through the Soul of the Community project. After interviewing around 43,000 people in 26 communities, the study concluded that the main factors that attached people to place include: an area's physical beauty, opportunities for socializing, and a community's openness to all people.

Source: Knight Soul of the Community 2010, Why People Love Where They Live and Why It Matters: A National Perspective. http://www.soulofthecommunity.org/

[Text Box]

Airport Land Use Commission (ALUC)

The State law requires each county with public use airports to establish an Airport Land Use Commission (ALUC). The ALUC is mandated to fulfill two specific duties:

- To prepare airport land use plans for promoting and ensuring compatibility between each airport in a county and its surrounding and adjacent land uses; and,
- To review local agency land use actions and airport plans for consistency with the airport land use plan and policies.

[Text Box]

SCAG's Compass Blueprint Growth Vision

The Land Use Element goals and policies are consistent with the SCAG's Compass Blueprint Growth Vision, which contains a set of land use strategies that SCAG encourages local governments to implement:

- Focusing growth in existing and emerging centers and along major transportation corridors.
- Creating significant areas of mixed use development and walkable, "people scaled" communities.
- Providing new housing opportunities that respond to the region's changing demographics.
- Targeting growth in housing, employment, and commercial development within walking distance of existing and planned transit stations.
- Injecting new life into under-used areas by creating vibrant new business districts, redeveloping old buildings, and building new businesses and housing on vacant lots.
- Preserving existing, stable, single family neighborhoods.
- Protecting important open space, environmentally sensitive areas and agricultural lands from development.

Chapter 4: Mobility Element

Table of Contents

I. Introduction

The Mobility Element addresses the General Plan's Guiding Principles by underscoring the connection between land use planning and mobility. Promoting the creation of an accessible and comprehensive multimodal circulation system is key to implementing the objectives of Smart Growth. The Mobility Element ensures that the County's circulation systems are safe and accessible, which promotes Healthy, Livable, and Equitable Communities and Sufficient Community Services and Infrastructure. The Mobility Element also provides policy guidance to implement an effective and efficient circulation system, which is critical to ensuring a Strong and Diversified Economy. Furthermore, the Mobility Element encourages sustainable approaches to transportation to address the General Plan's goals for Environment Resource Management.

The California Complete Streets Act of 2007 requires the General Plan to demonstrate how the County will provide for the routine accommodation of all users of a road or street, including pedestrians, bicyclists, users of public transit, motorists, children, seniors, and the disabled. The Mobility Element addresses this requirement with policies and programs that consider all modes of travel, with the goal of making streets safer, accessible and more convenient to walk, ride a bicycle, or take transit.

The Mobility Element provides an overview of the transportation infrastructure and strategies for developing an efficient and multimodal transportation network. The Element assesses the challenges and constraints of the County's transportation system, and offers policy guidance to reach the County's long-term mobility goals. Two sub elements—the Highway Plan and Bicycle Master Plan—supplement the Mobility Element. These plans establish policies for the roadway and bikeway systems in the unincorporated areas, which are coordinated with the networks in the County's 88 incorporated cities. The General Plan also establishes a program to prepare community pedestrian plans, with guidelines and standards to promote walkability and connectivity throughout the unincorporated areas.

II. Background

The County has one of the largest transportation systems in the world. Despite continuing efforts to increase transportation services and build transportation infrastructure, County transportation systems are heavily burdened by the demands of a growing population and a diversity of activities. Transportation is also one of the biggest contributor of noise, greenhouse gases and other air pollutants.

Regulatory Framework

Local agencies responsible for transportation services in the County coordinate their activities to comply with the goals and policies of Southern California Association of Governments (SCAG) and Los Angeles County Metropolitan Transportation Authority (Metro). SCAG is the federally designated regional transportation planning agency responsible for the Regional Transportation Plan (RTP). Metro is the county-level transportation planning agency responsible for the Long Range Transportation Plan (LRTP). The County, the 88 cities in the County, and other transportation agencies engage in transportation planning activities by participating in the development and implementation of the RTP and LRTP.

The County participates in establishing policies, promoting specific projects, and funding the strategies in the RTP and the LRTP. Each Los Angeles County Supervisor is a member of the Metro Board of Directors, and two members of the Los Angeles County Board of Supervisors serve on SCAG's Regional Council, and on the Southern California Regional Rail Authority (Metrolink) Board of Directors.

Transportation Systems in Los Angeles County

Public Transit

The County is served by a large public transit system that includes rail systems and various bus service options, such as transitways and bus rapid transit systems. Figure 4.1 depicts the major public transit systems in the County.

Figure 4.1: Major Public Transit Systems

Rail

Metro operates the Metro rail system, which is exclusively within the County. The Metro rail system consists of the following lines: Red, Purple, Blue, Green, Gold and Expo. The hub of the system is in downtown Los Angeles at Union Station. The Metro lines that primarily serve the unincorporated areas include the Metro Blue, Green and Gold Lines. The Metro Blue Line stations in the unincorporated areas include: Slauson, Florence, Firestone, and Willowbrook. The Vermont/Athens and Hawthorne/Lennox stations along the Green Line are also located in the unincorporated areas. The Gold Line has four stations in the unincorporated areas: Indiana, Maravilla, East LA Civic Center, and Atlantic.

Two additional rail service operators that provide services in the County are Metrolink and Amtrak. The Southern California Regional Rail Authority (SCRRA) operates the 416-mile Metrolink commuter rail system, which has its hub in downtown Los Angeles at Union Station and extends to Ventura, San Bernardino, Riverside, Orange, and San Diego counties, and serves some of the unincorporated areas of the County. There is one Metrolink Station located in the unincorporated

community of Acton, on the Antelope Valley Line. Amtrak provides interstate service from points around the country to Union Station, as well as regional service between major cities throughout California.

Bus

With many regional and municipal operators providing bus services, buses provide the majority of public transit service in the County. Examples of these operators include Torrance Transit, Foothill Transit, Santa Clarita Transit, and the Antelope Valley Transit Authority. According to Metro's 2009 Long Range Transportation Plan, the transit providers in Los Angeles County collectively operate 4,000 buses and serve 1.6 million bus riders daily.

The Metro bus system is the largest in the County. Metro operates the Metro Rapid Bus service, which runs on select surface street corridors with fewer stops and electronic signal switching devices to expedite traffic flow, and the Metro Express Bus service, which are express bus routes for a portion of the route and then local or limited routes in other areas. Metro also operates two bus rapid transitways: the Orange Line and Silver Line. The Orange Line operates on a dedicated bus lane along an east-west corridor in the San Fernando Valley and also includes a separated bike path that runs along part of the route. The Silver Line operates between the El Monte bus station, Union Station and downtown Los Angeles, and the Artesia Transit Center.

Furthermore, the Los Angeles County Department of Public Works (DPW) operates fixed route shuttle services in the following unincorporated areas: Willowbrook and King Medical Center Shuttle services in Willowbrook; Athens Shuttle service in West Athens-Westmont; Lennox Shuttle service in Lennox; Florence-Firestone/Walnut Park Shuttle service in Florence-Firestone and Walnut Park; El Sol Shuttle service in East Los Angeles; Sunshine Shuttle service in South Whittier; Avocado Heights/Bassett/West Valinda Shuttle service in Avocado Heights, Bassett and West Valinda; East Valinda Shuttle service in East Valinda; Edmund D. Edelman's Children's Court Shuttle service in East Los Angeles; Los Nietos Shuttle service in Los Nietos; and Acton/Agua Dulce Shuttle service in Acton and Agua Dulce. For detailed information on these shuttle services and routes in the County, please refer to Appendix D.

Paratransit

Paratransit is an alternative mode of flexible transportation that does not follow fixed routes or schedules. Demand-responsive paratransit contractors are used to meet the needs of seniors and mobility-impaired individuals living in the unincorporated areas.

Bikeways

The entirety of surfaced roadways, excluding freeways, in the County may be used by the bicycling public even though they are not all identified as bikeways. The State Vehicle Code allows roadways to be used by bicyclists. However, the lack of public awareness and the safety concerns associated with road sharing create a need for bikeways with a grade separation, lane delineation, or designated trail/path construction for bicycle users throughout the County.

Bicycle Master Plan

The Los Angeles County Bicycle Master Plan, adopted in March 2012, provides policy guidance for building a comprehensive bicycle network throughout the unincorporated areas. The Bicycle Master Plan identifies bikeways and transportation systems in the County that are available for use by bicyclists, such as roadways with bike lanes or designated bike routes, and dedicated off-road bike

paths, such as bike paths along the flood control channels. The purpose of the Bicycle Master Plan is to: 1) guide the development of infrastructure, policies and programs that improve the bicycling environment in the County; 2) depict the general location of planned bikeway routes throughout the County; and 3) provide for a system of bikeways that is consistent with the General Plan.

The Bicycle Master Plan Maps depict bikeways along roadways in the unincorporated areas and along rivers, creeks, and flood control facilities within the County. These bikeways may be used for both recreational use and commuter travel.

To view the Bicycle Master Plan, including policies, programs, and the mapped bicycle network, please visit DPW's Bicycle Master Plan web site at http://dpw.lacounty.gov/pdd/bikepath/bikeplan/.

Pedestrian Networks

The diversity of communities in the County creates distinct conditions, opportunities and challenges for pedestrians. There are a number of trails and paths in the County that are available for use by pedestrians, such as sidewalks, hiking trails, over and under passes, and skywalks. Together, these systems constitute a network for accommodating pedestrian travel throughout the County.

Community Pedestrian Plans

The County is committed to improving the environment to allow for increased alternative transportation uses. The General Plan includes a program to prepare a community pedestrian plans for the County that will set standards for sidewalks, street crossings, sidewalk continuity, street connectivity, and topography. The community pedestrian plans will emphasize the connectivity of pedestrian paths to and from public transportation, major employment centers, shopping centers, and government buildings.

For more information on community pedestrian plans, please refer to Part III: General Plan Implementation Programs.

Freeway, Highway, and Local Road Networks

The County highway network is comprised of the State Highway System, which consists of 915 freeway and highway miles, and includes U.S. Interstate freeways and state-maintained freeways and highways, High Occupancy Vehicle (HOV) lanes, and county and city highways. This network spans the County and provides access to much of the mainland area, connecting all 88 cities and most unincorporated areas. The California Department of Transportation (Caltrans) is the state agency responsible for the maintenance of freeways and highways. Caltrans estimates that on average there are more than 100 million vehicle miles traveled per day in the County via the State Highway System. Figure 4.2 is a map of the County's Freeway and Highway System.

Figure 4.2: Highways, Freeways and Airports

The County is responsible for the design, construction, operation, maintenance, and repair of roads in the unincorporated areas, as well as in a number of local jurisdictions that contract with the County for these services. DPW maintains over 3,100 miles of major roads and local streets in the unincorporated areas and over 1,700 miles in 22 cities.

Level of Service

DPW uses level of service (LOS) to assess the congestion of roadways in the transportation system. Based on a roadway's volume-to-capacity ratio (the number of vehicles currently using the roadway compared to the ideal maximum number of vehicles that can efficiently use the roadway), a letter designation is assigned that represents the traffic flow conditions, or LOS. Letter designations "A" through "F" represent progressively declining traffic flow conditions. LOS designations indicate whether the roadways in the County are operating in excess of their intended capacity. Acceptable LOS is determined on a case by case basis, but generally, Level D is the desired minimum LOS in the County.

Table 4.1 provides the definitions for LOS A-F, which are based on the definitions in the Transportation Research Board's Highway Capacity Manual.

Table 4.1: Los Angeles County Department of Public Works Level of Service Definitions

LOS	Type of Flow	Delay	Maneuverability
A	Free flow	Little or no delay	Users are unaffected by other traffic; freedom of speed and movement, level of comfort, convenience and safety are excellent.
B	Stable flow	Short traffic delays	Users begin to notice other traffic; freedom of speed continues, but freedom to maneuver declines slightly.
C	Stable flow	Average traffic delays	Traffic may back up behind turning vehicles. Most drivers feel somewhat restricted. Traffic signals operate at maximum efficiency.
D	Approaching unstable flow	Long traffic delays	Maneuverability is severely limited during short periods when traffic backs up temporarily. Comfort, convenience, and safety are affected. Users wait one signal cycle to pass through a signalized intersection.
E	Unstable flow	Very long traffic delays	Traffic volumes are at or near capacity; users wait several cycles to pass through a signalized intersection.
F	Forced flow	Excessive delay	Traffic volumes exceed the capacity of the street and traffic queues develop. Stop-and-go traffic conditions predominate.

Source: Los Angeles County Department of Public Works

Although DPW utilizes the above described LOS criteria for assessing the performance of, and determining impacts to, roadways, it is possible that future assessments will incorporate different methodologies. These methodologies will incorporate all potential users of the roadway (Multimodal Level of Service).

Highway Plan

The Los Angeles County Highway Plan provides policy guidance for building a comprehensive highway network throughout the unincorporated areas. The Highway Plan provides a highway

system that is consistent with and supportive of the land uses depicted by the General Plan Land Use Policy Map. The purpose of the Highway Plan is to: 1) depict the general location of planned highway routes throughout the County; 2) provide a means for protecting highway right-of-way within the unincorporated areas; 3) establish a plan and process for coordinating highway policies with neighboring cities and counties; and 4) provide for a system of highways that is consistent with the General Plan.

The Los Angeles County Interdepartmental Engineering Committee (IEC), which is comprised of the Director of Planning, the Road Commissioner, and the County Engineer, is charged with maintaining the Highway Plan.

Figure 4.3 shows the Highway Plan, which includes locations of existing and proposed major arterial highways throughout the County. Although the County has virtually no jurisdiction over roads in the 88 cities, or the freeways and other state routes maintained by Caltrans, these roadways are included in the map for reference and visual continuity.

The roadways depicted on the Highway Plan are defined as follows:

Major Highway: This classification includes urban highways that are of countywide significance and are, or are projected to be, the most highly traveled routes. These roads generally require four or more lanes of moving traffic, channelized medians and, to the extent possible, access control and limits on intersecting streets. This width may vary to meet extraordinary circumstances.

Also classified as major highways are key connectors, non-urban access ways and recreational roads. The bulk of these routes are not planned for urban type improvement. However, the full major highway right-of-way width of 100 feet or more is generally required to maintain adequate safety and noise standards. Portions of these rights-of-way are needed for recreational uses, such as equestrian and bike trails, and for other transportation uses, such as turnouts.

Secondary Highway: Secondary highways include urban routes that serve or are planned to serve an areawide or countywide function, but are less heavily traveled than major highways. In a few cases, routes that carry major highway levels of traffic are classified as secondary highways because it is impractical to widen them to major highway standards. In addition to the countywide function, secondary highways frequently act as oversized collector roads that feed the countywide system. In this capacity, the routes serve to remove heavy traffic from local streets, especially in residential areas.

In urban areas, secondary highways normally have 4 moving lanes of traffic on 80 feet of right-of-way. However, configuration and width may vary with traffic demand and conditions on the ground. Access control, especially to residential property and minor streets, is desirable along these roads.

Limited Secondary Highway: Limited secondary highways are located in remote foothill, mountain and canyon areas. Their primary function is to provide access to low-density settlements, ranches and recreational areas. The standard improvement for limited secondary highways is 2 traffic lanes on 64 feet of right-of-way. Typically, such improvements consist of 28-30 feet of pavement with graded shoulders. Left-turn pockets and passing lanes may be provided when required for traffic safety. The right-of-way may be increased to 80 feet for additional improvements where traffic or drainage conditions warrant.

A uniform building setback shall be established 40 feet from the centerline of all limited secondary highways in order to preserve proper sight distances and to help maintain a rural appearance

adjacent to the roadway. This setback shall be in addition to any yard requirement contained in the Zoning Code.

Parkway: The parkway classification is applied to urban and non-urban routes that having park-like features either within or adjacent to the roadway.

Expressway: The expressway classification is primarily for through-traffic with full or partial control of access. Expressways can accommodate 6 to 10 traffic lanes. The width of right-of-way varies as necessary to incorporate these features, but shall not be less than 80 feet. Roadway improvements vary depending upon the composition and volume of traffic carried.

Figure 4.3: Highway Plan Policy Map

Aviation Network

There are 15 public-use airports located in the County, as shown in Figure 4.2. The majority of passenger air transportation is serviced through Los Angeles International Airport (LAX), Burbank Airport, and the Long Beach Airport. Table 4.2 is a list of the airports and owners in the County.

Table 4.2: Los Angeles County Public-Use Airports

Airport	Location	Ownership
Agua Dulce Airport	Agua Dulce	Private
Burbank (Bob Hope) Airport	City of Burbank	Airport Authority
Brackett Field Airport	City of La Verne	Los Angeles County
Catalina Airport	Santa Catalina Island	Private
Compton/Woodley Airport	City of Compton	Los Angeles County
El Monte Airport	City of El Monte	Los Angeles County
General William J. Fox Airfield Airport	City of Lancaster	Los Angeles County
Jack Northrup Field Airport (Hawthorne Municipal Airport)	City of Hawthorne	City of Hawthorne
Long Beach Municipal Airport (Daugherty Field Airport)	City of Long Beach	City of Long Beach
Los Angeles International Airport (LAX)	City of Los Angeles	City of Los Angeles (LAWA)
Santa Monica Municipal Airport	City of Santa Monica	City of Santa Monica
Palmdale Regional Airport	City of Palmdale	City of Los Angeles (LAWA)

Van Nuys Airport	City of Los Angeles, Van Nuys	City of Los Angeles (LAWA)
Whiteman Airport	City of Los Angeles, Pacoima	Los Angeles County
Zamperini Field	City of Torrance	City of Torrance

Freight Rail Network

The County has an extensive rail network that is focused on the efficient and safe movement of goods throughout the region. An effective goods movement system requires the elimination of at-grade crossings, and the creation and operation of rail networks, such as the Alameda Corridor.

The Alameda Corridor is a 20-mile rail cargo corridor, with a 10-mile below-grade trench between the Ports of Los Angeles and Long Beach and the central Los Angeles freight yard transfer stations. The Alameda Corridor has been instrumental in efficiently transporting goods from the Ports to inland transfer stations. The Alameda Corridor East Project, which is an extension of the Alameda Corridor Project, covers the area from central Los Angeles eastward 35 miles through the San Gabriel Valley, past Pomona and onward to the transcontinental rail network. The $910 million endeavor of mobility and safety improvements includes signalization upgrades, roadway widening, and 20 grade separations.

Figure 4.4 shows the freight and passenger rail lines that run throughout the County.

Figure 4.4: Freight and Passenger Rail Lines

Supportive Facilities

Harbors

The Ports of Long Beach and Los Angeles are key links in the global economy and can handle a variety of cargo, including containers, bulk products, and automobiles. Combined, they are one of the largest and most efficient international shipping ports in the country, and the fifth busiest container port in the world. According to SCAG, the Ports handled just under 120 million metric tons of cargo imports and exports, valued at $336 billion in 2010. The Ports also serve as a significant tourism driver, as the largest cruise ship terminal on the west coast, serving over a million passengers per year.

Parking

A limited number of public parking lots are maintained in the unincorporated areas by a variety of agencies, including Metro, the Departments of Beaches and Harbors, and DPW. Metrolink maintains park-and-ride lots adjacent to commuter rail stops. The County owns and operates the following four park-and-ride lots: Studio City (Ventura Boulevard); Pomona (Fairplex); San Dimas (Via Verde); and Acton (Acton/Vincent Grade Metrolink Station).

The County regulates onstreet parking in certain high-traffic areas through restricted parking zones enforced by the Sheriff's Department and California Highway Patrol. In addition, the Los Angeles County Department of Regional Planning regulates parking for new developments by requiring an adequate number of spaces to meet anticipated demand.

Terminals

Terminal facilities provide multiple uses, from park-and-ride lots for daily commuter vehicles to the heavily used freight terminals that serve the County's ports. Fierce competition among west coast cities for international trade business has led to the planning and construction of an efficient terminal network in the County. The most notable terminal facilities are the intermodal terminal networks located in and around the Ports of Los Angeles and Long Beach, the goods transfer stations located near downtown Los Angeles, and several freight and trucking facilities in the City of Industry.

III. Issues

1. Providing Streets That Accommodate All Users

Historically, transportation planning and street design have focused on the automobile, resulting in hostile environments for pedestrians and bicyclists. In order to create safer places to walk and bicycle, as well as take transit, more emphasis needs to be placed on these other viable modes of transportation. Furthermore, street designs should accommodate all users, including children, seniors, and the disabled. Streets designed to incorporate all potential users, including pedestrians, bicyclists, transit users, and conventional vehicular traffic is known as complete streets.

Aesthetics and function are also important considerations when creating comfortable places to walk, bicycle, and take transit. This can include landscaping, street furniture, and amenities, such as benches and shelters at transit stops.

In a jurisdiction as diverse as the unincorporated areas of the County, the approach to complete streets must be flexible and street designs must be context-sensitive. For example, complete streets in rural areas, such as the Antelope Valley, could look and feel very different from complete streets in urban communities, such as Willowbrook and Florence-Firestone.

2. Creating a Multimodal Transportation System

The most prominent characteristic of transportation in the County is the single occupant driver. On an annual basis, SCAG estimates that approximately 74 percent of all people in Southern California drive alone to and from work in their car. Single occupant vehicle use is associated with the highest level of land consumption among all transportation modes, and generates the highest level of environmental impacts.

To encourage transit use and discourage single occupant vehicle use, the County can facilitate an interconnected, multimodal network of streets, alleys, paths, greenways, and waterways where people can choose to walk, bicycle, take transit or drive. The key to achieving a functional and sustainable multimodal transportation system is to provide efficient connections between different modes. For example, bicyclists can conveniently travel to farther destinations if they have the option to board the transit system with their bicycles. Multimodal options, such as bicycling and walking are cost-effective, energy efficient and healthy alternatives to driving. Additionally, creating bike-friendly and walkable communities is a critical component in meeting the County's greenhouse gas emission and energy reduction goals, while enhancing vibrant, livable communities.

Mobility management is an important component of a multimodal transportation system. Highway congestion results in major social costs to the County, and long travel times and congestion increases energy and oil usage, exacerbates automobile emissions, and diminishes the region's quality of life. In addition, long delays and congestion negatively impact the region's economy

According to SCAG, by failing to address congestion in the region, jobs have been lost – every 10 percent decrease in congestion can bring an employment increase of about 132,000 jobs.

Mobility management is an important strategy for improving congestion and reducing vehicle miles traveled (VMTs). Mobility management strategies are designed to be used alone, or in concert with other policies to have a cumulative effect on the efficiency of the transportation system. These strategies include incentives that change travel behavior, such as offering employer-based transit passes or increasing transit availability; the reduction of parking requirements; car-sharing programs; regional carpooling programs; and telecommuting. Mobility management also refers to Transportation Demand Management (TDM), including the use of technologies in the development of transportation facilities and infrastructure, such as liquid and compressed natural gas, and hydrogen gas stations, Intelligent Transportation Systems (ITS), and electric car plug-in ports.

Achieving a multimodal transportation system will require a greater investment in transit, pedestrian, and bicycle infrastructure. New proposals, such as tolling major freeways, double-decking highways, and/or raising the gas tax, all have varying levels of political and popular support. However, paying for transportation infrastructure will remain a critical planning issue. To plan efficient, functional and cost-effective transportation networks, including public transit, roadways and alternative transportation, the County should leverage investment with the planning, financing and management of other jurisdictions' transportation efforts. The County must work with transportation planning agencies on infrastructure, capital improvements and programming in areas where the General Plan focuses growth.

3. Connecting Transportation and Land Use Planning

For any transportation system to be effective, healthy and sustainable, all aspects–streets, freeways, public transit, highways, sidewalks, bicycle facilities, and freight movement–must be coordinated with land use planning. Land use and mobility are inherently linked: low density sprawl with single use development encourages driving. Alternatively, denser, communities with a mix of land uses that encourages transit use, walking, and bicycling are healthier and sustainable.

Land use planning and urban design are important factors in developing transit use and multimodal transportation options. Historically, streets in the County have been designed to move the maximum amount of automobile traffic. Congested roadways and high on-street parking demand create insufficient space to accommodate bike lanes. In addition, a frequent complaint of bicyclists is the absence of adequate facilities to secure bicycles at public and private buildings or facilities. Many of the commercial corridors in mature urbanized areas are underutilized and in need of redevelopment. Strengthening mixed land uses and promoting compact development in these areas, in concert with design standards for rights-of-way, can help encourage walking and bicycling for shorter trips, as well as make transit more accessible.

Because of the nature and financing of regional transportation networks, transportation planning is fragmented among many jurisdictions, agencies and County departments. Effective inter-jurisdictional collaboration, and public-private partnerships, in transportation and land use planning is essential to creating an efficient and multimodal transportation network across the County.

4. Safe and Efficient Movement of Goods

The safe and efficient movement of goods is an important mobility issue that significantly impacts the economy. Goods movement has been negatively impacted by inefficient transportation networks. The County's ports, airports, rail lines and intermodal transit terminals have existing capacity constraints that undermine the efficiency and productivity of the goods movement system. In

addition, the existing roadway and rail networks are reaching capacity. As a result, the system is susceptible to disruptions, which causes delays that reduce the quality of services and increase costs to consumers. Furthermore, the roadways and rail networks that accommodate the movement of goods are shared by motorists and passengers, which raises additional concerns over efficiency and safety.

5. Impacts of Transportation on Natural and Community Resources

Transportation systems, goods movement activities, and automobile use directly affect quality of life. This includes traffic congestion, truck intrusion into neighborhoods, safety, land use incompatibility, poor air quality and related health impacts, restricted mobility and delay at rail crossings, noise and vibration impacts, and visual impacts. Significant short- and long-term air quality impacts directly result from goods movement activities, such as emissions from ocean ships, diesel trucks, as well as increased auto-emissions, which in turn contributes to climate change.

The Ports of Long Beach and Los Angeles are heavily investing in infrastructure to handle a projected doubling of container volumes. However, the Ports have also been identified as one of the largest sources of air pollution in the region. In addition, terminal operations and supporting infrastructure are consumptive land uses, and are often characterized as having heavily polluting activities. The Ports have created a Clean Air Action Plan in conjunction with the U.S. Environmental Protection Agency, the California Air Resources Board, and the South Coast Air Quality Management District to reduce emissions related to port operations.

Furthermore, airports, as well as freeways, are impactful to sensitive receptors in terms of noise and air quality. Although at a rate much slower than those seen in previous decades, SCAG expects air travel in the region to continue to grow. LAX, for instance, is the sixth busiest airport in the world and third busiest in the United States, offering more than 565 daily flights to 81 domestic cities and more than 1,000 weekly nonstop flights to 66 international destinations on more than 75 air carriers. It ranks 13th in the world in the amount of air cargo tonnage handled. In 2010, LAX served more than 59 million passengers, processed more than 1.9 million tons of air cargo valued at nearly $84 billion, and handled 575,835 aircraft operations (landings and takeoffs).

A $4.11-billion capital improvement program is underway at LAX, generating nearly 40,000 local jobs. The program's centerpiece is the $1.5-billion Bradley West Project with new gates for the latest-generation aircraft; new concourses and seating areas; new retail and food and beverage offerings; and expanded areas for more efficient security screening, immigration and customs processing. There also are several major airfield and facility projects, including a new Central Utility Plant, new taxiways and taxi lanes, and multi-million-dollar renovations – undertaken by both Los Angeles World Airports (LAWA) and the airlines – to other terminals. The expansion and operation of transportation systems, which invariably affect biological resources and water quality, can be mitigated to lessen the negative impacts on the County's resources. One key ecological issue is the effect of increased runoff from paved surfaces, which increases sediment movement, destroys aquatic habitat, and redistributes road-source pollutants. A second crucial ecological issue is potential negative impacts of human transportation systems on biological resources. Human transit is often responsible for transporting non-native species to ecosystems that do not have any natural defenses against the new threats. At the same time, transit infrastructure creates physical barriers across wildlife habitats and corridors that can reduce the mobility of local species and threaten genetic diversity. As discussed in the Public Services and Facilities Element, the majority of stormwater runoff in the County is discharged directly into the Pacific Ocean. The General Plan provides policies that support transportation systems that treat runoff and mitigate its environmental impacts before it reaches the County's water bodies.

IV. Goals and Policies

Goal M-1: Street designs that incorporate the needs of all users.	
Topic	**Policy**
Complete Streets	Policy M 1.1: Provide for the accommodation of all users, including pedestrians, motorists, bicyclists, equestrians, users of public transit, seniors, children, and persons with disabilities when requiring or planning for new, or retrofitting existing, roads and streets.
	Policy M 1.2: Ensure that streets are safe for sensitive users, such as seniors and children.
	Policy M 1.3: Realign capital improvement programs and funding streams to ensure the implementation of complete streets.
	Policy M 1.4: Utilize industry standard rating systems, such as the Institute for Sustainable Infrastructure (ISI) Rating System, to assess sustainability and effectiveness of street systems for all users.

Goal M-2: Interconnected and safe bicycle- and pedestrian-friendly streets, sidewalks, paths and trails that promote active transportation and transit use.	
Topic	**Policy**
Active Transportation Design	Policy M 2.1: Design streets that accommodate pedestrians and bicyclists, and reduce motor vehicle accidents through a context sensitive process that addresses the unique characteristics of urban, suburban, and rural communities.
	Policy M 2.2: Accommodate pedestrians and bicyclists, and reduce motor vehicle accidents by implementing the following street designs, whenever appropriate and feasible: • Lane width reductions to 10 or 11 feet in low speed environments with a low volume of heavy vehicles. • Wider lanes may still be required for lanes adjacent to the curb, and where buses and trucks are expected. • Low-speed designs. • Access management practices developed through a community-driven process. • Back in angle parking at locations that have available roadway width and bike lanes, where appropriate.

	Policy M 2.3: Accommodate pedestrians and bicyclists, and reduce motor vehicle accidents by implementing the following intersection designs, whenever appropriate and feasible: • Right angle intersections that reduce intersection skew. • Smaller corner radii to reduce crossing distances and slow turning vehicles. • Traffic calming measures, such as bulb-outs, sharrows, medians, roundabouts, and narrowing or reducing the number of lanes (road diets) on streets. • Gutter placement between parking and bikeways. • Crossings at all legs of an intersection. • Shorter crossing distances for pedestrians. • Right-turn channelization islands. Sharper angles of slip lanes may also be utilized. • Signal progression at speeds that support the target speed of the corridor. • Pedestrian push buttons when pedestrian signals are not automatically recalled. • Walk interval on recall for short crossings. • Left-turn phasing. • Prohibit right turn on red. • Signs to remind drivers to yield to pedestrians.

	Policy M 2.4: Ensure a comfortable walking environment for pedestrians by implementing the following, whenever appropriate and feasible: • Designs that limit dead-end streets and dead-end sidewalks. • Adequate lighting on pedestrian paths, particularly around building entrances and exits, and transit stops. • Designs for curb ramps, which are pedestrian friendly and compliant with the American Disability Act (ADA). • Perpendicular curb ramps at locations where it is feasible to reduce the curb return radius. • Pedestrian walking speed based on the latest standard for signal timing. Slower speeds should be used when appropriate (i.e., near senior housing, rehabilitation centers, etc.) • Approved devices to extend the pedestrian clearance times at signalized intersections. • Accessible Pedestrian Signals (APS) at signalized intersections. • Pedestrian crossings at signalized intersections without double or triple left or right turn lanes. • Pedestrian signal heads, countdown pedestrian heads, pedestrian phasing and leading pedestrian intervals at signalized intersections. • Exclusive pedestrian phases (pedestrian scrambles) where turning volume conflicts with very high pedestrian volumes. • Advance stop lines at signalized intersections. • Pedestrian Hybrid Beacons. • Medians or crossing islands to divide long crossings. • High visibility crosswalks. • Pedestrian signage. • Advanced yield lines for uncontrolled crosswalks. • Rectangular Rapid Flashing Beacon or other similar approved technology at locations of high pedestrian traffic. • Safe and convenient crossing locations at transit stations and transit stops located at safe intersections.

	Policy M 2.5: Ensure a comfortable bicycling environment by implementing the following, whenever appropriate and feasible: • Bicycle signal heads at intersections. • Bicycle signal detection at all signalized intersections. • Wayfinding signage. • Road diet techniques, such as lane narrowing, lane removal, and parking removal/restriction. • Appropriate lighting on all bikeways, including those in rural areas. • Designs, or other similar features, such as: shoulder bikeways, cycle tracks, contra flow bike lanes, shared use paths, buffered bike lanes, raised bike lanes, and bicycle boulevards.
	Policy M. 2.6: Encourage the implementation of future designs concepts that promote active transportation, whenever available and feasible.
	Policy M 2.7: Require sidewalks and bikeways to accommodate the existing and projected volume of pedestrian and bicycle activity, considering both the paved width and the unobstructed width available for walking.
	Policy M 2.8: Connect pedestrian and bicycle paths to schools, public transportation, major employment centers, shopping centers, government buildings, residential neighborhoods, and other destinations.
	Policy M 2.9: Encourage the planting of trees along streets and other forms of landscaping to enliven streetscapes by blending natural features with built features.
	Policy M 2.10: Encourage the provision of amenities, such as benches, shelters, secure bicycle storage, and street furniture, and comfortable, safe waiting areas near transit stops.
	Policy M 2.11: Promote the continuity of streets and sidewalks through design features, such as limiting mid-block curb cuts, encouraging access through side streets or alleys, and promoting shorter block lengths.

Goal M-3: Streets that incorporate innovative designs.	
Topic	**Policy**
Innovative Street Design	Policy M 3.1: Facilitate safe roadway designs that protect users, preserve state and federal funding, and provide reasonable protection from liability.
	Policy M 3.2: Consider innovative designs when part of an accepted standard, or when properly vetted through an appropriate engineering/design review, in compliance with all state and federal laws.

	Policy M 3.3: Complete the following studies prior to the implementation of innovative design concepts: • An analysis of the current and future context of the community and neighborhood in which they are proposed; • A balanced assessment of the needs of all users and travel modes (i.e., pedestrian, bicycle, transit, vehicular, and equestrian, where appropriate); • A technical assessment of the operational and safety characteristics for each mode; and • A consistency check with transportation network plans, including the Highway Plan, Bicycle Master Plan, and Community Pedestrian Plans.
	Policy M 3.4: Support legislation that minimizes or eliminates liability associated with the implementation of innovative street designs that accommodate all users.

Goal M-4: An efficient multimodal transportation system that serves the needs of all County residents.	
Topic	**Policy**
Transit Efficiency, Multimodal Transportation	Policy M 4.1: Expand transportation options throughout the County that reduce automobile dependence.
	Policy M 4.2: Expand shuttle services throughout the County to connect major transit centers to community points of interest.
	Policy M 4.3: Maintain transit services within the unincorporated areas that are affordable, timely, cost-effective, and responsive to growth patterns and community input.
	Policy M 4.4: Ensure expanded mobility and increase transit access for underserved transit users, such as seniors, students, low income households, and persons with disabilities.
	Policy M 4.5: Encourage continuous, direct routes through a connected system of streets, with small blocks and minimal dead ends (cul-de-sacs).
	Policy M 4.6: Support alternative LOS standards that account for a multimodal transportation system.
	Policy M 4.7: Provide and maintain appropriate signage for streets, roads and transit.
	Policy M 4.8: Ensure the participation of all potentially affected communities in the transportation planning and decision-making process.
	Policy M 4.9: Support the linkage of regional and community-level transportation systems, including multimodal networks.
	Policy M 4.10: Improve the efficiency of the public transportation system with bus lanes, signal prioritization, and connections to the larger regional transportation network.

	Policy M 4.11: Work with adjacent jurisdictions to ensure connectivity and the creation of an integrated regional network.
Travel Demand Management	Policy M 4.12: Reduce vehicle trips through the use of mobility management practices, such as the reduction of parking requirements, employer/institution based transit passes, regional carpooling programs, and telecommuting.
	Policy M 4.13: Promote mobility management practices, including incentives to change transit behavior and using technologies, to reduce VMTs.

Goal M-5: Land use planning and transportation management that facilitates the use of transit.	
Topic	**Policy**
Land Use and Transportation	Policy M 5.1: Facilitate transit-oriented land uses and pedestrian-oriented design to encourage transit ridership.
	Policy M 5.2: Implement parking strategies that facilitate transit use and reduce automobile dependence.
	Policy M 5.3: Maintain transportation right-of-way corridors for future transportation uses, including bikeways, or new passenger rail or bus services.
Transportation Funding	Policy M 5.4: Support dedicated funding streams for the construction, maintenance and improvement of roadway, public transit, pedestrian and bicycle transportation systems.
	Policy M 5.5: Encourage financing programs, such as congestion pricing, bonding and increasing parking costs, to implement transportation systems and facilities.

Goal M-6: The safe and efficient movement of goods.	
Topic	**Policy**
Goods Movement	Policy M 6.1: Maximize aviation and port system efficiencies for the movement of people, goods and services.
	Policy M 6.2: Support the modernization of the County's aviation systems, including its principal airport, LAX.
	Policy M 6.3: Designate official truck routes to minimize the impacts of truck traffic on residential neighborhoods and other sensitive land uses.
	Policy M 6.4: Minimize noise and other impacts of goods movement, truck traffic, deliveries, and staging in residential and mixed-use neighborhoods.

	Policy M 6.5: Support infrastructure improvements and the use of emerging technologies that facilitate the clearance, timely movement, and security of trade.
	Policy M 6.6: Preserve property for planned roadway and railroad rights-of-way, marine and air terminals, and other needed transportation facilities.

Goal M-7: Transportation networks that minimizes negative impacts to the environment and communities.	
Topic	**Policy**
Environmentally Sensitive Transportation Design	Policy M 7.1: Encourage the use of natural systems to treat stormwater and rainwater runoff.
	Policy M 7.2: Minimize roadway runoff through the use of permeable surface materials, such as porous asphalt and concrete materials, wherever feasible.
	Policy M 7.3: Encourage the creation of wildlife underpasses and overpasses, fencing, signage, and other measures to minimize impacts to wildlife at junctures where transit infrastructure passes through sensitive habitats.
	Policy M 7.4: Encourage the use of sustainable transportation facilities and infrastructure technologies, such as liquid and compressed natural gas, and hydrogen gas stations, ITS, and electric car plug-in ports.
	Policy M 7.5: Where the creation of new roadways or other transportation systems is necessary in areas with sensitive habitats, particularly SEAs, use best practice design to encourage species passage and minimize genetic diversity losses when new transportation infrastructure cannot avoid crossing through undisturbed natural areas.
Rural Streets	Policy M 7.6: In rural areas, require rural highway and street standards that minimize the width of paving and the placement of curbs, gutters, sidewalks, street lighting, and traffic signals, except where necessary for public safety.

Table 4.3: Mobility Element Implementation Programs

Living Streets
Parking Ordinance
Community Pedestrian Plans
Safe Routes to School Program

[Text Box]

Model Design Manual for Living Streets

The Model Design Manual for Living Streets is a valuable resource for local jurisdictions looking to create streets that are safe and comfortable for all users and all modes. It outlines various design features that not only accommodate cars, but also pedestrians, bicyclists, and transit riders. Street design features that help to create vibrant and attractive streets are also outlined in the manual.

The manual was funded by the Department of Health and Human Services through the Los Angeles County Department of Public Health and the UCLA Luskin Center for Innovation.

For more information please visit: http://www.modelstreetdesignmanual.com/

[Text Box]

Green Streets

Green streets is a sustainable stormwater management and landscaping strategy that utilizes a combination of increased permeable surfaces and planted areas, soil filtration, vegetative bio-retention and underground stormwater retention basins to maximize groundwater recharge. Green streets not only improves water quality and drainage, but also improves mobility and promotes complete streets through traffic calming, and enhances the pedestrian experience through sustainable landscaping, such as bio-swales, street trees, rain gardens and planters.

Chapter 5: Air Quality Element

Table of Contents

I. Introduction

The South Coast Air Basin, which includes the majority of Los Angeles County, continues to have among the worst air quality ratings in the country. Additionally, climate change, which is primarily caused by an increase in greenhouse gas (GHG) emissions, is one the most pressing environmental issues faced by all levels of government. Air pollution and climate change pose serious threats to the environment, economy, and public health.

The Air Quality Element addresses the General Plan's Guiding Principles by promoting clean air and addressing climate change. In addition to Smart Growth policies, such as building sustainably and reducing energy consumption, the Air Quality Element discusses clean air as a positive outcome of smart growth land use policies to reduce Vehicle Miles Traveled (VMTs), traffic pollution and greenhouse gas emissions, and Environmental Resource Management policies to protect resources. The Air Quality Element also addresses how the provision of Sufficient Community Services and Infrastructure, especially the County's vast transportation network, needs to include considerations for the impacts on air quality and quality of life. The Air Quality Element also discusses the importance of clean air in planning for Healthy, Livable, and Equitable Communities, and for the workforce in building a Strong and Diversified Economy.

The Air Quality Element summarizes air quality issues and outlines the goals and policies in the General Plan that will improve air quality and reduce greenhouse gas emissions.

II. Background

Air Pollutants

The air quality in Southern California does not meet state and federal standards. The American Lung Association consistently gives the County failing grades in the amount of ozone and particulate pollution in the air. Although smog levels are impacted by seasons and weather patterns, smog is visible in the air on most days.

The County is a large basin with the Pacific Ocean to the west, and several mountain ranges with 11,000 foot peaks to the east and south. Frequent sunny days and low rainfall contribute to ozone

formation, as well as high levels of fine particles and dust. In addition, the County is home to many diverse industries and the largest goods movement hub on the west coast. In spite of emission controls that are among the most stringent in the country, power generation and petroleum refining continue to be among the County's largest stationary sources of air pollution.

Poor air quality is a measurable environmental hazard that impacts public health, welfare and the economy. The California Air Resources Board (CARB) has identified diesel particulate matter (PM) as representing 70 percent of the known cancer risk from air toxics in California. Diesel PM is primarily emitted from trucks, trains and ships, which puts those who live near ports and distribution centers at greater risk. A 2008 report by the Institute of Economic and Environmental Studies at California State University Fullerton found that California loses about $28 billion annually due to premature deaths and illnesses linked to ozone and particulates from sources in the South Coast and San Joaquin air basins. Most of those costs, about $25 billion, are connected to roughly 3,000 smog-related deaths each year. Additional impacts include work and school absences, emergency room visits, asthma attacks and other respiratory illnesses.

Poor air quality in the region is attributed to emissions from human activities and natural sources, as well as geography, local weather and climate. Specific causes of poor air quality include: natural factors, such as changes in the sun's intensity or slow changes in the Earth's orbit around the sun; natural processes within the climate system (e.g., changes in ocean circulation); human activities that change the atmosphere's composition (e.g., through burning fossil fuels); and the land surface (e.g., deforestation, reforestation, urbanization, desertification, etc.).

Federal, state and regional agencies regulate air pollutants and contaminants that harm human health. Regulations can include standard-setting, ambient monitoring, developing permitting programs, enforcement activities, and establishing economic incentives to reduce air pollution. As shown in Figure 5.1, the County is divided into air basins, which are areas with similar meteorological and geographic conditions. The majority of the County is in the South Coast Air Basin, while the area north of the San Gabriel Mountains is in the Mojave Desert Air Basin.

Figure 5.1: Air Basins

Criteria Air Pollutants

The Clean Air Act requires the U.S. Environmental Protection Agency (EPA) to set national ambient air quality standards for six common air pollutants. These pollutants are called criteria air pollutants because the EPA has developed human health-based and/or environmentally-based criteria (science-based guidelines) for setting permissible levels:

- Ozone (O_3)
- Particulate matter (PM)
- Carbon monoxide (CO)
- Nitrogen dioxide (NO_2)
- Sulfur dioxide (SO_2)
- Lead (Pb)

Of the six identified criteria air pollutants, particle pollution and ground-level ozone have the most widespread health impacts. The County's levels of ozone, particulate matter, and carbon monoxide continually exceed the federal and state ambient air quality standards. Table 5.1 is a summary of the primary sources and effects of the federally-identified criteria air pollutants.

Table 5.1: Primary Sources and Effects of Criteria Pollutants

Pollutants	Source	LA County Classification	Primary Health Effects
Ozone (O_3)	Atmospheric reaction of organic gases with nitrogen oxides in sunlight ("smog")	Extreme non-attainment area	Aggravation of respiratory and cardiovascular diseases; reduced lung function; increased cough and chest discomfort
Fine Particulate Matter (PM10 and PM 2.5)	Stationary combustion of fuels; construction activities; industrial processes; atmospheric chemical reactions	Serious non-attainment area	Reduced lung function; aggravation of respiratory and cardio-respiratory diseases; increased mortality rate; reduced lung function growth in children.
Carbon Monoxide (CO)	Incomplete combustion of fuels, such as motor vehicle exhaust	Serious non-attainment area	Aggravation of some heart diseases.
Nitrogen Dioxide (NO_2)	Motor vehicle exhaust; high temperature stationary combustion; atmospheric reactions	*Concentrations have not exceeded federal standards since 1991, but emissions remain a concern because of their contribution to O_3 and PM	Aggravation of respiratory diseases.
Sulfur Dioxide (SO_2)	Combustion of sulfur containing fossil fuels; smelting of sulfur bearing metal ores; industrial processes	Attainment area	Aggravation of respiratory diseases (eg., asthma, emphysema); reduced lung function.
Lead (Pb)	Contaminated soil	Attainment area	Behavioral and hearing disabilities in children; nervous system impairment.

Source: South Coast Air Quality Management District, 2005.

Toxic Air Contaminants

Many toxic air contaminants (TACs), such as formaldehyde and methanol, do not have federal or state ambient air quality standards. However, exposure to TACs is associated with elevated risk of cancer, birth defects, genetic damage, and other adverse health effects.

TACs are regulated by technology-based requirements that are enforced at the state and local level. In California, the Air Toxics Program and the Air Toxics "Hot Spots" Information and Assessment Act regulate TACs. In the County, operators of certain types of facilities must submit emissions

inventories. The Air Toxics Program categorizes each facility as being high, intermediate, and low-priority based on the potency, toxicity, quantity, and volume of its emissions. If the risks are above established levels, facilities are required to notify surrounding populations and to develop and implement a risk reduction plan.

Greenhouse Gases

GHGs in the atmosphere affect the Earth's heat balance by absorbing infrared radiation. This layer of gases prevents the escape of heat, similar to the function of a greenhouse. According to the EPA, the principal GHGs that enter the atmosphere because of human activities are carbon dioxide, methane, nitrous oxide, and fluorinated gases.

GHGs contribute to the destruction of the Earth's naturally-occurring ozone, which provides protection from the damaging effects of solar ultraviolet radiation. The biggest contributors to ozone depletion are chlorofluorocarbons (CFCs), halons, carbon tetrachloride, methyl chloroform, and other halogenated compounds.

Climate Change

Climate change refers to any significant change in measures of climate (such as temperature, precipitation, or wind) lasting for an extended period (decades or longer). While climate change is not solely the result of poor air quality, the two have many common causes and effects.

Scientists believe that the Earth is warming faster than at any time in the previous 1,000 years. According to the California Energy Commission, the average global surface temperature has increased by 1.1 degrees Fahrenheit since the 19th century, and the 10 warmest years of the last century all occurred within the last 15 years.

The impacts of climate change are exacerbated by increased emissions during warm weather. Warmer temperatures cause increased energy consumption through the use of air conditioners, which increases emissions from power plants and vehicles. Climate change causes warming, drying, and increased winds that result in hotter, harder to control wildfires. These wildfires result in increased levels of fine particulate matter that could also exceed state and federal standards and harm the public.

Legislation

The Global Warming Solutions Act of 2006 (AB 32) manages and reduces greenhouse gas emissions in California. AB 32 requires that CARB establish a comprehensive program of regulatory and market mechanisms to reduce greenhouse gas emissions to 1990 levels by the year 2020.

The Sustainable Communities and Climate Protection Act of 2008 (SB 375), is one of many bills that implement AB 32, and requires CARB to develop regional greenhouse gas emission reduction targets for automobile and light trucks. It requires the 18 metropolitan planning organizations in California, such as Southern California Association of Governments, to coordinate land use, transportation and housing strategies, and prepare a Sustainable Communities Strategy (SCS) to reduce the amount of VMTs in their respective regions and demonstrate their ability to meet CARB's targets. SCAG adopted its SCS as part of its 2012 RTP in April of 2012. For more information on the 2012 RTP/SCS, please visit SCAG's web site, located at http://www.scag.ca.gov.

Los Angeles County Energy and Environmental Program

In 2006, the Los Angeles County Board of Supervisors adopted an Energy and Environmental Program (EEP) for the development and enhancement of energy conservation and environmental programs for County departments. These programs contribute to the County's efforts to reduce communitywide GHGs and GHGs from County operations. The EEP consists of the following programs:

Energy and Water Efficiency

The EEP establishes a reduction target of 20 percent by 2015, and implements conservation monitoring practices and water and energy shortage awareness programs for County buildings and departments.

Green Building Construction and Operations

The County's Green Building Program consists of the Green Building, Low-Impact Development, and Drought Tolerant Ordinances. For more information on the County's environmental and sustainability programs, please visit http://green.lacounty.gov.

Environmental Stewardship

The Environmental Stewardship Program measures and reduces the County's environmental footprint, including the amount of greenhouse gases produced through direct and indirect County operations, and develops climate change-related policies.

Public Outreach and Education

The Public Outreach and Education Program utilizes the County's communication and outreach channels to share utility industry information, facilitate implementation of subsidy and assistance programs, and spread energy conservation practices throughout the region.

Los Angeles County Climate Action Plan

A climate action plan is a local commitment to fulfilling the objectives outlined in AB 32. The County's Climate Action Plan will specify the County's goals for greenhouse gas emission reductions by 2020 and 2035 within the unincorporated areas. The Climate Action Plan will include a GHG inventory for the unincorporated areas; an action plan for how the County will meet its GHG emission targets; and the mechanism for tracking and evaluating its progress toward meeting the County's goals.

III. Issues

1. Coordinating Land Use, Transportation and Air Quality Planning

Where and how land is developed can impact air quality, as well as the impact of air quality on public health. People who live near major sources of air pollution are at a greater health risk. Sensitive receptors, or users of residences, schools, daycare centers, parks and playgrounds, or medical facilities, are particularly susceptible to the impacts of air pollution. Furthermore, CARB advises distancing requirements for sources of air pollution, including freeways, distribution centers, ports, rail yards, refineries, chrome platers, dry cleaners that use perchloroethylene, and gasoline dispensing facilities.

Studies indicate that residing near sources of traffic pollution is associated with adverse health effects, such as the exacerbation of asthma, onset of childhood asthma, non-asthma respiratory symptoms, impaired lung function, reduced lung development during childhood, and cardiovascular morbidity and mortality. These associations are diminished with distance from the pollution source. Given the association between traffic pollution and health, many recommend that freeways, in particular, be sited at least 500 feet from residences, schools, and other sensitive land uses. The Health Effects Institute (HEI) indicates that exposure to traffic pollution may occur up to 300 to 500 meters (approximately 984 to 1640 feet). The range reported by HEI reflects the variable influence of background pollution concentrations, meteorological conditions, and seasons. In addition, siting parks and active recreational facilities near freeways may increase public exposure to harmful pollutants, particularly while exercising. Studies show that heavy exercise near sources of traffic pollution may have adverse health effects.

In addition, there is a direct link between transportation activities and air pollution. According to the South Coast Air Quality Management District, mobile sources of pollution, such as cars, trucks, buses, construction equipment, trains, ships and airplanes, account for 60 percent of all smog producing emissions in the region. Additionally, the County's highly congested freeways and highways further contribute to the conditions that produce air pollution. The continued population growth that is projected for the County could overwhelm these air quality gains unless careful attention is paid to voluntary and regulatory measures that reduce transportation-related emissions.

Developing land and transportation systems to reduce the need for vehicle trips and provide alternative modes of transportation can improve air quality. In addition, integrating land use plans, transportation plans, and air quality plans can help minimize exposure to toxic air pollutant emissions from industrial and other stationary sources. The Mobility Element and Land Use Element provide transportation-based policies to reduce VMTs, such as improving the efficiency of the County roadway network; mobility management, such as increased ridesharing and vanpools; and improving the jobs-housing balance.

2. Responding to Climate Change

Climate change will have a number of adverse impacts on the County's ecosystems and economy. Various scenarios predict intense flooding or prolonged droughts, higher temperatures that can lead to frequent wildfires, and rising sea levels that will affect low-lying coastal areas. A large GHG contributor is carbon dioxide, and in California, more than 35 percent of the fossil fuel emissions of carbon dioxide are related to transportation uses. As the County has some of the highest rates of single occupant vehicle use, traffic congestion, and VMTs in the country, the County is a significant contributor to climate change in the region.

IV. Goals and Policies

Goal AQ 1: Protection from exposure to harmful air pollutants.	
Topic	**Policy**
Air Pollutants	Policy AQ 1.1: Encourage new residential, commercial, and industrial development to reduce impacts from air pollution sources.

	Policy AQ 1.2: Minimize the health risks to people from industrial toxic or hazardous air pollutant emissions.
	Policy AQ 1.3: Encourage the use of low or no volatile organic compound (VOC) emitting materials.
	Policy AQ 1.4: Reduce particulate emissions from construction, grading, excavation, and demolition to the maximum extent feasible.
	Policy AQ 1.5: Work with local air quality management districts to publicize air quality warnings, and to track potential sources of airborne toxics from identified mobile and stationary sources.

Goal AQ 2: The reduction of air pollution and mobile source emissions through coordinated land use, transportation and air quality planning.	
Topics	**Policy**
Air Quality, Land Use, and Transportation	Policy AQ 2.1: Encourage the application of design and other appropriate measures when siting sensitive uses, such as residences, schools, senior centers, daycare centers, medical facilities, or parks with active recreational facilities within proximity to major sources of air pollution, such as freeways.
	Policy AQ 2.2: Require all access roads, driveways, and parking areas that serve new commercial and industrial development to be constructed with materials that minimize particulate emissions and are appropriate to the scale and intensity of use.
	Policy AQ 2.3: Require the use of zero, low-emission, biodiesel or hybrid vehicles in the County motor pool.
	Policy AQ 2.4: Reduce emissions from traffic congestion and vehicle trips through the support of alternative modes of transportation.
	Policy AQ 2.5: Regulate the siting and development of land uses that encourage cars and trucks to idle, such as drive-through establishments.
	Policy AQ 2.6: Participate in, and effectively coordinate the development and implementation of community and regional air quality programs.

Goal AQ 3: Implementation of plans and programs to address the impacts of climate change.	
Topic	**Policy**

Climate Change	Policy AQ 3.1: Prepare a climate action plan for the unincorporated areas that includes an inventory of greenhouse gas emissions; an action plan for how the County will meet its GHG emission targets; and the mechanism for tracking and evaluating its progress toward meeting the County's goal.
	Policy AQ 3.2: Reduce energy consumption in County operations by 20 percent by 2015.
	Policy AQ 3.3: Reduce water consumption in County operations.
	Policy AQ 3.4: Participate in local, regional and state programs to reduce greenhouse gas emissions in the County.
	Policy AQ 3.5: Encourage maximum amounts of energy conservation in new development and municipal operations.

Goal AQ 4: Energy efficiency and conservation through development and design techniques.	
Topic	**Policy**
Energy Efficient Development	Policy AQ 4.1: Encourage new development to employ sustainable energy practices, such as utilizing passive solar techniques and/or active solar technologies.
	Policy AQ 4.2: Support the design of developments that provide substantial tree canopy cover, and utilize light colored paving materials and reflective roofing materials to reduce the urban heat island effect.
	Policy AQ 4.3: Require green building policies, low impact development, and drought tolerant landscaping in all development activities.
	Policy AQ 4.4: Encourage development to optimize the solar orientation of buildings to maximize passive and active solar design techniques.

Table 5.2: Air Quality Element Implementation Programs

Climate Action Plan Program
PACE Financing Program

[Text Box]

Air Quality Regulating Agencies

The following are federal, state and local agencies that regulate air quality in the County:

U.S. Environmental Protection Agency

The U.S. Environmental Protection Agency (EPA) enforces the Clean Air Act through multiple programs, policies and regulations. The EPA focuses on pollution prevention and energy efficiency, indoor and outdoor air quality, industrial air pollution, pollution from vehicles and engines, radon, acid rain, stratospheric ozone depletion, climate change, and radiation protection. The EPA sets emissions standards for mobile sources, such as automobiles, aircraft, certain ships, and locomotives. Information on the programs and activities in EPA Region IX, which includes California, can be found on the EPA web site at http://www.epa.gov/region9.

California Air Resources Board

The California Air Resources Board (CARB) is responsible for the implementation of the Clean Air Act, which establishes state ambient air quality standards, and several programs related to emission reduction activities. Per AB 32, CARB is also responsible for establishing a program to track and report greenhouse gas emissions, and to regulate, measure, and enforce the required greenhouse gas emission reductions. Information on CARB's programs and activities can be found on their web site at http://www.arb.ca.gov.

South Coast Air Quality Management District (SCAQMD) and the Antelope Valley Air Quality Management District (AVAQMD)

The South Coast Air Quality Management District (SCAQMD) and the Antelope Valley Air Quality Management District (AVAQMD) are responsible for monitoring air quality as well as planning, implementing, and enforcing programs designed to attain and maintain state and federal ambient air quality standards in the region. The SCAQMD jurisdiction is approximately 10,743 square miles and includes the entire County except for the Antelope Valley, which is covered by the AVAQMD. The SCAQMD implements a wide range of programs and regulations that address point source pollution and mobile source emissions, and enforces air quality through inspections, fines, and educational training. Information on air quality management districts can be found on the AQMD web site, located at http://www.aqmd.gov.

[Text Box]

Development Policies That Reduce Greenhouse Gas Emissions

- Implement land use strategies to encourage jobs-housing balance, promote transit-oriented development, and encourage high density development along transit corridors. Encourage compact, mixed-use projects, forming urban villages designed to maximize affordable housing and encourage walking, bicycling and the use of public transit systems.
- Encourage infill, redevelopment, and higher density development, whether in incorporated or unincorporated settings.
- Encourage new development to integrate housing, civic and retail amenities (jobs, schools, parks, shopping opportunities) to help reduce VMT resulting from discretionary automobile trips.

Source: Governor's Office of Planning and Research, CEQA and Climate Change Technical Advisory, June 18, 2008

[Text Box]

What is Ozone?

According to the EPA and CARB, certain air pollutants may put people at-risk for developing cancer. The top three contributors of the potential cancer risk primarily come from motor vehicles—diesel PM, 1,3 butadiene, and benzene. Other air pollutants, such as hexavalent chromium and perchloroethylene, while not appearing to contribute as much to overall cancer risks, can present high risks to people living close to a source.

Source: American Lung Association, State of the Air 2010

[Text Box]

What Is a Carbon Footprint?

A carbon footprint is a measure of the impact that our activities have on the environment, and in particular, climate change. The carbon footprint relates to the amount of greenhouse gases produced through burning fossil fuels for electricity, heating, transportation, and leisure activities. To find out ways to calculate and reduce your carbon footprint, visit the Carbon Footprint web site located at http://www.carbonfootprint.com.

[Text Box]

Green Building Third Party Certification

LEED

The LEED green building rating system, developed by the United States Green Building Council, is a national standard for design, construction, and operation of green buildings and is the most widely accepted and recognized rubric for green building. In particular, LEED concentrates on sustainable site development, water savings, energy efficiency, the selection of recycled or local materials, and indoor environmental quality.

GreenPoint Rated

The GreenPoint Rated system for residential development was created specifically for use within California and emphasizes the need for water efficiency and energy conservation. GreenPoint Rated uses a flexible checklist approach that allows a builder to choose the green building elements that will fit best in their project, as well as meet the sustainability goals of the project. The GreenPoint Rated system is organized into sections that address eco-friendly design and construction practices, including structural frame and building envelope, landscaping, site design, building performance, heating, ventilation and air conditioning, and renewable energy.

[Text Box]

Los Angeles Regional Collaborative (LARC)

The Los Angeles Regional Collaborative (LARC) is a network of leaders from government, the business community, academia, labor, and environmental and community groups dedicated to encouraging greater coordination and cooperation in addressing climate change at the local and regional levels. The purpose of this collaboration is to share information, foster partnerships, and develop systemwide strategies to address climate change and promote a green economy through sustainable communities.

Chapter 6: Conservation and Natural Resources Element

Table of Contents

I. Introduction

The protection, conservation and preservation of the County's natural resources and open space areas is vital as Los Angeles County is heavily urbanized, and most of the natural resources and open space areas are located within the unincorporated areas. The County must act as the steward for the County's natural resources and available open space areas, and conserve and protect these lands and resources from inappropriate development patterns.

The Conservation and Natural Resources Element addresses the General Plan's Guiding Principles by serving as the policy guide for the majority of the County's Environmental Resource Management policies and programs. The Conservation and Natural Resources Element also addresses issues that are integral to Smart Growth principles and planning for Healthy, Livable, and Equitable Communities, such as water, biological, energy resource, and scenic resource conservation. The Conservation and Natural Resources Element addresses Sufficient Infrastructure and Community Services by providing a long-range vision to address important infrastructure needs, such as the County's water and food production supply. The policies in the Conservation and Natural Resources Element also contribute to a Strong and Diversified Economy, as they relate to sustainable emerging industries, and recreational and scenic opportunities that foster tourism.

The Conservation and Natural Resources Element guides the long-term conservation of the County's natural resources and preservation of available open space areas. The Conservation and Natural Resources Element addresses the following conservation areas: Open Space Resources; Biological Resources; Water Resources; Agricultural Resources; Mineral and Energy Resources; Scenic Resources; and Historic, Cultural and Paleontological Resources.

II. Open Space Resources

This section addresses the County's open space and natural area resources, and provides policies for preserving and managing dedicated open space areas through preservation, acquisition, and easements.

Background

The County's open space resources consist of public and private lands and waters that are preserved in perpetuity or for long-term open space and recreational uses. Existing open spaces in the unincorporated areas include County parks and beaches, conservancy lands, state parklands, and federal lands, such as national forests. Open space resources include private lands, such as deed-restricted open space parcels and easements. Various stakeholders throughout the County share a responsibility to manage and preserve the County's available open space resources.

Open Space Resources

Table 6.1 shows a summary of the County's open space resources areas, by acreage and category.

Table 6.1: Summary of Unincorporated Los Angeles County Open Space Resources, in Acres

Open Space Resource Category	Acres
Conservancy Lands	48,271.79
County Lands	16,834.24
Federal Lands	679,629.58
Private Open Space Lands	9,181.03
State Lands	50,893.72
Total Open Space Acreage	804,810.36

Source: Los Angeles County Department of Regional Planning GIS Section

County Lands

The County Lands category includes open space areas owned and maintained by the Los Angeles County Department of Parks and Recreation (DPR): natural areas, wildlife and wildflower sanctuaries, and regional parks with significant natural resources. Examples include: Devil's Punchbowl Natural Area, High Desert Wildlife Sanctuaries, Whittier Narrows Recreation Area, Santa Fe Dam Recreation Area, and Schabarum Regional Park. Please refer to the Parks and Recreation Element, Appendix E and Appendix F for a full discussion on parkland resources.

Conservancy Lands

The County is home to scenic areas and diverse topographic, geologic and vegetative features. State-created and non-profit conservancies play a critical role in preserving many of these areas through the acquisition and preservation of available open space areas throughout the County. A list and descriptions of partnering conservancies in the County can be found in Appendix E.

State Lands

The State Lands category includes open space and recreation areas owned and operated by the State of California. The California Department of Parks and Recreation has been instrumental in providing open space and recreation areas in the County. State parklands preserve important natural habitat areas, while providing both passive and active recreational opportunities that attract users throughout the region. The County is committed to preserving the quality of these areas by planning for compatible uses on adjacent lands. Examples of State Lands include Malibu Creek and Topanga State Park.

Federal Lands

The Federal Lands category refers to public lands managed by the federal government including:

National Forest

The Angeles National Forest and a small portion of the Los Padres National Forest encompass nearly 650,000 acres of land within the County. The Angeles National Forest stretches across the County in two sections encompassing the San Gabriel Mountain Range, and is 1,018 square miles, or 25 percent of the entire land area of the County. The U.S. Forest Service is responsible for managing public forest lands. Its mission is the stewardship of forest lands and resources through programs that provide recreation and multiple uses of natural resources, wilderness areas, and significant habitat areas. The U.S. Forest Service prepares and periodically updates the Land and Resource Management Plan as a policy guide for the use of lands in the national forests.

Within the boundaries of the national forests, nearly 40,000 acres are privately-owned. For these parcels, commonly referred to as in-holdings, the County retains responsibility for land use regulation.

National Recreation Area

The Santa Monica Mountains National Recreation Area is a part of the National Park System and is managed by the National Park Service. The Recreation Area preserves natural habitats, historical and cultural sites, offers recreational opportunities, and improves the air quality for the Los Angeles basin. Covered by chaparral, oak woodlands, and coastal sage scrub, it is home to many species that are listed as rare, threatened, or endangered.

Bureau of Land Management Land

The U.S. Bureau of Land Management (BLM) owns thousands of acres of open space land in the northern portion of the County. These primarily desert lands serve to preserve federally-listed endangered and threatened species, and where compatible, provide recreational, agricultural, energy, and mining activities.

Private Open Space

Open space dedications are defined as privately-owned lands that have been set aside for permanent open space as part of a larger land development proposal.

The California Open Space Easement Act of 1969 sets forth general conditions governing the creation of recognized open space easements. Agreements or contracts establishing such easements specify the standards and conditions for uses and activities permitted within the area covered. Commitment of such lands to open space use in perpetuity is typically assured through deed-restrictions or dedication of construction rights secured at the time of development permit approval. Within dedicated open space areas, standards and conditions for use are specifically set forth as conditions of the zoning permit or subdivision tract map.

Open Space Resources Policy Map

The Open Space Resources Policy Map, Figure 6.1, aids decision-makers in identifying and maintaining open space in an undisturbed state for public recreation, scenic enjoyment, and for the protection and study of natural ecosystems. Open Space Resources are part of the County's Special Management Areas . For more information on the Special Management Areas , please refer to the Land Use Element.

Figure 6.1: Open Space Resources Policy Map

Issues

1. Open Space Preservation

Increased population growth and ongoing development activities continue to impact the County's open space areas. Dedicated open space areas are vital for the recreational, scenic and wilderness opportunities they provide. Leap frog development and sprawl affects the ability to preserve biotic diversity and to provide appropriate recreational amenities. Because of sprawling development, the County's open space areas are becoming increasingly fragmented or isolated, which decreases connectivity.

2. Open Space Acquisition and Planning

The acquisition and preservation of open space areas is a challenging and expensive endeavor. Additionally, there is no coordinated master plan in the County to acquire, manage and preserve the County's available open space areas. Working in partnership with conservancies and other stakeholders that can purchase and acquire available open space lands is an important part of the County's open space acquisition strategy. A coordinated and collaborative effort to manage and fund a countywide open space master plan is needed to adequately protect the County's available open space areas.

Goals and Policies for Open Space Resources

Goal C/NR 1: Open space areas that meet the diverse needs of the County.	
Topic	**Policy**
Open Space Acquisition	Policy C/NR 1.1: Support the acquisition of new available open space areas throughout the County.
	Policy C/NR 1.2: Create an established network of dedicated open space areas that provide regional connectivity, between the southwestern extent of the Tehachapi Mountains to the Santa Monica Mountains, and from the southwestern extent of the Mojave Desert to the Puente Chino Hills.
	Policy C/NR 1.3: Increase and improve access to dedicated open space and natural areas for all users.
	Policy C/NR 1.4: Prioritize open space acquisitions for available lands that contain unique ecological features, streams, watersheds, woodlands, grasslands, and/or offer linkages that enhance wildlife movements and genetic diversity.
Open Space Preservation and Conservation of Natural Areas	Policy C/NR 1.5: Implement programs and policies that enforce the responsible stewardship and preservation of dedicated open space areas throughout the County.
	Policy C/NR 1.6: Protect and conserve natural resources, natural areas, and open spaces on park properties.

Goal C/NR 2: Effective collaboration in open space resource preservation.	
Topic	**Policy**
Open Space Collaboration and Financing	Policy C/NR 2.1: Establish new revenue generating mechanisms to leverage County resources to enhance and acquire available open space and natural areas in the County.
	Policy C/NR 2.2: Encourage the development of multi-benefit dedicated open spaces throughout the County.
	Policy C/NR 2.3: Improve understanding and appreciation for natural areas through preservation programs and educational facilities.
	Policy C/NR 2.4: Collaborate with public, non-profit, and private organizations to acquire and preserve available open space lands.

III. Biological Resources

The physical environment of the County is extremely diverse: elevations range from sea level to 10,000 feet; soils vary due prehistoric volcanic activity, marine sedimentation and river deposition; and climates that are mild and moist near the coast change to severe temperature extremes in the high mountains and desert. The County boasts a treasury of natural features, including coastlines, islands, dunes, marshes, tidal flats, sea cliffs, hills, mountain ranges, freshwater ponds, rivers, streams, wetlands, woodlands, deserts, chaparral, grasslands, valleys, and plains. As a result, the County contains a unique and varied collection of biological resources, including habitats and species—some of which may not be found anywhere else in the world.

The County has six main types of biological resources: regional habitat linkages; forests; coastal zone; riparian habitats, streambeds and wetlands; woodlands; and Significant Ecological Areas (SEAs). The General Plan is tasked with protecting and enhancing these resources, and ensuring the legacy of the County's biotic diversity is passed on to future generations.

In addition, there are two sites in the unincorporated areas of the County that are controlled by the U.S. Department of Defense and that contain important biological resources. The resources and protections on Edwards Air Force Base in the Antelope Valley are described in detail in the Antelope Valley SEA description in Appendix E. The resources and protections on San Clemente Island are described in detail in the Coastal Zone Resources section in Appendix E.

Background

Regional Habitat Linkages

The County's biological resources and important habitat areas are part of a greater habitat linkage that extends beyond the County boundaries. Figure 6.2 maps the regional habitat linkages that connect biological resource areas in the County with resource areas in adjacent local jurisdictions. The areas depicted are based on national forest boundaries, the County's SEAs, and a series of missing linkage design studies conducted by the South Coast Wildlands Project. For a detailed description of these linkages, please refer to Appendix E. The following linkages are important to ensuring greater regional biodiversity, and species and habitat connectivity:

- The Puente Hills SEA is a linkage connecting the Puente Hills with the Chino Hills in Orange County.
- Linkages in the Santa Monica Mountains, Santa Susana and Simi Hills, Santa Clara River and Santa Felicia Creek SEAs connect to habitats in Ventura County.
- The San Andreas SEA is a linkage to the Santa Clara River Watershed, San Gabriel Mountains, Antelope Valley, and Tehachapi Mountains.
- The Antelope Valley SEA serves as a linkage between the San Gabriel Mountains and the Mojave Desert, and provides wildlife movement opportunities into open areas in Kern County and San Bernardino County.

Figure 6.2: Regional Habitat Linkages

Forests

The two national forests, Los Padres National Forest and Angeles National Forest, contain extensive biological resources. The Angeles National Forest contains the largest area of dedicated open space in the County. A vast number of wildlife species depend on the Angeles National Forest for protection, foraging, and breeding. Two thirds of the Angeles National Forest has slopes steeper than 60 percent, with elevations ranging from 1,200 to 10,000 feet above sea level.

Activities that occur in the national forests have a potential impact on biotic resources, as well as on the quality of local water supplies and the health of major watersheds. There are 240 miles of perennial rivers and streams, as well as 19 lakes and reservoirs. The floor of the national forests allows rainfall and snowmelt to replenish groundwater basins, which provides the County with approximately 13 percent of its annual water supply. Surface water runoff fills streams and rivers, which support riparian habitats. To protect these forest functions, the U.S. Forest Service has identified two thirds of the County's national forests as sensitive watershed areas.

The County is responsible for the land use regulation of the nearly 40,000 acres of privately-owned in-holdings within the national forest boundaries. Much of this land is in remote locations, subject to a high degree of natural hazards, and lacks adequate access to paved roads and water supply. The County does not encourage development in the national forests, and regulation is coordinated closely with the U.S. Forest Service.

Coastal Zone

The biological resource value in the coastal zone, which includes San Clemente Island, Santa Catalina Island, Marina Del Rey, Ballona Wetlands and the Santa Monica Mountains, is significant. The study and management of these resource areas is more rigorous than any other area in the County, and any land disturbance is regulated through coastal land use plans and local coastal programs, in conjunction with the California Coastal Commission.

Biological resources in the coastal zone are identified through Sensitive Environmental Resource Areas (SERAs), which contain terrestrial or marine resources that, because of their characteristics and/or vulnerability, require special protection. SERAs are comprised of the following sub-categories: Environmentally Sensitive Habitat Areas (ESHAs); Significant Woodlands and Savannahs; Significant Watersheds; Malibu Cold Creek Resource Management Area; and Wildlife Migration Corridor. SERAs are not intended to function as isolated preservation areas, but as areas subject to strictly-enforced environmental resource protections and land use regulations.

Biological resource management and regulation on Santa Catalina Island is implemented through the Santa Catalina Island Local Coastal Program (LCP). Island resources, such as Significant Ecological Areas (SEA), are identified in the LCP and are subject to restrictive development regulations. Any changes to the SEA boundaries or associated regulations require an amendment to the LCP and certification by the California Coastal Commission. Biological resource management and regulation on Marina Del Rey is also implemented through an LCP.

Land use regulation and jurisdictional authority in the Santa Monica Mountains Coastal Zone involves many public entities. In the unincorporated areas, biological resource protection is implemented through the Malibu Land Use Plan and the Malibu Coastal Program District, and by both the County and the California Coastal Commission.

Finally, resources within San Clemente Island and the Ballona Wetlands are managed by the U.S. Navy and California Department of Parks and Recreation, respectively.

For more information on the biological resources in the coastal zone, please refer to Appendix E.

Riparian Habitats, Streambeds and Wetlands

Riparian habitats are comprised of vegetation and other physical features that are typically found on stream banks and flood plains associated with streams, lakes, or other bodies of perennial or nearly-perennial surface water. Streambeds are the physical confines that water typically flows through, either perennially or after rain events. Riparian habitats and streambeds are of inherent value to local and regional ecosystems. They serve as important connectors to up- and downstream ecosystems or adjacent habitats; provide critical value to migratory birds; contribute to the quality of habitat linkages and wildlife corridors; and play a crucial role in maintaining surface and subsurface water quality.

Wetlands are areas that are inundated or saturated by surface water or groundwater at a frequency and duration that are sufficient to support vegetation, which is typically adapted for life in saturated soil conditions. Examples of wetlands include swamps, marshes, bogs, vernal pools, and playa lake areas. However, wetlands can also remain dry for long periods of time, which makes their identification and management potentially difficult. Wetlands contribute to water quality and the overall health of watersheds in several ways. They slow water flow, decrease erosion, filter water runoff, and provide habitat for many endangered plant and animal species.

The Emergency Wetlands Resources Act establishes a national wetlands conservation program, which requires states to include wetlands in their Comprehensive Outdoor Recreation Plans for management and preservation. California has lost over 90 percent of its original wetland areas, and the County has lost 95 percent. The County is dedicated to preserving its remaining wetlands and supports the wetland reclamation and conservation efforts of numerous non-profit organizations. In addition to County policy and regulation, projects that are subject to CEQA and located in a wetland are forwarded to applicable state and federal agencies for further review and permitting requirements.

Woodlands

The County's oak woodlands are an important resource that provides an abundance of aesthetic, ecological, and economic benefits to County residents. Oak woodland habitats are the most diverse terrestrial ecosystems in California. Similarly, riparian woodlands, California walnut, juniper, and Joshua tree woodlands provide habitat for multiple species within a concentrated area. Various types of woodlands are found in the County, including riparian woodlands; California walnut

woodlands in the San Gabriel Valley and Puente Hills; juniper and Joshua tree woodlands in the Antelope Valley; and oak woodlands countywide.

Significant Ecological Areas (SEAs)

A Significant Ecological Area (SEA) designation is given to land in the County that contains irreplaceable biological resources, as detailed in Appendix E. Cumulatively, the 27 SEAs and 2 Coastal Resource Areas represent the wide-ranging biodiversity of the County, and contain its most important biological resources. Each individual SEA is sized to support sustainable populations of its component species, and includes undisturbed or lightly disturbed habitat along with linkages and corridors that promote species movement. Table 6.2 and Figure 6.3 detail the 27 SEAs and 2 Coastal Resources Areas of the County.

Table 6.2: Significant Ecological Areas

	Significant Ecological Area
1	Alamitos Bay
2	Altadena Foothills and Arroyos
3	Antelope Valley
4	Ballona Wetlands
5	Cruzan Mesa Vernal Pools
6	East San Gabriel Valley
7	El Segundo Dunes
8	Griffith Park
9	Harbor Lake Regional Park
10	Joshua Tree Woodlands
11	Madrona Marsh Preserve
12	Malibu Coastline
13	Palos Verdes Peninsula and Coastline
14	Point Dume
15	Puente Hills
16	Rio Hondo College Wildlife Sanctuary

17	San Andreas
18	San Dimas Canyon and San Antonio Wash
19	San Gabriel Canyon
20	Santa Clara River
21	Santa Felicia
22a	Santa Monica Mountains
23	Santa Susana Mountains and Simi Hills
24	Terminal Island (Pier 400)
25	Tujunga Valley and Hansen Dam
26	Valley Oaks Savannah
27	Verdugo Mountains

Table 6.3: Coastal Resource Areas

Coastal Resource Area	
22b	Coastal Zone of the Santa Monica Mountains
28	Santa Catalina Island

Figure 6.3 Significant Ecological Areas and Coastal Resource Areas Policy Map

SEAs are part of the County's Special Management Areas Policy Map (Figure 3.1) in the Land Use Element. The County's SEA Program has a long history going back to the 1970s. The SEA Program, for those SEAs located in unincorporated areas of the County, is administered through the General Plan goals, policies and implementation program and the SEA Ordinance. Some SEAs are located entirely or partially outside of the County's jurisdiction in cities, along the coastline, or within national forest land. Appendix E provides more information about the SEA Program history, guiding principles, criteria for designation and detailed summaries of the biological resources contained within each SEA. Within the SEAs, areas identified as Ecological Transition Areas (ETAs) are those areas where biological resources have been altered or degraded, but still contribute elements to the overall function of the SEA. In many instances, the ETAs contain habitat linkages and wildlife corridors, or provide water resources that contribute to the sustainability of important resources within undisturbed areas of the SEA. ETAs consist of active or recent agricultural uses, low density rural lands or subdivisions where areas of functioning native vegetation and habitat remain

interspersed with homes, cleared areas supporting naturalized grassland and/or recovering native plant cover, and golf courses.

The coastal zone of the Santa Monica Mountains and Santa Catalina Island, and are identified on the SEA map as Coastal Resource Areas. The Coastal Resource Area designation is intended to identify the biological resources of each area as equivalent in significance with SEAs, while recognizing that the protection of these areas is regulated differently from other SEAs, through local coastal programs, instead of through the SEA Ordinance.

The objective of the SEA Program is to conserve the genetic and physical diversity of the County by designing biological resource areas that are capable of sustaining themselves into the future. However, SEAs are not wilderness preserves. Much of the land in SEAs is privately held, used for public recreation, or abuts developed areas. The SEA Program must therefore balance the overall objective of resource preservation against other critical public needs. The General Plan goals and policies are intended to ensure that privately-held lands within the SEAs retain the right of reasonable use, while avoiding activities and developments that are incompatible with the long-term survival of the SEAs.

Certain uses of the SEAs are compatible by definition with the long-term sustainability of biological resources. Some examples of uses that do not conflict with the goals of the SEA Program include: regulated scientific study; passive recreation, including wildlife observation and photography; and limited picnicking, riding, hiking and overnight camping. Many other uses may also be compatible with the SEA Program, or may partially or fully mitigate against potential impacts through careful site design and stewardship. In particular, the following uses may be determined compatible by scientific review or biotic surveys, or through the addition of conditions that are intended to protect against site specific and cumulative impacts to biotic resources in the SEA:

- Low-density or clustered residential uses that are compatible with identified biotic resources present in or affected by the site.

- Low-intensity local or visitor-serving commercial uses.

- Essential public and semi-public uses that are necessary for health, safety and welfare, and that cannot be located to alternative sites.

- Agricultural uses that are compatible with identified biotic resources that are present on or near the site.

- Extractive uses, including oil and gas recovery, and rock, sand and gravel quarrying, which are compatible with identified biotic resources.

More complex or intensive types of developments within SEAs are not precluded from development, but may require additional technical review to ensure that projects properly identify existing resources and potential impacts. The Los Angeles County Department of Regional Planning (DRP) assumes a responsibility to assist these types of projects with site design in the early stages of the project to ensure that projects are sensitive to and compatible with the resources of the area. The process of analyzing impacts to existing biological resources and determining SEA compatibility is designed to provide careful evaluation of projects within SEAs, in order to ensure that the ecological function of the SEA is maintained.

Generally complex or intensive types of developments in the SEAs require an SEA Conditional Use Permit (SEA CUP). The SEA Technical Advisory Committee (SEATAC) is an expert advisory

committee that assists the DRP and the Los Angeles County Regional Planning Commission in assessing applications for SEA CUPs by providing recommendations on the biological analyses conducted for SEA CUPs, and on the project's compatibility with SEA resources.

Issues

1. Preservation of Biotic Diversity

Development continues to be the main cause of species decline in the Southern California region, where approximately 20 percent of the species on the federally-endangered species list are found. Although both federal and state agencies are tasked with protecting their listed species, the County has a role to play in species survival when it decides whether or not to approve development within habitats that contain endangered and threatened species. The SEA Program balances future development and human activities against the preservation of irreplaceable biotic resources. The SEA designation does not protect or identify every individual biotic resource, and SEAs are not preserves or conservation areas; rather, SEAs are areas in which planning decisions are made with extra sensitivity toward biological resources and ecosystem functions. In order to accommodate potential development pressures, the SEAs were designed as large-scale areas connected to regional resources, creating a sufficient habitat and mobility areas for species. However, the resiliency and long-term sustainability of the SEAs is dependent upon careful land use decisions by the County to maintain core habitats and linkages.

2. SEA Monitoring and Status Reporting

SEAs are large and changing areas containing evolving resources, and new science, species, or development practices may create a need for changes to the SEA Program over time. In order to meet the changing needs of the SEA Program, and assess progress in implementation, the County should periodically review the SEA Program. This periodic review may include undertaking new studies, monitoring approved uses, disclosing impacts of development and human activities on the County's biological resources and when necessary, amending the SEA Ordinance, SEA boundaries and technical descriptions to address any changes required to meet the overall objective of the SEA Program.

3. Coordination of Property Rights and Environmental Protection

The SEA Program is a method of balancing private property rights against impacts to irreplaceable biological resources. Preservation of these resources must not compromise the right of privately held lands to be fairly used by their owners, nor burden them with excessive development costs or regulatory procedures. The SEA Program is tasked with serving the needs of property owners in SEA areas by simplifying the development process when possible, providing clear guidelines and expectations about the requirements for development in SEAs, coordinating with other regulatory agencies, and seeking out financing mechanisms that incentivize the preservation of biological resources and the acquisition of conservation areas.

Goals and Policies for Biological Resources

Goal C/NR 3: Permanent, sustainable preservation of the County's genetically and physically diverse biological resources and ecological systems including: habitat linkages, forests, coastal zone, riparian habitats, streambeds, wetlands, woodlands and SEAs.	
Topic	**Policy**

Protection of Biological Resources	Policy C/NR 3.1: Conserve and enhance the ecological function of the County's diverse natural habitats and biological resources.
	Policy C/NR 3.2: Create and administer innovative County programs incentivizing the permanent dedication of SEAs and other important biological resources as open space areas.
	Policy C/NR 3.3: Restore significant riparian resources such as degraded streams, rivers, wetlands to maintain ecological function.
	Policy C/NR 3.4: Conserve and sustainably manage the County's forests and woodlands.
	Policy C/NR 3.5: Ensure compatibility of development in the national forests in conjunction with the U.S. Forest Service Land and Resource Management Plan.
	Policy C/NR 3.6: Assist state and federal agencies with the preservation of special status species, their associated habitat and wildlife movement corridors through the administration of the SEAs and other programs.
	Policy C/NR 3.7: Participate in inter-jurisdictional collaborative strategies that protect biological resources.
Site Sensitive Design	Policy C/NR 3.8: Discourage development in areas with identified significant biological resources, such as SEAs.
	Policy C/NR 3.9: Consider the following in the design of a project that is located within an SEA, to the greatest extent feasible: • Preservation of biologically valuable habitats, species, wildlife corridors and linkages; • Protection of sensitive resources on the site within open space; • Protection of water sources from hydromodification to maintain the ecological function of riparian habitats; and • Placement of the development in the least biologically sensitive areas on the site.
	Policy C/NR 3.10: Require that development mitigate 'in-kind' for unavoidable impacts on biologically sensitive areas within the County, and permanently preserve mitigation sites.
	Policy C/NR 3.11: Discourage new development from increasing the urban-wildland interface in undisturbed natural areas through compact design.
	Policy C/NR 3.12: Discourage development to maintain and support the preservation of riparian habitats, streambeds, and wetlands in a natural state, unaltered by grading, fill, or diversion activities.

Goal C/NR 4: Preserved and restored oak woodlands that are conserved in perpetuity with no net loss of existing woodlands.	
Topic	**Policy**
Oak Woodland Preservation	Policy C/NR 4.1: Conserve and sustainably manage the County's oak woodlands.

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Oak Woodlands

As defined by the California Department of Fish and Game, an oak woodland is an oak stand with a greater than 10 percent canopy cover or that may have historically supported greater than 10 percent canopy cover. Associated with that canopy cover and connectivity are over 300 vertebrate species and more than 5,000 invertebrates, as well as hundreds of native understory plant species. The County is supporting the Resource Conservation District of the Santa Monica Mountains in its preparation of the Oak Woodlands Conservation Management Plan through the provision of technical advice from the Fire Department and DRP.

IV. Local Water Resources

The arid and semi-arid climate and landscape of the County require that water be managed as an invaluable resource. The County recognizes that the effective management and preservation of its local water resources are vital to preserving a high quality of life for County residents and businesses, as well as for sustaining the functioning of watersheds and the natural environment.

Background

Local Water

The occurrence and movement of water above, on, and below the ground in the County can be explained in general terms by the hydrologic cycle. Precipitation falls to earth, is intercepted by vegetation before it reaches the ground, then soaks into the soil where it infiltrates into shallow and deeper groundwater zones. Water drawn up by vegetation transpires into the atmosphere in the form of water vapor. Similarly, water collected on surfaces and in the soil evaporates into the atmosphere. Collectively, this process of water vapor passing into the atmosphere is called evapotranspiration. During a storm, as the soil approaches saturation and rainfall continues, runoff begins to occur. Rainfall falling on paved surfaces does not soak into the ground. At first, the runoff gathers in small pools and minor depressions on the ground surface. Once these small depressions are filled and rainfall continues, runoff increases, forming rivulets and filling streams, rivers, and lakes. Precipitation, interception, infiltration, evapotranspiration, and runoff occur in the context of a system called a watershed.

Precipitation

During the wet season, storms approach from the west or northwest, with southerly winds that continue until the weather front passes. Nearly all precipitation occurs during the months of

December through March, while precipitation during summer months is infrequent, and rainless periods of several months are common. The average annual rainfall across the entire County is 15.65 inches, but the annual average varies from 7.8 inches in the high desert, to 12.1 inches at LAX near the coast, to 27.5 inches at Mt. Wilson. Another examination of characteristic rainfall patterns shows that 85% of all storms within the County deposit between 3/4 inch and 1-1/4 inches or less of rain, depending on location.

Snowfall at elevations above 5,000 feet is frequently experienced during winter storms but, except on higher peaks and the northern slopes, melts rapidly. In the coastal plain and mountainous areas, the distribution of rainfall from individual storms generally follows patterns related to elevation and terrain. This distribution is called the orographic effect.

Runoff and Surface Waters

The Pacific Ocean eventually receives the excess runoff that is generated on the coastal plain of Los Angeles. Excess runoff generated in the Antelope Valley of the high desert will eventually arrive at the dry lake bed near the border with Kern County. The high desert can also experience summer thunderstorms, which cause the most serious flooding in that area. Surface flows reach the dry lake bed when the storms in the high desert are large enough for runoff to exceed local infiltration and transpiration.

Runoff can even occur at times of no rain. In urban areas, dry weather runoff can occur as the result of the discharge of process flows and other human endeavors. Examples of process flows include treated wastewater and industrial flows. Excessive irrigation can also contribute to dry weather runoff. Dry weather discharge from natural springs and seeps can occur in mountainous areas and where high groundwater levels otherwise reach the ground surface. The amount and continuity of springs and seep flows can vary year to year, depending significantly on previous rainfall.

Surface waters occur in the form of streams, rivers, ponds, lakes, and reservoirs. In the County, there are over 900 miles of major river systems, 3600 miles of smaller streams, and 25 square miles of pond, lake, and reservoir surface. Streams and rivers convey surface runoff and can be instrumental in groundwater recharge. They can also serve as corridors for fish and wildlife movement. Streams and rivers support their own habitats as well as link other habitats together.

A number of the ponds, lakes and reservoirs in the County are man-made impoundments that serve as water storage facilities. These storage facilities receive and store rainfall and runoff, as well as imported water supplies from outside of the County, and hold them until needed at a later time. Examples within the County boundaries are Hollywood Reservoir, which is operated by the City of Los Angeles Department of Water and Power, and Pyramid Lake, operated by the Metropolitan Water District of Southern California. Smaller impoundments within the County are operated by other public and private water wholesalers and retailers. Some of these facilities support fish and wildlife, and provide recreation areas for County residents that are compatible with flood management and water storage operations.

Some impoundments, which are primarily operated by the Los Angeles County Flood Control District, serve the dual functions of flood control and storage. Stored runoff collected during the storm season is later released at controlled rates throughout the year for downstream groundwater recharge. For example, an array of Los Angeles County Flood Control District dams in the San Gabriel Mountains provides flood protection, while storing runoff for later release to the San Gabriel River and downstream groundwater recharge areas. These downstream facilities capture close to 80 percent of the runoff that flows from the mountains. Water sources that originate in the County provide approximately one third of the area's water supply.

The rate and quantity, as well as the quality, of runoff are significantly influenced by the land use within the tributary area. For example, the amount of impervious surface that accompanies development, in particular, connected impervious surfaces, dictates the volume of runoff produced from most storms. Furthermore, the degree to which flow paths are straightened, channelized, piped, and connected influence how soon runoff appears during a storm and the rate at which it flows. The types of land uses, ranging from open space, single family, and heavy industrial, affect the type and concentration of pollutants that may be carried in the runoff.

For flood protection and erosion control purposes, many of the larger rivers within the County are armored with concrete lining. Some rivers, such as the Ballona Creek and Los Angeles River, are lined on the bottoms as well as along the banks. Others, such as the San Gabriel River and Santa Clara River are armored primarily along their banks.

Also located within the County are a number of regional groundwater recharge areas called spreading grounds. Most spreading grounds are owned by the Los Angeles County Flood Control District and are located in areas where the underlying soils are composed of permeable formations and are hydraulically connected to the underlying groundwater basin. Some spreading grounds are owned by the City of Los Angeles and by a few other cities. The total area of regional spreading grounds countywide is 3,361 acres.

Soils, Infiltration, and Groundwater

Soil type and geography will influence the location and amount of rainwater and surface water infiltration. Igneous, metamorphic, and sedimentary rock groups are present within the County. The San Gabriel Mountains and Verdugo Hills are composed primarily of highly fractured igneous rock, with large areas of granitic rock formation being exposed. Faulting and deep weathering have produced porous zones in the rock formation; however, rock masses have produced a comparatively shallow soil mantle due to the steepness of slopes, which is a condition that accelerates erosion of the finer material.

Surface soils that are deposited by the movement of water are termed alluvial soils. Valley and desert soils are alluvial and vary from coarse sand and gravel near canyon mouths to silty clay, clay, and sand, and gravel in the lower valleys and coastal plain. The alluvial fill has accumulated by repeated deposition of sediments to depths as great as several thousand feet. This fill is quite porous in areas of relatively low clay content. Geologic structures and irregularities in the underlying bedrock divide the alluvium into several groundwater basins. Valley soils are generally well drained, but there are a few areas containing perched water where groundwater sits above the main aquifer separated by a relatively impermeable layer. Soils are further described in the Agricultural Resources section.

When precipitation and surface water infiltrate naturally into the ground, they first typically travel through an unsaturated soil zone until they reach the water table, which is the layer where the soil is saturated. This layer of soil saturation is called a groundwater basin, or aquifer. Aquifers can hold millions of acre-feet of water and extend for miles. There are numerous major groundwater basins in the County, located geographically as follows:

Table 6.4: Major Groundwater Basins

	Major Groundwater Basin
Coastal Plain	• Central Basin • West Coast Basin • Santa Monica Basin • Hollywood Basin
San Gabriel Valley	• Main San Gabriel Basin • Upper San Gabriel Canyon Basin • Lower San Gabriel Canyon Basin • Wayhill Basin • Foothill Basin • Glendora Basin • Claremont Heights Basin • Live Oak Basin • Chino Basin • San Dimas Basin • Pomona Basin • Puente and Spadra Basins • Raymond Basin
San Fernando Valley (also known as the Upper Los Angeles River Area)	• San Fernando Main Basin • Sylmar Basin • Verdugo Basin • Eagle Rock Basin
Santa Clarita Valley	N/A
Antelope Valley	N/A

Except during times of drought, groundwater extraction accounts for nearly 1/3 of the water usage in the County. In rural areas, hundreds of households depend solely on private wells that tap into local groundwater sources.

Watersheds

A watershed is a geographic area that, due to its terrain and topography, contributes to the flow of surface water, sediments, and transported materials from the land into a common river, lake, groundwater basin, ocean, or other water body. A watershed, also known as a drainage area or catchment, can be large or small, pristine or urbanized. All land is located in a watershed of some sort. Furthermore, just as larger river systems can have smaller tributary streams, a major watershed can also have smaller sub-watersheds within it that define the tributary drainage areas. An action that occurs within an upstream watershed, therefore, can have an impact on downstream conditions.

A healthy watershed is a place where the interrelated functions of the water cycle—water movement, soil movement, and vegetative cover—unite to simultaneously provide the benefits of water supply, clean runoff, healthy microclimate, flood protection, recreation, and habitat.

The following major watersheds, as shown in Figure 6.4, are located in the County. For descriptions of these major watersheds, please refer to Appendix E.

Table 6.5: Major Watersheds

Watershed	Sub-Watershed
Antelope Valley Watershed	• Amargosa Creek • Big Rock Creek • Little Rock Creek
Los Angeles Harbor Watershed	• Dominguez Channel
Los Angeles River Watershed	• Tujunga Wash • Verdugo Wash • Arroyo Seco • Rio Hondo • Compton Creek
San Gabriel River Watershed	• Walnut Creek • Puente Creek • Coyote Creek

Santa Clara River Watershed	• Soledad Canyon • Mint Canyon • Bouquet Creek • South Fork Santa Clara River
Santa Monica Bay Watershed	• Malibu Creek • Topanga Canyon • Santa Monica Canyon • Ballona Creek

Watershed Management

Watershed management is an effective and comprehensive method to address water resource challenges. Watershed management integrates habitat enrichment and recreation availability with water supply, flood protection, and clean runoff.

Because a watershed encompasses many jurisdictions, water supply, water quality, flood protection and natural resource issues are best managed at a regional or multiple-agency level. The County works within its jurisdiction to improve the health of rivers, streams and lesser tributaries to enhance overall water resources, runoff quality and wildlife habitat. However, watershed integration must be a multi-jurisdictional process. The County has to participate with other stakeholders, including the Los Angeles County Flood Control District, in various ways to manage the function and health of watersheds.

The collaborative process is the most effective way to engage local stakeholders and local jurisdictions, generate partnerships, collaborate with educational and professional institutions, and develop and implement watershed plans throughout the County. Such plans should incorporate measures to protect and augment local water supplies, maintain flood protection standards, provide assistance in the event of flooding, encourage recreational opportunities, conserve habitats of native species, and improve the quality of water that flows to rivers, lakes, and the ocean.

Figure 6.4: Major Watersheds

Surface Water Quality Regulations

The federal government established the Clean Water Act (CWA) in 1972 to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters” with the goal that “wherever attainable water quality should provide for the protection and propagation of fish, shellfish, and wildlife, and provide for recreation in and on the water.” The California Water Resources Control Board and regional water quality control boards, through the Ocean Plan and the Basin Plan, respectively, implement portions of the CWA by designating water bodies and their existing and potential uses as beneficial uses, and set forth policies that protect them from degradation.

In 1949, nine California regional water quality control boards were established to protect the quality of receiving waters from adverse impacts of wastewater discharges. The Porter-Cologne Water Quality Act, enacted in 1969 and enabling the California Water Code, authorized the State to adopt, review, and revise policies for all water bodies in California. The Act also directed the regional water quality boards to develop basin plans to address water quality issues and protection for inland water bodies. The Basin Plan for Los Angeles was adopted in 1975 and is comprised of the Water Quality Control Plan for the Santa Clara River Basin and the Water Quality Control Plan for the Los Angeles Basin, with the latest amendment to the Plan completed in 1994. The Antelope Valley is under the jurisdiction of the Lahontan Regional Water Quality Control Board. The Lahontan Basin Plan took effect in 1995, replacing three earlier plans.

Under the California Water Code, the California Water Resources Control Board adopted the California Ocean Plan in 2005 to protect water quality for the use and enjoyment of the public through the control of the discharge of waste into the ocean. The beneficial uses to be protected include "industrial water supply; water contact and non-contact recreation, including aesthetic enjoyment; navigation; commercial and sport fishing; mariculture; preservation and enhancement of designated Areas of Special Biological Significance (ASBS); rare and endangered species; marine habitat; fish migration; fish spawning and shellfish harvesting."

The basin plans for the Los Angeles Regional Water Quality Control Board and Lahontan Regional Water Quality Control Board and the California Water Board's Ocean Plan protect water bodies by designating them with beneficial uses and implementing programs to protect such uses. There are up to 24 beneficial uses developed and defined by the State and the regional water quality boards designated to water bodies as "existing" or "potential." Examples of beneficial uses include: municipal and domestic supply; water contact recreation; and preservation of biological habitats. A complete list of the beneficial uses can be found in the Water Quality Control Plan for the Los Angeles Region (1994), the Water Quality Control Plan for the Lahontan Region (1995), and the California Ocean Plan (2005). These documents can be found on the California Water Resources Control Board web site at http://www.swrcb.ca.gov.

National Pollutant Discharge Elimination System (NPDES)

In 1987, an amendment to the Clean Water Act effectively prohibited the discharge of pollutants to waters of the U.S. from stormwater, unless such discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) Permit. The NPDES is a permitting program that establishes a framework for regulating municipal, industrial, and construction stormwater discharges into surface water bodies, including stormwater channels.

The Los Angeles Regional Water Quality Control Board and Lahontan Regional Water Quality Control Board are responsible for implementing the federally-mandated NPDES program in the County through the adoption of an Order, which is effectively the NPDES Permit for that region. The Los Angeles Regional Board's 2001 Municipal Separate Storm Sewer Permit (MS4 Permit, or Stormwater Permit) named 84 cities and the County as permittees. The Los Angeles County Flood Control District was designated as the principal permittee of the 2001 Stormwater Permit, and made responsible for coordinating activities to comply with the requirements set forth in the Stormwater Permit, but not responsible for ensuring the compliance of any other permittee.

An NPDES Permit defines the responsibilities of each permittee to control pollutants, including the adoption and enforcement of local ordinances and monitoring programs. The County's Stormwater Ordinance requires that the discharge, deposit, or disposal of any stormwater and/or runoff to storm drains must be covered by a NPDES Stormwater Permit.

The Stormwater Permit imposes a number of basic programs on all permittees in order to maintain a level of acceptable runoff conditions through the implementation of Best Management Practices (BMPs). A BMP is any practice, device, or design that mitigates stormwater quality problems. Those programs are: public information and participation; industrial/commercial inspection; development planning; development construction; public agency activities; and illegal connection/discharge abatement.

For example, in the public agency activities program, the County and other cities are directed to implement "good housekeeping" BMPs to eliminate runoff problems that might be associated with an agency's routine activities. These BMPs include material storage shelters, vehicle washing management, spill containment, and public parking lot sweeping. The development planning program requires the inclusion of post-construction stormwater BMPs into the design of most new public and private development at the project site level to address pollutants generated by specific activities and types of development. The development construction program requires the implementation of temporary BMPs during a project's construction phase. These construction phase BMPs protect water resources by preventing erosion, controlling runoff, protecting natural slopes and channels, storing fluids safely, managing spills quickly, and conserving natural areas.

The Low Impact Development (LID) Ordinance, which took effect in 2009, meets and exceeds the 2001 Stormwater Permit's development planning program for development in the unincorporated areas of the County. The LID Ordinance calls for the design and installation of naturalistic post-construction BMPs that are distributed throughout the project and incorporated into the development at the parcel-scale, and that mimic the hydrologic cycle. The manual that accompanies the LID Ordinance recognizes that a well-designed site layout can contribute to protecting a site's existing natural resources. The manual also recognizes that the impervious cover that accompanies development, such as rooftops, driveways, sidewalks, or parking lots, can have a significant direct effect on the quantity and quality of stormwater runoff. As a result, significant new development in the unincorporated areas of the County must infiltrate a certain portion of its runoff on site. If infiltration is not technically feasible, the runoff must be stored and used on site, and if storage is not possible, the runoff must be routed through bio-filtration before it is discharged downstream.

For more information on the County's two regional water quality control boards and their NPDES programs, please visit the State of California Environmental Protection Agency web site at http://www.swrcb.ca.gov/rwqcb4 and http://www.swrcb.ca.gov/rwqcb6. More information on the County LID requirements can be found at http://dpw.lacounty.gov/wmd/LA_County_LID_Manual.pdf.

Areas of Special Biological Significance (ASBSs)

Ocean areas requiring the protection of marine species or biological communities from an undesirable alteration in natural water quality are designated by the California Water Resources Control Board as Areas of Special Biological Significance (ASBSs). There are 34 areas designated as ASBS. Of those, six are located within the jurisdiction of the County. Five ASBSs in the County are located off the coasts of the Channel Islands (one along the coastline of the San Clemente Island and four along the coastlines of Santa Catalina Island). The sixth ASBS (designated as "ASBS-24") is located along the coast of Ventura County and Los Angeles County, extending from Mugu Lagoon to Latigo Point. About two thirds of ASBS-24 lies along the coastline of the County.

Federal and state policies prohibit the discharge of pollutants into areas identified as ASBS. Specifically, the California Ocean Plan requires that "waste shall not be discharged to areas designated as being of special biological significance. Discharges shall be located a sufficient distance from such designated areas to assure maintenance of natural water quality conditions in these areas." The County of Los Angeles, the Los Angeles County Flood Control District, cities and

other public jurisdictions, and private property owners own and maintain dozens of storm drains that discharge into ASBS-24.

Issues

1. Watershed Impacts

All development and urban activities occur in a watershed. Rivers, streams, and people can be adversely affected by poorly designed land uses within a watershed. With urbanization comes impervious surfaces, the straightening and channelizing of water courses, the filling of wetlands, intrusion into flood plains, the loss of vegetation, heat island effects, compacted soils, increased and polluted runoff, eroded streams, and the impairment of surface and groundwaters. The General Plan recognizes the importance of utilizing a watershed-based planning approach as a method to protect, conserve and restore resources by utilizing or mimicking natural hydrologic processes. The path to improving local water resources is through improving watershed functions.

2. Surface Water Impairments

The U.S. Environmental Protection Agency (EPA) has found that close to 218 million Americans live within 10 miles of a polluted lake, stream, river, or coastline, and most of the County falls within this category. The cost of cleaning polluted water bodies is significant and requires additional funding for local agencies to implement. Water quality regulation and implementation programs are beginning to make a difference, but without major public awareness, behavioral changes, and operational changes, the clean-up process will remain an ongoing challenge.

Federal and state agencies, such as the EPA and regional water quality control boards, are working to improve the quality of surface and groundwater by identifying contaminants, imposing clean-up efforts, and bringing enforcement actions against polluters. In order to comply with surface water quality regulations to protect existing clean water bodies and restore impaired water bodies, the County and all cities are implementing water pollution prevention programs appropriate for their jurisdiction.

Section 303(d) of the CWA requires states to identify and establish a list of water bodies for which technology-based effluent limitations required by the CWA are not stringent enough to attain and maintain applicable water quality standards. Those water bodies on the 303(d) list are termed “impaired water bodies.” For each impaired water body, states are required to develop a total maximum daily load (TMDL), which is the pollutant limit a water body can receive and still attain water quality standards. Any pollution above the maximum TMDL has to be “budgeted,” meaning that the residual pollution is allocated for reduction among the various sources of the pollutant in order to regain the beneficial uses of the water body.

A significant number of the water bodies in the County, including rivers, lakes, coastal estuaries, bays, and beaches, are included on the 303(d) list. More than a dozen different stormwater and wastewater pollutants including metals, nutrients, indicator bacteria, organics, pesticides, trash, and other contaminants are found in the County’s water bodies in amounts significantly above established water quality standards.

3. Groundwater Impairment and Depletion

In the more urbanized coastal basin of the County, the natural recharge process is hampered by compacted soils and impervious surfaces associated with urbanization and development. In the open space areas of the northern portion of the County, where substantial percolation can occur,

water demand is so great that annual precipitation and groundwater recharge operations are not sufficient to recharge the basins.

Because approximately one third of the County's local water supply is drawn from groundwater basins, the quantity and quality of this water source is critical. Contamination from past industrial and agricultural practices, saltwater intrusion, and underground storage tank leakage has decreased usable groundwater supplies throughout the County.

In an effort to mitigate groundwater depletion, water agencies throughout the County have developed strategies to recharge groundwater artificially. One strategy involves purchasing water imported from outside the County or utilizing recycled water (highly treated wastewater) and recharging it back into the groundwater basins. Another strategy diverts imported water to certain regional spreading grounds, where it can percolate back into the water basins. The Los Angeles County Flood Control District also diverts a certain amount of stormwater into regional spreading grounds to replenish the groundwater supply.

Highly treated, recycled waste water is also used for recharging groundwater aquifers through Los Angeles County Flood Control District spreading operations and injection at seawater barriers to resist saltwater intrusion. This recycled water is provided to a large degree by the Los Angeles County Sanitation Districts and to lesser degrees by the Water Replenishment District of Southern California, the City of Los Angeles, and the West Basin Municipal Water District.

Goals and Policies for Water Resources

Goal C/NR 5: Protected and useable local surface water resources.	
Topic	**Policy**
Surface Water Protection	Policy C/NR 5.1: Support the LID philosophy, which seeks to plan and design public and private development with hydrologic sensitivity, including limiting the straightening and channelizing of natural flow paths, removal of vegetative cover, compaction of soils, and distribution of naturalistic BMPs at a parcel-level scale.
	Policy C/NR 5.2: Require compliance by all County departments with adopted Municipal Separate Storm Sewer System (MS4), General Construction, and point source NPDES permits.
	Policy C/NR 5.3: Actively engage with stakeholders in the formulation and implementation of surface water preservation and restoration plans, including plans to improve impaired surface water bodies by retrofitting tributary watersheds with LID types of BMPs.
	Policy C/NR 5.4: Actively engage in complying with all approved TDML implementation and compliance plans for impaired water bodies.
	Policy C/NR 5.5: Manage the placement and use of septic systems in order to protect nearby surface water bodies.
	Policy C/NR 5.6: Minimize point and non-point source water pollution.

Goal C/NR 6: Protected and usable local groundwater resources.	
Topic	**Policy**
Groundwater Protection	Policy C/NR 6.1: Support the LID philosophy, which incorporates distributed, post-construction parcel-level stormwater infiltration as part of new development.
	Policy C/NR 6.2: Protect natural groundwater recharge areas and regional spreading grounds.
	Policy C/NR 6.3: Actively engage in stakeholder efforts to disperse rainwater and stormwater infiltration BMPs at the parcel-level scale throughout the County.
	Policy C/NR 6.4: Manage the placement and use of septic systems in order to protect high groundwater.
	Policy C/NR 6.5: Prevent parcel-level stormwater infiltration where inappropriate and unsafe, such as in areas with high seasonal groundwater, on hazardous slopes, within 100 feet of drinking water wells, with brownfield redevelopment, and in contaminated soils.

Goal C/NR 7: Protected and healthy watersheds.	
Topic	**Policy**
Watershed Protection	Policy C/NR 7.1: Support the LID philosophy, which mimics the natural hydrologic cycle using undeveloped conditions as a base, in public and private land use planning and development design.
	Policy C/NR 7.2: Support the preservation, restoration and strategic acquisition of open space to preserve natural streams, drainage paths, wetlands, and rivers, which are necessary for the healthy function of watersheds.
	Policy C/NR 7.3: Actively engage with stakeholders to incorporate the LID philosophy in the preparation and implementation of watershed and river master plans.
	Policy C/NR 7.4: Promote the development of multi-use facilities for stormwater quality improvement, groundwater recharge, flood management, and other compatible uses.

[Text Box]

Low Impact Development (LID)

LID is an ecosystem based approach to stormwater management that mimics a site's pre-development hydrology. LID uses design techniques, such as maintaining recharge areas, buffer zones, open spaces, and drainage courses. It also utilizes infiltration swales, grading strategies, and open drainage systems to slow, infiltrate, filter, store, and detain stormwater runoff close to its source as opposed to conveying and treating it in large and costly end-of-pipe facilities. LID employs techniques that reduce the use of pipes, ponds, curbs, and gutters in subdivisions and other infrastructure improvement projects.

[Text Box]

Integrated Regional Water Management Plans (IRWMP's)

Integrated Regional Water Management Plans (IRWMP's) define a clear vision and strategy for the sustainable management of water resources within a specific region delineated by one or more watersheds. IRWMP's generally contain an assessment of current and future water demand, water supply, water quality, and environmental needs. They address the challenges for delivering a stable and clean supply of water for the public, addressing stormwater and urban runoff water quality, providing flood protection, meeting water infrastructure needs, maximizing the use of reclaimed water, enhancing water conservation, and promoting environmental stewardship.

During the planning process, all stakeholders, including water distributors and purveyors, regional waterworks and sanitation districts, local public works departments, environmental organizations, non-profits, and other vested interests work together to develop common goals, objectives, and strategies. Since water related issues are addressed on a regional, watershed basis, these plans are instrumental in building consensus amongst the various stakeholders in the development and prioritization of an action plan that is complementary and leverages inter-jurisdictional cooperation, resources, and available funding. There are four IRWMP regions in the County:

- Antelope Valley IRWMP;
- Upper Santa Clara River IRWMP;
- Greater Los Angeles County IRWMP; and,
- Los Angeles Gateway Region.

For more information on the IRWMP's, please go to http://www.avwaterplan.org, http://www.scrwaterplan.org, or http://www.lawaterplan.org, respectively.

[Text Box]

Total Maximum Daily Load (TMDL) Implementation Plan

The TMDL Implementation Plan provides a schedule for responsible jurisdictions to implement systems, programs, and Best Management Practices (BMPs) to comply with progressive pollutant reduction schedules. As of August 2012, 24 TMDLs are in effect, and about 20 more TMDLs that are expected to be established by 2012 are being developed by the Los Angeles Regional Water Quality Control Board and the EPA. By 2020, some 60-70 TMDLs are expected to apply in total in the County. The development of each TMDL results in an amendment of the Basin Plan, and subsequent inclusion into the National Pollutant Discharge Elimination System (NPDES) Permit program. The County is engaged in taking actions to mitigate the impact that urbanization has caused on its water resources and the environment.

[Text Box]

Hydromodification

Hydromodification is one of the leading sources of impairment in streams, lakes, estuaries, aquifers, and other water bodies in the country. Three major types of hydromodification activities—channelization and channel modification, dams, and stream bank and shoreline erosion—change a water body's physical structure as well as its natural function. These changes can cause problems, such as changes in flow, increased sedimentation, higher water temperature, lower dissolved oxygen, degradation of aquatic habitat structure, loss of fish and other aquatic populations, and decreased water quality. It is important to properly manage hydromodification activities to reduce non-point source pollution in surface and groundwater.

V. Agricultural Resources

Agricultural land is an important resource in California and in the County. Much of the agrarian land in the County has been developed. Therefore, agricultural land is viewed as a non-renewable resource that needs to be protected from conversion and encroachment of incompatible uses.

Background

The County produced over $270 million in agriculture products in 2006. Table 6.6 summarizes the dollar value of the crops and farm products produced in the County. Nursery products remain the number one crop produced in the County. Harvested acreage for vegetable crops dropped 30 percent from the previous year, and the County saw production losses from vegetable crops, field crops, and dairy and livestock production. Production gains were seen in fruit and nut crops and nursery products.

Table 6.6: 2006 Value of Los Angeles County Agricultural Crops and Commodities

Commodity	2006 Value
Nursery Products (Indoor plants, ornamental trees, etc.)	$191,879,000
Cut Flowers and Decoratives	$581,000

Fruits and Nuts (Strawberries, avocados, cherries, apples, etc)	$26,674,000
Vegetable Crops (Root vegetables, herbs, greens, etc.)	$33,146,000
Field Crops (Alfalfa, grain hay, rangeland)	$11,176,000
Livestock Production	$6,228,000
Apiary (Honey, beeswax)	$1,211,000
Forest Products (Firewood)	$20,000
Total	**$270,915,000**

Source: 2006 Los Angeles County Crop and Livestock Report

The emerging trends for agriculture in the County is less farming and less land being used for agricultural activities. The 2002 U.S. Census of Agriculture counted a total of 1,543 farms in the County, which is a seven percent decrease from the previous 1997 Census. The Census shows a similar decreasing trend in the total number of acres used for farming. In 2002, the total number of acres in the County used for farming was 111,458, which is a 17 percent decrease from the 1997 Census. Although the average size of the farms in the County is 72 acres, the majority of the County's farms are 50 acres or smaller.

The U.S. Department of Agriculture (USDA) Natural Resources Conservation Service classifies soils into eight categories based on agricultural potential. This classification depends on factors, such as slope, organic matter, flooding potential, and erosion hazards. From this classification, prime soils (Class I and II soils) are identified for agricultural production. Based on this system, the California Department of Conservation Farmland Mapping and Monitoring Program identifies farmland that is ideally suited for agricultural use. The program does not affect local land use decisions, but is an identification tool that can be used for policy purposes by local governments.

Agricultural Resources Areas

Agricultural Resource Areas (ARAs) consist of historically farmed areas in the County, as well as farmland identified by the California Department of Conservation, including Prime Farmland, Farmland of Statewide Importance, Farmland of Local Importance, and Unique Farmland.

The ARA excludes the following: Sensitive Environmental Resource Areas; Significant Ecological Areas; approved specific plans; approved large-scale renewable energy facilities; and most areas that are categorized as Urban and Built-Up Land, or Other by the California Department of Conservation.

Finally, areas that permit densities greater than 1 dwelling unit per 10 acres, and areas less than 40 acres, were removed to ensure that the ARAs consist of larger contiguous acres of agricultural land uses and viable farmland.

Figure 6.5, Agricultural Resource Areas Policy Map, identifies areas where the County promotes the preservation of agricultural land.

Figure 6.5: Agricultural Resource Areas Policy Map

Issues

1. Agricultural Land Use Compatibility

Increased population growth and accompanying development will result in the conversion of agricultural lands to non-agricultural uses. This is problematic in the northern portion of the County, which contains most of the agricultural land in the County and is also experiencing the most rapid population growth. As development in the County expands from urban centers into agricultural areas, conflicts between land uses may occur. Residents of new housing developments often voice concern over odors, dust, and pesticides from neighboring farms. Development adjacent to agricultural land must be regulated to minimize these impacts.

2. Sustainable Agriculture

Certain agricultural practices have been identified as being major contributors to pollutants that impact air and water quality. Policies to promote agricultural production must also address air quality, water quality, water supply and other issues related to sustainability. Sustainable agricultural practices, such as organic farming, can help mitigate the potential impacts of agricultural production.

Goals and Policies for Agricultural Resources

Goal C/NR 8: Productive farmland that is protected for local food production, open space, public health, and the local economy.	
Topic	**Policy**
Agricultural Resources	Policy C/NR 8.1: Protect ARAs, and other land identified as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance by the California Department of Conservation, from encroaching development and discourage incompatible adjacent land uses.
	Policy C/NR 8.2: Discourage land uses in ARAs, and other land identified as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance by the California Department of Conservation, that are incompatible with agricultural activities.
	Policy C/NR 8.3: Encourage agricultural activities within the ARAs.

Goal C/NR 9: Sustainable agricultural practices.	
Topic	**Policy**
Sustainable Agricultural Practices	Policy C/NR 9.1: Support agricultural practices that minimize and reduce soil loss, minimize pesticide use, and prevent water runoff from affecting water, soil, and air quality.

	Policy C/NR 9.2: Support innovative agricultural practices that conserve resources and promote sustainability, such as drip irrigation, hydroponics, and organic farming.
	Policy C/NR 9.3: Support farmer's markets, farm stands, and community-supported agriculture throughout the County.
	Policy C/NR 9.4: Support countywide community garden and urban farming programs.

[Text Box]

Sustainable Food Systems: Organic Farming, Urban Farming, and Community Gardens

Sustainable agriculture refers to the production of food without the depletion of the Earth's resources or polluting of the environment. Sustainable agriculture addresses the social, economical, and environmental effects of farming. For more information on organic farming practices, please visit the National Sustainable Agriculture Information Service web site at http://www.attra.org.

Organic farming is a form of agricultural production that avoids or largely excludes the use of synthetic fertilizers, pesticides, herbicides, plant growth regulators and livestock feed additives. Organic farmers use crop rotation, crop residues, animal manures, other beneficial organisms, and mechanical cultivation to maintain soil productivity and control pests. Organic farming is considered environmentally responsible in that the exclusion of chemicals prevents the spread of these toxins into the air, water, soil, and food stuffs. There are an estimated 75 million acres of organic farmland in the world. In the U.S., "organic" foods must be certified by the U.S. Department of Agriculture. Any food that claims it is organic or organically produced must attain this certification. In the County, there is a limited amount of organic farming, reaching only 111 acres in 2006.

Urban farming refers to the practice of cultivating, processing and distributing food in, or around a village, town or city. Urban farming can be practiced as a food producing activity, for income, and in some cases simply for recreation. However, urban farming contributes to food security and food safety in two ways: it increases the amount of food available to people living in cities; and, it allows fresh vegetables and fruits and meat products to be made available to urban consumers. Because urban farming promotes local food production and distribution, urban farming activities are generally seen as sustainable practices. For more information on urban farming, please visit http://www.urbanfarming.org.

The American Community Garden Association allows a broad definition of what a community garden entails. Community gardens have been shown to provide a catalyst for neighborhood and community development, beautify neighborhoods, preserve or create urban green space, and create income opportunities and economic development. For more information on community gardens, please visit http://www.communitygarden.org/.

VI. Mineral and Energy Resources

The Mineral and Energy Resources section of the Conservation and Natural Resources Element addresses the use and management of valuable energy and mineral resources in the County, and the increasing importance of the conservation of these resources for future users. The demand for resources in the County is high, and projected growth in the region will continue to strain the County's mineral supply.

Background

Mineral Resources Areas

Mineral Resource Zones (MRZ-2s)

Mineral resources are commercially-viable aggregate or mineral deposits, such as sand, gravel, and other construction aggregate. California is the largest consumer of sand and gravel in the country, but is also a major producer, generating approximately one billion dollars worth of these mineral resources annually. The Los Angeles metropolitan area produces and consumes more construction aggregate than any other metropolitan area in the country. A continuous supply of aggregate materials for urban infrastructure is essential to the Southern California economy.

The County depends on the California Geological Survey to identify deposits of regionally-significant aggregate resources. These clusters or belts of mineral deposits are designated as Mineral Resource Zones (MRZ-2s). Four major MRZ-2s are identified in the County and are shown in Table 6.7: Little Rock Creek Fan, Soledad Production Area, Sun Valley Production Area, and Irwindale Production Area. The Soledad and Little Rock Creek MRZ-2s contain significant deposits that are estimated to provide for future needs through the year 2046. However, the Sun Valley MRZ-2 is near depletion, and the Irwindale MRZ-2 is expected to approach depletion in 2017. The County's MRZ-2s are shown in Figure 6.6, the Natural Resource Areas Map.

Table 6.7: Geologic Inventory of Mineral Resources in Los Angeles County

Production Region	Aggregate Reserves as of 1999	Per Capita Consumption Rates	Estimated Depletion Year
Irwindale Production Area	250 Million Tons	4.0 Tons	2017
Little Rock Creek Fan	250 Million Tons	12.7 Tons	2046
Soledad Production Area	160 Million Tons	9.9 Tons	2046
Sun Valley Production Area	20 Million Tons	2.4 Tons	near depletion

Source: California State Mining and Geology Board, Aggregate Resources in the Los Angeles Metropolitan Area, 1999

Figure 6.6: Natural Resource Areas

Mineral Resource Zone Regulation and Conservation

The California Department of Conservation protects mineral resources to ensure adequate supplies for future production. The California Surface Mining and Reclamation Act of 1975 (SMARA) was adopted to encourage the production and conservation of mineral resources, prevent or minimize adverse effects to the environment, and protect public health and safety. An important component of SMARA requires that all surface mines be reclaimed to a productive second use upon the completion of mining (Public Resources Code, sub-sections 2712 (a),(b), and (c)).

In a joint regulatory effort, SMARA authorizes local governments to assist the State in issuing mining permits and monitoring site reclamation efforts. To manage mining resources, the County has incorporated mineral resource policies into the Conservation and Natural Resources Element. In addition to these policies, Title 22 of the Los Angeles County Code (Part 9 of Chapter 22.56) requires that applicants of surface mining projects submit a Reclamation Plan prior to receiving a permit to mine, which must describe how the excavated site will ultimately be reclaimed and transformed into another use.

Oil and Natural Gas

Mineral Resource Areas also include oil and natural resources. Oil production still occurs in many parts of the County, including the Baldwin Hills and the Santa Clarita Valley and is regulated by the California Division of Oil, Gas, and Geothermal Resources (DOGGR). The County's involvement is limited to zoning and land use regulations to mitigate impacts from surface operations on surrounding communities. Adherence to the standards for the installation, operation, and abandonment of oil and gas production and storage facilities is important to protect public health and safety.

Energy Resources

Energy in California is produced from a variety of non-renewable and renewable natural resources, including oil, natural gas, and hydrologic, wind, and solar power. Although non-renewable energy resources (oil and natural gas) generate a majority of its energy, California has one of the most diverse portfolios of renewable energy resources in the country. Renewable energy is derived from resources that are regenerative and cannot be depleted, such as wind and solar power. For this reason, renewable energy sources are fundamentally different from fossil fuels, such as coal, oil, and natural gas, which are finite and also produce greenhouse gases and other pollutants. Aside from existing oil and natural gas deposits, California's topography and climate lend themselves to the production of energy from wind, solar, and tidal power. There are significant opportunities for the County to produce energy from renewable sources.

Figure 6.6, the Natural Resource Areas Map identifies potential energy resources in the County. More information about solar energy can be found on the County's web site at http://lacounty.solarmap.org.

Issues

1. Development in Mineral Resource Areas

Mineral Resource Areas include existing surface mining activities, identified by the California Mining and Geology Board, and areas suitable for the production of energy resources, including crude oil and natural gas. Many issues arise from the incompatible development of land around a Mineral Resource Area. Mineral resource extraction and production activities can often garner community

complaints due to perceived environmental threats and surface operations. The General Plan protects the County's Mineral Resource Areas, as well as the conservation and production of these resources, by encouraging compatible land uses in surrounding and adjacent areas.

2. Energy Conservation

Energy demand for transportation and non-transportation uses, including gasoline, electricity, heating, and cooling will continue to increase as the County's population grows. Energy consumption patterns demonstrate that County residents consume proportionally more energy for transportation than the rest of California. Low-density, automobile-dependent communities place high demands on the County's declining energy resources. The Mobility Element policies promote rail, bus, carpool, bicycle, and pedestrian modes of transportation as alternatives to the single-occupant automobile, and the Land Use Element policies promote the efficient development and use of land to reduce consumptive land use patterns.

In addition, State and County building codes determine energy efficiency requirements for building construction. Changes to building codes over the years have resulted in substantial improvements in energy efficiency. This has translated into less energy required to light, cool, and heat buildings. In addition, green building techniques, such as the use of passive solar orientation, recycled building materials, improved insulation, energy star appliances, and onsite small-scale renewable energy generation have contributed to energy conservation. The Air Quality Element includes policies on energy conservation and promoting renewable energy to help the County meet its climate change goals.

Goals and Policies for Mineral and Energy Resources

Goal C/NR 10: Locally available mineral resources to meet the needs of construction, transportation, and industry.	
Topic	**Policy**
Mineral Resource Protection	Policy C/NR 10.1: Protect MRZ-2s and access to MRZ-2s from development and discourage incompatible adjacent land uses.

Goal C/NR 11: Mineral extraction and production activities that are conducted in a manner that minimizes impacts to the environment.	
Topic	**Policy**
Mineral Extraction	Policy C/NR 11.1: Require mineral resource extraction and production activities to comply with County regulations and state requirements, such as SMARA, and DOGGR regulations.
	Policy C/NR 11.2: Require the reclamation of abandoned surface mines to productive second uses.
	Policy C/NR 11.3: Require appropriate levels of remediation for all publicly-owned oil and natural gas production sites based on possible future uses.

	Policy C/NR 11.4: Require that mineral resource extraction and production operations be conducted to protect other natural resources and prevent excessive grading in hillside areas.

Goal C/NR 12: Sustainable management of renewable and non-renewable energy resources.	
Topic	**Policy**
Energy Resources	Policy C/NR 12.1: Expand the production and use of renewable energy resources.
	Policy C/NR 12.2: Encourage the effective management of energy resources, such as ensuring adequate reserves to meet peak demands.

[Text Box]

Renewable Energy

In 2005, 73 to 90 percent of utility generated electricity output was natural gas fired, while renewable energy sources provided more than 10% of all the electricity in California. When large hydroelectric facilities are included, that share jumps to more than 27 percent. In response to the Global Warming Solutions Act of 2006, the California Renewable Portfolio Standard Program, which is an initiative of the California Energy Commission, calls for this share to increase to 33 percent (not counting large hydroelectric facilities) by 2020. Potential renewable energy generators in California include solar, wind, tidal, small-scale hydroelectric, geothermal, fuel cells, biomass, and landfill gas reclamation.

An important trend of renewable energy production focuses on the development of onsite energy generation. Onsite energy generation utilizes renewable energy technologies for onsite energy production. Onsite energy generation promotes investment in renewable energy infrastructure, creates an income generating use where utility companies buy back excess power, and relieves stress and dependence on the existing electrical grid's infrastructure.

The California Energy Commission is charged with the increased development of the renewable energy sector in California. There are several programs in California that facilitate the development of renewable energy production, as well as energy conservation, including rebates for solar, wind, and fuel cell technologies, public education, and funding research and development of emerging renewable energy technologies. More information can be found on the California Energy Commission Renewable Energy Programs web site at http://www.energy.ca.gov/renewables.

VII. Scenic Resources

The County recognizes that the coastline, mountain vistas, and other scenic features of the region are a significant resource for the County. This section of the Conservation and Natural Resources Element addresses the preservation of the County's valuable designated scenic areas, vistas, and roadways.

Background

The County's scenic resources consist of designated scenic highways and corridors (or routes), and hillsides and ridgelines.

Official State Scenic Highways and Corridors

The State Scenic Highway Program was created in 1963 to protect and enhance the natural scenic beauty of California highways and adjacent corridors through special conservation treatment. The Los Angeles County Scenic Highway Plan was created to conform to the State Scenic Highway Program. According to State guidelines, a highway may be designated scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view.

To be designated as an official state scenic highway, the County must create a corridor protection program, which must be adopted by the Los Angeles County Board of Supervisors. Each corridor protection program must contain the following five elements related to preserving the nominated scenic highway:

- 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; and,
- Attention to design and appearance of structures and equipment.

For more information on nominations for official state scenic highway designations, please visit the California Department of Transportation Scenic Highway Program web site at http://www.dot.ca.gov/hq/LandArch/scenic_highways/scenic_hwy.htm.

The County contains three official state scenic highways, as seen in Table 6.8 and Figure 6.7.

Table 6.8: Official State Scenic Highways

Highway	Location
Angeles Crest Highway Route-2	From 2.7 miles north of I-210 to the San Bernardino County Line.
Mulholland Highway (two sections)	From CA-1 to Kanan Dume Road From West of Cornell Rd. to East of Las Virgenes Road.
Malibu Canyon–Las Virgenes Highway	From CA-1 to Lost Hills Road

Figure 6.7: Scenic Highways

Hillsides, Scenic Viewsheds, and Ridgelines

Other scenic resources in the County include hillsides, scenic viewsheds, and ridgelines.

Hillsides

The San Gabriel Mountains, Verdugo Hills, Santa Susana Mountains, Simi Hills, Santa Monica Mountains and Puente Hills play a major role in physically defining the County's diverse communities. They not only create dramatic backdrops against densely developed suburbs and communities, but also provide extensive environmental and public benefits to County residents.

The vast majority of the native plant and animal species within the County reside within the hilly and mountainous terrain. Mountain lions, bobcats, black bears and deer are among the larger animals that inhabit these areas, and serve as indicators that smaller mammals and vegetation within the food chain are stable. A high number of heritage oak trees that are 100 to 600 years old, occur in many of the County's oak woodlands and further indicate the biological significance of these areas.

In addition to their scenic beauty, undeveloped mountains and hills serve to protect the overall health of watersheds. They provide natural drainage systems, which play a role in water quality, slope stability, stormwater runoff, erosion control and groundwater replenishment.

Scenic Viewsheds

A scenic viewshed provides a scenic vista from a given location, such as a highway, a park, a hiking trail, or even from a particular neighborhood. The boundaries of a viewshed are defined by the field of view to the nearest ridgeline. Scenic viewsheds in the County vary by location and community and can include ridgelines, unique rock outcroppings, waterfalls, ocean views or various other unusual or scenic landforms.

Ridgelines

There are numerous ridgelines that provide dramatic views for the unincorporated areas of the County. The General Plan supports the protection and preservation of the County's ridgelines, and allows individual communities to identify and regulate their ridgeline resources. To identify significant ridgelines, the following criteria must be considered:

- Topographic complexity;
- Uniqueness of character and location;
- Presence of cultural or historical landmarks;
- Visual dominance on the skyline or viewshed, such as the height and elevation of a ridgeline; and,
- Environmental significance to natural ecosystems, parks, and trail systems.

Figure 6.8 identifies the County's Hillside Management and designated Ridgeline Management Areas.

Figure 6.8: Hillside Management Areas and Ridgeline Management Policy Map

Issues

1. Protection of Scenic Resources

Southern California has lost many of its scenic resources due to a variety of human activities. In the absence of adequate land use controls, many scenic resources have been adversely affected by unsightly development and sprawl. The visual pollution associated with the proliferation of billboards, signs, utility lines, and unsightly uses detracts from and often obscures many of the County's scenic resources. Another factor that significantly affects visual quality is air pollution. Man-made sources of air pollution, particularly tailpipe emissions from cars and trucks, contribute to the reduction of visibility and to the deterioration of some vegetation and wildlife.

2. Hillside Regulation

The geologic instability of the County's mountain ranges is apparent in the numerous earthquake-induced landslide and liquefaction areas in the County. A majority of the mountains and hilly terrain in the County is steeply sloped land of 25 percent slope, with a large portion of this area greater than 50 percent slope. Development of steep terrain is costly and the public costs associated with years of safety and public services in certain areas can be prohibitive. The highest and best use for some mountainous terrain may be as an airshed, watershed and natural habitat.

In addition, hillside development has the potential to change natural drainage systems and remove the native vegetation that once slowed water runoff. The removal of vegetation eliminates the natural containment of runoff. Water cannot then percolate into the soil, and instead gathers velocity as it flows down the hillside, causing accelerated erosion. Erosion that is accelerated beyond its normal rate can deposit silt into streams and lakes, which can adversely affect water quality, smother vegetation, and trigger landslides.

To conserve the natural beauty and public benefit of hillsides, land use activities that may result in environmental degradation are subject to regulations and design guidelines that discourage hillside development based on slope, soil, natural drainage channels, and seismic and fire hazards. The Hillside Management Conditional Use Permit (CUP) is a regulatory vehicle to consider potential environmental degradation and hillside alteration in Hillside Management Areas (HMAs), which are areas where the slope is 25 percent or greater.

The Hillside Management CUP allows clustering development at the base of the slope, limits grading, and ensures that the drainage configuration remains as natural as possible and will not adversely impact the area below the site. Hillside design guidelines are referenced during the pre-development and permit processing phases to minimize hillside alteration, conserve ridgeline silhouettes, determine traffic circulation and building placement by topography, and incorporate trails where appropriate. By imposing these design conditions, a more sensitive development will occur in the County's hillsides in a manner that respects the natural topography and biological resources of the area.

Goals and Policies for Scenic Resources

Goal C/NR 13: Protected visual and scenic resources.	
Topic	**Policy**

Scenic Resource Protection	Policy C/NR 13.1: Protect the County's scenic resources through land use regulations that mitigate development impacts.
	Policy C/NR 13.2: Protect the County's ridgelines from incompatible development that diminishes their scenic value.
	Policy C/NR 13.3: Reduce light trespass, light pollution and other threats to scenic resources.
	Policy C/NR 13.4: Encourage developments to be designed to create a consistent visual relationship with the natural terrain and vegetation.
	Policy C/NR 13.5: Require grading to conform to the existing terrain.
	Policy C/NR 13.6: Prohibit outdoor advertising and billboards along scenic routes, corridors and other scenic areas.
	Policy C/NR 13.7: Encourage the incorporation of roadside rest stops, vista points, and interpretive displays into projects in scenic areas.
Hillside Management	Policy C/NR 13.8: Manage development in HMAs to protect their natural and scenic character and minimize risks from natural hazards, such as fire, flood, erosion, and landslides.
	Policy C/NR 13.9: Consider the following in the design of a project that is located within an HMA, to the greatest extent feasible: • Public safety and the protection of hillside resources through the application of safety and conservation design standards; • Maintenance of large contiguous open areas that limit exposure to landslide, liquefaction and fire hazards and protect natural features, such as significant ridgelines, watercourses and SEAs.

VIII. Historic, Cultural, and Paleontological Resources

Historic, cultural, and paleontological resources are an important part of the County's identity and contribute to the local economy. This section sets forth goals and policies for the management and preservation of historic, cultural, and paleontological resources in the County.

Background

The resources described in this section include historic buildings, structures, artifacts, sites, and districts of historic, architectural, archaeological, or paleontological significance. They may be locations of important events that were turning points in the history of the County, or be unique structures or groups of structures possessing distinct architectural features that depict a historic period of the County.

The County's historic, cultural, and paleontological resources are non-renewable and irreplaceable. The County aims to promote public awareness of their value, and their public enjoyment should be fostered whenever possible. To this end, the County promotes cooperative efforts between public and private organizations to identify, restore, and conserve these resources.

Legislative Tools

The County embraces the importance of protecting historic, cultural, and paleontological resources and is guided in development decisions by federal, state, and local programs that officially recognize these resources. The following legislative tools improve the protection and enhancement of historic and cultural structures in the County:

Local

- Los Angeles County Historical Landmarks and Records Commission reviews and recommends cultural heritage resources in the unincorporated area for inclusion in the State Historic Resources Inventory.

State

- The California State Parks Department's Office of Historic Preservation maintains the State Historic Resources Inventory, a compilation of all resources formally determined eligible for or listed in the National Register of Historic Places, the California Register of Historical Resources or designated as State Historical Landmarks or Points of Historical Interest.

- CEQA provides guidelines for the identification and protection of archaeological sites, artifacts, and paleontological resources. If a project threatens an archaeological or paleontological resource, the project is required to provide mitigation measures to protect the site or enable study and documentation of the site. Assessment of these resources requires a survey prepared by a qualified archaeologist or paleontologist.

- The State Historical Building Code (SHBC) is a set of regulations adopted in 1979 that was created to improve the protection and enhancement of historic structures. The intent of SHBC is to protect California's architectural heritage by recognizing the unique construction problems inherent in historic buildings and offering an alternative code to deal with these problems. The SHBC provides alternative building regulations for the rehabilitation, preservation, restoration, or relocation of structures designated as historic buildings. SHBC regulations are intended to facilitate restoration or accommodate change of occupancy so as to conserve a historic structure's original or restored architectural elements and features.

Federal

- The Archaeological Resources Protection Act of 1979 protects archaeological resources and provides requirements for permit issuance to excavate or remove archaeological resources.

- The Native American Heritage Act of 1992 provides guidelines for the protection of Native American remains and artifacts.

- The National Register of Historic Places is the official list of the country's historic places worthy of preservation. Authorized by the National Historic Preservation Act of 1966, the National Park Service's National Register of Historic Places is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect the country's historic and archeological resources.

- National Historic Landmarks 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 U.S. Today, fewer than 2,500 historic places bear this national distinction.

Historic Resource Sites

The State of California designates historic resources as Historical Landmarks or Points of Historical Interest and lists them in the California Register of Historical Resources. Historical Landmarks are resources of statewide significance, and Points of Historical Interest are resources of local significance. Many of the resources listed in the California Register are also of national significance and are listed in the National Register of Historic Places.

The County has many Historical Landmarks and Points of Historical Interest in its jurisdiction, including the remnants of vast ranchos, routes of early explorers, historic railroad lines, and the homes of prominent people who shaped local history. The State Historical Resources Commission administers the California Register, which lists 506 historic resources throughout the County. While the great majority of these resources are located in cities, 29 are located in the unincorporated areas of the County. Table 6.9 and Figure 6.9 display the location and designation of the 29 historic resources in the unincorporated areas.

Figure 6.9: Historic Resource Sites Policy Map

Table 6.9: Historic Resource Sites in the Unincorporated Areas

Altadena Town & Country Club	Lang Southern Pacific Station	Site of Llano Del Rio Cooperative Colony
Andrew McNally House	Mentryville	Soledad-Acton Schoolhouse
Antelope Valley Indian Museum	Mount Lowe Railway	St. Francis Dam Disaster Site
Bassett Elementary School	Oak of the Golden Dream	Sylvia Park Country Club Clubhouse
Christmas Tree Lane	Old Ridge Route	Topanga Christian Fellowship Church
Clear Creek Vista Point	Old Short Cut	Vasquez Rocks
Crank House	Pacific Electric Railway Company Substation No. 8	Woodbury Story House
Dominguez Adobe Ranch House	Pico Canyon Oil Field Well No. 4	Zane Grey Estate
General Charles S. Farnsworth County Park	Pomona Water Powerplant	Site of Llano Del Rio Cooperative Colony
Keyes Bungalow	Rancho San Francisco	

Significant General Fossil Localities

Well over 1,000 fossil localities have been recorded and in excess of a million specimens have been collected in the County. Although numerous places countywide have yielded fossils, especially in the hills and in the vicinity of Rancho La Brea, 11 significant general fossil localities have been identified, as shown in Table 6.10. Fossils continue to be discovered in the County in association with ground-disturbing activities in fossil-rich areas.

Table 6.10: Significant General Fossil Localities in Los Angeles County

Location	Fossil Type	Formations
La Brea Tar Pits	N/A	N/A
Palos Verdes Peninsula	Mastadon, mammoth, horse, camel, sloth	Palos Verdes Sand
Palos Verdes Peninsula	Grey whale	San Pedro
Palos Verdes Peninsula	Fish, birds, sea lion, plants, baleen whale, horse, sloth, sea otter, mammoth, mastodon, bison, camel, tapir	Monterey Shale
Palos Verdes Peninsula	Dolphin	Monterey Shale
Santa Monica Mountains (Topanga Canyon)	Cypraeid gastropod	Topanga
Santa Monica Mountains (Old Topanga Canyon Road, Piuma Road)	Multiple	Topanga
Mint Canyon	Oldest hawk in California	Tick Canyon
Mint Canyon	Horse, elephant, camel	Mint Canyon
Puente Hills (Hacienda Heights)	Fish	Puente
Puente Hills (Diamond Bar)	Fish and leaves	Puente

Issues

Land Use Compatibility and the Importance of a Local Process

The primary threats to the County's historic, cultural, and paleontological resources are incompatible land uses and development on or adjacent to the County's resources, a lack of a local registry, and the limitations of state and federal programs to protect resources.

Incompatible land uses and development can adversely affect resources by degrading the historic nature of the site through incompatible and inappropriate design features, allowing development that blocks views or hinders the public's enjoyment of a particular cultural site, or development that removes or demolishes significant historical features on existing buildings.

A local registry or landmarks commission, which can be crucial to a successful historic, cultural, and paleontological resource preservation program, is needed in the County to identify historic, cultural, and paleontological resources that are not identified by state and federal programs. A local process also encourages the participation of stakeholders who are familiar with the resources within their communities.

Officially-recognized resources are integral parts of the built and natural environments, and must be considered in County land use actions. There may be other sites and structures that have not been identified and that have importance to local communities. In such cases, a community-based plan may designate these sites or structures as locally significant.

Goals and Policies

Goal C/NR 14: Protected historic, cultural, and paleontological resources.	
Topic	**Policy**
Historic, Cultural, and Paleontological Resource Protection	Policy C/NR 14.1: Mitigate all impacts from new development on or adjacent to historic, cultural, and paleontological resources to the greatest extent feasible.
	Policy C/NR 14.2: Support an inter-jurisdictional collaborative system that protects and enhances the County's historic, cultural, and paleontological resources.
	Policy C/NR 14.3: Support the preservation and rehabilitation of historic buildings.
	Policy C/NR 14.4: Ensure proper notification procedures to Native American tribes in accordance with Senate Bill 18 (2004).
	Policy C/NR 14.5: Promote public awareness of the County's historic, cultural, and paleontological resources.
	Policy C/NR 14.6: Ensure proper notification and recovery processes are carried out for development on or near historic, cultural, and paleontological resources.

[Text Box]

Senate Bill (SB) 18

Senate Bill 18 (2004) requires California cities and counties to contact and consult with California Native American tribes prior to amending or adopting a general plan or specific plan, or designating land as open space. SB 18 requires city and county governments to consult with California Native American tribes to aid in the protection of traditional tribal cultural places through local land use planning. SB 18 provides California Native American tribes an opportunity to participate in local land use decisions at an early stage in the planning process for the purpose of protecting, or mitigating, impacts to sites of cultural significance. Involving tribes early allows for ample consideration of cultural places in the context of broad local land use policy, before individual site specific, project level land use decisions are made by a local government.

Table 6.11: Conservation and Natural Resources Element Implementation Programs

SEA Preservation Program
Mitigation Land Banking Program
Oak Woodlands Conservation Management Plan Implementation
Scenic Resources Ordinance
Agricultural Resources Ordinance
Mineral Resource Zones Ordinance
Renewable Energy Ordinance
Native Vegetation Conservation Ordinance
Habitat Conservation Plan
Water Quality Initiatives
Watershed and Rivers Master Plans
Urban Greening Program
Open Space Land Acquisition Strategy
Healthy and Sustainable Food Systems Ordinance
Solar Energy Orientation Study

Chapter 7: Parks and Recreation Element

Table of Contents

I. Introduction

The parks and recreational facilities of Los Angeles County play a vital role in maintaining a high quality of life for County residents. The County owns and operates parks and recreational facilities in both unincorporated areas and cities in the County. These facilities serve the local needs of communities in the unincorporated areas, as well as regional needs countywide.

The Parks and Recreation Element addresses the General Plan's Guiding Principles by providing policy direction for the maintenance and expansion of the County's parks and recreation system. The provision of parks and recreation facilities to address a diversity of populations and needs is an important part of ensuring Sufficient Infrastructure and Community Services, and plays a key role in fostering livability and activities in conjunction with Smart Growth land use and mobility policies. Parks and recreation facilities are an important part of the County's landscape and tourism industry, which can contribute to planning for a Strong and Diverse Economy, and a strong parks and recreation system is one of the most important factors in planning for Healthy, Livable, and Equitable Communities. The Parks and Recreation Element also includes policies that implement effective Environmental Resource Management practices on its vast recreation and open space areas.

The purpose of the Parks and Recreation Element is to plan and provide for an integrated parks and recreation system that meets the needs of residents in the County. The goals and policies set forth in this Element address the growing and diverse recreation needs of the communities served by the County.

II. Background

Park and recreation planning in the County is guided in part by several important plans and studies. Two documents that guide County park planning are the Parks and Recreation Strategic Plan and the Strategic Asset Management Plan (SAMP).

In 1992, the Department of Parks and Recreation (DPR) prepared the Parks and Recreation Strategic Plan for 2010 to guide the decision-making process for the future development of parks and implementation of recreation programs. The Strategic Plan assesses existing park acreage and future recreation needs; identifies goals, objectives, and policies for appropriate future actions; and includes recommendations based on needs, goals and public involvement to guide the future direction of parks and recreation in the County. In 2003, DPR updated the Strategic Plan to create a road map to meet the various community recreation needs as the population continued to grow and change. The document identifies important trends and opportunities, while setting the Department's direction for a five-year period.

In 2004, DPR prepared the SAMP for 2020 to provide County decision-makers, park planners, and the public with updated information and analyses, and to prioritize the allocation of limited economic resources for the provision of parks, recreation facilities, and open space. The SAMP includes park inventories, identifies needs, and provides recommendations for each Planning Area and each Supervisorial District.

Parkland Classifications

For planning purposes, parks are classified based on the size, use, and physical characteristics of the land. In addition, the traditional template of local and regional parks has been expanded to capture diverse opportunities for acquisition and development of parkland. The County's park system, including facilities that are owned, operated, and maintained by the County, totals 27,480 acres. Table 7.1 summarizes the acreage of local and regional parkland, by Planning Area. A complete inventory of the parks operated by DPR can be found in Appendix F.

Table 7.1: Existing County Parkland, by Planning Area

	Parkland, in Acres		
Planning Area	**Local**	**Regional**	**Total**
Antelope Valley	49	3,227	3,276
East San Gabriel Valley	239	3,170	3,409
Coastal Islands	0	38	38
Gateway	56	749	805
Metro	97	392	489
Santa Clarita Valley	112	14,529	14,641
San Fernando Valley	8	500	508
Santa Monica Mountains	0	0	0
South Bay	25	603	628

Westside	20	384	404
West San Gabriel Valley	44	3,224	3,268
Total	650	26,816	27,466

Source: Los Angeles County Department of Parks and Recreation, April 2012.

The County offers a wide variety of parks and recreation resources, which generally fall under two systems: local park system and regional park system. In addition, the County offers multi-user trails and access to other recreation facilities, such as city parks and facilities and private recreation facilities.

Local Park System

The local park system consists of parks of varying sizes that meet local needs and offer opportunities for daily recreation. This system includes community parks, neighborhood parks, pocket parks, and park nodes, and is summarized in Table 7.2.

Community Parks

Community parks are typically 10 to 20 acres, and serve several neighborhoods within a 1 to 2 mile radius of the park. Community parks that are located in residential neighborhoods serve both the needs of the community park service radius and neighborhood park service radius. Community parks provide opportunities for a wide variety of active and passive recreation activities. The amenities programmed into a community park are focused on meeting the needs of several neighborhoods or large sections of the community. They allow for group activities and recreational opportunities that may not be feasible in neighborhood parks. Amenities for community parks can include informal open play areas, children's play apparatus, group picnic areas with overhead shelters, barbecues, lighted sports fields, basketball courts and tennis courts, public restrooms, concession building, maintenance building, onsite parking and information kiosks.

Neighborhood Parks

Neighborhood parks are typically 3 to 10 acres, and serve residents living within a half mile radius of the park. Neighborhood parks provide space, programs and recreation activities to create healthy social networks within residential communities. The common objective of all neighborhood parks is to bring people together to recreate and socialize close to home. Ease of access and walking distance uninterrupted by major roads and other physical barriers are important factors in locating neighborhood parks. Neighborhood parks should be well-connected to other public facilities, such as schools and libraries. Amenities for neighborhood parks can include informal open play areas, children's play apparatus, picnic tables, picnic shelters, barbecues, practice sports fields, basketball, tennis and volleyball courts, public restrooms, information kiosks, recreation offices, and onsite parking.

Pocket Parks

Pocket parks are less than three acres in size, and serve residential or business areas within a quarter mile radius or within walking distance. They are best used to meet limited or specialized recreational needs. Pocket parks can provide landscaped public use areas in industrial and commercial areas, scenic overlooks, linkage to a community pathway system, and urban infill sites in

parks poor communities. Pocket parks generally do not have onsite parking. Amenities for pocket parks can include both active and passive features, depending on the community's setting and needs, such as children's play apparatus, picnic areas, fountains and seating areas. Due to the limited amenities included in pocket parks, they are typically not included in the service radius analysis.

Park Nodes

Park nodes are small pieces of open space that serve as public destinations, connections, and community defining spaces. Nodes provide physical and visual breaks to the urban landscape and connect various spaces, such as waterways, streets, trails, and greenways. Park nodes are used as gathering and rest areas, and serve as opportunities for social and cultural exchange. Examples of park nodes include equestrian and hiking trail heads, bike rest stops and stations with lockers and repair areas, neighborhood focal points, and passive amenities, such as plazas, rest areas, playgrounds, landmarks, and public art installations.

Table 7.2: Local Park System Summary

Facility	Typical Park Features and Amenities
Community Park Acres Per Thousand Population: 4/1,000 Suggested Acreage:10 to 20 acres Service Area:1 to 2 miles	Passive park amenities including but not limited to: informal open play areas, children's play apparatus, family and group picnic areas with overhead shelters, barbecues. Active sports activities including but not limited to: lighted sports fields, basketball courts and tennis courts. Additional amenities may include aquatics complex, skate park, arena soccer, roller hockey, community gardens, and dog parks. Park facilities including but not limited to: public restrooms, concession building, community buildings, maintenance building and onsite parking and information kiosks.
Neighborhood Park Acres Per Thousand Population: 4/1,000 Suggested Acreage: 3 to 10 acres Service Area:1/2 mile	Passive park amenities including but not limited to: informal open play areas, children's play apparatus, group picnic areas with overhead shelters, barbecues. Active park amenities including but not limited to: practice sports fields, basketball, tennis, and volleyball courts. Park facilities including but not limited to: public restroom, onsite parking and information kiosks.
Pocket Park Acres Per Thousand Population: 4/1,000 Suggested Acreage: less than 3 acres Service Area:1/4 mile	Passive park amenities including but not limited to: picnic areas and seating areas. Active park amenities including but not limited to: children's play apparatus.

Park Node Acres Per Thousand Population:4 / 1,000 Suggested Acreage:1/4 acre or less No service radius area	Varies; can include: plazas, rest areas, playgrounds, landmarks and public art installations

Regional Park System

The regional park system is intended to meet the park and recreation needs of residents and visitors throughout the County. This system consists of community regional parks, regional parks, and special use facilities, and is summarized in Table 7.3.

Community Regional Parks

Community regional parks are typically 20 to 100 acres, and have a service radius of 20 miles. Community regional parks protect and conserve natural resources, preserve open spaces, and provide recreational facilities that are not available in neighborhood or community parks. Amenities for community regional parks can include a jogging exercise course, informal open play areas, children's play apparatus, group picnic areas with overhead shelters, barbecues, lighted sports fields, basketball courts and tennis courts, information kiosks, public restrooms, concession building, recreation offices, maintenance buildings, and onsite parking. Community regional parks may also have one or more of the following features: multiple sports facilities, aquatics center, fishing lake, community building and gymnasium, and scenic views and vistas.

Regional Parks

Regional parks are typically greater than 100 acres in size, and have a service radius of 25 miles or more. They include unique areas such as lakes, wetlands, auditoriums, water bodies, and campgrounds, in addition to the active recreational facilities offered in community and community regional parks. Many of the recreation activities are associated with experiencing the natural environment. A regional park may also perform important ecological and environmental functions, including serving as wildlife habitats. The connection of these parks to natural areas is often vital to ensuring a healthy ecological system. Amenities for regional parks can include picnic areas, nature centers, trail systems, scenic drives, campgrounds, water areas for swimming, fishing and boating, and in some cases, sport fields.

Special Use Facilities

Special use facilities are generally single purpose facilities that serve the greater regional recreational or cultural needs of the County. One notable example is the Hollywood Bowl. Special use facilities require adequate public access and sufficient buffers to protect adjacent residential users and to insulate the park from commercial or industrial development. Special use facilities can provide both passive (e.g. historic and cultural facilities, natural areas, habitat preservation areas, arboreta and botanical gardens, and nature centers) and active (e.g. golf courses and driving ranges, equestrian centers, off highway vehicle (OHV) parks, water parks or aquatic facilities, and skate parks) needs within the region. There are no size criteria or service radius areas associated with special use facilities.

Table 7.3: Regional Park System Summary

Facility	Typical Park Features and Amenities
Community Regional Park Acres Per Thousand Population: 6 /1,000 Suggested Acreage: 20 to100 acres Service Area: up to 20 miles	Passive park amenities including but not limited to: informal open play areas, children's play apparatus, group picnic areas with overhead shelters, barbecues. Active sports activities including but not limited to: lighted sports fields, basketball courts and tennis courts. Additional amenities may include one or more of the following features: multiple sports facilities, aquatics center, fishing lake, community building and gymnasium, and scenic views and vistas. Park facilities including but not limited to: public restrooms, concession building, community buildings, maintenance building and onsite parking and information kiosks.
Regional Park Acres Per Thousand Population: 6 /1,000 Suggested Acreage: greater than 100 acres Service Area: 25+ acres	Passive park amenities including but not limited to: group picnic areas with overhead shelters, barbecues. Additional amenities may include one or more of the following features: lakes, wetlands, auditoriums, water bodies for swimming, fishing and boating, and sports fields.
Special Use Facility Acres Per Thousand Population: 6 /1,000 No size criteria No assigned service radius area	Generally, single purpose facilities. Can include passive features such as: wilderness parks, nature preserves, botanical gardens and nature centers. Active uses can include: performing arts, water parks, aquatic facilities, skate parks, golf driving ranges and golf courses.

Trails

The County offers unique trail user opportunities that showcase the diverse scenery and provide connectivity to parks, open spaces, cultural resources, and wilderness areas. The County has an ideal climate for trail user activities on most days of the year.

Typical trail uses range from hiking and walking, to mountain biking and horseback riding, with many users participating in more than one activity. The quality of the trail experience is directly proportional to the state of the visual, natural, and educational environment through which the trail passes. The wide variety of experiences, include but are not limited to: exercise, solitude, spiritual practices, physical and mental well-being, building social networks, testing athletic skills, and experiencing

nature. The County strives to make all trails multi-use and accessible to all non-motorized users including pedestrians, equestrians, and mountain bicyclists, where appropriate.

In May 2011, the Los Angeles County Board of Supervisors adopted the County of Los Angeles Trails Manual (Trails Manual), which provides County staff and developers with guidelines and standards for trail planning, design, development, and maintenance of County trails. The purpose of the Trails Manual is to provide guidance to County departments that interface with trail planning, design, development and maintenance of hiking, equestrian, and mountain biking recreational trails, while addressing physical and social constraints and opportunities associated with the diverse topographic and social conditions that occur in the unincorporated territory of the County.

Figure 7.1 depicts the County's regional trail system.

Figure 7.1: Regional Trail System

Other Recreation Facilities

In addition to local and regional parks and trails, County residents are served by the following types of recreation facilities: multi-benefit parks, school sites, city parks and facilities, private recreational facilities, and greenways.

Multi-Benefit Parks

Multi-benefit parks and open spaces are created through collaborative efforts among city, county, state, and federal agencies; private organizations; schools; private landowners; and industries. These parks are characterized as having more than one function and contributing to multiple program goals. There are a number of applications of multi-benefit parks including: utility corridors and flood control basins that can serve as areas for active or passive recreation; school sites located adjacent to parks that can share facilities, such as parking and park amenities; watershed areas that can protect critical wildlife habitats, preserve open space, provide trails for recreation, and contribute to water conservation objectives; and water districts, where trails can be located adjacent to flood control channels and trailhead parks.

School Sites

The County works with school districts to organize, promote, and conduct joint recreational and educational programs. These community recreation agreements are a form of joint-use agreement, where either a school or park facility may be put to some recreational use by the other party in exchange for some facility improvement and/or maintenance. A park does not have to be adjacent to a school (i.e., share a common boundary) for an agreement to be viable.

City Parks and Facilities

City parks and facilities that are located close to the borders of the unincorporated areas are enjoyed by city and County residents alike. Similarly, local County parks that are located within or close to the borders of cities provide recreational amenities for both populations. This overlap in local park service radius is an important factor to consider in the placement of new local County parks.

Private Recreational Facilities

Private recreational facilities play an important role in meeting the recreational needs of the County. The network of private recreational facilities within the County consists of churches, health and

fitness clubs, and other organizations that offer a variety of programs and facilities. This Element does not include an inventory of private recreational facilities, and as the County does not control, maintain, or program private recreational facilities, these resources are not credited toward the County's acreage goals for public parks.

Greenways

Greenways provide a linear area along natural corridors, and often follow features such as rivers, man-made waterways, drainage channels, and utility easements. Greenways can accommodate various modes of uninterrupted pedestrian travel on pathways, including walking, jogging, and bicycling, and can include recreation areas and natural landscape features.

Recreation Programs

Along with access to parks and recreation facilities, the availability of a wide range of recreation programs is critical to the quality of life in any community. A comprehensive offering of effective recreation programs benefit individuals, neighborhoods, and households of all ages, income levels, cultures and abilities by:

- Offering opportunities to play, grow, and learn;
- Providing a sense of place and of belonging;
- Promoting health and wellness, including obesity prevention;
- Improving neighborhood and community connections, and problem-solving;
- Enhancing community cohesiveness while honoring diversity; and
- Helping protect natural environments.

Recreation programs can range from organized sports, tournaments, scheduled classes, and special events, to more individualized, casual leisure activities such as family picnics and walking. Effective recreation programs promote the constructive use of leisure time and a lifelong commitment to a healthy lifestyle.

DPR offers a wide variety of recreation programs to meet the diverse needs of County residents. These programs serve a diverse group of stakeholders including, but not limited to: preschool-aged children, elementary school-aged youth, middle school-aged youth, high school-aged youth, adults, seniors and households.

Parkland Dedication and Funding

The County standard for the provision of parkland is 4 acres of local parkland per 1,000 residents of the population in the County's unincorporated areas, and 6 acres of regional parkland per 1,000 residents of the County's total population. This section describes the County's parkland dedication requirements, as well as funding mechanisms for the planning and development of parks and recreation facilities in the County.

Quimby Act

The California Quimby Act, which is part of the Subdivision Map Act, applies to residential subdivisions and permits the County, by ordinance, to require the dedication of land or payment of fees for park and recreational purposes. As part of its approval of a subdivision, the County may require the subdivider to provide land to serve the park and recreational needs of future residents of the subdivision.

The Quimby Act establishes a standard of dedicating 3 acres of parkland per 1,000 residents for subdivisions. However, as a condition of zone change approval, General Plan amendment, specific plan approval, or development agreement, the County may require a subdivider to dedicate land according to the following General Plan standards of 4 acres of local parkland per 1,000 residents in the unincorporated areas, and 6 acres of regional parkland per 1,000 residents. This requirement is justified as long as an appropriate nexus between the project and the dedication can be shown.

Quimby fees may be used to acquire land for local park purposes, improve local parkland (including existing local parks), or both acquire and develop local parkland. To convert a Quimby obligation in land (acres) into the Quimby fee, the land obligation is multiplied by the Representative Land Value (RLV) per acre for the Park Planning Area (PPA) in which the subdivision is located. RLVs are adjusted annually based upon changes in the Consumer Price Index.

Because of the need for usable public parkland for active recreation purposes, DPR rarely gives any Quimby credit for parkland exceeding a slope of three percent and instead gives credit for the “net” park acreage (maximum slope of three percent) the County receives. In addition, DPR does not accept undeveloped park sites from developers. This means that the developer is required to provide a developed park to the County on a “turn-key” basis and receives credit for the costs of developing the public park up to and against any remaining Quimby obligation, after accounting for the net acreage dedicated to the County.

For the purposes of the County's Quimby Act Ordinance, the unincorporated areas are divided into 47 PPAs, based on location and neighborhood characteristics. The Quimby fees generated in one PPA may not be spent in another area.

Proposition A Funds

Proposition A Funds may be used to fund the development, acquisition, improvement, restoration and maintenance of parks; recreational, cultural and community facilities; and open space lands within the County. These funds are administered by the Los Angeles County Regional Park and Open Space District. The Open Space District was created when voters approved Proposition A in 1992. Proposition A authorized an annual assessment on nearly all of the 2.25 million parcels of real property in the County. Proposition A funded $540 million for the acquisition, restoration or rehabilitation of real property for parks and park safety, senior recreation facilities, gang prevention, beaches, recreation, community or cultural facilities, trails, wildlife habitats, or natural lands, and maintenance and servicing of those projects. In 1996, the County’s voters approved another Proposition A to fund an additional $319 million for parks and recreation projects and additional funds for maintenance and to service those projects.

Landscaping and Lighting District

The California Landscaping and Lighting Act of 1972 authorizes local legislative bodies to establish benefit related assessment districts, or Landscaping and Lighting Districts (LLADs) and to levy

assessments for the construction, installation, and maintenance of certain public landscaping and lighting improvements. LLADs may be established to maintain local public parks.

Mello-Roos District

A developer may apply to the County to form a Mello-Roos District pursuant to the California Mello-Roos Community Facilities Act of 1982 to develop and maintain park improvements. Pursuant to County guidelines, the parks should be regional in nature, and have an impact or benefit beyond the associated subdivision.

III. Issues

1. Park Planning For a Diversity of Needs

Parks and recreational facilities are used for various purposes by a wide range of users. Because the needs of park users are diverse, no individual park or recreational facility can meet the needs of all users. Therefore, a diverse and comprehensive system of facilities is needed to provide a wide range of recreational opportunities.

A mistaken assumption is that park and recreation planning only involves looking at population projections and then providing more of what already exists. Numerous studies have shown that parks and recreation needs and preferences vary by age, race and ethnicity, and other factors. In addition, the physical distribution of parkland and park accessibility by underrepresented groups and underserved populations, including low-income and transit-dependent communities, are important considerations. The County must understand and plan for these diverse park and recreation needs.

Based on data from a wide variety of sources, outdoor recreation activities with learning components, trail related experiences, and water recreation will increase. Motorized recreation, augmented with navigational equipment, will also continue to grow. As the population evolves and changes, there will be many new supporters and advocates for outdoor recreation and opportunities for partners to contribute to a better quality of life. Cooperation and partnerships between public, private, and nongovernmental service providers can ensure a seamless and comprehensive system of outdoor recreation opportunities and experiences.

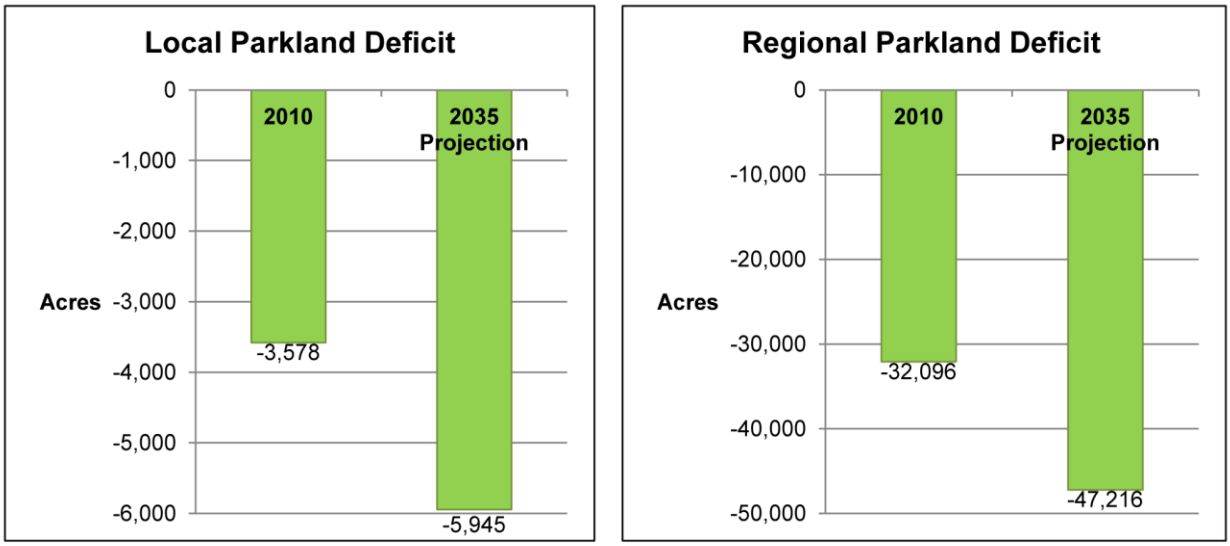
Enhanced collaboration refers to the idea of providing more and improved park and recreation services through multiple use facilities and partnerships with other public, non-profit, and private organizations. The County must work with other agencies to leverage financial, land, and other resources to meet the growing and diverse recreation needs of County residents.

2. Acquisition and Development of Additional Parkland

There are large areas of the County that are underserved by parks and recreational facilities. Nearly two out of three children in the County do not live within walking distance (one quarter mile) of a park, playground, or open space. DPR conducted a preliminary gap analysis to determine the County's need for additional parks and to identify park poor areas. The Gap Analysis Study shows that the County faces significant deficits in local and regional parkland: 3,578 acres for local parkland and 32,096 acres for regional parkland, as shown in Table 7.4 and Figures 7.2 and 7.3. Based on population projections, these deficits will increase to 5,945 acres in local parkland and 47,216 acres in regional parkland by the year 2035 if no new parks are created.

Figure 7.2: Local Parkland Gap Analysis

Figure 7.3: Regional Parkland Gap Analysis



The gap analysis represents a first step toward identifying park-deficient neighborhoods in the unincorporated areas. Figures 7.4 and 7.5 show the service radius for local and regional parks. Areas that do not lie within the service radius are considered underserved by parks and recreation facilities.

Figure 7.4: Community Regional and Regional Park Service Radius Map

Figure 7.5: Community, Neighborhood and Pocket Park Service Radius Map

Table 7.4: Existing County Parkland by Planning Area, Year 2010

	Local Parkland Standard 4 Acres / 1,000 Population			**Regional Parkland Standard 6 Acres / 1,000 Population**		
Planning Areas	**Unincorporated Population 2010**	**Parkland Acreage**	**Surplus / Deficit Acreage**	**Countywide Population 2010**	**Parkland Acreage**	**Surplus / Deficit Acreage**
Antelope Valley	73,488	49	-245	382,868	3,227	930
Coastal Islands	368	0	-1	4,096	38	13
East San Gabriel	234,251	239	-698	933,116	3,170	-2,429

Valley						
Gateway	103,094	56	-356	1,666,588	749	-9,251
Metro	306,768	97	-1,130	1,819,084	392	-10,523
Santa Clarita Valley	24,790	112	13	1,768,978	14,529	3,915
San Fernando Valley	94,907	8	-372	271,227	500	-1,127
Santa Monica Mountains	19,222	0	-77	85,785	0	-515
South Bay	69,612	25	-253	1,016,674	603	-5,497
West San Gabriel Valley	103,181	44	-369	895,543	3,224	-2,149
Westside	27,407	20	-90	974,646	384	-5,464
Total	**1,057,088**	**650**	**-3,578**	**9,818,605**	**26,816**	**-32,096**

Sources: 2010 U.S. Census and Department of Parks and Recreation April 2012.

Table 7.5: Projected Future County Parkland Need, Year 2035

	Local Parkland Standard 4 Acres / 1,000 Population			**Regional Parkland Standard 6 Acres / 1,000 Population**		
	Unincorporated Population Projection 2035	**Current Local Parkland Acreage**	**Surplus / Deficit Acreage**	**Countywide Population Projection 2035**	**Current Regional Parkland Acreage**	**Surplus / Deficit Acreage**
Total	1,648,695	650	-5,945	12,338,623	26,816	-47,216

Source: 2008 SCAG RTP and Department of Parks and Recreation April 2012.

A good community parks and recreation system is based on the quality of facilities and services provided, as well as the ability to anticipate and respond to changing trends. According to the report, *Park and Recreation Trends in California 2005*, changes in the size and composition of State's population will drive the impacts on the delivery of parks and recreation services in the future.

A more in-depth gap analysis will be conducted as part of the County's future Parks and Recreation Master Plan. This analysis will involve a detailed review of demographic, geographic, land use, and transportation data for each Planning Area to determine its park deficiencies in terms of acreage,

accessibility, and suitability. For more information on the Parks and Recreation Master Plan, please refer to Part III: General Plan Implementation Programs.

3. Improved Trail Systems

Trails offer opportunities for people to hike, walk, run or ride, and encourage people to connect with nature. As linear parks, trails help make the region more livable and provide communities with access to increased health and fitness activities. Trails can also promote increased activity with smaller amounts of land than large parks, and can often use leftover or unwanted land.

As the County's population continues to grow and the region becomes increasingly urbanized, the demand for outdoor recreation opportunities and trails will increase. One way to meet this demand is to create and maintain an adequate multi-use trail system that is accessible to all County residents and to provide continuous enjoyment though increased and expanded connectivity. Additional trails are also needed closer to population centers in the central and southwestern portions of the County, where more residents could conveniently access and reap the recreation, health, and mobility benefits of trails.

Multi-use trails are used by equestrians, cyclists, hikers, and runners. As the amount of public land continues to decrease, the need for multi-use trails will continue to grow, as well as the need to find solutions to possible user conflicts. An expanded multi-use trial system can alleviate user conflicts, while also providing increased access to this important health and fitness system.

4. Protection of Historical and Natural Resources on County Park Properties

Many County parks contain important historical and natural resources that must be protected. Historic resources on County park properties include buildings, collections, landscapes, bridges, and other physical features. The maintenance, repair, rehabilitation, restoration, or reconstruction of historical resources are carried out in a manner that is consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings.

Natural resources include natural areas, sanctuaries, and open space preserves. There is a need to establish linkages that will promote connectivity to enhance the movement of wildlife and promote genetic health among native species of plants and animals. Continuous efforts to expand the regional park system are necessary to protect and conserve natural resources regardless of the required park acreage based upon park standards. Open space areas that are established for conservation purposes, such as wildlife sanctuaries, provide a greater benefit than the relative location of the site to populated areas. In the regional park system, a key consideration is the ecological health of natural environments. Accessibility to regional facilities is also important. Access may be enhanced by providing improved public transportation to connect population centers with regional parks.

Threats to these resources include both intentional and unintentional acts, such as deferred maintenance, renovation or improvements that significantly alter or damage the resource, acts of vandalism and theft, or overuse by park users.

5. Sustainable Parks

County park properties must contribute to the County's goals of sustainability, carbon footprint reduction, water conservation, and energy conservation. Sustainable design and management are

necessary to promote responsible environmental practices, enhance social benefits, and reduce the cost of ownership and management.

All park projects must be considered within their surrounding context. Landscapes need to be treated as interdependent and interconnected spaces that share systems of soil, topography, vegetation, and water. By understanding these larger patterns and employing a comprehensive approach, parks can be designed in a way that helps repair and restore ecosystems rather than detract from them. For example, designing a park to take advantage of natural processes is one way to achieve sustainability through site design.

Funding is the main challenge facing the design and implementation of sustainable strategies. However, sustainable design and management practices will help reduce operation and maintenance costs in the long run. In addition, regular maintenance and preventative measures can prolong the life of existing buildings and facilities on County park properties, and reduce the need for new or expanded facilities.

IV. Goals and Policies

Goal P/R 1: Enhanced active and passive park and recreation opportunities for all users.	
Topic	**Policy**
Park Programming	Policy P/R 1.1: Provide opportunities for public participation in designing and planning parks and recreation programs.
	Policy P/R 1.2: Provide additional active and passive recreation opportunities based on a community's setting, and recreational needs and preferences.
	Policy P/R 1.3: Consider emerging trends in parks and recreation when planning for new parks and recreation programs.
	Policy P/R 1.4: Promote efficiency by building on existing recreation programs.
Park Management	Policy P/R 1.5: Ensure that County parks and recreational facilities are clean, safe, inviting, usable and accessible.
	Policy P/R 1.6: Improve existing parks with needed amenities and address deficiencies identified through the park facility inventories.
	Policy P/R 1.7: Ensure adequate staffing, funding, and other resources to maintain satisfactory service levels at all County parks and recreational facilities.
	Policy P/R 1.8: Enhance existing parks to offer balanced passive and active recreation opportunities through more efficient use of space and the addition of new amenities.
	Policy P/R 1.9: Offer more lighted playing fields using energy efficient light fixtures where appropriate to extend playing time.
	Policy P/R 1.10: Ensure a balance of passive and recreational activities in the development of new park facilities.

	Policy P/R 1.11: Provide access to parks by creating pedestrian and bicycle-friendly paths and signage regarding park locations and distances.

Goal P/R 2: Enhanced multi-agency collaboration to leverage resources.	
Topic	**Policy**
Collaboration and Financing	Policy P/R 2.1: Develop joint-use agreements with other public agencies to expand recreation services.
	Policy P/R 2.2: Establish new revenue generating mechanisms to leverage County resources to enhance existing recreational facilities and programs.
	Policy P/R 2.3: Build multi-agency collaborations with schools, libraries, non-profit, private, and other public organizations to leverage capital and operational resources.
	Policy P/R 2.4: Utilize school and library facilities for County sponsored and community sponsored recreational programs and activities.
	Policy P/R 2.5: Support the development of multi-benefit parks and open spaces through collaborative efforts among entities such as cities, County, state, and federal agencies, private groups, schools, private landowners, and other organizations.
	Policy P/R 2.6: Participate in joint powers authorities (JPAs) to develop multi-benefit parks as well as regional recreational facilities.
	Policy P/R 2.7: Increase communication and partnerships with local law enforcement, neighborhood watch groups, and public agencies to improve safety in parks.
Mass Care Shelters	Policy P/R 2.8: Evaluate and enhance facilities and amenities with respect to alternative use of parks to carry out Mass Care and Shelter operations in the wake of a disaster.

Goal P/R 3: Acquisition and development of additional parkland.	
Topic	**Policy**
Parkland Acquisition and Dedication	Policy P/R 3.1: Acquire and develop additional local and regional parkland to meet the following County standards: 4 acres of local parkland per 1,000 residents in the unincorporated areas and 6 acres of regional parkland per 1,000 residents of the County's total population.
	Policy P/R 3.2: For projects that require zone change approvals, general plan amendments, specific plans, or development agreements, require developers to provide for local and regional parkland above and beyond their Quimby obligations as based on an appropriate nexus study.

	Policy P/R 3.3: Require as a condition of residential subdivision approval that a subdivider create a LLAD to maintain the park.
	Policy P/R 3.4: Provide additional parks in communities with insufficient local parkland as identified through the gap analysis.
	Policy P/R 3.5: Expand the supply of regional parks by acquiring land that would: 1) provide a buffer from potential threats that would diminish the quality of the recreational experience; 2) protect watersheds; and 3) offer linkages that enhance wildlife movements and biodiversity.
	Policy P/R 3.6: Collaborate with other public, non-profit, and private organizations to acquire land for parks.
	Policy P/R 3.7: Pursue a variety of opportunities to secure property for parks and recreational facilities, including purchase, grant funding, private donation, easements, surplus public lands for park use, and dedication of private land as part of the development review process.
Parkland Development	Policy P/R 3.8: Mitigate impacts from freeways to new parks to the extent feasible.
	Policy P/R 3.9: Site new parks near schools, libraries, senior centers and other community facilities where possible.

Goal P/R 4: Improved accessibility and connectivity to a comprehensive trail system including rivers, greenways, and community linkages.	
Topic	**Policy**
Trail System	Policy P/R 4.1: Create multi-use trails to accommodate all users.
	Policy P/R 4.2: Develop staging areas and trail heads at strategic locations to accommodate multi-use trail users.
	Policy P/R 4.3: Develop a network of feeder trails into backbone trails.
	Policy P/R 4.4: Maintain and design multi-purpose trails in ways that minimize circulation conflicts among trail users.
	Policy P/R 4.5: Collaborate with other public, non-profit, and private organizations in the development of a comprehensive trail system.
	Policy P/R 4.6: Create new multi-use trails that link community destinations including parks, schools and libraries.

Goal P/R 5: Protection of historical and natural resources on County park properties.

Topic	Policy
Park Resource Preservation	Policy P/R 5.1: Preserve historic resources on County park properties, including buildings, collections, landscapes, bridges, and other physical features.
	Policy P/R 5.2: Expand the collection of historical resources under the jurisdiction of the County, where appropriate.
	Policy P/R 5.3: Protect and conserve natural resources on County park properties, including natural areas, sanctuaries, and open space preserves.
	Policy P/R 5.4: Ensure maintenance, repair, rehabilitation, restoration, or reconstruction of historical resources in County parks and recreational facilities are carried out in a manner consistent with the most current Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings.
Education and Programming	Policy P/R 5.5: Preserve and develop facilities that serve as educational resources that improve community understanding of and appreciation for natural areas, including watersheds.
	Policy P/R 5.6: Promote the use of County parks and recreational facilities for educational purposes, including a variety of classes and after school programs.
	Policy P/R 5.7: Integrate a range of cultural arts programs into existing activities, and partner with multicultural vendors and organizations.

Goal P/R 6: A sustainable parks and recreation system.	
Topic	**Policy**
Sustainable Parks System	Policy P/R 6.1: Support the use of recycled water for landscape irrigation in County parks.
	Policy P/R 6.2: Support the use of alternative sources of energy, such as wind and solar sources to reduce the use of energy at existing parks.
	Policy P/R 6.3: Prolong the life of existing buildings and facilities on County park properties through preventative maintenance programs and procedures.
	Policy P/R 6.4: Ensure that new buildings on County park properties are environmentally sustainable by reducing carbon footprints, and conserving water and energy.
	Policy P/R 6.5: Ensure the routine maintenance and operations of County parks and recreational facilities to optimize water and energy conservation.

Table 7.6: Park and Recreation Element Implementation Programs

County Parks and Recreation Master Plan
Trails Program
Parks Sustainability Program

[Text Box]

Parks, Playgrounds, and Beaches in the Los Angeles Region (1930)

The Olmsted Brothers and Bartholomew report entitled *Parks, Playgrounds, and Beaches in the Los Angeles Region* was the first comprehensive parks and open space plan for the greater Los Angeles area. The report proposed a system of parks, parkways, children's playgrounds, and public beaches. It was a model of ambitious, intelligent, and sensitive planning commissioned at a time when land was available. However, only segments of the report have been implemented to date. Through its planning efforts and collaboration with other agencies and jurisdictions, the DPR hopes to revive and fulfill the Olmsted and Bartholomew vision to the maximum extent possible.

[Text Box]

Green Visions Plan (2007)

Green Visions is a joint venture between the University of Southern California and the region's land conservancies, including the Rivers and Mountains Conservancy, Santa Monica Mountains Conservancy, Coastal Conservancy, and the Baldwin Hills Conservancy. The Green Visions Plan offers a guide to habitat conservation, watershed health and recreational open space for the Los Angeles metropolitan region. The electronic tools and data developed as part of Green Visions are intended to expand the analytic and planning capabilities of local agencies and organizations to, among other things, reduce the fragmented, piecemeal approach to regional resource planning.

[Text Box]

Greater Los Angeles County Integrated Regional Water Management Plan (2006)

The 2006 Greater Los Angeles County Integrated Regional Water Management Plan (IRWMP) addresses water resource issues of the Los Angeles region in an integrated and collaborative manner. Recreation and open space are important components of the IRWMP, with 6 of the 13 priority projects providing open space, habitat, and recreational benefits. The IRWMP also recommends that 30,000 acres of new parkland be acquired to keep pace with population growth.

[Text Box]

SCAG Regional Comprehensive Plan (2008)

In 2008, the Southern California Association of Governments (SCAG) completed the Regional Comprehensive Plan (RCP) as a vision of how Southern California can balance resource conservation, economic vitality, and quality of life. The RCP presents a visionary, regionwide approach to coordinate and facilitate the preservation of open space in Southern California. Specifically, the Plan includes an "Open Space and Habitat" chapter, which focuses on community open space, natural lands, and farmlands. Community open space includes areas that enhance the quality of life and completes interconnected networks of parks, trails, greenbelts, community gardens, and urban forests serving the region's communities.

Chapter 8: Noise Element

Table of Contents

I. Introduction

Excessive noise levels can have a significant impact on quality of life. As a public policy issue, excessive levels of noise result in increased neighborhood annoyance, dissatisfaction, and in some cases, health and safety hazards. Due to Los Angeles County's geographic, environmental, and cultural diversity, the levels and types of noise issues vary significantly throughout the County.

The Noise Element addresses the General Plan's Guiding Principles by addressing community concerns around noise, which is an environmental impact that impacts planning for Healthy, Livable, and Equitable Communities. The Noise Element emphasizes the role of land use and transportation planning to protect sensitive users from noise impacts. Policies to reduce incompatible land uses that contribute to noise impacts on scenic and open space resources areas work toward achieving Environmental Resource Management and Smart Growth goals. Furthermore, as transportation and industries are the largest generators of noise impacts, noise is an important consideration in planning for Sufficient Community Services and Infrastructure and a Strong and Diversified Economy.

The purpose of the Noise Element is to reduce and limit the exposure of the general public to excessive noise levels. The Noise Element sets the goals and policy direction for the management of noise in the County.

II. Background

Sound is the result of a sound source inducing vibration in the air. The vibration produces alternating bands of relatively dense and sparse particles in the air, spreading outward from the source. The result of the movement of the particles is a fluctuation in the normal atmosphere pressure, or sound waves. These waves radiate in all directions from the source and may be reflected and scattered or, like other wave actions, may turn corners. When the source stops vibrating, the sound waves disappear, almost instantaneously, and the sound ceases. The ear is extremely sensitive to sound pressure fluctuations, which are converted into auditory sensations.

Sound may be described in terms of three variables: amplitude, frequency, and time pattern. For more information on sound descriptors, please refer to Appendix G.

Noise Measurement

Noise is often described in qualitative terms, and individuals differ greatly on what noises are considered pleasant or annoying. The community noise metrics used in the Noise Element are either Community Noise Equivalent Level (CNEL) or Day-Night Average Level (Ldn). CNEL and Ldn are the metrics used to describe annoyance due to noise and to establish land use planning criteria regarding noise.

Community Noise Equivalent Level (CNEL)

CNEL is the average equivalent A-weighted sound level during a 24-hour day that is obtained after the addition of five decibels to sound levels in the evening, from 7 p.m. to 10 p.m., and after the addition of 10 decibels to sound levels in the evening, from 10 p.m. to 7 a.m. The CNEL metric is currently used by the California Aeronautics Code for the evaluation of noise impacts at specific airports noise problems. Local compliance with the state airport standard requires that community noise levels be expressed in CNEL.

Day-Night Average Level (Ldn)

Ldn is the average equivalent A-weighted sound level during a 24 hour day that is obtained after the addition of 10 decibels to sound levels in the evening, after 10 p.m. and before 7 a.m. The Ldn represents a simplification of the CNEL.

For more information on basic levels of noise measurement, please refer to Appendix G.

Noise Environment

The typical community noise environment is made up of background or “ambient noise,” and higher, “intrusive” levels of noise. In the unincorporated areas, the major sources of noise come from transportation systems, such as commercial and private airports, rail and bus networks, and the County's regional freeway and highway system. Other major sources of noise have historically been identified with industrial uses, such as manufacturing plants.

Effects of Noise

Noise by definition is unwanted sound. It is an intrusion on one’s sense of privacy. Noise can be an emotional strain and a source of great frustrations when the noise is beyond a person’s control. Noise may interfere with a broad range of human activities, the overall effect of which is to cause annoyance.

The potential effects of noise on humans include the following:

- Hearing loss;
- Non-auditory physiological response;
- Communication interference;
- Performance interference;

- Sleep disturbance;
- Subjective response; and
- Community response.

Hearing Loss

Exposure to sufficient levels of noise for long periods of time can produce temporary or permanent loss of hearing. Noise levels have been identified as protective of the hearing of the general population from significant damage due to environmental noise. Environmental noise differs from workplace noise in that it is generally intermittent, covers 365 days per year rather than 250 work days, and covers 24 hours per day rather than 8 hours. Taking these factors into account, the U.S. Environmental Protection Agency (EPA) has identified an environmental noise level of Leq(24) = 70 dB to protect 96 percent of the general population from a hearing loss of greater than 5 dB at 4000 Hz.

Non-Auditory Physiological Response

Excessive exposure to noise may contribute to the development and aggravation of stress-related conditions, such as high blood pressure, coronary diseases, ulcers, colitis, and migraine headaches. EPA studies suggest the possibility of adverse health outcomes associated with environmental noise and underscore the need for additional research. Although it is reasonable to view annoyance as a symptom or sign of noise-induced stress, no direct test of this relationship has been made.

Communication Interference

The indirect effects of speech interference are:

- Disturbance of normal domestic or educational activities;
- Creation of an undesirable living environment;
- Safety hazards; and
- A source of extreme annoyance.

The appropriate noise levels to prevent outdoor speech interference (oral communication) for the outdoors, depends on the voice level and communication distance. For example, at a distance of 2 meters from the speaker with a normal voice (70 dB) the sound level that would allow communication with 95 percent intelligibility is 60 dB. Indoors, an Ldn of 50 dB permits virtually 100 percent intelligibility within buildings. For older populations and people with hearing problems, the background noise would be lower.

High levels of noise reduce the number of conversations and their content, quality, and fidelity. Children have a relative lack of knowledge of language that makes them less able to “hear” speech when some of the cues are lost. Repeated exposure to high levels of noise in “critical periods of development” might affect conceptual development and the acquisition of speech, language, and language-related skills, such as reading and listening.

Performance Interference

In general, noise is more likely to reduce the accuracy than the total quantity of work, and it affects complex tasks more than simpler ones. As noise levels increase, both reaction times and numbers of errors increase. For some simple tasks, noise may enhance performance (when distracting cues are dropped out). Factors to consider on how noise affects work performance include: the characteristics of noise, characteristics of the task, aspects of performance considered important, and individual differences.

Noise levels most likely to be detrimental to performance are:

- Continuous noise levels above 90 dB; and
- Levels less than 90 dB, if they have predominantly high frequency components, are intermittent, unexpected, or uncontrollable.

According to the EPA, field studies demonstrate that high noise levels have been corroborated with poor performance on reading tests and auditory discrimination problems.

Sleep Disturbance

Sleep disturbance is one of the major causes of annoyance due to noise. Long-term or chronic sleep disturbance may lead to health disorders. In general, the higher the noise level, the greater the probability of a response. For example, a study found that there was a 5 percent probability of subjects being awakened by peak levels of 40 dB and a 30 percent probability at 70 dB. If the number of sound peaks increases, an individual will take longer to fall asleep, even if the average sound level decreases. However, continuous or very frequent noise throughout the night, even as high as 95 dB, appears to cause little change in the average duration of the sleep stages, since such stages are disturbed more by peaks than by high continuous levels alone.

Subjective Response

Excessive noise exposure can result in a variety of psychological responses or symptoms in an individual. The physical attributes of noise that can affect an individual's subjective response include apparent loudness or intensity, spectral shape, presence of discrete frequency components, abruptness or impulsiveness, intermittency, duration, and temporal variations. Other factors include the time of day, the activity interfered with, the ability to control the source and the information content, and personal factors.

Sounds of two KHz or higher are generally the most annoying and disruptive, although noises that are abrupt, intermittent, or fluctuate with time can be very annoying as well. In general, the louder the noise, the more annoying it is likely to be.

Community Response

Community response to noise is usually studied through social surveys. These studies attempt to predict, on an aggregate basis, the degree of annoyance or other effects that can be expected by the community at varying noise levels. Community response to noise is based on statistical averages, since it is known that response to noise varies greatly among individuals.

The most stable indicator of annoyance is the percentage of exposed persons who rate themselves as being highly annoyed. According to the EPA, there is a relationship between annoyance, complaints, and community reaction as a function of day-night sound levels. Approximately 17

percent of the population will be highly annoyed at an Ldn of 55 dB, and over 40 percent of the population will be highly annoyed if the Ldn exceeds 70 dB, which is the maximum safe level that the EPA has identified to protect against the risk of hearing loss. The relationship between noise and annoyance is based largely on the results of surveys around airports. These estimates have been criticized because aircraft noise is not present in many urban areas. In addition, complaints occur at a much lower rate than annoyance, and generally do not become evident until the noise levels are very high. For example, at an Ldn of 70 dB, approximately 10 percent of the population can be expected to complain, while 25 to 40 percent of the population will be annoyed.

Table 8.1 lists disturbances from excessive noise that range from minor sleep annoyance to potential hearing loss. Schools and hospitals, and other land uses that house sensitive receptors, or those at high risk of being affected by high noise levels, are considered noise-sensitive uses. In addition to the effects on human physiology and behavior, excessive noise impacts other species. For example, birds living in noisier environments tend to sing louder at night.

Table 8.1: Sources and Effects of Common Noise

dB	Effects	Observation	Source
130	Hearing loss	Pain threshold	Hard rock band Thunder
120		Deafening	
110			Jet take-off
100			Loud auto horn at 10 ft.
90		Very loud	Noisy city street
85			
80			School cafeteria
75			
70	Physiological effects	Loud	Vacuum cleaner at 10 ft.
65			
60	Interference with speech		Normal speech at 3 ft.
55			
50	Sleep interruption	Moderately loud	Average office Dishwasher in next room
45			
40	Sleep disturbance		Soft radio music Quiet residential area
35			

30		Faint	Interior of average residence
20			Average whisper at 6 ft.
10			Rustle of leaves in wind
5		Very faint	Human breathing
0	Audibility threshold		

Source: Compilation of scientific and academic literature, generated by FHWA and EPA.

Community Attitudes Toward Noise Impacts

The countywide outreach efforts for the General Plan revealed that both urban and rural communities experience neighborhood disturbances, such as barking dogs, leaf blowers, garbage trucks, buses, back-up alarms, permanent amplified noise (i.e., PA systems), and motorcycles. Urban residential areas seemed to be affected by commercial and industrial spillover noise, such as trucks making late night deliveries at neighborhood shopping centers. Virtually all communities objected to noise generated by freeways and major arterials. All communities reacted to aircraft noise to some extent, with the strongest reaction from those whose homes and businesses lie beneath the flight path of major airports.

In compliance with the County Noise Ordinance, the Los Angeles County Department of Public Health (DPH) has performed noise complaint assessments and surveys from 1996 through 1999. During this period, DPH responded to a total of 111 noise complaints under its statutory authority. It should be noted, however, that the quantification of complaints should not be used solely as a definitive expression of community response.

Noise Levels

Table 8.2 provides the current and projected noise levels for major sources of noise in the unincorporated areas.

Table 8.2: Current and Projected Noise Levels for Major Sources (coming soon)

Source	Current	Projected
Highways and Freeways		
Primary Arterials and Major Local Streets		
Online Railroad Operations and Ground Rapid Transit Systems		
Airport Operations		
Industrial Plants		

Regulatory Framework

The following section outlines federal, state and County noise-level standards.

Federal Regulations

The adverse impact of noise was officially recognized by the federal government in the Noise Control Act of 1972, which serves three purposes:

- Promulgating noise emission standards for interstate commerce;
- Assisting state and local abatement efforts; and,
- Promoting noise education and research.

The Office of Noise Abatement and Control (ONAC) was initially tasked with implementing the Noise Control Act. However, the ONAC has since been eliminated, leaving the development of federal noise policies and programs to other federal agencies and inter-agency committees. For example, the Occupational Safety and Health Administration (OSHA) agency prohibits exposure of workers to excessive sound levels. The U.S. Department of Transportation (DOT) assumed a significant role in noise control through its various operating agencies, such as with the Federal Aviation Administration (FAA), which regulates noise generated by aircraft and airports. Surface transportation system noise is regulated by a host of agencies, including the Federal Transit Administration (FTA), which requires that all rail systems receiving federal funding be constructed and operated in accordance with its regulations and specifications. The Federal Railroad Administration (FRA) sets forth and enforces safety standards, including noise emissions within railroad locomotive cabs. Transit noise is regulated by the FTA, while freeways that are part of the interstate highway system are regulated by the Federal Highway Administration (FHWA). The FHWA has adopted and promulgated noise abatement criteria for highway construction projects. The federal government encourages local jurisdictions to use their land use regulatory authority to site new development to minimize potential noise impacts. For information on federal guidelines for acceptable environmental noise levels, please refer to Appendix G.

State Regulations

A major source of excessive noise is airports. Title 21 of the California Code of Regulations establishes the maximum acceptable level of aircraft noise in proximity to residences, schools, hospitals, and places of assembly at 65 dB CNEL. The County's Airport Land Use Plan was adopted by the Airport Land Use Commission (ALUC) in 1991 and contains noise contours based on the state standards for all public use airports within the County. Figure 8.1 shows these noise contours, and includes updated noise contour data where available. The County's Airport Land Use Plan can be found on the Los Angeles County Department of Regional Planning's web site, located at http://planning.lacounty.gov/ALUC.

Figure 8.1: Airport Noise Contours

Additional state regulatory codes that relate to noise abatement include:

- Uniform Building Code: Title 24 of the California Code of Regulations requires certain noise insulation measures to be used in the design of all new residential construction other than detached, single family dwellings;

- Vehicle Code: Establishes maximum noise levels for motor vehicles; and,
- California Code of Regulations: Establishes maximum acceptable levels of aircraft noise.

The California Department of Health Service's Office of Noise Control (ONC), established in 1973, was instrumental in developing regulatory tools to control and abate noise for use by local agencies. One significant model is the Land Use Compatibility for Community Noise Environments Matrix, which allows a local jurisdiction to clearly delineate the compatibility of sensitive uses with various incremental levels of noise. The County has adapted this matrix to develop the County's exterior noise standards, as seen in Table 8.2.

County Regulations

The County maintains the health and welfare of its residents with respect to noise through nuisance abatement ordinances and land use planning. The County Noise Control Ordinance, Title 12 of the County Code, was adopted by the Los Angeles County Board of Supervisors in 1977 "…to control unnecessary, excessive, and annoying noise and vibration.…" It declares that the purpose of the County policy is to "…maintain quiet in those areas which exhibit low noise levels and to implement programs aimed at reducing noise in those areas within the county where noise levels are above acceptable values." (Section 12.08.010 of the County Code).

On August 14, 2001, the Los Angeles County Board of Supervisors approved an ordinance amending Title 12 of the County Code to prohibit loud, unnecessary, and unusual noise that disturbs the peace and/or quiet of any neighborhood or which causes discomfort or annoyance to any reasonable person of normal sensitivity residing in the area. Regulations can include requirements for sound barriers, mitigation measures to reduce excessive noise, or the placement and orientation of buildings, and can specify the compatibility of different uses with varying noise levels, as shown in Table 8.2. For more information on noise barrier strategies, please see Appendix G.

Table 8.3: Los Angeles County Community Noise Criteria

			Level (dBA)				
Noise Zone	**Land Use of Receptor Property**	**Time**	**Std 1 L50 30 min/hr**	**Std 2 L25 15 min/hr**	**Std 3 L8.3 5 min/hr**	**Std 4 L1.7 1 min/hr**	**Std 5 L0 At no time**
I	Noise Sensitive	Anytime	45	50	55	60	65
II	Residential	10PM to 7AM	45	50	55	60	65
		7AM to 10PM	50	55	60	65	70
III	Commercial	10PM to 7AM	55	60	65	70	75
		7AM to 10PM	60	65	70	75	80
IV	Industrial	Anytime	70	75	80	85	90

Source: Section 12.08.390 of the Los Angeles County Code (a portion of the Noise Control Ordinance)

Figure 8.2 shows the County noise contours. For an analysis of the noise contours and land uses, please refer to the Appendix G (coming soon).

Figure 8.2: Noise Contours (coming soon)

III. Issues

Reducing Noise Impacts Through Planning

Since excessive noise affects the quality of life of people working and living in the County, existing and future noise levels must be considered when making land use planning decisions to minimize exposure to excessive noise. Noise-sensitive uses, such as residences, hospitals, schools, child care facilities, and places of assembly are especially vulnerable to excessive noises generated by the airports, rail, freeways and primary arterials, heavy industry and warehousing facilities. Planning these noise-sensitive uses must include sufficient spatial separation or site design and construction to ensure compatibility with noise-generating uses.

Coordinated transportation and land use planning plays a critical role in the prevention and mitigation of excessive noise impacts. Federal and state laws, in many instances, preempt local laws from controlling certain sources by setting noise levels and operational procedures for aircraft, motor vehicles, and interstate carriers. Local governments can, whenever they have jurisdictional authority, address these noise problems through a combination of land use planning, building code and zoning regulations, and other policies where a noise abatement program is required.

Decisions on land adjacent to transportation facilities, such as the airports, freeways and other major highways, must consider both existing and future noise levels of these transportation facilities to assure the compatibility of proposed uses.

In addition, the condition of road surfaces and traffic congestion can contribute to vehicle noise. Local roadway design features, traffic management, and traffic calming techniques can minimize noise from traffic speed and frequent vehicle acceleration and deceleration, while innovative roadway paving material can further reduce traffic noise.

IV. Goals and Policies

Goal N-1: The reduction of excessive noise impacts.	
Topic	**Policy**
Reducing Noise Impacts	Policy N 1.1: Utilize land uses to buffer noise-sensitive uses from adverse noise impacts.
	Policy N 1.2: Reduce exposure to noise impacts by promoting land use compatibility.
	Policy N 1.3: Minimize impacts to noise-sensitive land uses by ensuring adequate site design, acoustical construction, and use of barriers or berms.
	Policy N 1.4: Enhance and promote noise abatement programs in an effort to maintain acceptable levels of noise as defined by the Los Angeles County Exterior Noise Standards and other applicable noise standards.

	Policy N 1.5: Ensure compliance with the jurisdictions of State Noise Insulation Standards (Title 24, California Code of Regulations and Chapter 35 of the Uniform Building Code), such as noise insulation of new multifamily dwellings constructed within the 60 dB (CNEL or Ldn) noise exposure contours.
	Policy N 1.6: Ensure cumulative impacts related to noise do not exceed excessive levels.
	Policy N 1.7: Utilize traffic management and noise suppression techniques to minimize noise from traffic and transportation systems.
	Policy N 1.8: Minimize noise impacts to pedestrians and transit-riders in the design of transportation facilities and mobility networks.
	Policy N 1.9: Require construction of noise attenuation barriers on noise sensitive uses that would be exposed to exterior noise levels of 65 dBA CNEL and above, when unavoidable impacts are identified.
	Policy N 1.10: Orient residential units away from major noise sources (in conjunction with applicable building codes). Exterior walls should have minimal surface openings (i.e., windows, balconies, sliding doors, etc.) not to exceed 10% of the total wall surface.
	Policy N 1.11: Maximize buffer distances and design and orient sensitive receptor structures (hospitals, residential, etc.) to prevent noise and vibration transfer from commercial/light industrial uses.

Table 8.4: Noise Element Implementation Programs

Countywide Noise Assessment Survey /County Noise Ordinance Update
Countywide Noise Mapping
Noise Abatement Program

Chapter 9: Safety Element

Table of Contents

I. Introduction

Development in Los Angeles County has extended into areas with environmental hazards, such as hillsides, floodplains, and seismic areas. If this pattern of growth continues, it will further increase the vulnerability of County residents to seismic, geotechnical, flood, and fire hazards. In addition, studies suggest that climate change will increase the risk of natural hazards, particularly related to wildland fires and flooding.

The Safety Element addresses the General Plan's Guiding Principles by providing policies that work toward facilitating development to areas that are safe and sustainable. Healthy, Livable, and Equitable communities are also safe communities, and Environmental Resource Management practices ensure that communities and new developments are protected from the County's environmental hazards. To mitigate safety hazards, the County must ensure Sufficient Community Service and Infrastructure. The Safety Element also works in conjunction with Smart Growth policies that encourage development outside of hazard areas. Finally, the Safety Element addresses a Strong and Diversified Economy by promoting the protection of private property and loss of life from environmental and man-made hazards.

The purpose of the Safety Element is to reduce the potential risk of death, injuries, and economic damage resulting from natural and man-made hazards. The California Government Code requires the General Plan to address "the protection of the community from any unreasonable risks associated with the effects of seismically induced surface rupture, ground shaking, ground failure,

tsunami, seiche, and dam failure; slope instability leading to mudslides and landslides; subsidence, liquefaction, and other seismic hazards...; flooding; and wildland and urban fires." The Safety Element addresses only limited aspects of man-made disasters, such as hazardous waste and materials management, in particular, those aspects related to seismic events, fires, and floods. In general, hazardous materials management is addressed in the Los Angeles County Integrated Waste Management Plan (California Code of Regulations (CCR) Section 18755.5).

The Safety Element works in conjunction with the Local All Hazards Mitigation Plan prepared by the Chief Executive Office (CEO), which sets strategies for natural and man-made hazards in the County. The Local All Hazards Mitigation Plan, which has been approved by the Federal Emergency Management Agency (FEMA) and the California Emergency Management Agency (CalEMA), includes a compilation of known and projected hazards in the County. For more information on the County Local All Hazards Mitigation Plan, please visit the CEO web site at http://lacoa.org/hazmit.htm.

II. Seismic and Geotechnical Hazards

Background

Since 1800, over 90 significant earthquakes have jolted the Los Angeles region. There are over 50 active and potentially active fault segments, an undetermined number of buried faults, and at least four blind thrust faults capable of producing damaging earthquakes in the County.

The California Alquist-Priolo Earthquake Fault Zoning Act of 1972 and Section 113 of the County Building Code prohibits the location of most structures for human occupancy across the traces of active faults, and lessens the impacts of fault rupture. In addition, the California Seismic Hazards Mapping Act of 1990 regulates developments as defined by the Act. Seismic Hazard Zone Maps depict areas where earthquake induced liquefaction or landslides have historically occurred, or where there is a high potential for such occurrences. Liquefaction is a process by which water saturated granular soils transform from a solid to a liquid state during strong ground shaking. A landsliding is a general term for a falling, sliding or flowing mass of soil, rocks, water and debris.

The main provisions of the Alquist-Priolo Earthquake Fault Zoning and Seismic Hazard Mapping Acts are to:

- Require the California Geological Survey to prepare maps depicting earthquake fault zones, liquefaction hazard zones and earthquake-induced landslide zones.
- Require property owners (or their real estate agents) to disclose that their property lies within identified hazard zones; and,
- Prohibit new construction of projects within identified hazard zones until a comprehensive geotechnical study has been completed.

Figure 9.1 identifies the County's Seismic Hazard Zones. In addition to depicting faults within Alquist-Priolo Earthquake Fault Zones, Figure 9.1 also depicts faults that are considered active based on published and unpublished information. For more details on active faults in the County, please refer to Appendix H.

Figure 9.1: Seismic and Geotechnical Hazard Zones Policy Map

Issues

1. Seismic Hazards

Earthquakes can cause ground rupture, liquefaction and landsliding. In addition, flooding in low-lying coastal areas can result from a tsunami that is generated by a large offshore earthquake or sub-marine landslides. Widespread and localized earthquake induced effects place structures or utility corridors at-risk, and if damaged, can result in fires, failure of large dams, or the release of toxic, flammable, or explosive materials. The General Plan prohibits new projects, as defined by the Alquist-Priolo Act and Seismic Hazards Mapping Acts, until a comprehensive geotechnical study has been completed.

2. Geotechnical Hazards

More than 50 percent of the unincorporated areas are comprised of hilly or mountainous terrain. The vast majority of hillside hazards include mud and debris flows, active deep seated landslides, hillside erosion, and man-induced slope instability. These geotechnical hazards include artificially-saturated or rainfall-saturated slopes, the erosion and undercutting of slopes, earthquake induced rock falls and shallow failures, and natural or artificial compaction of unstable ground. The County's Hillside Management Area Ordinance regulates development in hillsides of 25 percent slope or greater to address these potential hazards.

Goals and Policies for Seismic and Geotechnical Hazards

Goal S 1: An effective regulatory system that prevents or minimizes personal injury, loss of life and property damage due to seismic and geotechnical hazards.	
Topic	**Policy**
Geotechnical Hazards	Policy S 1.1: Discourage development in Seismic Hazard and Alquist-Priolo Earthquake Fault Zones.
	Policy S 1.2: Prohibit the construction of most structures for human occupancy adjacent to active faults until a comprehensive geotechnical study that addresses the potential for fault rupture has been completed.
	Policy S 1.3: Require developments to mitigate geotechnical hazards, such as soil instability and landsliding, in Hillside Management Areas through siting and development standards.
	Policy S 1.4: Support the retrofitting of unreinforced masonry structures to help reduce the risk of structural and human loss due to seismic hazards.

III. Flood and Inundation Hazards

Background

Flood Hazard Zones are areas subject to moderate or minimal flood hazards that are identified on an official Flood Insurance Rate Map issued by the Federal Emergency Management Agency (FEMA). Flooding in the County can be earthquake induced or can result from intense rainfall. Figure 9.2

shows the County's Flood Hazard Zones, which are 100-year and 500-year floodplains designated by FEMA.

In addition to the Flood Hazard Zones, the California Department of Water Resource's Awareness Floodplain Mapping Program identifies potential flood hazard areas that are not part of the regulated floodplain. For the available awareness floodplain maps for the unincorporated areas, please refer to Appendix H.

Figure 9.2: Flood Hazard Zones Policy Map

Since 1980, the County has been a voluntary participant in the FEMA National Flood Insurance Program (NFIP). As a participant, the County is responsible for regulating development in Flood Hazard Zones and planning for floodplain management activities that promote and encourage the preservation and restoration of the natural state of the floodplain. As a compliance requirement of the NFIP, the County enforces regulations to ensure that buildings are erected at a safe elevation and to prevent potential damage to properties.

The County provides information on Flood Hazard Zones from FEMA's Flood Insurance Rate Maps to property owners for use in resolving flood insurance matters with insurance companies and lending institutions. The County conducts educational outreach to communities in the unincorporated areas on how to mitigate flooding impacts on properties. Through these and other efforts, the County reduces flood insurance costs for residents who are required to purchase flood insurance by lowering a community's overall rating system number.

For more information on flood hazards, please visit the Los Angeles County Department of Public Works (DPW) web site at http://dpw.lacounty.gov/wmd/nfip.

Issues

Flood Hazards and the Impacts of Climate Change

Large sub-marine landslides have the potential to generate destructive tsunamis along adjacent coastal areas in Southern California. The travel time for a locally generated tsunami, from initiation at the source to arrival at coastal communities, can be 5 to 30 minutes.

The likelihood for the catastrophic inundation of low-lying coastal areas of the County as a result of a tsunami is low. However, the risk of losing vital commerce associated with the Ports of Los Angeles and Long Beach warrants adequate risk reduction measures from tsunamis. The Ports of Los Angeles and Long Beach have completed a Tsunami Hazard Assessment to guide disaster planning and mitigate damage from a potential tsunami at their facilities. In addition, the County All Hazards Mitigation Plan includes risk reduction measures for the coastal areas. For more information, please refer to the County Local All Hazards Mitigation Plan, which can be accessed on the CEO web site at http://lacoa.org/hazmit.htm.

Figure 9.3 identifies the County's Tsunami Hazard Areas, which include Marina Del Rey and portions of the Santa Monica Mountains Coastal Zone.

Figure 9.3: Tsunami Hazard Areas

The inundation of water caused by a catastrophic dam or aqueduct failure can devastate large areas of the County and threaten residences and businesses. There are 103 dams in the County that hold billions of gallons of water in reservoirs, and seismic activity can compromise dam structures and

result in catastrophic flooding. Since 1928, two dam failures and one near failure have occurred in the County. Frequently occurring, intense storm events have also caused mudflow and flood hazards, which have led to the destruction of property, injuries, and deaths. Figure 9.4 identifies the County's Dam and Reservoir Inundation Routes.

Figure 9.4: Dam and Reservoir Inundation Routes

Climate change is expected to produce longer and more severe droughts due to higher average temperatures, as well as greater and more frequent floods. The County's current water systems are designed to balance flood protection during the winter and spring months with water storage during the dry months. Increased rainfall and an earlier melting of the snowpack could result in overburdened facilities that cannot adequately protect communities from floods. In addition, consideration needs to be made for floods caused by sea level rise. Figure 9.5 shows the areas along the coastline that can potentially be impacted due to sea level rise flooding. While these impacts are likely to occur over a long period of time, sea level rise can affect and alter the impacts of flood inundation of low-lying coastal areas. Impacts related to sea level rise include the flooding of septic systems and the intrusion of salt water into the fresh water supply. Although coastal habitats can adapt to gradual changes in sea level, an accelerated rise in sea level will negatively impact coastal habitats. Wetlands, in particular, are at-risk of being inundated.

Figure 9.5: Sea Level Rise Impact Areas

Goals and Policies for Flood Hazards

Goal S 2: An effective regulatory system that prevents or minimizes personal injury, loss of life, and property damage due to flood and inundation hazards.	
Topic	**Policy**
Flood Hazards	Policy S 2.1: Discourage development in the County's Flood Hazard Zones.
	Policy S 2.2: Discourage development from locating in dam and reservoir inundation routes.
	Policy S 2.3: Discourage development from locating downslope from aqueducts.
	Policy S 2.4: Consider climate change adaptation strategies in flood and inundation hazard planning.
	Policy S 2.5: Ensure that developments located within the County's Flood Hazard Zones are sited and designed to avoid isolation from essential services and facilities in the event of flooding.
	Policy S 2.6: Ensure that the mitigation of flood related property damage and loss limits impacts to biological and other resources.
	Policy S 2.7: Establish cooperative working relationships among public agencies with responsibility for flood protection.
	Policy S 2.8: Locate essential public facilities, such as hospitals and fire stations, outside of Flood Hazard Zones, where feasible.

IV. Fire Hazards

Background

The County faces major wildland fire threats due to its hilly terrain, dry weather conditions and the nature of its plant coverage. The at-risk areas are designated as Very High Fire Hazard Severity Zones (VHFHSZs) by the Forestry Division of the Los Angeles County Fire Department. In an effort to reduce the threats to lives and property, the Fire Department has instituted a variety of regulatory programs and standards for vegetation management, pre-fire management and planning, fuel modification, and brush clearance. In addition to these programs, the Fire Department and DPW enforce fire and building codes related to development in VHFHSZs. The Fire Department has access requirements for single family residential uses built in VHFHSZs. Access requirements for all other uses built within VHFHSZs are determined on a case-by-case basis.

Figure 9.6 identifies the County's VHFHSZs. For more information on the County's fire prevention and safety programs, please visit the Los Angeles County Fire Department's web site at http://fire.lacounty.gov.

Figure 9.6: Fire Hazard Severity Zones Policy Map

Issues

1. The Increasing Costs of Wildland Fires

Although fires are a natural part of the County's wildland ecosystem, development in wildland areas increases the danger of wildfires to residents, property, and the environment. Increased fire frequency is the primary threat to wildland ecosystems, which are adapted to an average fire return interval of 60 to 150 years. More frequent fires cause habitat type conversion and the presence of invasive species.

Wildland fire threats are increasing, in part due to climate change. The rise in temperature and prolonged periods of drought increase the frequency and duration of wildfires. Wildfires also have negative impacts on air quality. As exposure to smoke and particulate matter has immediate and long-term public health impacts, populations may suffer from eye irritations, respiratory problems, and complications to existing lung and heart conditions. Wildfires also have major economic impacts and cost the County millions of dollars every year.

Although multiple regulations are in place to ensure that adequate infrastructure, such as peak load water supplies and necessary disaster routes are incorporated into new developments, older communities with aging and substandard infrastructure may face greater risks from wildland fires. In addition, current regulations cannot ensure that all developments that locate in VHFHSZs are protected from wildland fire threats.

For a timeline of recent fires and their countywide impacts, as well as their impacts on the unincorporated areas, please refer to Appendix H.

2. Urban Fire Considerations

Due to the intensity of development, the number of potentially affected populations, and the difficulties of containment, the County must also devote major resources to controlling potential fire hazards in its urbanized areas. Fire safety and suppression are especially critical in industrial areas and highrise buildings. The County must also consider performance standards and use exemptions

that minimize urban fire risks, such as regulating certain commercial uses that have high fire risks in mixed use developments.

Goals and Policies for Fire Hazards

Goal S 3: An effective regulatory system that prevents or minimizes personal injury, loss of life, and property damage due to fire hazards.	
Topic	**Policy**
Fire Hazards	Policy S 3.1: Discourage development in VHFHSZs, particularly in areas with significant biological resources.
	Policy S 3.2: Consider climate change adaptation strategies in planning for VHFHSZs.
	Policy S 3.3: Ensure that the mitigation of fire related property damage and loss in VHFHSZs limits impacts to biological and other resources.
	Policy S 3.4: Reduce the risk of wildland fire hazards through the use of regulations and performance standards, such as fire resistant building materials and vegetation.
	Policy S 3.5: Encourage the use of fire resistant vegetation that is compatible with the area's natural vegetative habitats in fuel modification activities.
	Policy S 3.6: Reduce the risk of urban fire hazards through the implementation of regulations and performance standards.
	Policy S 3.7: Ensure adequate infrastructure, including ingress, egress, and peak load water supply availability for all projects located in VHFHSZs.
	Policy S 3.8: Consider siting and design for developments located within VHFHSZs, particularly in areas located near ridgelines and on hilltops, to reduce the wildfire risk.
	Policy S 3.9: Support the retrofitting of existing structures in VHFHSZs to help reduce the risk of structural and human loss due to wildfire.

V. Emergency Response

Background

Disaster Response

Figure 9.7 shows the County's disaster routes. For more information on disaster response, please refer to the County Local All Hazards Mitigation Plan, which can be accessed on the CEO web site at http://lacoa.org/hazmit.htm.

Figure 9.7: Disaster Routes

Emergency Responders

Office of Emergency Management (OEM)

The Office of Emergency Management is responsible for organizing and directing the preparedness efforts of the Emergency Management Organization of Los Angeles County. The OEM is the day-to-day Los Angeles County Operational Area coordinator for the County. The emergency response plan for the unincorporated areas is the Operational Area Emergency Response Plan (OAERP), which is prepared by OEM. The OAERP strengthens short and long-term emergency response and recovery capability, and identifies emergency procedures and emergency management routes in the County.

To access the OAERP, and to find more information on the OEM, please visit the CEO's web site at http://lacoa.org.

Los Angeles County Fire Department

The Los Angeles County Fire Department (LACFD) provides fire, safety, and emergency medical services to the unincorporated areas. Additionally, many cities within the County utilize LACFD services. There are three major geographic regions in the LACFD service area, which are divided into nine divisions and 22 battalions, as seen in Figure 9.8.

Figure 9.8: Fire Department Battalions and Stations

The LACFD operates multiple divisions including Air and Wildland, Fire Prevention, and Forestry. In addition, the Health Hazardous Materials Division's mission is to "protect the public health and the environment...from accidental releases and improper handling, storage, transportation, and disposal of hazardous materials and wastes through coordinated efforts of inspections, emergency response, enforcement, and site mitigation oversight."

The LACFD is a special district and receives most of its revenue from the unincorporated areas from a portion of the ad valorem property tax paid by the owners of all taxable properties. This revenue source varies from one tax rate area to another, and is specifically earmarked for the LACFD. The LACFD's Special Tax, which was approved by voters in 1997, is a supplemental revenue source that pays for essential fire suppression and emergency medical services. In addition, in 1990, the Los Angeles County Board of Supervisors adopted a Los Angeles County Developer Fee Program to fund the acquisition, construction, improvement, and equipping of fire station facilities in the high growth areas of the County.

For more information on LACFD's programs and divisions, please visit their web site at http://fire.lacounty.gov.

Los Angeles County Sheriff's Department

The Los Angeles County Sheriff's Department (LASD) is the largest sheriff's department in the world. In addition to specialized services, the LASD is divided into 10 divisions, including the Office of Homeland Security, which focuses on potential threats related to local homeland security issues, such as terrorism or bioterrorism. The LASD provides law enforcement services to more than one million people living within 90 unincorporated communities, as well as to more than four million residents living within 40 contract cities. In addition, LASD provides law enforcement services to nine community colleges, Metro, and 48 Superior Courts. In addition to proactive enforcement of criminal

laws, the LASD also provides investigative, traffic enforcement, accident investigation, and community education functions.

The LASD budget is approved by the Los Angeles County Board of Supervisors through the utilization of state and local tax dollars. These funds are augmented by revenue generating contracts and grant allowances.

The passage of tax limitation measures, decline in the popular support for bond measures, and reductions in state and federal assistance, has hampered the capability of local governments to fund public safety. The LASD partnered with the City of Santa Clarita and the Los Angeles County Board of Supervisors to establish the Law Enforcement Facilities Fee. The Law Enforcement Facilities Fee is a fee program that applies to certain projects in the Santa Clarita Valley and aims to mitigate project impacts on law enforcement service and facilities.

Figure 9.9 identifies the location of LASD's service areas. The Field Operation Regions are centered on 25 patrol stations that are dispersed throughout the County.

For the location and detailed information of each station, and further information on the LASD Office of Homeland Security, please visit the LASD web site at http://www.lasd.org.

Figure 9.9: Sheriff's Department Service Areas

Issues

1. The Need for Adequate Emergency Response Services

A catastrophic natural or man-made disaster has the potential to severely strain the emergency response and recovery capabilities of federal, state and local governments, and profoundly impact the regional and state economy. It is imperative that there are adequate resources available for emergency response. For example, to effectively and efficiently fulfill all of its functions, the LASD requires a staff level of one deputy sheriff per each 1,000 population.

Effective emergency response requires that the County provide public alerts and warnings for disasters. In addition, there is a need for preparedness communications about threats that face communities throughout the County. .

2. Creating Efficiencies Through Collaboration and Coordination

Continued growth and development in the County will significantly affect the LACFD and LASD operations. Coordination among various County departments is necessary to ensure adequate emergency response. Collaboration can also ensure that development occurs at a rate that keeps pace with service needs. In order to maintain an adequate emergency response system, the County must discourage development in hazardous areas, including Very High Fire Hazard Severity Zones, Flood Hazard Zones, and Seismic and Geotechnical Hazard Zones.

Goals and Policies for Emergency Response

Goal S 4: Effective County emergency response management capabilities.	
Topic	**Policy**

Emergency Response	Policy S 4.1: Ensure that County residents are protected from the public health consequences of natural or man-made disasters through increased readiness and response capabilities, risk communication, and the dissemination of public information.
	Policy S 4.2: Support County emergency providers in reaching their response time goals.
	Policy S 4.3: Coordinate with other County and public agencies, such as transportation agencies, and health care providers on emergency planning and response activities, and evacuation planning.
	Policy S 4.4: Encourage the improvement of hazard prediction and early warning capabilities.
	Policy S 4.5: Ensure that there are adequate resources, such as sheriff and fire services, for emergency response.

Table 9.1: Safety Element Implementation Programs

Wildland Fire Hazards Ordinance
Debris Management Plan
At-Risk Properties Hazard Fund and Strategies
Floodplain Management Plan Implementation and Update

[Text Box]

Wildland Fires and Climate Change

Recent studies indicate that the changing climate has resulted in wildland fires that last longer and occur more frequently. In 2007 and 2008 alone, wildland fires burned over 147,000 acres, destroyed 570 residences, and damaged an additional 42 residences in the unincorporated areas. In 2009, the Station Fire broke out in the Angeles National Forest, which burned nearly 160,000 acres and destroyed approximately 76 residences. This fire, the largest in County recorded history, occurred months before the Santa Ana winds, which often exacerbate wildland fires in the fall and spring months.

[Text Box]

Community Emergency Response Team (CERT) Program

The Community Emergency Response Team (CERT) Program educates people about disaster preparedness for hazards that may impact their area, and trains them in basic disaster response skills, such as fire safety, light search and rescue, team organization, and disaster medical operations. Using the training learned in the classroom and during exercises, CERT volunteers can assist others in their neighborhood or workplace following an event when professional responders are not immediately available to help. CERT members are also encouraged to support emergency response agencies by taking a more active role in emergency preparedness projects in their community.

For more information on the CERT Program, please visit the Fire Department web site at http://www.fire.lacounty.gov/ProgramsEvents/PECERT.asp.

Chapter 10: Public Services and Facilities Element

Table of Contents

I. Introduction

As the County continues to grow, the demand for public facilities and infrastructure will increase. This Element provides a summary of some of the major public services and facilities that serve the County, and establishes policies that guide the provision of public services and facilities in conjunction with the County's projected growth.

The Public Services and Facilities Element addresses the General Plan Guiding Principles with a strategy to provide Sufficient Community Services and Infrastructure for the unincorporated areas. Important community issues, such as water supply and waste disposal are covered in this Element, and are vital components of promoting Healthy, Livable, and Equitable Communities and Smart Growth principles. A strong public services and facilities system also works toward Environmental Resource Management principles by improving the County's service systems to be efficient and energy sensitive, which in turn protects open space and environmentally sensitive areas. Finally, strong service provision and infrastructure is an important factor for ensuring a Strong and Diversified Economy.

The Public Services and Facilities Element promotes the orderly and efficient planning of public facilities and infrastructure in conjunction with land use development and growth. This Element focuses on services and facilities that are affected the most by growth and development: Water; Wastewater and Sewer; Solid Waste; Utilities; Early Care and Education; and Libraries. The Element also discusses the key role of collaboration among County agencies in efficient and effective service provision and facilities planning.

This Element works in conjunction with the Los Angeles County Department of Public Works (DPW) Strategic Plan, which outlines service delivery goals for sanitary sewer, water supply, flood control, garbage disposal, and traffic lighting within the County; Standard Urban Stormwater Mitigation Plan; Integrated Waste Management Plan; Sewer System Management Plan; Library Strategic Plan; and other plans to address the provision of public services and facilities to the unincorporated areas.

II. Effective Service and Facilities Planning and Maintenance

Background

There are special development fees and legal requirements in place to address the provision of services or facilities and infrastructure, including school facilities fees, sewer connection mitigation fees, fire protection facilities fees, library facilities mitigation fees, and water supply assessments for large projects.

Issues

1. Development Fees

Many of the County's existing public facilities are operating at full capacity or are overburdened. In addition, many development fees and legal requirements that are intended to pay for infrastructure and services only apply to certain developments, such as subdivisions and projects that exceed a certain size threshold.

2. The Need to Effectively Track Development

In addition to fees, a comprehensive system is necessary to effectively track planned development and corresponding infrastructure and service needs. Coordination among various County departments ensures that infrastructure is upgraded, as well as expanded in areas, such as the County's Transit Oriented Districts (TODs), where General Plan encourages development.

Without adequate investment from the public sector to maintain and upgrade existing infrastructure, the costs of infrastructure improvements could make a project financially infeasible. As the General Plan promotes growth in urbanized infill areas, the County will benefit from the long-term reduction in

future infrastructure costs, as various studies show that the costs to providing public infrastructure and services, such as roads, water, sewerage systems, and garbage collection tend to increase with sprawl.

Goals and Policies for Effective Service and Facilities Planning and Maintenance

Goal PS/F 1: A coordinated, reliable, and equitable network of public facilities that preserves resources, ensures public health and safety, and keeps pace with planned development.	
Topic	**Policy**
Sufficient Infrastructure	Policy PS/F 1.1: Discourage development in areas without adequate public services and facilities.
	Policy PS/F 1.2: Ensure that adequate services and facilities are provided in conjunction with development through phasing or other mechanisms.
	Policy PS/F 1.3: Ensure coordinated service provision through collaboration between County departments and service providers.
	Policy PS/F: 1.4: Ensure the adequate maintenance of infrastructure.
	Policy PS/F 1.5: Focus infrastructure investment, maintenance and expansion efforts where the General Plan encourages growth, such as TODs.
	Policy PS/F 1.6: Support multi-faceted public facility expansion efforts, such as substations, mobile units, and satellite offices.

III. Drinking Water

Background

The County provides a continuous supply of clean water for everyday uses through a complex water management system, which consists of numerous water providers, water control boards and other agencies. The County's mix of local and imported water supplies is delivered through an intricate system of aqueducts, reservoirs, and groundwater basins.

Water Sources

Approximately 33 percent of the County’s water supply comes from local sources, including surface water from mountain runoff, groundwater and recycled water. While local water supplies are the least costly, surface water and groundwater supplies fluctuate in response to variations in annual rainfall, contamination and effectiveness of conservation measures.

Other than what falls as rain, water is imported into the County from three sources: the Colorado River, the Bay Delta in Northern California via the State Water Project, and the Owens Valley via the Los Angeles Aqueduct. The Los Angeles Aqueduct primarily serves the residents and businesses of the City of Los Angeles.

For a description of the County’s local water sources, please refer to the Conservation and Natural Resources Element. For description of the imported water sources, please refer to Appendix I.

Water Suppliers

Water services in the County are provided by a complex network of water districts, water wholesalers and private companies that specialize in developing and improving water service for their customers. Most of the imported water utilized in the unincorporated areas is provided by the Metropolitan Water District, Castaic Lake Water Agency, Antelope Valley/East Kern Water Agency, Littlerock Creek Irrigation District and the Palmdale Water District. For a description of water suppliers, please refer to Appendix I.

Water Management Plans

In accordance with the California Urban Water Management Planning Act of 1983, every urban water supplier that annually serves 3,000 or more customers, or provides more than 3,000 acre feet of water, must prepare and adopt an Urban Water Management Plan (UWMP). These plans contain a description and evaluation of water supplies, reclamation programs, and conservation activities. Based upon land use plans provided by local governments, population projections or other inputs, the UWMP calculates the projected water demand for the district and compares this demand against current and anticipated water supplies. These UWMPs, which are updated every five years, are provided to local governments to help inform decisions on development proposals.

UWMPs serve as building blocks for Integrated Regional Water Management Plans (IRWMPs), which define a clear vision and strategy for the sustainable management of water resources within a specific region delineated by one or more watersheds. Local and County UWMPs can be found on the Southern California Association of Government's web site at http://www.scag.ca.gov/rcp/uwmp.htm.

Issues

Drought, pollution, population growth and land use affect the quantity and quality of local and regional water supplies. The County's climate is characterized by extended periods of dry weather and varying levels of rainfall, which range from an average of 27.5 inches per year in the San Gabriel Mountains to 7.8 inches in the Antelope Valley. The overall demand for water is projected to increase dramatically to 2035, and the cost, quality and availability of water will affect future development patterns.

1. Water Conservation

The County needs to reduce its reliance on imported water sources. Voluntary conservation measures by industries and residents have been successful in the past, particularly with regard to outdoor water use. Two thirds of residential water use is attributed to landscape maintenance, which makes conservation measures such as planting drought tolerant, indigenous plants an important component of a water conservation policy.

The conservation of the County's water supply is a primary goal of the County. To reduce the County's dependence on imported water, County agencies are establishing various water conservation programs. One example from DPW is the creation of water reclamation projects and groundwater recharge facilities to capture stormwater runoff. In 2000, County conservation efforts captured 220,000 acre feet of local stormwater runoff that was valued at $80 million. Another effort by DPW is participation in a Water Augmentation Study, which is striving to make parcel-level groundwater recharge feasible. Additional actions include the County Board of Supervisor's 2008 Countywide Water Supply and Conservation Alert. This resolution urges County residents, businesses, and water purveyors to intensify water conservation efforts and directs all County

departments to implement measures to achieve a 15 to 20 percent reduction in overall water demand.

The General Plan supports water conservation efforts that focus on curbing demand by reducing consumption through technological advances, such as aerators and motion sensors on low flush toilets and stalls, onsite gray water reclamation and dual plumbing; promoting xeriscaping; and organizing educational campaigns to discourage wasteful water consumption.

2. Increasing the Water Supply

Recycled water is used primarily for recharging groundwater aquifers through regional groundwater recharge operations and injection at seawater barriers. Other uses of recycled water include irrigating landscaping and supplying industrial processes. Recycled water provides a reliable and consistently high quality supply of water, but also requires additional infrastructure and modifications to regulations that govern the use of recycled water, before it can reach its full supply potential.

Several water agencies throughout Southern California, such as the Metropolitan Water District, Castaic Lake Water Agency and City of Los Angeles Department of Water and Power, are taking the steps to add desalinated water to their list of water supplies. Desalination, or removing salt from ocean water, has the potential to increase the local water supply, but is also energy consumptive and costly.

Goals and Policies for Drinking Water

Goal PS/F 2: Increased water conservation efforts.	
Topic	**Policy**
Water Conservation	Policy PS/F 2.1: Implement water conservation measures, such as drought tolerant landscaping and restrictions on water used for landscaping.
	Policy PS/F 2.2: Support educational outreach efforts that discourage wasteful water consumption.

Goal PS/F 3: Increased local water supplies through the use of new technologies.	
Topic	**Policy**
Water Supply	Policy PS/F 3.1: Increase the supply of water though the development of new sources, such as recycled water, gray water, and rainwater harvesting.
	Policy PS/F 3.2: Support the increased production, distribution and use of recycled water, gray water, and rainwater harvesting to provide for groundwater recharge, seawater intrusion barrier injection, irrigation, industrial processes and other beneficial uses.

IV. Wastewater and Sewer

Background

The management of wastewater effluent and raw sewage in the County involves a complex mix of service providers to cover its large population and vast geographic area. The primary providers of wastewater management services for the unincorporated areas include the Los Angeles County Sanitation Districts, DPW, and municipal septic or wastewater systems.

Construction operations and the maintenance of facilities that collect, treat, recycle and dispose of sewage and industrial wastes is the responsibility of the Los Angeles County Sanitation Districts. Local sewers and laterals connected to the Los Angeles County Sanitation District's trunk sewer lines in the unincorporated areas are the responsibility of DPW.

The Los Angeles County Sanitation Districts, which are a confederation of 24 independent districts, serve the wastewater and solid waste management needs of approximately 5.2 million people, cover over 800 square miles and service 78 cities and the unincorporated areas. As of 2005, the Los Angeles County Sanitation Districts owned, operated and maintained 1,340 miles of sewers that conveyed 510 million gallons per day (gpd) of wastewater, 200 million gpd of which is recycled, to 11 wastewater treatment plants. The service areas for the County's sewer systems include the Joint Outfall System, which is a partnership of 17 of the 24 independent sanitation districts, the Santa Clarita Valley and the Antelope Valley.

DPW maintains 5,200 miles of main line sewers, 255 pumping stations and four sewage treatment plants. The DPW Environmental Programs Division also permits and inspects industrial waste discharge into local sewers. The County Code requires that every business that disposes industrial wastewater obtain a permit. The Sewer System Management Plan controls and mitigates sewer sanitary overflows. For more information on the SSMP, please visit DPW's web site at http://ladpw.org.

Issues

Sewer and Wastewater Management

Sewer systems in certain parts of the unincorporated areas are aging and require upgrades. The County does not plan for sewer infrastructure needs through long-range capital improvement planning, and instead addresses sewer infrastructure in a piecemeal fashion.

The treatment of stormwater runoff in wastewater management systems is a serious concern in the County, particularly because stormwater runoff contains pollutants, including heavy metals, pesticides, herbicides, fertilizer, animal waste, trash, food waste, fuels, oils, solvents, lubricants and grease. The collection of these pollutants into stormwater channels, which have traditionally been discharged directly into the Pacific Ocean, is a serious water quality issue.

Goals and Policies for Wastewater and Sewer

Goal PS/F 4: A reliable network of wastewater systems in the County.	
Topic	**Policy**

Wastewater Systems	Policy PS/F 4.1: Encourage the planning and continued development of efficient countywide wastewater systems.
	Policy PS/F 4.2: Support capital improvement plans to improve aging and deficient wastewater systems, particularly in areas where the General Plan encourages development, such as TODs.
	Policy PS/F 4.3: Ensure the proper design of sewage treatment and disposal facilities, especially in landslide, hillside, and other hazard areas.

V. Solid Waste

Background

The County has the largest solid waste management system in the country. There are seven major solid waste landfills, four minor solid waste landfills and two waste to energy facilities that serve the County, as shown in Figure 10.1. In 2009, the County generated, on average, 64,780 tons of solid waste per day (tpd). As available space for landfills becomes scarce and more distant, and as local landfills reach their holding capacity, cities and counties have been mandated to more effectively manage waste and reduce their solid waste volume.

Figure 10.1: Landfills

The 2009 Annual Report for the Los Angeles County Integrated Waste Management Plan (IWMP) describes the County's strategy for maintaining adequate disposal capacity through 2024. Provided certain assumptions are met, the County would meet its disposal capacity needs by permitting and developing all in-County landfill expansions; utilizing out-of-County disposal capacity; developing necessary infrastructure to facilitate the export of waste to out-of-County landfills; and developing facilities that utilize conversion technologies to the extent that is technically and economically feasible. The development of out-of-County disposal capacity, markets for recovered materials and conversion technologies are anticipated to meet the expanding needs for the County. In 2009, the County exported over 5,700 tpd to landfills in neighboring counties. In order to meet future disposal needs, the County will continue to export more waste to these landfills.

The County has a number of countywide diversion, source reduction and household hazardous waste programs. In 2006, the countywide diversion rate, or the rate of waste that has been diverted from landfills through recycling and other programs, was 58 percent, which is comparable to the statewide rate (54 percent). In that year, the County disposed of approximately 12 million tons of waste.

For more information on the County's waste management programs, please visit the DPW Environmental Programs Division web site at http://www.CleanLA.org. For more information on the County's solid waste disposal data, please visit http://www.LACountySWIMS.org.

Issues

1. Waste Generation and Disposal Capacity

The major issues regarding waste management in the County include the growing amounts of waste being generated and disposed of; a shortage of solid waste processing facilities; and strong public

opposition for new solid waste management facilities. Table 10.1 lists the remaining permitted capacity for landfills in the County. Based on 2009 waste disposal figures, without major expansions to existing landfills, the County's current disposal system has approximately five years of remaining capacity left. In 2013, the Puente Hills Landfill, the largest landfill in the County, will close. At that time, a significant percentage of the County's solid waste may have to be exported to facilities out of the County, which may result in increased costs and environmental impacts. This concern is exacerbated by the projected increase in waste generation to approximately 92,455 tpd within the next 15 years.

Table 10.1: Remaining Permitted Disposal Capacity for Los Angeles County Landfills

Landfill	Maximum Daily Capacity (Tons)	Estimated Remaining Permitted Capacity (Million Tons)*	Remaining Life (Years)**
Antelope Valley	1,400	7.36	28
Burbank	240	3.12	44
Calabasas	3,500	7.53	16
Chiquita Canyon	6,000	7.32	10
Lancaster	1,700	13.1	3
Pebbly Beach	49	0.06	18
Puente Hills	13,200	14.35	4***
San Clemente	10	0.04	23
Scholl Canyon	3,400	5.06	15
Sunshine Canyon (City/County)	12,100	80.63	28
Whittier (Savage Canyon)	350	3.35	39
Total	**43,749**	**141.92**	

Source: Los Angeles County Integrated Waste Management Plan, 2009 Annual Report, February 2011.

*Estimated remaining permitted capacity based on landfill owner/operator responses in a written survey conducted by the Los Angeles County Department of Public Works in August 2010, as well as a review of site specific permit criteria established by local land use agencies, local enforcement agencies, California Regional Water Quality Control Board, and the South Coast Air Quality Management District.

**Landfill remaining life as permitted in 2009.

***The Puente Hills Landfill will close in October 31, 2013.

Solid waste enterprises within the County are proponents of Material Recovery Facilities/Transfer Stations to provide additional infrastructure to help meet the County's future disposal needs. The Los Angeles County Sanitation Districts completed the acquisition of the Mesquite Regional Landfill in

Imperial County and has signed a purchase agreement for the acquisition of the Eagle Mountain Landfill. Mesquite Landfill has a permitted capacity of 20,000 tpd and a 100-year lifespan. The Los Angeles County Sanitation Districts are developing a waste by rail system that could transport up to 8,000 tpd to the Mesquite Landfill.

2. Promoting Alternative Technologies

Faced with a dwindling landfill capacity, as well as the impacts of climate change, the County must evaluate sustainable options for solid waste management, such as conversion technologies and landfill gas to energy facilities. The Los Angeles County Sanitation Districts currently have three landfill gas to energy facilities that generate electrical power from landfill gas. Landfill gas is created through the natural decomposition of refuse and has about half the energy content of natural gas. Conversion technologies refer to a wide variety of biological, mechanical, chemical, and thermal (excluding incineration) processes that convert residual post recycled municipal solid waste and other organic feedstock into useful products, alternative fuels and clean and renewable energy. Additionally, utilizing conversion technologies locally could effectively enhance recycling, reduce pollution and greenhouse gas emissions, extend the life of existing landfills and reduce dependence on fossil fuels. Conversion technologies are currently being explored by the County in conjunction with the Alternative Technology Advisory Subcommittee, which is comprised of a diverse group of representatives from public agencies, industry, community, and other experts in the field of conversion technologies. As a part of the Southern California Conversion Technology Demonstration Project, on April 20, 2010, the Los Angeles County Board of Supervisors approved agreements to develop three conversion technology demonstration projects, and instructed DPW to begin evaluating options for the development of commercial-scale projects in the County. For more information, please visit the Southern California Conversion Technology Demonstration Project web site at http://www.socalconversion.org.

3. Trash Hauling

For many years, two-thirds of the unincorporated areas (primarily the San Gabriel and Antelope Valleys), residential and commercial solid waste collection services were provided through an open-market system whereby each resident/business directly arranged for trash collection services with no County involvement. Due to changes in federal and state laws regarding waste reduction, changing public attitudes toward protecting the environment and increasing consumer demands for better service, the open-market system was unable to fully adapt to these conditions. In response, beginning in 2007, DPW gradually implemented a residential trash collection franchise system to replace the open-market system. Under the franchise system, the County signs an agreement with waste haulers to authorize them to provide exclusive services for individual communities; and, the County establishes minimum service standards, and institutes rate control measures. The franchise system has helped to improve customer service, increase accountability, develop cleaner neighborhoods and increase diversion rates. As of early 2011, 14 residential franchises have been established throughout San Gabriel Valley and Santa Clarita Valley. DPW anticipates replacing the remaining residential open-market system areas, including the Antelope Valley, as early as 2014. In regards to the commercial open market system, DPW anticipates replacing it with a franchise system by mid 2012.

Trash collection service in the remaining third of the unincorporated areas (located in South Los Angeles and Malibu areas) is provided through a garbage disposal district system. Under this system, the County issues a contract for a waste hauler to provide service to both residents and businesses. Operational expenses are paid from revenues generated through special property tax assessments. To date, the County has established seven garbage disposal districts, which are the only ones operating in the State.

Goals and Policies for Solid Waste

Goal PS/F 5: Adequate disposal capacity and minimal waste and pollution in the County.	
Topic	**Policy**
Waste Management	Policy PS/F 5.1: Maintain an efficient, safe and responsive waste management system that reduces waste while protecting the health and safety of the public.
	Policy PS/F 5.2: Ensure adequate disposal capacity by providing for environmentally sound and technically feasible development of solid waste management facilities, such as landfills and transfer/processing facilities.
	Policy PS/F 5.3: Discourage incompatible land uses near or adjacent to solid waste disposal facilities identified in the Countywide Integrated Waste Management Plan.
Waste Diversion	Policy PS/F 5.4: Encourage solid waste management facilities that utilize conversion and other alternative technologies and waste to energy facilities.
	Policy PS/F 5.5: Reduce the County's waste stream by minimizing waste generation and enhancing diversion.
	Policy PS/F 5.6: Encourage the use and procurement of recyclable and biodegradable materials throughout the County.
	Policy PS/F 5.7: Encourage the recycling of construction and demolition debris generated by public and private projects.
	Policy PS/F 5.8: Ensure adequate and regular waste and recycling collection services.
	Policy PS/F 5.9: Encourage the availability of trash and recyclables containers in new developments, public streets, and large venues.

VI. Utilities

Background

The County's utility infrastructure, information and communication networks are layered with utility rights of way and properties that contain tower structures, substations, generating plants, pipelines, storage fields, valve stations, wells, radio and television studios and other equipment facilities. In the unincorporated areas, most electric, natural gas, or telecommunication services are delivered by private service providers. However, the County recognizes the need to define and ensure adequate levels of service in these areas as the County continues to grow.

Issues

1. Energy Conservation

The County is faced with considerable strain on existing electricity and power delivery systems. As a result of increased electricity usage and prolonged hot weather conditions due to climate change, brown outs, or losses of power and forced reductions in electricity delivery, occur periodically

throughout the State. There is a need to upgrade the County's power grid and service capabilities, and to educate the public on energy conservation. Upgrades and enhancements of local services and strong energy conservation programs can add to the reliability and efficiency of the overall utility network, and contribute to the long-term quality of life for County residents and businesses.

Similarly, the region's substantial population growth is outpacing the development of new natural gas supplies, much of which is imported from out of state. In addition to heating and cooking, natural gas currently provides 73 percent to 90 percent of the energy used to generate electricity, especially during peak times. As the population continues to grow, the County must focus on the development of new natural gas supplies, including locally produced natural gas and liquefied natural gas (LNG); upgrading and enhancing the region's natural gas infrastructure system to improve reliability and efficiency; strong energy conservation programs; and renewable energy alternatives.

A major contributor to the long-term energy independence of the County will be the increased production of energy from renewable sources. The production of energy from renewable sources onsite can also ensure the ongoing operations of primary health, safety and civic infrastructure during times of disruption. The County is a participant in the Statewide Renewable Energy Transmission Initiative (RETI), which identifies sites that are suitable for various types of renewable energy sources, including geothermal, solar, wind and biomass. This issue is discussed in greater detail in the Conservation and Natural Resources Element.

2. Siting Facilities

It is important for the County to address land use compatibility in siting infrastructure facilities that are necessary for the delivery of energy and information resources. Siting utility infrastructure and facilities is difficult, as many parts of the County are built out with little room for facility expansion. In certain areas, there is public opposition to the expansion or placement of utility infrastructure. In the case of new natural gas storage facilities, there is added difficulty in finding locations with specific geologic conditions to ensure efficiency and reliability.

Goals and Policies for Utilities

Goal PS/F 6: A County with adequate public utilities.	
Topic	**Policy**
Utility Infrastructure	Policy PS/F 6.1: Ensure efficient and cost effective utilities that serve existing and future needs.
	Policy PS/F 6.2: Improve existing wired and wireless telecommunications infrastructure.
	Policy PS/F 6.3: Expand access to wireless technology networks, while minimizing visual impacts through co-location and design.
	Policy PS/F 6.4: Protect utility facilities to ensure the continued provision of utility services in the County.
	Policy PS/F 6.5: Encourage the use of renewable energy sources in utility and telecommunications networks.
	Policy PS/F 6.6: Encourage the construction of utilities underground, where feasible.

	Policy PS/F 6.7: Encourage projects that incorporate onsite renewable energy systems.

VII. Early Care and Education Facilities

Background

The County's role in developing and managing educational facilities and programs is limited. However, the Los Angeles County Office of Education (COE), which is the country's largest regional education agency, serves as an intermediary between the local school districts and the California Department of Education. The COE is guided by a seven member County Board of Education, which is appointed by the Los Angeles County Board of Supervisors. The COE provides a vision statement and strategic opportunities for educational facility development to coordinate the assessment of facility needs and the construction of schools that fall to individual school districts throughout the County. For more information, please visit the COE web site at http://www.lacoe.edu.

Another role that the County plays in coordinating in public school facilities is through the County subdivision approval process, in which developers are required to assess the need for, and in some cases provide, land for the construction of public schools within their development. Development impact fees, based on the size of a development, are distributed to the appropriate school district for the construction of school facilities before the County issues any building permits.

Issues

Land Use Coordination

At a minimum, the California Education Code requires public school districts to notify the local planning agency when siting new public schools to determine if the proposed site conforms to the General Plan. In addition, school districts consult with the County through the CEQA process.

As educational facilities are major components of, and significantly impact neighborhoods, it is essential for the County to work proactively with school districts and other educational providers to ensure the coordination between land use planning and school facilities planning. Joint-use school facilities, as opposed to stand alone institutions, can benefit communities and create operational and economic efficiencies. School facilities should be accessible and open to multiple users, including students and the greater community.

As discussed in the Land Use Element and the Economic Development Element, there is a shortage of early care and education facilities in the County. According to the 2011 Los Angeles County Child Care and Development Needs Assessment, the availability of licensed care facilities varies by age. For infant/toddlers, there are sufficient facilities to accommodate only one out of every seven children in working families; for preschool-age children, there are three spaces for every four children; for school-age children requiring after school care while parents work, there is one licensed space for every three children. Half-day preschool options are available for seven out of every ten eligible children of three and four years who are able to use a half-day program. For more information on 2011 Child Care Needs Assessment, please visit the CEO Office of Child Care web site at http://childcare.lacounty.gov.

Goals and Policies for Early Care and Education Facilities

Goal PS/F 7: A County with adequate educational facilities.	
Topic	**Policy**
Early Care and Educational Facilities	Policy PS/F 7.1: Encourage the joint-use of school sites for community activities and other appropriate uses.
	Policy PS/F 7.2: Proactively work with school facilities and education providers to coordinate land use and facilities planning.
	Policy PS/F 7.3: Encourage adequate facilities for early care and education.

VIII. Libraries

Background

The County of Los Angeles Public Library is one of the largest public library systems in the country. In fiscal year 2009-2010, the Library staff circulated 16.8 million items to 3.3 million cardholders; answered over 10 million reference questions; provided 19,000 programs to 515,000 children, teens, and adults; and assisted the public with three million internet sessions on the Library's public access computers. The Los Angeles County Library system is a special fund County department operating under the direction of the Los Angeles County Board of Supervisors. Figure 10.2 identifies the County libraries and service planning areas.

Figure 10.2: Libraries

Supplementing the 5.8 million volume book collection, the Library also offers magazines, newspapers, microfilm, government publications, specialized reference materials, magazines, audio-visual media, adult, teen and children programs, downloadable audio and ebooks, and internet access, including WiFi.

For more information on the Library system, please refer to the County of Los Angeles Library Strategic Plan, which can be viewed at http://www.colapublib.org/aboutus/strategic.html.

Library Facilities Mitigation Fees

The County applies a library facilities mitigation fee to new residential developmentss in unincorporated areas. This fee is intended to mitigate the significant adverse impacts of increased residential development on the County Library system. The library facilities mitigation fee is based on the estimated cost of providing the projected library facility needs in each library planning area. Table 10.2 shows these fees as of July 1, 2011.

Table 10.2: County Public Library Facilities Mitigation Fees (2011)

Planning Area (P.A.)	Fee (per dwelling unit)
P.A. 1: Santa Clarita Valley	$829.00
P.A. 2: Antelope Valley	$804.00
P.A. 3: West San Gabriel Valley	$839.00
P.A. 4: East San Gabriel Valley	$827.00
P.A. 5: Southeast	$830.00
P.A. 6: Southwest	$836.00
P.A. 7: Santa Monica Mountains	$832.00

The mitigation fee in each of the seven planning areas is reviewed annually by the County Librarian, in consultation with the County Auditor Controller, and is adjusted every July 1. No adjustment shall increase or decrease the fee to an amount more or less than the amount necessary to recover the cost of providing applicable library facilities and services.

The provisions of the Library Facilities Mitigation Fee Ordinance are applicable to residential projects only. All library facilities mitigation fees received by the County are deposited into a special library capital facilities fund (one for each library planning area), and expended solely for the purposes for which the fees were collected.

Issues

Library Facility Needs

The majority of the County's 86 libraries are undersized and understocked to meet the service needs of current and projected populations served by the County Library system. A study conducted by the County Library in April 2001 determined that many of the County's libraries do not meet basic facility and service planning guidelines. The current guideline for library facility space is a minimum of 0.5 gross square foot per capita. The 2001 study determined that 89 percent of existing libraries will not meet that standard in the year 2020. In addition, the study determined that by 2020, 77 percent of existing libraries will not meet the County Library's current service level planning guideline of 2.75 items (books and other library materials) per capita.

Many existing County libraries are located in areas with little or no new residential development, and therefore, there are no mitigation fees or other reliable sources of capital funding available to replace or expand them. A permanent source of funding to replace or expand existing facilities is needed to meet the projected population growth in the County Library's service area over the next two decades.

Goals and Policies for Libraries

Goal PS/F 8: A comprehensive public library system.	
Topic	**Policy**
Library System	Policy PS/F 8.1: Ensure a desired level of library service through coordinated land use and facilities planning.
	Policy PS/F 8.2: Support library mitigation fees that adequately address the impacts of new development.

[Text Box]

Constituent Service Centers and Environmental Service Centers

Due to geographic spread and demographic characteristics, there is a need to establish a number of local centers that can address specific constituent needs and requests, in close proximity to homes and places of work. Constituent Service Centers provide high quality, public services at conveniently located facilities. Specific County department presence will be tailored to each community's needs, including but not limited to community meeting rooms, libraries, senior community centers, and field offices for various County departments such as Consumer Affairs, Sheriff, Planning and Building and Safety. Additional services could include Adult Protective Services, and space for community-based organizations. Constituent Service Centers include the East Los Angeles Civic Center, and two in Florence-Firestone and Lennox.

Environmental Service Centers are Constituent Service Centers that provide assistance to the community on environmental initiatives, such as the County's Green Building Program, AB 811 and the PACE program. County staff is available to answer questions about retrofits, water conservation, and the County's Green Building policies. An Environmental Service Center is located in West Athens-Westmont.

Table 10.3 Public Services and Facilities Element Implementation Programs

Planning Area Capital Improvement Plans
Water Conservation Ordinance
Agricultural Water Conservation Program

Chapter 11: Economic Development Element

Table of Contents

I. Introduction

From its origins as a sparsely populated agricultural area, Los Angeles County has developed into a national and global economic center. Today, the County's economy is diverse and fast-changing, and faces global competition for economic resources.

The Economic Development Element addresses the General Plan Guiding Principles by providing an economic development strategy to develop a Strong and Diversified Economy. The Element addresses Smart Growth by including policies for adequate and protected land for employment-rich land uses and businesses, and Sufficient Community Service and Infrastructure by underscoring the importance of services and infrastructure in promoting industry and strengthening the County's workforce. The Element also addresses Environmental Resource Management by focusing employment-based land uses toward infill areas, and addresses Healthy, Livable, and Equitable concerns by ensuring that industrial uses are planned for sustainably and with considerations for compatibility with non-industrial uses.

The Economic Development Element outlines the County's economic development goals, and provides strategies that contribute to the economic well-being of the County. The overall performance of the economy and economic development efforts strongly impact land use and development patterns. Through the implementation of this Element, the County is planning for the economic health and prosperity of its physical and social environments, and planning strategically for the future economy.

The Element works in conjunction with the Los Angeles County Strategic Plan for Economic Development, which was adopted by the Los Angeles County Board of Supervisors in 2010. The Strategic Plan can be found at the following link:

http://www.lacountystrategicplan.com/documents/LACountyStrategicPlanforED.pdf.

II. Background

The County's historical growth pattern of sprawling single family development, with scattered commercial and industrial uses, has strongly influenced the County's economy.

The first major economic sectors to emerge in the County were land development, real estate and the entertainment industry, which continues today to play a major role in the County's economy. In addition, the aerospace industry was responsible for some of the County's major growth spurts. By the 1960s, the aerospace industry employed hundreds of thousands of workers, which accounted for nearly half of the County's manufacturing jobs at that time.

During the 1990s, major economic, social, and environmental trends impacted the County's economy, and in particular, its manufacturing sector. The end of the Cold War reduced defense spending, which significantly impacted the County's aerospace and related manufacturing industries. In addition, with free trade agreements and globalization, local, regional, state and national level economies merged with the global economy, and competition from overseas producers with cheaper labor and production costs prompted an exodus of manufacturing jobs from the County.

The present economy of the County is technology-driven, including biomedical, digital information technology, and environmental technology. Another key economic driver is the creative economy, which includes industries involved in the production of cultural, artistic, and design goods and services. Specifically, the fusion between technology and creativity, such as innovations in interactive media, plays an important role in the region's economic growth. International trade, aerospace, petroleum, and tourism continue to drive the County's economy, as well as media production, finance, telecommunications, law, healthcare, and transportation.

Economic Sectors and Jobs

The County has a diverse economic base, with multiple industry clusters. Despite significant losses, the County is still the largest manufacturing center in the country. The County is also home to the Ports of Los Angeles and Long Beach, which combined, is considered the sixth busiest port in the world.

Increased population growth has transformed the County's economic landscape, and growth in small and minority-owned businesses have contributed to offsetting the decline in manufacturing jobs. Although the County has gained jobs in recent years, the total number of jobs in the County has only recently rebounded to 1990 levels.

According to the Los Angeles County Economic Development Corporation (LAEDC), the largest growth sectors in terms of jobs are professional, scientific and technical services, health services, and retail trade. The County continues to have a net decrease in durable goods manufacturing and construction jobs, and a weakening housing sector will continue to affect the regional economy. The LAEDC identifies the following key leading industry clusters:

- Entertainment
- Fashion
- Aerospace and Analytical instruments
- Trade (transportation, logistics, and distribution)

- Education and Knowledge Creation
- Publishing and Printing
- Metal Manufacturing
- Biomedical
- Tourism

III. Issues

1. Economic Growth

Despite the County's continued population growth, total job numbers in the County have only reached 1990 levels in recent years. Major growth areas include low-wage service and retail jobs. The rise in low-wage jobs is projected to continue.

Also, a significant portion of the County's economic growth in the last 15 years has been in the informal economy, as well as the growth of small and minority-owned businesses. However, these businesses often have limited growth potential due to limited access to capital and expansion opportunities.

To assist small businesses and connect them with government opportunities, the Los Angeles County Office of Small Business (OSB) was established as a source of information on procurement opportunities, certification, financing, and technical assistance. OSB also serves as the County Procurement Technical Assistance Center, which is funded by the U.S. Department of Defense to help small businesses obtain contracts with prime defense contractors. In addition, OSB provides workshops and training for small businesses on how to sell goods and services to the County, the State, the federal government, and other public agencies in Southern California.

The Business Technology Center of Los Angeles County (BTC) is another example of the County's efforts to assist start-up, early stage small businesses to grow. The BTC, which is a project of the Los Angeles County Community Development Commission, is dedicated to the development of high technology firms through business management assistance, technical assistance, and the coordination of available financial resources. The 40,000 square-foot facility, which is located in Altadena, offers key business support services to emerging technology organizations, including access to capital and business professional mentorship from a large volunteer group of seasoned executives. The BTC houses companies with specialties such as software development, bio-informatics, cutting edge sensors and the commercialization of federal laboratory technologies.

2. Attracting Target Industries

The following industry clusters have the most potential to contribute to a broad-based, stable, and expanding economy for the County:

Entertainment

The County is home to an internationally-recognized entertainment industry and is the site of major television and movie production activities, video game and digital entertainment production, and an increasing number of fine arts establishments and venues. To prevent the relocation of entertainment production to other states and overseas, the County must continue to pursue state

incentives to keep entertainment production in California and in the Los Angeles region. In addition, the County must address the potential conflicts between communities, filming and production, and balance the needs of the entertainment industry with community concerns.

Fashion

The fashion industry workforce in the County is more than twice the size of the fashion industry workforce in New York's fashion district. Big name designers operate alongside small, independent shops. Many fashion education programs support these activities, including: Fashion Institute of Design and Merchandising and the Otis College of Art and Design.

Aerospace and Analytical Instruments

With research universities, private think tanks, a NASA outpost, and research and development facilities, the County lays claim to a sizeable share of the high-tech marketplace. Employment in the aerospace cluster is concentrated in the manufacturing of aerospace products and parts. The analytical instruments cluster supports the aerospace industry through the production of aerospace instrumentation. Both clusters demand a highly-skilled workforce and offer wages that are double the County average.

Trade

The Ports of Los Angeles and Long Beach, along with the Los Angeles International Airport (LAX), handle more cargo than any other region in the country, and trade and logistics continues to be a growing economic sector in the County. Infrastructure improvements related to trade and goods movement should be prioritized to maintain the County's competitive hold on this sector. Additionally, expanding trade and goods movement can benefit the County. For example, facilitating the creation of an "inland port" near the Palmdale Regional Airport would alleviate congested conditions in the ports and airports in the southern portion of the County, while also strengthening the employment base in the northern portion of the County. For an inland port to succeed, economical routes must be identified and supported by infrastructure improvements.

Education and Knowledge Creation

There are approximately 120 accredited institutions in the County that confer associates, bachelors, and graduate degrees. Three universities—California Institute of Technology (Caltech), University of California Los Angeles, and University of Southern California—received more than $2.06 billion in research funding from federal agencies in 2010.

Publishing and Printing

The County is a hub for publishing and printing activity, including book and directory publishing, music publishing, internet publishing and broadcasting, and web search portals.

Metal Manufacturing

The County is the nation's number one manufacturing center in terms of employment. The County is known for its expertise in advanced materials, such as composites, ceramics, polymers, and the latest innovations in nanomaterials. The presence of the aerospace industry has been a motivating factor in the research, development, and deployment of new materials and processes.

Biomedical

Health sciences and biomedical research represent a growing industry that provides high-paying jobs. The County cannot capitalize on this sector without addressing the lack of high-tech industrial or office space. Land use policy and redevelopment efforts can increase the amount of land available for this target industry.

Tourism

The County must continue to promote its cultural icons and expand its tourist destinations. A countywide umbrella organization is needed to focus initiatives into regional efforts that effectively promote a "Los Angeles" brand.

In addition to the above, the County should focus efforts on growing the nascent but fast-emerging innovation-based sectors, including digital media, clean technology (e.g., electric vehicles and renewable energy), and advanced materials.

3. Impact of Land Use Policy on the Economy

Land designated for industrial and employment-rich uses is needed to retain and attract businesses and jobs. The County's historic growth patterns and land use policies have resulted in the conversion of much of the County's available industrial land for non-industrial uses. The remainder of the County's industrial and office space is not sufficient to meet the needs of existing and emerging industries.

Incompatible land uses in and around industrial areas also hinder economic growth. For example, allowing residential uses in industrial areas increases tensions between the business community and new residents, as industrial activities often produce noise, odor, smells, traffic congestion, and other environmental impacts. Industrial land also needs to be buffered to avoid conflicts, and industrial uses must be thoughtfully incorporated into community-based planning efforts to address potential environmental justice impacts.

A study of the industrial land within the unincorporated areas, which can be found in Appendix J, informed the General Plan policies to preserve and protect viable industrial land, and create industrial and employment-rich land. The study organizes the County's industrial land into two categories: Employment Protection Districts and Flex Districts.

Employment Protection Districts

Employment Protection Districts are economically-viable industrial and employment-rich lands, with policies to prevent the conversion of industrial land to non-industrial uses. These areas, which are identified in Figure 11.1, are mapped as Employment Protection District Overlays in the General Plan Land Use Policy Maps. For more information on the Employment Protection District Overlay, please refer to the Land Use Element.

Flex Districts

Flex Districts are industrial areas that provide opportunities for non-industrial uses and mixed uses, where appropriate, but also light industrial or office/professional uses that are compatible with residential uses. As opportunity areas, as discussed in Part I of the General Plan, Flex Districts serve as a framework for future industrial land use considerations in community-based planning efforts.

Figure 11.1: Employment Protection Districts Policy Map

4. Impact of Mobility Infrastructure on the Economy

Mobility is a key component of economic development, as businesses and industry require efficient road, rail, shipping, and air networks to transport goods and services, and as employees and residents need access to employment centers. Much of the transportation infrastructure of the County is strained, aging and over capacity. Traffic congestion, compounded by the County's aging infrastructure, is an economic obstacle for local businesses. Major transportation networks, such as the freeways leading out of the Ports of Los Angeles and Long Beach, are congested. The Ports, along with LAX, are crowded with freight and have limited expansion opportunities. The County's aging and congested transportation infrastructure will continue to inhibit development efforts and business activities unless it is upgraded.

The County's approach to transportation infrastructure must advance economic success, but also be sustainable. The Alameda Corridor, which allows for the transport of freight on a dedicated rail line to inland transfer yards, is an example of a project that improves the County's transportation infrastructure, while mitigating the environmental impacts of trucking and trade activities. In addition to infrastructure for goods movement, an adequate public transit system is essential for moving and retaining a vital workforce in an environmentally sensitive manner.

5. Revitalization

To achieve broad-based economic prosperity, local governments must stimulate business activity in neighborhoods that have limited economic opportunities. As revitalization activities can attract major new industries and businesses, the County can focus its resources on improving economically-distressed communities within the unincorporated areas. A recent study by the Los Angeles Economic Roundtable suggests that local governments in the County spent almost $1 billion dollars annually on activities that are traditionally associated with economic development—job training, economic development and redevelopment. With the elimination of 70 redevelopment agencies in the County, effective February 1, 2012, this amount may be reduced by half.

In 1982, the Los Angeles County Board of Supervisors consolidated three entities—the Housing Authority, Community Development Department, and the Redevelopment Agency—to form the Los Angeles County Community Development Commission (CDC). The CDC's Affordable Housing and Economic Development Division is responsible for implementing the County's economic development policies and programs in the unincorporated areas. In addition, the CDC is responsible for administering Los Angeles County Board of Supervisors Policy No. 5.125, Economic Development Business Incentive Program, on a countywide basis.

The CDC administers a comprehensive economic development program focused primarily on services to the unincorporated areas. CDC programs include business façade renovations, streetscape improvements, loan programs, State Enterprise Zone tax credits, operation of a business incubator, provision of public parking in commercial corridors, financial support for merchant associations, and technical assistance to businesses. The CDC administers the Los Angeles Urban County CDBG Program for the County and 48 participating cities. CDBG funds have been used to finance many of the County's economic development activities.

Enterprise Zones

The California Enterprise Zone Program targets economically-distressed areas using special state and local incentives to promote business investment and job creation. Businesses within Enterprise

Zones are eligible for substantial tax credits and benefits, including hiring tax credits, sales and use tax credits on machinery and equipment, net operating loss carryover, and business expense deductions. Figure 11.2 shows the locations of the Enterprise Zones administered by CDC. Since 2008, East Los Angeles has been designated a State Enterprise Zone, of which the CDC administers the unincorporated portions. In 2010, CDC received conditional designation for two State Enterprise Zones: Harbor Gateway Communities Enterprise Zone, in partnership with the City of Los Angeles and the City of Huntington Park; and the Santa Clarita Valley Enterprise Zone, in partnership with the City of Santa Clarita. All three of these Enterprise Zones will operate for 15 years.

Figure 11.2: Enterprise Zones

Los Angeles Empowerment Zones

Federal Empowerment Zones are highly distressed urban and rural communities that are eligible for a combination of grants, tax credits for businesses, bonding authority and other benefits based on experienced poverty and/or high out migration. The Los Angeles Empowerment Zone Program creates reinvestment opportunities through the U.S. Department of Housing and Urban Development's (HUD) guaranteed Section 108 loans and related Economic Development Initiative Grants within a five Census tract areas and surrounding buffer zones located in Florence-Firestone and Willowbrook. Most recently, funds allocated for the Empowerment Zone Program were used to construct the 30,000 square feet Martin Luther King, Jr. Center for Public Health in Willowbrook, and a 41-space public parking lot in Florence-Firestone.

More information on the CDC's economic development programs can be found on the CDC's web site at http://www3.lacdc.org/CDCWebsite/ER/Home.aspx.

6. The Role of Education in Economic Development

The County is in need of more training and workforce development programs, as much of the blue collar workforce is not prepared to meet the job demands of the future. The continued globalization of the economy means that local workers with limited education have to compete with an increasingly educated global workforce. In addition, federal and state government cuts to education put the County at greater risk of losing its competitive edge.

According to the LAEDC, over 50 percent of the working-age population in the County has low levels of literacy, with a high percentage lacking a high school diploma or a GED. The industries that will provide the most economic returns require a workforce with a knowledge base and advance technical training. Furthermore, continuing demographic shifts over the next two decades will dramatically change the region's population, particularly the prime working age population. While the baby boom generation retires, a steady influx of low-skilled workers will comprise of an increasingly large portion of the labor pool.

A skilled and dedicated workforce is important for sustaining the County's economic competitiveness, and invigorating economic activity through the reinvestment of wages. Fostering a diverse and cutting-edge industry base requires a synergistic relationship between companies and a well-developed workforce to advance technologies.

While there are multiple state, federal and local agencies that ensure that the County's workforce is well-trained, workforce programs are fragmented and administered by different agencies, which weakens the ability of the workforce development system to meet the needs of the private sector.

Fragmentation causes duplication, resource inefficiencies, and difficulty for the public and employers to understand and access programs.

The County supports strategic workforce development activities designed in collaboration with major universities, colleges, and other research institutions in the County, and also with community colleges, high schools, non-profits, and local job training centers. Workforce development programs must be varied and widespread to reach the under-employed or unemployed residents in the County, and should include on-the-job training, functional literacy, poverty reduction, English as a Second Language (ESL), business incubation, and mentoring. Furthermore, it is important to continually orient the County's workforce training programs toward the needs of emerging industries and new technologies.

7. The Need for Centralized Economic Development Planning

The LAEDC collects and distributes information on growth and market trends on a regional basis, encourages cooperation among jurisdictions to implement long-term goals for shaping the economy, and advocates for a more cohesive and unified economic development strategy. As a first crucial step to developing a unified countywide strategy, the LAEDC has worked with more than 1,080 stakeholders, including representatives from the public, private, business, government, labor, education, environmental, and community-based organizations, to develop the Strategic Plan for Economic Development in Los Angeles County. The Los Angeles County Board of Supervisors adopted the Los Angeles County Strategic Plan for Economic Development in 2010.

Additionally, the County needs to proactively address business and economic development needs, including the provision of financial and regulatory incentives to attract jobs and target industries, and foster public-private partnerships. 8. Competitive Disadvantages

Increased global competition has resulted in tighter profit margins for economic sectors, and more cost-effective markets for labor and materials have made production methods more mobile and international. A recent study by the Los Angeles Economic Roundtable shows that in the County, a business environment characterized by high production costs, high utility costs, strict environmental regulations, and a perceived indifference to the importance of industrial uses, are contributing to the relocation of industries to areas where incentives are attracting industries and businesses. One primary example of the effect of global and regional competition on the County's economy is the regional trend of job losses in the manufacturing sector. Although local leaders have made significant efforts to retain manufacturing activities in the region, manufacturing jobs are relocating overseas, to inland areas and to other states due to lower production costs.

Another disadvantage for economic development is the high cost of doing business in the County. For example, the County has higher utility and energy costs compared to other regions, and the energy network may not be sufficient to meet the demands of both business and residential customers during peak energy periods. In addition, industrial land and office space in the unincorporated areas need to be retrofitted and upgraded to accommodate target industries and attract high-paying jobs. Furthermore, aggressive strategies and infrastructure improvements must be implemented to attract business and industry to the unincorporated areas.

Furthermore, the shortage of affordable housing and early care and education, have major impacts on the workforce as well as on the regional economy and economic development efforts. High housing costs is a deterrent to attracting an educated middle class labor force. Regional attention to building housing for all income levels is a primary factor in the success of the County's economic future. Early care and education is not only extremely important to working families, it is important to the communities in which they live and work. A report in 2008 entitled *The Economic Impact of Early*

Care and Education Industry in Los Angeles County indicates that the early care and education industry generates $1.9 billion annually and provides over 65,000 full-time equivalent jobs in the County. The report concludes that the County's future economic productivity depends upon investment in quality early care and education as a critical industry. The report also indicates: "The short-term economic benefits to working families and their employers are apparent. Equally important are the long-term benefits in human capital—children, their school readiness, and the productivity of the future workforce." A copy of the report is available on the CEO Office of Child Care web site at http://childcare.lacounty.gov.

IV. Goals and Policies

Goal ED 1: An economic base and fiscal structures that attract and retain valuable industries and businesses.	
Topic	**Policy**
Target Industries for the County	Policy ED 1.1: Encourage a diverse mix of industries and services in each County Planning Area.
	Policy ED 1.2: Encourage and foster the development of the green and renewable energy economic sectors.
	Policy ED 1.3: Encourage public-private partnerships to support the growth of target industries.
	Policy ED 1.4: Encourage the expansion and retention of targeted industries and other growth economic sectors, such as the entertainment industry.
County Incentives for Business	Policy ED 1.5: Provide quality, responsible, and business-friendly municipal services to attract and retain businesses and employees.
	Policy ED 1.6: Develop, advance, and promote competitive advantages for economic development and growth.
	Policy ED 1.7: Identify opportunities to lower the costs of doing business in the County.
	Policy ED 1.8: Establish and maintain a competitive tax structure to attract and retain business and industry to the County.
	Policy ED 1.9: Promote the County as a national and international center for business, global trade, and development.

Goal ED 2: Land use practices and regulations that foster economic development and growth.	
Topic	**Policy**

Industrial Land	Policy ED 2.1: Protect industrial lands, especially within Employment Protection Districts, from conversion to non-industrial uses.
	Policy ED 2.2: Utilize adequate buffering and other land use practices to facilitate the compatibility between industrial and non-industrial uses.
Business and Environmental Justice	Policy ED 2.3: Ensure environmental justice in economic development activities.
	Policy ED 2.4: Ensure high standards of development and encourage environmentally sustainable practices in economic development activities.
	Policy ED 2.5: Encourage employment opportunities to be located in proximity to housing.
	Policy ED 2.6: Encourage community-serving uses, such as child care centers and personal services, to be located in proximity to employment centers.
	Policy ED 2.7: Incentivize economic development and growth along existing transportation corridors and in urbanized areas.
Streamlined Permit Processing	Policy ED 2.8: Streamline the permit review process and other entitlement processes for businesses and industries.

Goal ED 3: An expanded and improved infrastructure system to support economic growth and development.	
Topic	**Policy**
Infrastructure Improvements	Policy ED 3.1: Utilize capital improvement plans to prioritize infrastructure investments.
	Policy ED 3.2: Support infrastructure that facilitates the efficient movement of goods, energy, information, and people.
	Policy ED 3.3: Support the expansion of business communication networks, such as telecommunications and wireless technologies.
	Policy ED 3.4: Support the use of public-private partnerships to develop, fund, and deliver critical infrastructure.
	Policy ED 3.5: Work with state agencies dedicated to financing important critical infrastructure and economic development projects.

Goal ED 4: Enhanced revitalization activities.	
Topic	**Policy**

Economic Development Strategies	Policy ED 4.1: Develop a range of financial incentives and programs that encourage development and business growth.
	Policy ED 4.2: Facilitate relationships between financial institutions and local businesses to increase access to capital resources.
	Policy ED 4.3: Establish, renew, implement, manage, protect, and/or expand Enterprise Zones, and other programs that facilitate community development and rehabilitation.
	Policy ED 4.4: Expand the use of tax increment financing and programs, such as impact fees and assessment districts, and transportation tax increment financing.
	Policy ED 4.5: Support the development of community-level economic development strategies in line with Los Angeles County Strategic Plan for Economic Development.
	Policy ED 4.6: Support the development of small business assistance and entrepreneurial programs that are focused on management, financial planning, and technology application.
Infill Development	Policy ED 4.7: Incentivize infill development that revitalizes underutilized commercial and industrial areas.
	Policy ED 4.8: Direct resources to economically distressed areas to spur revitalization activities.
	Policy ED 4.9: Retrofit and reuse vacant and underutilized industrial and commercial sites for emerging and targeted industries.
	Policy ED 4.10: Support expedited permitting for green building retrofits.

Goal ED 5: A skilled and educated workforce.	
Topic	**Policy**
Education	Policy ED 5.1: Support a quality education system at all levels that ensures college-readiness and career-readiness.
	Policy ED 5.2: Attract and retain highly-skilled graduates, in particular, graduates of science and engineering programs.
	Policy ED 5.3: Support and create collaborative educational programs that address specific under-employed populations and workforce needs in targeted areas.
	Policy ED 5.4: Encourage outreach efforts to educational and community-learning institutions to expand workforce education programs.
	Policy ED 5.5: Expand functional literacy and English as a Second Language (ESL) programs throughout the County.

	Policy ED 5.6: Support linked programs that align high schools with community colleges and four-year institutions.
	Policy ED 5.7: Engage employers earlier in the education and workforce development process to ensure work-readiness and a smooth transition from school or training to work placement.
Job Training	Policy ED 5.8: Ensure that businesses have enough skilled workers to meet their workforce needs.
	Policy ED 5.9: Prepare, train, and educate job seekers and incumbent workers to find and advance in high-value, high-wage jobs with built-in career ladders.
	Policy ED 5.10: Promote the attraction, retention and expansion of commercial and industrial firms that provide employment improvement opportunities for unskilled and semi-skilled workers.
	Policy ED 5.11: Initiate vocational training programs across the County that provide the skills necessary for participation in the labor force.
	Policy ED 5.12: Collaborate with the private sector to identify growing workforce needs and link training initiatives to the needs of target industries.
	Policy ED 5.13: Establish employer assistance initiatives to expand skilled trades training and vocational education for high demand occupations.

Goal ED 6: Collaborative efforts to implement coordinated economic development activities.	
Topic	**Policy**
Coordinated Economic Development	Policy ED 6.1: Encourage a collaborative inter-agency and inter-jurisdictional environment to align economic development activities and promote information sharing on economic trends, business cycles, best practices, and resources.
	Policy ED 6.2: Analyze emerging trends for policy modification, and maintain and update accurate labor force, market trends, and other important economic data.
	Policy ED 6.3: Strengthen cooperation with private sector organizations, economic development organizations, and community level business groups.
	Policy ED 6.4: Strengthen the County's legislative advocacy function in state and federal policies to advance the County's economic development goals.
	Policy ED 6.5: Increase communication and coordination with relevant local, regional, and state public and private economic development agencies to leverage resources and coordinate economic policy.

Table 11.1: Economic Development Element Implementation Programs

Economic Development Incentives Program Economic Development Outreach and Coordination Initiative

[Text Box]

Economic Development Partners

The Los Angeles County Economic Development Corporation (LAEDC) was established in 1981 by the County as a public-private partnership with the mission to attract, retain, and expand businesses and jobs in the County. The LAEDC publishes semi-annual economic forecasts for the County, and informs economic development in the County by compiling data and research from a variety of sources, and providing analyses of key employment sectors and sub-regions of economic activity. More information on LAEDC can be found on their web site, located at http://www.laedc.org.

Part III: General Plan Implementation

I. Introduction

Pursuant to the California Government Code, a city or county is required to "implement the general plan through actions including, but not limited to, the administration of specific plans and zoning and subdivision ordinances." The Government Code also requires that upon adoption of a general plan, a planning agency shall "investigate and make recommendations to the legislative body regarding reasonable and practical means for implementing the general plan."

The objective of Part III: General Plan Implementation is to:

- Increase inter-agency cooperation and public-private partnerships;
- Focus actions for the short-term and long-term implementation of General Plan goals and policies;
- Facilitate the systematic implementation of the General Plan; and
- Provide a mechanism to track the progress of implementing the General Plan.

II. General Plan Maintenance

General Plan Annual Progress Report

Section 65400 of the Government Code requires that the County prepare a general plan annual progress report (annual report) on the status of General Plan implementation. The annual report is prepared by the Department of Regional Planning (DRP), presented to the Los Angeles County Regional Planning Commission and the Los Angeles County Board of Supervisors, and submitted to the California Office of Planning and Research and the California Department of Housing and Community Development by April 1 of each year.

The annual report is the County's mechanism for comprehensively reporting on the following: 1) program implementation; 2) effectiveness of major policies; 3) updates to datasets; and 4) map maintenance.

1. Program Implementation

The annual report shall outline the County's progress toward implementing the General Plan implementation programs. A description of milestones, accomplishments, as well as any impediments will be included for each program.

2. Effectiveness of Major Policies

The annual report shall include information on the effectiveness of major policies. The table below outlines the monitoring strategy:

Policy Area	Monitoring Method
Transit Oriented Districts (TODs)	Report annually on the progress of the TODs. Include: • A summary of new development within the TODs approved by DRP, including

	mixed-use projects. • A summary of infrastructure improvements, including but not limited to pedestrian, bicycling, and streetscape improvements.
Significant Ecological Areas (SEAs)	Report every two years on the status of the County's SEAs. Include: • A summary of new development within SEAs approved by DRP; • The overall status of biological functions within each SEA, if known; • Any additional scientific studies undertaken on SEAs; • Recommendations for any modifications to the SEA Program, including General Plan goals and policies and the SEA Ordinance; • Identification of lands within individual SEAs as priority habitats or areas for protection; • A description of any ongoing partnerships with conservation agencies and other stakeholders; • A current map of SEA lands that are protected in perpetuity through deed-restrictions, conservation easements, etc.; and • The Director's conclusion as to the overall successes and challenges of the SEA Program in implementing General Plan goals and policies.
Employment Protection Districts (EPDs)	Report annually on the progress of the EPDs. Include: • A summary of new development within the EPDs approved by DRP, including new industrial uses, as well as an analysis on the conversion of any industrial lands to non-industrial uses.
Agricultural Resource Areas (ARAs)	Report annually on the progress of the ARAs. Include: • A summary of new development within the ARAs approved by DRP, including an analysis on the reduction or expansion of agricultural uses in the ARAs. • A comparison of the agricultural land uses countywide based on data from the California Department of Conservation.

3. Dataset Updates

The General Plan includes various maps and figures that rely on datasets that are continually updated. The annual report shall outline information on new data that impacts General Plan maps and figures. As new datasets become available, the following maps will be updated administratively:

- Natural Resource Areas
- Seismic and Geotechnical Hazard Zones Policy Map
- Flood Hazard Zones Policy Map
- Tsunami Hazard Areas

- Sea Level Rise Impact Areas

- Fire Hazard Severity Zones Policy Map

The Special Management Areas Policy Map and the Hazard, Environmental and Resource Constraints Map may also be updated administratively, if the changes are a result of new datasets that are applied to the aforementioned maps.

4. Map Maintenance

Lastly, certain policy maps may need to be amended annually to reflect new public lands and open space acquisitions. These changes will require a plan amendment. The annual report will outline plan amendment recommendations to be initiated by the DRP after the completion of the annual report.

The following policy maps will be reviewed annually and updated as needed:

- Land Use Policy Maps: Update based on changes to Public and Semi-Public (P) and Natural Resources (OS-C, OS-PR, OS-NF, OS-BLM, and OS-W) land use categories.

- Open Space Resources Policy Map: Update to reflect new lands that have been dedicated permanently for open space conservation purposes, as well as land acquired for parks and recreation.

General Plan Updates

The County shall undergo a comprehensive General Plan Update every 10 years. The General Plan Update shall include a concurrent update to the zoning ordinance and zoning map, as needed, to ensure consistency with the General Plan. The Housing Element and Safety Element shall be updated concurrently, and in accordance with the statutory deadlines specified in the Government Code. Updating a General Plan is a comprehensive process that ensures consistency with other countywide agency plans, and should include stakeholder input.

III. General Plan Programs

Organization

The General Plan programs, outlined below, are organized by General Plan Element and are designed to address the overall policy objectives identified in the General Plan. Each program identifies lead and partner agencies; however, they are not exclusive, and new partners can be added, as needed. The programs also include a timeframe and are categorized based on level of priority. The highest priority programs should be initiated within the first two years of adoption of the General Plan. Programs that are designated as ongoing represent actions that must be addressed on a regular basis for General Plan implementation.

Funding

The General Plan programs guide the development of work programs for County departments. They also inform the budget process and will be used to set funding priorities. The schedules and tasks listed in the implementation program are based on adequate funding being secured through a joint effort undertaken by all departments and agencies. If funding is not secured, the implementation

steps and/or timeframes may need to be modified. To supplement department budgets, County staff will also work to secure grants, as needed, for program implementation.

Program No.	Program Description	General Plan Goals & Policies	Lead & Partner Agencies	Timeframe
LU-1	**Planning Areas Framework Program** The General Plan serves as the foundation for all community-based plans, such as area plans, community plans, and coastal land use plans. Area plans focus on land use and other policy issues that are specific to the Planning Area. The Planning Areas Framework Program shall entail the completion of an area plan for each of the 11 Planning Areas. Area plans will be tailored toward the unique geographic, demographic, and social diversity of each Planning Area; however, at a minimum, area plans shall be developed using the following guidelines: • Involve major stakeholders, including but not limited to residents, businesses, property owners, County departments, regional agencies, adjacent cities. • Explore the role of arts and culture, and consider beautification efforts. • Analyze the transportation network, and assess the transportation and community improvement needs. Utilize the street design considerations outlined in the Mobility Element as a tool for street improvements that meet the needs of all potential users, promote active transportation, and address the unique characteristics of the Planning Area. • Review and consider the identified opportunity areas, as appropriate. • Develop a land use policy map that considers the local context, existing neighborhood character, and the General Plan Hazard, Environmental and Resource Constraints Map. • Consider the concurrent development of area-wide zoning tools. • Update specific plans and zoning ordinances, as needed, to ensure consistency and plan implementation. At a minimum, each area plan shall consist of the following components: 1) a comprehensive policy document with area-specific elements, as needed, and that incorporates community-based plans as chapters; 2) a land use policy map that utilizes the General Plan Land Use Legend; 3) a zoning map that is consistent with the area plan; 4) a capital improvement plan	Land Use Element: Goal LU 2	Lead: DRP Partners: DPW, CEO, DPH, CDC, DPR, Arts Commission, Agricultural Commissioner, Fire	Years 1-2

	developed in partnership with the Department of Public Works (see Planning Area Capital Improvement Plans Program); and 5) an environmental review document that uses the General Plan Programmatic EIR as a starting point to assess the environmental impacts of the area plan.			
LU-2	**Transit Oriented District Program** Prepare a station area plan for each TOD. The goals of station area plans are to: 1) increase ridership; 2) facilitate compact, mixed use development; 3) improve pedestrian amenities and public safety; 4) increase economic activity; and 5) facilitate the public investment of infrastructure improvements. A TOD station area plan shall consist of the following: • Background Report: TOD station area plans shall consider input from stakeholders, including residents and County staff, and set priorities for transportation, housing, open space, and public safety within the TODs. The TOD station area plans shall consider the local context and existing neighborhood character. • Land Use Plan and Zoning: TOD station area plans shall detail land uses and zoning that support transit ridership, discourage automobile use, reduce parking requirements, and promote pedestrian and bicycle activity. Land uses within the TOD should strategically focus compact development, encourage a mix of housing types and commercial uses. Multifamily dwellings are encouraged. Analyze existing zoning ordinances, including the adopted TOD ordinances, and amend, as needed. • Transportation Coordination Plan: TOD station area plans shall identify pedestrian, bicycle, and automobile routes and multimodal connections. Street infrastructure improvements should examine the street design considerations outlined in the Mobility Element. TOD station area plans should encourage transit and bike commuting by addressing safety concerns and improving facilities (e.g. bike racks). In addition, TOD station area plans should address parking demand, explore opportunities for parking reductions, pricing strategies, and shared or “park-once” parking facilities. In addition, TOD station area plans should identify opportunities to coordinate a light rail system or bus rapid transit with local bus service in conjunction with Metro, and local and regional operators. • Design Guidelines: TOD station area plans shall include detailed design guidelines that will promote livability within the TOD. The standards should include well-designed streetscapes with facilities for pedestrians and linkages to adjacent neighborhoods.	Land Use Element: Goals LU 4, LU 5; Policies 1.11, 1.12, 1.13, 1.14, 1.15. Mobility Element: Goal M 5 Public Services and Facilities Element: Policy 1.5 Economic Development Element: Policies: 2.7	Lead: DRP Partners: DPW, Metro, Arts Commission, CDC	Years 1-2

	• Economic Development Plan: TOD station area plans shall contain a plan to facilitate economic development and redevelopment. TOD station area plans should include a market analysis, and strategies to encourage the activities and services needed to attract economic opportunities to the TOD and surrounding area. • Capital Improvement Plan: TOD station area plans shall identify needed public amenities and infrastructure improvements, and funding and resource allocations, for each TOD to reach its potential. Public amenities and infrastructure can include streetscapes, bikeways, shared parking structures, sewers, and other public and semi-public facilities. • Implementation Program: TOD station area plans shall detail implementation actions to be undertaken within a five-year period.			
LU-3	**Airport Land Use Compatibility Plans** Develop the County's airport land use compatibility plans.	Land Use Element: Policy LU 6.5	Lead: DRP Partner: DPW	Years 1-2
LU-4	**Economic Development Land Use Strategy** • Ensure that the County is a competitive location for business establishment and expansion, by identifying and addressing regulatory barriers. • Make the planning and entitlement process for economic development activities timely, accountable, customer-driven, and predictable. • Identify opportunities to relocate current residential uses, where feasible, that are surrounded by industrial uses in Employment Protection Districts. • Consider amendments to Title 22 to add development standards to buffer residential and industrial uses. • In key industrial areas, consider the allowance of flexibility in land uses and permitting requirements as a way to incentivize redevelopment of these areas, and establish clear guidelines for development to ensure compatibility.	Land Use Element: Policy 5.8 Air Quality Element: Policy 1.2 Economic Development Element: Goals ED 2, ED 4	Lead: DRP Partner: CDC, CEO, LAEDC	Years 1-2
LU-5	**Growth Management Program** • Explore the feasibility of implementing a program that uses infrastructure and service levels as a threshold for development and permitting; and	Land Use Element: Goal LU 3	Lead: DRP Partners: DPW	Years 1-2

	• Explore the feasibility of establishing greenbelts or other growth management strategies in urbanized areas.			
LU-6	**Civic Art Program** The County Civic Art Policy requires certain capital development projects in the County, either wholly or partially funded by the County, to dedicate one percent of the design and construction cost to public art projects on the site. Explore the expansion of this policy and support the management of the County's art collection.	Land Use Element: Goals LU 8	Lead: Arts Commission Partners: CEO	Year 1-2
LU-7	**Transfer of Development Rights Program** • Explore the feasibility of a Transfer of Development Rights (TDR) Program in order to direct growth and development away from valuable open space areas to identified infill areas. • Identify natural resource, rural and agricultural areas, including Agricultural Resource Areas (ARAs), and portions of the Significant Ecological Areas (SEAs) with high priority resources as sending areas. • Identify potential receiving areas, such as TODs and vacant and underutilized sites, in urban areas. • Consider partnering with other local jurisdictions to expand the scope of the TDR Program. Consider establishing a pilot program with the City of Santa Clarita. • Prepare an ordinance that outlines applicability and procedures for the TDR Program. • Establish or identify a County entity to coordinate the sales and transactions of TDR.	Land Use Element: Goals LU 3, LU 4	Lead: DRP Partners: CEO, DPR, Assessor, DPW	Years 3-5
LU-8	**Adaptive Reuse Ordinance** Prepare an Adaptive Reuse Ordinance within the context of, and in compliance with, existing building codes that considers the following: • The conversion of older, economically distressed or historically-significant buildings into multifamily residential developments, live-and-work units, mixed use developments, or commercial uses.	Land Use Element: Policies LU 4.1, LU 4.2 Economic Development Element: Policies: ED 4.8, ED 4.9	Lead: DRP Partner: DPW	Years 3-5

	• Incentives to expedite the rehabilitation and redevelopment of structures in older communities, and reduce vacant space in commercial areas.			
LU-9	**Art and Cultural Resources Program** Explore the feasibility of provisions for incorporating public art and other cultural amenities in new private development. Also examine the development of an in-lieu fee option.	Land Use Element: Goals LU 8	Lead: DRP Partner: Arts Commission	Year 3-5
LU-10	**Community Design Guidelines** Create design guidelines to preserve and enhance the character-defining features of all unincorporated communities.	Land Use Element: Goals LU 4, LU 5, LU 8 Conservation and Natural Resources Element: Policy C/NR 13.8	Lead: DRP Partners: DPW, Arts Commission	Years 6-10
LU-11	**Early Care and Education Program** In conjunction with the goals, strategies and objectives of the Strategic Plan for Child Care and Development for Los Angeles County, as adopted by the County Child Care Planning Committee, and the Child Care Policy Framework, as adopted by the Board of Supervisors: • Prepare an ordinance that considers the following within the unincorporated areas: – Barriers due to zoning regulations and costly permit fees. – Regulatory and other incentives, based on the conclusions and recommendations of the County's Child Care Planning Committee and other agencies in *The Economic Impact of the Early Care and Education Industry in Los Angeles County*, January 2008. These could include incentives to developers, such as fee reductions, waiver or modification to development standards, and streamlined permit review, to include child care within their projects, particularly within affordable housing developments, mixed use developments and projects that connect child care services to transit corridors. • Develop an education program that includes: – Engagement with the development community about the need/demand for child care services.	Land Use Element: Policies LU 5.5, 5.6, 5.7	Lead: CEO, Office of Child Care Partners; DRP, LACOE	Years 6-10

	• Technical assistance and training to child care providers on the development of child care facilities.			
LU-12	**Military Operation Areas Overlay Ordinance** Prepare an ordinance to identify, coordinate and assist in resolving potential land use conflicts within military operation areas (MOAs) to ensure that new development is compatible with military operations, safeguard mission training and testing requirements, support military readiness, and enhance safety for military personnel and persons on the ground. The ordinance should consider the following: • The establishment of an MOA Overlay in which proposed developments are regulated; • Provisions to ensure that all uses are compatible with military operations within the MOA Overlay; • Review procedures for all proposed development projects within the MOAs that could impact military operations, such as uses that produce electromagnetic interference, frequency spectrum interference, height obstructions, glare, smoke, dust, and steam.	Land Use Element: Goal LU 7	Lead: DRP	Years 6-10
M-1	**Living Streets** In conjunction with the Highway Plan, Bicycle Master Plan, and the Pedestrian Plan, consider the following to meet the needs of all potential users of the street: • Assessment of thoroughfares to determine if they are providing sufficient multimodal transportation options to address the California Complete Streets Act. • Standards for streets, sidewalks, bikeways, stormwater BMPs, and other road amenities to implement complete streets. • Traffic calming measures for intersections and residential streets that increase the safety and use of alternatives modes of transportation. • Updates to Title 21 to revise County street cross sections to promote safe and livable pedestrian and bicycle-oriented street design. • The transformation of impervious street surfaces into landscaped green spaces that	Mobility Element: Goal M 1 Mobility Element: Policies M 7.1, M 7.2 Conservation and Natural Resources Element: Policies C/NR 5.1, 6.1, 7.4	Lead: DPW Partner: DRP, DPH	Years 1-2

	capture stormwater runoff and let water soak into the ground as plants and soil filter pollutants. • The direction of stormwater into groundwater basins to replenish groundwater supplies. • The creation of attractive streetscapes and urban green spaces, which provide natural habitats, and help connect neighborhoods, schools, parks, and business districts. • Methods to attract and create funds and resources to maintain green streets in the long-term.			
M-2	**Parking Ordinance** • Prepare a study that assesses the applicability of parking requirements in all unincorporated areas, provides an overview of best practices, and identifies amendments, as needed. • Consider amendments to the Zoning Code to reflect the best new practices in land use and parking requirements.	Mobility Element: Policies M 4.12, M 5.2	Lead: DRP	Years 1-2
M-3	**Community Pedestrian Plans** Prepare Community Pedestrian Plans that consider the following: • The adequacy of pedestrian routes, accommodations, and the need for improvements or additional infrastructure, given the current or future context of particular neighborhoods. • Design guidelines for streets and walking paths in public and private developments. • Connectivity of pedestrian paths to and from schools, public transportation, major employment centers, shopping centers, and government buildings, in order to eliminate the gaps in the transportation system. • Special needs populations, including seniors and people with disabilities. • A framework for the development and implementation of Community Pedestrian Plans in the unincorporated areas that considers safety, design, connectivity, and the needs of all users.	Mobility Element: Goal M 1, M 2, M 3	Lead: DPW Partner: DRP	Years 1-2

	• Coordination with the development of the Planning Areas Framework Program and the TOD Program to ensure planning consistency and to promote intermodal transportation connectivity and community livability. • The identification of unincorporated communities with a substantial absence of, and need for, sidewalks. • Construction of pedestrian improvements through the annual road construction program. • The securing of grant program funding to construct pedestrian plan improvements.			
M-4	**Safe Routes to School Program** • Develop Safe Routes to School programs that address pedestrian and bicycle safety for a two-mile radius around all elementary, middle and high school facilities. • Identify low income communities and/or communities with high rates of bike/pedestrian injury and prioritize these for Safe Routes to Schools grants. • Within high priority areas, identify schools in great need of bike/pedestrian improvements. • Submit grant proposals for high priority schools/areas.	Mobility Element: Goals M 1, M 2	Lead: DPW Partner: DPH	Years 3-5
AQ-1	**Climate Action Plan** The Climate Action Plan (CAP) shall include the following components and criteria: 1. Plans and programs to reduce GHG emissions to levels that are generally consistent with specific targets for reduction of the County's current and projected 2020 GHG emissions inventory, and that are reasonably attributable to land uses within the County's unincorporated areas (including both existing and future development) and its internal government operations. Targets shall be generally consistent with reduction targets in Assembly Bill (AB) 32 (Health & Safety Code, §38500 et seq.), or other applicable local or regional enactments addressing GHG emissions, including applicable California Air Resources Board regulations adopted pursuant to AB 32. • The CAP may establish goals beyond 2020, which are generally consistent with the applicable laws and regulations and based on current science.	Air Quality Element: Goal AQ 3	Lead: DRP Partners: ISD, CEO, DPW, DPH	Adopt within 18 months

	• The CAP shall include specific and general tools and strategies to reduce the County's current and projected 2020 GHG inventory and to meet the CAP's target for GHG reductions by 2020. • The CAP shall consider GHG reduction strategies, including but not limited to: – Measures to improve energy efficiency in existing and future development; – Increased use of renewable energy, including distributed systems for residential, commercial and industrial buildings, as well as utility-scale renewable energy generation and transmission facilities; – Water conservation and efficiency measures for existing and future development, including water recycling; – Solid waste measures, including the reduction of waste generation, diversion of waste for reuse, recycling, methane capture, and potential waste to energy efforts; – Land use, and transportation measures, including the promotion of transit and transit-oriented development; pedestrian and bicycle infrastructure, alternative fuel vehicle infrastructure, and other measures; and – Urban forestry or other means of improving carbon sequestration. The CAP will also consider the effect of federal, state, and regional actions to reduce GHG emissions within the County. The CAP shall establish a schedule of implementation actions. From time to time, but at least every five years, the County shall review the CAP's land use and development reduction strategies for residential, municipal, and commercial buildings, and update the requirements to ensure that they help achieve the GHG reduction targets specified in the CAP. 2. Mechanisms to regularly review the progress of meeting emission reduction targets established by the CAP. 3. Procedures for reporting on the progress of the CAP to officials and the public. 4. Procedures for revising the CAP, as needed, to meet GHG emissions reduction targets, including environmental review of any revisions, pursuant to CEQA, as necessary. 5. Allocation of funding and staffing for CAP implementation. 6. Amendments to the General Plan to address the results of the CAP, as needed.			

AQ-2	**PACE Financing Program** Pursuant to AB 811, establish a countywide property assessed clean energy (PACE) financing program to provide municipal financing for energy and water efficiency and renewable energy projects on private property.	Air Quality Element: Policies AQ 3.2, AQ 3.3 Public Services and Facilities Element: Policy 6.5	Lead: ISD	Years 1-2
C/NR-1	**SEA Preservation Program** Coordinate with programs for the preservation of natural resources, especially programs that identify financial incentives for the acquisition of SEA lands. Focus on targeting the following implementation actions to ensure that SEAs are specifically included: • Transfer of Development Rights Program • Habitat Conservation Plan • Mitigation Land Banking Program • Open Space Land Acquisition Strategy	Conservation and Natural Resources Element: Goal C/NR 3, Policy C/NR 3.2	Lead: DRP	Years 1-2
C/NR-2	**Mitigation Land Banking Program** Study the feasibility of creating a Mitigation Land Banking Program with appropriate standards and criteria to allow eligible projects to purchase land within SEAs or other biologically sensitive areas as a mitigation measure for development in areas outside of SEAs. Encourage mitigation banking across watershed and jurisdictional boundaries to provide more opportunities for mitigation, and avoid the creation of "orphan mitigation banks."	Conservation and Natural Resources Element: Goal C/NR 3, Policy C/NR 3.2	Lead: DRP Partner: CEO, DPR, DPW, DPH, DBH, Agricultural Commissioner	Years 1-2
C/NR-3	**Oak Woodlands Conservation Management Plan Implementation** Participate in the preparation of an Oak Woodlands Conservation Management Plan, and an implementing ordinance, which shall consider the regional efforts undertaken to inform the conservation of the County's Oak Woodlands. Implement the County's Oak Woodlands Conservation Management Plan through the following actions: • Create a guidance document that outlines how development projects affecting oak woodlands will be processed, mitigated, and monitored, and provide this document	Conservation and Natural Resources Element: Goal C/NR 4, Policies C/NR 3.4, C/NR 4.1	Lead: DRP Partners: DPW, Fire	Years 1-2

	to staff, applicants, and the general public; • Account for oak woodlands in the Climate Action Plan; • Develop a process for documenting oaks that are added by a property owner ("volunteer oaks") as part of the Zoning Ordinance Update Program; and • Work with the Los Angeles Region Imagery Acquisition Consortium to lobby for the inclusion of infrared imagery acquisition that will help document existing oak woodlands.			
C/NR-4	**Scenic Resources Ordinance** • Prepare a Scenic Resources Ordinance that creates a scenic corridor, scenic viewshed, and significant ridgeline program and/or ordinance to protect the County's remaining scenic resources. • Develop countywide ridgeline protection regulations and a countywide ridgeline map.	Conservation and Natural Resources Element: Goal C/NR 13	Lead: DRP	Years 1-2
C/NR-5	**Agricultural Resource Areas Ordinance** • Prepare an Agricultural Resource Areas Ordinance in order to protect the conversion of agricultural uses into non-agricultural uses. • Analyze the feasibility of offering density bonuses and/or requiring conservation subdivisions that deed-restrict a certain percentage of the project site for open space and agricultural uses only. • Ensure compatibility between agricultural and non-agricultural land uses through buffering, development standards, and design requirements.	Conservation and Natural Resources Element: Goal C/NR 8	Lead: DRP	Years 1-2
C/NR-6	**Mineral Resource Zones Ordinance** Prepare a Mineral Resource Zones Ordinance that considers the following: • Develop regulations for development in Mineral Resource Zones to ensure that development projects are compatible with existing or potential mineral resource areas, and are designed to maintain the future development of extractive, surface mining or energy production; and	Conservation and Natural Resources Element: Goals C/NR 10, C/NR 11	Lead: DRP	Years 1-2

	• Develop standards and conditions for extractive surface mining facilities.			
C/NR-7	**Renewable Energy Ordinance** Prepare a Renewable Energy Ordinance that guides the development of renewable energy projects.	Conservation and Natural Resources Element: Goal C/NR 12	Lead: DRP	Years 1-2
C/NR-8	**Native Vegetation Conservation Ordinance** Prepare a Native Vegetation Conservation Ordinance that considers the following: • Standards for the removal of native vegetation; and • Standards for incorporating native vegetation into development projects.	Conservation and Natural Resources Element: Policies C/NR 3.1, C/NR 13.4	Lead: DRP Partners: DPW, Fire	Years 3-5
C/NR-9	**Habitat Conservation Plan** Prepare a Habitat Conservation Plan to identify and preserve the County's biologically sensitive land and natural resources, including SEAs. The Habitat Conservation Plan shall include the following: • A review of best practices in Habitat Conservation Plans in other local jurisdictions; and • A dedicated permanent source of funding for natural area conservation and preservation related efforts, including the routine study of the County's biological resources.	Conservation and Natural Resources Element: Goal C/NR 3	Lead: DRP Partner: CEO, DPR, DPW, DPH, DBH, Agricultural Commissioner	Years 3-5
C/NR-10	**Water Quality Initiatives** • Analyze and research locations of possible Flood Control District (FCD) and County discharges into Areas of Biological Significance (ASBS). • Commence investigation into the removal of FCD and County anthropogenic (non-natural) dry weather discharges into the ASBS. • Identify, attract, and create funds and resources to implement these initiatives.	Conservation and Natural Resources Element: Goals C/NR 5, C/NR 6, C/NR 7	Lead: DPW Partners: DPH, DBH	Years 3-5
C/NR-11	**Watershed and Rivers Master Plans**	Conservation and	Lead: DPW	Years 3-5

	• Participate with stakeholders in the preparation of Watershed Management Plans in response to the NPDES Municipal Separate Storm Sewer Systems (MS4) Permit by promoting recreational opportunities, enhancing aquatic habitats, and restoring natural features, where appropriate, while maintaining necessary levels of flood protection. • Identify, attract, and create funds and resources to implement these plans.	Natural Resources Element: Goal C/NR 7	Partner: DBH, DPR, CEO	
C/NR-12	**Urban Greening Program** • Work with the CDC and other stakeholders to expand community garden programs, and to identify County-owned parcels and other potential sites for community gardens. • Create and implement an urban farming program. • Initiate a County tree planting program with the goal of planting one tree for every resident in the unincorporated areas of the County. • Explore joint-use agreements for green amenities for land under major utility corridor line easements. • Amend the County Code, as applicable, to require 30 percent tree canopy coverage, at maturity, on new development to shade parking lots and structures in a manner that will reduce the urban heat island effect.	Mobility Element: Policy M 2.9 Air Quality Element: Policy AQ 4.2 Conservation and Natural Resources Element: Policy C/NR 9.4	Lead: DRP Partners: DPW, DPR, CDC, CEO, Utilities	Years 3-5
C/NR-13	**Open Space Land Acquisition Strategy** Develop an open space land acquisition strategy that incorporates collaborative partners; identifies multi-use sites; explores all means of open space acquisition and preservation; and implements legal protections, such as deed-restrictions and easements. Develop programs to improve education, awareness, and stewardship of County open spaces, natural areas and SEAs.	Conservation and Natural Resources Element: Goals C/NR 1, C/NR 2	Lead: DPR Partner: DRP, DPW	Years 6-10
C/NR-14	**Healthy and Sustainable Food Systems Ordinance** Perform an assessment of the food system in unincorporated areas of the County to identify communities that lack access to healthy foods, barriers to the development of markets that support healthy food access, and opportunities to promote greater connectivity between local food sources and communities.	Conservation and Natural Resources Element: Goals C/NR 8, C/NR 9	Lead: DRP Partner: DPH, Agricultural Commissioner	Years 6-10

	Prepare a Healthy and Sustainable Food Systems Ordinance that considers the following: • Incentives to promote healthy and sustainable farming practices, such as organic farming and hydroponics. • Identification and implementation of strategies and incentives to increase the availability of healthy and local foods in communities, especially those without access to fresh produce.			
C/NR-15	**Solar Energy Orientation Study** Prepare a Solar Energy Orientation Study that includes the following: • The feasibility of requiring the optimization of solar orientation in developments to maximize passive and active solar techniques, • Guidelines for reducing the urban heat island effect in new and existing development. • A solar energy subdivision design manual that depicts passive and active solar energy design guidelines.	Land Use Element: Policy LU 10.1 Air Quality Element: Policy AQ 4.4	Lead: DRP	Years 6-10
P/R-1	**County Parks and Recreation Master Plan** • Develop a comprehensive Los Angeles County Parks and Recreation Master Plan in collaboration with partner agencies, community groups and other stakeholders. The Master Plan will include a needs and demands analysis, in-depth gap analysis, evaluation of existing facilities and programs, asset management strategies, and implementation actions, including: • Park Inventories: Carry out repairs and improvements to existing parks based on the priority established in the park facility inventories. Access related improvements, including upgrades to comply with the Americans with Disabilities Act (ADA), are a priority. As County parks may be used to operate Mass Care Shelters in a major disaster, these shelters must be accessible to persons with disabilities. Compile an inventory of historical resources at all County parks and recreational facilities, including facilities that are listed or eligible to be included on the state and/or national Register of Historic Places. Improve and enhance educational, informational, and regulatory signage at County parks and recreational facilities, as appropriate.	Parks and Recreation Element: Goals P/R 1, P/R 2, P/R 5	Lead: DPR Partner: DRP	Years 1-2

	• New Park Opportunities: Identify properties that may be suitable for the development of new parks and expansion of existing parks. Study the possibility of developing multi-benefit parks and trails in areas, such as floodway channels, powerline alignments, major water and sewer easements, flood basins and impoundment areas, and transportation rights of way. In addition, evaluate opportunities to develop parks and recreation facilities on brownfields following appropriate clean up and remediation. • Policy Development: Draft a countywide policy to require developers of large residential projects to develop new public parks. Survey and mark the boundaries of County-owned wildlife and wildflower sanctuaries to address encroachment by adjacent property owners. Pursue local, state, and/or federal historical registration and/or museum accreditation of additional County parks and recreational facilities, where appropriate. • Land Acquisition Strategy: Develop a land acquisition strategy as a component of the Master Plan that will establish a framework for evaluating land acquisition priorities, identify funding options for acquisitions, and provide a five-year implementation plan for land acquisition. • Program Development: Expand the park volunteer program and actively recruit more youth and seniors to conduct recreation programs and services, and identify additional facilities where historical and natural resource programs may be offered. • Parks Maintenance Master Plan: Develop a Parks Maintenance Master Plan and a computerized maintenance reporting and tracking system to ensure that routine maintenance and operations of County parks and recreational facilities are carried out in a timely, efficient, and sustainable manner. The Maintenance Master Plan will establish benchmarks for all routine park maintenance tasks and future goals based on national standards. • Revenue Enhancement: Pursue a variety of initiatives to generate additional revenues for parks and recreation including: expanding the Adopt a Park program, soliciting donations and sponsorships, applying for grants, and holding more fundraising activities and events.			
P/R-2	**Trails Program** • Develop a Trails Master Plan as a component of the Parks and Recreation Master Plan in collaboration with other public, non-profit, and private organizations. As part of the Master Plan, create a GIS layer of existing and proposed city, County,	Parks and Recreation Element: Goal P/R 4	Lead: DPR Partner: DRP	Years 1-2

	regional, state, and federal trails and trail segments to identify gaps and opportunities for linkages. • Collaborate with state and federal park agencies to develop uniform trail maintenance standards and trail use regulations. • Prepare and release an official map of County multi-use trails for all users. • Design and develop a new countywide uniform trail signage program that provides identification, by creating an overall branding to unify DPR's signs, along with directional and regulatory information.			
P/R-3	**Parks Sustainability Program** Implement the County's Energy and Environmental Policy at County parks, including the following programs: • Leadership in Energy and Environmental Design (LEED) certification (or other equivalent energy certified ratings) for all new buildings of 10,000 square feet, which is the County's Board-approved policy. DPR will also pursue LEED-EB (Existing Buildings) certification for certain existing buildings on park properties by addressing whole building cleaning and maintenance issues (including chemical use), recycling programs, exterior maintenance programs, and systems upgrades. • Energy and Water Efficiency Program: This program seeks to further reduce energy and water consumption at County parks by establishing specific reduction targets and a formal reporting process to measure DPR's progress towards these targets. Recommended initiatives include the implementation of conservation monitoring practices, and energy and water efficiency projects in existing County parks. • Environmental Stewardship Program: Aims to reduce DPR's environmental footprint including, among other impacts, air pollutants that are produced through direct and indirect DPR operations, increase the use of environmentally-friendly products, and expand its recycling, composting, and mulching programs. • Sustainable Design Program: Provides for the integration of sustainable, green building technologies into the designs of park improvement and refurbishment projects, seeks to extend the life cycle or useful life of buildings on County parks, and maximize energy and water use efficiency. Establish and implement guidelines for the operation, design, and development of existing and new park facilities that will meet the needs of communities, while minimizing impacts to	Parks and Recreation Element: Goal P/R 6	Lead: DPR Partner: ISD	Years 3-5

	the natural environment. The guidelines will address a variety of issues, including but not limited to the following: • Systems design that promotes efficient use of water and energy; • Landscape design that uses drought-tolerant plants and native plants, where appropriate; • The use of construction material with recycled content; • The reduction of waste during construction and occupancy; • The use of construction materials with reduced or no release of harmful gases; • Building design and operation which promote indoor air quality and users' comfort level and productivity; • The installation of efficient plumbing fixtures to reduce potable water use and lower production of waste water; and • The purchase of sustainable cleaning materials and building maintenance products.			
N-1	**Countywide Noise Assessment Survey/County Noise Ordinance Update** • Identify major sources of noise and noise issues in the County (Countywide Assessment Survey) • Revise the County's Noise Ordinance, update the vibration standard.	Noise Element: Goal N 1	Lead: DPH Partner: DRP, DPW	Years 1-2
N-2	**Countywide Noise Mapping** If determined to be feasible, prepare a map of detailed noise contours and associated land uses within the County.	Noise Element: Goal N 1	Lead: DPH Partner: DRP	Years 6-10
N-3	**Noise Abatement Program** Create guidelines to mitigate noise issues in development projects and at a countywide level.	Noise Element: Goal N 1	Lead: DPH Partner: DRP	Years 6-10
S-1	**Wildland Fire Hazards Ordinance**	Safety Element: Goal S	Lead: DRP, Fire	Years 1-2

	Study the feasibility of preparing a Wildland Fire Hazards Ordinance that does the following: • Evaluates the feasibility of a Wildland Urban Interface Regulatory Overlay District, which includes all lands within the Very High Fire Hazard Severity Zones. This overlay would provide DRP with the ability to collaborate with the Fire Department to determine the appropriate actions and proportional levels of firefighting services that are required to further protect lives and property within the overlay district. • Develops standards to address design, siting, aspect, fuels, and proximity to hazardous topography, and tools to analyze the various hazards that contribute to wildfire severity; • Evaluates current procedures and regulations that are applicable to Very High Fire Hazard Severity Zones, including disaster routes, road widths, clearances around structures, and water supplies; and • Identifies possible improvements and amend the County Code accordingly for projects in Very High Fire Hazard Severity Zones.	3	Partners: DPW, CEO, County Counsel, Agricultural Commissioner, U.S. Forest Service	
S-2	**Debris Management Plan** Prepare a Debris Management Plan to address the mass removal of debris that could result from a major disaster.	Safety Element: Goal S 4	Lead: DPW and OEM	Years 3-5
S-3	**At-Risk Properties Hazard Fund and Strategies** • Identify at-risk properties in hazard areas, such as those on FEMA's repetitive loss properties list. • Research available funding sources to retrofit existing structures that are located in hazard areas.	Safety Element: Goals S 1, S 2, S 3	Lead: DPW Partner: CEO, DRP, DPH	Years 6-10
S-4	**Floodplain Management Plan Implementation and Update** • Distribute and advocate the County's Floodplain Management Plan, which focuses on flood hazard mitigation for repetitive loss properties in the County's unincorporated areas. • Update the Floodplain Management Plan on its five-year cycle to address any additional or reduction of repetitive loss properties.	Safety Element: Goal S 2	Lead: DPW	Ongoing

PS/F-1	**Planning Area Capital Improvement Plans** DRP and DPW to jointly secure sources of funding and set priorities for preparing studies to assess infrastructure needs for the 11 Planning Areas. Once funding has been secured and priorities have been set, prepare a Capital Improvement Plan for each of the 11 Planning Areas (see also Planning Areas Framework Program). Each Capital Improvement Plan shall include the following: • Sewer Capacity Study; Transportation System Capacity Study; Waste Management Study; Stormwater System Study; Public Water System Study; list of necessary infrastructure improvements; Implementation Program; and Financing Plan.	Mobility Element: Goal M 3 Public Services and Facilities Element: Goal PS/F 1 Economic Development Element: Goal ED 3	Lead: DPW Partner: DRP	Years 1-2
PS/F-2	**Water Conservation Ordinance** • Continually review and update the County's water conservation ordinance with appropriate enforcement procedures, such as instituting a water conservation hotline and other measures. • Study the feasibility of instituting a conservation water rate structure for the Los Angeles County Waterworks Districts that supply water to the unincorporated areas.	Public Services and Facilities Element: Goals PS/F 2, P/SF 3	Lead: DPW Partner: ISD	Years 1-2
PS/F-3	**Agricultural Water Conservation Program** Study the feasibility of creating an agricultural water conservation program, which will increase crop water use efficiency, and reduce water use through conservation and technological advancement in water management.		Lead: DRP Partner: Agricultural Commissioner	Years 3-5
ED-1	**Economic Development Incentives Program** • Develop business incentives for infill development, brownfield remediation, and alternative energy production. • Identify federal, state, and local resources to create economic and regulatory incentives in order to attract targeted industries and to promote sustainable development policies. • Create incentives and programs, and seek and apply for grant funding to rehabilitate and upgrade industrial districts.	Economic Development Element: Goal ED 1	Lead: CDC Partner: DRP, CEO, LAEDC	Years 1-2

	• Expand and renew the County's incentive zones and districts to better address the need for economic development throughout the County's industrial and commercial areas. • Incentivize services and employment opportunities to revitalize economically distressed areas.			
ED-2	**Economic Development Outreach and Coordination Initiative** • Collect information and develop a benchmarking mechanism on County economic and business trends and conditions, in conjunction with LAEDC, real estate professionals, site locator service providers, and economic development professionals. Determine needs and respond to changes using this information. • Create a web site and related materials that guide developers and the business community through the County planning and permitting process, include information on policies that facilitate infill development and smart growth, and regularly update site inventory of public land that is available for economic investment and redevelopment opportunities. • Facilitate sector-based training initiatives in targeted industries, in conjunction with the LAEDC and other partners, such as the California Transportation and Logistics Institute. Inventory existing workforce development programs throughout the County and promote them via the County and LAEDC web sites. • Participate in regional collaborative efforts around economic development between business and universities, colleges, and private training institutes and service providers. • Develop a promotional campaign that targets foreign-owned enterprises in specific industries in order to attract them to establish operations in the County (Foreign Direct Investment (FDI) Program). Collaborate with entities, such as the World Trade Association.	Economic Development Element: Goal ED 6	Lead: CDC Partners: CEO, DRP, LAEDC	Years 6-10

Part IV: Goals and Policies Summary

Land Use Element

Goal LU 1: A General Plan that serves as the constitution for development, and a Land Use Policy Map that implements the General Plan's Goals, Policies and Guiding Principles.	
Topic	**Policy**
General Plan Amendments	Policy LU 1.1: Support comprehensive updates to the General Plan, area plans, community plans, coastal land use plans and specific plans.
	Policy LU 1.2: Discourage project-specific amendments to the text of the General Plan, including but not limited to the Guiding Principles, Goals, Policies and Implementation Programs.
	Policy LU 1.3: In the review of project-specific amendments to the General Plan, ensure that they support the Guiding Principles of the General Plan: • Smart Growth; • Sufficient Community Services and Infrastructure; • A Strong and Diversified Economy; • Environmental Resource Management; and/or, • Healthy, Livable and Equitable Communities.
	Policy LU 1.4: In the review of a project-specific amendment(s) to the General Plan, ensure that the project-specific amendment(s): • Is consistent with the goals and policies of the General Plan; • Shall benefit the public interest and is necessary to realize an unmet local or regional need.
	Policy LU 1.5: In the review of a project-specific amendment(s) to increase residential densities in Rural Preserve Areas, ensure that the project-specific amendment(s): • Does not result in the expanded capacity of the roadway network to facilitate future growth; • Does not result in the expansion of service facilities to facilitate future growth; and • Does not result in a significant reduction of services, or a significant increase in costs to the County.
	Policy LU 1.6: In the review of a project-specific amendment(s) to convert OS-C designated lands to other land use designations, ensure that the project-specific amendment(s) does not contribute to the overall loss of open space that protects water quality, provides natural habitats, and contributes to improved air quality.

	Policy LU 1.7: In the review of a project-specific amendment(s) to convert lands within the EPD Overlay to non-industrial land use designations, ensure that the project-specific amendment(s): • Is located on a parcel that adjoins a parcel with a comparable use, at a comparable scale and intensity; • Will not negatively impact the productivity of neighboring industrial activities; • Is necessary to promote the economic value and the long-term viability of the site; and • Will not subject future residents to potential noxious impacts, such as noise, odors or dust or pose significant health and safety risks.
	Policy LU 1.8: In the review of a project-specific amendment(s) to convert lands within the ARAs to land use designations other than RL 10, RL20 and RL40, ensure that the project-specific amendment(s): • Is located on a parcel that adjoins another parcel with a comparable use, at a comparable scale and intensity; and • Will not negatively impact the productivity of neighboring agricultural activities.
	Policy LU 1.9: Limit the amendment of each mandatory element of the General Plan to four times per calendar year, unless otherwise specified in Section 65358 of the California Government Code.
	Policy LU 1.10: Allow adjustments to the General Plan Land Use Policy Map to follow an adjusted Highway Plan alignment without a General Plan amendment, when the following findings can be met: • The adjustment is necessitated by an adjusted Highway Plan alignment that was approved by the Los Angeles County Interdepartmental Engineering Committee (IEC) in a duly noticed public meeting; • The adjustment maintains the basic relationship between land use types; and • The adjustment is consistent with the General Plan.
Specific Plans	Policy LU 1.11: Require the intensity, density, and uses allowed in a new specific plan to be determined using the General Plan, including the Land Use Policy Map and Land Use Legend.
	Policy LU 1.12: Require a General Plan amendment for any deviation from the intensities, densities, and uses allowed by the General Plan (to apply the appropriate designation from the General Plan Land Use Legend), unless allowances for flexibility are specified in the specific plan.
	Policy LU 1.13: Require development regulations and zoning for new specific plans to be consistent with their corresponding General Plan land use designation.
	Policy LU 1.14: Allow specific plans to include implementation procedures for flexibility, such as development phasing, and redistribution of intensities and uses, as appropriate.
	Policy LU 1.15: Require a specific plan amendment for any deviation from the procedures and policies established by a specific plan.

Goal LU 2: Community-based planning efforts that implement the General Plan and incorporate public input, and regional and community level collaboration.	
Topic	**Policy**
Regional and Community-Based Planning Initiatives	Policy LU 2.1: Ensure that all community-based plans are consistent with the General Plan.
	Policy LU 2.2: Ensure broad outreach, public participation, and opportunities for community input in community-based planning efforts.
	Policy LU 2.3: Consult with and ensure that applicable County departments, adjacent cities and other stakeholders are involved in community-based planning efforts.
	Policy LU 2.4: Coordinate with other local jurisdictions to develop compatible land uses.
	Policy LU 2.5: Support and actively participate in inter-jurisdictional and regional planning efforts to help inform community-based planning efforts.
	Policy LU 2.6: Consider the role of arts and culture in community-based planning efforts to celebrate and enhance community character.
	Policy LU 2.7: Set priorities for Planning Area-specific issues, including transportation, housing, open space, and public safety as part of community-based planning efforts.
	Policy LU 2.8: Coordinate with the Los Angeles County Department of Public Works and other infrastructure providers to analyze and assess infrastructure improvements that are necessary for plan implementation.
	Policy LU 2.9: Utilize the General Plan Land Use Legend and the Hazard, Environmental and Resource Constraints Model to inform land use policy maps.
	Policy LU 2.10: Ensure consistency between land use policy and zoning by undergoing a comprehensive zoning consistency analysis that includes zoning map changes and zoning code amendments, as needed.
	Policy LU 2.11: Update community-based plans on a regular basis.
Goal LU 3: A development pattern that discourages sprawl and protects and conserves greenfield areas, natural resources, and SEAs.	
Topic	**Policy**
Growth Management	Policy LU 3.1: Protect and conserve greenfield areas, natural resources, and SEAs.
	Policy LU 3.2: Minimize sprawl and direct population growth and residential density to urbanized areas to reduce vehicle miles traveled (VMTs).

	Policy LU 3.3: Discourage development in areas with environmental resources and/or safety hazards.
	Policy LU 3.4: Discourage development in greenfield areas where infrastructure and public services do not exist.
Goal LU 4: Infill development and redevelopment that strengthens and enhances communities.	
Topic	**Policy**
Infill Development	Policy LU 4.1: Encourage infill development on vacant, underutilized, and/or brownfield sites.
	Policy LU 4.2: Encourage the adaptive reuse of underutilized structures and the revitalization of older, economically distressed neighborhoods.
	Policy LU 4.3: Encourage transit-oriented development with the appropriate residential density along transit corridors and within station areas.
	Policy LU 4.4: Encourage mixed use development along major commercial corridors.
Goal LU 5: Vibrant, livable and healthy communities with a mix of land uses, services and amenities.	
Topic	**Policy**
Residential Uses	Policy LU 5.1: Encourage a mix of residential land use designations and development regulations that accommodate various densities, building types and styles.
	Policy LU 5.2: Encourage compact development and increased residential density, where appropriate.
Community-Serving Uses	Policy LU 5.3: Encourage a diversity of commercial and retail services, and public facilities at various scales to meet regional and local needs.
	Policy LU 5.4: Support a mix of land uses that promote bicycling and walking, and reduce VMTs.
	Policy LU 5.5: Encourage community-serving uses, such as early care and education facilities, grocery stores, farmers' markets, restaurants, and banks to locate near employment centers.
	Policy LU 5.6: Ensure that all households in the County have access to a sufficient supply of quality early care and education and supervised school-age enrichment options for children from birth to 13.
	Policy LU 5.7: Reduce regulatory and other barriers to early care and education facilities.
Employment Generating Uses	Policy LU 5.8: Preserve industrially designated land for intensive, employment-based uses.

	Policy LU 5.9: Encourage employment opportunities and housing to be developed in proximity to one another.
Goal LU 6: Compatible land uses that complement neighborhood character and the natural environment.	
Topic	**Policy**
Land Use Compatibility	Policy LU 6.1: Reduce and mitigate the impacts of incompatible land uses where feasible using buffers and other design techniques.
	Policy LU 6.2: Protect industrial parks and districts from incompatible uses.
	Policy LU 6.3: Protect public and semi public facilities, including but not limited to major landfills, solid waste disposal sites, and mineral resource extraction facilities from incompatible uses.
	Policy LU 6.4: Ensure land use compatibility in areas adjacent to military installations and where military operations, testing, and training activities occur.
	Policy LU 6.5: Ensure airport operation compatibility with adjacent land uses through airport land use plans.
Rural Character	Policy LU 6.6: Protect rural communities from the encroachment of incompatible development.
	Policy LU 6.7: Encourage land uses and developments that are compatible with the natural environment and landscape.
	Policy LU 6.8: Encourage development in rural areas that is compatible with rural community character, preserves open space, conserves agricultural land, and promotes efficiencies in services and infrastructure.
Goal LU 7: Land uses that are compatible with military operations and military readiness, and enhance safety for military personnel and persons on the ground.	
Topic	**Policy**
Military Compatible Uses	Policy LU 7.1: Facilitate the early exchange of project-related information that is pertinent to military operations with the military for proposed actions within MOAs and within 1,000 ft of a military installation.

	Policy LU 7.2: Evaluate the potential impact of new structures within MOAs to ensure the safety of the residents on the ground and continued viability of military operations within the MOAs. In the review of development within MOAs, consider the following: • Uses that produce electromagnetic and frequency spectrum interference, which could impact military operations; • Uses that release into the air any substance such as steam, dust and smoke, which impair pilot visibility; • Uses that produce light emissions, glare or distracting lights, which could interfere with pilot vision or be mistaken for airfield lighting; • Uses that physically obstruct any portion of the MOA due to relative height above ground level; and • Uses that produce electromagnetic and frequency spectrum interference, and that could impact military operations.
Goal LU 8: Well-designed and healthy places that support a diversity of built environments.	
Topic	**Policy**
Community Design	Policy LU 8.1: Encourage community outreach and stakeholder agency input early and often in the design of projects.
	Policy LU 8.2: Design development adjacent to natural features in a sensitive manner to complement the natural environment.
	Policy LU 8.3: Consider the built environment of the surrounding area in the design and scale of new or remodeled buildings, architectural styles, and reflect appropriate features such as massing, materials, color, detailing or ornament.
	Policy LU 8.4: Promote environmentally sensitive and sustainable design.
	Policy LU 8.5: Encourage the use of distinctive landscaping, signage and other features to define the unique character of districts, neighborhoods or communities, and engender community identity, pride and community interaction.
	Policy LU 8.6: Encourage pedestrian activity through the following: • Designing the main entrance of buildings to front the street; • Incorporating landscaping features; • Limiting masonry walls and parking lots along commercial corridors and other public spaces; • Incorporating street furniture, signage, and public events and activities; and • Using wayfinding strategies to highlight community points of interest.
	Policy LU 8.7: Promote public spaces, such as plazas that enhance the pedestrian environment, and continuity along commercial corridors with transit or active pedestrian activities.
	Policy LU 8.8: Promote public art and cultural amenities that support community values and enhance community context.

	Policy LU 8.9: Encourage land uses and design that stimulate positive and productive human relations and foster the achievement of community goals.
	Policy LU 8.10: Promote architecturally distinctive buildings and focal points at prominent locations, such as major commercial intersections and near transit stations or open spaces.
	Policy LU 8.11: Facilitate the use of streets as public space for activities that promote civic engagement, such as farmers' markets, parades, etc.
	Policy LU 8.12: Discourage gated entry subdivisions ("gated communities") to improve neighborhood access and circulation, improve emergency access, and encourage social cohesion.
	Policy LU 8.13: Discourage flag lot subdivisions unless designed to be compatible with the existing neighborhood character.
Goal LU 9: Land use patterns and community infrastructure that promote health and wellness.	
Topic	**Policy**
Community Wellness	Policy LU 9.1: Promote community health for all neighborhoods.
	Policy LU 9.2: Direct resources to areas that lack amenities, such as transit, clean air, grocery stores, bikeways, parks, and other components of a healthy community.
	Policy LU 9.3: Encourage patterns of development, such as sidewalks and bikeways that promote physical activity.
	Policy LU 9.4: Encourage farmers' markets, community gardens, and proximity to other local food sources that provide access to healthful and nutritious foods.
	Policy LU 9.5: Encourage patterns of development that increase convenient, safe access to healthy foods, especially fresh produce, in all neighborhoods.
Goal LU 10: Subdivisions that utilize sustainable design techniques.	
Topic	**Policy**
Sustainable Subdivisions	Policy LU 10.1: Encourage subdivisions to utilize sustainable design practices, such as maximizing energy efficiency through lot configuration, maximizing interconnectivity, and utilizing public transit.
	Policy LU 10.2: Prohibit the use of private yards as required open space within subdivisions unless such area includes active recreation or outdoor activity areas dedicated for common and/or public use.
	Policy LU 10.3: Ensure that subdivisions in VHFHSZs site open space to minimize fire risks from flammable vegetation.

	Policy LU 10.4: Encourage the use of density controlled design techniques to conserve natural resource areas—particularly SEAs—and agricultural areas.
	Policy LU 10.5: Encourage sustainable subdivisions that meet Leadership in Energy and Environmental Design–Neighborhood Development (LEED-ND) or other green neighborhood standards.

Mobility Element

Goal M 1: Street designs that incorporate the needs of all users.	
Topic	**Policy**
Complete Streets	Policy M 1.1: Provide for the accommodation of all users, including pedestrians, motorists, bicyclists, equestrians, users of public transit, seniors, children, and persons with disabilities when requiring or planning for new, or retrofitting existing, roads and streets.
	Policy M 1.2: Ensure that streets are safe for sensitive users, such as seniors and children.
	Policy M 1.3: Realign capital improvement programs and funding streams to ensure the implementation of Complete Streets.
	Policy M 1.4: Utilize industry standard rating systems, such as the Institute for Sustainable Infrastructure (ISI) Rating System, to assess sustainability and effectiveness of street systems for all users.
Goal M 2: Interconnected and safe bicycle- and pedestrian-friendly streets, sidewalks, paths and trails that promote active transportation and transit use.	
Topic	**Policy**
Active Transportation Design	Policy M 2.1: Design streets that accommodate pedestrians and bicyclists, and reduce motor vehicle accidents through a context sensitive process that addresses the unique characteristics of urban, suburban, and rural communities.
	Policy M 2.2: Accommodate pedestrians and bicyclists, and reduce motor vehicle accidents by implementing the following street designs, whenever appropriate and feasible: • Lane width reductions to 10 or 11 feet in low speed environments with a low volume of heavy vehicles. Wider lanes may still be required for lanes adjacent to the curb, and where buses and trucks are expected. • Low-speed designs. • Access management practices developed through a community-driven process. • Back in angle parking at locations that have available roadway width and bike lanes, where appropriate.

	Policy M 2.3: Accommodate pedestrians and bicyclists, and reduce motor vehicle accidents by implementing the following intersection designs, whenever appropriate and feasible: • Right angle intersections that reduce intersection skew. • Smaller corner radii to reduce crossing distances and slow turning vehicles. • Traffic calming measures, such as bulb-outs, sharrows, medians, roundabouts, and narrowing or reducing the number of lanes (road diets) on streets. • Gutter placement between parking and bikeways. • Crossings at all legs of an intersection. • Shorter crossing distances for pedestrians. • Right-turn channelization islands. Sharper angles of slip lanes may also be utilized. • Signal progression at speeds that support the target speed of the corridor. • Pedestrian push buttons when pedestrian signals are not automatically recalled. • Walk interval on recall for short crossings. • Left-turn phasing. • Prohibit right turn on red. • Signs to remind drivers to yield to pedestrians.

	Policy M 2.4: Ensure a comfortable walking environment for pedestrians by implementing the following, whenever appropriate and feasible: • Designs that limit dead-end streets and dead-end sidewalks. • Adequate lighting on pedestrian paths, particularly around building entrances and exits, and transit stops. • Designs for curb ramps, which are pedestrian friendly and compliant with the American Disability Act (ADA). • Perpendicular curb ramps at locations where it is feasible to reduce the curb return radius. • Pedestrian walking speed based on the latest standard for signal timing. Slower speeds should be used when appropriate (i.e., near senior housing, rehabilitation centers, etc.) • Approved devices to extend the pedestrian clearance times at signalized intersections. • Accessible Pedestrian Signals (APS) at signalized intersections. • Pedestrian crossings at signalized intersections without double or triple left or right turn lanes. • Pedestrian signal heads, countdown pedestrian heads, pedestrian phasing and leading pedestrian intervals at signalized intersections. • Exclusive pedestrian phases (pedestrian scrambles) where turning volume conflicts with very high pedestrian volumes. • Advance stop lines at signalized intersections. • Pedestrian Hybrid Beacons. • Medians or crossing islands to divide long crossings. • High visibility crosswalks. • Pedestrian signage. • Advanced yield lines for uncontrolled crosswalks. • Rectangular Rapid Flashing Beacon or other similar approved technology at locations of high pedestrian traffic. • Safe and convenient crossing locations at transit stations and transit stops located at safe intersections.

	Policy M 2.5: Ensure a comfortable bicycling environment by implementing the following, whenever appropriate and feasible: • Bicycle signal heads at intersections. • Bicycle signal detection at all signalized intersections. • Wayfinding signage. • Road diet techniques, such as lane narrowing, lane removal, and parking removal/restriction. • Appropriate lighting on all bikeways, including those in rural areas. • Designs, or other similar features, such as: shoulder bikeways, cycle tracks, contra flow bike lanes, shared use paths, buffered bike lanes, raised bike lanes, and bicycle boulevards.
	Policy M. 2.6: Encourage the implementation of future designs concepts that promote active transportation, whenever available and feasible.
	Policy M 2.7: Require sidewalks and bikeways to accommodate the existing and projected volume of pedestrian and bicycle activity, considering both the paved width and the unobstructed width available for walking.
	Policy M 2.8: Connect pedestrian and bicycle paths to schools, public transportation, major employment centers, shopping centers, government buildings, residential neighborhoods, and other destinations.
	Policy M 2.9: Encourage the planting of trees along streets and other forms of landscaping to enliven streetscapes by blending natural features with built features.
	Policy M 2.10: Encourage the provision of amenities, such as benches, shelters, secure bicycle storage, and street furniture, and comfortable, safe waiting areas near transit stops.
	Policy M 2.11: Promote the continuity of streets and sidewalks through design features, such as limiting mid-block curb cuts, encouraging access through side streets or alleys, and promoting shorter block lengths.
Goal M 3: Streets that incorporate innovative designs.	
Topic	**Policy**
Innovative Street Design	Policy M 3.1: Facilitate safe roadway designs that protect users, preserve state and federal funding, and provide reasonable protection from liability.
	Policy M 3.2: Consider innovative designs when part of an accepted standard, or when properly vetted through an appropriate engineering/design review, in compliance with all state and federal laws.

	Policy M 3.3: Complete the following studies prior to the implementation of innovative design concepts: • An analysis of the current and future context of the community and neighborhood in which they are proposed; • A balanced assessment of the needs of all users and travel modes (i.e., pedestrian, bicycle, transit, vehicular, and equestrian, where appropriate); • A technical assessment of the operational and safety characteristics for each mode; and • A consistency check with transportation network plans, including the Highway Plan, Bicycle Master Plan, and Community Pedestrian Plans.
	Policy M 3.4: Support legislation that minimizes or eliminates liability associated with the implementation of innovative street designs that accommodate all users.
Goal M 4: An efficient multimodal transportation system that serves the needs of all County residents.	
Topic	**Policy**
Transit Efficiency, Multimodal Transportation	Policy M 4.1: Expand transportation options throughout the County that reduce automobile dependence.
	Policy M 4.2: Expand shuttle services throughout the County to connect major transit centers to community points of interest.
	Policy M 4.3: Maintain transit services within the unincorporated areas that are affordable, timely, cost-effective, and responsive to growth patterns and community input.
	Policy M 4.4: Ensure expanded mobility and increase transit access for underserved transit users, such as seniors, students, low income households, and persons with disabilities.
	Policy M 4.5: Encourage continuous, direct routes through a connected system of streets, with small blocks and minimal dead ends (cul-de-sacs).
	Policy M 4.6: Support alternative LOS standards that account for a multimodal transportation system.
	Policy M 4.7: Provide and maintain appropriate signage for streets, roads and transit.
	Policy M 4.8: Ensure the participation of all potentially affected communities in the transportation planning and decision-making process.
	Policy M 4.9: Support the linkage of regional and community-level transportation systems, including multimodal networks.
	Policy M 4.10: Improve the efficiency of the public transportation system with bus lanes, signal prioritization, and connections to the larger regional transportation network.
	Policy M 4.11: Work with adjacent jurisdictions to ensure connectivity and the creation of an integrated regional network.

Travel Demand Management	Policy M 4.12: Reduce vehicle trips through the use of mobility management practices, such as the reduction of parking requirements, employer/institution based transit passes, regional carpooling programs, and telecommuting.
	Policy M 4.13: Promote mobility management practices, including incentives to change transit behavior and using technologies, to reduce VMTs.
Goal M 5: Land use planning and transportation management that facilitates the use of transit.	
Topic	**Policy**
Land Use and Transportation	Policy M 5.1: Facilitate transit-oriented land uses and pedestrian-oriented design to encourage transit ridership.
	Policy M 5.2: Implement parking strategies that facilitate transit use and reduce automobile dependence.
	Policy M 5.3: Maintain transportation right-of-way corridors for future transportation uses, including bikeways, or new passenger rail or bus services.
Transportation Funding	Policy M 5.4: Support dedicated funding streams for the construction, maintenance and improvement of roadway, public transit, pedestrian and bicycle transportation systems.
	Policy M 5.5: Encourage financing programs, such as congestion pricing, bonding and increasing parking costs, to implement transportation systems and facilities.
Goal M 6: The safe and efficient movement of goods.	
Topic	**Policy**
Goods Movement	Policy M 6.1: Maximize aviation and port system efficiencies for the movement of people, goods and services.
	Policy M 6.2: Support the modernization of the County's aviation systems, including its principal airport, LAX.
	Policy M 6.3: Designate official truck routes to minimize the impacts of truck traffic on residential neighborhoods and other sensitive land uses.
	Policy M 6.4: Minimize noise and other impacts of goods movement, truck traffic, deliveries, and staging in residential and mixed-use neighborhoods.
	Policy M 6.5: Support infrastructure improvements and the use of emerging technologies that facilitate the clearance, timely movement, and security of trade.
	Policy M 6.6: Preserve property for planned roadway and railroad rights-of-way, marine and air terminals, and other needed transportation facilities.
Goal M 7: Transportation networks that minimizes negative impacts to the environment and communities.	
Topic	**Policy**

Environmentally Sensitive Transportation Design	Policy M 7.1: Encourage the use of natural systems to treat stormwater and rainwater runoff.
	Policy M 7.2: Minimize roadway runoff through the use of permeable surface materials, such as porous asphalt and concrete materials, wherever feasible.
	Policy M 7.3: Encourage the creation of wildlife underpasses and overpasses, fencing, signage, and other measures to minimize impacts to wildlife at junctures where transit infrastructure passes through sensitive habitats.
	Policy M 7.4: Encourage the use of sustainable transportation facilities and infrastructure technologies, such as liquid and compressed natural gas, and hydrogen gas stations, ITS, and electric car plug-in ports.
	Policy M 7.5: Where the creation of new roadways or other transportation systems is necessary in areas with sensitive habitats, particularly SEAs, use best practice design to encourage species passage and minimize genetic diversity losses when new transportation infrastructure cannot avoid crossing through undisturbed natural areas.
Rural Streets	Policy M 7.6: In rural areas, require rural highway and street standards that minimize the width of paving and the placement of curbs, gutters, sidewalks, street lighting, and traffic signals, except where necessary for public safety.

Air Quality Element

Goal AQ 1: Protection from exposure to harmful air pollutants.	
Topic	**Policy**
Air Pollutants	Policy AQ 1.1: Encourage new residential, commercial, and industrial development to reduce impacts from air pollution sources.
	Policy AQ 1.2: Minimize the health risks to people from industrial toxic or hazardous air pollutant emissions.
	Policy AQ 1.3: Encourage the use of low or no volatile organic compound (VOC) emitting materials.
	Policy AQ 1.4: Reduce particulate emissions from construction, grading, excavation, and demolition to the maximum extent feasible.
	Policy AQ 1.5: Work with local air quality management districts to publicize air quality warnings, and to track potential sources of airborne toxics from identified mobile and stationary sources.
Goal AQ 2: The reduction of air pollution and mobile source emissions through coordinated land use, transportation and air quality planning.	
Topic	**Policy**

Air Quality, Land Use, and Transportation	Policy AQ 2.1: Encourage the application of design and other appropriate measures when siting sensitive uses, such as residences, schools, senior centers, daycare centers, medical facilities, or parks with active recreational facilities within proximity to major sources of air pollution, such as freeways.
	Policy AQ 2.2: Require all access roads, driveways, and parking areas that serve new commercial and industrial development to be constructed with materials that minimize particulate emissions and are appropriate to the scale and intensity of use.
	Policy AQ 2.3: Require the use of zero, low-emission, biodiesel or hybrid vehicles in the County motor pool.
	Policy AQ 2.4: Reduce emissions from traffic congestion and vehicle trips through the support of alternative modes of transportation.
	Policy AQ 2.5: Regulate the siting and development of land uses that encourage cars and trucks to idle, such as drive-through establishments.
	Policy AQ 2.6: Participate in, and effectively coordinate the development and implementation of community and regional air quality programs.
Goal AQ 3: Implementation of plans and programs to address the impacts of climate change.	
Topic	**Policy**
Climate Change	Policy AQ 3.1: Prepare a climate action plan for the unincorporated areas that includes an inventory of greenhouse gas emissions; an action plan for how the County will meet its GHG emission targets; and the mechanism for tracking and evaluating its progress toward meeting the County's goal.
	Policy AQ 3.2: Reduce energy consumption in County operations by 20 percent by 2015.
	Policy AQ 3.3: Reduce water consumption in County operations.
	Policy AQ 3.4: Participate in local, regional and state programs to reduce greenhouse gas emissions in the County.
	Policy AQ 3.5: Encourage maximum amounts of energy conservation in new development and municipal operations.
Goal AQ 4: Energy efficiency and conservation through development and design techniques.	
Topic	**Policy**
Energy Efficient Development	Policy AQ 4.1: Encourage new development to employ sustainable energy practices, such as utilizing passive solar techniques and/or active solar technologies.
	Policy AQ 4.2: Support the design of developments that provide substantial tree canopy cover, and utilize light colored paving materials and reflective roofing materials to reduce the urban heat island effect.

	Policy AQ 4.3: Require green building policies, low impact development, and drought tolerant landscaping in all development activities.
	Policy AQ 4.4: Encourage development to optimize the solar orientation of buildings to maximize passive and active solar design techniques.

Conservation and Natural Resources Element

Goal C/NR 1: Open space areas that meet the diverse needs of the County.	
Topic	**Policy**
Open Space Acquisition	Policy C/NR 1.1: Support the acquisition of new available open space areas throughout the County.
	Policy C/NR 1.2: Create an established network of dedicated open space areas that provide regional connectivity, between the southwestern extent of the Tehachapi Mountains to the Santa Monica Mountains, and from the southwestern extent of the Mojave Desert to the Puente Chino Hills.
	Policy C/NR 1.3: Increase and improve access to dedicated open space and natural areas for all users.
	Policy C/NR 1.4: Prioritize open space acquisitions for available lands that contain unique ecological features, streams, watersheds, woodlands, grasslands, and/or offer linkages that enhance wildlife movements and genetic diversity.
Open Space Preservation and Conservation of Natural Resource Areas	Policy C/NR 1.5: Implement programs and policies that enforce the responsible stewardship and preservation of dedicated open space areas throughout the County.
	Policy C/NR 1.6: Protect and conserve natural resources, natural areas, and open spaces on park properties.
Goal C/NR 2: Effective collaboration in open space resource preservation.	
Topic	**Policy**
Open Space Collaboration and Financing	Policy C/NR 2.1: Establish new revenue generating mechanisms to leverage County resources to enhance and acquire available open space and natural areas in the County.
	Policy C/NR 2.2: Encourage the development of multi-benefit dedicated open spaces throughout the County.
	Policy C/NR 2.3: Improve understanding and appreciation for natural areas through preservation programs and educational facilities.
	Policy C/NR 2.4: Collaborate with public, non-profit, and private organizations to acquire and preserve available open space lands.

Goal C/NR 3: Permanent, sustainable preservation of the County's genetically and physically diverse biological resources and ecological systems including; habitat linkages, forests, coastal zone, riparian habitats, streambeds, wetlands, woodlands and SEAs.	
Topic	**Policy**
Protection of Biological Resources	Policy C/NR 3.1: Conserve and enhance the ecological function of the County's diverse natural habitats and biological resources.
	Policy C/OS 3.2: Create and administer innovative County programs incentivizing the permanent dedication of SEAs and other important biological resources as open space areas.
	Policy C/NR 3.3: Restore significant riparian resources such as degraded streams, rivers, wetlands to maintain ecological function.
	Policy C/NR 3.4: Conserve and sustainably manage the County's forests and woodlands.
	Policy C/NR 3.5: Ensure compatibility of development in the national forests in conjunction with the U.S. Forest Service Land and Resource Management Plan.
	Policy C/NR 3.6: Assist state and federal agencies with the preservation of special status species, their associated habitat and wildlife movement corridors through the administration of the SEAs and other programs.
	Policy C/NR 3.7: Participate in inter-jurisdictional collaborative strategies that protect biological resources.
Site Sensitive Design	Policy C/NR 3.8: Discourage development in areas with identified significant biological resources, such as SEAs.
	Policy C/NR 3.9: Consider the following in the design of a project that is located within an SEA, to the greatest extent feasible: • Preservation of biologically valuable habitats, species, wildlife corridors and linkages; • Protection of sensitive resources on the site within open space; • Protection of water sources from hydromodification to maintain the ecological function of riparian habitats; and • Placement of the development in the least biologically sensitive areas on the site.
	Policy C/NR 3.10: Require that development mitigate 'in-kind' for unavoidable impacts on biologically sensitive areas within the County, and permanently preserve mitigation sites.
	Policy C/NR 3.11: Discourage new development from increasing the urban-wildland interface in undisturbed natural areas through compact design.
	Policy C/NR 3.12: Discourage development to maintain and support the preservation of riparian habitats, streambeds, and wetlands in a natural state, unaltered by grading, fill, or diversion activities.

Goal C/NR 4: Preserved and restored oak woodlands that are conserved in perpetuity with no net loss of existing woodlands.	
Topic	**Policy**
Oak Woodland Preservation	Policy C/NR 4.1: Conserve and sustainably manage the County's oak woodlands.
Goal C/NR 5: Protected and useable local surface water resources.	
Topic	**Policy**
Surface Water Protection	Policy C/NR 5.1: Support the LID philosophy, which seeks to plan and design public and private development with hydrologic sensitivity, including limiting the straightening and channelizing of natural flow paths, removal of vegetative cover, compaction of soils, and distribution of naturalistic BMPs at a parcel-level scale.
	Policy C/NR 5.2: Require compliance by all County departments with adopted Municipal Separate Storm Sewer System (MS4), General Construction, and point source NPDES permits.
	Policy C/NR 5.3: Actively engage with stakeholders in the formulation and implementation of surface water preservation and restoration plans, including plans to improve impaired surface water bodies by retrofitting tributary watersheds with LID types of BMPs.
	Policy C/NR 5.4: Actively engage in complying with all approved TDML implementation and compliance plans for impaired water bodies.
	Policy C/NR 5.5: Manage the placement and use of septic systems in order to protect nearby surface water bodies.
	Policy C/NR 5.6: Minimize point and non-point source water pollution.
Goal C/NR 6: Protected and usable local groundwater resources.	
Topic	**Policy**
Groundwater Protection	Policy C/NR 6.1: Support the LID philosophy, which incorporates distributed, post-construction parcel-level stormwater infiltration as part of new development.
	Policy C/NR 6.2: Protect natural groundwater recharge areas and regional spreading grounds.
	Policy C/NR 6.3: Actively engage in stakeholder efforts to disperse rainwater and stormwater infiltration BMPs at the parcel-level scale throughout the County.
	Policy C/NR 6.4: Manage the placement and use of septic systems in order to protect high groundwater.

	Policy C/NR 6.5: Prevent parcel-level stormwater infiltration where inappropriate and unsafe, such as in areas with high seasonal groundwater, on hazardous slopes, within 100 feet of drinking water wells, with brownfield redevelopment, and in contaminated soils.
Goal C/NR 7: Protected and healthy watersheds.	
Topic	**Policy**
Watershed Protection	Policy C/NR 7.1: Support the LID philosophy, which mimics the natural hydrologic cycle using undeveloped conditions as a base, in public and private land use planning and development design.
	Policy C/NR 7.2: Support the preservation, restoration and strategic acquisition of open space to preserve natural streams, drainage paths, wetlands, and rivers, which are necessary for the healthy function of watersheds.
	Policy C/NR 7.3: Actively engage with stakeholders to incorporate the LID philosophy in the preparation and implementation of watershed and river master plans.
	Policy C/NR 7.4: Promote the development of multi-use facilities for stormwater quality improvement, groundwater recharge, flood management, and other compatible uses.
Goal C/NR 8: Productive farmland that is protected for local food production, open space, public health, and the local economy.	
Topic	**Policy**
Agricultural Resources	Policy C/NR 8.1: Protect ARAs, and other land identified as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance by the California Department of Conservation, from encroaching development and discourage incompatible adjacent land uses.
	Policy C/NR 8.2: Discourage land uses in ARAs, and other land identified as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance by the California Department of Conservation, that are incompatible with agricultural activities.
	Policy C/NR 8.3: Encourage agricultural activities within the ARAs.
Goal C/NR 9: Sustainable agricultural practices.	
Topic	**Policy**
Sustainable Agricultural Practices	Policy C/NR 9.1: Support agricultural practices that minimize and reduce soil loss, minimize pesticide use, and prevent water runoff from affecting water, soil, and air quality.
	Policy C/NR 9.2: Support innovative agricultural practices that conserve resources and promote sustainability, such as drip irrigation, hydroponics, and organic farming.

	Policy C/NR 9.3: Support farmer's markets, farm stands, and community-supported agriculture throughout the County.
	Policy C/NR 9.4: Support countywide community garden and urban farming programs.
Goal C/NR 10: Locally available mineral resources to meet the needs of construction, transportation, and industry.	
Topic	**Policy**
Mineral Resource Protection	Policy C/NR 10.1: Protect MRZ-2s and access to MRZ-2s from development and discourage incompatible adjacent land uses.
Goal C/NR 11: Mineral extraction and production activities that are conducted in a manner that minimizes impacts to the environment.	
Topic	**Policy**
Mineral Extraction	Policy C/NR 11.1: Require mineral resource extraction and production activities to comply with County regulations and state requirements, such as SMARA, and DOGGR regulations.
	Policy C/NR 11.2: Require the reclamation of abandoned surface mines to productive second uses.
	Policy C/NR 11.3: Require appropriate levels of remediation for all publicly-owned oil and natural gas production sites based on possible future uses.
	Policy C/NR 11.4: Require that mineral resource extraction and production operations be conducted to protect other natural resources and prevent excessive grading in hillside areas.
Goal C/NR 12: Sustainable management of renewable and non-renewable energy resources.	
Topic	**Policy**
Energy Resources	Policy C/NR 12.1: Expand the production and use of renewable energy resources.
	Policy C/NR 12.2: Encourage the effective management of energy resources, such as ensuring adequate reserves to meet peak demands.
Goal C/NR 13: Protected visual and scenic resources.	
Topic	**Policy**
Scenic Resource Protection	Policy C/NR 13.1: Protect the County's scenic resources through land use regulations that mitigate development impacts.
	Policy C/NR 13.2: Protect the County's ridgelines from incompatible development that diminishes their scenic value.

	Policy C/NR 13.3: Reduce light trespass, light pollution and other threats to scenic resources.
	Policy C/NR 13.4: Encourage developments to be designed to create a consistent visual relationship with the natural terrain and vegetation.
	Policy C/NR 13.5: Require grading to conform to the existing terrain.
	Policy C/NR 13.6: Prohibit outdoor advertising and billboards along scenic routes, corridors and other scenic areas.
	Policy C/NR 13.7: Encourage the incorporation of roadside rest stops, vista points, and interpretive displays into projects in scenic areas.
Hillside Management	Policy C/NR 13.8: Manage development in HMAs to protect their natural and scenic character and minimize risks from natural hazards, such as fire, flood, erosion, and landslides.
	Policy C/NR 13.9: Consider the following in the design of a project that is located within an HMA, to the greatest extent feasible: • Public safety and the protection of hillside resources through the application of safety and conservation design standards; • Maintenance of large contiguous open areas that limit exposure to landslide, liquefaction and fire hazards and protect natural features, such as significant ridgelines, watercourses and SEAs.
Goal C/NR 14: Protected historic, cultural, and paleontological resources.	
Topic	**Policy**
Historic, Cultural, and Paleontological Resource Protection	Policy C/NR 14.1: Mitigate all impacts from new development on or adjacent to historic, cultural, and paleontological resources to the greatest extent feasible.
	Policy C/NR 14.2: Support an inter-jurisdictional collaborative system that protects and enhances the County's historic, cultural, and paleontological resources.
	Policy C/NR 14.3: Support the preservation and rehabilitation of historic buildings.
	Policy C/NR 14.4: Ensure proper notification procedures to Native American tribes in accordance with Senate Bill 18 (2004).
	Policy C/NR 14.5: Promote public awareness of the County's historic, cultural, and paleontological resources.
	Policy C/NR 14.6: Ensure proper notification and recovery processes are carried out for development on or near historic, cultural, and paleontological resources.

Parks and Recreation Element

Goal P/R 1: Enhanced active and passive park and recreation opportunities for all users.	
Topic	**Policy**
Park Programming	Policy P/R 1.1: Provide opportunities for public participation in designing and planning parks and recreation programs.
	Policy P/R 1.2: Provide additional active and passive recreation opportunities based on a community's setting, and recreational needs and preferences.
	Policy P/R 1.3: Consider emerging trends in parks and recreation when planning for new parks and recreation programs.
	Policy P/R 1.4: Promote efficiency by building on existing recreation programs.
Park Management	Policy P/R 1.5: Ensure that County parks and recreational facilities are clean, safe, inviting, usable and accessible.
	Policy P/R 1.6: Improve existing parks with needed amenities and address deficiencies identified through the park facility inventories.
	Policy P/R 1.7: Ensure adequate staffing, funding, and other resources to maintain satisfactory service levels at all County parks and recreational facilities.
	Policy P/R 1.8: Enhance existing parks to offer balanced passive and active recreation opportunities through more efficient use of space and the addition of new amenities.
	Policy P/R 1.9: Offer more lighted playing fields using energy efficient light fixtures where appropriate to extend playing time.
	Policy P/R 1.10: Ensure a balance of passive and recreational activities in the development of new park facilities.
	Policy P/R 1.11: Provide access to parks by creating pedestrian and bicycle-friendly paths and signage regarding park locations and distances.
Goal P/R 2: Enhanced multi-agency collaboration to leverage resources.	
Topic	**Policy**
Collaboration and Financing	Policy P/R 2.1: Develop joint-use agreements with other public agencies to expand recreation services.
	Policy P/R 2.2: Establish new revenue generating mechanisms to leverage County resources to enhance existing recreational facilities and programs.
	Policy P/R 2.3: Build multi-agency collaborations with schools, libraries, non-profit, private, and other public organizations to leverage capital and operational resources.

	Policy P/R 2.4: Utilize school and library facilities for County sponsored and community sponsored recreational programs and activities.
	Policy P/R 2.5: Support the development of multi-benefit parks and open spaces through collaborative efforts among entities such as cities, County, state, and federal agencies, private groups, schools, private landowners, and other organizations.
	Policy P/R 2.6: Participate in joint powers authorities (JPAs) to develop multi-benefit parks as well as regional recreational facilities.
	Policy P/R 2.7: Increase communication and partnerships with local law enforcement, neighborhood watch groups, and public agencies to improve safety in parks.
Mass Care Shelters	Policy P/R 2.8: Evaluate and enhance facilities and amenities with respect to alternative use of parks to carry out Mass Care and Shelter operations in the wake of a disaster.
Goal P/R 3: Acquisition and development of additional parkland.	
Topic	**Policy**
Parkland Acquisition and Dedication	Policy P/R 3.1: Acquire and develop additional local and regional parkland to meet the following County standards: 4 acres of local parkland per 1,000 residents in the unincorporated areas and 6 acres of regional parkland per 1,000 residents of the County's total population.
	Policy P/R 3.2: For projects that require zone change approvals, general plan amendments, specific plans, or development agreements, require developers to provide for local and regional parkland above and beyond their Quimby obligations as based on an appropriate nexus study.
	Policy P/R 3.3: Require as a condition of residential subdivision approval that a subdivider create a LLAD to maintain the park.
	Policy P/R 3.4: Provide additional parks in communities with insufficient local parkland as identified through the gap analysis.
	Policy P/R 3.5: Expand the supply of regional parks by acquiring land that would: 1) provide a buffer from potential threats that would diminish the quality of the recreational experience; 2) protect watersheds; and 3) offer linkages that enhance wildlife movements and biodiversity.
	Policy P/R 3.6: Collaborate with other public, non-profit, and private organizations to acquire land for parks.
	Policy P/R 3.7: Pursue a variety of opportunities to secure property for parks and recreational facilities, including purchase, grant funding, private donation, easements, surplus public lands for park use, and dedication of private land as part of the development review process.
Parkland Development	Policy P/R 3.8: Mitigate impacts from freeways to new parks to the extent feasible.
	Policy P/R 3.9: Site new parks near schools, libraries, senior centers and other community facilities where possible.

Goal P/R 4: Improved accessibility and connectivity to a comprehensive trail system including rivers, greenways, and community linkages.	
Topic	**Policy**
Trail System	Policy P/R 4.1: Create multi-use trails to accommodate all users.
	Policy P/R 4.2: Develop staging areas and trail heads at strategic locations to accommodate multi-use trail users.
	Policy P/R 4.3: Develop a network of feeder trails into backbone trails.
	Policy P/R 4.4: Maintain and design multi-purpose trails in ways that minimize circulation conflicts among trail users.
	Policy P/R 4.5: Collaborate with other public, non-profit, and private organizations in the development of a comprehensive trail system.
	Policy P/R 4.6: Create new multi-use trails that link community destinations including parks, schools and libraries.
Goal P/R 5: Protection of historical and natural resources on County park properties.	
Topic	**Policy**
Park Resource Preservation	Policy P/R 5.1: Preserve historic resources on County park properties, including buildings, collections, landscapes, bridges, and other physical features.
	Policy P/R 5.2: Expand the collection of historical resources under the jurisdiction of the County, where appropriate.
	Policy P/R 5.3: Protect and conserve natural resources on County park properties, including natural areas, sanctuaries, and open space preserves.
	Policy P/R 5.4: Ensure maintenance, repair, rehabilitation, restoration, or reconstruction of historical resources in County parks and recreational facilities are carried out in a manner consistent with the most current Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings.
Education and Programming	Policy P/R 5.5: Preserve and develop facilities that serve as educational resources that improve community understanding of and appreciation for natural areas, including watersheds.
	Policy P/R 5.6: Promote the use of County parks and recreational facilities for educational purposes, including a variety of classes and after school programs.
	Policy P/R 5.7: Integrate a range of cultural arts programs into existing activities, and partner with multicultural vendors and organizations.
Goal P/R 6: A sustainable parks and recreation system.	

Topic	Policy
Sustainable Parks System	Policy P/R 6.1: Support the use of recycled water for landscape irrigation in County parks.
	Policy P/R 6.2: Support the use of alternative sources of energy, such as wind and solar sources to reduce the use of energy at existing parks.
	Policy P/R 6.3: Prolong the life of existing buildings and facilities on County park properties through preventative maintenance programs and procedures.
	Policy P/R 6.4: Ensure that new buildings on County park properties are environmentally sustainable by reducing carbon footprints, and conserving water and energy.
	Policy P/R 6.5: Ensure the routine maintenance and operations of County parks and recreational facilities to optimize water and energy conservation.

Noise Element

Goal N-1: The reduction of excessive noise impacts.	
Topic	**Policy**
Reducing Noise Impacts	Policy N 1.1: Utilize land uses to buffer noise-sensitive uses from adverse noise impacts.
	Policy N 1.2: Reduce exposure to noise impacts by promoting land use compatibility.
	Policy N 1.3: Minimize impacts to noise-sensitive land uses by ensuring adequate site design, acoustical construction, and use of barriers or berms.
	Policy N 1.4: Enhance and promote noise abatement programs in an effort to maintain acceptable levels of noise as defined by the Los Angeles County Exterior Noise Standards and other applicable noise standards.
	Policy N 1.5: Ensure compliance with the jurisdictions of State Noise Insulation Standards (Title 24, California Code of Regulations and Chapter 35 of the Uniform Building Code), such as noise insulation of new multifamily dwellings constructed within the 60 dB (CNEL or Ldn) noise exposure contours.
	Policy N 1.6: Ensure cumulative impacts related to noise do not exceed excessive levels.
	Policy N 1.7: Utilize traffic management and noise suppression techniques to minimize noise from traffic and transportation systems.
	Policy N 1.8: Minimize noise impacts to pedestrians and transit-riders in the design of transportation facilities and mobility networks.

	Policy N 1.9: Require construction of noise attenuation barriers on noise sensitive uses that would be exposed to exterior noise levels of 65 dBA CNEL and above, when unavoidable impacts are identified.
	Policy N 1.10: Orient residential units away from major noise sources (in conjunction with applicable building codes). Exterior walls should have minimal surface openings (i.e., windows, balconies, sliding doors, etc.) not to exceed 10% of the total wall surface.
	Policy N 1.11: Maximize buffer distances and design and orient sensitive receptor structures (hospitals, residential, etc.) to prevent noise and vibration transfer from commercial/light industrial uses.

Safety Element

Goal S 1: An effective regulatory system that prevents or minimizes personal injury, loss of life and property damage due to seismic and geotechnical hazards.	
Topic	**Policy**
Geotechnical Hazards	Policy S 1.1: Discourage development in Seismic Hazard and Alquist-Priolo Earthquake Fault Zones.
	Policy S 1.2: Prohibit the construction of most structures for human occupancy adjacent to active faults until a comprehensive geotechnical study that addresses the potential for fault rupture has been completed.
	Policy S 1.3: Require developments to mitigate geotechnical hazards, such as soil instability and landsliding, in Hillside Management Areas through siting and development standards.
	Policy S 1.4: Support the retrofitting of unreinforced masonry structures to help reduce the risk of structural and human loss due to seismic hazards.
Goal S 2: An effective regulatory system that prevents or minimizes personal injury, loss of life, and property damage due to flood and inundation hazards.	
Topic	**Policy**
Flood Hazards	Policy S 2.1: Discourage development in the County's Flood Hazard Zones.
	Policy S 2.2: Discourage development from locating in dam and reservoir inundation routes.
	Policy S 2.3: Discourage development from locating downslope from aqueducts.
	Policy S 2.4: Consider climate change adaptation strategies in flood and inundation hazard planning.

	Policy S 2.5: Ensure that developments located within the County's Flood Hazard Zones are sited and designed to avoid isolation from essential services and facilities in the event of flooding.
	Policy S 2.6: Ensure that the mitigation of flood related property damage and loss limits impacts to biological and other resources.
	Policy S 2.7: Establish cooperative working relationships among public agencies with responsibility for flood protection.
	Policy S 2.8: Locate essential public facilities, such as hospitals and fire stations, outside of Flood Hazard Zones, where feasible.
Goal S 3: An effective regulatory system that prevents or minimizes personal injury, loss of life, and property damage due to fire hazards.	
Topic	**Policy**
Fire Hazards	Policy S 3.1: Discourage development in VHFHSZs, particularly in areas with significant biological resources.
	Policy S 3.2: Consider climate change adaptation strategies in planning for VHFHSZs.
	Policy S 3.3: Ensure that the mitigation of fire related property damage and loss in VHFHSZs limits impacts to biological and other resources.
	Policy S 3.4: Reduce the risk of wildland fire hazards through the use of regulations and performance standards, such as fire resistant building materials and vegetation.
	Policy S 3.5: Encourage the use of fire resistant vegetation that is compatible with the area's natural vegetative habitats in fuel modification activities.
	Policy S 3.6: Reduce the risk of urban fire hazards through the implementation of regulations and performance standards.
	Policy S 3.7: Ensure adequate infrastructure, including ingress, egress, and peak load water supply availability for all projects located in VHFHSZs.
	Policy S 3.8: Consider siting and design for developments located within VHFHSZs, particularly in areas located near ridgelines and on hilltops, to reduce the wildfire risk.
	Policy S 3.9: Support the retrofitting of existing structures in VHFHSZs to help reduce the risk of structural and human loss due to wildfire.
Goal S 4: Effective County emergency response management capabilities.	
Topic	**Policy**
Emergency Response	Policy S 4.1: Ensure that County residents are protected from the public health consequences of natural or man-made disasters through increased readiness and response capabilities, risk communication, and the dissemination of public information.

	Policy S 4.2: Support County emergency providers in reaching their response time goals.
	Policy S 4.3: Coordinate with other County and public agencies, such as transportation agencies, and health care providers on emergency planning and response activities, and evacuation planning.
	Policy S 4.4: Encourage the improvement of hazard prediction and early warning capabilities.
	Policy S 4.5: Ensure that there are adequate resources, such as sheriff and fire services, for emergency response.

Public Services and Facilities Element

Goal PS/F 1: A coordinated, reliable, and equitable network of public facilities that preserves resources, ensures public health and safety, and keeps pace with planned development.	
Topic	**Policy**
Sufficient Infrastructure	Policy PS/F 1.1: Discourage development in areas without adequate public services and facilities.
	Policy PS/F 1.2: Ensure that adequate services and facilities are provided in conjunction with a development through phasing or other mechanisms.
	Policy PS/F 1.3: Ensure coordinated service provision through collaboration between County departments and service providers.
	Policy PS/F: 1.4: Ensure the adequate maintenance of infrastructure.
	Policy PS/F 1.5: Focus infrastructure investment, maintenance and expansion efforts where the General Plan encourages growth, such as TODs.
	Policy PS/F 1.6: Support multi-faceted public facility expansion efforts, such as substations, mobile units, and satellite offices.
Goal PS/F 2: Increased water conservation efforts.	
Topic	**Policy**
Water Conservation	Policy PS/F 2.1: Implement water conservation measures, such as drought tolerant landscaping and restrictions on water used for landscaping.
	Policy PS/F 2.2: Support educational outreach efforts that discourage wasteful water consumption.
Goal PS/F 3: Increased local water supplies through the use of new technologies.	
Topic	**Policy**

Water Supply	Policy PS/F 3.1: Increase the supply of water though the development of new sources, such as recycled water, gray water, and rainwater harvesting.
	Policy PS/F 3.2: Support the increased production, distribution and use of recycled water, gray water, and rainwater harvesting to provide for groundwater recharge, seawater intrusion barrier injection, irrigation, industrial processes and other beneficial uses.
Goal PS/F 4: A reliable network of wastewater systems in the County.	
Topic	**Policy**
Wastewater system	Policy PS/F 4.1: Encourage the planning and continued development of efficient countywide wastewater systems.
	Policy PS/F 4.2: Support capital improvement plans to improve aging and deficient wastewater systems, particularly in areas where the General Plan encourages development, such as TODs.
	Policy PS/F 4.3: Ensure the proper design of sewage treatment and disposal facilities, especially in landslide, hillside, and other hazard areas.
Goal PS/F 5: Adequate disposal capacity and minimal waste and pollution in the County.	
Topic	**Policy**
Waste Management	Policy PS/F 5.1: Maintain an efficient, safe and responsive waste management system that reduces waste while protecting the health and safety of the public.
	Policy PS/F 5.2: Ensure adequate disposal capacity by providing for environmentally sound and technically feasible development of solid waste management facilities, such as landfills and transfer/processing facilities.
	Policy PS/F 5.3: Discourage incompatible land uses near or adjacent to solid waste disposal facilities identified in the Countywide Integrated Waste Management Plan.
Waste Diversion	Policy PS/F 5.4: Encourage solid waste management facilities that utilize conversion and other alternative technologies and waste to energy facilities.
	Policy PS/F 5.5: Reduce the County's waste stream by minimizing waste generation and enhancing diversion.
	Policy PS/F 5.6: Encourage the use and procurement of recyclable and biodegradable materials throughout the County.
	Policy PS/F 5.7: Encourage the recycling of construction and demolition debris generated by public and private projects.
	Policy PS/F 5.8: Ensure adequate and regular waste and recycling collection services.
	Policy PS/F 5.9: Encourage the availability of trash and recyclables containers in new developments, public streets, and large venues.

Goal PS/F 6: A County with adequate public utilities.	
Topic	**Policy**
Utility Infrastructure	Policy PS/F 6.1: Ensure efficient and cost effective utilities that serve existing and future needs.
	Policy PS/F 6.2: Improve existing wired and wireless telecommunications infrastructure.
	Policy PS/F 6.3: Expand access to wireless technology networks, while minimizing visual impacts through co-location and design.
	Policy PS/F 6.4: Protect utility facilities to ensure the continued provision of utility services in the County.
	Policy PS/F 6.5: Encourage the use of renewable energy sources in utility and telecommunications networks.
	Policy PS/F 6.6: Encourage the construction of utilities underground, where feasible.
	Policy PS/F 6.7: Encourage projects that incorporate onsite renewable energy systems.
Goal PS/F 7: A County with adequate educational facilities.	
Topic	**Policy**
Early Care and Educational Facilities	Policy PS/F 7.1: Encourage the joint-use of school sites for community activities and other appropriate uses.
	Policy PS/F 7.2: Proactively work with school facilities and education providers to coordinate land use and facilities planning.
	Policy PS/F 7.3: Encourage adequate facilities for early care and education.
Goal PS/F 8: A comprehensive public library system.	
Topic	**Policy**
Library System	Policy PS/F 8.1: Ensure a desired level of library service through coordinated land use and facilities planning.
	Policy PS/F 8.2: Support library mitigation fees that adequately address the impacts of new development.

Economic Development Element

Goal ED 1: An economic base and fiscal structures that attract and retain valuable industries and businesses.	
Topic	**Policy**
Target Industries for the County	Policy ED 1.1: Encourage a diverse mix of industries and services in each County Planning Area.
	Policy ED 1.2: Encourage and foster the development of the green and renewable energy economic sectors.
	Policy ED 1.3: Encourage public-private partnerships to support the growth of target industries.
	Policy ED 1.4: Encourage the expansion and retention of targeted industries and other growth economic sectors, such as the entertainment industry.
County Incentives for Business	Policy ED 1.5: Provide quality, responsible, and business-friendly municipal services to attract and retain businesses and employees.
	Policy ED 1.6: Develop, advance, and promote competitive advantages for economic development and growth.
	Policy ED 1.7: Identify opportunities to lower the costs of doing business in the County.
	Policy ED 1.8: Establish and maintain a competitive tax structure to attract and retain business and industry to the County.
	Policy ED 1.9: Promote the County as a national and international center for business, global trade, and development.
Goal ED 2: Land use practices and regulations that foster economic development and growth.	
Topic	**Policy**
Industrial Land	Policy ED 2.1: Protect industrial lands, especially within Employment Protection Districts, from conversion to non-industrial uses.
	Policy ED 2.2: Utilize adequate buffering and other land use practices to facilitate the compatibility between industrial and non-industrial uses.
Business and Environmental Justice	Policy ED 2.3: Ensure environmental justice in economic development activities.
	Policy ED 2.4: Ensure high standards of development and encourage environmentally sustainable practices in economic development activities.
	Policy ED 2.5: Encourage employment opportunities to be located in proximity to housing.

	Policy ED 2.6: Encourage community-serving uses, such as child care centers and personal services, to be located in proximity to employment centers.
	Policy ED 2.7: Incentivize economic development and growth along existing transportation corridors and in urbanized areas.
Streamlined Permit Processing	Policy ED 2.8: Streamline the permit review process and other entitlement processes for businesses and industries.
Goal ED 3: An expanded and improved infrastructure system to support economic growth and development.	
Topic	**Policy**
Infrastructure Improvements	Policy ED 3.1: Utilize capital improvement plans to prioritize infrastructure investments.
	Policy ED 3.2: Support infrastructure that facilitates the efficient movement of goods, energy, information, and people.
	Policy ED 3.3: Support the expansion of business communication networks, such as telecommunications and wireless technologies.
	Policy ED 3.4: Support the use of public-private partnerships to develop, fund, and deliver critical infrastructure.
	Policy ED 3.5: Work with state agencies dedicated to financing important critical infrastructure and economic development projects.
Goal ED 4: Enhanced revitalization activities.	
Topic	**Policy**
Economic Development Strategies	Policy ED 4.1: Develop a range of financial incentives and programs that encourage development and business growth.
	Policy ED 4.2: Facilitate relationships between financial institutions and local businesses to increase access to capital resources.
	Policy ED 4.3: Establish, renew, implement, manage, protect, and/or expand Enterprise Zones, and other programs that facilitate community development and rehabilitation.
	Policy ED 4.4: Expand the use of tax increment financing and programs, such as impact fees and assessment districts, and transportation tax increment financing.
	Policy ED 4.5: Support the development of community-level economic development strategies in line with Los Angeles County Strategic Plan for Economic Development.
	Policy ED 4.6: Support the development of small business assistance and entrepreneurial programs that are focused on management, financial planning, and technology application.

Infill Development	Policy ED 4.7: Incentivize infill development that revitalizes underutilized commercial and industrial areas.
	Policy ED 4.8: Direct resources to economically distressed areas to spur revitalization activities.
	Policy ED 4.9: Retrofit and reuse vacant and underutilized industrial and commercial sites for emerging and targeted industries.
	Policy ED 4.10: Support expedited permitting for green building retrofits.
Goal ED 5: A skilled and educated workforce.	
Topic	**Policy**
Education	Policy ED 5.1: Support a quality education system at all levels that ensures college-readiness and career-readiness.
	Policy ED 5.2: Attract and retain highly-skilled graduates, in particular, graduates of science and engineering programs.
	Policy ED 5.3: Support and create collaborative educational programs that address specific under-employed populations and workforce needs in targeted areas.
	Policy ED 5.4: Encourage outreach efforts to educational and community-learning institutions to expand workforce education programs.
	Policy ED 5.5: Expand functional literacy and English as a Second Language (ESL) programs throughout the County.
	Policy ED 5.6: Support linked programs that align high schools with community colleges and four-year institutions.
	Policy ED 5.7: Engage employers earlier in the education and workforce development process to ensure work-readiness and a smooth transition from school or training to work placement.
Job Training	Policy ED 5.8: Ensure that businesses have enough skilled workers to meet their workforce needs.
	Policy ED 5.9: Prepare, train, and educate job seekers and incumbent workers to find and advance in high-value, high-wage jobs with built-in career ladders.
	Policy ED 5.10: Promote the attraction, retention and expansion of commercial and industrial firms that provide employment improvement opportunities for unskilled and semi-skilled workers.
	Policy ED 5.11: Initiate vocational training programs across the County that provide the skills necessary for participation in the labor force.
	Policy ED 5.12: Collaborate with the private sector to identify growing workforce needs and link training initiatives to the needs of target industries.

	Policy ED 5.13: Establish employer assistance initiatives to expand skilled trades training and vocational education for high demand occupations.
Goal ED 6: Collaborative efforts to implement coordinated economic development activities.	
Topic	**Policy**
Coordinated Economic Development	Policy ED 6.1: Encourage a collaborative inter-agency and inter-jurisdictional environment to align economic development activities and promote information sharing on economic trends, business cycles, best practices, and resources.
	Policy ED 6.2: Analyze emerging trends for policy modification, and maintain and update accurate labor force, market trends, and other important economic data.
	Policy ED 6.3: Strengthen cooperation with private sector organizations, economic development organizations, and community level business groups.
	Policy ED 6.4: Strengthen the County's legislative advocacy function in state and federal policies to advance the County's economic development goals.
	Policy ED 6.5: Increase communication and coordination with relevant local, regional, and state public and private economic development agencies to leverage resources and coordinate economic policy.

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Part VI: Glossary

Abatement: The reduction or elimination of a hazardous condition, including but not limited to, strengthening, occupancy restrictions or demolition.

Acres, Gross: The entire acreage of a site.

Acres, Net: The portion of a site that can actually be built upon.

Active Fault: A fault that shows evidence of, or is suspected of, having experienced surface displacement within the last 11,000 years. An active fault is considered to have the highest potential for future surface rupture.

Adaptive Reuse: The conversion of obsolete or historic buildings from their original or most recent use to a new use.

Agriculture: Use of land for the production of food and fiber, including the growing of crops and/or the grazing of animals on natural prime or improved pasture land.

Ambient Noise: The composite of noise from all sources near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.

Aquifer: An underground, water-bearing layer of earth, porous rock, sand or gravel through which water can seep or be held in natural storage. Aquifers generally hold sufficient water to be used as a water supply.

Archaeology: The science of recovering data about pre-existing or extinct culture and peoples.

Attainment: Compliance with state and federal ambient air quality standards within an air basin.

A-Weighted Level, dBA: The sound level in decibels as measured on a sound level meter using the A weighting filter network. This filter deemphasizes the very low and very high frequency components of the sound in a manner similar to the response of the human ear and giving a good correlation with subjective reactions to noise.

Best Management Practices (BMPs): A set of standards and emerging practices in any field of work or study that exhibit the best known approach to addressing an issue. For example, a list of stormwater Best Management Practices would consist of structural and non-structural control measures taken to mitigate the quantity and quality of runoff caused through changes to land use.

Bikeways: A term that encompasses Class I bicycle paths, Class II bicycle lanes, and Class III bicycle routes.

Blue Line Stream: A watercourse shown as a blue line on a U.S. Geological Service topographic quadrangle map.

Brownfield: An area with abandoned, idle or underutilized industrial and commercial facilities where expansion, redevelopment or reuse is complicated by real or perceived environmental contamination.

California Environmental Quality Act (CEQA): A state law requiring state and local agencies to regulate activities with consideration for environmental protection.

California Department of Transportation (Caltrans): The state agency responsible for the planning, engineering, construction and maintenance of the California State Highways and Freeways, provides inter-city rail services and permits airports and heliports. Of the 12 Caltrans organizational Districts, Los Angeles and Ventura County are a part of the Caltrans District 7.

Carpool, Vanpool, Subscription Bus, Ride Pooling: A group riding concept wherein commuters with relatively (sometimes approximately) the same origin and destination travel together and share their commuting expenses. The three main forms of group riding or ride pooling are the subscription bus, the vanpool, and the carpool.

Coastal Development Permit (CDP): A permit for any development within the coastal zone that is required pursuant to subdivision (a) of Section 30600 of the California Coastal Act. This permit grants a right or entitlement to pursue development specified in the permit, so long as the permit remains valid and the project description and conditions of the permit are adhered to.

Community Noise Equivalent Level (CNEL): The average equivalent A-weighted sound level during a 24 hour day, obtained after addition of five decibels to sound levels in the evening from 7 p.m. to 10 p.m. and after addition of 10 decibels to sound levels in the night from 10 p.m. to 7 a.m.

Commuter Rail: Mass transportation concept of utilizing railroad facilities for commuting purposes.

Congestion Management Plan (CMP): A mechanism employing growth management techniques including traffic level of service requirements, standards for public transit, trip reduction programs involving transportation systems management and jobs/housing balance strategies, and capital improvement programming for the purpose of controlling and/or reducing the cumulative regional traffic impacts of development.

Cul-de-sac: A short street or alley with only a single means of ingress and egress at one end and with a large turnaround at its other end.

Cumulative Impact: As used in CEQA, the total impact resulting from the accumulated impacts of individual projects or programs over time.

Debris Basins: Dam areas used to filter debris from flood waters before water continues downstream.

Decibel, dB: A unit measurement describing the amplitude of sound, equal to 20 times the logarithm to the base of 10 or the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micronewtons per square meter).

Dedication: The turning over by an owner or developer of private land for public use, and the acceptance of land for such use by the governmental agency having jurisdiction over the public function for which it will be used. Dedications for roads, parks, school sites or other public uses often are made conditions for approval of a development by a city or county.

Density Bonus: The allocation of development rights that allows a parcel to accommodate additional square footage or additional residential units beyond the maximum for which the parcel is zoned.

Depletion: The withdrawal of water from a particular resource at a rate that is greater than the rate of replenishment.

Developable Land: Land that is suitable as a location for structures and that can be developed free of hazards to, and without disruption of, or significant impact on, natural resource areas.

Easement: Usually the right to use property owned by another for specific purposes or to gain access to another property. For example, utility companies often have easements on the private property of individuals to be able to install and maintain utility facilities.

Easement, Conservation: A tool for acquiring open-space with less than full-fee purchase, whereby a public agency buys only certain specific rights from the land owner. These may be positive rights (providing the public with the opportunity to hunt, fish, hike or fide over the land) or they may be restrictive fights (limiting the uses to which the land owner may devote the land in the future).

Easement, Scenic: A tool that allows a public agency to use an owner's land for scenic enhancement, such as roadside landscaping or vista preservation.

Emission Standard: The maximum amount of pollutant legally permitted to be discharged from a single source, either mobile or stationary.

Endangered Species: A species of animal or plant including the ecosystems for which they depend is considered to be endangered when its prospects for survival and reproduction are in immediate jeopardy from one or more natural or man-made causes, including habitat destruction or reduction.

Environmental Impact Report (EIR): A report required pursuant to the California Environmental Quality Act which assesses all the environmental characteristics of an area, determines what effects or impacts will result if the area is altered or disturbed by a proposed action, and identifies alternatives or other measures to avoid or reduce those impacts.

Environmental Justice: The fair treatment of people of all races, cultures and incomes with respect to the development, adoption, implement and enforcement of environmental laws, regulations and policies.

Exaction: A contribution or payment required as an authorized precondition for receiving a development permit; usually refers to mandatory dedication (or fee in lieu of dedication) requirements found in many subdivision regulations.

Feasible: Capable of being accomplished in a successful manner within a reasonable time taking into account economic, environmental, social and technological factors.

Flood: An overflow or inundation of water that comes from a river, dam or other body of water.

Flood, 100-Year: The magnitude of a flood expected to occur on the average every 100 years, based on historical data. The 100-year flood has a 1/100, or one percent, chance of occurring in any given year.

Flood, 200-Year: The magnitude of a flood expected to occur on the average every 100 years, based on historical data. The 200-year flood has a 1/200, or one half of one percent, chance of occurring in any given year.

Flood Insurance Rate Map (FIRM): For each community, the official map on which the Federal Insurance Administration has delineated areas of special flood hazard and the risk premium zones applicable to that community.

Floodplain: The relatively level land area on either side of the banks of a stream regularly subject to flooding. That part of the floodplain subject to a one percent chance of flooding in any given year is designated as an "area of special flood hazard" by the Federal Insurance Administration.

Floodway: The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the "base flood" without cumulatively increasing the water surface elevation more than one foot. No development that increases the water surface elevation or velocities is allowed in floodways.

Grading: Alteration of existing slope and shape of the ground surface.

Green Building: The practice of increasing the efficiency with which buildings and their sites use and harvest energy, water, and materials, and reducing building impacts on human health and the environment, through better siting, design, construction, operation, maintenance, and removal — the complete building life cycle.

Ground Failure: Ground movement or rupture caused by strong shaking during an earthquake. Includes landslide, lateral spreading, liquefaction and subsidence.

Ground Shaking: Ground movement resulting from the transmission of seismic waves during an earthquake.

Groundwater: Water under the Earth's surface, often confined to aquifers capable of supplying wells and springs.

Groundwater Recharge: The natural process of infiltration and percolation of rainwater from land areas or streams through permeable soils into water-holding rocks that provide underground storage ("aquifers"). (See "Aquifer Recharge")

Growth Management: The use by a community of a wide range of techniques in combination to determine the amount, type and rate of development desired by the community and to channel that growth into designated areas. Growth management policies can be implemented through growth rates, zoning, capital improvement programs, public facilities ordinances, urban limit lines, standards for levels of service and other programs.

Habitat: The physical location or type of environment in which an organism or biological population lives or occurs.

High Occupancy Vehicle (HOV): Any vehicle other than a driver-only automobile (e.g., a vanpool, a bus, or two or more persons to a car).

Hillside Management Areas: Hilly and mountainous areas with average slopes above 25 percent. Instituted to preserve the natural and scenic character of the area and to minimize danger to life and property caused by fire and flood hazards, water pollution, soil erosion and land slippage.

Historic Preservation: The preservation of historically significant structures, monuments, parks, cultural heritage sites and neighborhoods until such time as, and in order to facilitate, restoration and rehabilitation of the building(s) to a former condition.

Hydrology: The branch of science that studies the behavior of water as it occurs in the atmosphere, appears on the Earth's surface and underground.

Impact Fee: A fee, also called a development fee, levied on the developer of a project by a city, county or other public agency as compensation for otherwise unmitigated impacts the project will produce. Section 66000, et seq., specifies that development fees shall not exceed the estimated reasonable cost of providing the service for which the fee is charged. To lawfully impose a development fee, the public agency must verify its method of calculation and document proper restrictions on use of the fund.

Impervious Surface: Surface through which water cannot penetrate, such as a roof, road, sidewalk and paved parking lot. The amount of impervious surface increases with development and establishes the need for drainage facilities to carry the increased runoff.

Impulsive Noise: Connotes a sharp increase in sound within a very short interval of time, such as gun fire, barking dogs, police sirens, etc.

Infill Development: The development, redevelopment, or reuse of vacant land or underutilized parcels (usually individual lots or leftover properties) within existing urbanized areas that are already largely developed.

Infrastructure: Public services and facilities, such as sewage disposal systems, water supply systems, other utility systems, and roads.

Intensity: For residential uses, the actual number or the allowable range of dwelling units per net or gross acre. For non-residential uses, the actual or the maximum permitted floor area ratios (FARs).

Inter-agency: Indicates cooperation between or among two or more discrete agencies in regard to a specific program.

Jobs-Housing Balance: The availability of affordable housing for employees. The jobs/housing ratio divides the number of jobs in an area by the number of employed residents. A ratio of 1.0 indicates a balance. A ratio greater than 1.0 indicates a net in-commute, less than 1.0 indicates a net out-commute.

Joint Powers Authority (JPA): A legal arrangement that enables two or more units of government to share authority in order to plan and carry out a specific program or set of programs that serves both units.

Land Banking: The purchase of land by a local government for use or resale at a later date.

Landmark: (1) A building, site, object, structure or significant tree, having historical, architectural, social or cultural significance and marked for preservation by the local, state or federal government. (2) A visually prominent or outstanding structure or natural feature that functions as a point of orientation or identification.

Landslide: Downslope movement of soil and/or rock, which typically occurs during an earthquake or following heavy rainfall.

Landslides: Downhill movement of masses of earth material under force of gravity**Ldn:** The average equivalent A-weighted sound level during a 24 hour day, obtained after addition of 10 decibels to sound levels in the night after 10 p.m. and before 7 a.m. (CNEL and Ldn represent daily levels of noise exposure averaged on an annual or daily basis, while Leq represents the equivalent energy noise exposure for a shorter time period, typically one hour.

Leapfrog Development: New development separated from existing development by substantial vacant land.

Leq: Equivalent energy level. The sound level corresponding to a steady state sound level containing the same total energy as a time varying signal over a given sample period. Leq is typically computed over 1, 8 and 24 hour sample periods.

Level of Service (Traffic): A scale that measures the amount of traffic that a roadway or intersection can accommodate, based on such factors as maneuverability, driver dissatisfaction, and delay.

Liquefaction: The transformation of loose, wet soil from a solid to a liquid state, often as a result of ground shaking during an earthquake.

Local Coastal Program (LCP): A combination of a local government's land use plans, zoning ordinances, zoning district maps and (within sensitive coastal resources areas) other implementing actions that together meet the local requirements of, and implement the provisions and policies of, the California Coastal Act of 1976.

Low Impact Development (LID): An approach to stormwater management with a basic principle that is modeled after nature: manage rainfall at the source using uniformly distributed decentralized micro-scale controls.

Mello-Roos Bonds: Locally issued bonds that are repaid by a special tax imposed on property owners within a “community facilities district” established by a governmental entity. The bond proceeds can be used for public improvements and for a limited number of services.

Mills Act: California legislation by which property owners can secure a substantial property tax reduction by entering into a contract to preserve their historically or architecturally significant building.

Mineral Resource: Land on which known deposits of commercially viable mineral or aggregate deposits exist. This designation is applied to sites determined by the California Geological Survey as being a resource of regional significance, and is intended to help maintain the quarrying operations and protect them from encroachment of incompatible land uses.

Mode: Any form of transportation such as private motor vehicle, public transit, railroad, bicycle, walking, pipeline, marine or aviation.

Mud or Debris Flow: The rapid downward movement of predominately saturated, unconsolidated mud or earth, commonly including boulders and trees.

Multimodal Facilities: A transportation system comprised of more than one modal network to provide the user with a reasonable choice.

Municipal Services: Services traditionally provided by local government, including water and sewer, roads, parks, schools and police and fire protection.

National Flood Insurance Program: A federal program that authorizes the sale of federally subsidized flood insurance in communities where such flood insurance is not available privately.

National Historic Preservation Act: A 1966 federal law that established a National Register of Historic Places and the Advisory Council on Historic Preservation. It authorized grants-in-aid for preserving historic properties.

National Pollutant Discharge Elimination System (NPDES): As authorized by the Clean Water Act, the National Pollutant Discharge Elimination System (NPDES) permit program controls water pollution by regulating point sources that discharge pollutants into waters of the U.S. Point sources are discrete conveyances such as pipes or man-made ditches.

National Register of Historic Places: The official list established by the National Historic Preservation Act, of sites, districts, buildings, structures, and objects significant in the country's history or whose artistic or architectural value is unique.

Nitrogen Oxides: The sum of nitric oxide and nitrogen dioxide that is produced when fuel is burned at a high temperature in vehicle engines and boilers in industrial operations and electric power plants, and causes irritation to eyes, nose and throat. Nitrogen oxide is responsible for the brown haze over most cities, restricts plant growth and contributes to photochemical smog.

Noise Contours: Lines drawn about a noise source indicating equal levels of noise exposure. CNEL and Ldn are the metrics used to describe annoyance due to noise and to establish land use planning criteria regarding noise.

Non-attainment: The condition of not achieving a desired or required level of performance. Frequently used in reference to air quality.

Office of Planning and Research (OPR): A California agency that provides policy and legislative research for the Governor’s office.

Official County Scenic Highway: A segment of state highway identified in the Master Plan of State Highways Eligible for Official Scenic Highway Designation and designated by the Director of the Department of Transportation (Caltrans).

Overlay: A land use designation on the General Plan Land Use Map, or a zoning designation on a zoning map, which modifies the basic underlying designation in some specific manner.

Paratransit: Those types of public transportation whose characteristics are between those of the private automobile and conventional scheduled transit, e.g., taxis, jitneys, dial-a-ride, carpools, vanpools or subscription bus services.

Particulates: Solid and liquid materials directly emitted to the atmosphere, sometimes referred to as aerosols, that are derived from natural sources and man’s activities.

Paleontology: The study of fossil remains.

Parcel: A lot in single ownership or under single control usually considered a unit for purposes of development.

Parking Management: An evolving Transportation Demand Management (TDM) technique designed to obtain maximum utilization from a limited number of parking spaces. Can involve pricing and preferential treatment for HOVs, non-peak period users, and short-term users.”

Peak Hours: Those hours of the day when traffic volumes are at their highest hourly count.

Performance Standards: Zoning regulations that permit uses based on a particular set of standards of operation rather than on a particular type of use. Performance Standards provide specific criteria limiting noise, air pollution, emissions, odors, vibration, dust, dirt, glare, heat, fire hazards, wastes, traffic impacts and visual impact of a use.

Pollution, Non-Point: Sources for pollution that are less definable and usually cover broad areas of land, such as agricultural land with fertilizers that are carried from the land by runoff, or automobiles.

Pollution, Point-source: In reference to water quality, a discrete source from which pollution is generated before it enters receiving waters, such as a sewer outfall, a smokestack, or an industrial waste pipe.

Potable Water: Water suitable for drinking or cooking purposes from both health and aesthetic considerations.

Potentially Active Fault: A fault showing evidence of movement within the last 11,000 to 750,000 years.

Prime Farmland: Land that has the best combination of physical and chemical characteristics for the production of crops. Prime Farmland must have been used for the production of irrigated crops within the last three years. Prime Farmland does not include publicly-owned lands for which there is an adopted policy preventing agricultural use.

Rare Species: Any species that, although not presently threatened with extinction, is in such small numbers that it may be endangered if its environment worsens.

Recharge: To restore, usually water into an aquifer.

Reclamation: The reuse of resources, usually those present in solid wastes or sewage.

Recreation, Active: A type of recreation or activity that requires the use of organized play areas including, but not limited to, softball, baseball, football and soccer fields, tennis and basketball courts and various forms of children's play equipment.

Recreation, Passive: Type of recreation or activity that does not require the use of organized play areas.

Regional: Pertaining to activities or economies at a scale greater than that of a single jurisdiction, and affecting a broad geographic area.

Regional Center: A major destination characterized by regional commerce and activity, and consisting of a diversity of local and regional-serving uses, such as major commercial, residential, cultural and recreational facilities, services, employment centers, and multimodal transportation.

Reservoir: A body of water stored in either a natural or man-made basin. Reservoirs are usually used for the storage and regulation of water resources.

Retrofit: To add materials and/or devices to an existing building or system to improve its operation, safety, or efficiency. Buildings have been retrofitted to use solar energy and to strengthen their ability to withstand earthquakes, for example.

Ridgeline: A line connecting the highest points along a ridge and separating drainage basins or small-scale drainage systems from one another.

Right-of-way: A strip of land occupied or intended to be occupied by certain transportation and public use facilities, such as roads, railroads and utility lines.

Riparian: A type of environment, usually referring to stream banks or other areas that are adjacent to and dependent on a watercourse or body of water.

Rural: A way of life characterized by living in a non-urban or agricultural environment at low densities without typical urban services. Urban services and facilities not normally found in rural areas include curbs, gutters and sidewalks; street lighting, landscaping and traffic signalization; mass public transit; and commercial facilities dependent on large consumer volumes such as regional shopping centers.

Rural Preserve Area: Rural preserves are largely undeveloped and generally not served by existing infrastructure and public facilities. Many of these areas contain environmental resources, such as Significant Ecological Areas, Scenic Resource Areas, and Agricultural Resource Areas. In addition, many of these areas contain safety hazards, such as Seismic Zones, Very High Hazard Severity Zones, and Flood Zones. The primary benefit of these areas is that they provide habitat for regionally significant biological species while simultaneously providing scenic value to residents. A secondary benefit of these areas is that they contain natural resources which provide economic opportunities. Development in these areas should be limited to single family homes at very low densities, light and heavy agricultural uses, including equestrian and animal-keeping uses, and other uses where appropriate.

Rural Town Area: Rural towns provide a transition between rural town center areas and rural preserve areas, as they are occupied by a mix of residential and light agricultural uses. Residents living in these areas are willing to forego urban infrastructure and services in order to live in a rural environment. The majority of new residential development should be directed to these areas, provided that such development is consistent with the existing community character and allows for light agricultural, equestrian, and animal-keeping uses where appropriate. These areas will provide transportation linkages to rural town center areas and other nearby destination points.

Rural Town Center Area: Rural town centers are the focal points of rural communities, serving the daily needs of residents and providing local employment opportunities. The majority of new locally-oriented public facilities and new locally-oriented commercial uses should be directed to these areas. These areas will provide pleasant pedestrian environments and will be accessible by a range of transportation options to reduce vehicle trips. Some of these areas will allow for a mix of commercial and residential uses.

Scenic Highway/Scenic Route: A highway, road, drive or street that, in addition to its transportation function, provides opportunities for the enjoyment of natural and man-made scenic resources and access or direct views to areas or scenes of exceptional beauty or historic or cultural interest. The aesthetic values of scenic routes often are protected and enhanced by regulations governing the development of property or the placement of outdoor advertising (billboards).

Scenic Quality: The total impression made by components of a natural or man-made landscape that provide an attractive and memorable visual experience to the viewer, including natural landforms, water features, rock outcroppings, trees and other vegetation, and rural and urban structures of interest.

Seismic: Caused by or subject to earthquakes or earth vibrations.

Septic System: A sewage-treatment system that includes a settling tank through which liquid sewage flows and in which solid sewage settles and is decomposed by bacteria in the absence of

oxygen. Septic systems are often used for individual-home waste disposal where an urban sewer system is not available.

Significant Ecological Areas (SEAs): Ecologically important or fragile land and water areas valuable as plant and animal communities.

Solid Waste: Any unwanted or discarded material that is not a liquid or gas. Includes organic wastes, paper products, metals, glass, plastics, cloth, brick, rock, soil, leather, rubber, yard wastes, and wood, but does not include sewage and hazardous materials. Organic wastes and paper products comprise about 75 percent of typical urban solid waste.

Southern California Association of Governments (SCAG): As the designated Metropolitan Planning Organization, the Association of Governments is mandated by the federal government to research and draw up plans for transportation, growth management, hazardous waste management, and air quality. Additional mandates exist at the state level.

Specific Plan: A tool authorized by Government Code §65450 et. seq. for the systematic implementation of the general plan for a defined portion of a community's planning area. AsSpecific plan must specify in detail the land uses, public and private facilities needed to support the land uses, phasing of development, standards for the conservation, development and use of natural resources, and a program of implementation measures, including financing measures.

Sphere of Influence: The probable physical boundaries and service area of a local agency, as determined by the Local Agency Formation Commission of the County.

Standards: (1) A rule or measure establishing a level of quality or quantity that must be complied with or satisfied. Government Code §65302 requires that general plans spell out the objectives, principles, “standards” and proposals of the general plan. Examples of standards might include the number of acres of park land per 1,000 population that the community will attempt to acquire and improve, or the “traffic Level of Service” (LOS) that the plan hopes to attain. (2) Requirements in a zoning ordinance that govern building and development as distinguished from use restrictions, for example, site design regulations such as lot area, height limit, frontage, landscaping, and floor area ratio.

Subdivision: The division of a tract of land into defined lots, either improved or unimproved, which can be separately conveyed by sale or lease, and which can be altered or developed. “Subdivision” includes a condominium project as defined in §1350 of the California Civil Code and a community apartment project as defined in §11004 of the Business and Professions Code.

Subdivision Map Act: Section 664 10 et seq. of the California Government Code, this act vests in local legislative bodies the regulation and control of the design and improvement of subdivisions, including the requirement for tentative and final maps.

Subregional: Pertaining to a portion or a region.

Surface Runoff: Excess water that does not percolate into the ground, but travels over the soil surface to the nearest water channel or storm drain. Runoff can carry with it sediment, debris and pollutants.

Sustainability: Community use of natural resources in a way that does not jeopardize the ability of future generations to live and prosper.

Sustainable Development: Development that maintains or enhances economic opportunity and community well-being while protecting and restoring the natural environment upon which people and economies depend. Sustainable development meets the needs of the present without compromising the ability of future generations to meet their own needs.

Telecommunications: Refers to a technological industry that includes telephone service (both local and long distance), wireless, microwave, satellite, cable, video and, with the addition of the computer, transmission of voice, data and video along with sophisticated networks of electronic mail, telecommuting and video conferencing.

Threatened Species: Any species that is likely to become endangered within the foreseeable future. A species of animal or plant is endangered when its survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, over-exploitation, predation, competition, disease or other factors, or when, although not presently threatened with extinction, the species is existing in such small numbers that it may become endangered if its environment worsens.

Transfer of Development Rights (TDR): Also known as “Transfer of Development Credits”, a program that can relocate potential development from areas where proposed land use or environmental impacts are considered undesirable (the “donor” site) to another (“receiver”) site chosen on the basis of its ability to accommodate additional units of development beyond that for which it was zoned, with minimal environmental, social and aesthetic impacts.

Transit: The conveyance of persons or goods from one place to another by means of a local, public transportation system.

Transit, Public: A system of regularly scheduled buses and/ or trains available to the public on a fee-per-ride basis. Also called “Mass Transit”.

Transportation Demand Management (TDM): A strategy for reducing demand on the road system by reducing the number of vehicles using the roadways and/or increasing the number of persons per vehicle. TDM attempts to reduce the number of persons who drive alone on the roadway during the commute period and to increase the number in carpools, vanpools, buses and trains, walking and bicycling. TDM can be an element of TSM.

Trip: A one-way journey that proceeds from an origin to a destination via a single mode of transportation. The smallest unit of movement considered in transportation studies. Each trip has one “production end,” (or origin—often from home, but not always) and one “attraction end (destination).’’

Tsunami: A large ocean wave generated by an earthquake in or near the ocean.

Uniform Building Code (UBC): A national, standard building code that sets forth minimum standards for construction.

Urbanized Area: Urbanized areas are generally characterized by moderate and higher density residential development, commercial development, and/or industrial development, and the availability of public services, such as central water and sewer, an extensive road network, public transit, and other such services (e.g., safety and emergency response).

Urban Design: The attempt to give form, in terms of both beauty and function, to selected urban areas or to whole cities. Urban design is concerned with the location, mass and design of various

urban components and combines elements of urban planning, architecture and landscape architecture.

Utility Corridors: Rights-of-way or easements for utility lines on either publicly or privately-owned property.

Vehicle-Miles Traveled (VMT): A key measure of overall street and highway use. Reducing VMT is often a major objective in efforts to reduce vehicular congestion and achieve regional air quality goals.

Viewshed: The area within view from a defined observation point.

Watercourse; Channel: Natural or once natural flowing (perennially or intermittently) water including rivers, streams and creeks. Includes natural waterways that have been channelized, but does not include man-made channels, ditches and underground drainage and sewage systems.

Watershed: The total area above a given point on a watercourse that contributes water to its flow. The entire region drained by a waterway or watercourse that drains into a lake or reservoir.

Waterway: (See “Watercourse”)

Wetlands: Transitional areas between terrestrial and aquatic systems where the water table is usually at or near the surface or the land is covered by shallow water. Under a “unified” methodology now used by all federal agencies, wetlands are defined as “those areas meeting certain criteria for hydrology, vegetation and soils.”

Wildlife Corridor: A natural corridor, such as an undeveloped ravine, that is frequently used by wildlife to travel from one area to another.

Zoning: The division of a city or county by legislative regulations into areas or zones that specify allowable uses for real property and size restrictions for buildings within these areas. A program that implements the General Plan.

LOS ANGELES COUNTY GENERAL PLAN

APPENDICES

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Appendix A: Land Use Policy Maps

Appendix B: General Plan Guiding Principles and Planning Areas Framework

I. Development of the General Plan Guiding Principles

The County developed the General Plan Guiding Principles—Smart Growth; Sufficient Community Services and Infrastructure; Strong and Diversified Economy; Environmental Resource Management; and Healthy, Livable and Equitable Communities—to reflect the broadly expressed needs, concerns, and aspirations of County residents and stakeholders. The following issues were identified as important topics to be addressed in the General Plan:

Promote a Strong and Diversified Economy

- Provide a wide range of investment opportunities and job choices so that the County is less vulnerable to the harmful consequences of recessions.
- Provide an adequate supply of land suitable for industry and commerce to ensure a diversified and strong economy.
- Increase training efforts to better prepare the workforce for future industries.

Promote Fiscal, Environmental, and Social Sustainability

- Meet the needs of the current generation without compromising the ability of future generations to meet their needs.
- Encourage practices that maximize user benefit, minimize waste and redundancy, and consistently promote the revitalization, restoration, and enhancement of the built, natural, and social environments.
- Promote the conservation of energy and other valuable natural resources as a basic principle in all planning activities.

Promote Revitalization of Urban Areas

- Direct development opportunities to areas most in need of economic investment.
- Emphasize code enforcement as a means to spur urban redevelopment in economically depressed areas.

Provide Affordable Housing

- Build and maintain a diversity of decent housing at an affordable price.

Provide for Adequate Community Services and Facilities

- Maintain roadways and regulate land uses.
- Provide community services and facilities, such as schools, parks, and libraries that play a significant role in the enrichment of the public consciousness.
- Develop a sense of place for the many neighborhoods within the County.
- Ensure proficient emergency service and infrastructure coverage, such as fire protection and wastewater systems, which are necessary for the health and safety of residents and visitors.
- Increase community services, such as daycare and job training centers.

Promote Multimodal Transportation Alternatives and an Efficient Transportation

System

- Maintain and maximize the efficiency of the County highway and road network system by integrating and promoting alternative forms of transportation, such as rail, bus, and biking.
- Improve the freight and highway systems for the safe and efficient movement of goods.
- Protect rural communities and rural lifestyles.
- Maintain the unique character and development patterns of unincorporated rural communities.

Conserve Water and Protect its Quality

- Develop and promote strong conservation efforts and preserve land for the natural recharge of groundwater, which is essential to ensure an ongoing adequate supply of quality water to the County.
- Promote the development of a countywide recycled water system.

Protect the Natural Environment, Natural Resources, and Conserve Open Space

- Maintain and protect natural resources, such as clean air and water, wildlife habitat areas, mineral resource areas, agricultural land, national forest land, parks and open space areas, and recreational areas.
- Preserve open space areas that provide valuable recreational, scenic and biological resources for County residents.
- Acquire open space and limit development in rural areas.
- Address the regional issue of air quality, which is important in maintaining a high quality of life for County residents.

Protect Against Natural and Manmade Hazards

- Create programs to provide current and improved hazard-related information, and strengthen development review procedures and standards.

II. Development of Planning Areas Framework

The Planning Areas Framework for the General Plan was developed using the following sources:

- SCAG subregional boundaries for Los Angeles County;
- Census tract boundaries;
- LAFCO Municipal Service Review Areas;
- City and unincorporated community boundaries;
- Physical and geographic boundaries;
- Stakeholder input; and
- Subregional planning initiatives and planning issues.

Appendix C: Land Use Element Resources

I. Hazard, Environmental and Resource Constraints Model

The purpose of the Hazard, Environmental and Resource Constraints Model is to inform the land use policy direction of future community-based planning initiatives, as well as other land use policies, regulations and procedures. In addition, it is a tool to inform applicants and planners of potential site constraints and regulations.

The Model uses a classification system that identifies constraints based on level of severity. The classifications identify areas that are constrained due to environmental conditions and/or hazards.

The classes are defined as follows:

- Class I: Land that has minimal constraints.
- Class II: Land that has moderate constraints.
- Class III: Land that has severe constraints.

Figure C.1 is a visual representation of the Hazard, Environmental and Resource Constraints Model. The classification system is not cumulative. For example, if an area is part of a Very High Fire Hazard Severity Zone (Class I) and a Significant Ecological Area (Class II), it is mapped as Class II.

Figure C.1: Hazard, Environmental and Resource Constraints Model

Table C.1 outlines the constraints incorporated into the model, the classification of these constraints and the source of the data.

Table C.1: Classification and Sources of Constraints

Hazards, Environmental and Other Resources	Class I	Class II	Class III	Data Source
FEMA Q3 Flood Zone 100 year		X		Federal Emergency Management Agency
FEMA Q3 Flood Zone 500 year	X			Federal Emergency Management Agency
National Forest		X		United States Forest Service
Open Space			X	Los Angeles County Department of Regional Planning Los Angeles County Assessor's Office GreenInfo Network - California Protected Areas Database
Significant Ecological Areas (SEAs)		X		Los Angeles County Department of Regional Planning
Environmentally Sensitive Habitat Areas (ESHA)			X	Los Angeles County Department of Regional Planning

Oak Woodlands and Savannahs			X	Los Angeles County Department of Regional Planning
Cold Creek / Dark Canyon Resource Management Area			X	Los Angeles County Department of Regional Planning
Significant Watersheds			X	Los Angeles County Department of Regional Planning
Wildlife Migration Corridor / Habitat Linkages			X	Los Angeles County Department of Regional Planning
Coastal Zone	X			California Coastal Commission
Scenic Highways		X		California Department of Transportation
Significant Ridgelines	X			Los Angeles County Department of Regional Planning
Mineral Resources	X			California Department of Conservation, Division of Mines and Geology
Oil and Gas Resources	X			California Department of Conservation, Division of Oil, Gas & Geothermal
Military Installations and Operation Areas	X			Military Operation Areas: Combination of Defense Installation Spatial Data Infrastructure (DISDI) dataset and information derived from the Flight Information Publications (FLIP), FAA Instrument Flight Rules (IFR), and Visual Flight Rules (VFR) data sources. Special Use Areas: Combination of DISDI dataset and information derived from FAA IFR and VFR data sources. Data verified by Regional Airspace Coordinators (RACs). Military Installations: DISDI dataset.
Dam and Reservoir Innundation Areas	X			California Emergency Management Agency
Tsunami Hazard Areas	X			California Emergency Management Agency University of Southern California California Geological Survey
Very High Fire Hazard Severity Zone	X			California Department of Forestry and Fire Protection, Fire and Resource Assessment Program
Airport Influence Areas	X			Los Angeles County Airport Land Use Commission
Active Fault Trace			X	Los Angeles County General Plan, Fault Rupture Hazards and Historic Seismicity Map

Seismically Induced Landslide Zone		X		California Geological Survey, Seismic Hazard Zone Maps
Seismically Induced Liquefaction Zone	X			California Geological Survey, A-P Maps
Alquist-Priolo Earthquake Fault Zone			X	California Geological Survey, Seismic Hazard Zone Maps
Hillside Management Areas: 25% - 49.9%	X			Los Angeles County Department of Regional Planning
Hillside Management Areas: 50% or greater slope		X		Los Angeles County Department of Regional Planning
Agricultural Resource Areas (ARAs)		X		Los Angeles County Department of Regional Planning
Prime Farmland		X		California Department of Conservation, Department of Land Resource Protection
Farmland of Statewide Importance		X		California Department of Conservation, Department of Land Resource Protection
Unique Farmland		X		California Department of Conservation, Department of Land Resource Protection
Farmland of Local Importance		X		California Department of Conservation, Department of Land Resource Protection

II. Land Use Legend

Population Density Standards

California Government Code Section 65302(a) requires general plan land use elements to contain population density standards for land use categories. Because of the impracticality of regulating population density, this section summarizes the expected persons or employees per land use category upon General Plan buildout.

Residential Population Density

Table C.3: Residential Population Density by Land Use Designation

General Plan Land Use	Acres	Population Density (Persons/Acre)	Population Estimate
General Plan Land Use Legend (not in a community plan)			
General Plan	**106,632**	**6.5**	**696,396**
CG - General Commercial	867	-	-

CM - Major Commercial	297	-	-
CR - Rural Commercial	1	-	-
H2 - Residential 2	1,462	6	9,007
H5 - Residential 5	1,773	15	27,306
H9 - Residential 9	14,398	26	373,188
H18 - Residential 18	2,474	52	128,252
H30 - Residential 30	814	67	54,326
H50 - Residential 50	118	112	13,180
H100 - Residential 100	5	223	1,101
IH - Heavy Industrial	1,702	-	-
IL - Light Industrial	1,868	-	-
IO - Industrial Office	0	-	-
MU - Mixed Use	245	335	82,025
OS-BLM - Bureau of Land Management	76	-	-
OS-C - Conservation	7,644	-	-
MR - Mineral Resources	1,088	-	-
ML - Military Land	36,615	-	-
OS-NF - National Forest	2,777	-	-
OS-PR - Parks and Recreation	7,099	-	-
OS-W - Water	2,070	-	-
P - Public and Semi-Public	6,907	-	-
RL1 - Rural Land 1	1,153	4	4,440
RL2 - Rural Land 2	126	2	243
RL10 - Rural Land 10	2,249	0.4	866

RL20 - Rural Land 20	12,767	0.2	2,458
RL40 - Rural Land 40	38	0.1	4
Community-Based Plans			
Altadena Community Plan	**5,604**	**11**	**61,359**
BP - Business Park	38	-	-
E - Estate/Equestrian	93	2	144
GC - General Commercial	64	-	-
I - Institutions	183	-	-
LD - Low Density Residential	3,068	18	56,694
LMD - Low/Medium Density Residential	1	37	46
MD - Medium Density Residential	26	49	1,271
MOS - Miscellaneous Open Space	68	-	-
MU - Mixed Use "Center"	37	49	1,792
N - Non-Urban	327	1	403
NF - National Forest and National Forest Managed Lands	416	-	-
PR - Public and Private Recreation	103	-	-
Public Streets	815	-	-
SP - La Vina Specific Plan	219	5	1,008
U - Utilities	145	-	-
Antelope Valley Area Plan	**1,130,584**	**0.2**	**258,407**
CR - Rural Commercial	1,024	-	-
CR-MU - Rural Commercial / Mixed Use	359	13	4,819
H18 - Medium Density Residential	118	52	6,114
H2 - Large Lot Residential	6,446	6	39,708

H30 - Urban Residential	84	61	5,131
H5 - Suburban Residential	716	15	11,031
H9 - Suburban High Density Residential	472	26	12,238
IH - Heavy Industrial	1,382	-	-
IL - Light Industrial	1,057	-	-
OS-BLM - Bureau of Land Management	8,925	-	-
OS-C - Conservation	3,431	-	-
ML - Military Land	41,779	-	-
OS-NF - National Forest	498,543	-	-
OS-PR - Parks and Recreation	19,315	-	-
OS-W - Water	11,039	-	-
P - Public and Semi-Public	18,659	-	-
RL1 - Rural Land 1	5,268	4	20,281
RL2 - Rural Land 2	15,172	2	29,206
RL5 - Rural Land 5	18,793	1	14,470
RL10 - Rural Land 10	133,178	0.4	51,273
RL20 - Rural Land 20	315,539	0.2	60,753
RL40 - Rural Land 40	29,287	0.1	3,383
East Los Angeles Community Plan	**3,381**	**38**	**128,487**
CC - Community Commercial	150	-	-
CM - Commercial Manufacturing	93	-	-
CR - Commercial Residential	65	67	4,361
I - Industrial	158	-	-
LD - Low Density Residential	132	25	3,246

LMD - Low/Medium Density Residential	1,045	49	51,146
MC - Major Commercial	95	-	-
MD - Medium Density Residential	1,041	67	69,735
P - Public Use	582	-	-
RP - Residential Parking	21	-	-
Hacienda Heights Community Plan	**6,360**	**10**	**65,833**
CG - General Commercial	131	-	-
H18 - Residential 18	201	52	10,402
H2 - Residential 2	719	6	4,429
H30 - Residential 30	10	67	693
H5 - Residential 5	2,110	15	32,499
H50 - Residential 50	7	112	785
H9 - Residential 9	594	28	16,466
IL - Light Industrial	28	-	-
OS-C - Open Space Conservation	403	-	-
OS-PR - Open Space Parks and Recreation	1,131	-	-
P-CS - Public and Semi-Public Community Serving	30	-	-
P-TF - Public and Semi-Public - Transportation Facilities	0	-	-
P-UF - Public and Semi-Public Utilities and Facilities	133	-	-
RL10 - Rural Lands 10	714	0.4	275
RL2 - Rural Lands 2	148	2	284
Malibu Coastal Land Use Plan	**51,141**	**0.3**	**16,729**
3 - Rural Land I	3,905	0.3	1,336
4 - Rural Land II	3,375	1	2,320

5 - Rural Land III	2,615	2	4,604
6 - Residential I	903	3	2,595
11 - Institution and Public Facilities	982	-	-
12 - Rural Business	18	-	-
13 - General Commercial	0	-	-
14 - Office/Commercial Services	0	-	-
16 - Low-Intensity Visitor-Serving Commercial Recreation	710	-	-
17 - Recreation-Serving Commercial	0	-	-
18 - Parks	15,441	-	-
8A - Residential III(A)	21	6	121
8B - Residential III(B)	75	17	1,273
9B - Residential IV(B)	5	5	29
9C - Residential IV(C)	0	31	15
M2 - Mountain Land	23,051	0.2	4,437
MU - Mixed Use - Specific Plan Required	39	-	-
Marina Del Rey Coastal Land Use Plan	**699**	**30**	**21,067**
B - Boat Storage	18	-	-
H - Hotel	30	-	-
MC - Marine Commercial	32	-	-
O - Office	5	-	-
OS - Open Space	35	-	-
P - Parking	20	-	-
PF - Public Facilities	8	-	-
R III - Residential III	38	78	2,970

R IV - Residential IV	21	100	2,060
R V - Residential V	96	167	16,037
VS/CC - Visitor-Serving / Convenience Commercial	32	-	-
W - Water	365	-	-
Rowland Heights Community Plan	**7,422**	**7**	**50,900**
C - Commercial	192	-	-
I - Industrial	144	-	-
N1 - Non-Urban 1	1,459	1	1,124
N2 - Non-Urban 2	510	3	1,730
O - Open Space	1,566	-	-
TOS - Transitional Open Space (N1)	272	1	210
TOS - Transitional Open Space (N2)	268	3	695
TOS - Transitional Open Space (U1)	252	7	1,878
U1 - Urban 1	1,276	9	10,998
U2 - Urban 2	1,278	18	22,728
U3 - Urban 3	68	36	2,477
U4 - Urban 4	51	49	2,517
U5 - Urban 5	84	78	6,543
Santa Catalina Island Coastal Land Use Plan	**46,137**	**0**	**0**
Commercial - Two Harbors	3	-	-
Conservation/Primitive Recreation - Catalina	20,212	-	-
Conservation/Recreation - Two Harbors	820	-	-
Extractive Use - Catalina	514	-	-
Industrial/Transportation - Two Harbors	5	-	-

Industrial/Transportation/Utilities - Catalina	172	-	-
Lodges/Inns - Two Harbors	14	-	-
Marine Commercial - Two Harbors	3	-	-
Open Space/Recreation - Two Harbors	108	-	-
Open Space/Structured Recreation - Catalina	24,057	-	-
Residential Land Uses - Two Harbors	136	-	-
undefined* - Two Harbors	3	-	-
Utilites/Services - Two Harbors	7	-	-
View Corridor - Two Harbors	84	-	-
Santa Clarita Valley Area Plan	**270,887**	**1**	**237,638**
Residential	270,887	1	237,638
Santa Monica Mountains North Area Plan	**20,162**	**0.5**	**9,399**
C - Commercial	120	-	-
CR - Commercial Recreation - Limited Intensity	47	-	-
N1 - Rural Residential 1	454	3	1,173
N10 - Mountain Lands 10	4,265	0.3	1,419
N2 - Rural Residential 2	668	2	1,124
N20 - Mountain Lands 20	5,505	0.2	1,060
N5 - Mountain Lands 5	2,028	1	1,388
OS - Open Space	775	-	-
OS-DR - Open Space Deed Restricted	591	-	-
OS-P - Open Space Parks	4,731	-	-
OS-W - Open Space Water	39	-	-
P - Public and Semi-Public Facilities	515	-	-

TC - Transportation Corridor	0	-	-
U2 - Residential 2	252	6	1,386
U4 - Residential 4	148	9	1,323
U8 - Residential 8	26	21	526
Twin Lakes Community Plan	**45**	**4**	**174**
RC - Rural Communities	45	4	174
Walnut Park Neighborhood Plan	**369**	**37**	**13,717**
GC - General Commercial	35	-	-
MC - Mixed Commercial	11	-	-
NP I - Neighborhood Preservation I	167	28	4,619
NP II - Neighborhood Preservation II	21	55	1,146
NR - Neighborhood Revitalization	117	67	7,852
OC - Office Commercial	7	-	-
PU/I - Public Use / Institutional	8	-	-
R/P - Residential / Parking	4	28	100
West Athens-Westmont Neighborhood Plan	**1,489**	**27**	**40,539**
C.1 - Regional Commercial	45	-	-
C.2 - Community Commercial	81	-	-
C.3 - Neighborhood Commercial	2	-	-
C.4 - Commercial Manufacturing	15	-	-
CR - Commercial Recreation	13	-	-
OS.1 - Recreation / Open Space	122	-	-
PL.1 - Public/Quasi-Public Use	157	-	-
RD 2.3 - Single Family Residence	485	25	11,945

RD 3.1 - Two Family Residence	549	49	26,868
RD 3.2 - Medium Density Bonus	19	67	1,292
SCD - Senior Citizen Density Bonus	4	112	434
Grand Total	**1,650,912**	**N/A**	**1,600,645**

Note*:* The buildout for residential development on County land outside of community plan areas is based on 80 percent of the maximum residential density, with an exception for densities of no more than one unit per acre, which may buildout at the maximum.

The County includes a number of existing community plan areas. Assumptions for density and floor area ratios were developed in response to development standards in each community plan. Population projections were established by applying County-determined person per household assumptions for single family and multifamily housing types.

Source: Los Angeles County Department of Regional Planning, GIS Section.

Employment Population Density

Table C.4: Employment Population Density by Land Use Designation

General Plan Land Use	Acres	Employee Density (Employees/Acre)	Employee Estimate
Proposed General Plan (not in a community plan)			
General Plan	**106,632**	**1.78**	**190,423**
CG - General Commercial	867	44	37,879
CM - Major Commercial	297	63	18,717
CR - Rural Commercial	1	21	13
H2 - Residential 2	1,462	0.1	100
H5 - Residential 5	1,773	0.1	100
H9 - Residential 9	14,398	0.2	3,086
H18 - Residential 18	2,474	0.3	811
H30 - Residential 30	814	1	427
H50 - Residential 50	118	2	250
H100 - Residential 100	5	-	-

IH - Heavy Industrial	1,702	20	34,761
IL - Light Industrial	1,868	17	32,181
IO - Industrial Office	0	144	71
MU - Mixed Use	245	128	31,327
OS-BLM - Bureau of Land Management	76	-	-
OS-C - Conservation	7,644	-	-
MR - Mineral Resources	1,088	-	-
ML- Military Land	36,615	-	-
OS-NF - National Forest	2,777	-	-
OS-PR - Parks and Recreation	7,099	0.2	1,625
OS-W - Water	2,070	0.1	307
P - Public and Semi-Public	6,907	4	28,667
RL1 - Rural Land 1	1,153	0.1	101
RL2 - Rural Land 2	126	-	-
RL10 - Rural Land 10	2,249	-	-
RL20 - Rural Land 20	12,767	-	-
RL40 - Rural Land 40	38	-	-
Community Plans			
Altadena Community Plan	**5,604**	**3**	**18,463**
BP - Business Park	38	80	3,075
E - Estate/Equestrian	93	0.1	5
GC - General Commercial	64	147	9,376
I - Institutions	183	4	803
LD - Low Density Residential	3,068	0.1	377

LMD - Low/Medium Density Residential	1	-	-
MD - Medium Density Residential	26	0.2	4
MOS - Miscellaneous Open Space	68	1	100
MU - Mixed Use "Center"	37	121	4,411
N - Non-Urban	327	-	-
NF - National Forest and National Forest Managed Lands	416	-	-
PR - Public and Private Recreation	103	2	164
Public Streets	815	-	-
SP - La Vina Specific Plan	219	1	150
U - Utilities	145	-	-
Antelope Valley Area Plan	**1,130,584**	**0.05**	**55,392**
CR - Rural Commercial	1,024	21	21,897
CR-MU - Rural Commercial / Mixed Use	359	22	7,729
H18 - Medium Density Residential	118	-	-
H2 - Large Lot Residential	6,446	0.05	300
H30 - Urban Residential	84	-	-
H5 - Suburban Residential	716	-	-
H9 - Suburban High Density Residential	472	-	-
IH - Heavy Industrial	1,382	3	4,069
IL - Light Industrial	1,057	17	17,623
OS-BLM - Bureau of Land Management	8,925	-	-
OS-C - Conservation	3,431	0.01	50
ML - Military Land	41,779	-	-
OS-NF - National Forest	498,543	-	-

OS-PR - Parks and Recreation	19,315	0.02	346
OS-W - Water	11,039	-	-
P - Public and Semi-Public	18,659	0.1	2,796
RL1 - Rural Land 1	5,268	0.0005	2
RL2 - Rural Land 2	15,172	0.02	329
RL5 - Rural Land 5	18,793	-	-
RL10 - Rural Land 10	133,178	0.0008	100
RL20 - Rural Land 20	315,539	0.0005	150
RL40 - Rural Land 40	29,287	-	-
East Los Angeles Community Plan	**3,381**	**13**	**42,459**
CC - Community Commercial	150	129	19,239
CM - Commercial Manufacturing	93	46	4,289
CR - Commercial Residential	65	105	6,848
I - Industrial	158	33	5,234
LD - Low Density Residential	132	-	-
LMD - Low/Medium Density Residential	1,045	1	565
MC - Major Commercial	95	28	2,627
MD - Medium Density Residential	1,041	1	904
P - Public Use	582	5	2,753
RP - Residential Parking	21	-	-
Hacienda Heights Community Plan	**6,360**	**2**	**13,310**
CG - General Commercial	131	85	11,194
H18 - Residential 18	201	0.07	15
H2 - Residential 2	719	0.14	100

H30 - Residential 30	10	-	-
H5 - Residential 5	2,110	0.5	1,000
H50 - Residential 50	7	-	-
H9 - Residential 9	594	0.34	200
IL - Light Industrial	28	17	466
OS-C - Open Space Conservation	403	-	-
OS-PR - Open Space Parks and Recreation	1,131	0.2	200
P-CS - Public and Semi-Public Community Serving	30	3	100
P-TF - Public and Semi-Public - Transportation Facilities	0	-	-
P-UF - Public and Semi-Public Utilities and Facilities	133	-	-
RL10 - Rural Lands 10	714	-	-
RL2 - Rural Lands 2	148	0.2	35
Malibu Coastal Land Use Plan	**51,141**	**0.4**	**22,138**
3 - Rural Land I	3,905	0.01	23
4 - Rural Land II	3,375	0.004	15
5 - Rural Land III	2,615	0.05	120
6 - Residential I	903	-	-
11 - Institution and Public Facilities	982	8	7,600
12 - Rural Business	18	17	309
13 - General Commercial	0	17	8
14 - Office/Commercial Services	0	29	5
16 - Low-Intensity Visitor-Serving Commercial Recreation	710	16	11,603
17 - Recreation-Serving Commercial	0	17	3
18 - Parks	15,441	0.01	175

8A - Residential III(A)	21	-	-
8B - Residential III(B)	75	-	-
9B - Residential IV(B)	5	-	-
9C - Residential IV(C)	0	-	-
M2 - Mountain Land	23,051	0.07	1,603
MU - Mixed Use - Specific Plan Required	39	17	672
Marina Del Rey Coastal Land Use Plan	**699**	**5**	**3,598**
B - Boat Storage	18	4	80
H - Hotel	30	0.2	7
MC - Marine Commercial	32	43	1,346
O - Office	5	144	780
OS - Open Space	35	0.4	13
P - Parking	20	0.3	5
PF - Public Facilities	8	-	-
R III - Residential III	38	-	-
R IV - Residential IV	21	-	-
R V - Residential V	96	-	-
VS/CC - Visitor-Serving / Convenience Commercial	32	43	1,366
W - Water	365	-	-
Rowland Heights Community Plan	**7,422**	**3**	**20,661**
C - Commercial	192	82	15,764
I - Industrial	144	21	3,027
N1 - Non-Urban 1	1,459	-	-
N2 - Non-Urban 2	510	0.4	200

O - Open Space	1,566	0.1	194
TOS - Transitional Open Space (N1)	272	-	-
TOS - Transitional Open Space (N2)	268	-	-
TOS - Transitional Open Space (U1)	252	-	-
U1 - Urban 1	1,276	0.3	401
U2 - Urban 2	1,278	1	1,075
U3 - Urban 3	68	-	-
U4 - Urban 4	51	-	-
U5 - Urban 5	84	-	-
Santa Catalina Island Coastal Land Use Plan	**46,137**	**0.0**	**570**
Commercial - Two Harbors	3	3	7
Conservation/Primitive Recreation - Catalina	20,212	0.002	32
Conservation/Recreation - Two Harbors	820	0.02	17
Extractive Use - Catalina	514	-	-
Industrial/Transportation - Two Harbors	5	-	-
Industrial/Transportation/Utilities - Catalina	172	0.03	6
Lodges/Inns - Two Harbors	14	-	-
Marine Commercial - Two Harbors	3	-	-
Open Space/Recreation - Two Harbors	108	0.02	2
Open Space/Structured Recreation - Catalina	24,057	0.02	505
Residential Land Uses - Two Harbors	136	-	-
undefined* - Two Harbors	3	-	-
Utilites/Services - Two Harbors	7	-	-
View Corridor - Two Harbors	84	-	-

Santa Clarita Valley Area Plan	**270,887**	**0.4**	**105,881**
Non-Residential	270,887	0.39	105,881
Santa Monica Mountains North Area Plan	**20,162**	**0.3**	**6,569**
C - Commercial	120	40	4,764
CR - Commercial Recreation - Limited Intensity	47	26	1,195
N1 - Rural Residential 1	454	0.05	21
N10 - Mountain Lands 10	4,265	0.05	200
N2 - Rural Residential 2	668	0.1	100
N20 - Mountain Lands 20	5,505	0.003	16
N5 - Mountain Lands 5	2,028	0.1	200
OS - Open Space	775	-	-
OS-DR - Open Space Deed Restricted	591	-	-
OS-P - Open Space Parks	4,731	0.01	62
OS-W - Open Space Water	39	0.3	11
P - Public and Semi-Public Facilities	515	-	-
TC - Transportation Corridor	0	-	-
U2 - Residential 2	252	-	-
U4 - Residential 4	148	-	-
U8 - Residential 8	26	-	-
Twin Lakes Community Plan	**45**	**0**	**0**
RC - Rural Communities	45	0	0
Walnut Park Neighborhood Plan	**369**	**14**	**5,044**
GC - General Commercial	35	109	3,786
MC - Mixed Commercial	11	43	474

NP I - Neighborhood Preservation I	167	1	100
NP II - Neighborhood Preservation II	21	-	-
NR - Neighborhood Revitalization	117	-	-
OC - Office Commercial	7	87	572
PU/I - Public Use / Institutional	8	14	112
R/P - Residential / Parking	4	-	-
West Athens-Westmont Neighborhood Plan	**1,489**	**7**	**10,894**
C.1 - Regional Commercial	45	24	1,060
C.2 - Community Commercial	81	87	6,994
C.3 - Neighborhood Commercial	2	43	79
C.4 - Commercial Manufacturing	15	21	318
CR - Commercial Recreation	13	0.4	5
OS.1 - Recreation /Open Space	122	1	70
PL.1 - Public/Quasi-Public Use	157	11	1,743
RD 2.3 - Single Family Residence	485	1	325
RD 3.1 - Two Family Residence	549	0.4	200
RD 3.2 - Medium Density Bonus	19	5	100
SCD - Senior Citizen Density Bonus	4	-	-
Grand Total	**1,650,912**	**N/A**	**495,403**

Note: Wherever possible, employment assumptions were provided by the Natelson Company Employment Density Study. Employment estimates for public uses, such as Public Facilities, Public/Quasi-Public, and Institutions, were determined individually to reflect existing uses.

Source: Los Angeles County Department of Regional Planning, GIS Section.

III. Land Use Policy Map

Map Conversion Methodology

Conversion to Digitized and Parcel-Based Land Use Policy Map

The 1980 General Plan Land Use Policy Map generalizes land use designations, and functions as a framework for the development of more detailed area and community plans (see page 21 and 22 of the 1980 General Plan Land Use Element). In developing parcel-based maps for this General Plan, it was necessary to examine every community at a parcel level to determine the appropriateness of the General Plan land use designations.

The conversion to parcel-based land use maps began in 1997, with creating base maps for all the unincorporated areas of the County, using the parcel patterns from County zoning maps as a guide to make the line work more accurate. In 2004 and 2005, the General Plan and GIS sections reviewed the digitized, parcel-based maps and fixed discrepancies. In addition, the staff edited the maps and reflect adopted project-specific amendments to the maps.

Figure C.2 is a snapshot of an unincorporated community from the 1980 General Plan Land Use Policy Map. Figure C.3 is a digitized version of the same snapshot overlaid on a parcel-based map.

Figure C.2: 1980 General Plan Land Use Policy Map Snapshot

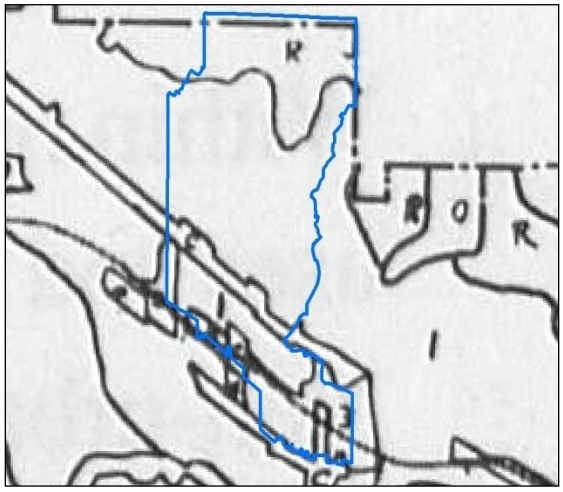
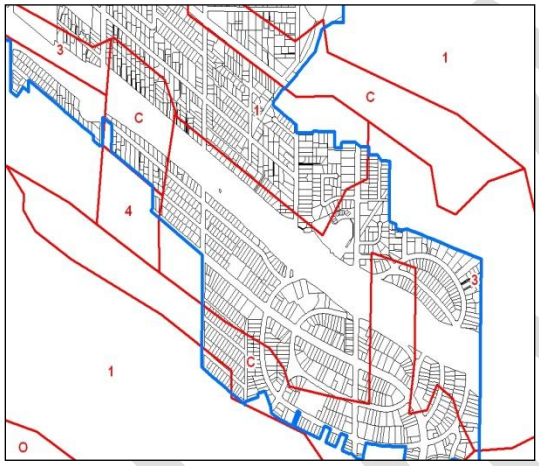


Figure C.3: GIS Digitized Version of the 1980 General Plan Land Use Policy Map



Figures C.4 and C.5 provide a final illustration of the land use map conversion process. Figure C.4 is a snapshot of the adopted 1980 General Plan Land Use Policy Map. Figure C.5 represents the fully converted, GIS-driven and parcel-based land use map.

Figure C.4: 1980 General Plan Land Use Map

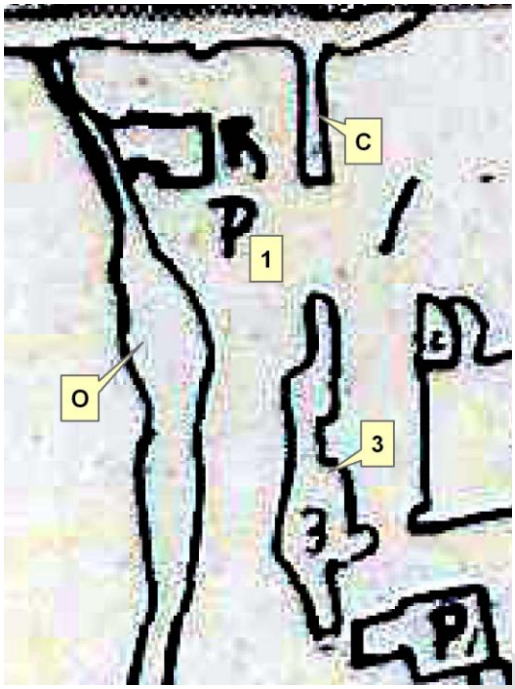


Figure C.5: Current Department Land Use Map

Additional Refinements

In 2010, the staff further refined the converted General Plan Land Use Policy Map using the approach outlined in the 1980 General Plan to determine land uses for areas not covered by an area

or community plan.

Objectives

- Reduce the inconsistencies between zoning and land use designations;
- Eliminate and discourage spot zoning;
- Reduce conflicts between adjacent uses;
- Reflect existing land use trends and/or envision future trends; and
- Eliminate unnecessary split-zoning/land use designations.

Factors considered

- Parcelized 1980 General Plan Land Use Policy Map (GIS-Net) and proposed land use designation of subject property;
- Existing zoning of subject property;
- Existing uses and densities (if residential) on subject property;
- Year built/established;
- Surrounding land use designation and zoning;
- Surrounding existing uses and densities (if residential);
- Plan amendments and/or zone changes;
- Recent approvals/projects under construction on subject property; and
- Other cities' spheres of influence.

Policy Map Changes

Transit Oriented Districts

The TOD boundaries are delineated on the Land Use Policy Map as half-mile radii from stations along Metro rail and bus rapid transit lines that are within, or adjacent to, unincorporated areas. The General Plan establishes 11 TODs, as discussed in the Land Use Element.

Where not covered by an existing community-based plan, and where appropriate, the staff designated the commercial corridors within the TODs to Mixed Use MU, which allows multifamily, commercial and mixed uses at residential densities ranging from 0-150 du/ac and commercial uses at a maximum of FAR 3.0.

Density, intensity, design and infrastructure improvements in the TODs will be regulated through TOD station area plans.

Industrial Area Preservation and Conflicts

The staff made land use changes based on the industrial land analysis (see Appendix J). In some instances, the recommended Employment Protection Districts differ from the boundaries identified on the Land Use Policy Maps. The recommended boundaries were refined as part of the land use mapping process, and therefore, may not be identical in every case. In addition, in some instances, instead of identifying an area as a Flex District, as recommended by the industrial lands study, the area was re-designated on the Land Use Policy Map to commercial to reflect the existing land uses. In other instances, the area was designated industrial and identified as a Flex District on the Opportunity Areas maps.

The staff also studied areas that are appropriate for heavy industrial uses, based on existing uses, zoning and additional research. The staff designated most of the areas zoned for heavy industrial as IH Heavy Industrial, as well as sites with major industrial uses with noxious impacts, such as oil refineries.

Hillside Management Areas and Other Hazard, Environmental and Resource Constraints

Using the Hazard, Environmental and Resource Constraints model, and existing and surrounding uses, the staff made land use changes to a limited number of hillsides and other areas with environmental constraints.

Appendix D: Mobility Element Resources

I. County Shuttles

Athens Shuttle Service

Days and hours of service: Monday through Friday from 7:00 a.m. to 6:00 p.m. and on Saturday from 9:00 a.m. to 6:00 p.m.

Service frequency: 30 minutes. One-directional shuttle traveling throughout the community along a circular loop.

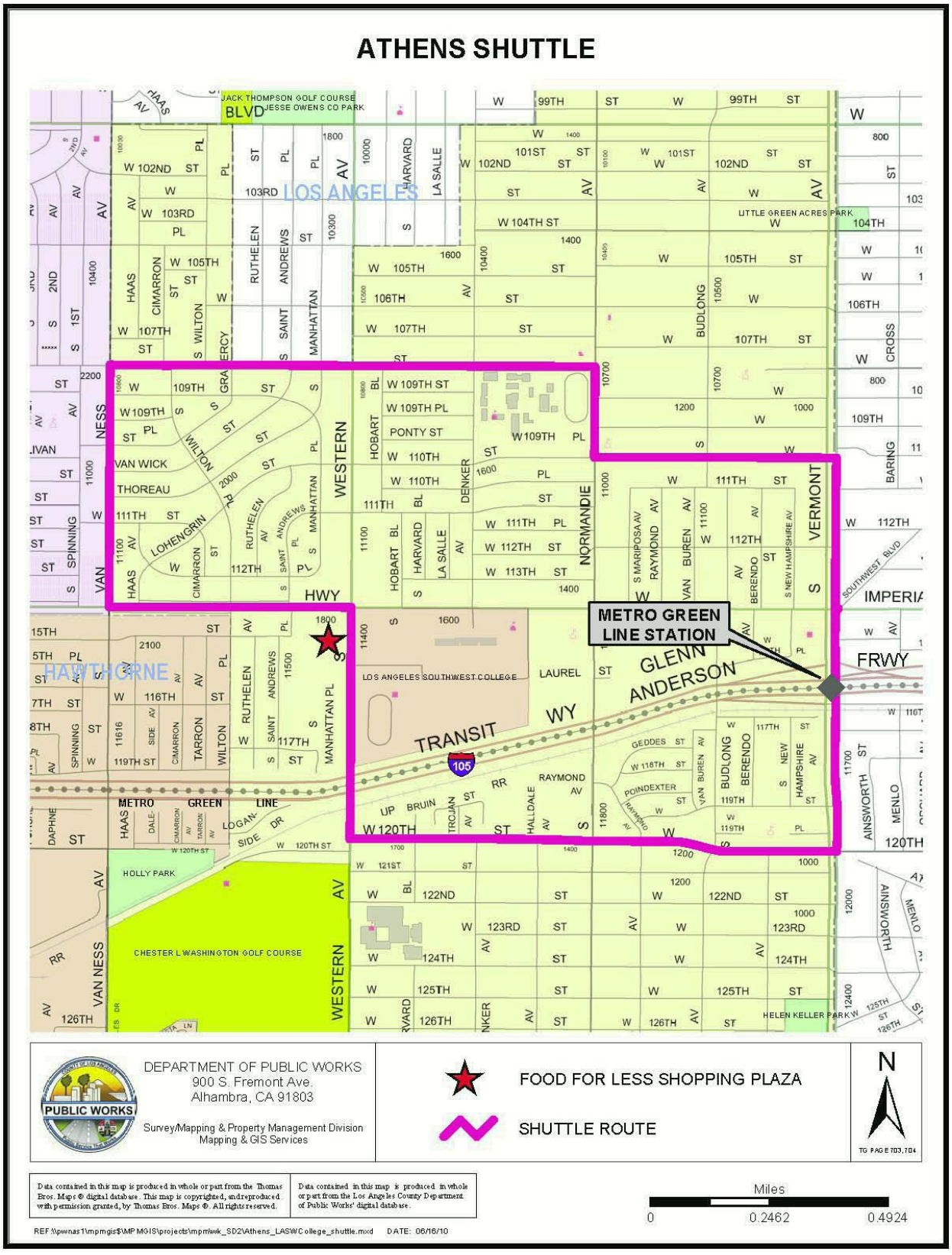
Fare structure: $0.25 per trip. Accepts all Metro passes and EZ passes. Seniors (ages 60 and over), children under age five and persons with disabilities, ride for free.

Number of service vehicles: One cutaway bus service vehicle

Key destinations served:

- Vermont Station along Metro Green Line
- Southwest College
- Washington High School
- Los Angeles County Department of Public Social Services

Figure D.1: Athens Shuttle Service Route


ATHENS SHUTTLE
METRO GREEN LINE STATION
GLENN ANDERSON
TRANSIT
WY
HWY
FRWY
LOS ANGELES SOUTHWEST COLLEGE
HOLLY PARK
CHESTER L WASHINGTON GOLF COURSE
HELEN KELLER PARK
LITTLE GREEN ACRES PARK
JACK THOMPSON GOLF COURSE
JESSE OWENS CO PARK
LOS ANGELES
HAWTHORNE
IMPERIAL
METRO GREEN LINE
DEPARTMENT OF PUBLIC WORKS
900 S. Fremont Ave.
Alhambra, CA 91803
Survey/Mapping & Property Management Division
Mapping & GIS Services
FOOD FOR LESS SHOPPING PLAZA
SHUTTLE ROUTE
N
TG PAGE 703, 704
Miles
0
0.2462
0.4924
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Lennox Community Shuttle Service

Days and hours of service: Monday through Friday from 7:00 a.m. to 6:00 p.m. and on Saturday from 9:00 a.m. to 6:00 p.m.

Service frequency: 30 or 60 minutes (pending final alignment and stops). Circular loop from Lennox County Park traveling first in one direction from end to end, and then traveling in the opposite direction from end to end.

Fare structure: $0.25 per trip. Accepts all Metro passes and EZ passes. Seniors (ages 60 and over), children under age five and persons with disabilities, ride for free.

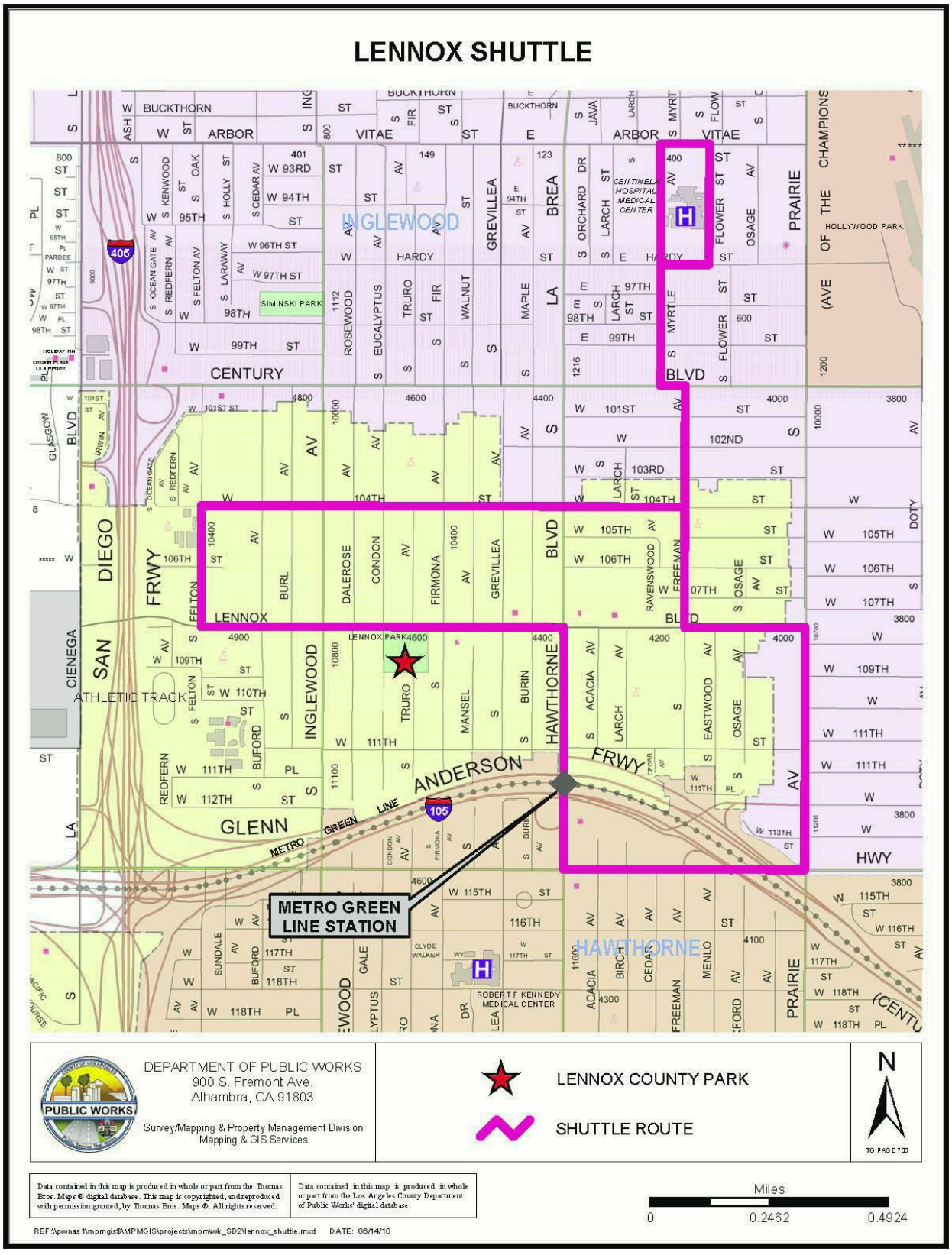
Type of service vehicles: 16-passenger (with side seating) cutaway bus

Number of service vehicles: One cutaway bus service vehicle

Key destinations served:

- Lennox County Park
- Hawthorne Station along the Metro Green Line
- Lennox County Library Branch
- U.S. Post Office
- Sheriff Station
- Centinela Hospital
- Felton Elementary School
- Jefferson Elementary School

Figure D.2: Lennox Shuttle Service Route


LENNOX SHUTTLE
INGLEWOOD
CENTURY
LENNOX
HAWTHORNE
GLENN
ANDERSON
METRO GREEN LINE STATION
LENNOX PARK
ATHLETIC TRACK
SIMINSKI PARK
HOLLYWOOD PARK
CENTINELA HOSPITAL MEDICAL CENTER
ROBERT F KENNEDY MEDICAL CENTER
405
105
DEPARTMENT OF PUBLIC WORKS
900 S. Fremont Ave.
Alhambra, CA 91803
Survey/Mapping & Property Management Division
Mapping & GIS Services
LENNOX COUNTY PARK
SHUTTLE ROUTE
N
Miles
0
0.2462
0.4924

Willowbrook Community Shuttle Service

Days and Hours of Service: Monday through Friday from 7:00 a.m. to 6:00 p.m. and on Saturday from 9:00 a.m. to 6:00 p.m.

Service frequency: Route A: 30 minutes, Route B: 60 minutes. One-directional loop.

Fare structure: $0.25 per trip. Accepts all Metro passes and EZ passes. Seniors (ages 60 and over), children under age five and persons with disabilities, ride for free.

Type of service vehicles: 18-passenger (with side seating) trolley buses

Number of service vehicles: Two trolley bus service vehicles

Key destinations served:

Route A:

- Mona County Park
- Kenneth Hahn Shopping Plaza
- Martin Luther King Medical Center
- Drew Medical University
- Cesar Chavez Alternative School
- King-Drew Magnet High School
- Willowbrook Middle School
- Jefferson Elementary School
- Anderson Elementary School

Route B:

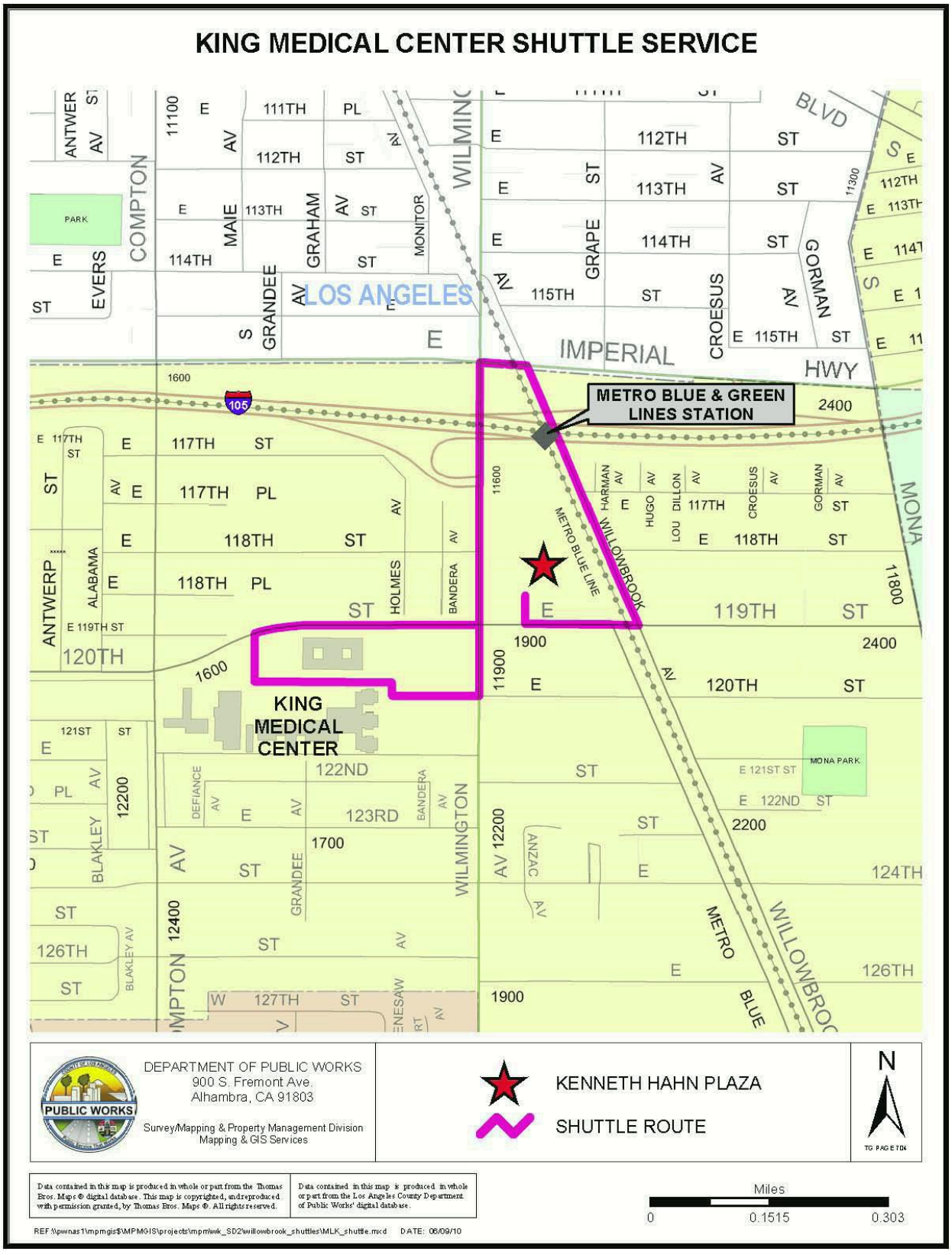
- Sibrie County Park
- Athens County Park
- Carver County Park
- Magic Johnson County Recreation Area
- Food 4-Less Shopping Center (Rosecrans Ave and Central Ave)
- Vons Grocery (El Segundo Blvd and Avalon Blvd)
- Kenneth Hahn Shopping Plaza
- U.S. Post Office (Avalon Blvd and 120th Street)
- Willowbrook Senior Center
- Willowbrook Field Office for Supervisorial District 2
- County Library (Black Resource Center)
- Watts-Willowbrook Boys and Girls Clubs
- Rosa Parks Station along the Metro Green and Blue Lines
- Martin Luther King Medical Center
- Drew Medical University
- Cesar Chavez Alternative School
- King-Drew Magnet High School
- Centennial High School
- Willowbrook Middle School

- Vanguard Middle School
- Carver Elementary School

Figure D.3: King Medical Center Shuttle Service Route

Figure D.4: Willowbrook Shuttle Service Route A

Figure D.5: Willowbrook Shuttle Service Route B


KING MEDICAL CENTER SHUTTLE SERVICE
METRO BLUE & GREEN LINES STATION
KING MEDICAL CENTER
LOS ANGELES
IMPERIAL HWY
COMPTON
WILMINGTON
WILLOWBROOK
METRO BLUE LINE
MONA PARK
DEPARTMENT OF PUBLIC WORKS
900 S. Fremont Ave.
Alhambra, CA 91803
Survey/Mapping & Property Management Division
Mapping & GIS Services
KENNETH HAHN PLAZA
SHUTTLE ROUTE
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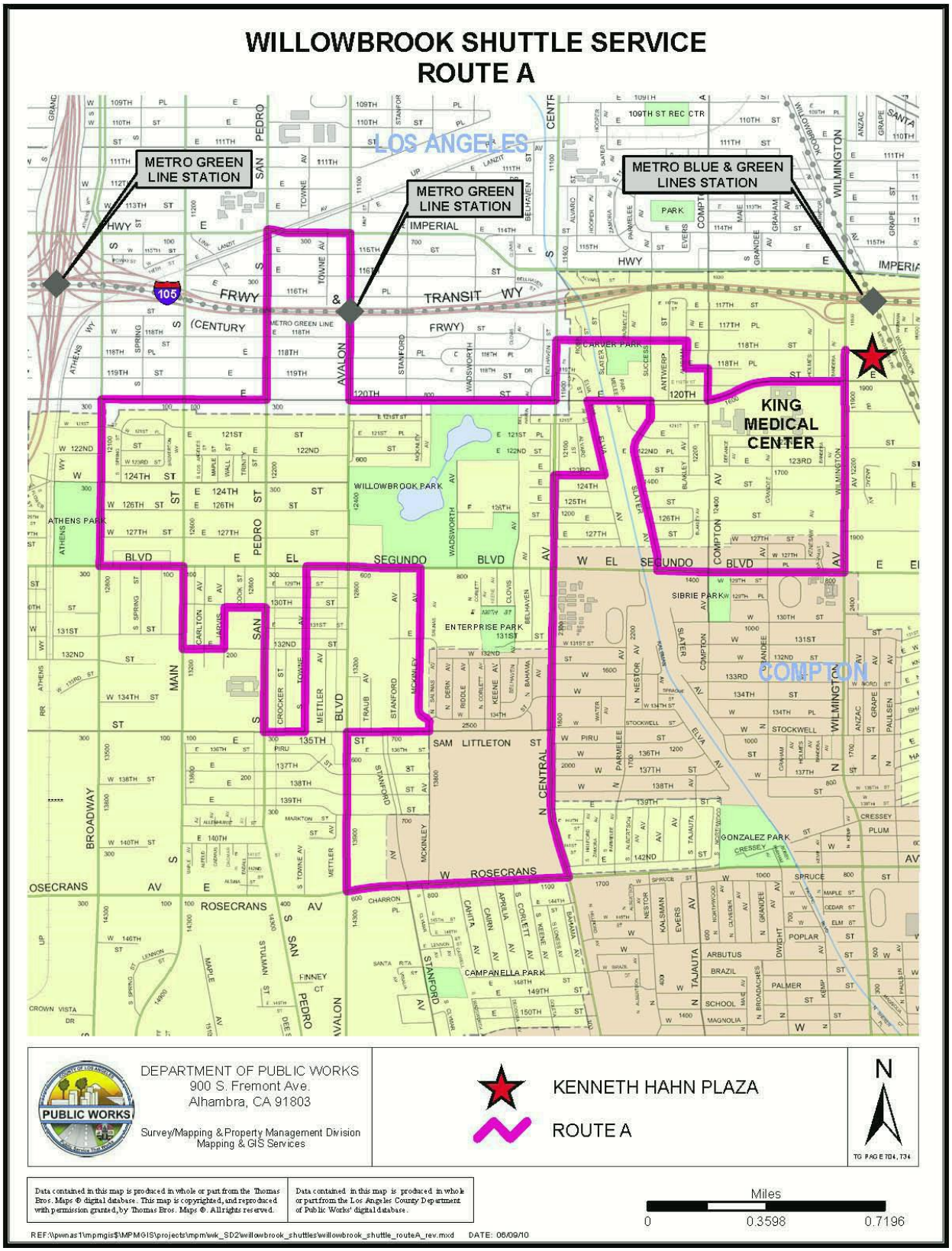
WILLOWBROOK SHUTTLE SERVICE
ROUTE A
METRO GREEN LINE STATION
METRO GREEN LINE STATION
METRO BLUE & GREEN LINES STATION
LOS ANGELES
COMPTON
KING MEDICAL CENTER
WILLOWBROOK PARK
ATHENS PARK
ENTERPRISE PARK
SIBRIE PARK
GONZALEZ PARK
CAMPANELLA PARK
DEPARTMENT OF PUBLIC WORKS
900 S. Fremont Ave.
Alhambra, CA 91803
Survey/Mapping & Property Management Division
Mapping & GIS Services
KENNETH HAHN PLAZA
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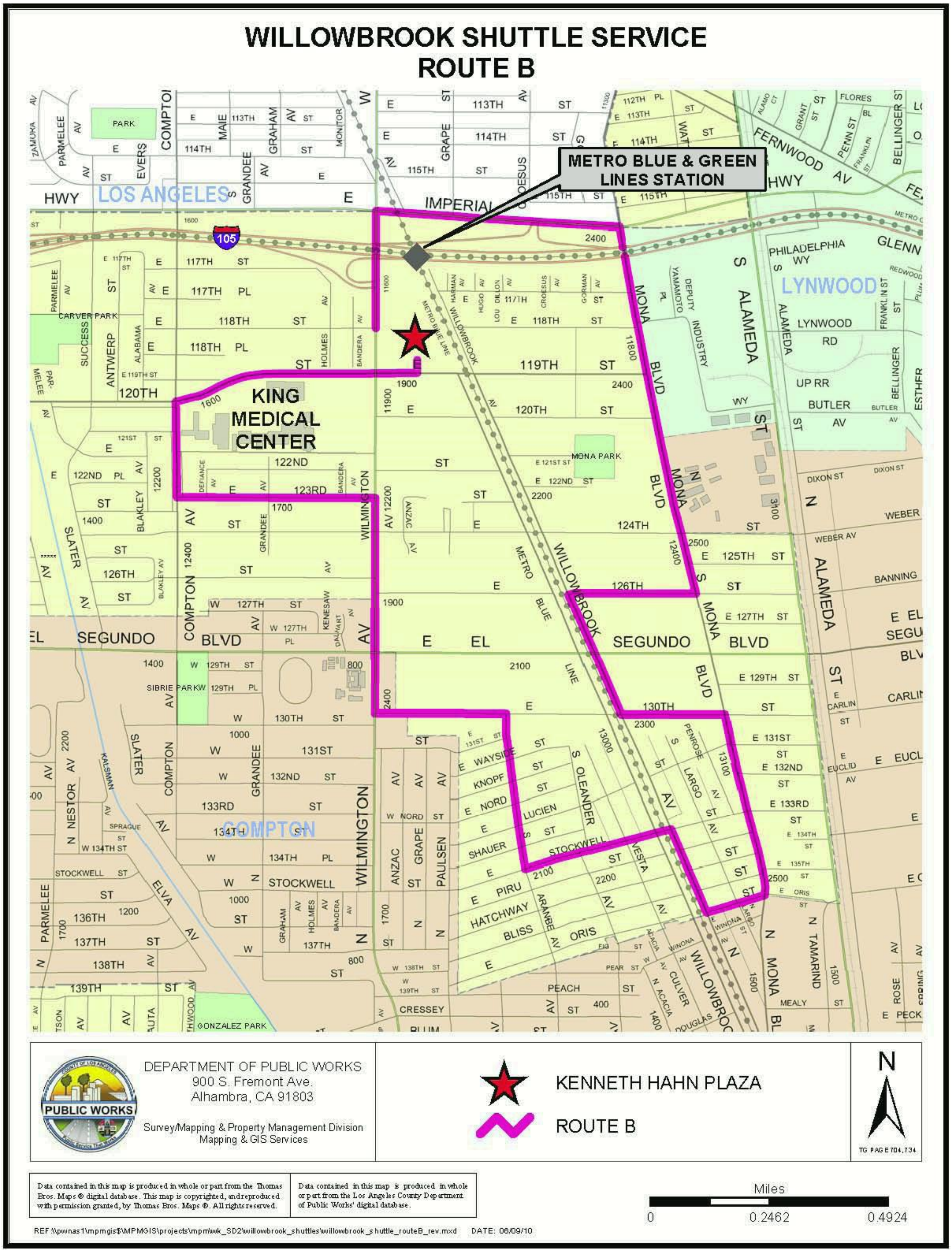
WILLOWBROOK SHUTTLE SERVICE
ROUTE B
METRO BLUE & GREEN LINES STATION
KING MEDICAL CENTER
LOS ANGELES
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GONZALEZ PARK
IMPERIAL
HWY
EL SEGUNDO BLVD
WILLOWBROOK
WILMINGTON AV
COMPTON AV
MONA BLVD
ALAMEDA ST
DEPARTMENT OF PUBLIC WORKS
900 S. Fremont Ave.
Alhambra, CA 91803
Survey/Mapping & Property Management Division
Mapping & GIS Services
PUBLIC WORKS
KENNETH HAHN PLAZA
ROUTE B
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Data contained in this map is produced in whole or part from the Los Angeles County Department of Public Works' digital database.
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DATE: 06/09/10

Florence - Firestone and Walnut Park Shuttle Service

Days and hours of service: Monday through Friday from 7:00 a.m. to 6:00 p.m. and on Saturday from 9:00 a.m. to 6:00 p.m.

Service frequency: 60 minutes. Bi-directional shuttle traveling throughout the community along a circular loop.

Fare structure: $0.25 per trip. Accepts all Metro passes and EZ passes. Seniors (ages 60 and over), children under age five and persons with disabilities, ride for free.

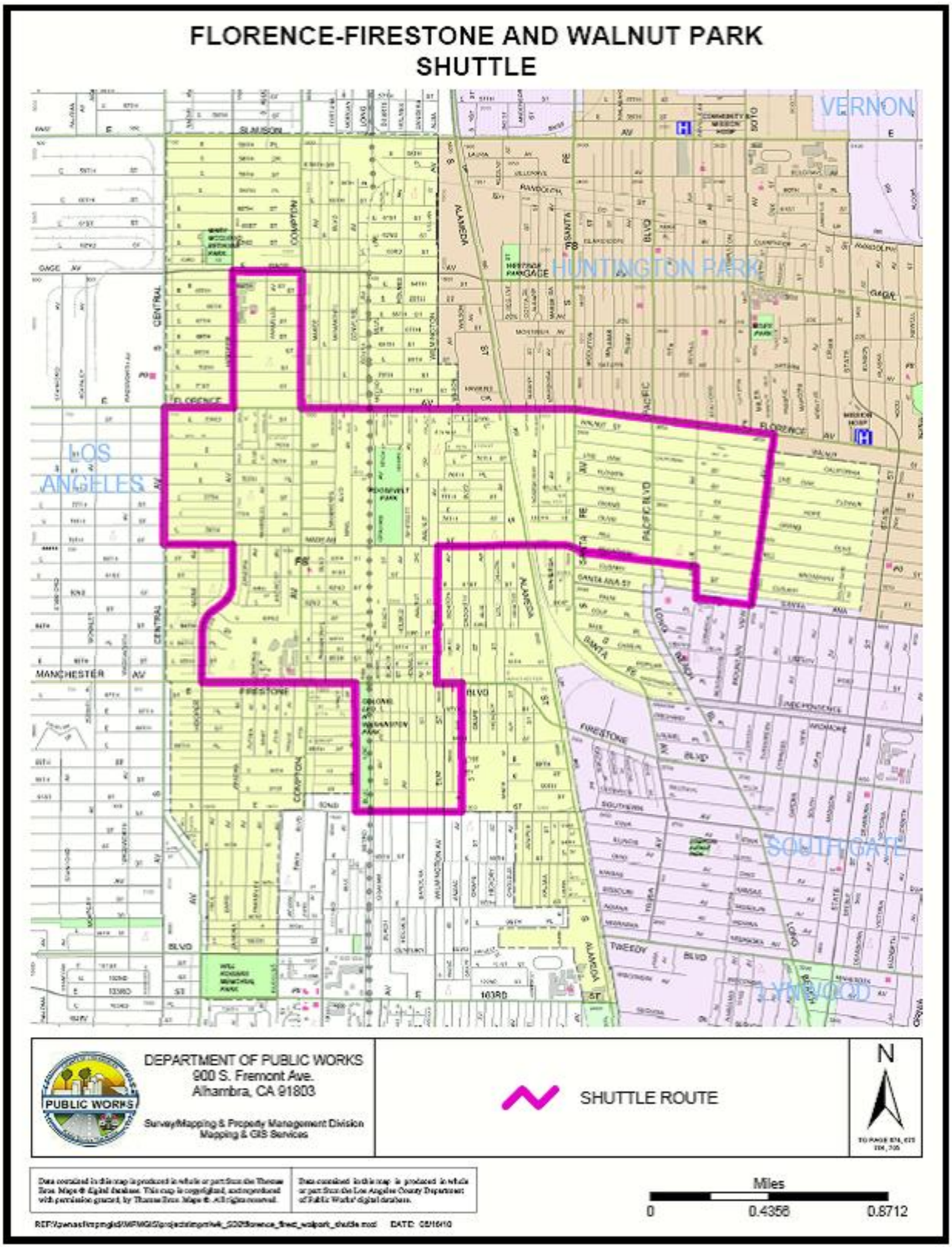
Type of service vehicles: 20-passenger (with front to back seating) cutaway buses

Number of service vehicles: Two cutaway bus service vehicles

Key destinations served:

- Roosevelt County Park
- Leon Washington County Park
- Bethune County Park
- Florence and Firestone Stations along the Metro Blue Line
- La Alameda Shopping Center
- Florence-Firestone Service Center
- Graham Library
- Drew Middle School
- Edison Middle School
- Walnut Park Elementary School
- Graham Elementary School
- 92nd Street Elementary School

Figure D.6: Florence-Firestone/Walnut Park Shuttle Service Route


FLORENCE-FIRESTONE AND WALNUT PARK SHUTTLE
VERNON
HUNTINGTON PARK
LOS ANGELES
SOUTH GATE
DEPARTMENT OF PUBLIC WORKS
900 S. Fremont Ave.
Alhambra, CA 91803
Survey/Mapping & Property Management Division
Mapping & GIS Services
PUBLIC WORKS
SHUTTLE ROUTE
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Appendix E: Conservation and Natural Resources Element Resources

I. Open Space and Natural Areas in Los Angeles County

Los Angeles County offers a wide variety of open space and natural areas. The following open space and natural areas are managed by the County or are contained in primarily unincorporated areas of the County:

Angeles National Forest

The Angeles National Forest was established by Executive Order in 1892 and is managed by the U.S. Forest Service. The Forest covers over 650,000 acres. The Angeles National Forest manages the watersheds within its boundaries to provide water to Southern California and to protect surrounding communities from catastrophic floods. The land within the Angeles National Forest is diverse in appearance and terrain, and provides many opportunities for recreational and scenic enjoyment. Much of the Angeles National Forest is covered with dense chaparral, pine and fir covered slopes as elevations in the Angeles National Forest range from 1,200 to 10,064 feet.

Deane Dana Friendship Park

Deane Dana Friendship Park, which is a 123-acre park located on the Palos Verdes Peninsula, affords dramatic panoramic views of Catalina Island, Los Angeles and Long Beach harbors, the City of Los Angeles to the north, and the San Gabriel and San Bernardino mountain ranges. There are hiking trails throughout the park. The County is currently working with the U.S. Fish and Wildlife Service to restore coastal sage scrub habitat at the park.

Devil's Punchbowl Natural Area

Devil's Punchbowl is one of the most spectacular geologic formations in California. The 1,310-acre natural area consists of rugged wilderness rock formations along the San Andreas Fault on the north slope of the San Gabriel Mountains. The terrain climbs from 4,200 feet to 6,500 feet in elevation, with natural plant and animal communities ranging from desert scrub to pine forests, and a seasonal stream runs through the natural area.

Eaton Canyon Natural Area

Situated at the base of Mt. Wilson, this 190-acre natural area contains several plant and native habitat communities. Eaton Creek flows through the Canyon during all but the summer months. The 7,600 square foot nature center contains displays of local flora and fauna, ecosystem concepts and live animals. The natural area offers five miles of nature trails and an equestrian trail, and serves as a trailhead to the Mt. Wilson Toll Road and Henninger Flats.

High Desert Wildlife and Wild Flower Sanctuaries

The County currently operates eight wildlife sanctuaries and one wildflower sanctuary in the high desert of Antelope Valley. Ranging from 2,500 to over 3,600 feet in elevation and encompassing more than 2,000 acres, the sanctuaries offer opportunities for spring wildflower viewing, bird watching, hiking and horseback riding. Wildlife seen on the preserves varies from earthbound creatures, such as the horned lizards, chuckwallas and rattlesnakes, to majestic prairie falcons and

golden eagles. Insect life is most abundant during the warmer months, and in spring, the Joshua tree and other large shrubs provide nesting sites for a variety of songbirds. Other protected animals are the kit fox, desert tortoise and Mojave ground squirrel.

Kenneth Hahn State Recreation Area

The 300-acre Kenneth Hahn State Recreation Area, managed by the Los Angeles County Department of Parks and Recreation, includes large areas of native coastal sage scrub habitat, lawns and landscaped areas, picnic sites, tot lots, a fishing lake, a lotus pond, a community center, and five miles of trails. One of the most actively used features is the park's more than seven miles of footpaths and trails.

Michael D. Antonovich Open Space Preserve

The Michael D. Antonovich Open Space Preserve offers 500 acres of dedicated open space in the Santa Susana Mountains and is managed by the Mountains Recreation and Conservation Authority (MRCA). Located on the northern border of Los Angeles, this open space preserve offers sweeping views of the Santa Clarita and San Fernando Valleys and contains a diversity of flora and fauna, from big cone Douglas fir, California walnut and oak trees to black bears, deer and mountain lions. The Preserve also provides important habitat connections through its numerous wilderness trails in the Rim of the Valley corridor of the Santa Clarita Woodlands Park.

Placerita Canyon Natural Area

This 350-acre natural area is located in an east-west running canyon featuring oak groves, chaparral-covered slopes and a sycamore-lined stream. Placerita Canyon is home to the famous "Oak of the Golden Dream," where gold was "first" discovered in California in 1842 and "Walker's Cabin," a reminder of early frontier living. The Placerita Canyon maintains eight miles of hiking trails.

San Dimas Canyon Nature Center

Located between San Dimas and Sycamore canyons and bordering the Angeles National Forest, this park offers a variety of plant and animal communities. Nature trails meander through the more than 100 acres of chaparral and riparian vegetation. A one-mile nature trail loop begins in an oak woodland and climbs gently into chaparral-covered foothills. This park also features a wildlife sanctuary for injured or non-releasable native animals and a raptor rehabilitation flight cage.

Santa Fe Dam Recreation Area

The 836-acre Santa Fe Dam Recreation Area is located in Irwindale in the San Gabriel Valley. The Recreation Area is home to the Santa Fe Dam Nature Center, which focuses on the plant life and wildlife of the alluvial fan of the San Gabriel River. The plant community of the river fan, Alluvial Fan Sage Scrub, is among the rarest and last of its kind in the County. Rare and endangered plants, birds, and other wildlife species inhabit the Recreation Area. Examples include: cactus wrens, California gnatcatchers, scissor-tail flycatchers, horned lizards, and kangaroo rats.

Santa Monica Mountains National Recreation Area

The 150,000-acre Santa Monica Mountains National Recreation Area is a part of the National Park System, which encompasses the mountain range from the Oxnard Plain in Ventura County, past Topanga State Park to Franklin Canyon and the Hollywood Bowl in Los Angeles. The Recreation

Area preserves natural habitats, historical and cultural sites, offers recreational opportunities, and acts to improve the air quality for the Los Angeles Basin. Covered by chaparral, oak woodlands, and coastal sage scrub, it is home to many species listed as rare, threatened, or endangered.

Schabarum Regional Park

The 640-acres Schabarum Regional Park is comprised of open space and natural areas, including picturesque canyons and rolling hills for hiking, biking and horseback riding. Over 90 percent of this park has been left in its natural state for the public to enjoy.

Vasquez Rocks Natural Area Park

This 945-acre natural area is a popular hiking, picnicking, and equestrian area. The park is located in the high desert near Agua Dulce Springs and features unusual rock formations, Tatavian Indian sites, and a seasonal stream. The principal plant communities are desert, chaparral, and riparian.

Whittier Narrows Natural Area

This natural area occupies approximately 300 acres in the southern portion of Whittier Narrows Recreation Area. Bordering the San Gabriel River, the Natural Area is home to several habitats with the dominant one being a riparian woodland. The southeastern portion of the site features four lakes that provide a winter sanctuary for migrating waterfowl and are opened by special permit for birding and photography. This area is near lakes and contains many plants and animals that are typically found within a wetland community.

II. Conservancies

The County works with various conservancies to maintain and protect open space land in Los Angeles County. Land conservancies are private, nonprofit organizations that share a common goal: to conserve land for the benefit of people and nature. Land conservancies are generally started by community residents who wish to preserve a certain area or piece of open space land on a local or regional scale. As a private organization, land conservancies have the flexibility to acquire, hold and manage land in the public interest, and also to preserve open space through voluntary conservation agreements with landowners, which permanently protect the land from development while the title remains with the landowner. Most conservancies work in partnership with local governments and provide various levels of educational programs and land restoration and/or land enhancement projects.

The County works with a number of conservancies to preserve and protect the County's open spaces:

Antelope Valley Conservancy

The Antelope Valley Conservancy (AVC) is a local land trust conservancy that obtains and stewards lands that are important to the community for quality of life, scenic beauty, and plant and animal habitat. AVC focuses on Joshua tree woodlands, the keystone species of the Mojave Desert, which supports a wide variety of native species. Most of the Conservancy's targeted preservation lands are in the County's designated Significant Ecological Areas. (http://www.avconservancy.org/)

Baldwin Hills Conservancy

The Baldwin Hills Conservancy (BHC) was created by the State in 2000 to acquire open space and manage public lands within the Baldwin Hills area and to provide recreation, restoration and protection of wildlife habitat within the territory for the public's enjoyment and educational experience. Specifically, BHC is responsible for: implementing the Baldwin Hills Park Master Plan; prioritizing and implementing acquisition of additional recreational and open space land for the expansion of Kenneth Hahn State Recreation Area; conducting planning activities for the area; and developing and coordinating a program of resource stewardship for optimum recreational and natural resource value based on the needs of the surrounding community. (http://www.bhc.ca.gov/)

California Coastal Conservancy

Established in 1976, the Coastal Conservancy is a State agency that uses entrepreneurial techniques to purchase, protect, restore, and enhance coastal resources, and to provide access to the shore. The Conservancy works in partnership with local governments, other public agencies, nonprofit organizations, and private landowners. To date, the Conservancy has undertaken more than 1,800 projects along the 1,100 mile California coastline. (http://www.scc.ca.gov/)

Catalina Island Conservancy

In 1974, the Santa Catalina Island Company entered into a fifty year Open Space Easement agreement with the County, guaranteeing public recreational and educational use of 41,000 acres of Catalina Island, consistent with good land conservation practices. The Santa Catalina Island Company subsequently deeded this land to the non-profit Catalina Island Conservancy (formed in 1972), along with an additional 1,135 acres. The Catalina Island Conservancy continues to manage 42,135 acres on Catalina Island, providing the highest level of conservation protection to 88 percent of the island. The Conservancy's mission is "to be a responsible steward of its lands through a balance of conservation, education and recreation." The conservation activities include wildlife management, a plant ecology program, invasive plant management, restoration of degraded areas and scientific research by many different researchers from across California and the country. Over 60,000 children and youth come to Catalina Island every year to various educational camps. There are also several campgrounds and 140 miles of hiking and biking trails on Catalina, including the Trans-Catalina Trail, which will allow visitors to access the Island in low-impact ways. Catalina Island is also a well-known and long-standing destination for boaters. (http://www.catalinaconservancy.org/)

Mountains Recreation and Conservation Authority

Established in 1985, the Mountains Recreation and Conservation Authority (MRCA) is a partnership between the Santa Monica Mountains Conservancy, the Conejo Recreation and Park District, and the Rancho Simi Recreation and Park District. The MRCA is dedicated to the preservation and management of open space and parkland, watershed lands, trails, and wildlife habitat. The MRCA manages almost 60,000 acres of public lands and parks, and provides comprehensive education and interpretation programs for the public. The MRCA works in cooperation with the SMMC and other local partners to acquire parkland, participate in vital planning processes, and complete major park improvement projects. The MRCA also provides natural resources and scientific expertise, critical regional planning services, park construction services, park operations, fire prevention, ranger services, and educational and leadership programs for youth. (http://www.mrca.ca.gov/)

Newhall Ranch High Country Recreation and Conservation Authority

The Newhall Ranch High Country Recreation and Conservation Authority is a joint powers authority formed by SMMC, the County of Los Angeles, and the City of Santa Clarita. Its purpose is the

conservation and management of public open space lands set aside for habitat and recreation pursuant to the Los Angeles County Board of Supervisors approval of the Newhall Ranch project, the Westridge project, and any other such open space lands dedicated by Newhall Land Company or its successors. (http://smmc.ca.gov/NRHCRCA.asp)

Puente Hills Landfill Native Habitat Preservation Authority

The Puente Hills Landfill Native Habitat Preservation Authority (Habitat Authority) is a joint powers authority with a board of directors consisting of the City of Whittier, County of Los Angeles, Sanitation Districts of Los Angeles County, and the Hacienda Heights Improvement Association. The Habitat Authority was created in 1994 as mitigation for the Puente Hills Landfill. To date, the Habitat Authority manages 3,860 acres of preserved public open space. The Habitat Authority's main focus has been to acquire the remaining open space within its jurisdiction, with special consideration given to the Hacienda Heights area. (http://www.habitatauthority.org/)

San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy

The San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy (RMC) was created by the California Legislature in 1999. RMC is one of nine conservancies within the California Resources Agency. Its mission is to preserve open space and habitat in order to provide for low-impact recreation and educational uses, wildlife habitat restoration and protection, and watershed improvements. RMC's territory covers eastern portions of the County County and western Orange County, a vast and varied area that includes mountains, valleys, rivers, coastal plain, and coastline. (http://www.rmc.ca.gov/)

San Gabriel Mountains Regional Conservancy

The San Gabriel Mountains Regional Conservancy (SGMRC) is devoted to watershed management and a great variety of other projects in the San Gabriel River watershed of the eastern portion of the County. Included in the region are the San Gabriel Mountains, the San Gabriel River Valley and related areas. (http://www.sgmrc.org/)

Santa Clarita Watershed Recreation and Conservation Authority

The Santa Clarita Watershed Recreation and Conservation Authority (SCWRCA) was established in 1993 by the City of Santa Clarita and the Santa Monica Mountains Conservancy in order to cooperatively plan for the preservation of open space, trails, parkland, and watershed protection in the Santa Clarita area and the upper Santa Clara River watershed. In 2002, the SCWRCA finalized the City's and Conservancy's long-standing efforts to acquire Whitney Canyon Ranch. The 442-acre property is the first to be owned by SCWRCA, heralding a new phase in the cooperation between the entities. (http://smmc.ca.gov/SCWRCA.asp)

Santa Monica Mountains Conservancy

The Santa Monica Mountains Conservancy (SMMC) was established by the California State Legislature in 1980. Since that time, it has helped to preserve over 60,000 acres of parkland in both wilderness and urban settings, and has improved more than 114 public recreational facilities throughout Southern California. Through direct action, alliances, partnerships, and joint powers authorities, the Conservancy's mission is to strategically buy back, preserve, protect, restore, and enhance treasured pieces of Southern California to form an interlinking system of urban, rural and river parks, open space, trails, and wildlife habitats that are easily accessible to the general public.

(http://smmc.ca.gov/)

Watershed Conservation Authority

The Watershed Conservation Authority (WCA) was created in 2003 as a joint powers entity of the RMC and the Los Angeles County Flood Control District. The focus of the WCA is on projects that will provide open space, habitat restoration, and watershed improvement projects in the watersheds of both the San Gabriel River and the Lower Los Angeles River. (http://watershedconservationauthority.org/)

Wildlife Corridor Conservation Authority

The Wildlife Corridor Conservation Authority (WCCA) was established to provide for the proper planning, conservation, environmental protection, and maintenance of lands within the Puente-Chino Hills corridor area. Its goal is to assure that sufficient continuity of habitat can be preserved to maintain a functioning wildlife corridor made up of about 40,000 acres of land located between the Santa Ana Mountains and Whittier Hills. WCCA's governing board consists of representatives from the cities of Brea, Whittier, Diamond Bar, La Habra Heights, the Santa Monica Mountains Conservancy, California Department of Parks and Recreation, California Department of Fish and Game, the County of Los Angeles, and two public members. (http://smmc.ca.gov/WCCA.html)

III. Regional Habitat Linkages

Habitat linkages are defined as area within the overall range of a species or suite of species that possess sufficient cover, food, forage, water and other essential elements to serve as a movement pathway, or between two or more larger areas of habitat. Depending on the species, linkages vary in size. For example, a belt of coastal sage scrub traversing a golf course, connecting sage scrub habitat areas on either side, providing a safe passage zone for smaller, slower-moving species (such as lizards and rodents) to maintain population connectivity between the two sides of the golf course is one form of habitat linkage.

Wildlife corridors, which are areas of open space of sufficient width to permit larger, mobile species (such as foxes, bobcats and coyote) to pass between larger areas of open space, or to disperse from one major open space region to another, are another type of habitat linkage. Such areas are generally several hundred feet wide, unobstructed, and usually possess cover, food and water. The upland margins of a creek channel, open ridgelines, open valleys or the bottoms of drainages often serve as major corridors locally, as do riparian alignments.

The County's biological resources are important in a regional context, serving to connect resources in adjacent local jurisdictions. Critical biological resources are maintained through habitat connectivity, which sustains population genetic diversity, and provides refuge for migrant species. Regional habitat linkages are identified in the Conservation and Natural Resources Element. The Antelope Valley, Puente Hills, San Andreas, Santa Clara River, Santa Felicia, Santa Monica Mountains, and Santa Susana Mountains and Simi Hills SEAs serve as important regional habitat linkages. More details about linkages between and within each of these SEAs are provided below:

Antelope Valley SEA

The SEA extends from the Angeles National Forest to the playa lakes within Edwards Air Force Base, encompassing the whole of the two largest drainages exiting the northern slope of the San Gabriel Mountains. Its geographical features serve as a major habitat linkage and movement

corridor for all wildlife species within its vicinity. Ecologically generalist species (such as bobcat, coyote, mule deer, fox, raccoon, etc.) have the ability to move across such vast areas and through-changing habitat types. For such species, the SEA may serve as an important system for long-term inter-populational genetic exchange. For smaller or less-mobile species, or taxa, which are more narrowly restricted in their habitat needs, the SEA can serve as a broad linkage zone, in which individual movement can take place during seasonal or populational dispersal. This provides essential genetic exchange within and between metapopulations. The two drainages, combined with the upland terrestrial Desert-Montane transect portion of the SEA, ensure linkage values and direct movement zones for all of the wildlife species present within the County portion of the Antelope Valley.

Puente Hills SEA

Evidence of significant wildlife movement throughout the Puente Hills SEA has been documented in a two-year carnivore study commissioned by the Santa Monica Mountains Conservancy as part of a multi-jurisdictional effort to establish a regionwide wildlife movement linkage. This SEA represents the County portion of a continuous series of natural open space within the Puente Hills and Chino Hills. Overall, this open space extends north and west from State Route-91 in Orange and Riverside counties to the Whittier Narrows reach of the San Gabriel River. The Puente and Chino Hills are a natural, physical link between the Santa Ana Mountains and the San Gabriel River. The San Gabriel River flows from and links to the San Gabriel Mountains. By virtue of these linkages and a complex of interconnected habitat units, the Puente and Chino Hills function as both an important wildlife linkage and resident habitat area for regional wildlife populations.

San Andreas SEA

The San Andreas SEA includes several important linkages for wildlife movement. The Fault Zone connects with the Santa Clara River drainage in the Lake Hughes area, linking with this large, free-flowing watershed that extends to the Pacific Ocean in Ventura County. The foothills and grassland in the westernmost tip of the SEA are part of an important linkage between the San Gabriel Mountains and the Tehachapi Mountains. This linkage to the Tehachapi Mountains is important because it connects the southernmost extent of the Sierra Nevada Mountains with the San Gabriel Mountains and with the Southern Coast Ranges. The Tehachapi Mountains are the only mountain linkage between the Transverse Ranges and the Southern Coast Ranges to the Sierra Nevada Range. This largely natural area may be an important topographic reference for migrating birds and bats, as well as functioning for essential high elevation foraging grounds along their migration route. The Tehachapi Mountains further provide a valuable link for gene flow between divergent populations of many species, including plants. The SEA includes several large drainages that extend from the San Gabriel Mountains to the western end of the Mojave Desert: the Antelope Valley floor and the Fairmont and Antelope buttes. These washes provide an important linkage for animals traveling between the mountains (all the ranges mentioned above) and the Mojave Desert. In addition, Amargosa Creek facilitates east-west wildlife movement through Liebre Mountain, Portal Ridge, and Ritter Ridge to Barrel Springs in the Antelope Valley near the City of Palmdale. The frequency of valuable riparian communities along this travel route located within an otherwise arid climate, further indicates the importance of this area, which is one of the busiest natural wildlife linkages in the region.

Santa Clara River SEA

Historically (and prehistorically) the riparian corridor along the Santa Clara River has served as the

primary east-west linkage between the Pacific coastline, coast ranges, interior ranges, high desert and southern Sierra (via the Tehachapi Range). Animals moving through the Santa Clara River at one time had unobstructed passage along the river and within its tributaries. The present configuration of the tributary drainages has reduced connectivity from the Santa Clarita Valley to the north, but the Santa Clara River remains relatively intact and open. The SEA embraces the river corridor and the linkage zones that are considered essential to ensuring connectivity and resource values within the historic movement zones for all of the wildlife species present within the County portion of the Santa Clara River.

Santa Felicia SEA

Historically, riparian corridors have served as linkages between the Pacific coastline, Coast Ranges, interior ranges, the high desert and southern Sierras (via the Tehachapi Range). The Santa Felicia stream corridor likely serves the functions today. The elevation in this area is lower than that of the Los Padres National Forest, to the north, which facilitates animal movement within the riparian systems between Piru Lake in Ventura County and the San Gabriel Mountain Range in the County. The tributary drainages for Santa Felicia Creek within this SEA remain intact and unobstructed.

Santa Monica Mountains SEA

Although wildlife movement is hampered by rural development in the SEA, animals are still able to move through the Santa Monica Mountains in many areas. Due to its large size and topographic complexity, many linkages are certain to occur within the SEA at various bottlenecks. These linkages allow movement between large open space areas within the SEA, as well as between areas outside the SEA, such as the Simi Hills and the western extent of the Santa Monica Mountains in Ventura County. The genetic flow through these areas is crucial in maintaining the diversity and viability of certain species within the Santa Monica Mountains. Open space linkages between Kanan Road and Calabasas Parkway along State Route-101, as indicated by the National Park Service, are of particular importance for continued wildlife movement due to the lack of alternative routes and encroachment of development. Although there are significantly large open spaces within the SEA, contiguous habitat linkages between them are critical in reducing bottlenecks and providing for long-term sustainability.

Santa Susana Mountains and Simi Hills SEA

The Santa Susana Mountains and Simi Hills SEA includes several important linkages for wildlife movement. The Santa Susana Mountains and Simi Hills provide a vast open space corridor to foster wildlife movement between the Santa Monica Mountains to the south, San Gabriel Mountains to the east, and the Los Padres National Forest to the north. Dense, natural habitat associated with the majority of the study area provides excellent opportunities for concealment and water sources, while the grasslands provide an abundance of prey.

IV. Significant Ecological Areas

History of the SEA Program

Los Angeles County's Significant Ecological Areas (SEAs) Program has schematic roots in an initial General Plan guiding document, the 1970 Environmental Development Guide, which was adopted as a preliminary General Plan for the County. The Open Space Concept Plan and 1990 Open Space Policy Map depict greenbelt areas and rural lands that reasonably correspond to the current SEA

map.

The original Significant Ecological Area Report was prepared in 1972 by scientists from the University of California, Los Angeles, the Los Angeles County Museum of Natural History and other local academic institutions, at the request of the Los Angeles County Department of Regional Planning (DRP). The DRP asked the report authors to identify "significant ecological areas," which due to their high biological resource value, should receive special consideration during the formulation of the 1973 General Plan. In the final report, 81 such areas were mapped and brief descriptions of the value of each were given. The 81 areas were then included on the Vegetation and Wildlife Map in the Conservation Element of the 1973 General Plan.

In 1976, following the 1975 court decision requiring the preparation of a revised General Plan, the DRP and the Environmental Systems Research Institute commissioned the Los Angeles County Significant Ecological Area Study (1976 SEA Study), from the environmental consulting firm, England and Nelson. After excluding the Channel Islands and national forest lands from the study area, the 1976 SEA Study reviewed the data and criteria used to establish the original significant ecological area list, analyzed new information, developed of a set of eight criteria to be used to select and prioritize significant ecological areas and concluded with individual maps and descriptions for each. From an initial list of 115 sites, 62 areas met the criteria and were recommended for adoption by the study. In 1980, 61 of these biologically significant areas were adopted as part of the Conservation and Open Space Element of the Los Angeles County General Plan on the Special Management Areas Policy Map and through individual descriptions of the SEAs in Technical Supplement E of the 1980 General Plan.

In 1991, supplemental studies further assessing the biological resources within seven SEAs were conducted. The Phase I Studies, conducted by Michael Brandman Associates, assessed the following SEA areas: Cold Creek Significant Ecological Area No.9, San Fransciquito Canyon Significant Ecological Area No.19, Dudleya Densiflora Population Significant Ecological Area No.45, Kentucky Springs Significant Ecological Area No.61, Las Virgenes Significant Ecological Area No.6, Tonner Canyon and Chino Hills SEA No. 15, and Tuna Canyon SEA No. 10. The studies looked at current ownership patterns, existing resources, development pressures and made recommendations into the future management of the SEAs. All of the Phase I studies found either that the SEA boundaries were adequate in size or recommended the expansion of the boundaries to better encompass and protect biotic resources.

In 2000, the DRP commissioned the Los Angeles County Significant Ecological Area Update Study (2000 Update Study) prepared by PCR Services Corporation, Frank Hovore & Associates and Forma Systems. The 2000 Update Study included an Executive Summary, Background Report and twelve biological resources assessments for the Proposed Antelope Valley SEA, Proposed Cruzan Mesa Vernal Pools SEA, Proposed East San Gabriel Valley SEA, Proposed Joshua Tree Woodlands SEA, Proposed Puente Hills SEA, Proposed San Andreas SEA, Proposed San Dimas Canyon and San Antonio Wash SEA, Proposed San Gabriel Canyon SEA, Proposed Santa Catalina Island SEA, Proposed Santa Clara River SEA, Proposed Santa Monica Mountains SEA, and the Proposed Santa Susana Mountains and Simi Hills SEA. These twelve biological resource assessment areas consolidated the 1980 unincorporated area SEAs into larger areas for study and proposed inclusion as SEAs.

The 2000 Update Study also examined the assumptions of the original eight SEA designation criteria from the 1976 SEA Study, modifying one criterion and deleting two. The modification of Class 1 changed the language from "the habitat of rare, endangered, and threatened plant and animal

species," to specify "the habitat of *core populations* of rare, endangered and threatened plant and animal species." Class 6: "areas important as game species habitat or as fisheries" was removed due to the questionable contribution of these areas towards maintaining biotic diversity. Class 8: "special areas" was deleted due to the vague nature of that designation. The six SEA criteria are contained within this Appendix E, and each SEA description lists which criteria it meets.

From 2001 to 2011, the DRP conducted public outreach, solicited additional recommendations on the SEA boundaries and checked the SEA boundaries with an expert panel of biologists convened in 2010.

SEA Designation Principles

Previously, areas were assigned SEA designations in an attempt to slow or modify the type of development within their boundaries. However, as the County underwent a period of unanticipated growth, many of the SEAs experienced a reduction and/or degradation of their biotic diversity. Appendix E uses the definition of biotic or biological diversity provided by the 1990 U.S. Congressional Biodiversity Act, HR1268, which is defined as a full range of variety and variability within and among living organisms and the ecological complexes in which they occur.

Currently, the design of the SEAs is based on scientifically-grounded concepts regarding size and connectivity. Where feasible, SEAs form linkages between core habitats, which are large blocks of habitat generally conforming to a significant topographical feature, such as a watershed, major river, butte, etc., in order to ensure regional species movement.

Most SEA designations do not focus on a single resource or habitat type and, over time, conservation plans have come to employ a fluid approach to conserving an ever increasing list of sensitive resources (e.g., endangered species, habitats of limited distribution, and "patchy" habitats such as coastal sage scrub). The SEA designations rely on two primary conservation principles: namely that species extinction rates are lower on larger "islands," or blocks of land, than smaller islands; and that isolated habitat areas have less opportunity to regain species by re-colonization from other areas.

Many wildlife species, particularly carnivores and other wide ranging species, require large areas of suitable habitat for genetically and demographically viable populations. In addition, large islands are more likely to encompass diverse habitat types and are more easily buffered against potential impacts from surrounding developed lands. The SEAs are designed to provide habitat linkages between related habitat types (such as the Antelope Valley buttes, or the San Andreas Rift Zone wetlands), by encompassing areas of sufficient width to function as wildlife movement routes between these open space areas.

The current SEA designations provide local resources (such as sensitive species) and their habitats, as well as the seasonal support habitats for those resources, with connections to essential sustaining resource areas (such as corridor areas and hydrological systems). For example, zones of lower intensity human impacts that exist between essential habitat resources have been included in the current SEA designations, thereby helping to maintain the biotic diversity in the County.

SEA Selection Criteria

All of the County's SEAs must satisfy at least one of the six SEA selection criteria:

A. The habitat of core populations of endangered or threatened plant or animal species.

Intent of Criterion A: These areas are important in maintaining viable plant and/or animal populations for those species recognized by state and or federal resource agencies as being extremely low in numbers or having a very limited amount of suitable habitat available. The terms "endangered" and "threatened" have precise meanings defined in both state and federal law. The identification of "core population"' will be determined by the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (CDFG). The term "core population" as used here is a general biological term referring to a known and/or a viable population. Other locations of endangered or threatened plant or animal species may also occur in the County, which are not within an SEA. It should also be noted that the concept of core populations is consistent with current thinking of the USFWS and the CDFG.

This criterion is not meant to constitute a recovery program for listed species, but one element of a more comprehensive conservation effort for the long term sustainment of listed species within the County. At the local level, recovery programs of both the CDFG and the USFWS have measures in place that can impose severe penalties for the "take" of listed species or their habitat.

- Federally Endangered: "any species which is in danger of extinction throughout all or a significant portion of its range ..."

- Federally Threatened: "any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range."

- State Endangered: " ...a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease."

- State Threatened: " ...a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter [California Code of Regulations, Title 1, Sec 670.5]

B. On a regional basis, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.

Intent of Criterion B: The purpose of this criterion is to identify biotic resources that are uncommon on a regional basis. The geographical region considered could be as small as the Southern California coastal plains, the Transverse Mountain Ranges, the Mojave Desert, the Southern California coastline, etc. The geographical region could also be as large as Southern California, the Pacific coast, all of California, the western United States, or even larger. The community, association, or habitat is either unique or restricted in distribution in an area larger than the political boundaries of the County (i.e., coastal sage scrub, native grasslands, or vernal pools). Resources that are limited in distribution in the region being considered, but common elsewhere, are also included under this category.

C. Within the County, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.

Intent of Criterion C: The purpose of this criterion is to identify biotic resources that are uncommon within the political boundaries of the County, regardless of their availability elsewhere. The County has a high diversity of biological components. The County and San Diego County are the only

counties in the U.S. that possess coastal, montane, and desert subregions within their boundaries. It is a rich heritage that few local governments have an opportunity to preserve.

Many biotic communities that were once common in the County have been severely reduced due to urban and agricultural development. This is especially true south of the San Gabriel Mountains, and among the agricultural fields of the North County. Other biotic features have never been common.

D. Habitat that at some point in the life cycle of a species or group of species, serves as concentrated breeding, feeding, resting, migrating grounds and is limited in availability either regionally or in the County.

Intent of Criterion D: Species or groups of species, at various points in their life cycles, tend to congregate in certain areas. These areas possess resources that are essential to the maintenance of specific wildlife species. This criterion is intended to identify those areas that are limited in distribution either regionally or in the County, and not the primary habitat of common species or groups of species.

E. Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community.

Intent of Criterion E: Oftentimes scientists learn the most about a biological phenomenon by studying it at an extreme in its distribution. This frequently reveals the biological and ecological parameters under which it can survive. In addition, isolated populations and communities often are relicts of what was present in an area at some previous time, and may show genetic traits not found elsewhere in the species. These biological and ecological parameters may be useful in determining taxonomic relationships.

F. Areas that would provide for the preservation of relatively undisturbed examples of the original natural biotic communities in the County.

Intent of Criterion F: The intent of this criterion was to identify examples of the primary biotic resources in the County. At least one example (e.g., native grassland, valley oak savannah) of each vegetation type will be selected from the various geographical regions in the County in order to preserve basic biogeographic diversity.

SEA Descriptions

The following are detailed descriptions of each SEA.

Note regarding plant community classifications:

Plant communities within the SEAs were classified using standard methodology and terminology. The communities in this description correspond directly with those listed in Holland's *Preliminary Descriptions of the Terrestrial Natural Communities of California* (1986 and 1992 update). In recent years, ecologists have refined Holland's approach to define communities primarily by their constituent plant assemblages and have now widely adopted the classification system described by Sawyer, Keeler-Wolf and Evens in *A Manual of California Vegetation*, Second Edition 2009 (MCV). This has become the accepted standard recognized by the California Department of Fish and Game, the California Native Plant Society and the U.S. Fish and Wildlife Service.

The important difference between the two methods is that the earlier system's categories were based on a variety of factors, such as physiographic features, as in the case of vernal pools, or by specific plants, as in the case of coast live oak woodland, or by the use of commonly accepted terms, as in "chaparral." In the MCV, plant communities are defined with more precision as botanical alliances where one, occasionally two, particular plant species are dominant or co-dominant with a host of other possible associated plants. The MCV lists no one plant community called chaparral because in habitats of this type any one of a variety of shrubs can be dominant and influence the character of the vegetation. For example, in a location where chamise is predominant, the alliance is classified as an *Adenostoma fasciculatum* Shrubland Alliance, while close by greenbark ceanothus may emerge as the most common shrub and this is termed a *Ceanothus spinosis* Shrubland Alliance.

The transition to the new MCV format is ongoing. Not all alliances have been fully described, and new ones are still being recognized and extensive research is in progress to define every alliance in the new MCV plant communities' format. The more familiar nomenclatures will continue to be used for the SEA Program when appropriate.

An effort has been made to conform to this new format. Descriptions and general locations of each plant community as described in the *Comprehensive Floral & Faunal Compendium of the Los Angeles County SEAs* appear below. The plant communities correspond to Holland's *Preliminary Descriptions of the Terrestrial Natural Communities of California.* Each was considered baseline information and evaluated for the potential presence of alliances as described in the MCV. Alliances whose profiles matched the given criteria are listed. In many cases only with further investigation can the presence of some alliances be confirmed. In addition, it should be noted that not all alliances are listed within the SEA descriptions, as many alliances have yet to be defined and new alliances are still being discovered. Where species' scientific names have been updated from those used in the MCV, these are given in brackets and follow nomenclature presented in *The Jepson Manual, 2nd Edition* (Baldwin *et al*. 2012).

Status Abbreviations:

- ABC: American Bird Conservancy Green List
- AFS: American Fisheries Society categories of risk: vulnerable, threatened, or endangered;
- AWL: Audubon Watchlist
- BCC: Fish and Wildlife Service Birds of Conservation Concern
- BLMS: Bureau of Land Management Sensitive Species
- CDF: California Department of Forestry and Fire Protection Sensitive Species
- FC: Federal Candidate species
- FE: Federally listed as Endangered
- FSS: USDA Forest Service Sensitive Species
- FT: Federally listed as Threatened
- FPD: Federally proposed for delisting
- FPE: Federally proposed for listing as Endangered
- FPT: Federally proposed for listing as Threatened
- LAA: Los Angeles Audubon list of Los Angeles County's Sensitive Bird Species
- RPR: Rare Plant Rank
- SC: National Marine Fisheries Service Species of Concern
- SCD: State candidate for delisting
- SCE: State candidate for listing as Endangered

- SCT: State candidate for listing as Threatened
- SE: State-listed as Endangered
- SSC: CDFG Species of Special Concern;
- ST: State-listed as Threatened
- USBC: United States Bird Conservation Watch List
- WBWG: Western Bat Working Group: High, Medium and Low priority
- Xerces: Xerces Society Red List of Pollinators

1. Alamitos Bay SEA

Location

General

The Alamitos Bay Significant Ecological Area (SEA) is located upstream of the Alamitos Bay Marina, off the Los Cerritos Channel of the City of Long Beach. The SEA boundaries encompass the Alamitos Bay salt marsh, which is one of three remaining examples of salt marshes found in the County. The entire SEA area has been identified by the California Audubon as a Globally Important Bird Area (IBA)—part of the Los Cerritos Wetlands and adjacent oil fields section of the Orange Coast Wetlands unit. The entire SEA is located within the United States Geological Survey (USGS) 7.5' California Los Alamitos Quadrangle.

General Boundary and Resources Description

The SEA boundaries generally follow the Alamitos Bay salt marsh area, which is bordered by an oil field, main artery roads, the Cerritos Channel, and residential development. The SEA is situated to the west of Studebaker Road, north of Westminster Avenue, east of Pacific Coast Highway and south of Loynes Drive and the Cerritos Channel within the City of Long Beach.

The SEA is one of three remaining examples of salt marsh found in the County, and the last remnant of the extensive salt marshes once found in Los Alamitos Bay. The majority of this vegetation type has been lost to urbanization, flood control projects, harbors, and marinas. It is one of the most productive ecological communities and is an important breeding ground for terrestrial and marine organisms, including the majority of commercial fishes. This is due in part to the estuaries and salt marshes interfacing between the terrestrial and marine worlds, and serving as important nutrient cycling centers for marine ecosystems. The Belding's savannah sparrow occurs in Alamitos Bay salt marsh. This species is restricted to salt marsh habitat, and has been placed on the state-endangered species list. The Orange Coast Wetlands IBA is believed to harbor one-eighth of the population of Belding's savannah sparrows, and there is a significant amount in Alamitos Bay. Least terns and other terns that breed in the area often use Alamitos Bay and the Cerritos arm as a foraging area. This type of habitat is an important wintering ground for migratory birds. It is estimated that in the fall and spring seasons, the Orange Coast Wetlands IBA hosts 15,000-20,000 individuals of migrating birds.

Vegetation

As discussed, the SEA encompasses the last remaining coastal salt marsh in Los Alamitos Bay's formerly extensive system of salt marshes and is one of only three such examples of this habitat remaining in County. Sensitive plant species occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources section.

Coastal Salt Marsh: Consists of salt-tolerant plants that are mostly low-growing herbaceous perennials that are found on the borders of marine salt water bodies. The duration and extent of tidal inundation or influence causes a graduation in the prevalence of various species within this community. In the Alamitos Bay wetlands, this includes cordgrass as the dominant species and depending on the conditions, pickleweed, salt grass, alkali heath and spearscale can also be found.

Corresponding MCV communities:

- *Sarcocornia pacifica* (*Salicornia depressa*) ([*Salicornia pacifica*, *Salicornia depressa*] pickleweed mats) Herbaceous Alliance
- *Bolboschoenus maritimus* (salt marsh bulrush marshes) Herbaceous Alliance
- *Distichlis spicata* (salt grass flats) Herbaceous Alliance
- *Spartina foliosa* (California cordgrass marsh) Herbaceous Alliance

Intertidal Flats: Brackish coastal wetlands of low-lying basins of high evaporation and infrequent inputs of freshwater with low-growing salt tolerant plants.

Corresponding MCV Communities:

- *Ruppia* (*cirrhosa, maritima*) (ditch-grass or widgeon-grass mats) Aquatic Herbaceous Alliance

Wildlife

Coastal salt marshes and estuaries are productive habitats, which are used for foraging and breeding grounds, for both resident and migrating wildlife species. Estuaries and coastal salt marshes are the interface between the terrestrial and marine worlds, and are important nutrient recycling centers for marine ecosystems. In the past, this habitat was once extensive in the Los Alamitos Bay area.

Although little documentation regarding the types of animals present has been found, based on the apparent health of the ecosystem, it may be assumed that fishes that are commonly found in the vicinity can also be found in the SEA. These may include species, such as arrow goby, California halibut, cheekspot goby, diamond turbot, queenfish, shadow goby, shiner perch, topsmelt, longjaw mudsucker, Pacific staghorn sculpin, and yellowfin goby.

Without more information, it is not possible to predict whether any reptiles or mammals can be found, but it is likely that amphibians, such as Baja California chorus frogs, are present.

The SEA habitat probably supports a variety of bird species found in the few coastal saltmarshes that remain in coastal Southern California. Belding's savannah sparrow has been observed in the SEA. Shallow water habitat exists and would be expected to attract wading birds and ducks. Foraging habitat that is attractive to raptors appears to be present on the outside perimeter of the marsh.

Wildlife Movement

The SEA provides a variety of saltwater, estuarine, mudflat and freshwater marsh habitats, and is an important stopover for many migratory birds traveling the Pacific Flyway migration route. Its suitability for many fishes and invertebrates allows populations that are capable of supporting further colonization and expansion of range. The area does not fall within any identified terrestrial

movement routes for wildlife.

Sensitive Biological Resources

Sensitive biological resources are habitats or individual species that have special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, and/or rare. This is due to the species' declining or limited population sizes, which usually results from habitat loss. Watch lists of such resources are maintained by the California Department of Fish and Game (CDFG), the United States Fish and Wildlife Service (USFWS), and special groups, such as the California Native Plant Society (CNPS). The following sections indicate the habitats as well as plant and animal species present, or potentially present within the SEA, which have been accorded special recognition.

Sensitive Plan Communities and Habitats

The SEA supports several habitat types considered sensitive by resource agencies. These are inventoried by California Department of Fish and Game (CDFG) in the California Natural Diversity Database (CNDDB) [2011]. The CNDDB includes state and federally-listed endangered, threatened, and rare vascular plants, as well as several sensitive vertebrate species. The SEA is configured to encompass the regionally significant community of a coastal salt marsh or coastal brackish marsh. This community or closely related designations are considered highest priority communities by the CDFG, indicating that they are declining in acreage throughout their range due to land use changes. The array and composition of these communities have been discussed in the Vegetation section. Changes to the classification system mentioned earlier in some cases divide plant communities into many possible vegetation alliances—not all of which may be considered sensitive. Previously listed communities with at least one sensitive alliance in the new format have been listed.

Sensitive Plant Species

The following special-status plant taxa have been reported or have the potential to occur within the SEA, based on known habitat requirements and geographic range information:

- Davidson's saltscale (*Atriplex serenana var. davidsonii*) RPR 1B.2
- Southern tarplant (*Centromadia parryi ssp. australis*) RPR 1B.1
- Salt marsh bird's-beak (*Chloropyron maritimum ssp. maritimum*) FE, SE, RPR 1B.2
- Coulter's goldfields (*Lasthenia glabrata ssp. coulteri*) RPR 1B.1
- Coast woolly-heads (*Nemacaulis denudata var. denudata*) FT, RPR 1B.1
- California Orcutt grass (*Orcuttia californica*) FE, SE, RPR 2.1
- Estuary seablite (*Suaeda esteroa*) RPR 1B.2
- San Bernardino aster (*Symphyotrichum defoliatum*) RPR 1B.2

Sensitive Animal Species

The following special-status animal species are reported or are likely to be present within the SEA based on habitat requirements and known range attributes:

- Belding's savannah sparrow (*Passerculus sandwichensis beldingi*) SE
- California least tern (*Sternula antillarum browni*) FE, SE, ABC, CDFG Fully Protected

Ecological Transition Areas (ETAs)

There are no ETAs designated within this SEA.

Regional Biological Value

The SEA meets several SEA designation criteria and supports many regional biological values. Each criterion and how it is met is described below.

CRITERIA ANALYSIS OF THE ALAMITOS BAY SEA

Criterion		Status	Justification
A)	The habitat of core populations of endangered or threatened plant or animal species.	Met	Los Alamitos Bay is one of only three remaining salt marshes found in the County, and a remnant of extensive salt marshes once found in its area. (The others are the Ballona Wetlands off of Santa Monica Bay and the Malibu Lagoon.) It is the type habitat of Belding's savannah sparrow, which is an endangered species, that is still found in the much reduced habitat of the salt marshes of Southern California.
B)	On a regional basis, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	Salt marsh is reduced and fragmented from its former coverage in Southern California, so it is important to preserve any of these important estuarine areas.
C)	Within the County, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	Los Alamitos Bay is one of only three remaining salt marshes found in the County, which is a remnant of extensive salt marshes once found in the area.
D)	Habitat that at some point in the life cycle of a species or group of species, serves as concentrated breeding, feeding, resting, or migrating grounds and is limited in availability either regionally or in the County.	Met	The Belding's savannah sparrow lives its entire life in salt marshes and breeds, rests, and feeds in this area. Salt marshes are important nursery grounds for many marine animals, and diminished fisheries for many are attributed to the loss of salt marshes. Salt marshes are important habitat for migrating marine birds, which utilize the abundant forage produced by the marsh in the form of mud animals and insects.
E)	Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community.	Met	As one of only three salt marshes in the County, this area is scientifically interesting for the study of island bio-geography in that salt marshes are now islands, whereas they were once almost continuous in the seismically active coastline of Southern California. The three marshes differ from one another in dominant vegetation.

Criterion		Status	Justification
F)	Areas that would provide for the preservation of relatively undisturbed examples of the original natural biotic communities in the County.	Met	Los Alamitos Bay is one of only three remaining salt marshes found in the County, which is a remnant of extensive salt marshes once found in its area. The majority of this habitat type has been lost to urbanization, flood control projects, harbors, and marinas. Salt marshes are a very productive vegetative community and an important breeding and nursery area for marine, marsh, and terrestrial animals—an ecotone where multiple habitats meet and combine resident biota. Many commercially valuable fishes start life in salt marshes.

In conclusion, the area described in this report is an SEA because it contains: A) the habitat of core populations of endangered and threatened plant and animal species; B-C) biotic communities, vegetative associations, and habitat of plant and animal species that are either unique or are restricted in distribution in the County and regionally; and D) concentrated breeding, feeding, resting, or migrating grounds that are limited in availability in the County; E) biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community; and F) areas that would provide for the preservation of relatively undisturbed examples of the original natural biotic communities in the County.

2. Altadena Foothills and Arroyos SEA

Location

General

The Altadena Foothills and Arroyos Significant Ecological Area (SEA) is located in the westernmost portion of the San Gabriel Valley. This SEA includes incorporated and unincorporated areas. The SEA represents the lower elevation/urban interface portions of Millard, Alzada, Chiquita, Las Flores, Rubio, and Eaton canyons from the urban edge, to undeveloped wildland areas of the lower elevations of the Angeles National Forest.

The SEA is located within the Mount Wilson and Pasadena United States Geological Survey (USGS) 7.5' California Quadrangles.

General Boundary and Resources Description

On the west side of the Altadena Foothills and Arroyos, the western and southwestern boundaries track along the urban-wildland interface in the undeveloped areas of the Arroyo Seco, Fern, and El Prieto canyons, and the boundary pulls back around a small area of development at the northern-eastern edge of La Cañada-Flintridge. A developed area northeast of the junction of Millard Canyon and El Prieto is excluded. The SEA designation includes the undeveloped portions of sub-watersheds of the Arroyo Seco, and also encompasses undeveloped parts of drainages, including Alzada and Chiquita, which flow into the Devils Gate Reservoir of the Arroyo Seco. The Arroyo Seco is within the Los Angeles River watershed. This SEA includes portions of the cities of Pasadena and La Cañada-Flintridge, the unincorporated community of Altadena, and the Angeles National Forest. The eastern side of the southern boundary encompasses undeveloped areas of the sub-watersheds

of Las Flores, Rubio and Eaton canyons, which are tributary to the Rio Hondo and historically to the San Gabriel River. Much, but not all, of the Rio Hondo catchment is diverted via flood-control channels to the Los Angeles River. The southern boundary of the SEA is bordered by developed properties. The southern boundary moves east along the urban-wildland interface to include undeveloped parts of watersheds, which closely follow the perimeter of Devil's Gate Reservoir, in the Hahamongna Park in Pasadena. From Hahamongna Park, the SEA boundary continues east along the edge of development into the San Gabriel River watershed. The eastern border of the SEA is the eastern ridge of Eaton Canyon near the canyon mouth. A finger of the SEA extends downstream along Eaton Wash to include the Eaton Debris Basin and Reservoir. The northern boundary is formed along ridgelines within the Angeles National Forest that define the catchment of the local canyons. Within the Angeles National Forest, development is much less dense, in the form of in-holdings and Angeles National Forest leases, and is often naturally landscaped, albeit disturbed.

The chief attribute of this SEA is a high diversity of species, which is due to the SEA's position between the mountain biome and the valley biome, which is very abrupt because the change of slope is formed by the thrust fault complex that borders the San Gabriel Mountains. Furthermore, the SEA has as its center the dividing ridge between the two principal rivers of the Los Angeles Basin, the Los Angeles River and the San Gabriel River.

The wide range of elevation, topography, aspect, and geology represent a diverse array of physical habitats within this SEA. In general, the topography of the SEA is moderately steep to very steep, which results in a number of very narrow corridors with elevations ranging from a high of approximately 2,400 feet above mean sea level (MSL) to a low of approximately 1,200 feet above MSL. Consequently, a variety of plant communities exist, including riparian and upland shrublands and woodlands. Within these major community types, there are many vegetation series that vary according to plant species dominance.

Of particular note for this SEA is its potential to accommodate lower elevation east-west linkages. This is significant because of the constraints of development at lower elevations, the very steep terrain, and seasonal snow storms above the SEA, beginning at about 3000 feet—all of which limit potential movement for many species. There is also potential for north-south wildlife movement between the Angeles National Forest and the Verdugo Mountains via the Arroyo Seco and the San Rafael Hills. The Arroyo Seco is the eastern limit of this link and creates a potential movement corridor from the Angeles National Forest, over and under the Interstate-210. Across the Interstate-210, the linkage enters the San Rafael Hills, where blocks of habitat remain in the cities. Some are conserved in natural open space, such as the Cherry Canyon Park and Open Space Preserve of the City of La Cañada-Flintridge, just south of the County Descanso Gardens. These open spaces are interspersed with residential development and are not part of the SEA. From the San Rafael Hills, linkage potential may be traced to the west across State Route-2 and Verdugo Wash, past enclaves of residential development to access the Verdugo Mountains.

Vegetation

The variety of topography, soil types, slope aspects and water availability within the SEA creates a range of physical habitats that support numerous communities. Plant species observed or recorded in previous documentation within the SEA are indicated in the *Comprehensive Floral & Faunal Compendium of the Los Angeles County SEAs.* Sensitive plant species occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources section.

Brief descriptions and general locations of each major plant community present within the SEA are provided below, including oak woodland, white alder riparian woodland, chaparral, and coastal sage

chaparral scrub.

Oak Woodland: A plant community dominated by arborescent species of the oak genus (*Quercus*). Within this SEA, oak woodlands are dominated by one of two species: coast live oak (*Quercus agrifolia* var. *agrifolia*) and canyon oak (*Q. chrysolepis*). Understory and adjacent vegetation varies from annual grasses and forbs in level areas to shrubs where topography is steeper. Coast live oak woodland often forms a closed canopy and is scattered throughout the SEA, but is most prevalent on north-facing slopes and in drainage bottoms. The canyon oak woodland canopy is typically more open and found on steep, north-facing canyon walls.

Corresponding MCV communities:

- *Quercus agrifolia* (coast live oak woodland) Woodland Alliance
- *Quercus chrysolepis* (canyon oak woodland) Woodland Alliance

White Alder Riparian Woodland: Found along perennially-flowing streams in bedrock-constrained, steep-sided canyons, which result in a fairly narrow riparian corridor. This community is dominated by white alder (*Alnus rhombifolia*), which may grow 50 to 60 feet high over a shrubby understory.

Corresponding MCV community:

- *Alnus rhombifolia* (white alder groves) Forest Alliance

Chaparral: A shrub community comprised of robust, woody, mostly evergreen species. Within this SEA, a number of chaparral series are found according to their dominant plant species. These include chamise, laurel sumac (*Malosma laurina*), ceanothus (*Ceanothus spp.*), San Gabriel scrub oak (*Quercus dumosa* var. *gabrielensis*), and mosaics of these depending on mixtures of species and elevation. These and other shrub species form dense vegetation 5 to 10 feet in height. The development of chaparral is pronounced over the hillside areas throughout the SEA.

Corresponding MCV communities:

- *Adenostoma fasciculatum* (chamise chaparral) Shrubland Alliance
- *Adenostoma fasciculatum-Salvia apiana* (chamise–white sage chaparral) Shrubland Alliance
- *Arctostaphylos glandulosa* (Eastwood's manzanita chaparral) Shrubland Alliance
- *Arctostaphylos glauca* (bigberry manzanita chaparral) Shrubland Alliance
- *Ceanothus leucodermis* (chaparral whitethorn) Shrubland Alliance
- *Ceanothus spinosus* (greenbark ceanothus chaparral) Shrubland Alliance
- *Ceanothus oliganthus* (hairy leaf ceanothus chaparral) Shrubland Alliance
- *Prunus ilicifolia* (holly leaf cherry chaparral) Shrubland Alliance
- *Rhus ovata* (sugarbush chaparral) Shrubland Alliance

Coastal Sage Scrub: A shrubland community exhibiting less robust structure that is found in this SEA. This plant community is dominated by summer-deciduous shrubs, such as California sagebrush (*Artemisia californica*), California brittle bush (*Encelia californica*), white sage (*Salvia apiana*), black sage (*S. mellifera*), and California buckwheat (*Eriogonum fasciculatum*). It also forms dense stands, which grow three to four feet in height. Within this SEA, it is generally found in scattered patches, which are highly integrated with mixed chaparral. This plant community is generally found on hotter, drier south-facing slopes, lower ridges and small flats, which are primarily located in the lower elevation hillsides of the SEA.

Corresponding MCV communities:

- *Artemisia californica* (California sagebrush scrub) Shrubland Alliance
- *Artemisia californica-Salvia mellifera* (California sagebrush-black sage scrub) Shrubland Alliance
- *Artemisia californica-Eriogonum fasciculatum* (California sagebrush-California buckwheat scrub) Shrubland Alliance
- *Encelia californica* (California brittle bush scrub) Shrubland Alliance
- *Dendromecon rigida* (bush poppy scrub) Shrubland Alliance
- *Salvia apiana* (white sage scrub) Shrubland Alliance
- *Salvia leucophylla* (purple sage scrub) Shrubland Alliance
- *Salvia mellifera* (black sage scrub) Shrubland Alliance
- *Eriogonum fasciculatum* (California buckwheat scrub) Shrubland Alliance
- *Eriogonum fasciculatum-Salvia apiana* (California buckwheat-white sage scrub) Shrubland Alliance
- *Lotus scoparius* [*Acmispon glaber*] (deer weed scrub) Shrubland Alliance
- *Malacothamnus fasciculatus* (bush mallow scrub) Shrubland Alliance

Wildlife

Wildlife populations within the SEA are diverse due to the area's vegetative diversity and its location within and adjacent to the Angeles National Forest. The analysis of invertebrates is severely limited due to the lack of collection-related data; however, the SEA is likely to support healthy populations of a diverse assortment of invertebrate species based on its undisturbed nature and variety of habitats. Amphibians are present within the aquatic and semi-aquatic habitats along the Arroyo Seco, Millard Canyon, Eaton Canyon, and tributary drainages. Reptile abundance and diversity are characteristic of the habitats present, although areas closer to urban development along the southern boundaries of this SEA are likely to be degraded due to edge effects.

Bird use, diversity, and abundance within the SEA are high for several reasons. In general, this SEA provides habitat for a wide range of shrubland, woodland, and riparian species that occur at varying elevations. In particular, the riparian habitats found in drainages throughout this SEA provide essential habitat for riparian-obligate and riparian-favoring species. In addition, a number of migratory birds use this area to move across the northern portion of the Los Angeles Basin. These include a wide spectrum of birds including song birds, waterfowl and raptors.

Similarly, the mammalian fauna is very diverse and abundant. Many mammalian species, including wide-ranging, large mammals, such as black bear, mountain lion, bobcat, coyote and deer are expected to use the SEA to forage. These animals are likely to den within the more isolated areas within the Angeles National Forest; however they are known to roam the SEA for foraging and dispersal opportunities.

Wildlife Movement

Wildlife movement within the SEA takes on two major forms. First, due to the extremely steep intervening topography, considerable movement of wildlife up and down the drainages, which course through this SEA to connect the forest interior with foothill areas, is expected. Consequently, this type of movement occurs on a seasonal basis, particularly for large mobile mammals with a full range of habitat needs that are typically met over broad areas.

The second major type of movement occurs across the flanks of the foothills in an east-west direction. Particularly for riparian-obligate and riparian-favoring migratory birds, the corridor linking lower elevation riparian habitats in the SEA are of high importance and heavily utilized.

Sensitive Biological Resources

Sensitive biological resources are habitats or individual species that have special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, and/or rare. This is due to the species' declining or limited population sizes, which usually results from habitat loss. Watch lists of such resources are maintained by the California Department of Fish and Game (CDFG), the United States Fish and Wildlife Service (USFWS), and special groups, such as the California Native Plant Society (CNPS). The following sections indicate the habitats as well as plant and animal species present, or potentially present within the SEA, which have been accorded special recognition.

Sensitive Plant Communities and Habitats

The SEA supports several habitat types considered sensitive by resource agencies. These are inventoried by California Department of Fish and Game (CDFG) in the California Natural Diversity Database (CNDDB) [2011]. The CNDDB includes state and federally-listed endangered, threatened, and rare vascular plants, as well as several sensitive vertebrate species. Sensitive communities include hairy leaf ceanothus chaparral, holly leaf cherry chaparral, chamise-white sage chaparral, California brittle bush scrub, white sage scrub, California buckwheat-white sage scrub, and oak riparian woodland. These communities, or closely related designations, are considered high priority communities by the CDFG, which indicates that they are experiencing a decline throughout their range. The array and composition of these communities has been discussed in the Vegetation section.

Sensitive Plant Species

The following special-status plant taxa have been reported or have the potential to occur within the SEA, based on known habitat requirements and geographic range information:

- Sonoran maiden fern (*Thelypteris puberula* var. *sonorensis*) RPR 2.2
- San Gabriel manzanita (*Arctostaphylos glandulosa* ssp. *gabrielensis*) RPR 1B.2
- Braunton's milk-vetch (*Astragalus brauntonii*) RPR 1B.1, FE
- Nevin's barberry (*Berberis nevinii*) RPR 1B.1, SE, FE
- Parry's spineflower (*Chorizanthe parryi* var. *parryi*) RPR 1B.1
- Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*) RPR 1B.1
- White rabbit-tobacco (*Pseudognaphalium leucocephalum*) RPR 2.2
- San Gabriel oak (*Quercus dumosa* var. *gabrielensis*) RPR 4.2
- Greata's aster (*Symphyotrichum greatae*) RPR 1B.3
- Slender mariposa lily (*Calochortus clavatus* var. *gracilis*) RPR 1B.2
- Plummer's mariposa lily (*Calochortus plummerae*) RPR 1B.2
- Mesa horkelia (*Horkelia cuneata* ssp. *puberula*) RPR 1B.1

Sensitive Animal Species

The following special-status animal species are reported or are likely to be present within the SEA based on habitat requirements and known range attributes:

- Coast range newt (*Taricha torosa*) SSC
- Western pond turtle (*Emys marmorata*) BLMS, SSC, FSS
- Silvery legless lizard (*Anniella pulchra pulchra*) SSC, FSS
- Coast horned lizard (*Phrynosoma blainvillii*) BLMS, SSC, FSS
- Coastal whiptail (*Aspidoscelis tigris stejnegeri*) CDFG Special Animals List
- Coastal rosy boa (*Lichanura trivirgata roseofusca*) FSS
- San Bernardino mountain kingsnake (*Lampropeltis zonata parvirubra*) SSC, FSS
- Coast patch-nosed snake (*Salvadora hexalepis virgultea*) SSC
- San Bernardino ringneck snake (*Diadophis punctatus modestus*) FSS
- Two-striped garter snake (*Thamnophis hammondii*) BLMS, SSC, FSS
- American peregrine falcon (*Falco peregrinus anatum*) FD, SD, CDF, CDFG Fully Protected, BCC
- Southwestern willow flycatcher (*Empidonax traillii extimus*) FE, SE, ABC
- Least Bell's vireo (*Vireo bellii pusillus*) FE, SE, ABC
- Coastal California gnatcatcher (*Polioptila californica californica*) FT, ABC, SSC
- American badger (*Taxidea taxus*) SSC
- Western mastiff bat (*Eumops perotis californicus*) BLMS, SSC, WBWG High Priority
- Big free-tailed bat (*Nyctinomops macrotis*) SSC, WBWG: Medium-High Priority
- Pallid bat (*Antrozous pallidus*) BLMS, SSC, FSS, WBWG: High Priority
- Silver-haired bat (*Lasionycteris noctivagans*) CDFG Special Animals List, WBWG Medium Priority
- Hoary bat (*Lasiurus cinereus*) CDFG Special Animals List, WBWG: Medium Priority
- Western yellow bat (*Lasiurus xanthinus*) SSC, WBWG: High Priority
- San Diego desert woodrat (*Neotoma lepida intermedia*) SSC

Ecological Transition Areas (ETAs)

There are no ETAs designated within this SEA.

Regional Biological Value

The SEA meets important SEA designation criteria and supports many regional biological values. Each criterion and how it is met is described below.

CRITERIA ANALYSIS OF THE ALTADENA FOOTHILLS AND ARROYOS SEA

Criterion		Status	Justification
A)	The habitat of core populations of endangered or threatened plant or animal species.	Not Met	None within this SEA.
B)	On a regional basis, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted	Met	The SEA is designating one of the principle ecotones of the Southern California coastal areas: the area where the sediment of the coastal alluvial fans from the mountain streams and drainages is exiting the abrupt upthrust rock of the mountains. Here one finds the biotic communities of the mountains meeting the communities of the coastal plain areas,

	Criterion	Status	Justification
	in distribution.		combining with the organisms that are only found at the junction. The natural habitats of this kind of biological area are fast dwindling as urban communities expand to the limits of easily buildable space.
C)	Within the County, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	The SEA is designating one of the principle ecotone areas of the County coastal exposure: the area where the sediment of the alluvial fans from the mountain streams and drainages is adding to the mile-deep sediments of the Los Angeles Basin, as the watercourses exit the abrupt upthrust rock of the San Gabriel Mountains. It is an area where one can often encounter flora that is characteristic of the Peninsular Ranges to the south and flora of the coastal ranges and Sierra Nevada to the north, among typical flora of the Transverse Ranges. The SEA contains prime examples of coastal sage scrub and other kinds of chaparral, riparian oaks, woodlands of the canyon oak of the mountains, woodlands of the coast live oak, which occurs both in the lower mountains and the valleys, good stands of the San Gabriel endemic oak (*Quercus dumosa* var. *gabrielensis*), diverse and beautiful flora characteristic of the continually changing beds of the mountain streams, both perennial and intermittent, and the wildlife that reside in these various habitats.
D)	Habitat that at some point in the life cycle of a species or group of species, serves as concentrated breeding, feeding, resting, or migrating grounds and is limited in availability either regionally or in the County.	Met	The SEA provides a low-elevation constrained corridor. The SEA serves as the only corridor to provide interacting component habitat areas for species to feed, rest, and migrate from low basin and foothill elevations to the sub-alpine elevations of the high San Gabriel Mountains.
E)	Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community.	Not met	None within this SEA.
F)	Areas that would provide for the preservation of relatively undisturbed examples of the original natural biotic communities in the County.	Met	Areas encompassed within the SEA represent the only remaining stands of low-elevation foothill scrub, chaparral, and canyon woodland communities within the north San Gabriel Valley. These communities once extended throughout what are now the communities of the north San Gabriel Valley, bridging the transition between high chaparral on the southern slope of the San Gabriel Mountains to the alluvial fans extending beneath the mountains to the coastal basin.

In conclusion, the area is an SEA because it contains (B-C) a good example of the biotic communities typical of the area where the abrupt upthrust of the mountains meets the alluvial fans of the valleys, a natural habitat that is limited in availability in the County and the coastal Southern

California region; (D) it has a constrained connective corridor area near the Devil's Gate Dam where the freeway underpasses provide access between the San Rafael Hills and the San Gabriel Mountains; and (F) it supports intact remant stands of low-elevation chaparral and scrub communities that were once more widespread within the region.

3. Antelope Valley SEA

Location

General

The Antelope Valley Significant Ecological Area (SEA) is located in the central portion of the Antelope Valley, primarily east of the cities of Palmdale and Lancaster, within a predominantly unincorporated area of the County. The SEA is focused on the principal watercourses of the area: Little Rock Creek and Big Rock Creek and tributaries, such as Mescal Creek. The California Audubon recognizes the area of Edwards Air Force Base as a Globally Important Bird Area (IBA), which is visited by tens of thousands of migrant birds during the spring and fall migratory seasons, and supports the breeding of rare and endangered birds during the spring and summer months.

The SEA is located, at least partially, in each of the following United States Geological Survey (USGS) 7.5' California Quadrangles: Rosamond, Rosamond Lake, Redman, Rogers Lake S, Jackrabbit Hill, Lancaster E, Alpine Butte, Hi Vista, Adobe Mountain, Palmdale, Littlerock, Lovejoy Butte, El Mirage, Pacifico Mountain, Juniper Hills, Valyermo, and Mescal Creek.

General Boundary and Resources Description

Watercourses and water features, such as dry lakes and springs, are the focus for desert life and central to connectivity and biodiversity in this region. The SEA was delineated to emphasize the importance of the Little Rock Creek and Big Rock Creek watersheds to the surface and subsurface hydrology of the Antelope Valley and to the dry lakes. The western portion of the SEA extends along the margin of Little Rock Creek Wash and floodplain zone, while the eastern margin follows a tributary of Big Rock Creek, which is Mescal Creek Wash and its tributaries. The origins of the watercourses in the Angeles National Forest are an important aspect of their diversity and connectivity, and the importance of the diverse forest vegetation of this SEA is discussed below. The SEA includes several major buttes and numerous minor ones, which have highly diverse biota along with diverse desert habitats, which range from sand dunes from the wind-blown dust that the buttes collect, to rocky crags, which are home to various raptors. The SEA includes the County's portion of the watershed basin for dry lakes, which are the destination for the watercourses. There are three dry lakes and their adjacent plains (protected as part of Edwards Air Force Base) included in the SEA: Rosamond Dry Lake with the adjacent Piute Ponds, Buckhorn Lake, and Rogers Lake. These lakes and ponds are often flooded during the rainy winter-spring seasons, and are the principal resting areas on the Pacific Flyway. The northeastern portion of the SEA encompasses some agricultural cropland (some of which lie fallow) and dispersed rural residential uses; however, the underlying hydrology of the washes remains intact throughout the entire SEA.

Three main watercourse segments originate in the San Gabriel Mountains and flow through the Antelope Valley to dry lakes near the northern County boundary: 1) Little Rock Creek; 2) Big Rock Creek; and 3) Desert-Montane. Desert-Montane centers on Mescal Creek and includes adjacent drainages. The flows of all three drainages may be on the surface during rain and snowmelt, and are subsurface for much of the year.

The Little Rock Creek segment (the westernmost segment), goes north from Little Rock-Palmdale Dam as its southern barrier. Upstream from the reservoir is critical habitat for the endangered arroyo toad (*Anaxyrus californicus* FE, SSC). The toad could occur from time to time in the downstream area of the SEA. Heading north to Mount Emma Road, the boundaries follow the flood zone of the Little Rock Creek Wash and also incorporate some of the vegetated slopes that drain to the wash. North from Mount Emma Road, the boundaries follow Federal Emergency Management Agency (FEMA) boundaries except where the braiding is clearly outside of the FEMA boundary, such as near Avenue U, between Avenue S and Avenue T, and north of Avenue Q. In these areas, the line follows the edge of the braiding. North of Avenue M, the lines follow FEMA boundaries to Avenue F. On the west side, just south of Edwards Air Force Base, the SEA boundary heads west to incorporate the conservation area identified by the West Mojave (WEMO) Plan for alkali mariposa lily. North of Avenue F, the eastern boundary follows the FEMA boundary to the Edwards Air Force Base boundary.

All of Edwards Air Force Base that is in the County is included in the SEA because of the restricted entry and use protect the dry lakes and their neighboring areas. Many desert plants and wildlife species once found broadly across the Antelope Valley are now found only or primarily within Edwards Air Force Base. The ponds and dry lakes have distributed habitat of marshy alkali grassland, alkali flats, and cattail and bulrush marsh augmented by wastewater treatment facilities that have additional ponds. Some of the nesting rare and uncommon birds include white-faced ibis (*Plegadis chihi*), tricolored blackbird (*Agelaius tricolor*), redhead (*Aythya americana*), gadwall (*Anas strepera*), yellow-headed blackbird (*Xanthocephalus xanthocephalus*), least bittern (*Ixobrychus exilis*), and federally-threatened western snowy plover (*Charadrius alexandrinus nivosus*).

The Big Rock Creek area has western and eastern segments in the SEA. On the western segment, the SEA begins in the Angeles National Forest near its northern boundary and heads north through and out of the Angeles National Forest along Pallett Creek. The SEA includes parts of Cruthers and Holmes creeks near their junctions with Pallett Creek. SEA boundaries follow the braided stream channel toward the confluence with Big Rock Creek. From the aqueduct at Big Rock Creek to Edwards Air Force Base, the western boundary line follows the FEMA boundaries along the western side of Big Rock Creek braids, including Alpine Butte, and joining to the Little Rock Creek segment along Edwards Air Force Base. On the east segment of Big Rock Creek, the SEA boundaries head north from the Angeles National Forest headwaters of Dorr Canyon (a Big Rock Creek tributary) and the headwater area of Big Rock Creek near State Route-2. The boundaries travel through the Angeles National Forest and follow the wash area of the streams toward the confluence with Pallett Creek. The Angeles National Forest floodplain of the widened area of South Fork of Big Rock Creek is included in the SEA.

South Fork of Big Rock Creek is part of the federally-designated critical habitat of the mountain yellow-legged frog (*Rana muscosa*, FE, SE). This frog is known in the County from only a few high-mountain streams in the San Gabriel Mountains. Climate change and other global factors, such as air pollution, are suspected to be responsible for its endangered status.

Another broad area of the San Andreas Fault Zone near the Valyermo Ranch follows the FEMA boundaries and includes a nesting area for gray vireos near Bobs Gap. Between the Angeles National Forest and the aqueduct, the SEA boundaries follow FEMA boundaries. The eastern boundary follows the FEMA boundary along the main course of Big Rock Creek to the vicinity of Avenue Q East, where it diverges to include sections that have the main area of Lovejoy Buttes. At Avenue O, the eastern boundary returns to the FEMA boundary, and continues northeastward along the FEMA boundary to skirt development in Lake Los Angeles. In the vicinity of Avenue M, the

eastern boundary goes eastward through areas of natural vegetation (from about 100th Street to 215th Street) to include Rocky, Piute, and Saddleback buttes, and connect with the Desert-Montane transect segment.

The southern side of the Desert-Montane transect branch starts in the Angeles National Forest along the ridge of Table Mountain at the San Bernardino-Los Angeles County line. Table Mountain is known for its very diverse flora, which includes desert and mountain elements, and some unusual limestone-obligate species. The ridgeline SEA southern boundary gradually becomes the western boundary as it skirts the camp developments along the southern base of Table Mountain. The boundary turns north along the western ridge of the Mescal Creek drainage, crossing the California Aqueduct with the State Route-138. The Mescal Creek flora is known to be highly diverse, and the SEA boundaries include much of the Inface Bluff on the west side of Mescal Creek, which adds further diversity to Mescal Creek habitats. From the aqueduct to Avenue R, the western boundary buffers the westernmost desert drainage by 200 feet, which protects the braided area of the watercourse. This part of the SEA includes Black Butte and the Three Sisters (buttes), many smaller unnamed buttes, as well as Mescal and Theodore Payne County wildlife sanctuaries. The east side of the transect is the San Bernardino-Los Angeles County line. At about Avenue U East, the eastern boundary veers off the San Bernardino-Los Angeles County line to the north-northwest, buffering the Puzzle Creek watercourse by about 200 feet, which protects the braiding of the easternmost drainages. Near Avenue R, the boundary trends north, and goes north-northwest near Avenue P to include Moody Butte, lesser unnamed rises, and Blue Rock Butte.

The Desert-Montane segment largely avoids drainages that flow into and out of the Lake Los Angeles community, but the transect includes diffuse watercourses on the south side of Saddleback Butte, Saddleback Butte and the surrounding Saddleback Butte State Park, the Antelope Valley Indian Museum State Park at the base of Piute Butte, and Piute Butte. At about Avenue H and 70th Street East, the boundary turns to the northeast following natural vegetation to the County boundary near Avenue C. Here the boundary turns north along the line to where San Bernardino, Kern and Los Angeles counties meet. This northeastern part of the SEA has WEMO conservation areas for the threatened desert tortoise and state-threatened Mojave ground squirrel. The northeastern area has some BLM land and the County Phacelia Wildlife Sanctuary, which is also County Wildflower Preserve A. The SEA includes large parts of County Wildflower Preserve F.

On Edwards Air Force Base, north to south between Avenues B and E East, and west to east between 140th Street East and the San Bernardino-Los Angeles County line, there is federally-designated critical habitat for the state and federally-threatened desert tortoise (*Gopherus agassizii*). At 190th Street, the critical habitat widens to extend north beyond the County and the SEA into Kern County. At 200th Street, the critical habitat widens to the south to extend to Avenue H and then goes east across the San Bernardino-Los Angeles County line. The desert tortoise critical habitat area on Edwards Air Force Base is included in the SEA, and much of the SEA area north of Avenue H in the eastern drainages of the SEA is designated critical habitat for the tortoise.

The SEA traverses the Antelope Valley from the foothills of the San Gabriel Mountains, to the low elevations of the dry lake basins, and its expanse and considerable topographical relief is reflected in its relatively high floral and faunal diversity. The SEA includes playa lake,alkali marsh, alluvial fan scrub, a mosaic of xeric desert scrubs, Joshua tree woodland, desert riparian woodlands, juniper scrub, pinyon pine, chaparral and mixed conifer, oak, and riparian communities of higher elevations. Transitional zones (ecotones) between these communities often contain unusual species compositions, such as pinyon pine, juniper and Joshua trees together, or Joshua trees adjacent to cottonwood forest.

Edwards Air Force Base has the only good stands of mesquite (*Prosopis glandulosa*) remaining in the County. It has areas of Mojave spineflower (Chorizanthe spinosa), creosote bush scrub, alkali sink, and the transition vegetation between the two. Rosamond Lake has the best example of the shadscale scrub and alkali sink biotic communities in the County. Shadscale scrub needs heavy soil with underlying hardpan between 3000-6000 feet elevation, which is unusual in the County, and more common in the north Mojave Desert and Owens Valley. In addition, the playa has the southernmost extension of the Great Basin kangaroo rat (*Dipodomys microps*), which is an isolated geographic population of scientific interest.

The southernmost portions of the three "legs" of the SEA lie within the Angeles National Forest, and include the upper tributary watersheds and streams for Little Rock, Big Rock, and Mescal creeks. These areas support the mixed conifer, which are multi-species oak woodlands that are common to the middle-elevation zones on the north face of the San Gabriel Mountains. The creeks are higher energy systems at those elevations, as they collect water from the surrounding terrain, and are typically lined with woodlands of alder, willow, sycamore and cottonwood, with varying densities and with various compositions of species.

As the creeks drop north of the pressure ridges of the San Andreas Fault Zone, they lose gradient and widen, and most of the flow is beneath the surface, except during high energy storms or in the spring (depending upon rainfall totals in the watersheds). The vegetation becomes more sparse and less evenly distributed along the channel margins. Crossing the lowlands of the Antelope Valley, the channels support a variety of desert scrub vegetation within the alluvial plains. Where the alluvial plains are wide and shallow, cottonwood-willow woodland and sycamore woodland vegetation communities often occur within the overall floodplain on stable terraces; around oxbow flow zones in the Antelope Valley; or where the groundwater table is replaced or augmented by agricultural runoff. The surrounding upland habitats are primarily desert scrubs, including creosote and chenopod scrubs, sand sheets (chiefly around the buttes), and Joshua tree woodland. Intact Joshua tree woodland, with native substrates present, supports a relatively high diversity of annual wildflowers, reptiles and mammals. The Joshua trees also provide nest sites for many desert and migratory bird species.

Lovejoy, Alpine, Piute, Black and Saddleback buttes, along with other, smaller unnamed buttes, form most of the topographical relief within the SEA. These areas offer different ecological conditions that are associated with rock shelter, perching sites, nesting sites, denning areas, wind protection and sand sheet accumulation areas. Local and migratory bat species roost and reproduce in the caves and crevices of the butte formations. The higher buttes provide the only local nesting sites for owls and other birds of prey.

Alpine Butte is the least disturbed butte in the County, with excellent stands of Joshua tree woodland and creosote bush scrub, and impressive wildflower displays when rainfall is appropriate. Lovejoy Butte has Joshua tree woodland and creosote bush scrub, with a central wind-blown sand community for a good mixture of rock and sand habitats. In addition, the close proximity of Lovejoy Butte to Big Rock Creek Wash increases the diversity of habitats in the area. It also suffers most from impact from the Lake Los Angeles community, which borders the butte on three sides. The clustering of buttes in the SEA may be important to the abundant and diverse wildlife that inhabits the various vegetation communities around and in the buttes. Saddleback Butte and Piute Butte together are protected as a state park, but Saddleback Butte is also subject to development for campsites and hiking trails. Piute Butte has a prehistoric site that may protect it from much recreational development. All of the buttes harbor diverse wildlife and flora. Most of them are critical habitat for the state and federally-threatened desert tortoise. Some buttes within the critical habitat

are not included in the SEA.

The open agricultural lands, active and fallow, support a diversity of wildlife species, which essentially regard the fields and ditches as irrigated desert. Birds of prey frequently hunt over the open agricultural areas, including fallow fields; wide-ranging predators also find excellent hunting conditions in and around agricultural areas. A spectrum of local and migratory bat species feed over the irrigated fields in the spring and summer, when insect numbers are the highest, and at least one sensitive bat species, the pallid bat, forages in open scrub or ruderal desert habitats.

The northern portion of the SEA contains several unique habitat types, including mesquite bosque (threatened locally by lowering water tables and harvest for firewood), clay pan pools, vernal pools, alkali grasslands, alkali and freshwater marshes, and permanent ponds. Hundreds of bird species have been recorded from the pond and marsh habitats around the dry lakes and ponds, and numerous species nest on the playa margins or in the associated riparian habitats. The open creosote scrub and other xeric habitats on the slopes surrounding the lake playas serve as important wintering areas for many raptor species, as well as large numbers of song birds.

Vegetation

Plant species observed or recorded in previous documentation within the SEA are indicated in the *Comprehensive Floral & Faunal Compendium of the Los Angeles County SEAs.* Sensitive plant species occurring or potentially occurring within the SEAs are discussed in the Sensitive Biological Resources section.

Desert Scrub: A comprehensive term for a number of relatively low-stature, sparse-cover communities of shrubs and sub-shrubs that commonly occur on open, sandy soils where groundwater is inaccessible, except to a few deep-rooted species. Dominants include Great Basin sagebrush, antelope bush, creosote bush, several species of *Atriplex* (saltbush), rabbitbrush, cheesebush, sages, winterfat, and burrobrush, which are often with one or more perennial grasses (needlegrasses, sand drop-seed) interspersed. Formations dominated by saltbushes and other related taxa, which may be particularly common on alkaline soils, are sometimes called chenopod scrubs, in reference to the family *Chenopodiaceae*, which includes most of the dominant species. Within the SEA, variations on this community often intergrade with, or form understory within, juniper woodland and Joshua tree woodland. Variations are also found on lower slopes, around the buttes and on the adjacent Antelope Valley floor. These formations also occur extensively within the Desert-Montane transect segment of the SEA.

Corresponding MCV communities:

- *Krascheninnikovia lanata* (winterfat scrubland) Shrubland Alliance
- *Suaeda moquinii* ([*Suaeda nigra*] bush seepweed scrub) Shrubland Alliance
- *Atriplex spinifera* (spinescale scrub) Shrubland Alliance
- *Pluchea sericea* (arrow weed thickets) Shrubland Alliance
- *Artemisia tridentata* (big sagebrush) Shrubland Alliance
- *Artemisia tridentata* ssp. *vaseyana* (mountain big sagebrush) Shrubland Alliance
- *Atriplex canescens* (fourwing saltbush scrub) Shrubland Alliance
- *Atriplex confertifolia* (shadscale scrub) Shrubland Alliance
- *Atriplex hymenelytra* (desert holly scrub) Shrubland Alliance
- *Atriplex lentiformis* (quailbush scrub) Shrubland Alliance
- *Acacia greggii* (catclaw acacia thorn scrub) Shrubland Alliance

- *Ericameria paniculata* (black-stem rabbitbrush scrub) Shrubland Alliance
- *Ambrosia salsola* (cheesebrush scrub) Shrubland Alliance
- *Baccharis salicifolia* (mulefat thickets) Shrubland Alliance
- *Larrea tridentata* (creosote bush scrub) Shrubland Alliance
- *Larrea tridentata-Ambrosia dumosa* (creosote bush-white burr sage scrub) Shrubland Alliance
- *Atriplex polycarpa* (allscale scrub) Shrubland Alliance
- *Eriogonum fasciculatum* (California buckwheat scrub) Shrubland Alliance
- *Eriogonum heermannii* (Heermann's buckwheat patches) Provisional Shrubland Alliance
- *Eriogonum wrightii* (Wright's buckwheat patches) Dwarf Shrubland Alliance
- *Ephedra californica* (California joint fir scrub) Shrubland Alliance
- *Allenrolfea occidentalis* (iodine bush scrub) Shrubland Alliance
- *Sarcobatus vermiculatus* ([*Sarcobatus baileyi*] greasewood scrub) Shrubland Alliance
- *Yucca brevifolia* (Joshua tree woodland) Woodland Alliance
- *Prosopis glandulosa* (mesquite bosque) Woodland Alliance
- *Ambrosia salsola* (cheesebush scrub) Shrubland Alliance
- *Grayia spinosa* (spiny hop sage scrub) Shrubland Alliance
- *Castela emoryi* (crucifixion thorn stands) Shrubland Special Stands
- *Ericameria nauseosa* (rubber rabbitbrush scrub) Shrubland Alliance
- *Gutierrezia sarothrae* (broom snake weed scrub) Provisional Shrubland Alliance
- *Ambrosia dumosa* (white bursage scrub) Shrubland Alliance
- *Eriogonum fasciculatum-Salvia apiana* (California buckwheat-white sage scrub) Shrubland Alliance
- *Lepidospartum squamatum* (scale broom scrub) Shrubland Alliance
- *Purshia tridentata* (bitter bush scrub) Shrubland Alliance
- *Artemisia californnica-Eriogonum fasciculatum* (California sagebrush-California buckwheat scrub) Shrubland Alliance
- *Salvia apiana* (white sage scrub) Shrubland Alliance

Chaparral: Consists of broad-leafed or needle-leafed, sclerophyllous (hard-leafed), medium height to tall shrubs that form a dense cover on steep slopes that are usually below 5,000 feet in Southern California. Dominant species found within this community include scrub oaks (several species), chamise, manzanita, wild lilac, toyon, and western mountain-mahogany. This plant community occupies internal slopes, particularly on north-facing exposures, within the higher elevations of the SEA. Shrubs are frequently interspersed as understory formations within oak and conifer woodlands.

Corresponding MCV communities:

- *Adenostoma fasciculatum* (chamise chaparral) Shrubland Alliance
- *Adenostoma fasciculatum-Salvia apiana* (chamise-white sage chaparral) Shrubland Alliance
- *Adenostoma fasciculatum-Salvia mellifera* (chamise-black sage chaparral) Shrubland Alliance
- *Arctostaphylos glandulosa* (Eastwood's manzanita chaparral) Shrubland Alliance
- *Arctostaphylos glauca (*bigberry manzanita chaparral) Shrubland Alliance
- *Ceanothus cuneatus* (wedge leaf ceanothus chaparral, buck brush chaparral) Shrubland Alliance
- *Ceanothus greggii* (cup leaf ceanothus chaparral) Shrubland Alliance
- *Ceanothus crassifolius* (hoary leaf ceanothus chaparral) Shrubland Alliance

- *Lotus scoparius* ([*Acmispon glaber*] deer weed scrub) Shrubland Alliance
- *Prunus ilicifolia* (holly leaf cherry chaparral) Shrubland Alliance
- *Prunus emarginata* (bitter cherry thicket) Provisional Shrubland Alliance
- *Rhus ovata* (sugarbush chaparral) Shrubland Alliance

Grassland Communities: Consist of low, herbaceous vegetation that is dominated by grasses. This community also harbors native forbs and bulbs, as well as naturalized annual forbs. Only fragmentary representatives of native grasslands exist within the SEA, with mostly sand drop-seed colonies on relatively less-disturbed sandy substrates around the buttes. Non-native grassland consists of dominant invasive annual grasses that are primarily of Mediterranean origin. Dominant species within this "community," which is a ruderal formation and not a true habitat or community, include oats, bromes, foxtail chess and other grasses, wild mustards and other disturbance-favored "weedy" taxa. Non-native grasslands and other ruderal formations occur in small patches throughout the SEA and cover much of the land left fallow from agriculture.

Corresponding MCV communities:

- *Avena (barbata, fatua)* (wild oats grasslands) Semi-Natural Herbaceous Stands
- *Brassica (nigra)* and other mustards (upland mustards) Semi-Natural Herbaceous Stands
- *Bromus (diandrus, hordeaceus)-Brachypodium distachyon* (annual brome grasslands) Semi-Natural Herbaceous Stands
- *Bromus rubens-Schismus (arabicus, barbatus)* ([*Bromus madritensis* ssp. *rubens*] red brome or Mediterranean grass grasslands) Semi-Natural Herbaceous Stands
- *Centaurea (solstitialis, melitensis)* (yellow star-thistle fields) Semi-Natural Herbaceous Stands
- *Lolium perenne* ([*Festuca perennis*] perennial rye grass fields) Semi-Natural Herbaceous Stands

Wildflower Field: An amorphous mix of herbaceous plants noted for conspicuous annual wildflower displays, although noteworthy displays do not occur every year and appear to depend on rainfall patterns. Dominance varies from site to site and from year to year at any one particular site. Species frequently present include California poppy, tidy tips, dove lupine, valley tassels, purple owl's clover, and broad-leaved gilia. Within the SEA, prominent wildflower fields occur on the south facing slopes of the Tehachapi Mountains and the buttes.

Corresponding MCV communities:

None at this time.

Southern Willow Scrub: A riparian community consisting of dense, broad-leafed, winter-deciduous riparian thickets that occur within and adjacent to seasonal or permanent watercourses. The "scrub" habitat is generally sub-mature, which is a state that is often maintained by frequent heavy over-flooding–and may attain woodland or forest stature if undisturbed for several decades. Dominant species of this community within the SEA are mulefat, sandbar and arroyo willow. Within the SEA this community primarily occurs along portions of the tributary drainages to Little Rock and Big Rock creeks, but elements of it also may occur around the periphery of ponds and marshes.

Corresponding MCV communities:

- *Salix exigua* (sandbar willow thickets) Shrubland Alliance

- *Salix lasiolepis* (arroyo willow thickets) Shrubland Alliance

Joshua Tree Woodland: Dominated by Joshua tree, which usually is the only arborescent species, and with numerous smaller shrub species interspersed. Shrub species commonly associated with Joshua tree woodland habitat include creosote bush, Great Basin sagebrush, California buckwheat, saltbush, horsebrush, desert almond, and antelope bush. Joshua tree woodland is present in varying densities and age formations over much of the less-disturbed uplands around the two primary washes, and throughout the Desert-Montane transect.

Corresponding MCV communities:

- *Yucca brevifolia* (Joshua tree woodland) Woodland Alliance

Juniper Woodland: An open formation dominated by California juniper, often with an understory of desert scrub species, and sometimes mixed with chaparral or Joshua tree woodland at middle elevations. This community is found on lower slopes in the San Andreas Fault Zone.

Corresponding MCV communities:

- *Juniperus californica* (California juniper wooddland) Woodland Alliance
- *Juniperus grandis* (mountain juniper woodland) Woodland Alliance
- *Juniperus osteosperma* (Utah juniper woodland) Woodland Alliance

Mixed Conifer-Oak Woodland Formations: Typically consist of an overstory of oaks (canyon, interior live) intermixed with bigcone Douglas fir, incense cedar, and yellow pine of varying densities and compositions, depending on slope orientation, substrates, and fire history. Understory vegetation is usually dominated by chaparral species, such as scrub oak, manzanita, and wild lilac. This community occurs only in canyons in the higher elevations of the SEA.

Corresponding MCV communities:

- *Quercus chrysolepis* (canyon live oak forest) Forest Alliance
- *Quercus agrifolia* (coast live oak woodland) Woodland Alliance
- *Quercus wislizenii* (interior live oak woodland) Woodland Alliance
- *Pinus coulteri* (Coulter pine woodland) Woodland Alliance
- *Pseudotsuga macrocarpa-Quercus chrysolepis* (bigcone Douglas-fir forest) Forest Alliance

Southern Cottonwood-Willow Riparian Forest: A broad-leafed winter-deciduous habitat that is dominated by Fremont cottonwood, in places mixed with willow or western sycamore. Southern cottonwood-willow riparian forest (or woodland) occurs within the SEA along segments of Little Rock Creek and Big Rock Creek, and rows of trees line the periphery of irrigated sites, lakes and ponds.

Corresponding MCV communities:

- *Populus fremontii* (Fremont cottonwood forest) Forest Alliance
- *Populus trichocarpa* (black cottonwood forest) Forest Alliance

Mesquite Bosque: Consists of dense thickets of mesquite trees, usually found where groundwater resources are sufficient in quantity and depth to support the trees. There are remnant patches of this habitat throughout the northern portion of the SEA, but most of the trees have declined or died as water tables have been drawn down and mesquite wood has been harvested. Several large, healthy

stands of this habitat persist around the southern perimeter of the dry lakes.

Corresponding MCV communities:

- *Prosopis glandulosa* (mesquite bosque, mesquite thicket) Woodland Alliance

Freshwater Marsh: Develops in areas of still or slow-moving permanent freshwater. This community is dominated by the perennial, emergent cattail, which may reach heights of seven feet and grow in densities that form a closed canopy. Bulrush may also occur or be dominant within freshwater marsh. This formation occurs in scattered ponds and irrigation ditches throughout most of the SEA, but does form large, natural habitat areas at Piute Ponds and other pond sites around the dry lakes.

Corresponding MCV communities:

- *Phragmites australis* (common reed marshes) Herbaceous Alliance and Semi-Natural Stands
- *Schoenoplectus americanus* (American bulrush marsh) Herbaceous Alliance
- *Schoenoplectus californicus* (California bulrush marsh) Herbaceous Alliance
- *Typha (angustifolia, domingensis, latifolia)* (cattail marshes) Herbaceous Alliance
- *Lemna (minor)* and relatives (duckweed blooms) Provisional Herbaceous Alliance

Alkali Marsh: Similar to the freshwater marsh described above, but with more salt-tolerant plant species present. Species associated with this community include cattail, saltgrass and common reed. Alkali marsh occurs in small segments along Amargosa Creek, Edwards and Piute ponds, and other wetland areas scattered along the San Andreas Fault Zone.

Corresponding MCV communities:

- *Sarcobatus vermiculatus* ([*Sarcobatus baileyi*] greasewood scrub) Shrubland Alliance
- *Schoenoplectus americanus* (American bulrush marsh) Herbaceous Alliance
- Sporobolus airoides (alkali cordgrass marsh) Herbaceous Alliance
- *Allenrolfea occidentalis* (iodine bush scrub) Shrubland Alliance
- Atriplex lentiformis (quailbush scrub) Shrubland Alliance
- *Suaeda moquinii* ([*Suaeda nigra*] bush seepweed scrub) Shrubland Alliance

Desert Alluvial Wash and Alluvial Fan Scrub: Generally consist of a mixture of shrubs, which colonize and persist within infrequently scoured and flooded terrain such as floodplains, alluvial plains, or along seasonal streams. It is sometimes known as floodplain sage scrub. The dominant shrub in most washes is scalebroom, but Great Basin sagebrush, rabbitbrush, sweetbush, and chaparral yucca also may occur in the habitat type. This vegetation type is common throughout the alluvial plains and washes in the SEA.

Corresponding MCV communities:

- *Lepidospartum squamatum* (scale broom scrub) Shrubland Alliance

Disturbed or Barren Areas: These are areas that either completely lack vegetation or are dominated by ruderal species. Ruderal vegetation typically found within the SEA includes non-native grasses and “weedy” herbaceous species, native and non-native, including doveweed, mustards, telegraph weed, Russian thistle, dock, yellow star thistle, tocalote, Australian saltbush, and cocklebur. Disturbed areas occur throughout the SEA on fallow agricultural sites, around active agriculture and residential developments, along paved roads, fire breaks, dirt access roads, trails, and other similarly

disturbed areas.

Corresponding MCV Communities:

None at this time.

Wildlife

Wildlife within the SEA is moderately diverse and abundant, commensurate with the extensive acreage of natural open space and the relative diversity of habitat types. While a few wildlife species are entirely dependent upon a single vegetative community, the entire mosaic of vegetation communities within the SEA and adjoining areas constitutes a continuum of functional ecosystems supporting a wide variety of wildlife species, both within the SEA boundaries and as a part of the regional ecosystem.

Analysis of invertebrates is limited by a lack of specific data; however, the size of the SEA and diversity of habitats present is considered sufficient to encompass healthy populations of a large number of invertebrate species, in excess of 1,000 terrestrial species. The wetlands and aquatic habitats within the SEA support diverse faunas of freshwater and alkaline pool arthropods, including native fairy shrimp, brine flies, and tiger beetles. Insect orders are particularly well-represented taxonomically, with moderate levels of species endemism including *Coleoptera*, *Diptera*, Hymenoptera and nocturnal *Lepidoptera*.

Amphibians generally are not present within desert habitats, except where surface hydrology persists throughout the year or breeding season. A limited number of species may be abundant in desert riparian areas. The more moist woodland areas and canyon bottoms of the montane portions of the SEA support abundant populations of more common amphibians, and in Little Rock Creek, the southwestern arroyo toad. Several species of salamander may also be present within the mesic upper reaches of the creek drainages. Open desert scrub habitats generally support diverse reptile populations, and the overall herpetofauna of the SEA includes numerous lizard and snake species, along with western pond turtle and California desert tortoise.

Bird diversity within the SEA is related to habitat opportunities for year-round residents, seasonal residents, and migrating raptors and song birds. Open xeric scrub hosts a suite of birds typical of such sites over a wide range of deserts, while the transition zones in the southern portion of the SEA attract species with desert and montane habitat preferences. The most productive sites for birds are the riparian corridors and freshwater systems, which attract large numbers of migrants during spring and fall, and provide abundant cover and food resources for songbird breeding use. The desert riparian woodlands and rocky buttes provide nest sites for raptors, many of which forage widely over desert scrub and agricultural lands. The playa lakes and seasonal pools, along with the ponds near the dry lakes, attract large numbers of migrating shorebirds, waders and waterfowl, and provide important winter foraging and sheltering areas for waterfowl and birds of prey.

Wildlife species previously recorded, as well as those expected to occur, within the SEA are indicated in the *Comprehensive Floral & Faunal Compendium of the Los Angeles County SEAs*. Sensitive wildlife species occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources.

Wildlife Movement

The SEA extends from the Angeles National Forest to the playa lakes within Edwards Air Force

Base, encompassing most of the two largest drainages exiting the northern slope of the San Gabriel Mountain range. The geographical features of the SEA serve as a major habitat linkage and movement corridor for all wildlife species within its vicinity and in an intergenerational sense, many of the plant species. Ecologically generalist species (mountain lion, bobcat, coyote, gray fox, etc.) have the ability to move across such vast areas and through changing habitat types. For such species, the SEA may serve as an important system for long-term and genetic exchange among populations. For smaller or less-mobile species or taxa, which are narrowly restricted in their habitat needs, the SEA can serve as a broad linkage zone, in which individual movement can take place during seasonal population dispersal or over generations. This provides essential genetic exchange within and between metapopulations. The two drainages, combined with the upland terrestrial Desert-Montane transect portion of the SEA, ensure linkage and direct movement areas for all of the wildlife species present within the County portion of the Antelope Valley.

Sensitive Biological Resources

Sensitive biological resources are habitats or individual species that have special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, and/or rare. This is due to the species' declining or limited population sizes, which usually results from habitat loss. Watch lists of such resources are maintained by the California Department of Fish and Game (CDFG), the United States Fish and Wildlife Service (USFWS), and special groups, such as the California Native Plant Society (CNPS). The following sections indicate the habitats as well as plant and animal species present, or potentially present within the SEA, which have been accorded special recognition. When species are federally-listed as endangered or threatened, they often have federally-designated, geographically-specific "critical habitat areas." Critical habitat areas, after extensive study by experts, are judged to be essential to conservation and maintenance of the species. The desert tortoise and mountain yellow-legged frog have critical habitat in this SEA. The arroyo toad has nearby critical habitat and may be present in the SEA.

Sensitive Plan Communities and Habitats

The SEA supports several habitat types considered sensitive by resource agencies. These are inventoried by California Department of Fish and Game (CDFG) in the California Natural Diversity Database (CNDDB) [2011]. The CNDDB includes state and federally-listed endangered, threatened, and rare vascular plants, as well as several sensitive vertebrate species. The sensitive communities include: mesquite bosque, Joshua tree woodland, desert grassland, southern willow scrub, southern cottonwood-willow woodland, fresh-water swamp, alkali meadow, Mojave riparian forest, and desert dry wash woodland. These communities, or closely related designations, are considered high priority communities by the CDFG, which indicates that they are experiencing a decline throughout their range. The array and composition of these communities has been discussed in the Vegetation section.

Sensitive Plant Species

The following special-status plant taxa have been reported or have the potential to occur within the SEA, based on known habitat requirements and geographic range information:

- Mount Gleason Indian paintbrush (*Castilleja gleasoni*) RPR 1B.2
- Desert cymopterus (*Cymopterus deserticola*) RPR 1B.2
- Barstow woolly sunflower (*Eriophyllum mohavense)* RPR 1B.2
- Mason's neststraw (*Stylocline masonii*) RPR 1B.1

- Robinson's pepper grass (*Lepidium virginicum* var. *robinsonii,*[*Lepidium virginicum* ssp. *menziesii*]) RPR 1B.2
- Short-joint beavertail (*Opuntia basilaris* var. *brachyclada*) RPR 1B.2
- Robbins' nemacladus (*Nemacladus secundiflorus* var. *robbinsii),* RPR 2.2
- Sagebrush loeflingia (*Loeflingia squarrosa* var. *artemisiarum*) RPR 1B.2.2
- San Antonio milk-vetch (*Astragalus lentiginosus* var. *Antonius*) RPR 1B.3
- Big Bear Valley woollypod (*Astragalus leucolobus*) RPR 1B.2
- Lancaster milk-vetch (*Astragalus preussii* var*. laxiflorus*) RPR 1B.1
- Peirson's lupine (*Lupinus peirsonii*) RPR 1B.3
- Rock Creek broomrape (*Orobanche valida* ssp. valida) RPR 1B.2
- Red rock poppy (*Eschscholzia minutiflora* ssp. *Twisselmannii*) RPR 1B.2
- San Gabriel linanthus (*Linanthus concinnus*) RPR 1B.2
- Parry's spineflower (*Chorizanthe parryi* var. *parry*) RPR 1B.
- Mojave spineflower (*Chorizanthe* spinosa) RPR 4.2
- Johnston's buckwheat (*Eriogonum microthecum* var. *johnstonii*) RPR 1B.3
- Alkali mariposa lily (*Calochortus striatus*) RPR 1B.2
- Parish's alkali grass (*Puccinellia parishii)* RPR 1B.1

Sensitive Animal Species

The following special-status animal species are reported or are likely to be present within the SEA based on habitat requirements and known range attributes:

- Arroyo toad (*Anaxyrus californicus*) FE, SSC
- Desert tortoise (G*opherus* agassizii) FT, ST
- Swainson's hawk (*Buteo swainsoni*) ST
- Western snowy plover (*Charadrius alexandrinus nivosus*) FT, ABC, SSC, BCC
- mountain plover (*Charadrius montanus*) FT, CSC
- Willow flycatcher (*Empidonax traillii*) SE
- American peregrine falcon (*Falco peregrinus anatum*) SE
- Bald eagle (*Haliaeetus leucocephalus*) FT
- White faced ibis (*Plegadis chihi*) ST
- Bank swallow (*Riparia riparia*) ST
- Mohave ground squirrel (*Xerospermophilus mohavensis)* ST
- Nelson's antelope squirrel (*Ammospermophilus nelsoni*) ST

In addition, several other state-listed species of special concern have the potential to occur:

- Western pond turtle (*Emys marmorata*) BLMS, SSC, FSS
- Mojave fringed-toed lizard (*Uma scoparia*) BLMS, SSC
- San Diego horned lizard (*Phrynosoma blainvillii*) BLMS, SSC, FSS
- Chuckwalla (*Sauromalus ater)* (unusual in the County)
- Two-striped garter snake (*Thamnophis hammondii*) BLMS, SSC, FSS
- Cooper's hawk (*Accipiter cooperi*) CDFG Watch List
- Sharp-shinned hawk (*Accipiter striatus*)
- Tricolored blackbird (*Agelaius tricolor*) ABC, BLMS, SSC, BCC (nesting colony)
- Southern California (ashy) rufous-crowned sparrow (*Aimophila ruficeps canescens*) CDFG Watch List

- Bell's sage sparrow (*Amphispiza belli belli*) ABC, CDFG Watch List, BCC
- Golden eagle (*Aquila chrysaetos)* CDF, CDFG Fully Protected, CDFG Watch List, BCC
- Short-eared owl (*Asio flammeus*) ABC, SSC
- Long-eared owl (*Asio otus*) SSC
- Burrowing owl (*Athene cunicularia*) BLMS, SSC, BCC
- Redhead (*Aythya americana*) SSC
- California spotted owl (*Strix occidentalis occidentalis*) ABC, BLMS, SSC, FSS, BCC
- Ferruginous hawk (*Buteo regalis*) CDFG Watch List, BCC
- Vaux's swift *(Chaetura vauxi)* SSC
- Black tern (*Chlidonias niger*) SSC
- Northern harrier (*Circus cyaneus*) SSC
- California gull (*Larus californicus*) CDFG Watch List
- Yellow warbler (*Dendroica petechia brewsteri*) SSC, BCC
- California horned lark (*Eremophila alpestris actia*) CDFG Watch List
- Merlin (*Falco columbarius*) CDFG Watch List
- Prairie falcon (*Falco mexicanus*) CDFG Watch List, BCC
- Yellow-breasted chat (*Icteria virens*) SSC
- Least bittern (*Ixobrychus exilis*) SSC, BCC
- Loggerhead shrike (*Lanius ludovicianus)* SSC, BCC
- White-faced ibis (*Plegadis chihi*) CDFG Watch List
- Le Conte's thrasher (*Toxostoma lecontei*) ABC, SSC, BCC
- Gray vireo (*Vireo vicinior*) ABC, BLMS, SSC, BCC
- Yellow-headed blackbird (*Xanthocephalus xanthocephalus*) SSC
- Osprey (*Pandion haliaetus*) CDF, CDFG Watch List
- American white pelican (*Pelecanus erythrorhynchos*) SSC
- Double-crested cormorant (*Phalacrocorax auritus*) CDFG Watch List
- Pallid bat (*Antrozous pallidus*) BLMS, SSC, FSS, WBWG High Priority
- Pallid San Diego pocket mouse (*Chaetodipus fallax pallidus*) SSC
- Townsend's big-eared bat (*Corynorhinus (Plecotus) t. townsendii*) BLMS, SSC, FSS, WBWG: High Priority
- Spotted bat (*Euderma maculatum*) BLMS, SSC, WBWG High Priority
- California mastiff bat (*Eumops perotis californicus*) BLMS, SSC, WBWG High Priority
- Pocketed free-tailed bat (*Nyctinomops femorosaccus*) SSC, WBWG Medium Priority
- Big free-tailed bat (*Nyctinomops macrotis)* SSC, WBWG High Priority
- Southern grasshopper mouse (*Onychomys torridus ramona*) SSC
- Tehachapi pocket mouse (*Perognathus alticolus inexpectatus*) SSC, FSS
- American badger (*Taxidea taxus*) SSC

Ecological Transition Areas (ETAs)

Many areas designated as ETA characterize this SEA. Most of these ETAs are concentrated north of Avenue L and west of 140th Street where they are represented by large, contiguous agricultural fields with a checkerboard of active and fallow acreage. Similar conditions occur in a few scattered locations in the remainder of the SEA, but are not nearly as prevalent.

Regional Biological Value

The SEA meets several SEA designation criteria and supports many regional biological values. Each

criterion and how it is met described below.

CRITERIA ANALYSIS OF THE ANTELOPE VALLEY SEA

Criterion		Status	Justification
A)	The habitat of core populations of endangered or threatened plant or animal species.	Met	Critical habitat for the only known Antelope Valley population of the federally-endangered arroyo toad is adjacent to Little Rock Reservoir, upstream in Little Rock Creek, and some may still be found downstream of the dam in the SEA. The SEA encompasses much of the County ranges of the federally-threatened California desert tortoise, including much of the County critical habitat for the tortoise. The state-threatened Mohave ground squirrel occurs throughout much of the SEA. The SEA includes some of the critical habitat of mountain yellow-legged frog in the South Fork of Big Rock Creek. It includes habitat designated in the Western Mojave Plan (WEMO) for the alkali mariposa lily, which is a rare lily of the desert floor.
B)	On a regional basis, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	The mesquite bosque, sand sheet, rocky butte, desert riparian woodland, and alluvial fan sage scrub habitats are unique and regionally restricted biotic communities encompassed by the SEA. Desert species not, or rarely, found elsewhere in the County, such as verdin, black-throated sparrow, Mojave rattlesnake, desert banded gecko, Leech's prionid borer, and mesquite borer, occur within these habitats. Additionally, the ponds and other riparian and wetland systems in the northern portion of the SEA support numerous water birds and raptors not found elsewhere in the County.
C)	Within the County, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	The desert alluvial fan sage scrub, Joshua tree woodland, desert riparian woodland, mesquite bosque, alkali meadow/marsh, desert freshwater marsh, playa lake and seasonal pool habitats are located within, are unique to, or best represented within, the SEA.
D)	Habitat that at some point in the life cycle of a species or group of species, serves as concentrated breeding, feeding, resting, migrating grounds and is limited in availability either regionally or in the County.	Met	The freshwater habitats within and around Rosamond, Buckhorn and Rogers dry lake basins have large concentrations of migratory and resident waterfowl and birds of prey, providing them with essential seasonal and permanent resources. The rocky desert buttes are unique roosting, sheltering, perching and nesting sites for birds of prey and bats. This SEA is centered on migratory routes for both plants and animals along principal desert washes and buttes that connect the mountains to freshwater playas.
E)	Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community.	Met	The mesquite bosque that is located within the SEA is clearly at an extreme of its geographical range, along with its associated biota, such as the mesquite borer. Edge populations usually represent an unusual genetic variation in a population or community, and therefore meet the criterion of scientific interest as well as the criterion of a population at the extreme physical/geographical limit of its range.

Criterion		Status	Justification
F)	Areas that would provide for the preservation of relatively undisturbed examples of the original natural biotic communities in the County.	Met	The SEA encompasses some of the most biotically intact acreages of Joshua tree woodland, desert riparian woodland, and desert alluvial fan sage scrub remaining in the County. Mesquite was formerly widely distributed in the Antelope Valley, but due to harvesting, is now limited to a few protected areas, such as the Edwards Air Force Base.

In conclusion, the area described is an SEA because it contains: A) the habitat of core populations of endangered and threatened plant and animal species; B-C) biotic communities, vegetative associations, and habitat of plant and animal species that are either unique or are restricted in distribution in the County and regionally; D) concentrated breeding, feeding, resting, or migrating grounds, which are limited in availability in the County; E) populations of scientific interest at the edge of their range including the desert tortoise, the mesquite bosque, and the Mojave ground squirrel; and F) areas that provide for the preservation of relatively undisturbed examples of original natural biotic communities in the County.

4. Ballona Wetlands SEA

Location

General

The Ballona Wetlands Significant Ecological Area (SEA) is located south of Marina Del Rey, north of Playa Del Rey, and west and northwest of Playa Vista. One extending arm reaches north to the State Route-90 overcrossing and another reaches south to include the restored freshwater marsh adjacent to the Playa Del Rey and Playa Vista districts of the City of Los Angeles. The Ballona Wetlands are a remnant of what was the County's largest coastal lagoon. The Ballona watershed covers over 130 square miles, and the lagoon area was so large (about 11-12 square miles) that it included freshwater peripheries. Incorporated in the lagoon complex were 10 kinds of habitat that ranged from coastal saltwater marsh to grassy prairie to oak and willow woodland adjacent to freshwater areas. The lagoon connected via Ballona Creek that sometimes was the Los Angeles River, to La Cienega, a large swampy area (about 13-14 square miles) that was north and east of the Baldwin Hills. The SEA lies at the base of the Ballona Creek watershed and includes part of the Ballona Creek flood control channel that drains the total of 130 square miles, from what is now a highly urbanized area. While the Ballona Wetlands ecosystem has been substantially degraded over the years due to human activity and urban development, it is still a rich ecological system that bridges the gap between aquatic marine and freshwater land environments. It provides crucial habitat for hundreds of plant and animal species.

The SEA is in part of the California Audubon-designated Ballona Wetlands State Important Bird Area (IBA). The IBA is more extensive than the SEA, and includes all of the Marina Del Rey waterways, some of the Strand Beach to the south, Del Rey Lagoon and Ballona Lagoon, and extends up the Bluff Creek (source creek for the restored freshwater marsh) at the base of the south Ballona bluff as far as Centinela Avenue. This area is very important to avian life and has a great diversity of bird types ranging from those associated with salt water marsh to those associated with freshwater marsh to raptors that feed over grasslands.

The SEA is located on unincorporated land in the community of Marina Del Rey north of the Ballona Creek Channel and in the City of Los Angeles south of the Ballona Creek Channel. It is within the United States Geological Survey (USGS) 7.5' California Venice Quadrangle.

General Boundary and Resources Description

The SEA is surrounded by urban and residential uses. The SEA is bordered by Fiji Way in Marina Del Rey on the northeast, and has an arm that extends northeast to the State Route-90 overcrossing. This arm includes an undeveloped area of mixed native and non-native shrubs and grasses, and is bordered by Culver Boulevard on its south edge. The north boundary crosses the Ballona Creek Channel directly south of the end of Fiji Way, and goes west on the south side of Ballona Creek, which delineates the SEA's western half. The boundary turns southward, then eastward at the development in Playa Del Rey. The boundary goes north to Jefferson Boulevard along a gas line road, and then continues eastward on the north side of Jefferson Boulevard, as far as the area that has been restored as a freshwater marsh. The boundary turns southward and eastward to enclose the freshwater marsh. At the boundary of the freshwater marsh along Lincoln Boulevard, the boundary follows the west side of Lincoln Boulevard crossing Jefferson Boulevard, Ballona Wetlands, and connecting to the south side of the north arm where it crosses Culver Boulevard. Most of the area is a mixture of native and non-native shrubs and grasses, with a strong influence of brackish conditions. The northern side of the Ballona Creek Channel was a tidal mud flat in the original Ballona Lagoon that received a large amount of the dredge spoil when Marina Del Rey was created. However, there is enough natural forage in the wetlands to sustain a breeding colony of great blue herons and a breeding colony of black-crowned night herons in the trees of nearby Marina Del Rey.

Ballona Wetlands is one of three remaining remnants of salt marsh in the County (the other two are Malibu Lagoon in the Santa Monica Mountains SEA and the Cerritos Channel salt marsh in the Alamitos Bay SEA). This type of habitat is one of the most productive in the world, and is used as a breeding ground by many marine and terrestrial organisms. Belding's savannah sparrow (*Passerculus sandwichensis beldingi*), which is a state-recognized endangered species, resides in the pickleweed flats on the south side of the Ballona Wetlands. The California least tern (*Sternula antillarum browni*) breeds in the sandy areas around Ballona Lagoon and on Venice Beach, and is recognized as an endangered species by the state and federal governments. The terns forage in the waterways that are included in the SEA.

The salt marsh, Ballona Creek Channel, Ballona Lagoon, and Del Rey Lagoon form an important complex of habitats that are heavily used by migratory birds. The area is recognized by ornithologists and bird watchers throughout the area for its rich birdlife during the spring and fall migrations, and during the winter season. This type of heavy use is common in salt marsh habitat, and has been made more intense by the loss of habitat in Marina Del Rey, and throughout most of Southern California. This forces these birds to concentrate in the few remaining areas. Loss of this habitat type has led to reductions in the numbers of these birds present along the coast.

The salt marsh and lagoon at Ballona Creek are heavily used by academic institutions and conservation groups for educational field trips. This area serves as a type specimen of salt marsh habitat, and is the only easily accessible example in the County.

Vegetation

There are two categories of habitat in the SEA: wetland, and upland altered or created by filling and grading. The wetland is characterized by coastal salt marsh and freshwater marsh. The upland is

represented by a disturbed coastal sage scrub, non-native annual grassland, and coastal bluff and dune scrub. Sensitive plant species occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources section.

Descriptions and general locations of the each plant community present within the SEA are given below.

Coastal Salt Marsh: Consists of salt tolerant plants that are mostly low-growing herbaceous perennials found on the borders of marine salt water bodies. The duration and extent of tidal inundation or influence causes a graduation of various species prevalence within this community. In the Ballona Wetlands this includes the areas where pickleweed (*Salicornia pacifica*) is a dominant species and depending on the conditions other plants such as California cordgrass (*Spartina foliosa*), salt grass (*Distichlis spicata*), alkali heath (*Frankenia salina*) and spearscale (*Atriplex prostrata*) can be found.

Corresponding MCV communities:

- *Sarcocornia* [*Salicornia*] *pacifica* (*Salicornia depressa*) (pickleweed mats) Herbaceous Alliance
- *Bolboschoenus maritimus* (salt marsh bulrush marshes) Herbaceous Alliance
- *Distichlis spicata* (salt grass flats) Herbaceous Alliance
- *Spartina foliosa* (California cordgrass marsh) Herbaceous Alliance

Intertidal Flat: Brackish coastal wetlands of low-lying basins of high evaporation and infrequent inputs of freshwater with low-growing salt tolerant plants.

Corresponding MCV Communities:

- *Ruppia* (*cirrhosa*, *maritima*) (ditch-grass or widgeon-grass mats) Aquatic Herbaceous Alliance

Freshwater Marsh: Develops in areas of still or slow-moving permanent freshwater. In the SEA, this community may be dominated by perennial, emergent cattails (*Typha* spp.), which reach a height of four to five meters and often form a closed canopy. Bulrushes (*Schoenoplectus* spp.) are dominant below the cattail canopy. Freshwater marsh is relatively uncommon; it occurs in small patches in natural or created sinks with water sources.

Corresponding MCV communities:

- *Lepidium latifolium* (perennial pepper weed patches) Semi-Natural Herbaceous Stands
- *Schoenoplectus californicus* (California bulrush marsh) Herbaceous Alliance
- *Typha* (*angustifolia*, *domingenis*, *latifolia*) (cattail marshes) Herbaceous Alliance
- *Sarcocornia* [*Salicornia*] *pacifica* (*Salicornia depressa*) (pickleweed mats) Herbaceous Alliance
- *Juncus articus* (var. *balticus, mexicanus*) [*Juncus balticus* ssp. *ater*, *J. mexicanus*] (Baltic and Mexican rush marshes) Herbaceous Alliance
- *Juncus effusus* (soft rush marshes) Herbaceous Alliance
- *Lemna (minor)* and relatives (duckweed blooms) Provisional Herbaceous Alliance

Coastal Sage Scrub: Occurs in Southern California where moisture is available in the upper horizons

during the winter-spring growing season. Plants that are adapted to these conditions are a mixture of herbaceous and weakly woody, shrubby and drought deciduous types. This includes species such as California sagebrush (*Artemisia tridentata*), coyote brush (*Baccharis pilularis*) and laurel sumac (*Malosma laurina*).

Corresponding MCV communities:

- *Artemisia californica* (California sagebrush scrub) Shrubland Alliance
- *Artemisia californica-Salvia mellifera* (California sagebrush-black sage scrub) Shrubland Alliance
- *Artemisia californica-Eriogonum fasciculatum* (California sagebrush-California buckwheat scrub) Shrubland Alliance
- *Encelia californica* (California brittle bush scrub) Shrubland Alliance
- *Salvia mellifera* (black sage scrub) Shrubland Alliance
- *Eriogonum cinereum* (ashy buckwheat scrub) Shrubland Alliance
- *Eriogonum fasciculatum* (California buckwheat scrub) Shrubland Alliance
- *Hazardia squarrosa* (sawtooth golden bush scrub) Shrubland Alliance
- *Lotus scoparius* [*Acmispon glaber*] (deer weed scrub) Shrubland Alliance
- *Lupinus albifrons* (silver bush lupine scrub) Shrubland Alliance

Coastal Bluff and Dune Scrub: A remnant of the El Segundo Dune system that occupied coastal areas along much of the Santa Monica Bay. The system consists of fine, sandy soil that dries rapidly. Plants typical of the dune scrub include dune buckwheat (*Eriogonum parvifolium*), rattle pod (*Astragalus trichopodus var. lonchus*), bladderpod (*Peritoma arborea*), deer weed (*Acmispon glaber*), sawtooth goldenbush (*Hazardia squarrosa*), and California sunflower (*Helianthus californicus*)

Corresponding MCV communities:

- *Baccharis pilularis* (coyote brush scub) Shrubland Alliance
- *Lupinus arboreus* (yellow bush lupine scrub) Shrubland Alliance and Semi-Natural Shrubland Stands
- *Lupinus chamissonis-Ericameria ericoides* (silver dune lupine–mock heather scrub) Shrubland Alliance

Non-native Grassland Communities: Consist of low, herbaceous vegetation that are dominated by invasive grasses that are primarily of Mediterranean origin, but can also harbor native forbs and bulbs, as well as naturalized annual forbs. Species found within this community include wild oat (*Avena fatua*), slender oat (*Avena barbata*), red brome (*Bromus madritensis ssp. rubens*), ripgut brome (*Bromus diandrus*), and herbs such as black mustard (*Brassica nigra*) and wild radish (*Raphanus raphanistrum*). This community can be found throughout the SEA, but are less common in the moist soils found in and close to the salt and fresh water marshes.

Corresponding MCV communities:

- *Avena* (*barbata*, *fatua*) Semi-Natural Herbaceous Stands
- *Brassica* (*nigra*) and other mustards Semi-Natural Herbaceous Stands
- *Bromus* (*diandrus*, *hordeaceus*)-*Brachypodium distachyon* Semi-Natural Herbaceous Stands
- *Bromus rubens-Schismus (arabicus, barbatus)* ([*Bromus madritensis* ssp. *rubens*] red brome or Mediterranean grass grasslands) Semi-Natural Herbaceous Stands

- *Centaurea (solstitialis, melitensis)* (yellow star-thistle fields) Semi-Natural Herbaceous Stands
- *Lolium perenne* [*Festuca perennis*] (perennial rye grass fields) Semi-Natural Herbaceous Stands

Wildlife

Coastal salt marshes are very productive habitats that are used for foraging and breeding grounds, for both permanent resident and migrating wildlife species. The SEA is an important site due to the rarity of this type of habitat, which was once more extensive in Southern California.

Studies in the last 30 years in the vicinity have identified a total of 44 species of fishes. Types found include arrow goby (*Clevelandia ios*), California halibut (*Paralichthys californicus*), cheekspot goby (*Ilypnus gilberti*), diamond turbot (*Hypsopsetta guttulata*), queenfish (*Seriphus politus*), shadow goby (*Acentrogobius nebulosus*), shiner perch (*Cymatogaster aggregata*), topsmelt (*Atherinops affinis*), longjaw mudsucker (*Gillichthys mirabilis*), Pacific staghorn sculpin (*Leptocottus armatus*), and yellowfin goby (*Acanthogobius flavimanus*).

Many native species of reptiles and amphibians have been found in the SEA. These include common kingsnake, San Diego gopher snake (*Pituophis catenifer annectens*), western side-blotched lizard (*Uta stansburiana elegans*), San Diego alligator lizard (*Elgaria multicarinata webbii*), Great Basin fence lizard (*Sceloporus occidentalis longipes*), California slender salamander (*Batrachoseps attenuatus*) and California legless lizard (*Anniella pulchra*). Baja California chorus frog (*Pseudacris hypochondriaca*) and California toad (*Anaxyrus halophilus*) are very common in season. No invasive species of amphibians or reptiles have been reported in the SEA.

Native species of mammals found included western harvest mouse (*Reithrodontomys megalotis* (*western harvest mouse*), Botta's pocket gopher (*Thomomys bottae*), desert cottontail (*Sylvilagus audubonii*), striped skunk (*Mephitis mephitis*), raccoon (*Procyon lotor*), California ground squirrel (*Spermophilus beecheyi*), and the sensitive species south coast marsh vole (*Microtus californicus stephensi*). Invasive species found include house mouse (*Mus musculus*), black rat (*Rattus rattus*), Norway rat (*R. norvegicus*), domestic cat (*Felis domesticus*), Virginia opossum (*Didelphis virginiana*), and domestic dog (*Canis familiaris*). Low populations of small mammals are likely to be due to depredation by introduced red foxes, which are an immediate threat to the continued viability of the Ballona ecosystem.

The Ballona Wetlands provide habitat for a variety of bird species attracted to the few coastal saltmarshes that remain in coastal Southern California. Shallow water habitat for wading birds and ducks occurs in the northwestern portion of the SEA. No deep water is present for diving ducks and other birds that dive from the surface for fish. Foraging habitat for most raptors occurs in the western portion. Many bird species forage in the SEA, and the wetlands are used during migration and nesting. A resident population of Belding's savannah sparrow, which is a state-endangered species, was present in 2006 and the state and federally-endangered California least tern and fully protected American peregrine falcon (*Falco peregrinus anatum*) have been known to forage in this SEA. In 2010, least Bell's vireos (*least Bell's vireo*) successfully nested at the freshwater marsh, and many migrants have been observed there.

Sensitive wildlife species occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources section.

Wildlife Movement

The SEA is an important stopover for many migratory birds traveling the Pacific Flyway migration route. For many birds this area, it is important because it provides a variety of salt-water, estuarine, mudflat and freshwater marsh habitats. It offers many fishes and invertebrates an opportunity to establish populations capable of supporting further colonization to expand their range. The area does not fall within any identified terrestrial movement routes for wildlife.

Sensitive Biological Resources

Sensitive biological resources are habitats or individual species that have special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, and/or rare. This is due to the species' declining or limited population sizes, which usually results from habitat loss. Watch lists of such resources are maintained by the California Department of Fish and Game (CDFG), the United States Fish and Wildlife Service (USFWS), and special groups, such as the California Native Plant Society (CNPS). The following sections indicate the habitats as well as plant and animal species present, or potentially present within the SEA, which have been accorded special recognition.

Sensitive Plant Communities and Habitats

The SEA supports several habitat types considered sensitive by resource agencies. These are inventoried by California Department of Fish and Game (CDFG) in the California Natural Diversity Database (CNDDB) [2011]. The CNDDB includes state and federally-listed endangered, threatened, and rare vascular plants, as well as several sensitive vertebrate species. The SEA is configured to encompass regionally significant communities, which include pickleweed mats, salt marsh bulrush marshes, California cordgrass marsh, ditch-grass or widgeon-grass mats, California brittle bush scrub, ashy buckwheat scrub, sawtooth golden bush scrub, and silver dune lupine–mock heather scrub. These communities, or closely related designations, are considered high priority communities by the CDFG, which indicates that they are experiencing a decline throughout their range. The array and composition of these communities has been discussed in the Vegetation section.

Changes to the classification system mentioned earlier in some cases divides plant communities into many possible vegetation alliance communities, not all of which may be considered sensitive. For this SEA description, previously listed communities with a least one sensitive alliance in the new format have been listed.

Sensitive Plant Species

The statuses of rare plants are hierarchically categorized by the CNPS using a rank and decimal system. The initial category level of Rare Plant Rank is indicated by the ranks 1A (presumed extinct in California), 1B (rare or endangered in California and elsewhere), 2 (rare or endangered in California but more common elsewhere), 3 (more information needed, a review list), and 4 (limited distribution). In cases where the CNPS has further identified the specific threat to the species, a decimal or Threat Code is added: .1 (seriously endangered in California), .2 (fairly endangered in California), or .3 (not very endangered in California).

The following special-status plant taxa have been reported or have the potential to occur within the SEA, based on known habitat requirements and geographic range information:

- Aphanisma (*Aphanisma blitoides*) RPR 1B.1
- Marsh sandwort (*Arenaria paludicola*) RPR FE, SE, 1B.1
- Ventura marsh milk-vetch (*Astragalus pycnostachyus var. lanosissimus*) FE, SE, RPR 1B.1

- South Coast saltscale (*Atriplex pacifica*) RPR 1B.2
- Parish's brittlescale (*Atriplex parishii*) RPR 1B.1
- Davidson's saltscale (*Atriplex serenana var. davidsonii*) RPR 1B.2
- Southern tarplant (*Centromadia parryi ssp. australis*) RPR 1B.1
- Orcutt's pincushion (*Chaenactis glabriuscula var. orcuttiana*) RPR 1B.1
- Coastal goosefoot (*Chenopodium littoreum*) RPR 1B.2
- Salt marsh bird's-beak (*Chloropyron maritimum ssp. maritimum*) FE, SE, RPR 1B.2
- Beach spectaclepod (*Dithyrea maritima*) ST, RPR 1B.1
- Los Angeles sunflower (*Helianthus nuttallii ssp. parishii*) RPR 1A
- Coulter's goldfields (*Lasthenia glabrata ssp. coulteri*) RPR 1B.1
- Mud nama (*Nama stenocarpum*) RPR 2.2
- Gambel's water cress (*Nasturtium gambelii*) FE, SE, RPR 1B.1
- Coast woolly-heads (*Nemacaulis denudata var. denudata*) RPR 1B.2
- Ballona cinquefoil (*Potentilla multijuga*) RPR 1A
- Estuary seablite (*Suaeda esteroa*) RPR 1B.2

Sensitive Animal Species

The following special-status animal species are reported or are likely to be present within the SEA based on habitat requirements and known range attributes:

- Mimic tryonia (*Tryonia imitator*) CDFG Special Animals List
- Wandering skipper (*Panoquina errans*) CDFG Special Animals List
- Silvery legless lizard (*Anniella pulchra pulchra*) FSS, SSC
- Coastal whiptail (*Aspidoscelis tigris stejnegeri*) CDFG Special Animals List
- San Bernardino ringneck snake (*Diadophis punctatus modestus*) FSS
- Western pond turtle (*Emys marmorata*) BLMS, FSS, SSC
- Two-striped garter snake (*Thamnophis hammondii*) BLMS, FSS, SSC
- Tricolored blackbird (*Agelaius tricolor*) BCC, BLMS, SSC, USBC, AWL, ABC
- Burrowing owl (*Athene cunicularia*) BCC, BLMS, SSC
- Western snowy plover (*Charadrius alexandrinus nivosus*) FT, BCC, SSC, ABC, AWL, USBC
- California black rail (*Laterallus jamaicensis coturniculus*) BCC, ST, CDFG Fully Protected, USBC, AWL, ABC
- Belding's savannah sparrow (*Passerculus sandwichensis beldingi*) SE
- California least tern (*Sternula antillarum browni*) FE, SE, CDFG Fully Protected, USBC, ABC
- Vireo bellii pusillus (*least Bell's vireo*) FE, SE, ABC
- South coast marsh vole (*Microtus californicus stephensi*) SSC
- Pacific pocket mouse (*Perognathus longimembris pacificus*) FE, SSC
- Southern California saltmarsh shrew (*Sorex ornatus salicornicus*) SSC

Ecological Transition Areas (ETAs)

There are no ETAs designated within this SEA.

Regional Biological Value

The SEA meets several SEA designation criteria and supports many regional biological values. Each criterion and how it is met is described below.

Criteria Analysis of the Ballona Wetlands SEA

Criterion		Status	Justification
A)	The habitat of core populations of endangered or threatened plant or animal species.	Met	Least Bell's vireos are beginning to use the restored freshwater marsh component for breeding. Given time, this could become one of the important breeding areas for them in the coastal area. Belding's savannah sparrow lives in the salt marsh savannah. Least terns breed nearby and forage year round in the shoal water areas of the SEA.
B)	On a regional basis, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	There are three remaining salt marsh areas in the County: Cerritos Marsh in the Alamitos Bay SEA, Malibu Lagoon, and the SEA. In addition, there is a restored freshwater marsh on the periphery of Ballona Wetlands. The union of these two habitats is very rare in Southern California.
C)	Within the County, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution	Met	There are three remaining salt marsh areas in the County: Malibu Lagoon, the marsh in Alamitos Bay SEA, and SEA. In addition there is a restored freshwater marsh on the periphery of Ballona Wetlands. Salt marsh coupled with freshwater marsh, is very rare in the County. There is no other such representation in the County.
D)	Habitat that at some point in the life cycle of a species or group of species, serves as concentrated breeding, feeding, resting, or migrating grounds and is limited in availability either regionally or in the County.	Met	Endangered least Bell's vireos are using the freshwater marsh for breeding—they do not commonly occur in saltwater marshes, but were probably common on the peripheries in the freshwater portions. This restoration returns some of the former diversity and adds an important area for breeding. Many commercially valuable marine fishes start life in salt and estuarine marsh areas. The Ballona Wetlands are an important stopover point for migrations on the Pacific Flyway.
E)	Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community.	Met	The union of the salt marsh and freshwater marsh habitats has no other representation in the County and is therefore of great scientific interest. As the only easily accessible saltwater marsh, the Ballona Wetlands have great educational value. This kind of ecotone is usually in very short supply, and will always be an extreme kind of physical habitat, a meeting point for the coastal strand, the brackish area of the marsh, and the freshwater area of the upland.
F)	Areas that would provide for the preservation of relatively undisturbed examples of the original natural biotic communities in the County.	Not Met	Without implementation of restoration activities, this SEA does not provide for the preservation of relatively undisturbed examples of the original natural biotic communities in the County.

In conclusion, the area is an SEA because it contains: A) habitat that hosts breeding for the endangered least Bell's vireo; B-C) biotic communities, vegetative associations, and habitat of plant

and animal species that are unique and are restricted in distribution in the County and regionally; and D) concentrated breeding, feeding, resting, and migrating grounds, which are limited in availability in the County; and E) biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community

5. Cruzan Mesa Vernal Pools SEA

Location

General

The Cruzan Mesa Vernal Pools Significant Ecological Area (SEA) lies north of the Santa Clara River southeast of Bouquet Canyon. The SEA boundaries encompass the watershed and drainages of the Cruzan Mesa and Plum Canyon vernal pools, which are considered as a single ecosystem within the SEA. Vernal pools are a rare habitat. They are floored by clay or other substrate that retain water of spring rains for a period of months. The pool dries primarily by evaporation. The fauna and flora are adapted to this regimen, which often forms propagules that can last through years of dessication. The pools are ephemeral, and may not fill every year. The fauna may be specific to an area of pools. Most biota spread from pool to pool is carried in mud, which adhere to the feet of birds and other animals that visit the pools.

The SEA is located within the unincorporated area of the County and lies entirely within the United States Geological Survey (USGS) 7.5' California Mint Canyon Quadrangle.

General Boundary and Resources Description

The SEA boundaries generally follow sub-watershed boundaries, which extends beyond the sub-watershed boundary into areas to encompass vegetation, such as coastal sage scrub. The vernal pools in the northwest segment of the SEA are bounded in part by a sub-watershed boundary, but are primarily based on land formations that would adversely affect the vernal pools if altered to a great degree. This segment encompasses the vernal pool upland areas that contribute to the biological function of the vernal pool ecosystem. This SEA area includes most of the local federally-designated critical habitat for the threatened vernal pool plant, spreading navarretia (*Navarretia fossalis*, FT).

The SEA includes mesas, canyons and interior slopes, with Plum Canyon Creek running east-west through the southern portion of the SEA. The extent of the SEA encompasses the watershed, which supports both regionally unique vernal pools, including their immediate watersheds and the corridor between them. Plum Canyon forms the major drainage running east-west through the southern portion of the SEA, which drains west toward Bouquet Canyon. Uplands within the SEA are comprised of slopes and canyons, which support coastal sage scrub or scrub-chaparral vegetation. The Cruzan Mesa vernal pool complex lies within an elevated, topographically enclosed basin atop an eroded foothill between Mint and Bouquet canyons. Plum Canyon vernal pool, which is situated in a landslide depression on a hillside terrace, is smaller than the Cruzan Mesa pools, but possesses the same essential vernal pool characteristics as the larger system, and the two areas together form an ecologically functional unit.

The seasonally wet vernal pools and surrounding open coastal sage scrub and chaparral slopes support migrant and resident birds, other native sage scrub vertebrate species, and a number of sensitive taxa, including Riverside fairy shrimp, western spadefoot toad, ashy rufous-crowned

sparrow, Bell's sparrow, and possibly coastal California gnatcatcher. The steep cliffs that surround the Cruzan Mesa vernal pools, especially along the southeast and north margins, provide protected sites for perching, roosting and nesting by a variety of birds of prey, including great horned owl, barn owl, red-tailed hawk, prairie falcon, and golden eagle. The Plum Canyon vernal pool is hidden from view from the Plum Canyon roadway, and receives little human attention. Trash dumping, shooting and off-road vehicle activities have occurred within a few meters of the margin of the pool basin, but the pool shows only limited evidence of human intrusion.

Vegetation

The SEA encompasses formations of the following: vernal pool aquatics and emergent species; coastal sage scrub; mainland cherry forest; chaparral; and ruderal non-native grassland. Dirt roads inside the SEA are bordered by non-native grassland and other ruderal plant species. The vernal pool margins support limited densities of native grasses, but these do not form separate communities and are included within the vernal pool floral matrix. Plant species observed or recorded in previous documentation within the SEA are indicated in the *Comprehensive Floral & Faunal Compendium of the Los Angeles County SEAs.* Sensitive plant species occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources section.

Vernal Pool Sites: Occur in several different areas within the SEA where unique sub-surface conditions of shallow layers of less permeable horizons allow for seasonal accumulations of freshwater. True vernal pools, which are rare in Southern California and extremely rare in the County, form seasonally in shallow, closed basins, usually where a lens of heavy clay soil holds surface water following rainfall events. Agency-listed sensitive plant species occurring within both of the SEA pool systems include California Orcutt grass and spreading navarretia, along with other vernal pool endemics such as hairgrass, woolly-marbles, waterwort, *Mimulus latidens*, and water-starwort.

Corresponding MCV communities:

- *Alopecurus geniculatus* (water foxtail meadows) Provisional Herbaceous Alliance
- *Eleocharis macrostachya* (pale spike rush marshes) Herbaceous Alliance
- *Juncus arcticus (var. balticus, mexicanus* [*Juncus balticus* ssp. *ater, Juncus mexicanus*]) (Baltic and Mexican rush marshes) Herbaceous Alliance
- *Juncus (oxymeris, xiphioides)* (iris-leaf rush seeps) Provisional Herbaceous Alliance

Coastal Sage Scrub: Occurs throughout the slopes and ridges of most of the SEA, in places intermixed with chaparral elements. To some extent, the mosaic of coastal sage and chaparral reflects the fire history of any given portion of the site, with scrub formations generally occurring on sites that have recently burned. However, some slopes within upper Plum and Mint canyons, where no fires have occurred for over 30 years, still support "pure" coastal sage scrub, which suggests that the formation is a climax community on those sites.

Dominant species on most slopes within the SEA are California sagebrush, woolly blue-curls, chaparral yucca, black sage, Acton encelia, white sage, and chamise. A variety of less dominant associated species is also present, including lance-leaved live-forever, common tarplant, California buckwheat, beavertail cactus, turkish rugging, and Peirson's morning-glory. Disced or cleared areas have regrown with a dense cover of oats and bromes, California poppy, fiddleneck, several species of lupines, popcorn flower, comb-bur and other disturbance-favored native annuals. Less frequently disturbed portions of the upper watershed basin support dense stands of chamise. California scrub

oak chaparral with yerba santa is abundant along dirt roads and other disturbed areas. Where ground-water levels permit, giant rye grass, Mexican elderberry, acourtia, redberry, toyon, holly-leaved cherry, Fremont cottonwood, western sycamore, and arroyo willow occur in the lower portions of canyons and along Plum Canyon Creek.

Corresponding MCV communities:

- *Artemisia californica* (California sagebrush scrub) Shrubland Alliance
- *Artemisia californica-Salvia mellifera* (California sagebrush-black sage scrub) Shrubland Alliance
- *Artemisia californica-Eriogonum fasciculatum* (California sagebrush-California buckwheat scrub) Shrubland Alliance
- *Dendromecon rigida* (bush poppy scrub) Shrubland Alliance
- *Isocoma menziesii* (Menzie's golden bush scrub) Shrubland Alliance
- *Salvia apiana* (white sage scrub) Shrubland Alliance
- *Salvia mellifera* (black sage scrub) Shrubland Alliance
- *Eriogonum fasciculatum* (California buckwheat scrub) Shrubland Alliance
- *Ericameria linearifolia* (narrowleaf goldenbush scrub) Provisional Shrubland Alliance
- *Lotus scoparius* ([*Acmispon glaber*] deer weed scrub) Shrubland Alliance
- *Lupinus albifrons* (silver bush lupine scrub) Shrubland Alliance
- *Malacothamnus fasciculatus* (bush mallow scrub) Shrubland Alliance

Non-Native Grassland: Generally consists of invasive annual grasses, which are primarily of Mediterranean origin. It has become the dominant ground cover on disturbed sites throughout the western U.S. Common species within this "community," which is a ruderal formation and not a true habitat or community, include oats, bromes, foxtail chess, and other grasses, along with wild mustards, yellow star thistle, wire lettuce, sow thistle, milk thistle, and other disturbance-favored "weedy" taxa. Non-native ruderal formations occur over most of the Cruzan Mesa around the vernal pools, where coastal sage scrub has been disturbed or removed, in small strips and patches through the SEA—primarily along disturbed dirt road edges and where grading or other substrate disturbances have not regrown to native species.

Corresponding MCV communities:

- *Avena (barbata, fatua)* (wild oats grasslands) Semi-Natural Herbaceous Stands
- *Brassica (nigra) and other mustards* (upland mustards) Semi-Natural Herbaceous Stands
- *Bromus (diandrus, hordeaceus)-Brachypodium distachyon* (annual brome grasslands) Semi-Natural Herbaceous Stands
- *Bromus rubens-Schismus (arabicus, barbatus)* ([*Bromus madritensis* ssp. *rubens*] red brome or Mediterranean grass grasslands) Semi-Natural Herbaceous Stands
- *Centaurea (solstitialis, melitensis)* (yellow star-thistle fields) Semi-Natural Herbaceous Stands
- *Lolium perenne* ([*Festuca perennis*] perennial rye grass fields) Semi-Natural Herbaceous Stands

Mainland Cherry Forest: Is typically composed of tall stands of holly leaf cherry on rocky, dry slopes. Within the SEA, this community is not well-developed and intermingles with chaparral. It can be found in a single narrow patch on a slope in the southwestern portion of the SEA.

Corresponding MCV communities:

- *Prunus ilicifolia* (holly leaf cherry chaparral) Shrubland Alliance
- *Prunus virginiana* (choke cherry thickets) Provisional Shrubland Alliance

Wildlife

Wildlife diversity and abundance within the SEA are moderate, and commensurate with the relative homogeneity of the natural open space habitat types. Wildlife within much of the SEA is comprised of species that typically occur within coastal sage scrub. Birds of prey frequently forage over the pools and open grasslands, which form following the seasonal drying of the surface water. The Cruzan Mesa and Plum Canyon vernal pools provide rare surface water habitat for wildlife in an otherwise semi-arid scrub region, and the ponds attract moderate numbers and diversity of migratory waterfowl. The peripheral areas of coastal sage scrub around the vernal pools provide important shelter, terrestrial refugia, ecotonal and edge habitat for wildlife. A number of local wildlife species are more-or-less dependent upon coastal sage scrub or scrub-chaparral formations, while other species are strictly limited to seasonal pool habitats. The two vernal pool systems in the SEA, along with the coastal sage scrub-chaparral uplands surrounding and connecting them, constitute a single, integrated functional ecosystem for wildlife species within the SEA boundaries, as well as a part of the larger regional scrub-chaparral ecosystem.

While the analysis of invertebrates on any particular site is usually limited by a lack of specific data, containing only two primary natural habitat types within the SEA ensures that there is sufficient acreage to support healthy populations of present invertebrate species, which could be several hundred terrestrial species. The vernal pools, when ponded, form aquatic habitats for a moderately diverse fauna of freshwater arthropods and other invertebrates, including native fairy shrimp, aquatic flies, diving beetles, water scavengers, ostracods, and snails. At present, one ground beetle species (insect order *Coleoptera*), which is endemic to vernal pools, is known from the SEA.

Generally, amphibians are relatively common in coastal sage scrub habitats, with persistent surface hydrology during the breeding season. The SEA supports abundant populations of Pacific chorus frog, western toad, and western spadefoot toad. At least two species of salamander may also be present within more mesic portions of the surrounding canyons and chaparral.

Reptile populations expected to be within the SEA include numerous lizard species, including San Diego banded gecko, yucca night lizard, side-blotched lizard, western fence lizard, western skink, San Diego alligator lizard, coastal western whiptail, coastal horned lizard, and silvery legless lizard. A robust snake fauna is also expected to be within the SEA, including western blind snake, coachwhip (“red racer”), chaparral whipsnake, coastal patch-nosed snake, California rosy boa, San Diego gopher snake, California kingsnake, California mountain kingsnake, night snake, and Southern Pacific rattlesnake.

Bird diversity within the SEA is related to habitat opportunities for year-round residents, seasonal residents, migrating raptors and song birds. Open coastal sage scrub hosts a suite of birds that are typical of such sites, at lower elevations over most of the coastal slopes of Southern California. The most productive sites for resident coastal sage scrub and chaparral birds are around riparian and freshwater systems, which also attract large numbers of migrants during spring and fall. The vernal pools attract moderate numbers of migrating waders and waterfowl, and provide important winter foraging areas for resident and migratory birds of prey. Coastal sage and chaparral birds—resident or breeding within the SEA—include ashy rufous-crowned sparrow, Bell’s sage sparrow, black-chinned sparrow, lark sparrow, California thrasher, spotted towhee, California towhee, phainopepla,

northern mockingbird, lazuli bunting, and several species of hummingbird. In addition, species (western meadowlark, California horned lark, and perhaps also savannah and grasshopper sparrows) nest and forage in the grassland and ruderal habitats surrounding the vernal pools. Birds of prey that have been observed around the vernal pools include red-tailed hawk, northern harrier, prairie falcon, and golden eagle. Barn owl, great horned owl, and common raven nest in the cliffs surrounding Cruzan Mesa.

Wildlife species previously recorded, as well as those expected to occur, within the study area are indicated in the *Comprehensive Floral & Faunal Compendium* of the *Los Angeles County SEAs*. Sensitive wildlife species occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources section.

Wildlife Movement

The vernal pools situated within this SEA serve as isolated, high-quality, habitat linkage sites for migratory waterfowl. The vernal pools teem with arthropod and amphibian activity, and provide essential feeding grounds for long-distance migrants, as well as for resident species of reptiles, birds and mammals. The ponds do not lie within any identified terrestrial movement routes for wildlife, but may serve as important seasonal watering sites for species moving through and across the Plum Canyon divide between Mint and Bouquet canyons. The Plum Canyon stream channel undoubtedly serves as a movement pathway for more mobile species of terrestrial mammals, but it no longer links any larger habitat areas directly due to land conversion in Mint and Bouquet canyons.

Sensitive Biological Resources

Sensitive biological resources are habitats or individual species that have special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, and/or rare. This is due to the species' declining or limited population sizes, which usually results from habitat loss. Watch lists of such resources are maintained by the California Department of Fish and Game (CDFG), the United States Fish and Wildlife Service (USFWS), and special groups, such as the California Native Plant Society (CNPS). The following sections indicate the habitats as well as plant and animal species present, or potentially present within the SEA, which have been accorded special recognition.

The SEA is configured to encompass the regionally significant vernal pools and coastal sage scrub watershed, which supports them. Sensitive Holland plant communities within the SEA include vernal marsh, fresh-water swamp, coastal sage chaparral shrub; and in Plum Canyon, mainland cherry forest. We list here all Holland plant communities with the alliances in the new classification system. The related alliances, even if not sensitive, may be critical to support the sensitive ones.

Sensitive Plant Communities and Habitats

The SEA supports several habitat types considered sensitive by resource agencies. These are inventoried by California Department of Fish and Game (CDFG) in the California Natural Diversity Database (CNDDB) [2011]. The CNDDB includes state and federally-listed endangered, threatened, and rare vascular plants, as well as several sensitive vertebrate species. The SEA is configured to encompass regionally significant communities, which include mainland cherry forest in Plum Canyon, vernal marsh, and fresh-water swamp. These communities, or closely related designations, are considered high priority communities by the CDFG, which indicates that they are experiencing a decline throughout their range. The array and composition of these communities has been discussed in the Vegetation section. When species are federally-listed as endangered or threatened, they often

have federally-designated, geographically-specific "critical habitat areas." Critical habitat areas, after extensive study by experts, are judged to be essential to the conservation and maintenance of the species. The spreading navarretia has critical habitat areas that are coincident with the SEA.

Sensitive Plant Species

The following special-status plant taxa have been reported or have the potential to occur within the SEA, based on known habitat requirements and geographic range information:

- California Orcutt grass (*Orcuttia californica*) FE, SE, RPR 1B.1
- Spreading navarretia (*Navarretia fossalis)* FT, RPR 1B.1
- Slender-horned spineflower *(Dodecahema leptoceras)* FE, SE, RPR 1B.1
- Parry's spineflower (*Chorizanthe parryi* var*. parryi)* RPR 1B.1
- Orcutt's broadiaea (*Brodiaea orcuttii*) RPR 1B.1
- Slender mariposa lily (*Calochortus clavatus* var*. gracilis*) RPR 1B.2
- Plummer's mariposa lily (*Calochortus plummerae)* RPR 1B.2

Sensitive Animal Species

The following special-status animal species are reported or are likely to be present within the SEA based on habitat requirements and known range attributes:

- Vernal pool fairy shrimp (*Branchinecta lynchi*) FT
- San Diego fairy shrimp (*Branchinecta sandiegonensis*) FE
- Riverside fairy shrimp (*Streptocephalus wootonii*) FE
- Swainson's hawk (*Buteo swainsoni*) ST, ABC, FSS, BCC
- Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) FC, FSS, BCC
- American peregrine falcon (*Falco peregrinus anatum*) FD, SD CDF, CDFG Fully Protected, BCC
- Coastal California gnatcatcher (*Polioptila californica californica*) FT, ABC, SSC

In addition, there are animals recognized as state-listed species of concern that have the potential to occur:

- Western spadefoot (*Spea hammondii*) BLMS, SSC
- Coastal horned lizard (*Phrynosoma blainvillii*) BLMS, SSC, FSS
- Coast patch-nosed snake (*Salvadora hexalepis virgultea*) SSC
- Southern California (ashy) rufous-crowned sparrow (*Aimophila ruficeps canescens*) CDFG Watch List
- Two-striped garter snake (*Thamnophis hammondii*) BLMS, SSC, FSS
- Bell's sage sparrow (*Amphispiza belli belli*) ABC, CDFG Watch List, BCC
- Golden eagle (*Aquila chrysaetos)* CDF, CDFG Fully Protected, CDFG Watch List, BCC
- Burrowing owl (*Athene cunicularia*) BLMS, SSC, BCC
- Northern harrier (*Circus cyaneus*) SSC
- Prairie falcon (*Falco mexicanus*) CDFG Watch List, BCC
- Loggerhead shrike (*Lanius ludovicianus*) SSC, BCC
- San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) SSC
- San Diego desert woodrat (*Neotoma lepida intermedia*) SSC
- Southern grasshopper mouse (*Onychomys torridus ramona*) SSC

Ecological Transition Areas (ETAs)

There are no ETAs designated within this SEA.

Regional Biological Value

The SEA meets several SEA designation criteria and supports many regional biological values. Each criterion and how it is met described below.

CRITERIA ANALYSIS OF THE CRUZAN MESA VERNAL POOLS SEA

Criterion		Status	Justification
A)	The habitat of core populations of endangered or threatened plant or animal species.	Met	The only known County populations of the federally- endangered Riverside fairy shrimp, and the state and federally-endangered California Orcutt grass, are found in the vernal pools within the SEA. The federally-threatened plant, spreading navarretia, also occurs in these pools, and the pools and much of the SEA are designated critical habitat for this plant.
B)	On a regional basis, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	The Cruzan Mesa and Plum Canyon vernal pools are regionally unique biotic communities with several plants found only in such habitat types. The pools support the Riverside fairy shrimp, western spadefoot toad, and at least one vernal pool endemic ground beetle.
C)	Within County, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	The Cruzan Mesa and Plum Canyon vernal pools are unique biotic communities within the County, with several plants only found in such habitat types. The pools support the Riverside fairy shrimp, western spadefoot toad, and at least one vernal pool endemic ground beetle species.
D)	Habitat that at some point in the life cycle of a species or group of species, serves as concentrated breeding, feeding, resting, or migrating grounds and is limited in availability either regionally or in the County.	Met	The vernal pools serve as concentrated breeding areas for several species of amphibians, including the sensitive western spadefoot toad. They also attract a diversity of waterfowl seasonally—chiefly species migrating through the area—which use the pools for resting and feeding. While other open water systems attract and support waterfowl, the vernal pools are located in remote, upland sites, away from other freshwater features.
E)	Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community.	Not met	Although the SEA does not contain biotic resources that are clearly an extreme in physical/geographical limitations, or represent unusual variation in a population or community (and therefore does not meet this criterion), it is of scientific interest due the extreme rarity of vernal pool communities, especially in the County.

Criterion		Status	Justification
F)	Areas that would provide for the preservation of relatively undisturbed examples of the original natural biotic communities in the County.	Met	Protection and sensitive management of the Cruzan Mesa and Plum Canyon vernal pools would preserve one of the few examples of such habitat type in the County.

The SEA meets several designation criteria and supports several regional biological values. These values include: A) sensitive plant species unique to seasonal pools on heavy clay soils—several of which are at the northernmost point in their overall ranges, and seasonal surface water, which provide breeding sites for sensitive amphibians, including western spadefoot and Riverside fairy shrimp; B-C) a concentration of vernal pools, found in few places in the County and rare in the region, and their coastal sage scrub watershed, which serves as a hydrological filter, and seasonal ponds and surrounding mesic vegetation; D) vegetation that provides essential foraging and wintering sites for migrating birds that are otherwise uncommon on the coastal side of the San Gabriel Mountains, and steep cliffs surrounding the mesa tops with crevices and cavities providing roosting and nesting sites in the otherwise brush-covered hillsides; E-F) Rare habitat in Southern California, and the support of sensitive resources that are unique locally and regionally, and that biologists consider to be among the most sensitive habitat types in Southern California.

6. East San Gabriel Valley SEA

Location

General

The East San Gabriel Valley SEA is located in the eastern end of the San Gabriel Valley. The SEA includes some of the low hills that rim the San Gabriel Valley on the east. The SEA has several natural, interacting components that constitute an area-wide ecological unit. The SEA consists of five units. The location and configuration of this SEA and its parts are primarily defined by the urbanization of the eastern San Gabriel Valley, which has occurred over the more developable valley floor and lower slopes of the San Jose Hills. As a consequence, the SEA resembles an "archipelago" that encompasses portions, or islands, of undeveloped ridgelines, hilltops and drainages between the San Gabriel Mountains to the north and the Puente Hills to the south.

Generally, the topography within this SEA consists of moderate to steep hillsides with north, south, east and west slope aspects. Ridgelines vary in width, from narrow to broad, with well-defined drainages in between. One major drainage, Walnut Creek, and a man-made reservoir, Puddingstone Reservoir, are found within this SEA. Elevations range from a low of approximately 560 feet above Mean Sea Level (MSL) in the Walnut Creek drainage, to a high of approximately 1,375 feet above MSL at Buzzard Peak.

The SEA has several ridgelines and hilltops and the major drainage of Walnut Creek at the northern side of the San Jose Hills. In the last half of the 20th century, these areas have become surrounded by urban development. Units 1-5 include: 1) South Hills Park and the surrounding undeveloped land in the City of Glendora north of Interstate-210; 2) The natural riparian section of Walnut Creek County Park. The SEA includes sections in the City of Covina and City of San Dimas; 3) Frank G.

Bonelli Regional County Park (Bonelli Park); 4) Buzzard Peak, which is an extended ridge of undeveloped slopes to the west of Bonelli Park within the City of San Dimas, City of Walnut, and City of West Covina; and 5) Elephant Hill and an adjoining ridgeline in the City of Pomona. Along most of its boundaries, the SEA is bordered by developed properties. Large parts of this SEA are designated critical habitat for the federally-threatened coastal California gnatcatcher (*Polioptila californica californica*).

In its entirety, the SEA is located within the San Dimas, Glendora and Baldwin Park U.S. Geological Survey (USGS) 7.5' California Quadrangles.

General Boundary and Resources Description

Unit 1: The northernmost section of the SEA is the South Hills unit. Much of the SEA is "protected" in the South Hills Park of the City of Glendora. The SEA lies north of the Interstate-210, has its northwestern boundary along Big Dalton Wash (a concrete-lined flood control channel), and northeastern boundary along existing residential development in the floodplain of the wash and adjoining hills. The eastern boundary is also bordered by existing residential development. The southern boundary consists of the Interstate-210 right-of-way, and the western boundary lies along Glendora Avenue. Residential neighborhoods on the periphery (and not inside) of the South Hills Park are excluded, while external natural habitat is included in the SEA. An area of nursery fields in a central position of the park is included, as it is less than 40 acres in extent. Toward the eastern side of the SEA, there are some estate residences on the hills that are included, as they incorporate much natural habitat; however, denser neighborhoods are excluded from the SEA.

The South Hills are an area of chaparral and grasslands, and a northern stepping stone for wildlife (chiefly aerial) that move along the spine of the San Jose Hills between the San Gabriel Mountains of the Transverse Ranges, and the Puente and Chino Hills of the Peninsular Ranges on the southern side of the San Gabriel Valley. In South Hills Park, there are fine stands of walnut woodland in the upper elevations; northern ravines of oak woodland with walnut woodland in the upper elevations; what remains of the coast live oak woodland that once bordered the Big Dalton Wash; and excellent stands of prickly pear cactus covering some of the slopes. There are also grasslands with a dominant component of introduced mustards and some rocky exposures. Coastal sage scrub with alternating dominant components of California sagebrush (*Artemisia californica*), sumacs (*Rhus* spp.) and elderberries (*Sambucus* spp.) cover many of the slopes. Big Dalton Wash is channelized, and much development has been inserted into what was formerly Big Dalton's riparian oak woodland. This residential area forms a border for the northeast area of the SEA.

Unit 2: The most westerly portion of Walnut Creek begins where South Reeder Avenue crosses the Walnut Creek drainage on the border of the City of Covina and City of San Dimas. Walnut Creek runs along the northern base of the San Jose Hills and is a riparian interface between the rolling hill habitat and the coastal plain of the San Gabriel Valley. This segment encompasses the undeveloped creek bottom and flood plain, which is a relatively natural area along and adjacent to Walnut Creek, and most of it preserved as Walnut Creek Park. The Creek and lower slopes of the San Jose Hills contain one of the best riparian oak woodlands in the County, with a mixture of ash, walnut, willows, and sycamores. The upper areas of the oak woodland transition into excellent examples of walnut woodlands. Traveling east from this point, the SEA is bordered to the north by residential areas on the plains and to the south by residential areas on the ridgelines above the Creek. Much of the habitat of interest is on the slope of the ridgeline above the Creek.

Unit 3: The Walnut Creek Park unit is connected to the Bonelli Park unit. The SEA continues east to the Interstate-210, where the drainage and the SEA underpass along with San Dimas Avenue.

There is a fenced footpath on the south side of the underpass that wildlife and humans use extensively. On the east side of the Interstate-210, the boundaries diverge and follow the freeway right-of-way to the north and to the south. At the edge of natural habitat about a 0.2 mile north, the boundary turns northeast with Walnut Creek. There are two fingers of creek tributaries: one encircles its stream course as far as the Arrow Highway, and the other includes the undeveloped north-facing slope of a low ridge that has residential development along the top. The SEA ends at a Union Pacific rail line. The edges of Walnut Creek have business parks and industrial properties, as well as residential areas.

The SEA boundary returns back west from the two fingers to circle around the west side, and excludes the Raging Waters theme park. From Raging Waters, the SEA boundary follows along the northern boundary of Bonelli Park, which is the largest unit of the SEA. This area of Bonelli Park includes the 250-acre Puddingstone Reservoir, which is a flood control basin created by damming the main course of Walnut Creek. Puddingstone Reservoir is home to many resident birds, including a large population of American coots (*Fulica americana*). Notably, Puddingstone Reservoir also hosts a great variety and number of migrating waterfowl and other birds during the spring and fall, and provides riparian habitat for birds and other animals that are riparian obligates. Following along Puddingstone Drive to the Puddingstone Channel, the SEA eastern boundary turns south to conform to the eastern boundary of Bonelli Park. The Mountain Meadows Golf Course on the west side of the Park is an ETA, as are the campground area for recreational vehicles, the northern parking area of Puddingstone Reservoir, and the developed south side of Puddingstone Reservoir. On the south side of the park, the boundary borders the Interstate-10 to the junction with State Route-57, and then turns north following the east side of State Route-57, back to the undercrossing of San Dimas Avenue.

Bonelli Park (with the exception of the ETA areas), Puddingstone Reservoir, and Raging Waters is critical habitat for the coastal California gnatcatcher. There are a number of breeding pairs that occur in natural areas of coastal sage scrub in Bonelli Park. Another species of note is the many-stemmed dudleya or live-forever (*Dudleya multicaulis*), which is an uncommon plant found on the picturesque rocky outcrops of the Glendora volcanics formation. This plant is at its northernmost extent in this area of the San Gabriel Valley, and is more common in Orange County.

Unit 4: Across the State Route-57 from Bonelli Park, the San Jose Hills continue southwest, with residential areas dispersed among intervening grassland and chaparral natural areas. This area is considered an extension of the Buzzard Peak ridgeline. The natural area that continues the habitat in Bonelli Park is roughly a central area of a north-facing wooded area and a southern area of a ridgeline with steep slopes along the Interstate-10. The SEA is chiefly on the undeveloped upper ridge areas, and critical habitat for the coastal California gnatcatcher closely follows the SEA in the southern part along the ridgeline and the Interstate-10. The SEA and critical habitat for the gnatcatcher cross the highway with the ridgeline, and extend to Buzzard Peak

Buzzard Peak and its associated lands begin in the east along a ridgeline that is immediately north of the California State Polytechnic University (Cal Poly), Pomona campus. The western section of the SEA is undeveloped, but may be on the brink of growth. This component follows the ridgeline west to where it crosses Grand Avenue and continues in a westerly direction, which encompasses a series of minor ridgelines and drainages with highly dispersed residential areas. Moving east to west, its northern boundary is marked by Interstate-10, developed portions of the Forest Lawn Memorial Park Covina Hills and residential areas. Moving from east to west, its southern boundary is marked by developed and cultivated areas of the Cal Poly campus, Amar Road and residential areas. Along their entire lengths, the northern and southern boundaries follow highly circuitous

alignments at the edge of developed landscape. A lobe of the SEA extends into the natural area that separates Cal Poly Pomona from Mt. San Antonio College. Gnatcatcher critical habitat covers most of this segment of the SEA, and extends beyond Grand Avenue as far as State Route-39 (Azusa Avenue), with some islands of critical habitat in nearby hilltops.

Unit 5: A final component of this SEA is located south of the intersection of State Route-71 and State Route-57 in the City of Pomona, at a ridgeline that is bordered chiefly by development that has an undisturbed remnant of the original habitat: north-facing slopes of oak and walnut woodland. South-facing slopes consist of a mixture of dispersed chaparral, coastal sage scrub, and grasslands. There is a lobe that is north of Mission Boulevard in the City of Pomona on Elephant Hill, and a lobe south of Mission Boulevard. On Elephant Hill, the northern boundary is the Metrolink track. The eastern boundary is industrial development, the southern boundary is Mission Boulevard in the southeast, and the periphery of apartments along Brea Canyon Road, Appian Way, and Ferrara Court in the southwest. The western boundary is State Route-57. The Spadra cemetery with many introduced eucalyptus trees is not included. The ravines of Elephant Hill have fine examples of walnut woodland and the upper slopes have grassland, often dominated by mustards, with some areas of prickly-pear scrub.

Southeast of Mission Boulevard, the SEA is bordered by Mission Boulevard. The north-facing slopes with excellent oak and walnut woodland are bordered by residential areas at the base of the steep slopes. The eastern end is bordered by North Ranch Road, and the southwest is bordered by the dense residential community of Phillips Ranch in the City of Pomona. The crest of the ridge is rolling grasslands that are dominated by introduced mustards, and the slopes have a mix of dispersed grasslands, chaparral, coastal sage scrub, and prickly pear scrub.

The SEA encompasses several different local jurisdictions, including the unincorporated area of the County, City of Covina, City of Glendora, City of La Verne, City of Pomona, City of San Dimas, City of Walnut, and City of West Covina.

Vegetation

The variety of topography, soil types, slope aspects and water availability within this SEA create a range of physical habitats that support numerous plant species. The biological communities found in this SEA vary according to physical habitat conditions (i.e., slope exposure, soil type and depth, and the availability of water) and the area's history of grazing practices. Elevation plays almost no role in defining habitat types. Many slopes support oak and walnut woodland, which often intergrade with prevalent stands of mixed chaparral. Coastal sage scrub is also found on slopes with shallower, drier soils. Drainages are typically vegetated with oak riparian woodlands and forests, with stands of western sycamore (*Platanus racemosa*) and willow woodland. More moderate slopes and broader ridgelines have been subjected to livestock grazing. In these areas, the dominant vegetation consists of open non-native grassland. Oftentimes, grassland exists as the understory ground cover for wooded areas, which creates oak and walnut savannahs. Small isolated areas of freshwater marsh are also found around Puddingstone Reservoir. Plant species observed or recorded in previous documentation within the SEA are indicated in the *Comprehensive Floral & Faunal Compendium of the Los Angeles County SEAs.* Sensitive plant species occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources section.

Brief descriptions and general locations of each plant community present within the SEA are provided below, including oak woodland, oak riparian forest, walnut woodland, willow woodland, chaparral, coastal sage scrub, freshwater marsh, and non-native grassland.

Oak Woodland: A plant community dominated by species of the oak genus (*Quercus*). Within this SEA the dominant species is the coast live oak (*Quercus agrifolia* var. *agrifolia*), which typically grows to heights of 20 to 40 feet and forms either closed or open canopies. Understory vegetation varies from grassland in areas that are subject to grazing, to shrubs where the topography is steeper and/or grazing has been relaxed. This vegetation may also intergrade with shrub communities. Within this SEA, oak woodland is scattered throughout all components where it is most prevalent on northfacing slopes and in drainage bottoms.

Oak Riparian Forest: A highly related community to the oak woodland found in the SEA. It is also dominated by coast live oak. The primary difference between oak woodland and oak riparian forest is the greater availability of water in riparian situations, which is expressed in a dense tree canopy cover and tree clusters. A greater number of hydrophytic (moister favoring) plant species are also found in the understory. Typical riparian trees, such as western sycamore and willows (*Salix* spp.), occasionally occur. Oak riparian forest is well developed within Walnut Creek. Riparian trees are also scattered in other drainages throughout the Buzzard Peak component of this SEA.

Corresponding MCV communities:

- *Quercus agrifolia* (coast live oak woodland) Woodland Alliance
- *Quercus engelmannii* (Engelmann oak woodland) Woodland Alliance

Walnut Woodland: Often intergrading with oak dominated woodlands or developed as a distinct community. This community is dominated by the Southern California black walnut (*Juglans californica*), which grows 10 to 30 feet high. More often than not, the Southern California black walnut grows in open stands; however, closed tree canopies are not uncommon. In similar fashion to oak woodlands, its understory varies from grasses to shrubs. Thus, it forms stands ranging from savannahs to forests throughout the SEA. It is most common within Bonelli Park and Walnut Creek Park, South Hills, and Buzzard Peak components of the SEA.

Corresponding MCV communities:

- *Juglans californica* (Southern California black walnut groves) Woodland Alliance

Southern Willow Scrub: A well-developed southern willow scrub community that is found along Live Oak Creek upstream and at the point where the Creek flows into Puddingstone Reservoir in the Bonelli Park and Walnut Creek Park component of the SEA. Smaller patches of this community are also found scattered along drainages in the Buzzard Peak component. This community is dominated by species of willow, which form nearly monotypic stands due to their dense growth. These stands generally reach 10 to 20 feet in height with little understory vegetation.

Corresponding MCV communities:

- *Salix exigua* (sandbar willow thickets) Shrubland Alliance
- *Salix lasiolepis* (arroyo willow thickets) Shrubland Alliance

Mixed Chaparral: A shrub community composed of robust species. Within the SEA, these species include laurel sumac (*Malosma laurina*), toyon (*Heteromeles arbutifolia*), lemonadeberry (*Rhus integrifolia*) and western blue-elderberry (*Sambucus nigra* var. *caerulea*). Along with other shrub species, chaparral forms dense vegetation covers that grow 5 to 10 feet in height. The development of chaparral is most pronounced within the South Hills, Bonelli Park and Walnut Creek Park, and Buzzard Peak components of the SEA.

Corresponding MCV communities:

- *Adenostoma fasciculatum* (chamise chaparral) Shrubland Alliance
- *Ceanothus leucodermis* (chaparral whitethorn) Shrubland Alliance
- *Ceanothus oliganthus* (hairy leaf ceanothus chaparral) Shrubland Alliance
- *Prunus ilicifolia* (holly leaf cherry chaparral) Shrubland Alliance
- *Rhus ovata* (sugarbush chaparral) Shrubalnd Alliance

Coastal Sage Scrub: Communities of coastal sage scrub exhibit less robust structure within this SEA. This plant community is dominated by California sagebrush (*Artemisia tridentata*), California brittle bush (*Encelia californica*), black sage (*Salvia mellifera*), and California buckwheat (*Eriogonum fasciculatum*). Coastal sage scrub also forms dense stands, which grow three to four feet in height. Within this SEA, it is generally found in scattered patches, which are highly integrated with mixed chaparral. These communities are primarily located in the South Hills, Bonelli Park and Walnut Creek Park, Via Verde, and Buzzard Peak components of the SEA.

Corresponding MCV communities:

- *Artemisia californica* (California sagebrush scrub) Shrubland Alliance
- *Artemisia californica-Salvia mellifera* (California sagebrush-black sage scrub) Shrubland Alliance
- *Artemisia californica-Eriogonum fasciculatum* (California sagebrush-California buckwheat scrub) Shrubland Alliance
- *Encelia californica* (California brittle bush scrub) Shrubland Alliance
- *Salvia mellifera* (black sage scrub) Shrubland Alliance
- *Eriogonum fasciculatum* (California buckwheat scrub) Shrubland Alliance
- *Lotus scoparius* [*Acmispon glaber*] (deer weed scrub) Shrubland Alliance
- *Opuntia littoralis* (coast prickly pear scrub) Shrubland Alliance

Non-Native Grassland: Consists of non-native annual grasses and forbs. These opportunistically growing species include brome grasses, wild oats and mustards. Characteristic of other parts of Southern California, this community became established as a result of livestock grazing. In the process, native vegetation is removed, sometimes by mechanical means, and replaced by more opportunistic species. Non-native grassland is found throughout the SEA.

Corresponding MCV communities:

- *Avena* (*barbata*, *fatua*) Semi-Natural Herbaceous Stands
- *Brassica* (*nigra*) and other mustards Semi-Natural Herbaceous Stands
- *Bromus* (*diandrus*, *hordeaceus*)-*Brachypodium distachyon* Semi-Natural Herbaceous Stands
- *Bromus rubens-Schismus* (*arabicus*, *barbatus*) Semi-Natural Herbaceous Stands
- *Centaurea* (*solstitialis*, *melitensis*) (yellow star-thistle fields) Semi-Natural Herbaceous Stands
- *Lolium perenne* (perennial rye grass fields) Semi-Natural Herbaceous Stands

Freshwater Marsh: Small areas that support freshwater marsh and found at scattered locations along the shoreline Puddingstone Reservoir. This community may also exist at other locations, in or adjacent to artificially created impoundments used to water livestock. Freshwater marsh requires perennially shallow water or saturated soils. Dominant plants are comprised of emergent species, including cattails and bulrushes.

Corresponding MCV communities:

- *Schoenoplectus californicus* (California bulrush marsh) Herbaceous Alliance
- *Typha* (*angustifolia*, *domingensis*, *latifolia*) (cattail marshes) Herbaceous Alliance
- *Lemna* (*minor*) and relatives (duckweed blooms) Provisional Herbaceous Alliance

Wildlife

Wildlife populations within the SEA are generally expected to reflect lower diversity and abundance of habitat types. This is due to the influences of surrounding development and location of recreational uses over relatively large areas of the SEA. Analysis of invertebrates on any given site is generally limited by a lack of specific data; however, the SEA is considered sufficient to encompass moderately healthy populations of common invertebrate species. Fair numbers of amphibians are expected to be present primarily due to the aquatic and semi-aquatic habitats provided by Puddingstone Reservoir, and riparian habitats along Live Oak Channel and Walnut Creek. Diversity and evenness among these populations, however, is likely to be degraded due to a history of urbanization, which results in only a few species that are able to adapt accordingly.

Similar effects are anticipated for reptiles. Reptilian species that are typically found in suburban and rural areas are expected to occur in relatively high numbers. Less common, and perhaps, locally extinct would be those species that are more secretive in their habitats and/or not as prolific.

A surprisingly high diversity of birds is documented within this SEA, including a large population of coastal California gnatcatcher (*Polioptila californica californica*), which is a federally-threatened species. For numerous upland, raptorial, and water associated birds, the SEA provides a mosaic of habitats. Between woodland, shrubland, grassland and wetlands, diverse populations of birds are able to meet nesting, foraging, and migratory requirements.

Mammal populations also reflect the urbanized areas imparting this SEA. Small mammals are expected to be uneven in their diversity, with more adaptive, introduced European species in greater numbers compared to other species. Medium-sized mammal populations are expected to exhibit the same characteristics. Large mammals are largely absent on a resident basis.

All wildlife species previously recorded, as well as those expected to occur within this SEA are tabulated in the *Comprehensive Floral & Faunal Compendium* of the *Los Angeles County SEAs*. Sensitive wildlife species occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources section.

Wildlife Movement

The SEA represents the only regional wildlife linkage between the San Gabriel Mountains and the Puente Hills and Chino Hills complex. Unlike the commonly held concept of a corridor, however, this SEA contains a series of discontinuous habitat blocks and patches, rather than an unbroken corridor for movement. This SEA facilitates movement and exchange between larger habitat areas by permitting terrestrial "island-hopping" between the SEA components.

Using birds as an example, movement may be initiated by an individual or group of birds in either the San Gabriel Mountains or the Puente Hills. Larger species, with the capacity to cover long distances, may make the passage as one segment of its journey. Smaller species, however, that lack the physical or behavioral capacity may not be able to attain this movement under normal circumstances. By utilizing various components of the SEA, the same species can cover this journey

in several smaller trips. The same example may also apply to winged insects and wind-borne plant propagules and pollen. Interaction between, not just through the components, can occur as well.

This same function probably does not apply to other taxonomic groups. It is highly doubtful that amphibian, reptile and most mammal populations use this corridor as effectively as birds, if at all. Mule deer (*Odocoileus hemionus*), for example, do not occur within Bonelli Park, but are common in the San Gabriel Mountains and the Puente Hills. However, some mammals that tolerate urban environments, such as Virginia opossum (*Didelphis virginiana*), raccoon (*Procyon lotor*), and striped skunk (*Mephitis mephitis*), use the corridor in the manner previously described. Even mountain lion (*Puma concolor*) periodically enter Bonelli Park and Walnut Creek Park from the outside, by way of routes related to SEA components.

The manner in which the SEA allows wildlife populations in different areas to interact is less than ideal. However, exchange in the manner described above is dictated by the widespread urbanization of the region. “Island hopping” is the only remaining connection for regional interaction that can contribute to the maintenance of genetic variability and health of regional wildlife populations.

Sensitive Biological Resources

Sensitive biological resources are habitats or individual species that have special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, and/or rare. This is due to the species’ declining or limited population sizes, which usually results from habitat loss. Watch lists of such resources are maintained by the California Department of Fish and Game (CDFG), the United States Fish and Wildlife Service (USFWS), and special groups, such as the California Native Plant Society (CNPS). The following sections indicate the habitats as well as plant and animal species present, or potentially present within the SEA, which have been accorded special recognition. When species are federally-listed as endangered or threatened, they often have federally-designated, geographically-specific “critical habitat areas.” Critical habitat areas, after extensive study by experts, are judged to be essential to conservation and maintenance of the species. In this SEA, extensive areas are critical habitat for the coastal California gnatcatcher.

Sensitive Plant Communities and Habitats

The SEA supports several habitat types considered sensitive by resource agencies. These are inventoried by California Department of Fish and Game (CDFG) in the California Natural Diversity Database (CNDDB) [2011]. The CNDDB includes state and federally-listed endangered, threatened, and rare vascular plants, as well as several sensitive vertebrate species. Vegetation communities include Engelmann oak woodland, Southern California black walnut groves, holly leaf cherry chaparral, and California brittle bush scrub, which occur throughout the SEA. These communities, or closely related designations, are considered high priority communities by the CDFG, which indicates that they are experiencing a decline throughout their range. The array and composition of these communities has been discussed in the Vegetation section.

Sensitive Plant Species

The statuses of rare plants are hierarchically categorized by the CNPS using a rank and decimal system. The initial category level of Rare Plant Rank is indicated by the ranks 1A (presumed extinct in California), 1B (rare or endangered in California and elsewhere), 2 (rare or endangered in California but more common elsewhere), 3 (more information needed, a review list), and 4 (limited distribution). In cases where the CNPS has further identified the specific threat to the species, a decimal or Threat Code is added: .1 (seriously endangered in California), .2 (fairly endangered in

California), or .3 (not very endangered in California).

The following special-status plant taxa have been reported or have the potential to occur within the SEA, based on known habitat requirements and geographic range information:

- Nevin's barberry (*Berberis nevinii*) FE, SE, RPR 1B.1
- Round-leaved filaree (*California macrophylla*) RPR 1B.1
- Southern tarplant (*Centromadia parryi* ssp. *australis*) RPR 1B.1
- Smooth tarplant (*Centromadia pungens* ssp. *laevis*) RPR 1B.1
- Peruvian dodder (*Cuscuta obtusiflora* var. *glandulosa*) RPR 2.2
- San Gabriel Mountains dudleya (*Dudleya densiflora*) RPR 1B.1
- Many-stemmed dudleya (*Dudleya multicaulis*) RPR 1B.2
- Mesa horkelia (*Horkelia cuneata* ssp. *puberula*) RPR 1B.1
- Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*) RPR 1B.1
- Robinson's pepper-grass (*Lepidium virginicum* var. *robinsonii*) RPR 1B.2
- Brand's star phacelia (*Phacelia stellaris*) FC, RPR 1B.1
- White rabbit-tobacco (*Pseudognaphalium leucocephalum*) RPR 2.2
- Parish's gooseberry (*Ribes divaricatum* var. *parishii*) RPR 1A
- Chaparral ragwort (*Senecio aphanactis*) RPR 2.2
- San Bernardino aster (*Symphyotrichum defoliatum*) RPR 1B.2
- Thread-leaved brodiaea (*Brodiaea filifolia*) FT, SE, RPR 1B.1
- Slender mariposa lily (*Calochortus clavatus* var. *gracilis*) RPR 1B.2
- Palmer's mariposa lily (*Calochortus palmeri* var. *palmeri*) RPR 1B.2
- Plummer's mariposa lily (*Calochortus plummerae*) RPR 1B.2
- Intermediate mariposa lily (*Calochortus weedii* var. *intermedius*) RPR 1B.2
- Vernal barley (*Hordeum intercedens*) RPR 3.2
- California satintail (*Imperata brevifolia*) RPR 2.1
- California Orcutt grass (*Orcuttia californica*) FE, SE, RPR 1B.1

Sensitive Animal Species

The following special-status animal species are reported or are likely to be present within the SEA, based on habitat requirements and known range attributes:

- Silvery legless lizard (*Anniella pulchra pulchra*) FSS, SSC
- coastal whiptail (*Aspidoscelis tigris stejnegeri*) CDFG Special Animals List
- Rosy boa (*Charina trivirgata*) BLMS, FSS
- Western pond turtle (*Emys marmorata*) BLMS, FSS, SSC
- San Bernardino mountain kingsnake (*Lampropeltis zonata parvirubra*) FSS, SSC
- Coast horned lizard (*Phrynosoma blainvillii*) BLMS, FSS, SSC
- Coast patch-nosed snake (*Salvadora hexalepis virgultea*) SSC
- Two-striped garter snake (*Thamnophis hammondii*) BLMS, FSS, SSC
- Cooper's hawk (*Accipiter cooperii*) CDFG Watch List
- Tricolored blackbird (*Agelaius tricolor*) BCC, BLMS, SSC, USBC, AWL, ABC
- Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*) CDFG Watch List
- Grasshopper sparrow (*Ammodramus savannarum*) CDFG Special Animals List
- Long-eared owl (*Asio otus*) SSC, LAA

- Coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*) BCC, FSS, SSC
- Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) FC, BCC, FSS, SE
- Black swift (*Cypseloides niger*) BCC, SSC, USBC, AWL, ABC
- White-tailed kite (*Elanus leucurus*) CDFG Fully Protected
- Southwestern willow flycatcher (*Empidonax traillii extimus*) FE, FSS, SE, USBC, AWL, ABC
- Yellow-breasted chat (*Icteria virens*) SSC
- Coastal California gnatcatcher (*Polioptila californica californica*) FT, SSC, USBC, AWL, ABC
- Bank swallow (*Riparia riparia*) ST
- Least Bell's vireo (*Vireo bellii pusillus*) FE, BCC, SE, USBC, AWL, ABC
- Pallid bat (*Antrozous pallidus*) FSS, BLMS, SSC, WBWG High
- Northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*) SSC
- Western mastiff bat (*Eumops perotis californicus*) BLMS, SSC, WBWG High
- Hoary bat (*Lasiurus cinereus*) WBWG Medium
- Western yellow bat (*Lasiurus xanthinus*) WBWG High
- San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) SSC
- Fringed myotis (*Myotis thysanodes*) BLMS, WBWG High
- Long-legged myotis (*Myotis volans*) BLMS, SSC, WBWG Medium
- Yuma myotis (*Myotis yumaensis*) BLMS, WBWG Low-Medium
- San Diego desert woodrat (*Neotoma lepida intermedia*) SSC
- Pocketed free-tailed bat (*Nyctinomops femorosaccus*) SSC, WBWG Medium
- Big free-tailed bat (*Nyctinomops macrotis*) SSC, WBWG Medium-High
- American badger (*Taxidea taxus*) SSC

Ecological Transition Area (ETA)

There are no ETAs designated within this SEA.

Regional Biological Value

The SEA meets several SEA designation criteria and supports many regional biological values. Each criterion and how it is met described below.

CRITERIA ANALYSIS OF THE EAST SAN GABRIEL VALLEY SEA

Criterion		Status	Justification
A)	The habitat of core populations of endangered or threatened plant or animal species.	Met	This SEA contains various alliances of coastal sage scrub that are found in scattered patches over hillside habitat, which support a core population of the federally-threatened coastal California gnatcatcher. The gnatcatcher population has been slowly increasing, as recently observed in coastal sage scrub at two locations in the area, Bonelli Park and Buzzard Peak. There are an estimated 10 and 15 pairs of gnatcatchers in this population. The SEA also has a population of breeding coastal cactus wren. The rare multi-stemmed dudleya has its northernmost population in Bonelli Park.
B)	On a regional basis, biotic communities, vegetative associations, and habitat of	Met	Several plant communities within this SEA are CDFG highest priority communities due to their restricted

	plant or animal species that are either unique or are restricted in distribution.		distribution in the Southern California region. These communities include walnut woodlands, which are scattered throughout the SEA; oak riparian woodland, which is excellent within the Walnut Creek drainage; isolated stands of willow woodland along many of the drainages; freshwater marsh and open water in association with Puddingstone Reservoir; and coastal sage scrub in scattered patches over hillsides. Coastal sage scrub serves as the habitat for the coastal California gnatcatcher, which has been slowly increasing in Bonelli Park and Buzzard Peak. These areas also have a population of breeding cactus wren. The rare multi-stemmed dudleya has its northernmost population in Bonelli Park.
C)	Within the County, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution	Met	All of the plant communities and habitats indicated as restricted in distribution on a regional basis, are also restricted in distribution within the County.
D)	Habitat that at some point in the life cycle of a species or group of species, serves as concentrated breeding, feeding, resting, or migrating grounds and is limited in availability either regionally or in the County.	Met	Any relatively large body of water with pockets of natural lakeside vegetation along its shoreline potentially meets this criterion, particularly within the context of an arid to semi-arid environment that is characteristic of the County. Although subjected to boating activities and shoreline recreational use, Puddingstone Reservoir serves as an important habitat for migrating water fowl and water birds, which is evident in the high diversity of birds recorded at the Bonelli Park over the past several years. The natural areas of the east San Gabriel Valley serve as a migration and habitat connection between the San Gabriel Mountains and the Puente Hills.
E)	Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community.	Met	Bonelli Park contains a population of the rare many-stemmed dudleya, which is at the northern limit of its range. Most of the species is found in the Peninsular Ranges in Orange County. The coastal California gnatcatchers are in the northern extent of their range here, are clearly at an extreme in physical/geographical limitations, and may represent unusual variation in a population or community. The SEA, therefore, meets this criterion.
F)	Areas that would provide for the preservation of relatively undisturbed examples of the original natural biotic communities in the County.	Not Met	The SEA does not contain areas that would provide for the preservation of relatively undisturbed examples of the original natural biotic communities in the County.

In conclusion, the area is an SEA because it contains: A) the habitat of core populations of endangered and threatened plant and animal species; B-C) biotic communities, vegetative associations, and habitat of plant and animal species that are either unique or are restricted in distribution in the County and regionally; D) concentrated breeding, feeding, resting, or migrating grounds, which are limited in availability in the County; and E) biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community.

7. El Segundo Dunes SEA

Location

General

The El Segundo Dunes Significant Ecological Area (SEA) is located between the west end of the Los Angeles International Airport (LAX) and the Pacific Ocean. The SEA is the largest remaining coastal dune habitat in Southern California. The federally-endangered El Segundo blue (*Euphilotes battoides allyni*) butterfly lives its entire life in these dunes.

The entire SEA is located in the United States Geological Survey (USGS) 7.5' California Quadrangle of Venice.

General Boundary and Resources Description

The SEA boundaries are as follows: Sandpiper Street to the north, Pershing Drive to the east, Imperial Highway to the south, and Vista Del Mar Road to the west. This is the largest of four proposed critical habitat areas for the El Segundo blue butterfly. The Vista Del Mar Park on Vista Del Mar Road is excluded from the SEA.

The ecological significance of the El Segundo Dunes is recognized by both federal and state governments, as well as by the City and County of Los Angeles and the California Coastal Commission (CCC). The vegetation found here does not occur anywhere else in the County, and is uncommon throughout Southern California. The vegetation is southern dune scrub, which is adapted to sandy, well-drained soils. The vegetation shows zonation, changing gradually as one moves from the foredunes facing west and the ocean over the dune crest and into coastal sage scrub. Many plants and invertebrates are specifically adapted and restricted to this environment and are not found elsewhere. One of these endemic organisms is the El Segundo blue butterfly, a federally-endangered butterfly species. The distribution of this butterfly is entirely restricted to the El Segundo Dunes and a few specks of dune habitat south to the edge of Malaga Cove (all once part of the El Segundo Dune sysytem). Because of its rarity and highly limited range, the butterfly is officially recognized as an endangered species by the U.S. Fish and Wildlife Service. This small piece of dune habitat is extremely valuable as the final example of a community that was once more common along the County and Southern California coastline.

Vegetation

Vegetation within the SEA is a remnant of a formerly more widespread distribution in the Los Angeles area of plant communities defined by their proximity to the immediate coast with its unique environmental conditions and sandy soils. The area has a long history of land disturbance and increasing isolation from related habitats. Today, the SEA has three plant communities with relatively few species. Importantly, the dune buckwheat (*Eriogonum parvifolium*), which is the only host plant for the larvae of the rare El Segundo blue butterfly, is found there, and the buckwheat population is isolated from other populations. Sensitive plant species occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources section.

Descriptions and general locations of the each plant community present within the SEA are given below.

Coastal Strand Vegetation: A community that occurs in the loose sand just above the high tide line of

the beach. This community is characterized by a low species diversity because few plants can tolerate the harsh conditions on this dry, sandy, saline soil with buffeting by high winds, salt spray and high summer temperatures.

Corresponding MCV communities:

- *Abronia latifolia – Ambrosia chamissonis* (dune mat) Herbaceous Alliance
- *Cakile* (*edentula*, *maritima*) (sea rocket stands) Semi-Natural Provisional Herbaceous Alliance

Coastal Bluff and Dune Scrub: A remnant of the El Segundo Dune system that occupied coastal areas along much of the Santa Monica Bay. In the SEA, the coastal bluff and dune scrub is found in a strip along the immediate coastal sections of the SEA. The system consists of fine, sandy soil that dries rapidly. Plants typical of the dune scrub include dune buckwheat (*Eriogonum parvifolium*), rattle pod (*Astragalus trichopodus* var. *lonchus*), bladderpod (*Peritoma arborea*), deer weed (*Acmispon glaber*), sawtooth goldenbush (*Hazardia squarrosa*), and California sunflower (*Helianthus californicus*).

Corresponding MCV communities:

- *Baccharis pilularis* (coyote brush scrub) Shrubland Alliance
- *Lupinus arboreus* (yellow bush lupine scrub) Shrubland Alliance and Semi-Natural Shrubland Stands
- *Lupinus chamissonis-Ericameria ericoides* (silver dune lupine–mock heather scrub) Shrubland Alliance

Coastal Sage Chaparral Scrub: Characterized by the summer drought deciduous vegetation found near the Southern California coast of low, mostly soft-woody shrubs with bare ground underneath and between shrubs. This community is dominated by California sagebrush, California buckwheat (*Eriogonum fasciculatum*), black sage (*Salvia mellifera*), purple sage (*Salvia leucophylla*), and California brittle bush (*Encelia californica*) and intergrades with the coastal bluff and dune scrub near the shore and gradually becomes more evident near the crest of the site

Corresponding MCV communities:

- *Artemisia californica* (California sagebrush scrub) Shrubland Alliance
- *Artemisia californica-Salvia mellifera* (California sagebrush-black sage scrub) Shrubland Alliance
- *Artemisia californica-Eriogonum fasciculatum* (California sagebrush-California buckwheat scrub) Shrubland Alliance
- *Encelia californica* (California brittle bush scrub) Shrubland Alliance
- *Salvia mellifera* (black sage scrub) Shrubland Alliance
- *Eriogonum fasciculatum* (California buckwheat scrub) Shrubland Alliance
- *Hazardia squarrosa* (sawtooth golden bush scrub) Shrubland Alliance
- *Lotus scoparius* [*Acmispon glaber*] (deer weed scrub) Shrubland Alliance
- *Lupinus albifrons* (silver bush lupine scrub) Shrubland Alliance

Wildlife

An assessment of wildlife is made difficult due to the lack of data but the animal populations within

the SEA probably reflect a somewhat lower diversity and abundance for the habitat types present for several reasons, including: the small area of the dune habitat, the homogeneity of the topography and habitat, influences of edge effect from developments to the north and south, the ocean to the west and the impact of being under the flight paths of aircraft departing from LAX to the east.

One key occupant of the area is the El Segundo blue butterfly, which is found here and also in a very few other locations to the south in remnants of the former dune complex. The El Segundo blue butterfly co-occurs with the only known plant species that supports its complete lifecycle, the dune buckwheat (*Eriogonum parvifolium*). The adult butterfly uses the flowers as a major source of nectar, and the larvae feed only on the flowers and seeds.

Amphibian populations are generally scarce in beachfront communities and no riparian habitat is available within the SEA. Many essential reptilian habitat characteristics, such as open habitats that allow free movement and high visibility and small mammal burrows for cover and escape from predators and extreme weather, are present within the SEA. The scrubland habitats in the SEA probably provide foraging and cover habitat for year-round resident and seasonal resident song birds. In addition, the SEA provides some raptor foraging habitat, so they can be expected visitors. Mammal populations probably reflect the generally disturbed environs influencing this SEA. Small mammals are expected to be uneven in their diversity, with more adaptive species and introduced European species occurring in higher numbers compared to others. Medium sized mammal populations are expected to exhibit the same characteristics. Resident large mammals are absent. Sensitive wildlife species occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources section.

Wildlife Movement

The SEA is on the Pacific Flyway migration route used by many birds seasonally. The dune habitat probably does not play an important role as a stopover because of its limited resources, due its small size; however, it will attract some birds because it is one of the few undeveloped places along the coast. The area does not fall within any identified terrestrial movement routes for wildlife.

Sensitive Biological Resources

Sensitive biological resources are habitats or individual species that have special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, and/or rare. This is due to the species' declining or limited population sizes, which usually results from habitat loss. Watch lists of such resources are maintained by the California Department of Fish and Game (CDFG), the United States Fish and Wildlife Service (USFWS), and special groups, such as the California Native Plant Society (CNPS). The following sections indicate the habitats as well as plant and animal species present, or potentially present within the SEA, which have been accorded special recognition. When species are federally-listed as endangered or threatened, they often have federally-designated, geographically-specific "critical habitat areas." Critical habitat areas, after extensive study by experts, are judged to be essential to conservation and maintenance of the species. However, for species listed previous to 1978, critical habitat areas rarely are designated officially. Sometimes such areas are called "essential habitat," which would be the case here for the El Segundo blue butterfly.

Sensitive Plant Communities and Habitats

The SEA supports several habitat types considered sensitive by resource agencies. These are inventoried by California Department of Fish and Game (CDFG) in the California Natural Diversity

Database (CNDDB) [2011]. The CNDDB includes state and federally-listed endangered, threatened, and rare vascular plants, as well as several sensitive vertebrate species. These include dune mat, silver dune lupine–mock heather scrub, California brittle bush scrub, and sawtooth golden bush scrub. These communities, or closely related designations, are considered high priority communities by the CDFG, which indicates that they are experiencing a decline throughout their range. The array and composition of these communities has been discussed in the Vegetation section.

Sensitive Plant Species

The statuses of rare plants are hierarchically categorized by the CNPS using a rank and decimal system. The initial category level of Rare Plant Rank is indicated by the ranks 1A (presumed extinct in California), 1B (rare or endangered in California and elsewhere), 2 (rare or endangered in California but more common elsewhere), 3 (more information needed, a review list), and 4 (limited distribution). In cases where the CNPS has further identified the specific threat to the species, a decimal or Threat Code is added: .1 (seriously endangered in California), .2 (fairly endangered in California), or .3 (not very endangered in California).

The following special-status plant taxa have been reported or have the potential to occur within the SEA, based on known habitat requirements and geographic range information:

- Aphanisma (*Aphanisma blitoides*) RPR 1B.1
- Coastal dunes milk-vetch (*Astragalus tener* var. *titi*) FE, SE, RPR 1B.1
- Orcutt's pincushion (*Chaenactis glabriuscula* var. *orcuttiana*) RPR 1B.1
- Beach spectaclepod (*Dithyrea maritima*) ST, RPR 1B.1
- Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*) RPR 1B.1
- Brand's star phacelia (*Phacelia stellaris*) FC, RPR 1B.1

Sensitive Animal Species

The following special-status animal species are reported or are likely to be present within the SEA based on habitat requirements and known range attributes:

- Belkin's dune tabanid fly (*Brennania belkini*) CDFG Special Animals List
- Busck's gallmoth (*Carolella busckana*) CDFG Special Animals List
- Sandy beach tiger beetle (*Cicindela hirticollis gravida*) CDFG Special Animals List
- Senile tiger beetle (*Cicindela senilis frosti*) CDFG Special Animals List
- Globose dune beetle (*Coelus globosus*) CDFG Special Animals List
- Henne's eucosman moth (*Eucosma hennei*) CDFG Special Animals List
- El Segundo blue butterfly (*Euphilotes battoides allyni*) FE, Xerces: Critical
- Lange's El Segundo Dune weevil (*Onychobaris langei*) CDFG Special Animals List
- El Segundo flower-loving fly (*Rhaphiomidas terminatus terminatus*) CDFG Special Animals List
- Silvery legless lizard (*Anniella pulchra pulchra*) FSS, SSC
- Coastal whiptail (*Aspidoscelis tigris stejnegeri*) CDFG Special Animals List
- San Bernardino ringneck snake (*Diadophis punctatus modestus*) FSS
- Coast horned lizard (*Phrynosoma blainvillii*) BLMS, FSS, SSC
- Western snowy plover (*Charadrius alexandrinus nivosus*) FT, BCC, SSC, ABC, AWL, USBC
- California black rail (*Laterallus jamaicensis coturniculus*) BCC, ST, CDFG Fully Protected, USBC, AWL, ABC

- California least tern (*Sternula antillarum browni*) FE, SE, CDFG Fully Protected, USBC, ABC
- Pacific pocket mouse (*Perognathus longimembris pacificus*) FE, SSC

Ecological Transition Areas (ETAs)

There are no ETAs in this SEA.

Regional Biological Value

The SEA meets several SEA designation criteria incorporating regional biological values. Each criterion and how it is met is described below.

Criteria Analysis of the El Segundo Dunes SEA

Criterion		Status	Justification
A)	The habitat of core populations of endangered or threatened plant or animal species.	Met	The El Segundo Dunes is one of four known localities in the world where one can find the endangered El Segundo blue butterfly. All four areas are remnants of a once continuous three-mile system of seacoast dunes in the County. The blue's habitat is the coastal dune buckwheat, on which the butterfly lays its eggs and the larvae feed.
B)	On a regional basis, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	The southern dune scrub vegetation has become very uncommon in the Southern California region due to the conversion of the habitat to seacoast dwellings, hotels, and other development. The vegetation thrives on sandy, well-drained soils, and grades into coastal sage scrub on the inland side. Many plants and invertebrates are restricted to this environment and are not found elsewhere. This small piece of dune habitat is extremely valuable as the final example of a community that was once more common along the Southern California coast.
C)	Within the County, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution	Met	The southern dune scrub vegetation found here on the three remnant localities of the El Segundo Dunes does not occur anywhere else in the County.
D)	Habitat that at some point in the life cycle of a species or group of species, serves as concentrated breeding, feeding, resting, or migrating grounds and is limited in availability either regionally or in the County.	Met	A number of organisms call the sandy, well-drained soils of the El Segundo Dunes "home," and are restricted to this coastal environment. Like the El Segundo blue butterfly, their entire life cycles are here in the dunes.
E)	Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community.	Met	As a result of the uniqueness of this community and of the specializations of the organisms found here, the dunes have been closely scrutinized by biologists of many disciplines.

F)	Areas that would provide for the preservation of relatively undisturbed examples of the original natural biotic communities in the County.	Not Met	Much of the original three miles of dunes have been removed by development or disturbed. Scattered on the site are radio towers, roads, oil extraction equipment, and a reservoir. The vegetation is much impacted by human use, but can be restored. The designated area is the best remaining part of the original El Segundo Dunes.

In conclusion, the area is an SEA because it contains: A) core habitat for the federally-endangered El Segundo blue butterfly; B-C) beach dunes, a rare community both regionally and within the County; D) a habitat that is rare and necessary for the life cycle of the El Segundo blue butterfly and other dune insects and fauna; and E) the geographic limit of El Segundo Dunes, a rare habitat much studied by biologists.

8. Griffith Park SEA

Location

General

The Griffith Park Significant Ecological Area (SEA) is located within Griffith Park, the central park of the City of Los Angeles, situated on the extreme eastern end of the Santa Monica Mountains. The SEA is an extensive, relatively undisturbed island of natural vegetation in an urbanized, metropolitan area. It supports the coastal sage scrub, chaparral, riparian, and southern oak woodland plant communities that are typical in the interior mountain ranges of Southern California. What makes the SEA important is its geographical location. It has become an island of natural vegetation surrounded by urban and suburban development. The geographic location makes the area important for scientific study, for genetic interchange between otherwise isolated populations, and for recreation of urban residents.

The SEA is located partially in each of the following United States Geological Survey (USGS) 7.5' California Quadrangles: Burbank and Hollywood.

General Boundary and Resources Description

The SEA encompasses most of Griffith Park, south of the State Route-134, and west of Interstate-5. The SEA boundary generally follows the natural area near the Griffith Park boundaries in most cases. Isolated areas are important for preserving and documenting the geographical variability of vegetation and wildlife that formerly occurred throughout the region. They serve as reservoirs of native species that could be of scientific and economic value in the future. In addition, birds rely on these islands for areas to rest and feed along their north-south and east-west migration routes. In the case of Griffith Park, this function is made even greater than might be expected because it serves as a corridor for any gene flow and species movement that may take place between the Santa Monica and San Gabriel mountains via the Verdugo Mountains.

Beginning in the northwest corner, and proceeding eastward, the SEA follows the natural vegetation on the mountain slopes at the junction with the flood plain of the former Dark Canyon and the Los Angeles River. This area of the SEA includes the recently-acquired (2010) Cahuenga Peak, at 1820 feet, which is now the highest point of Griffith Park. Cahuenga Peak slopes have rocky outcrops, chaparral, and regenerating oak woodland and chaparral on the north-facing slopes. (This area was part of the 800 acres burned in the Griffith Park Fire of 2007.)

The Los Angeles River is channelized, but there is remnant oak riparian woodland in this area. Bordering the apartment complex on the east side of Barham Boulevard, there is a somewhat abrupt change in slope where the previous Dark Canyon Creek flowed. (Barham Boulevard was evidently constructed in this Canyon.) The SEA includes the remnant riparian coast live oak woodland (*Quercus agrifolia)*, which has many jurisdictional oak trees and in many places, the natural understory. Residents and staff at the apartments report frequent sightings of wildlife, particularly mule deer (*Odocoileus hemionus*) and coyotes (*Canis latrans*), in their parking lots, which line the Griffith Park side of the complex. On the slopes above, the chaparral of this west-facing slope grades upward into an extensive area of coastal sage scrub. The SEA includes these natural areas. From the natural areas on slopes above the junction of Barham Boulevard and Forest Lawn Boulevard, the SEA boundary continues eastward along the border of natural vegetation on the slopes above Forest Lawn Boulevard, including oak woodland in the ravines and mixed chaparral and grassland on the upper slopes. Occasionally, an ash (*Fraxinus velutina*) or Southern California black walnut (*Juglans californica*) are in these ravines, along with oak trees and other chaparral plants.

The boundary follows natural vegetation southward, away from the Los Angeles River, at the boundary of Forest Lawn Memorial Park (Forest Lawn). A slope and ridge top that have been cleared by Forest Lawn have been excluded from the SEA, but the chaparral on the east-facing side of the slope is included. From this ridge, the SEA roughly follows at the edge of the natural areas around the south side of the Forest Lawn and returns northward on the parcel line between the Forest Lawn and Griffith Park.

From the east side of Forest Lawn, the SEA boundary includes a chaparral-covered slope that is south of Travel Town and Zoo Drive. Cooper and Mathewson (2008) describe how coastal sage scrub occurs through a broad section of the northern part of Griffith Park, from end to end with patches of the sensitive valley needlegrass grassland. From the natural area near the Interstate-5 and State Route-134 interchange, the SEA boundary swings around westward, north of the Los Angeles Zoo, and forming a lobe on the chaparral-covered slopes. This area has ravines and a gradually sloping area near Travel Town, with riparian forest that includes sycamores (*Platanus racemosa*), oaks, willows (*Salix* spp.), and mulefat (*Baccharis salicifolia*), which are easily seen along Griffith Park Drive. Travel Town is not in the SEA, but its periphery of native riparian and chaparral is included. The north-facing upper slopes have chaparral, and the south-facing upper slopes have coastal sage scrub or grassland with chaparral plants here and there, especially elderberry (*Sambucus* spp.) Along Zoo Drive, ravines have typical chaparral of north-facing slopes. The SEA boundary continues past the Los Angeles Zoo along a road to a landfill area within Griffith Park, and goes around the landfill, forming a cherry-stem shaped area at the landfill road, and then continuing southeastward on the west side of Griffith Park Drive, excluding the Harding Municipal Golf Course. The Spring Canyon picnic area is excluded, as the understory of the sycamores and oaks is unnatural lawn, and the SEA boundary continues south along natural vegetation along Griffith Park Drive to the southern boundary of Griffith Park, near the Los Feliz offramp from the Interstate-5. A golf course practice area at the corner is excluded from the SEA.

From the southeast corner, the SEA boundary goes west along with the Griffith Park boundary at the edge of development to another golf course, which is excluded due to extensive modification of the slopes. The Greek Theater in Vermont Canyon and Griffith Park Observatory on the slope beyond are included, as the modified vegetation for each covers less than 40 acres. The SEA boundary continues west and then north with the Griffith Park boundary at the edge of development. A small quarry is excluded. The undeveloped upper Brush Canyon in Griffith Park is included. Griffith Park and SEA have oak woodland along the drainages, transitioning uphill into chaparral and then

grassland on the upper slopes. Within Griffith Park, north-facing sides of rocky outcrops often have a cliffside vegetation that is characterized by multiple kinds of lichens, mosses, liverworts and other non-vascular plants along with live-forever (*Dudleya* spp.), and other flowering plants. The SEA boundary follows Griffith Park boundaries around the development in the Blackwood Canyon area. A ridge area in Griffith Park on the south side of Mulholland Drive overlook is excluded. The SEA boundary follows Griffith Park boundaries on the southern edge and then turns north after including the grassland and coastal sage scrub-covered slopes that cover the open area between the two northern arms of the Hollywood Reservoir. On the west side of the SEA, the boundaries lap west outside of Griffith Park boundaries to include the oak woodland and chaparral of the lower elevations of Cahuenga Peak in the neighborhood of Dark Canyon (Barham Boulevard) and Caguenga Pass.

Vegetation

Vegetation within the SEA is comprised of a large variety of community types. The diversity of the communities reflects the topography of the mountainous park and include coastal sage chaparral scrub, riparian and coast live oak woodland, riparian, many kinds of chaparral, grassland, and cliffside vegetation. The maintenance of the diverse vegetation mosaic and the contacts of the different vegetation types (ecotones) has been cited as one of the principal qualities of importance to maintaining biotic diversity in Griffith Park (Cooper & Mathewson, 2008). The southern slopes are affected by more moist marine weather conditions, while the northern slopes are influenced by drier inland weather conditions. In addition, the steepness of many slopes causes sharp differences in vegetation on either side of a ridge. Sensitive plant species and plant communities occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources section.

Descriptions and general locations of the each plant community present within the SEA are given below.

Chaparral: A shrub community composed of robust species. Within this SEA, a number of chaparral subcommunities are found, and differentiated by their dominant plant species. These include chamise (*Adenostoma fasciculatum*), buck brush (*Ceanothus* spp.), scrub oak (*Quercus berberidifolia*), coast live oak (*Quercus agrifolia* var. *agrifolia*) and mosaics of these depending on mixture of species and elevation. These and other shrub species form dense vegetation covers, and grow 5 to 10 feet in height. The development of chaparral is pronounced over large hillside areas throughout the SEA.

Corresponding MCV communities:

- *Adenostoma fasciculatum* (chamise chaparral) Shrubland Alliance
- *Adenostoma fasciculatum-Salvia apiana* (chamise-white sage chaparral) Shrubland Alliance
- *Arctostaphylos glauca* (bigberry manzanita chaparral) Shrubland Alliance
- *Ceanothus greggii* [*vestitus*] (cup leaf ceanothus chaparral) Shrubland Alliance
- *Ceanothus spinosus* (greenbark ceanothus chaparral) Shrubland Alliance
- *Ceanothus oliganthus* (hairy leaf ceanothus chaparral) Shrubland Alliance
- *Prunus ilicifolia* (holly leaf cherry chaparral) Shrubland Alliance
- *Rhus ovata* (sugarbush chaparral) Shrubland Alliance

Coastal Sage Chaparral Scrub: A shrubland community exhibiting less robust structure found in this SEA. This plant community is dominated by California sagebrush (*Artemisia tridentata*), California brittle bush (*Encelia californica*), white sage (*Salvia apiana*), black sage (*Salvia mellifera*), and California buckwheat (*Eriogonum fasciculatum*). Dense stands may grow three to four feet in height.

Within this SEA, it is generally found in scattered patches, which are highly integrated with mixed chaparral. These are located throughout the SEA at middle elevations and on hillsides.

Corresponding MCV communities:

- *Artemisia californica* (California sagebrush scrub) Shrubland Alliance
- *Artemisia californica-Eriogonum fasciculatum* (California sagebrush-California buckwheat scrub) Shrubland Alliance
- *Encelia californica* (California brittle bush scrub) Shrubland Alliance
- *Dendromecon rigida* (bush poppy scrub) Shrubland Alliance
- *Salvia leucophylla* (purple sage scrub) Shrubland Alliance
- *Salvia mellifera* (black sage scrub) Shrubland Alliance
- *Eriogonum fasciculatum* (California buckwheat scrub) Shrubland Alliance
- *Lotus scoparius* [*Acmispon glaber*] (deer weed scrub) Shrubland Alliance
- *Opuntia littoralis* (coast prickly pear scrub) Shrubland Alliance
- *Malacothamnus fasciculatus* (bush mallow scrub) Shrubland Alliance

Coast Live Oak Woodland: A plant community dominated by *Quercus agrifolia.* Within this SEA, this community includes coast live oak, which typically grows to heights of 20 to 40 feet, and forms either closed or open tree canopies. Oak woodland is most commonly found on north-facing slopes and in drainage bottoms and often intergrades with shrub communities. Understory vegetation varies from grassland in level areas to shrubs where topography is steeper.

Corresponding MCV community:

- *Quercus agrifolia* (coast live oak woodland) Woodland Alliance

Riparian Forest: Along the major drainages riparian forest is found, which typically grows along streams in bedrock-constrained, steep-sided canyons, which results in a fairly narrow riparian corridor. The specific dominant plants are not known but riparian trees such as California bay (*Umbellularia californica*), white alder (*Alnus rhombifolia*), coast live oak, western sycamore (*Platanus racemosa*) and willow (*Salix* spp.) occur. There are also a greater number of hydrophytic (moister favoring) plant species in the understory.

Corresponding MCV communities:

- *Alnus rhombifolia* (white alder groves) Forest Alliance
- *Umbellularia californica* (California bay forest) Forest Alliance
- *Quercus agrifolia* (coast live oak woodland) Woodland Alliance
- *Platanus racemosa* (California sycamore woodlands) Woodland Alliance

Wildlife

Mammals making their home in Griffith Park include mule deer (*Odocoileus hemionus*), coyote (*Canis latrans*), raccoon (*Procyon lotor*), red fox (*Vulpes vulpes*), common gray fox (*Urocyon cinereoargenteus*), Virginia opossum (*Didelphis virginiana*), striped skunk (*Mephitis mephitis*), California ground squirrel (*Spermophilus beecheyi*), the non-native eastern fox squirrel (*Sciurus niger*), and house mouse (*Mus musculus*). Bobcat (*Lynx rufus*) have been observed in the northwest and eastern portions of Griffith Park, and there have been sightings of a mountain lion (*Puma concolor*) that some believe may have incorporated Griffith Park into its range.

The last survey of insects in Griffith Park was in the spring 2003, which was a year with a cool, late spring; it is not clear how that weather impacted the survey results. During that survey, the most frequently observed butterfly was the gulf fritillary (*Agraulis vanillae*), which uses ornamental passion vines as a host plant. Bumblebees and honeybees were the most abundant bee species, although carpenter bees were also observed. Sand wasps were observed along some of the hiking trails, where sandy patches are present. Scorpions, tarantulas and other spiders are commonly observed.

Amphibians observed in Griffith Park have included arboreal salamander (*Aneides lugubris*), California slender salamander (*Batrachoseps attenuatus*), Baja California chorus frog (*Pseudacris hypochondriaca*) and California toad (*Anaxyrus halophilus*). Non-native amphibians found in many streams in Griffith Park are the American bullfrog (*Lithobates catesbeianus*) and the African clawed frog (*Xenopus laevis*). In addition to stream habitats, the Los Angeles River, on the eastern side of Griffith Park provides abundant habitat for amphibians.

Reptiles identified in Griffith Park include the Great Basin fence lizard (*Sceloporus occidentalis longipes*), western skink (*Plestiodon skiltonianus skiltonianus*), San Diego alligator lizard (*Elgaria multicarinata webbii*), coastal whiptail (*Aspidoscelis tigris stejnegeri*), western side-blotched lizard (*Uta stansburiana elegans*), California legless lizard (*Anniella pulchra*), California striped racer (*Coluber lateralis lateralis*), red racer (*C. flagellum piceus*), California kingsnake (*Lampropeltis getula californiae*), San Bernardino ringneck snake (*Diadophis punctatus modestus*), San Diego gopher snake (*Pituophis catenifer annectens*), and southern Pacific rattlesnake (*Crotalus oreganus helleri*).

Ornithologists have identified about 200 bird species in Griffith Park, and about 150 of those are regularly seen (every year–Cooper and Mathewson 2008). Griffith Park is also an important stopover for migrating birds and provides an abundance of habitat for wintering birds. Resident birds during the 2003 survey included the acorn woodpecker (*Melanerpes formicivorus*), American crow (*Corvus brachyrhynchos*), Anna's hummingbird (*Calypte anna*), Bewick's wren (*Thryomanes bewickii*), bushtit (*Psaltriparus minimus*), California towhee (*Melozone crissalis*), California quail (*Callipepla californica*), California thrasher (*Toxostoma redivivum*), common raven (*Corvus corax*), European starling (*Sturnus vulgaris*, non-native), great horned owl (*Bubo virginianus*) and the red-tailed hawk (*Buteo jamaicensis*). Migratory birds include the ash-throated flycatcher (*Myiarchus cinerascens*), black-chinned hummingbird (*Archilochus alexandri*), black-headed grosbeak (*Pheucticus melanocephalus*) and western wood-pewee (*Contopus sordidulus*). Aquatic species, such as herons, egrets, ducks and migrating geese are seen in the Los Angeles River as it flows by Griffith Park. These species are also observed on the golf course water features within Griffith Park.

Sensitive wildlife species occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources section.

Wildlife Movement

Griffith Park has become increasingly isolated from the rest of the Santa Monica Mountain Range, the Los Angeles River, the Los Angeles Basin, the San Fernando Valley, and the Verdugo Mountains (a little less than two miles to the east) because of the freeways, concrete river projects and urbanization that surround Griffith Park. Although some species have disappeared, including the ringtail (*Bassariscus astutus*), the gray fox is still seen.

River-bed vegetation is quickly returning in the Los Angeles River as sand deposits on the hard channel bottom, and re-vegetation should be encouraged. Major bird and mammal populations exist on the re-vegetated portions of the Los Angeles River. Although some stretches of the Los Angeles River may not provide suitable primary corridors, it is important to reinstate Griffith Park's connection

to the Los Angeles River for the future of wildlife and plant connectivity. In the management draft for Griffith Park wildlife (Cooper and Mathewson 2008), the authors outline some of the important connections to maintain or enhance: bridges and underpasses over and under State Route-101 and culverts that feed into the Los Angeles River Channel.

Griffith Park is viewed as an important connective island for the Santa Monica Mountains to the west of State Route-101 and the Verdugo Mountains and San Gabriel Mountains to the east. Wildlife may also use the natural areas and even concrete channels of the Los Angeles River to connect to the Tujunga Wash and Hansen Dam SEA and to the San Gabriel Mountains.

Sensitive Biological Resources

Sensitive biological resources are habitats or individual species that have special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, and/or rare. This is due to the species' declining or limited population sizes, which usually results from habitat loss. Watch lists of such resources are maintained by the California Department of Fish and Game (CDFG), the United States Fish and Wildlife Service (USFWS), and special groups, such as the California Native Plant Society (CNPS). The following sections indicate the habitats as well as plant and animal species present, or potentially present within the SEA, which have been accorded special recognition.

Sensitive Plant Communities and Habitats

The SEA supports several habitat types considered sensitive by resource agencies. These are inventoried by California Department of Fish and Game (CDFG) in the California Natural Diversity Database (CNDDB) [2011]. The CNDDB includes state and federally-listed endangered, threatened, and rare vascular plants, as well as several sensitive vertebrate species. These communities include chamise-white sage chaparral, holly leaf cherry chaparral, California brittle bush scrub, California bay forest, and California sycamore woodlands, which occur throughout the SEA. These communities, or closely related designations, are considered high priority communities by the CDFG, which indicates that they are experiencing a decline throughout their range. The array and composition of these communities has been discussed in the Vegetation section.

Sensitive Plant Species

The statuses of rare plants are hierarchically categorized by the CNPS using a rank and decimal system. The initial category level of Rare Plant Rank is indicated by the ranks 1A (presumed extinct in California), 1B (rare or endangered in California and elsewhere), 2 (rare or endangered in California but more common elsewhere), 3 (more information needed, a review list), and 4 (limited distribution). In cases where the CNPS has further identified the specific threat to the species, a decimal or Threat Code is added: .1 (seriously endangered in California), .2 (fairly endangered in California), or .3 (not very endangered in California).

The following special-status plant taxa have been reported or have the potential to occur within the SEA, based on known habitat requirements and geographic range information:

- Braunton's milk-vetch (*Astragalus brauntonii*) FE, RPR 1B.1
- Nevin's barberry (*Berberis nevinii*) FE, SE, RPR 1B.1
- Round-leaved filaree (*California macrophylla*) RPR 1B.1
- Lewis' evening-primrose (*Camissonia lewisii*) RPR 3
- Southern tarplant (*Centromadia parryi* ssp. *australis*) RPR 1B.1

- San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*) FC, SE, RPR 1B.1
- Parry's spineflower (*Chorizanthe parryi* var. *parryi*) RPR 1B.1
- Many-stemmed dudleya (*Dudleya multicaulis*) RPR 1B.2
- Palmer's grapplinghook (*Harpagonella palmeri*) RPR 4.2
- Mesa horkelia (*Horkelia cuneata* ssp. *puberula*) RPR 1B.1
- Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*) RPR 1B.1
- White rabbit-tobacco (*Pseudognaphalium leucocephalum*) RPR 2.2
- San Bernardino aster (*Symphyotrichum defoliatum*) RPR 1B.2
- Greata's aster (*Symphyotrichum greatae*) RPR 1B.3
- Slender mariposa lily (*Calochortus clavatus* var. *gracilis*) RPR 1B.2
- Plummer's mariposa lily (*Calochortus plummerae*) RPR 1B.2
- Vernal barley (*Hordeum intercedens*) RPR 3.2
- California Orcutt grass (*Orcuttia californica*) FE, SE, RPR 1B.1

Sensitive Animal Species

The following special-status animal species are reported or are likely to be present within the SEA based on habitat requirements and known range attributes:

- Gertsch's socalchemmis spider (*Socalchemmis gertschi*) CDFG Special Animals List
- Western spadefoot (*Spea hammondii*) BLMS, SSC
- Coast range newt (*Taricha torosa*) SSC
- Silvery legless lizard (*Anniella pulchra pulchra*) FSS, SSC
- Coastal whiptail (*Aspidoscelis tigris stejnegeri*) CDFG Special Animals List
- Western pond turtle (*Emys marmorata*) BLMS, FSS, SSC
- Coast horned lizard (*Phrynosoma blainvillii*) BLMS, FSS, SSC
- Two-striped garter snake (*Thamnophis hammondii*) BLMS, FSS, SSC
- Southwestern willow flycatcher (*Empidonax traillii extimus*) FE, FSS, SE, USBC, AWL, ABC
- Least Bell's vireo (*Vireo bellii pusillus*) FE, BCC, SE, USBC, AWL, ABC
- Pallid bat (*Antrozous pallidus*) FSS, BLMS, SSC, WBWG High
- Western mastiff bat (*Eumops perotis californicus*) BLMS, SSC, WBWG High
- Silver-haired bat (*Lasionycteris noctivagans*) WBWG Medium
- Hoary bat (*Lasiurus cinereus*) WBWG Medium
- San Diego desert woodrat (*Neotoma lepida intermedia*) SSC
- Pocketed free-tailed bat (*Nyctinomops femorosaccus*) SSC, WBWG Medium
- Big free-tailed bat (*Nyctinomops macrotis*) SSC, WBWG Medium-High
- Los Angeles pocket mouse (*Perognathus longimembris brevinasus*) FSS, SSC
- Pacific pocket mouse (*Perognathus longimembris pacificus*) FE, SSC
- American badger (*Taxidea taxus*) SSC

Ecological Transition Areas (ETAs)

There are no ETAs designated within this SEA.

Regional Biological Value

The SEA meets all SEA designation criteria and supports many regional biological values. Each criterion and how it is met is described below.

Criteria Analysis of the Griffith Park SEA

Criterion		Status	Justification
A)	The habitat of core populations of endangered or threatened plant or animal species.	Not Met	No known core populations occur within this SEA.
B)	On a regional basis, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Not Met	No known unique or rare plant or animal species occur within this SEA that would be regionally uncommon. No rare plant habitats occur in Griffith Park. Griffith Park has extensive wild areas that are little studied according to Cooper and Mathewson 2008. Such areas could be discovered.
C)	Within the County, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution	Not Met	No known unique or rare plant or animal species occur within this SEA that would be particularly uncommon in the County. No rare plant habitats are known in Griffith Park. Griffith Park has extensive wild areas that are little studied according to Cooper and Mathewson 2008. Such areas could be discovered.
D)	Habitat that at some point in the life cycle of a species or group of species, serves as concentrated breeding, feeding, resting, or migrating grounds and is limited in availability either regionally or in the County.	Met	Griffith Park is the easternmost extent of the Santa Monica Mountains, and a stepping stone to the Verdugo and San Gabriel mountains, which are only two miles distant. It is a very important natural area for animals and plants species that go between the Santa Monica and San Gabriel mountains. Because of its large acreage, Griffith Park maintains sizable populations of biological communities, even top predators, such as bobcats. Griffith Park is teetering between becoming an island of natural habitat in a metropolis and maintaining connections to the rest of the Santa Monica Mountains to the west.
E)	Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community.	Met	Griffith Park is the easternmost extent of the Santa Monica Mountains, and a stepping stone to the Verdugo and San Gabriel Mountains, which are only two miles distant. It is a very important natural area for animals and plants species that go between the Santa Monica and San Gabriel mountains. Because of its large acreage, Griffith Park maintains sizable populations of biological communities, even top predators, such as bobcats. Griffith Park is teetering between becoming an island of natural habitat in a metropolis and maintaining connections to the rest of the Santa Monica Mountains to the west.
F)	Areas that would provide for the preservation of relatively undisturbed examples of the original natural biotic communities in the County.	Met	Griffith Park has extensive areas of coastal chaparral and is an island of refuge for native animals in the Santa Monica Mountains. Its mosaic of habitats includes coastal sage scrub, riparian areas, and southern oak woodland. The mosaic of habitats is especially valuable to preserve. Griffith Park is in the City of Los Angeles and protected in this respect, but no management plan

			preserves its natural habitat in perpetuity.

In conclusion, the area is an SEA because it contains: D) concentrated breeding, feeding, resting, or migrating grounds, which are limited in availability in the County; E) biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community; and F) areas that provide for the preservation of relatively undisturbed examples of original natural biotic communities in the County.

9. Harbor Lake Regional Park SEA

Location

General

The Harbor Lake Regional Park Significant Ecological Area (SEA) is located [within Kenneth Malloy Harbor Regional Park] in the Harbor City community of the City of Los Angeles, which is approximately 15 miles south of downtown Los Angeles and just west of the Interstate-110. The Lake is named "Machado Lake." The SEA supports one of three remaining wetlands that once covered the southern and western areas of the Los Angeles Basin. The SEA supports significant areas of aquatic and terrestrial plant communities, which provide habitat to a variety of birds and wildlife.

The site is located in the Torrance Quadrangle of the United States Geological Survey (USGS) 7.5 Minute Map Series (USGS, 1964).

General Boundary and Resources Description

The SEA boundaries encompass the lake areas that contribute to the biological function of the Harbor Lake ecosystem. It is bordered to the north by the Pacific Coast Highway, but includes a small segment of drainage, the Wilmington Drain ("Bixby Slough") north of Pacific Coast Highway. The slough is a secluded marsh that supports wildlife and waterfowl common to marsh areas. Thirty-five species of native birds have been observed breeding in the Wilmington Drain and a large number of interesting vagrants are recorded from this area. Following the Wilmington Drain segment, the boundary travels east along the south side of Pacific Coast Highway and south along the east boundary of Harbor Regional Park to the Harbor Park Municipal Golf Course. The SEA goes east to a parking area for the golf course. The golf course is included as ETA to emphasize the need to keep this area green. Wildlife from the adjacent woodlands use the golf course to transit between natural areas of the park in a less-populated area. The ETA boundary of the SEA includes the greens and excludes parking areas around the periphery of the golf course. The SEA goes west along the boundary of the natural riparian woodland of the park and golf course and then southwest along the boundary of marsh habitats of the park and the golf course. At the south end of the golf course, the SEA boundary goes generally southeast along the periphery of park and developed environment, much of it along the outer southern boundary of Los Angeles Harbor College. The SEA stops at the college southern frontage paved area, then turns west along Anaheim Street with the park boundary, excludes a graded and cleared area of the park in the southwest corner, and then goes with the park boundary north along Vermont Avenue to the Pacific Coast Highway. At the Pacific Coast Highway, the SEA boundary goes with the park boundary to the Wilmington Drain. Machado Lake is chiefly bordered by native marsh vegetation of cattails, rushes, reeds, and mulefat with some invasive giant cane (*Arundo donax*) and upland native riparian forest, which primarily consists of willows. The exception to the natural vegetation is along Vermont Avenue where lawns are maintained between parking areas and the lake for public recreation and picnicking. The bird species list has over 330 species, and the area is used by migrant birds on the Pacific Flyway during

the spring and fall migration periods. The SEA lies generally west of the Interstate-110.

The SEA encompasses regionally unique areas, including one of three remaining wetlands that once covered the South Bay area. The freshwater plants and animals found here are completely surrounded by residential and industrial facilities. This type of habitat has been filled, drained, and lost to development throughout most of the County. In some areas, man-made lakes and ponds have created small freshwater marshes along their edges, but this is minimal in comparison to the large expanses of freshwater marsh that were once found in the Los Angeles Basin.

Freshwater marsh habitat supports a great diversity of wildlife. Most of the bird species found here are dependent in some way on the surface moisture and vegetation, and would not be able to survive without it. It is also a habitat that supports several species of amphibians. Frogs and toads can be found here that are becoming extremely difficult to find throughout Southern California. The marsh is also an important area for migratory birds. Because Harbor Lake Regional Park and Madrona Marsh are the only habitat of this type in the southern portion of the County, they serve as small scale wildlife refuges. Waterfowl, shorebirds, marsh birds, and others can be found on the marsh in numbers during the spring and fall migration.

Vegetation

The SEA encompasses southern cottonwood-willow riparian forest, southern willow scrub, mulefat scrub, Venturan coastal sage chaparral scrub, "modified" coastal freshwater marsh, vernal marsh, and non-native grassland. Immediately bordering Machado Lake are emergent wetland species, such as bulrushes, cattails, and non-native water primroses (*Ludwigia peploides*). Also within the SEA are ornamental grasses, mature non-native trees, exotic invasive plant species. The coastal freshwater marsh and vernal marshes margins support limited densities of native grasses, but these do not form separate communities and are included within the vernal pool floral matrix. Plant species observed or recorded in previous documentation within the SEA are indicated in the *Comprehensive Floral & Faunal Compendium of the Los Angeles County SEAs*, in addition to other studies conducted for the specific area. Sensitive plant species occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources section.

Descriptions and general locations of the each plant community present within the SEA are given below.

Southern Cottonwood-Willow Riparian Forest: An open broad-leafed winter-deciduous riparian forest dominated by Fremont cottonwood (*Populus fremontii*), black willow (*Salix gooddingii*), and red willow (*S. laevigata*). This community occurs along moister sections of drainages, ponds, and lakes.

Corresponding MCV communities:

- *Populus fremontii* (Fremont cottonwood woodlands) Forest Alliance
- *Salix gooddingii* (black willow thickets) Woodland Alliance
- *Salix laevigata* (red willow thickets) Woodland Alliance

Southern Willow Scrub: A riparian community consisting of dense, broad-leafed, winter-deciduous riparian thickets occurring within and adjacent to watercourses. The dominant species of this community within the SEA are arroyo willow (*Salix lasiolepis*) with lesser amounts of mulefat (*Baccharis salicifolia*). This community occurs in along less moist portions of drainages as well as the periphery of ponds and lakes.

Corresponding MCV communities:

- *Salix exigua* (sandbar willow thickets) Shrubland Alliance
- *Salix lasiolepis* (arroyo willow thickets) Shrubland Alliance

Mulefat Scrub: A thicket occurring in seasonally and intermittently flooded habitats in riparian corridors or along lake margins.

Corresponding MCV Community:

- *Baccharis salicifolia* (mulefat thicket) Shrubland Alliance

Freshwater Marsh: Develops in areas of still or slow-moving permanent freshwater. This community is dominated by the perennial, emergent monocot cattails, which reach a height of four to five meters and often form a closed canopy. Bulrushes are dominant below the cattail canopy. Freshwater marsh is relatively uncommon; it occurs in small patches in natural or created sinks with water sources.

Corresponding MCV communities:

- *Lepidium latifolium* (perennial pepper weed patches) Semi-Natural Herbaceous Stands
- *Eleocharis macrostachya* (pale spike rush marshes) Herbaceous Alliance
- *Schoenoplectus californicus* (California bulrush marsh) Herbaceous Alliance
- *Typha* (*angustifolia*, *domingensis*, *latifolia*) (cattail marshes) Herbaceous Alliance
- *Juncus arcticus* (var. *balticus*, *mexicanus*) (Baltic and Mexican rush marshes) Herbaceous Alliance
- *Juncus effusus* (soft rush marshes) Herbaceous Alliance
- *Lemna* (*minor*) *and relatives* (duckweed blooms) Provisional Herbaceous Alliance

Vernal Pool Sites: Occur in several different areas within the SEA where unique sub-surface conditions of shallow layers of less permeable horizons allow for seasonal accumulations of freshwater. True vernal pools, which are rare in Southern California and extremely rare in the County, form seasonally in shallow, closed basins, usually where a lens of heavy clay soil holds surface water following rainfall events.

Corresponding MCV communities:

- *Eleocharis macrostachya* (pale spike rush marshes) Herbaceous Alliance
- *Juncus arcticus* (var. *balticus*, *mexicanus*) (Baltic and Mexican rush marshes) Herbaceous Alliance
- *Juncus* (*oxymeris*, *xiphioides*) (iris-leaf rush seeps) Provisional Herbaceous Alliance

Non-Native Grassland: Consists of dominant invasive annual grasses that are primarily of Mediterranean origin. Dominant species found within this community include wild oat (*Avena fatua*), slender oat, red brome, ripgut brome (*Bromus diandrus*), and herbs such as black mustard and wild radish.

Corresponding MCV communities:

- *Avena* (*barbata*, *fatua*) Semi-Natural Herbaceous Stands
- *Brassica* (*nigra*) and other mustards Semi-Natural Herbaceous Stands

- *Bromus* (*diandrus*, *hordeaceus*)-*Brachypodium distachyon* Semi-Natural Herbaceous Stands
- *Bromus rubens-Schismus* (*arabicus*, *barbatus*) [*Bromus madritensis* ssp. *rubens*] Semi-Natural Herbaceous Stands
- *Lolium perenne* [*Festuca perennis*] (perennial rye grass fields) Semi-Natural Herbaceous Stands

Venturan Coastal Sage Chaparral Scrub: Described as present and is characterized by the summer drought deciduous vegetation found near the Southern California coast south of Ventura County of low, mostly soft-woody shrubs with bare ground underneath and between shrubs. This community is dominated by California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), black sage (*Salvia mellifera*), purple sage (*Salvia leucophylla*), and California brittle bush (*Encelia californica*).

Corresponding MCV communities:

- *Artemisia californica* (California sagebrush scrub) Shrubland Alliance
- *Artemisia californica-Salvia mellifera* (California sagebrush-black sage scrub) Shrubland Alliance
- *Artemisia californica-Eriogonum fasciculatum* (California sagebrush-California buckwheat scrub) Shrubland Alliance
- *Encelia californica* (California brittle bush scrub) Shrubland Alliance
- *Salvia mellifera* (black sage scrub) Shrubland Alliance
- *Eriogonum fasciculatum* (California buckwheat scrub) Shrubland Alliance
- *Lotus scoparius* [*Acmispon glaber*] (deer weed scrub) Shrubland Alliance

Wildlife

Wildlife diversity and abundance within the SEA is moderate, commensurate with the relative homogeneity of the natural open space habitat types. Wildlife within much of the SEA is comprised of species typically occurring within freshwater and vernal pools. Birds of prey frequently forage over the pools and open grasslands, which form following the seasonal drying of the surface water. The Harbor Lake Regional Park vernal pools provide rare surface water habitat for wildlife in an otherwise developed region, and the ponds attract moderate numbers and diversity of migratory waterfowl. A number of local wildlife species are strictly limited to seasonal pool habitats. The vernal pool system in the Harbor Lake and also those in nearby Madrona Marsh Preserve SEA constitute the only local functional ecosystems of this unique type for wildlife species.

Freshwater marsh habitat supports a great diversity of wildlife. Most of the bird species found here are dependent in some way on the surface moisture and vegetation, and would not be able to survive without it. It is also a habitat that supports several species of amphibians. Frogs and toads can be found here that are becoming extremely difficult to find throughout Southern California. The marsh is also an important area for migratory birds. Because Harbor Lake Regional Park and Madrona Marsh are the only habitat of this type in the southern portion of the County, they serve as small-scale wildlife refuges. Waterfowl, shorebirds, marsh birds, and others can be found on the marsh in numbers during the spring and fall migration.

Coastal sage chaparral scrub habitats with persistent surface hydrology during the breeding season supports abundant populations of Baja California chorus frog (*Pseudacris hypochondriaca*), California toad (*Anaxyrus halophillus*), and western spadefoot (*Spea hammondii*). At least two species of salamander may also be present within more mesic portions of the surrounding canyons

and chaparral.

Bird diversity within the SEA is related to habitat opportunities for year-round residents, seasonal residents, migrating raptors and song birds. Open coastal sage chaparral scrub hosts a suite of birds that are typical of such sites at lower elevations over most of the coastal slopes of Southern California. The most productive sites for resident coastal sage chaparral scrub birds are around riparian and freshwater systems, which attract large numbers of migrants during the spring and fall. The vernal pools attract moderate numbers of migrating waders and waterfowl, and provide important winter foraging areas for resident and migratory birds of prey. Birds of prey typically observed around vernal pools include red-tailed hawk and American kestrel.

Wildlife species previously recorded, as well as those expected to occur, within the study area are indicated in the *Comprehensive Floral & Faunal Compendium* of the *Los Angeles County SEAs*. Sensitive wildlife species occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources section.

Wildlife Movement

The vernal pools situated within this SEA serve as isolated, high-quality habitat and linkage resource for migratory waterfowl. The vernal pools teem with arthropod and amphibian activity, and provide essential feeding grounds for long-distance migrants, as well as for resident species of reptiles, birds and mammals. The SEA does not lie within any identified terrestrial movement routes for wildlife.

Sensitive Biological Resources

Sensitive biological resources are habitats or individual species that have special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, and/or rare. This is due to the species' declining or limited population sizes, which usually results from habitat loss. Watch lists of such resources are maintained by the California Department of Fish and Game (CDFG), the United States Fish and Wildlife Service (USFWS), and special groups, such as the California Native Plant Society (CNPS). The following sections indicate the habitats as well as plant and animal species present, or potentially present within the SEA, which have been accorded special recognition.

The SEA is configured to encompass the regionally significant vernal pools and coastal sage chaparral scrub watershed. Changes to the classification system in some cases divides plant communities into many possible vegetation alliances, not all of which may be considered sensitive. For the purposes here previously listed communities with a least one sensitive alliance in the new format have been listed.

Sensitive Plant Communities and Habitats

The SEA supports several habitat types considered sensitive by resource agencies. These are inventoried by California Department of Fish and Game (CDFG) in the California Natural Diversity Database (CNDDB) [2011]. The CNDDB includes state and federally-listed endangered, threatened, and rare vascular plants, as well as several sensitive vertebrate species. The SEA is configured to encompass regionally significant communities, which include Fremont cottonwood woodlands, black willow thickets, iris-leaf rush seeps, California brittle bush scrub, and all vernal pool sites. These communities, or closely related designations, are considered high priority communities by the CDFG, which indicates that they are experiencing a decline throughout their range. The array and composition of these communities has been discussed in the Vegetation section.

Sensitive Plant Species

The statuses of rare plants are hierarchically categorized by the CNPS using a rank and decimal system. The initial category level of Rare Plant Rank is indicated by the ranks 1A (presumed extinct in California), 1B (rare or endangered in California and elsewhere), 2 (rare or endangered in California but more common elsewhere), 3 (more information needed, a review list), and 4 (limited distribution). In cases where the CNPS has further identified the specific threat to the species, a decimal or Threat Code is added: .1 (seriously endangered in California), .2 (fairly endangered in California), or .3 (not very endangered in California).

The following special-status plant taxa have been reported or have the potential to occur within the SEA, based on known habitat requirements and geographic range information:

- Aphanisma (*Aphanisma blitoides*) RPR 1B.1
- Ventura marsh milk-vetch (*Astragalus pycnostachyus* var. *lanosissimus*) FE, SE, RPR 1B.1
- Coulter's saltbush (*Atriplex coulteri*) RPR 1B.2
- South Coast saltscale (*Atriplex pacifica*) RPR 1B.2
- Parish's brittlescale (*Atriplex parishii*) RPR 1B.1
- Davidson's saltscale (*Atriplex serenana* var. *davidsonii*) RPR 1B.2
- Southern tarplant (*Centromadia parryi* ssp. *australis*) RPR 1B.1
- Salt marsh bird's-beak (*Chloropyron maritimum* ssp. *maritimum*) FE, SE, RPR 1B.2
- Mud nama (*Nama stenocarpum*) RPR 2.2
- Moran's navarretia (*Navarretia fossalis*) FT, RPR 1B.1
- Prostrate vernal pool navarretia (*Navarretia prostrata*) RPR 1B.1
- Estuary seablite (*Suaeda esteroa*) RPR 1B.2
- San Bernardino aster (*Symphyotrichum defoliatum*) RPR 1B.2
- Vernal barley (*Hordeum intercedens*) RPR 3.2
- California Orcutt grass (*Orcuttia californica*) FE, SE, RPR 1B.1

Sensitive Animal Species

The following special-status animal species are reported or are likely to be present within the SEA based on habitat requirements and known range attributes:

- Vernal pool fairy shrimp (*Branchinecta lynchi*) FT
- San Diego fairy shrimp (*Branchinecta sandiegonensis*) FE
- Riverside fairy shrimp (*Streptocephalus woottoni*) FE
- Mimic tryonia (*Tryonia imitator*) CDFG Special Animals List
- Monarch butterfly (*Danaus plexippus*) CDFG Special Animals List
- Silvery legless lizard (*Anniella pulchra pulchra*) FSS, SSC
- Western pond turtle (*Emys marmorata*) BLMS, FSS, SSC
- Tricolored blackbird (*Agelaius tricolor*) BCC, BLMS, SSC, USBC, AWL, ABC
- Southwestern willow flycatcher (*Empidonax traillii extimus*) FE, FSS, SE, USBC, AWL, ABC
- Belding's savannah sparrow (*Passerculus sandwichensis beldingi*) SE
- Bank swallow (*Riparia riparia*) ST
- Western mastiff bat (*Eumops perotis californicus*) BLMS, SSC, WBWG High
- Silver-haired bat (*Lasionycteris noctivagans*) WBWG Medium
- South coast marsh vole (*Microtus californicus stephensi*) SSC
- Pocketed free-tailed bat (*Nyctinomops femorosaccus*) SSC, WBWG Medium

- Big free-tailed bat (*Nyctinomops macrotis*) SSC, WBWG Medium-High
- Pacific pocket mouse (*Perognathus longimembris pacificus*) FE, SSC
- Southern California saltmarsh shrew (*Sorex ornatus salicornicus*) SSC

Ecological Transition Areas (ETAs)

The Harbor Park Municipal Golf Course is an ETA within this SEA.

Regional Biological Value

The SEA meets several SEA designation criteria and supports many regional biological values. Each criterion and how it is met is described below.

CRITERIA ANALYSIS OF THE HARBOR LAKE REGIONAL PARK SEA

Criterion		Status	Justification
A)	The habitat of core populations of endangered or threatened plant or animal species.	Not Met	This SEA does not contain habitat that supports a core population
B)	On a regional basis, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	SEA supports a sizeable lake with a freshwater marsh along its northern, eastern and southern shores and the Bixby Slough, habitats that once covered the South Bay area. This type of habitat has been filled, drained, and lost to development throughout most of Southern California.
C)	Within the County, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution	Met	Harbor Lake Regional Park is one of three remaining wetlands with freshwater marsh in the County. (The others are Madrona Marsh and recreated Ballona Freshwater Marsh, which are also in SEAs.) This type of habitat once covered much of the southern and western Los Angeles Basin area, and supports several species of amphibians including frogs and toads that are becoming rare throughout Southern California.
D)	Habitat that at some point in the life cycle of a species or group of species, serves as concentrated breeding, feeding, resting, or migrating grounds and is limited in availability either regionally or in County.	Met	Harbor Lake Regional Park and its marshes is an important area for migratory birds. The list of number of bird species seen has over 330 species. Freshwater marshes are important breeding areas for a number of birds and amphibian species.
E)	Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community.	Met	The Harbor Lake freshwater marsh has attracted considerable attention from the academic and scientific communities, and the resources of the area are well documented and continue to be studied.
F)	Areas that would provide for the preservation of relatively undisturbed examples of the original natural biotic	Met	The freshwater marsh is a good example of the freshwater marshes that used to occur along the fault lines of the Los Angeles Basin.

	communities in the County.		

In conclusion, the area is an SEA because it contains: B-C) a sizeable lake with a freshwater marsh along its eastern shore and the Bixby Slough, habitats that once covered the South Bay area. This type of habitat has been filled, drained, and lost to development throughout most of Southern California and the County. Three of these habitats remain in the County; D) the Harbor Lake Regional Park is habitat that serves as concentrated breeding, feeding, resting, and migrating grounds and is limited in availability both regionally and in the County; E) the Harbor Lake freshwater marsh has attracted considerable attention from the academic and scientific communities, and the resources of the area are well documented and continue to be studied; and F) the freshwater marsh is a good example of the freshwater marshes that used to occur along the fault lines of the Los Angeles Basin.

10. Joshua Tree Woodlands SEA

Location

General

The Joshua Tree Woodlands Significant Ecological Area (SEA) is located in the western portion of the Antelope Valley west and northwest of the Antelope Valley California Poppy Reserve in an unincorporated area of the County. This SEA encompasses many of the remaining old-growth stands of Joshua trees (*Yucca brevifolia*) on the west side of the Antelope Valley. Joshua tree woodland is a complex biological community of the gradual slopes of higher elevation desert areas that once covered much of this part of the Antelope Valley around the Antelope Wash. Joshua trees only occur within the Mojave Desert, and the County population is the western extreme location for the species.

Because Joshua trees live in areas that are easily developed for residences and agriculture, this habitat has become very fragmented in the County. The SEA consists of eight separate units, seven of which are in close proximity to each other between the Kern-Los Angeles County line to the north, and the California Aqueduct and Fairmont Butte to the south. The eighth unit is in an arroyo on the north side of the principal western ridgeline of Liebre Mountain, which is near the furthest western extent of Joshua tree woodland in Southern California. This woodland is located partially within the Angeles National Forest, and east and adjacent to the Interstate-5. The eighth unit is bordered on three sides by the San Andreas SEA.

All of the SEA except unit 8 is designated as the Antelope Valley Globally Important Bird Area (IBA) by the California Audubon. This part of the Antelope Valley is very important as a resource area that supports spring and fall migration of birds, from the small passerines to the larger raptors, such as the state-threatened Swainson's hawk (*Buteo swainsoni*) and turkey vultures (*Cathartes aura*). The Joshua tree woodland is a very important resource to these migrations by supplying perches and food for these animals on their journeys. The SEA is near the San Andreas SEA, the Antelope Valley California Poppy Reserve, the Arthur B. Ripley Desert Woodland State Park, and the County George F. Bones Desert Pines Wildlife Reserve; however, many of these areas are not contiguous with one another nor with the SEA. Unit 2 of the SEA includes much of the Arthur B. Ripley Desert Woodland State Park. Unit 8 of the SEA is contiguous with the San Andreas SEA.

Fragmentation is a concern because the Joshua trees depend on a small moth for reproduction. Only two species of moth can successfully pollinate Joshua trees, and in the SEA, there is only the yucca moth (*Tegeticula synthetica*). The moth may have limited dispersal abilities, and the Joshua

trees cannot reproduce from seeds without pollination from this particular moth. Cross pollination is regarded as essential to a species' genetic diversity, which is essential to adaptation to environmental change.

The Joshua trees in the seven units have the growth form of the lower elevation woodlands of the flatter areas, and somewhat spaced from one another and less clumped. The Joshua trees in the eighth unit have a growth form that is more common in the hilly areas, where the individuals sprout from connected rhizomes and are clumped. Many times, these clumps are clones, with individuals all sharing the same genetic identity.

The SEA is located at least partially in each of the following United States Geological Survey (USGS) 7.5' California Quadrangles: Neenach School, Fairmont Butte, Black Mountain, and Lebec.

General Boundary and Resources Description

The SEA is composed of eight units. The overall boundaries are as follows: The western boundary for units 1-7 terminates at 220th Street West (the border between Ranges 15W and 16W). The eastern boundary is 145th Street West. The northern boundary is on Avenue A at the Kern-Los Angeles County line. The southern boundary straddles the California Aqueduct, touches the Los Angeles Aqueduct, and is approximately on Avenue F. The southernmost area is located close to the foothills of the western San Gabriel Mountains.

Unit 1: The northernmost unit is bounded by Avenue A on the Kern-Los Angeles County line on the north between 200th Street West and approximately on 218th Street West. It extends irregularly to the south along a desert wash contour, about a 0.7 mile at its greatest extent. The current southern boundary is determined by agricultural clearing. This unit has a Joshua tree woodland with many shrub components of the biological community intact, including a floor covered by the wildflower goldfields (*Lasthenia glabrata*) in the spring.

Unit 2: Another unit is located between Avenue C to the north and Avenue F to the south (straddling part of State Route-138 on Avenue D and part of Lancaster Road on Avenue E), and east to west from about 200th Street to about 220th Street West. Clearance in various parcel units accounts for this unit's irregular shape. Agricultural clearing on both sides of the Antelope Wash has separated this unit from unit 1 to the north. The intervening area is a broad wash plain with rich alluvial soils. The former agricultural fields may now become fields of photovoltaic panels to generate renewable energy. This unit has a southern square mile that straddles the California Aqueduct and touches the Los Angeles Aqueduct at the base of the San Gabriel Mountains. In the northern area, this unit has old-growth Joshua tree woodlands on a rocky ridge that grades into stands of Joshua trees and woodland that includes California junipers (*Juniperus californica*) in flatter areas toward the south. The southern and eastern parts of this unit overlap with much of the Arthur B. Ripley Desert Woodland State Park. The California Aqueduct is open in this area and is an important resource for bird migration along the desert slopes of the western San Gabriel Mountains, particularly waterfowl. The Los Angeles Aqueduct is generally in concrete pipe for most of its extent, and in this area, is covered by a berm and road. A colony of burrowing owls (*Athene cunicularia*), which is a state species of special concern, was discovered during surveys for an adjacent photovoltaic panel development, and probably other colonies or individuals of the owl live within this unit.

Unit 3: Another unit is located between Avenue D to the north and Avenue E to the south, and between 190th Street and 195th Street West. It is on the broad outwash alluvial area of Kings Canyon and adjacent drainages. This outwash area is somewhat blocked by the aqueducts, but both aqueducts are provided with underpass channels for outflow of the canyons onto the desert floor.

The SEA includes a central cleared area that is regenerating the Joshua tree woodland and a residence with less than 40 acres cleared. The area next to Avenue D that has been cleared of Joshua trees is not included.

Unit 4: The square mile between Avenue C and Avenue D, and between 180th Street and 190th Street West has a good stand of Joshua tree and juniper woodland. This is also in the Kings Canyon alluvial wash area. There is a known area of Joshua tree regeneration to the east that is not included in the SEA.

Unit 5: The quarter square mile between Avenue C-5 and Avenue E, and between 180th Street and 185th Street West, is also on the Kings Canyon alluvial wash area and has a good stand of Joshua tree and juniper woodland.

Units 6: An area of a little over one-eighth square mile is located at the corners of both units 4 and 5. It is between Avenues D and E and between 180th Street and what would be 174th Street West. This is also in the Kings Canyon alluvial wash area and has a good stand of Joshua tree and juniper woodland.

Unit 7: A large irregular unit is located roughly between Avenue B, Avenue C5, 145th Street and 180th Street West. It has an extensive area of Joshua tree-juniper woodland that grades into stands of Joshua trees towards the east. There is a known area of Joshua tree regeneration in former agricultural fields between 160th Street West and 170th Street West that is not included in the SEA. The alluvial wash in the SEA is a combined area of outflow from Kings Canyon, unnamed canyons, and Broad Canyon.

Unit 8: The eighth unit is in an arroyo on the north side of the principal western ridgeline of Liebre Mountain, which is near the furthest western extent of Joshua tree woodland in Southern California. This woodland is located partially within the Angeles National Forest. It is east and adjacent to the Interstate-5. The eighth unit is bordered on three sides by the San Andreas SEA. This woodland has the clonal growth that is typical of Joshua trees in hilly areas.

The SEA is located primarily on the western Antelope Valley floor between the Tehachapi Mountains and the western San Gabriel Mountains. The topography of the SEA is extremely flat with the land sloping less than 200 feet in approximately five miles. The location and orientation of the SEA represents a matrix of remnant stands of Joshua tree woodland among a patchwork of disturbed areas. Nearly all of the land within the SEA is undisturbed and vegetated. Most of the land surrounding the SEA is disturbed by agricultural use, and also has some scattered rural residences. The SEA is entirely withiin the unincorporated area of the County.

Vegetation

Vegetation within the SEA is limited to a few communities with relatively few species. However, the dominant community, the Joshua tree woodland, is in good condition throughout most of the SEA and includes many mature stands. Plant species observed or recorded in previous documentation within the SEA are indicated in the *Comprehensive Floral & Faunal Compendium of the Los Angeles County SEAs.* Sensitive plant species occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources section.

Descriptions and general locations of the each plant community present within the SEA, including desert scrub, non-native grassland, Joshua tree woodland, juniper woodland, and disturbed are given below.

Desert Scrub: A moderately tall, fairly open shrubland with several species contributing to the canopy. Dominants often include Great Basin sagebrush, antelope bush, saltbush, and/or rabbitbrush, with several perennial grasses dispersed between the shrubs. Within the SEA, this community intergrades with Joshua tree woodlands.

Corresponding MCV communities:

- *Artemisia tridentata* (big sagebrush) Shrubland Alliance
- *Acacia greggii* (catclaw acacia thorn scrub) Shrubland Alliance
- *Ericameria nauseosa* (rubber rabbitbrush scrub) Shrubland Alliance
- *Eriogonum fasciculatum* (California buckwheat scrub) Shrubland Alliance
- *Ephedra californica* (California joint fir scrub) Shrubland Alliance
- *Yucca brevifolia* (Joshua tree woodland) Woodland Alliance
- *Grayia spinosa* (spiny hop sage scrub) Shrubland Alliance
- *Gutierrezia sarothrae* (broom snake weed scrub) Provisional Shrubland Alliance
- *Purshia tridentata* (bitter bush scrub) Shrubland Alliance

Grassland Communities: Consist of low, herbaceous vegetation that are dominated by grasses, but generally also harbor native forbs and bulbs, as well as naturalized annual forbs. Grasslands within the SEA consist of non-native grasslands alone. Non-native grassland consists of dominant invasive annual grasses that are primarily of Mediterranean origin. Dominant species found within this community include slender oats, wild oat (*Avena fatua*), ripgut brome (*Bromus diandrus*), red brome (*Bromus madritensis* ssp. *rubens*), goldentop (*Lamarckia aurea*), *Schismus*, and wild mustard. Non-native grasslands are located in small patches that interming with Joshua tree woodland throughout the SEA.

Corresponding MCV communities:

- *Avena* (*barbata*, *fatua*) (wild oats grasslands) Semi-Natural Herbaceous Stands
- *Brassica* (*nigra*) and other Mustards (upland mustards) Semi-Natural Herbaceous Stands
- *Bromus* (*diandrus*,*hordeaceus*)-*Brachypodium distachyon* (annual brome grasslands) Semi-Natural Herbaceous Stands
- *Bromus rubens-Schismus* (*arabicus*, *barbatus*) ([*Bromus madritensis* ssp. *rubens*] red brome or Mediterranean grass grasslands) Semi-Natural Herbaceous Stands
- *Centaurea* (*solstitialis*, *melitensis*) (yellow star-thistle fields) Semi-Natural Herbaceous Stands

Joshua Tree Woodland: An open woodland with Joshua tree (*Yucca brevifolia*), usually as the only arborescent species with numerous smaller shrub species interspersed between. Shrub species include Great Basin sagebrush, antelope bush, saltbush, rabbit brush, and creosote bush. Joshua tree woodland occupies approximately 95 percent of the SEA.

Corresponding MCV communities:

- *Yucca brevifolia* (Joshua tree woodland) Woodland Alliance

Juniper Woodland: An open woodland dominated by California juniper (*Juniperus californicus*), with an understory that is typical of desert scrub. This community is dominant in a few areas within the SEA, but is usually loosely scattered within the Joshua tree woodland.

Corresponding MCV communities:

- *Juniperus californica* (California juniper woodland) Woodland Alliance

Disturbed or Barren Areas: Areas that either completely lack vegetation or are dominated by ruderal species. Ruderal vegetation typically found within the SEA includes non-native grasses and "weedy" herbaceous species, native and non-native, including doveweed (*Croton setigerus*), mustards, telegraph weed (*Heterotheca grandiflora*), Russian-thistle (*Salsola tragus*), dock (*Rumex* spp.), yellow star-thistle (*Centaurea solstitialis*), Australian saltbush (*Atriplex semibaccata*), and cocklebur (*Xanthium strumarium*). Disturbed areas occur throughout the SEA around active agriculture and residential developments, along paved roads, dirt access roads, and other similarly disturbed areas.

Corresponding MCV communities:

None at this time.

Wildlife

Wildlife populations within the SEA reflect somewhat lower diversity and abundance for the habitat types present due to the small size of the SEA areas, the homogeneity of the topography and habitat, and influences of edge effect from surrounding agricultural land uses. An assessment of invertebrate populations is made difficult due to the lack of data, but the SEA is sure to include more common species in fair numbers. Amphibian populations are generally scarce in desert communities and no riparian habitat is available within the SEA. Many essential reptilian habitat characteristics such as open habitats that allow free movement and high visibility and small mammal burrows for cover and escape from predators and extreme weather are present within the SEA. These characteristics, as well as the availability of fallen and decomposing woody material, are likely to support a wide variety of reptilian species. The viviparous desert night lizard (*Xantusia vigilis*) occurs almost exclusively in association with Joshua tree debris and debris of other desert floor yuccas.

The scrubland, woodland, and grassland habitats in the SEA provide foraging and cover habitat for year-round resident and seasonal resident song birds. In addition, the SEA encompasses abundant raptor foraging, perching, and nesting habitat. The combination of these resources provide for a diversity of bird species.

Mammal populations are suggested to also reflect the generally disturbed environs influencing this SEA. Small mammals are expected to be uneven in their diversity with more adaptive species and introduced European species being in high numbers compared to others. Medium sized mammal populations are expected to exhibit the same characteristics. Large mammals are largely absent on a resident basis.

All wildlife species previously recorded, as well as those expected to occur, within the SEA are indicated in the *Comprehensive Floral & Faunal Compendium* of the *Los Angeles County SEAs*. Sensitive wildlife species occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources section.

Wildlife Movement

Wildlife movement within the SEA is possibly limited to local movement, but large-scale movement across the Antelope Valley floor is probably much facilitated by the Joshua tree habitat as island-like stepping stones. Typically in burned-over areas, animal paths tend to orient toward the Joshua tree

habitat. Birds, and possibly bats, and other aerial organisms that use the migration corridor along the desert side of the San Gabriel Mountains probably use the woodland in the SEA for resting and feeding. Animals foraging within the SEA are unlikely to occur in concentrated numbers due to the heterogeneity of the topography and habitat of the SEA. However, local movement to and from the different SEA areas, as well as to and from the San Gabriel Mountains and the Tehachapi Mountains may be restricted due to the disturbed nature of the Antelope Valley floor. Wildlife movement is likely to converge in areas where movement is still possible, which produces concentrated movement areas or "bottlenecks."

Sensitive Biological Resources

Sensitive biological resources are habitats or individual species that have special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, and/or rare. This is due to the species' declining or limited population sizes, which usually results from habitat loss. Watch lists of such resources are maintained by the California Department of Fish and Game (CDFG), the United States Fish and Wildlife Service (USFWS), and special groups, such as the California Native Plant Society (CNPS). The following sections indicate the habitats as well as plant and animal species present, or potentially present within the SEA, which have been accorded special recognition.

Sensitive Plant Communities and Habitats

The SEA supports several habitat types considered sensitive by resource agencies. These are inventoried by California Department of Fish and Game (CDFG) in the California Natural Diversity Database (CNDDB) [2011]. The CNDDB includes state and federally-listed endangered, threatened, and rare vascular plants, as well as several sensitive vertebrate species. These include California joint fir scrub, Joshua tree woodland, spiny hop sage scrub, broom snake weed scrub, and bitter bush scrub. These communities, or closely related designations, are considered high priority communities by the CDFG, which indicates that they are experiencing a decline throughout their range. The array and composition of these communities has been discussed in the Vegetation section.

In addition, CDFG is concerned with the status of California juniper woodland within the Antelope Valley, and this community is therefore considered sensitive within the County.

Sensitive Plant Species

The statuses of rare plants are hierarchically categorized by the CNPS using a rank and decimal system. The initial category level of Rare Plant Rank is indicated by the ranks 1A (presumed extinct in California), 1B (rare or endangered in California and elsewhere), 2 (rare or endangered in California but more common elsewhere), 3 (more information needed, a review list), and 4 (limited distribution). In cases where the CNPS has further identified the specific threat to the species, a decimal or Threat Code is added: .1 (seriously endangered in California), .2 (fairly endangered in California), or .3 (not very endangered in California).

The following special-status plant taxa have been reported or have the potential to occur within the SEA, based on known habitat requirements and geographic range information:

- Peirson's morning-glory (*Calystegia peirsonii*) RPR 4.2
- Clokey's cryptantha (*Cryptantha clokeyi*) RPR 1B.2
- Short joint beavertail (*Opuntia basilaris* var. *brachyclada*) RPR 1B.2

Sensitive Animal Species

The following special-status animal species are reported or are likely to be present within the SEA based on habitat requirements and known range attributes:

- Coast horned lizard (*Phrynosoma blainvillii*) BLMS, FSS, SSC
- Tricolored blackbird (*Agelaius tricolor*) BCC, BLMS, SSC, USBC, AWL, ABC
- Burrowing owl (*Athene cunicularia*) BCC, BLMS, SSC
- Ferruginous hawk (*Buteo regalis*) BCC, BLMS, CDFG Watch List, AWL, LAA
- Swainson's hawk (*Buteo swainsoni*) BCC, FSS, ST, USBC, AWL, ABC
- Mountain plover (*Charadrius montanus*) BCC, SSC, USBC, AWL, ABC
- Merlin (*Falco columbarius*) CDFG Watch List
- Prairie falcon (*Falco mexicanus*) BCC, CDFG Watch List, LAA
- American peregrine falcon (*Falco peregrinus anatum*) BCC, FSS, SE, CDF, CDFG Fully Protected, AWL, ABC
- California condor (*Gymnogyps californianus*) FE, SE, CDF, CDFG Fully Protected, USBC, AWL, ABC
- Loggerhead shrike (*Lanius ludovicianus*) BCC, SSC, LAA
- Le Conte's thrasher (*Toxostoma lecontei*) BCC, BLMS, SSC, USBC, AWL, ABC, LAA
- Hoary bat (*Lasiurus cinereus*) WBWG Medium
- Tehachapi pocket mouse (*Perognathus alticolus inexpectatus*) FSS, SSC
- American badger (*Taxidea taxus*) SSC

Ecological Transition Areas (ETAs)

There are no ETAs designated within this SEA.

Regional Biological Value

The SEA meets several SEA designation criteria and supports many regional biological values. Each criterion and how it is met described below.

CRITERIA ANALYSIS OF THE JOSHUA TREE WOODLANDS SEA

Criterion		Status	Justification
A)	The habitat of core populations of endangered or threatened plant or animal species.	Not Met	Although there are several listed species that occur within the SEA, this criterion is not met due to the lack of known core population areas.
B)	On a regional basis, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	The SEA contains large patches of undisturbed Joshua tree woodland habitat, which has become increasingly rare in the region.
C)	Within the County, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution	Met	As stated above, Joshua tree woodlands have become rare in the region, and are even more rare in the County.

D)	Habitat that at some point in the life cycle of a species or group of species, serves as concentrated breeding, feeding, resting, or migrating grounds and is limited in availability either regionally or in the County.	Met	The habitat within the SEA has been studied for how it may serve as a concentrated breeding, feeding, resting, or migrating ground for any species. Some cross-desert migratory routes depend, in part, on the cover and habitat of the Joshua tree woodland. The units 1-7 of the SEA on the Antelope Valley floor are in a globally IBA, known as a bird migration route. The Joshua tree woodland is an important component of resources that supports this migration.
E)	Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community.	Met	Due to the scarcity of Joshua tree woodland, specimens of the quality found in the SEA are important to science and have become living laboratories. The SEA contains the most westerly extent of this habitat type.
F)	Areas that would provide for the preservation of relatively undisturbed examples of the original natural biotic communities in the County.	Met	The Joshua tree woodland contained within the SEA is an excellent example of this community type.

In conclusion, the area is an SEA because it contains: B-C) Joshua tree woodland, a rare community both regionally and within the County; D) habitat important to breeding, feeding, and migration; E) the geographic limit of Joshua tree woodland; and F) an excellent undisturbed example of Joshua tree woodland.

11. Madrona Marsh Preserve SEA

Location

General

The Madrona Marsh Preserve Significant Ecological Area (SEA) lies on the northeast corner of Madrona Avenue and Sepulveda Boulevard, within the City of Torrance. The SEA boundaries encompass the natural part of the Madrona Marsh Preserve, which is a remnant of one of the last natural vernal wetlands in the County. Vernal marshes fill in the rainy season (winter and spring in our area) and dry completely by the end of summer. They are heavily used by migrant birds in the spring, and in the fall if rains are early. They usually have other resident flora and fauna that are specially adapted to the seasonal cycle of wetting and gradual complete dessication.

The SEA is located within the Torrance United States Geological Survey (USGS) 7.5' California Quadrangle.

General Boundary and Resources Description

The SEA boundaries generally follow the Madrona Marsh Preserve boundary, which is surrounded by urban development. The Madrona Marsh Preserve is a park of the City of Torrance that is situated to the west of Maple Avenue, north of West Sepulveda Boulevard, east of Madrona Avenue and directly south of Plaza Del Amo. The Madrona Marsh Nature Center has offices and visitor activities to the north of Plaza Del Amo. The Nature Center supports an active volunteer and educational program for natural areas in this part of the Los Angeles Basin.

The SEA supports one of three remaining freshwater wetlands that once covered much of the southern and western Los Angeles Basin area. In the lowland are vernal marshes and an alkaline margin, and the upland supports a back dune system and vernal pools.

The freshwater plants and animals found here are completely surrounded by residential development and industrial facilities. This type of habitat has been filled, drained, and lost to development throughout most of the County. In some areas, man-made lakes and ponds have created small freshwater marshes along their edges, but this is minimal in comparison to the large expanses of freshwater marsh that were once found in the Los Angeles Basin.

Freshwater marsh habitat supports a great diversity of wildlife. Most of the bird species are dependent in some way on the surface moisture and vegetation, and would not be able to survive without it. It is also a habitat that supports several species of amphibians. Frogs and toads can be found here that are becoming extremely difficult to find throughout Southern California. The marsh is also an important area for migratory birds. Over 150 bird species have been recorded as using Madrona Marsh. Because the remnant freshwater marshes like Madrona Marsh are the only habitat of this type in southern portion of the County, they serve as miniature wildlife refuges. Kenneth Malloy Harbor Regional Park (Harbor Lake Regional Park SEA) and Ballona Freshwater Marsh (Ballona Wetlands SEA) are the two other freshwater marshes in this area. Waterfowl, shorebirds, marsh birds, and others can be found on the marsh in numbers during the spring and fall migration.

Vegetation

The SEA encompasses formations of vernal pool aquatics and emergent species, alkaline marsh and coastal bluff and dune scrub. The vernal pool margins support limited densities of native grasses, but these do not form separate communities and are included within the vernal pool floral matrix. Sensitive plant species occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources section.

Descriptions and general locations of the each plant community present within the SEA are given below.

Vernal Marsh: Develops in areas of still or slow-moving freshwater for 6 to 11 months of the year. This community is dominated by the perennial, emergent cattails (*Typha* spp.), which reach a height of four to five meters and often form a closed canopy. Bulrushes (*Schoenoplectus* spp.) are dominant below the cattail canopy. Vernal marsh is relatively uncommon; it occurs in small patches in natural or created sinks with water sources.

Corresponding MCV communities:

- *Phragmites australis* (common reed marshes) Herbaceous Alliance and Semi-Natural Stands
- *Lepidium latifolium* (perennial pepper weed patches) Semi-Natural Herbaceous Stands
- *Eleocharis macrostachya* (pale spike rush marshes) Herbaceous Alliance
- *Schoenoplectus californicus* (California bulrush marsh) Herbaceous Alliance
- *Typha* (*angustifolia, domingensis, latifolia*) (cattail marshes) Herbaceous Alliance
- *Sarcocornia* [*Salicornia*] *pacifica* (*Salicornia depressa*) (pickleweed mats) Herbaceous Alliance
- *Juncus articus* (var. *balticus*, *mexicanus*) [*Juncus balticus* ssp. *ater, J. mexicanus*] (Baltic and Mexican rush marshes) Herbaceous Alliance
- *Juncus effusus* (soft rush marshes) Herbaceous Alliance

- *Lemna* (*minor*) and relatives (duckweed blooms) Provisional Herbaceous Alliance

Vernal Pool Sites: Occur in several different areas within the SEA where unique sub-surface conditions of shallow layers of less permeable horizons allow for seasonal accumulations of freshwater. True vernal pools, which are rare in Southern California and extremely rare in the County, form seasonally in shallow, closed basins, usually where a lens of heavy clay soil holds surface water following rainfall events.

Corresponding MCV communities:

- *Eleocharis macrostachya* (pale spike rush marshes) Herbaceous Alliance
- *Juncus arcticus* (var. *balticus*, *mexicanus*) [*Juncus balticus* ssp. *ater, J. mexicanus*] (Baltic and Mexican rush marshes) Herbaceous Alliance
- *Juncus* (*oxymeris, xiphioides*) (iris-leaf rush seeps) Provisional Herbaceous Alliance

Alkali Marsh: Found on the margins of the vernal pools and is similar to the freshwater marsh, but with more salt-tolerant hydrophytes present. Species associated with this community include saltgrass (*Distichlis spicata*), mulefat (*Baccharis salicifolia*), alkali mallow (*Malvella leprosa*), toadrush (*Juncus bufonis*), spikeweed (*Centromadia pungens ssp. pungens*), cotton batting (*Gnaphalium stramineum*), and alkali heliotrope (*Heliotropium curassavicum var. oculatum*).

Corresponding MCV communities:

- *Distichlis spicata* (salt grass flats) Herbaceous Alliance
- *Spartina foliosa* (California cordgrass marsh) Herbaceous Alliance
- *Arthrocnemum subterminale* (Parish's glasswort patches) Herbaceous Alliance
- *Atriplex lentiformis* (quailbush scrub) Shrubland Alliance

Coastal Bluff and Dune Scrub: Here is a remnant of the El Segundo Dune System that occupied coastal areas along much of the Santa Monica Bay. The system consists of fine, sandy soil that dries rapidly. Plants typical of the dune scrub include dune buckwheat (*Eriogonum parvifolium*), rattle pod (*Astragalus trichopodus var. lonchus*), bladderpod (*Peritoma arborea*), deer weed (*Acmispon glaber*), sawtooth goldenbush (*Hazardia aquarrosa*), and California sunflower (*Helianthus californicus*).

Corresponding MCV communities:

- *Baccharis pilularis* (coyote brush scrub) Shrubland Alliance
- *Lupinus arboreus* (yellow bush lupine scrub) Shrubland Alliance and Semi-Natural Shrubland Stands
- *Lupinus chamissonis-Ericameria ericoides* (silver dune lupine–mock heather scrub) Shrubland Alliance

Wildlife

Wildlife diversity and abundance within the SEA is moderate, commensurate with the relative homogeneity of the natural open space habitat types. Wildlife within much of the SEA is comprised of species that typically occur within freshwater marsh and vernal pools. Birds of prey frequently forage over the pools and open grasslands, which form following the seasonal drying of the surface water. The Madrona Marsh vernal pools provide rare surface water habitat for wildlife in an otherwise developed region, and the ponds attract moderate numbers and diversity of migratory

waterfowl. A number of local wildlife species are strictly limited to seasonal pool habitats. The vernal pool system in the Madrona Marsh and those in nearby Harbor Lake Regional Park SEA and the Ballona Wetlands freshwater marsh constitute the only local functional ecosystems of this unique type for wildlife species. The Madrona Marsh is the only one of these freshwater wetlands that has the yearly cycle of filling in the spring and complete dessication by late summer.

Analysis of invertebrates on any particular site usually is limited by a lack of specific data, but has sufficient acreage to support healthy populations of whatever invertebrate species are present, which is probably several hundred terrestrial species. The vernal pools, when ponded, form aquatic habitats for a moderately diverse fauna of freshwater arthropods and other invertebrates, including native fairy shrimp, aquatic flies, diving beetles, water scavengers, ostracods, and snails. Amphibians generally are relatively common in the pond. Frogs and toads are frequently seen.

Madrona Marsh, nearby Kenneth Malloy Harbor Regional Park, and Ballona freshwater marsh are the only habitats of this type in the southern portion of the County, and they serve as miniature wildlife refuges for bird species of open fresh water, waterfowl, shorebirds, marsh birds, and others can all be found on the marsh in numbers during the spring and fall migration.

Wildlife Movement

The vernal pools situated within this SEA serve as an isolated, high-quality resource providing habitat linkage for migratory waterfowl. The vernal pools teem with arthropod and amphibian activity, and provide essential feeding grounds for long-distance migrants, as well as for resident species of reptiles, birds and mammals. The ponds do not lie within any identified terrestrial movement routes for wildlife.

Sensitive Biological Resources

Sensitive biological resources are habitats or individual species that have special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, and/or rare. This is due to the species' declining or limited population sizes, which usually results from habitat loss. Watch lists of such resources are maintained by the California Department of Fish and Game (CDFG), the United States Fish and Wildlife Service (USFWS), and special groups, such as the California Native Plant Society (CNPS). The following sections indicate the habitats as well as plant and animal species present, or potentially present within the SEA, which have been accorded special recognition.

Sensitive Plant Communities and Habitats

The SEA supports several habitat types considered sensitive by resource agencies. These are inventoried by California Department of Fish and Game (CDFG) in the California Natural Diversity Database (CNDDB) [2011]. The CNDDB includes state and federally-listed endangered, threatened, and rare vascular plants, as well as several sensitive vertebrate species. The SEA is configured to encompass regionally significant communities, which include pickleweed mats, California cordgrass marsh, Parish's glasswort patches, silver dune lupine-mock heather scrub, and all vernal pools. These communities or closely related designations are considered highest priority communities by the CDFG, indicating that they are declining in acreage throughout their range due to land use changes. These communities, or closely related designations, are considered high priority communities by the CDFG, which indicates that they are experiencing a decline throughout their range. The array and composition of these communities has been discussed in the Vegetation section. Changes to the classification system in some cases divides plant communities into many

possible vegetation alliances communities, not all of which may be considered sensitive. For the purposes here previously listed communities with a least one sensitive alliance in the new format have been listed.

Sensitive Plant Species

The statuses of rare plants are hierarchically categorized by the CNPS using a rank and decimal system. The initial category level of Rare Plant Rank is indicated by the ranks 1A (presumed extinct in California), 1B (rare or endangered in California and elsewhere), 2 (rare or endangered in California but more common elsewhere), 3 (more information needed, a review list), and 4 (limited distribution). In cases where the CNPS has further identified the specific threat to the species, a decimal or Threat Code is added: .1 (seriously endangered in California), .2 (fairly endangered in the California), or .3 (not very endangered in the California).

The following special-status plant taxa have been reported or have the potential to occur within the SEA, based on known habitat requirements and geographic range information:

- Aphanisma (*Aphanisma blitoides*) RPR 1B.1
- Ventura marsh milk-vetch (*Astragalus pycnostachyus var. lanosissimus*) FE, SE, RPR 1B.1
- Coastal dunes milk-vetch (*Astragalus tener var. titi*) FE, SE, RPR 1B.1
- Coulter's saltbush (*Atriplex coulteri*) RPR 1B.2
- South coast saltscale (*Atriplex pacifica*) RPR 1B.2
- Parish's brittlescale (*Atriplex parishii*) RPR 1B.1
- Davidson's saltscale (*Atriplex serenana var. davidsonii*) RPR 1B.2
- Southern tarplant (*Centromadia parryi ssp. australis*) RPR 1B.1
- Orcutt's pincushion (*Chaenactis glabriuscula var. orcuttiana*) RPR 1B.1
- Coastal goosefoot (*Chenopodium littoreum*) RPR 1B.2
- Salt marsh bird's-beak (*Chloropyron maritimum ssp. maritimum*) FE, SE, RPR 1B.2
- Beach spectaclepod (*Dithyrea maritima*) ST, RPR 1B.1
- Coulter's goldfields (*Lasthenia glabrata ssp. coulteri*) RPR 1B.1
- Mud nama (*Nama stenocarpum*) RPR 2.2
- Moran’s navarretia (*Navarretia fossalis*) FT, RPR 1B.1
- Prostrate vernal pool navarretia (*Navarretia prostrata*) RPR 1B.1
- Coast woolly-heads (*Nemacaulis denudata var. denudata*) RPR 1B.2
- South coast branching phacelia (*Phacelia ramosissima var. austrolitoralis*) RPR 4.2
- Brand's star phacelia (*Phacelia stellaris*) FC, RPR 1B.1
- Ballona cinquefoil (*Potentilla multijuga*) RPR 1A
- Estuary seablite (*Suaeda esteroa*) RPR 1B.2
- Vernal barley (*Hordeum intercedens*) RPR 3.2
- California Orcutt grass (*Orcuttia californica*) FE, SE, RPR 1B.1

Sensitive Animal Species

The following special-status animal species are reported or are likely to be present within the SEA based on habitat requirements and known range attributes:

- Mimic tryonia (*Tryonia imitator*) CDFG Special Animals List
- Belkin's dune tabanid fly (*Brennania belkini*) CDFG Special Animals List
- Busck's gallmoth (*Carolella busckana*) CDFG Special Animals List

- Sandy beach tiger beetle (*Cicindela hirticollis gravida*) CDFG Special Animals List
- Western beach tiger beetle (*Cicindela latesignata latesignata*) CDFG Special Animals List
- Senile tiger beetle (*Cicindela senilis frosti*) CDFG Special Animals List
- Globose dune beetle (*Coelus globosus*) CDFG Special Animals List
- Henne's eucosman moth (*Eucosma hennei*) CDFG Special Animals List
- El Segundo blue butterfly (*Euphilotes battoides allyni*) FE, Xerces: Critical
- Lange's El Segundo Dune weevil (*Onychobaris langei*) CDFG Special Animals List
- Wandering skipper (*Panoquina errans*) CDFG Special Animals List
- El Segundo flower-loving fly (*Rhaphiomidas terminatus terminatus*) CDFG Special Animals List
- Dorothy's El Segundo Dune weevil (*Trigonoscuta dorothea dorothea*) CDFG Special Animals List
- Silvery legless lizard (*Anniella pulchra pulchra*) FSS, SSC
- Western pond turtle (*Emys marmorata*) BLMS, FSS, SSC
- Coast horned lizard (*Phrynosoma blainvillii*) BLMS, FSS, SSC
- Tricolored blackbird (*nesting colony*) (*Agelaius tricolor*) BCC, BLMS, SSC, USBC, AWL, ABC
- Western snowy plover (*Charadrius alexandrinus nivosus*) FT, BCC, SSC, ABC, AWL, USBC
- California black rail (*Laterallus jamaicensis coturniculus*) BCC, ST, CDFG Fully Protected, USBC, AWL, ABC (*all listings include full species*)
- Belding's savannah sparrow (*Passerculus sandwichensis beldingi*) SE
- California least tern (*Sternula antillarum browni*) FE, SE, CDFG Fully Protected, USBC, ABC (*both listings include full species*)
- South coast marsh vole (*Microtus californicus stephensi*) SSC
- Pacific pocket mouse (*Perognathus longimembris pacificus*) FE, SSC
- Southern California saltmarsh shrew (*Sorex ornatus salicornicus*) SSC

Ecological Transition Areas (ETAs)

There are no ETAs designated within this SEA.

Regional Biological Value

The SEA meets several SEA designation criteria and supports many regional biological values. Each criterion and how it is met is described below.

Criteria Analysis of the Madrona Marsh Preserve SEA

Criterion		Status	Justification
A)	The habitat of core populations of endangered or threatened plant or animal species.	Not Met	Not met, although the Madrona Marsh contains vernal pools, which may harbor threatened and endangered species in a unique location for the County.
B)	On a regional basis, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	Madrona Marsh is one of three remaining wetlands with freshwater marsh in the County. (The others are Kenneth Malloy Harbor Regional Park and the Ballona Wetlands freshwater marsh.) This type of habitat once covered the South Bay area of the Los Angeles Basin, and supports several species of amphibians and vernal pools that are becoming rare throughout Southern

			California.
C)	Within the County, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution	Met	Madrona Marsh is one of three remaining wetlands with freshwater marsh in the County. This type of habitat once covered the South Bay area, and supports several species of amphibians including frogs and toads that are becoming rare throughout Southern California. In addition it has some vernal pools, which are very rare in the County.
D)	Habitat that at some point in the life cycle of a species or group of species, serves as concentrated breeding, feeding, resting, or migrating grounds and is limited in availability either regionally or in the County.	Met	Any natural wetland like the Madrona Marsh is an important area for amphibians, which need water for their aquatic larvae to complete their life cycle. The Marsh is very important for migratory birds as a waypoint during the spring and fall migration periods.
E)	Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community.	Met	Because the Madrona Marsh is one of only three remnants of the formerly extensive habitat, there is much interest in the local community and at academic and scientific institutions in preserving the area and acquiring adjacent habitat currently used for gas and oil extraction that can be restored to marsh habitat.
F)	Areas that would provide for the preservation of relatively undisturbed examples of the original natural biotic communities in the County.	Met	The Madrona Marsh is a remnant of the freshwater marsh once prevalent in this area of the County, and it is important to recognize protection of the habitat.

In conclusion, the area is an SEA because it contains: B-C) biotic communities, vegetative associations, and habitat of plant and animal species that are either unique or are restricted in distribution in the County and regionally; D) concentrated breeding, feeding, resting, and migrating grounds, which are limited in availability in the County; E) unique habitat that is of scientific and educational value; and F) a very rare habitat of vernal marsh that has retained its unique yearly cycle.

12. Malibu Coastline SEA

Location

General

The Malibu Coastline Significant Ecological Area (SEA) is located in the shoreline and offshore coastal area of Malibu, which is adjacent to the Santa Monica Mountains. The SEA supports significant areas of aquatic plant and other subtidal communities, which provide habitat for a variety of fishes, birds, marine mammals, and other wildlife. Rocky outcrops intermixed with sandy spaces are found to a depth of 600 feet, and the nearshore area down to about 100 feet depth is considered the most productive and dynamic of all the marine communities outside the tropics. All of the many offshore rocks within 12 nautical miles of the coast are part of the California Coastal National Monument that is managed by the Bureau of Land Management in the U.S. Department of the Interior.

The site is located in the Triunfo Pass, Point Dume, Malibu and Topanga Quadrangles of the United

States Geological Survey (USGS) 7.5 Minute Map Series (USGS, 1964).

General Boundary and Resources Description

The SEA boundary encompasses parts of the shoreline and about a 0.8 mile offshore from Malibu. The SEA stretches between the Ventura-Los Angeles County line at Leo Carillo State Beach, all the way east to Topanga State Beach. The SEA is generally adjacent to the Santa Monica Mountains and Point Dume SEAs. Parts of the shore are included along many of the state beaches. The sandy beaches along this SEA are the least disturbed beaches of the County, some of them completely natural. This is the remnant of the typical rock and sand shoreline that once occurred all along the coast of Southern California. From Mugu Lagoon to Latigo Point (the County portion starting at the Ventura-Los Angeles County line), is an Area of Special Biological Significance (ASBS), which is a marine area designated by the State Water Resources Control Board as having exceptionally good water quality and natural community features. Populated and disturbed areas along the shore are largely in the City of Malibu and excluded from the SEA.

This area is a relatively undisturbed coastal region where the upwelling of nutrient-rich waters and a variety of habitats support highly productive and extremely diverse marine communities. The area possesses some of the best kelp bed habitat south of Santa Barbara, and supports the only remaining natural kelp beds off the mainland coast of the County. These kelp bed areas may be one hundred times more productive than adjacent sand bottom communities, and they provide refuge, food, and nursery grounds for thousands of species.

Rocky outcrops alternate with sandy stretches along this coastline and subtidally, outcrops are found to a depth of 600 feet. The stability of the substrate and the variety of exposures provide microhabitats for a great number of organisms. Characteristically, rocky shorelines from the lower intertidal zone to about 100 foot depth can be the most biologically active areas in the world. The adjacent Point Dume SEA is one of the few places that rocky intertidal habitat occurs between Palos Verdes Peninsula and Point Mugu in Ventura County. The rocky tidepools off Point Dume, Big Rock Beach, and the promontory where Topanga Canyon Creek enters the ocean are some of the very best remaining rocky intertidal habitat in the County, and these are within the SEA. The Marine Life Protection Act designated protected area in Malibu to be the Point Dume State Marine Conservation Area (SMCA) between El Matador State Beach west of Point Dume to the west side of Point Dume, which is approximately three miles of coastline, with the conservation area extending in due north-south lines from mean high tide to about three nautical miles offshore. In the SMCA, fishing is restricted to certain species. From the west side of Point Dume to Paradise Cove on the east side is designated as the Point Dume State Marine Reserve (SMR), which has no fishing or other take allowed, and extends in due north-south lines (adjacent to the SMCA on the west) from the intertidal to offshore, which is about three nautical miles.

This coastline possesses the only undisturbed sandy beaches that remain in the County. Although very dynamic in physical stability, there is a biological, subtidal, sand-bottom community that has a great diversity of resident organisms and invertebrates ranging from bacteria through jellyfish, mollusks, and echinoderms, such as seastars, to fishes that habitually choose the sand-bottom substrate. An important micro-community of decomposers is present. Sandy beaches with their diverse invertebrate communities of interstitial organisms provide feeding areas for many bird species. In addition, the soft substrate offers a repository for eggs and nursery grounds for many species, including the grunion (*Leuresthes tenuis*) that spawns and deposits its eggs in the highest intertidal areas of the sand. This shoreline remains in essentially a native state as a remnant of what once was typical of rock and sand shoreline in Southern California. Artificial modifications have been

limited to small local areas. West of Point Dume, some minor pollution does occur, but the kelp is healthy. East of Point Dume there is minor to moderate pollution, and kelp does not grow below 35 feet.

The SEA has critical habitat for the federally-threatened western snowy plover (*Charadrius alexandrinus nivosus*) along Zuma Beach and the northwest sandy area along Point Dume. This will eventually extend along the entire west side of the headland. The western snowy plover will also have critical habitat on the seaside of the barrier berm of the Malibu Lagoon. The snowy plover has over 300 individuals using the beaches of the County for winter roosts, and there is potential for some to over-summer and breed in the County after a hiatus of many decades (Ryan Ecological Consulting, 2010).

Vegetation

The terrestrial component of this marine oriented SEA is limited to the narrow stretch of beach just above the high tide line. Sensitive plant species occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources section.

Coastal Strand Vegetation: A community that occurs in the loose sand just above the high tide line of the beach. This community is characterized by a low species diversity because few plants can tolerate the harsh conditions on this dry, sandy, saline soil of high winds, salt spray and high summer temperatures.

Corresponding MCV communities:

- *Abronia latifolia – Ambrosia* spp. (dune mat) Herbaceous Alliance
- *Cakile (edentula, maritima)* (sea rocket stands) Semi-Natural Provisional Herbaceous Alliance

Marine Resources

The Malibu coastline is a relatively undisturbed coastal region where the upwelling of nutrient-rich waters and a variety of habitats support highly productive and extremely diverse marine communities. The area possesses some of the best kelp bed habitat south of Santa Barbara, and the only remaining natural kelp beds on the mainline coast of the County. Rocky outcrops alternate with sandy stretches along this coastline and are found to a depth of 600 feet. This coastline also possesses the only undisturbed sandy beaches remaining in the County.

Surfgrass and Eelgrass Habitats: Characterized by two flowering plants that resemble grass and form dense beds on different substrates and in different conditions. Both types form highly productive habitats for unique assemblages of marine species. NOAA Fisheries and the CDFG consider surfgrass and eelgrass as valuable habitats that should be protected. Surfgrass occurs from Mean Lower Low Water (MLLW) to about 25 feet depth on rocky substrate. Locations known to support substantial surfgrass beds include rocky points and rocky subtidal areas of canyons all along the northern border of the SEA. Eelgrass grows on soft substrate and typically occurs in bays. A form of eelgrass (thought to be *Zostera pacifica)* is found on open coast sand bottom. Eelgrass is an important habitat that supports a community of diverse species from sessile to mobile invertebrates and certain fishes, such as pipefish. A subtidal eelgrass bed is in the lee of Lechuza Point between about 25 and 45 feet depth, and subtidal eelgrass may still occur off Los Alisos Canyon.

Community dominant plant:

- *Phyllospadix scouleri*, or Scouler's surf grass and *P. torrey* or Torrey's surfgrass
- *Zostera pacifica* (eelgrass)

Intertidal Zone Habitats: Consist of a variety of coastal habitats periodically covered and uncovered by waves and tides. The rocky shores support a rich assortment of plants and animals including green, brown, and red algae. A wide variety of sessile invertebrates compete for space with the plants in this habitat. Mobile invertebrates, such as crabs and snails, can be found in great abundance. Fishes are limited to tidepools, although grunion do spawn and deposit their eggs in the high tide wash areas of sandy beaches. The sandy beaches have a diverse community of interstitial invertebrates. Shorebirds actively forage during low tide in all kinds of shoreline habitats. The federally-endangered black abalone (*Haliotus cracherodii* FE) was once abundant in this habitat all along the rocky coastlines of California. Whether it still persists in the Malibu coastline area is unknown, since its current populations are reduced and much more dispersed than before.

Nearshore Subtidal Habitat: Includes those marine habitats ranging from the lower level of the intertidal zone to 99 feet. This region supports a variety of assemblages of invertebrates and fishes, and in the SEA, this habitat is frequently dominated by giant kelp. Rocky areas have a diverse community of algae (in depths of sufficient light penetration), sessile and mobile invertebrates, and fishes. Subtidal areas are even more diverse than the intertidal areas, and this great variety can be appreciated by the examples of tidepools. There are a variety of subtidal sand-adapted organisms ranging from fishes to seastars, to many kinds of jellyfish, mollusks, and other invertebrates.

Kelp Forest Habitat: Giant kelp beds are located in many places along the SEA to a depth of approximately 99 feet in the ocean. The kelp beds are part of a productive habitat that provide food, attachment sites and shelter for invertebrates and fishes. Giant kelp, the dominant alga of this community, is the fastest lengthening organism known, and it thrives in nutrient-enriched waters of upwelling. It has been "clocked" at two feet per day extension of its stipe and blades. The kelp beds are an important nursery habitat and recruitment area for juvenile fishes and invertebrates. The National Oceanographic and Atmospheric Administration (NOAA) Fisheries as well as the CDFG consider kelp beds as sensitive, and lush kelp beds such as those from the Ventura-Los Angeles County line to Malibu Point are designated as ESHA (Environmentally Sensitive Habitat Areas, Malibu Local Coastal Plan, 1986).

Community dominant plant:

- Macrocystis pyrifera (Giant kelp)

Wildlife

The terrestrial and aerial wildlife found in the SEA is dependent on the two basic regimes found there: marine and shoreline terrestrial. The shoreline beaches and rocky intertidal are home to or visited by a wide variety of shorebirds, migrating birds and marine life. The sandy beaches with their shifting sands present an unstable substrate on which organisms can establish themselves, and their resident wildlife is a set of small specialists that live in the sand interstices. An important microcommunity of decomposers exists, which feed on the materials washed up by the waves.

The Malibu Coastline cliffs, bluffs, offshore rocks and beaches offer many undisturbed habitats for roosting, feeding and nesting by numerous kinds of shore– and seabirds. Sandy beaches provide feeding areas for many species. In addition, the soft substrate offers a repository for eggs and nursery grounds for many species.

The marine habitat has the greatest diversity of wildlife, with representatives from nearly all the phyla (major groupings of animals such as jellyfish, mollusks, echinoderms, etc.) and all parts of the food web (trophic levels) for several communities. Many of the marine phyla do not have terrestrial representatives. Some of the vertebrates, such as gray whales, and the plankton use the area as a migratory corridor. The major vegetation communities, each with its own great diversity and all trophic levels, are the benthic algae of rocky substrates, the kelp beds based on giant kelp holding onto rocky subtidal substrate and extending into the water column, and the planktonic, based on photosynthesizers that are all microscopic.

Sensitive wildlife species occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources section of this document.

Wildlife Movement

The SEA is on the Pacific Flyway migration route used by many birds seasonally, This shoreline plays an important role as a stopover because of its extensive undisturbed marine resources. The offshore major part of the SEA is on the annual migration route of the California gray whale (*Eschrichtius robustus*), a CITES Appendix I animal (Convention on International Trade in Endangered Species, endangered status, no trade or harvest except by strictly controlled export and import permits issued in countries that are party to the convention and have legislation of adoption, which includes the U.S.) The gray whale migrates close to shore on its transit during the winter months from the Bering Sea to lagoons of Baja California. This is migration to the Baja lagoons for calving and breeding. The whales generally return north offshore. The area may well be a migration corridor for other marine animals, as this is part of the great Southern California Bight, which has an eddy circling counterclockwise to the north off the southward flow of the California Current. This flow brings marine organisms (fishes, invertebrates, and plants) that may have major population concentrations in the south to this part of their ocean habitat. Most of these organisms have a planktonic stage that is absolutely dependent on the current system to maintain their populations and distribution. Pollution of the ocean waters by development on land will have significant effects that may not be appreciated immediately because of the cryptic nature of subtidal animals and plants.

Sensitive Biological Resources

Sensitive biological resources are habitats or individual species that have special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, and/or rare. This is due to the species' declining or limited population sizes, which usually results from habitat loss. Watch lists of such resources are maintained by the California Department of Fish and Game (CDFG), the United States Fish and Wildlife Service (USFWS), and special groups, such as the California Native Plant Society (CNPS). The following sections indicate the habitats as well as plant and animal species present, or potentially present within the SEA, which have been accorded special recognition. When species are federally-listed as endangered or threatened, they often have federally-designated, geographically-specific "critical habitat areas." Critical habitat areas, after extensive study by experts, are judged to be essential to conservation and maintenance of the species. There are two critical habitat areas for the western snowy plover in this SEA.

Sensitive Plan Communities and Habitats

The SEA supports no terrestrial habitat types considered sensitive by resource agencies, but the California Department of Fish and Game (CDFG) does not list intertidal or subtidal plants in its California Natural Diversity Data Base (CNDDB), 2011). NOAA Fisheries (National Oceanographic

and Atmospheric Administration) as well as the CDFG do consider kelp beds as sensitive, and lush kelp beds such as those from the Ventura-Los Angeles County line to Malibu Point are designated as ESHAs by the County's Malibu Local Coastal Plan, 1986.

Kelp beds disappeared off of Palos Verdes Peninsula during the height of pollution by the White Point outfall in the mid 20th century. The Palos Verdes Peninsula's kelp beds are subsequently returning after reduction of pollution, some prodigious planting efforts, and incursion of the motile zoospores from areas like the Malibu coastline. The kelp beds are sensitive to effects like pollution and excessive sedimentation from development. They are one of the most productive communities of the world, and should be treated with care. Any development plan that might impact them, even with indirect effects, deserves scrutiny.

Sensitive Plant Species

NOAA Fisheries as well as the CDFG consider kelp beds as sensitive, and lush kelp beds, such as those from the Ventura-Los Angeles County line to Malibu Point, are designated as ESHA by the Malibu Local Coastal Plan, 1986. The principle structural component of Malibu offshore kelp beds is the giant kelp (*Macrocystis pyrifera*). NOAA Fisheries and the CDFG consider surfgrass a valuable habitat that should be protected. The principle structural component of surfgrass beds is Scouler's surf grass (*Phyllospadix scouleri*) and Torrey's surfgrass (*P. torreyi*).

Sensitive Animal Species

The western snowy plover (*Charadrius alexandrinus nivosus* [FT, CSC]*),* which feeds and resides in the wrack line areas, has designated critical habitat on Zuma Beach from Trancas Canyon to the northwestern side of Point Dume. This is proposed to expand to Point Dume. Critical habitat is also proposed to include Malibu Beach from Malibu Point to an area east of the pier, which is the seaward side of Malibu Lagoon. The Malibu Lagoon is part of the Santa Monica Mountains SEA, and the SEA is contiguous with the Santa Monica Mountains SEA at the barrier berm of the Lagoon.

The southern steelhead (*Oncorhynchus mykiss irideus* [FE, CSC]) lives in the oceanic and coastal waters for most of its life and uses the coastal streams for breeding and the first year of its young fish's lives. After one to two years in fresh water, the young fish change to smolts and make their run to the ocean, where they spend the majority of their lives. The lower Arroyo Sequit and its West Fork is designated critical habitat for the southern steelhead. This area has naturally occurring spawning beds and young fish habitat. The coastal ocean waters are within this SEA, and the linkage paths from the ocean to the coastal streams are within this SEA. The southern steelhead is known to currently use the Arroyo Sequit, Malibu Creek, and Topanga Canyon. Historically the steelhead was known from Solstice and Zuma canyons, and was probable in all the major drainages, which once had perennial water and extended to the shore in the rainy season.

The California gray whale (*Eschrichtius robustus* CITES Appendix I) uses this SEA during its calving-breeding migration cycle. The entire order of cetaceae (whales and beaked dolphins) are considered CITES Appendix I by the Australian rating system, the most stringent adoption.

The black abalone (*Haliotis cracherodii*) is a federally-endangered species and critically endangered species of the International Union for Conservation of Nature-Red List (IUCN). At one time, the black abalone was plentiful in the rocky intertidal and nearshore rocky subtidal areas in the SEA, down to about 20 feet depth. Whether it still exists in the SEA is unknown, because its current occurrences are widely scattered and much reduced by overfishing and wasting disease.

- Black abalone (*Haliotis cracherodii*) FE
- Southern steelhead (*Oncorhynchus mykiss irideus)* FE, CSC
- Tidewater goby (*Eucyclogobius newberryi*) FE, SSC
- Western snowy plover (*Charadrius alexandrinus nivosus)* FT, CSC
- California gray whale (*Eschrichtius robustus*) CITES Appendix I

Ecological Transition Areas (ETAs)

There are no ETAs designated within this SEA.

Regional Biological Value

The SEA meets all SEA designation criteria and supports many regional biological values. Each criterion and how it is met is described below.

CRITERIA ANALYSIS OF THE MALIBU COASTLINE SEA

Criterion		Status	Justification
A)	The habitat of core populations of endangered or threatened plant or animal species.	Met	California gray whale, tidewater goby, southern steelhead, western snowy plover, and black abalone, all spend critical periods of their life cycles in this SEA. Other CITES-listed marine mammals also use this SEA.
B)	On a regional basis, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	This area is a relatively undisturbed coastal region where the upwelling of nutrient-rich waters provides for highly productive and extremely diverse marine communities. The area possesses some of the best kelp bed habitat south of Santa Barbara and is recognized as ESHA by NOAA and CDFG. The Malibu coastline section from the Ventura-Los Angeles County line boundary, southeast to Latigo Point is recognized as one of the principal natural areas in the (coastal) State Water Quality Protection Area Program. It is area ASBS-24 (Area of Special Biological Significance). The SEA has critical habitat for the southern steelhead, tidewater goby, and the western snowy plover.
C)	Within the County, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	This relatively undisturbed coastal region possesses some of the best kelp bed habitat south of Santa Barbara and supports the only remaining natural kelp beds off the mainland coast of the County. The kelp beds are recognized as ESHA by NOAA, CDFG, and the Malibu Local Coastal Program. It has critical habitat for the southern steelhead, tidewater goby, and the western snowy plover
D)	Habitat that at some point in the life cycle of a species or group of species, serves as concentrated breeding, feeding, resting, or migrating grounds and is limited in	Met	This area protects the entry point of two of three of the (endangered) southern steelhead spawning streams in the County and provides connective area for the endangered tidewater goby, which breeds in the brackish-water areas of the streams of the Santa Monica Mountains. Kelpbeds are the macroforest of the ocean, and the habitat and breeding and/or spawning ground for many marine animals. The sandy beaches provide feeding areas for many bird species, and the soft substrate offers a repository for eggs and

Criterion		Status	Justification
	availability either regionally or in the County.		nursery grounds for many species. The migration of marine species occur in this area for the California gray whale and for innumerable marine species whose plankton ride the ocean currents.
E)	Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community.	Met	As the main kelp bed of the County, this area is of great interest to marine scientists. It is also an edge kelp forest, separated by the long stretch of beaches of the Santa Monica Bay from the kelp beds of the Palos Verdes Peninsular area.
F)	Areas that would provide for the preservation of relatively undisturbed examples of the original natural biotic communities in the County.	Met	This shoreline remains in essentially a native state as a remnant of what once was typical of rock and adjacent sand shoreline in Southern California. The coastline possesses the only complete, undisturbed sandy beaches remaining in the County. An important microcommunity of decomposers is present. Artificial modifications have been limited to small local areas. West of Point Dume, there is minor pollution; east of Point Dume, there is minor to moderate pollution, and kelp does not grow below 35 feet.

In conclusion, the area is an SEA because it contains: A) the habitat of core populations of endangered and threatened plant and animal species; B-C) biotic communities, vegetative associations, and habitat of plant and animal species that are either unique or are restricted in distribution in the County, or regionally; D) concentrated breeding, feeding, resting, or migrating grounds, which are limited in availability in the County; E) biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community; and F) areas that provide for the preservation of relatively undisturbed examples of original natural biotic communities in the County.

13. Palos Verdes Peninsula and Coastline SEA

Location

General

The Palos Verdes Peninsula and Coastline Significant Ecological Area (SEA) is chiefly located offshore around the Palos Verdes Peninsula, but also includes terrestrial habitat in Portuguese Bend and several other disjunct drainages and ridgelines. All of the many offshore rocks within 12 nautical miles of the coast are part of the California Coastal National Monument that managed by the Bureau of Land Management in the U.S. Department of the Interior. Many endangered marine mammals use this habitat. The SEA includes the inshore part of the Point Vicente State Marine Conservation Area (SMCA) and the Abalone Cove SMCA. Most of the interior Peninsula canyons and slopes are critical habitat for the federally-threatened coastal California gnatcatcher (*Polioptila californica californica*). Many of the interior areas are also critical habitat for the federally-endangered Palos Verde blue butterfly (*Glaucopsyche lygdamus palosverdesensis*). The gnatcatcher favors the coastal sage scrub or chaparral vegetation; the butterfly favors flatter areas with grassland plants of the upper marine terraces, such as Ventura milk-vetch (*Astragalus pycnostachyus* var. *lanosissimus*), which is a

principal food plant for its larvae. The gnatcatcher critical habitat covers virtually all of the terrestrial part of the SEA and extends well beyond the SEA on the Peninsula. The butterfly's critical habitat is chiefly in flatter areas of the marine terraces, but can include broader areas of the canyons.

The SEA is located at least partially in each of the following United States Geological Survey (USGS) 7.5' California Quadrangles: Torrance, San Pedro, and Redondo Beach

General Boundary and Resources Description

Most of the SEA is in the nearshore marine habitat and extends from the high tide line of the beach to about one mile offshore. The designated SEA traverses along the coastline of the Palos Verdes Peninsula from Flat Rock Point at the northern end of Bluff Cove to the west end of the breakwater of Los Angeles Outer Harbor. The terrestrial part of the SEA includes several non-contiguous ravines, canyons and streambeds that are adjacent to rural residential areas. The area known as Portuguese Bend is one of the largest inland areas within the SEA.

The SEA has the inshore part of the Point Vicente SMCA, which extends from mean high tide due east-west to three nautical miles offshore. The Point Vicente SMCA is like a reserve in that no take of any kind is permitted. The western line goes due east-west off an unnamed point about a 0.4 mile north of Point Vicente. The eastern line goes due north-south off Long Point. Adjacent is the Abalone Cove SMCA, which extends from mean high tide to 3 nautical miles offshore, also due north-south. The eastern boundary of the Abalone Cove SMCA extends off Portuguese Point.

Disjunct interior parts of the SEA include: 1) Agua Amarga Canyon, which drains to Lunada Bay (critical habitat for both the Palos Verdes blue butterfly and the coastal California gnatcatcher; 2) an area of coastal sage scrub and bluffs north of Point Vicente; 3) the upper bluff area of chaparral and grassland that is on the northeast side of Pacific Coast Highway at Point Vicente; 4) the beach and cliff area south of Pacific Coast Highway at Abalone Cove, Portuguese Point, Inspiration Point and Portuguese Bend; (5) the unbuildable areas of the Portuguese Bend Landslide, which include grassland, chaparral, and canyons and surround the community of Portuguese Bend on the north side of Pacific Coast Highway, and border the southern side of the community of Rolling Hills; 6) cliffs and headland areas with coastal bluff, coastal chaparral, and grassland extending from the east side of Portuguese Bend to the City of Los Angeles border at the west end of Royal Palms Beach Park; 7) a lobe bordering the switchbacks of Palos Verdes Drive East that connects to the coast and covers the natural cliff, bluff, and chaparral vegetation up to about one mile inland; and 8) the intertidal area on the west side of Point Fermin.

The other disjunct interior parts of the SEA are within the community of Rolling Hills, with numerous natural parts of the canyons and ridges have been too steep to develop. These are designated as part of the SEA because the native vegetation is essential for the native birds and the migrants, which include those that use the Palos Verdes Peninsula as a rest stop and those that overwinter. They include the following canyons, which are on the north side of the Palos Verdes Range crest, and drain to the Los Angeles Basin: 9) Agua Negra Canyon on the west side of Crenshaw Avenue; 10) Agua Magna Canyon; 11) Sepulveda Canyon; 12) Blackwater Canyon, including two upland forks; and 13) George F. Canyon with all three upland forks.

Finally, the remaining disjunct interior parts of the SEA are in the Miraleste district of Rancho Palos Verdes, on the east side of Palos Verdes Drive East, naturally-vegetated canyons trend eastward to the flat area of San Pedro: 14) north of Rockinghorse Road; 15) north of Colt Road; 16) north of Coral Ridge Road; 17) Miraleste Canyon (north of Miraleste Road); and 18) two branches of San Pedro Canyon (south of Via Siena and north of Via Colinta).

The SEA is formed by the Palos Verdes Range, and is characterized by marine terraces atop rough terrain that is created by the erosion of the upland areas into many canyons. The flatter areas on the marine terraces are the areas that have been developed. Unparalleled headlands, rocky shoreline, and the land-sea interface provide for a tremendous variety of biotic resources in this area. It is one of the most biologically diverse and productive regions in the County, and contains several biotic communities, including rocky intertidal, kelp bed, coastal strand, and coastal sage scrub. One small sandy beach is periodically present on an ephemeral basis at Portuguese Bend. This 10 mile stretch of coastline, between Point Fermin and Bluff Cove, is the only sizeable rocky intertidal area in the County.

The Peninsula was once an island before sediments filled the Los Angeles Basin, and it has many biological associations today that originated during the time it was insular. A number of the uncommon plants, for example, are also only known from offshore islands, and some of the bird subspecies on the Peninsula are also only known elsewhere on the offshore islands. They are not found on the mainland except on the Palos Verdes Peninsula.

Rocky shores support a great number of species. This is primarily due to the interface of the ocean and the land, the highly diverse natural communities that both contain, and the oxygen and food-rich environment offered by this habitat. The natural features include a variety of substrates, both stable and unstable, the aeration of water and humidification of the air through wave splash, and the upwelling of nutrient-rich waters along the Southern California coast.

Subtidally, one can find representatives of every phylum of animals (major groupings, such as mollusks, echinoderms, jellyfish, etc.), many of which are not represented on land. Rocky substrates are as diverse as the intertidal areas. Sandy subtidal areas also support a great variety of species, but most are cryptic and submerge into the depths of the sand because of the high energy and unstable nature of their environment.

Kelp beds dominated by giant kelp (*Macrocystis pyrifera*) are an extremely productive habitat that provides food, attachment sites, and shelter for a diverse community of invertebrates, fishes, and sea mammals. They are an important nursery habitat for juvenile fishes. Kelp beds were originally common off the Southern California coast wherever rocks were present at shallow depths. However, due to man-made and natural phenomena, this habitat has been severely diminished in the region, and is now rare in the County. A kelp bed habitat restoration program was begun in the area in the 1960s, and appears to have been successful. Kelp has been reestablished west of Point Fermin, along Abalone Cove, and offshore of Halfway Point. Smaller colonies are now reestablishing at other locations offshore of the southern coast of the Peninsula.

The coastal cliffs found in the area range in elevation from 100 to 300 feet and support coastal sage scrub and coastal strand bluff scrub. These and offshore rocks offer ideal roosting and feeding sites for numerous shorebirds, gulls, and other seabirds, including the fully-protected California brown pelican (*Pelecanus occidentalis californicus*). The area is an important stop for migrating birds as they fly along the coast or across the Santa Monica Bay. In addition, the bluff tops that are now abandoned agricultural fields are utilized by many species as wintering feeding grounds. One fully-protected species, the American peregrine falcon (*Falco peregrinus anatum*), and one very uncommon species of conservation concern, the prairie falcon (*F. mexicanus*), have been known to winter here in recent years.

The bluff tops and cliffs have been disturbed by pedestrian use, residential development, and agriculture. Only very small, isolated ravines remain in a natural state. The shoreline has suffered major biological impairment, commonly blamed on over-collection by humans and intense pollution. The health of the marine environment has been relatively poor due to human influences, such as outfalls

with toxic contents, but appears to be slowly recovering.

Vegetation

Vegetation within the SEA is comprised of several terrestrial plant community types whose makeup is strongly influenced by the marine weather conditions. Coastal sage chaparral scrub occurs on the slopes, and southern willow scrub areas occur in the drainages of several isolated ravines distributed over the top of the peninsula. The immediate coast and cliffs support coastal dune and bluff scrub and coastal sage chaparral scrub. The abandoned agricultural fields and other disturbed areas that have become non-native grasslands provide raptor foraging areas with their populations of native reptiles and mammals.

Agua Amarga Canyon is the last remaining relatively undisturbed drainage on the coastal side of the Palos Verdes Peninsula. The SEA area is protected as a part of the Palos Verdes Peninsula Land Conservancy Preserves. Because of irrigation runoff, Agua Amarga has nearly perennial water. The canyon of Agua Amarga at Lunada Bay is quite spectacular, but not included in the SEA due to development on the coastal bluff adjacent to the descent to the beach. The main canyon has a complex of coastal sage scrub, chaparral, and riparian communities. Three forms of birds resident on the Peninsula that reside in Agua Amarga are insular forms of common birds: the dusky orange-crowned warbler (Vermivora celata ssp. sordida), the Channel Islands flycatcher (*Empidonax difficilis insulicola*, race of the western flycatcher), and Allen's hummingbird (*Selasphorus sasin sedentarius*). The dusky orange-crowned warbler is quite remarkable in that unlike other subspecies of the orange-crowned warbler, it is not a long-distance migrant. The federally-threatened coastal California gnatcatcher is also a resident in this canyon, and has critical habitat extending to the edge of the marine terrace bluff at the coast. Additionally, the canyon is critical habitat for the Palos Verdes blue butterfly. Vegetation also has insular forms. For example, the Catalina Island cherry (*Prunus ilicifolia* ssp. *lyonii*) and the southern island mallow (*Lavatera assurgentiflora* ssp. *glabra*) occur in the canyon. These animals and plants probably occur in all or many of the other terrestrial parts of the SEA as well.

Plant species observed or recorded in previous documentation within the SEA are indicated in the *Comprehensive Floral & Faunal Compendium of the Los Angeles County SEAs.* Sensitive plant species and plant communities occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources section.

Descriptions and general locations of the each plant community present within the SEA are given below.

Coastal Bluff and Dune Scrub: Found close to the ocean where the substrate consists of fine, sandy soil that dries rapidly. In the SEA, it is limited to small sections of coastal strand and bluffs. Plants typical of the dune scrub include dune buckwheat (*Eriogonum parvifolium*), rattle pod (*Astragalus trichopodus* var. *lonchus*), bladderpod (*Peritoma arborea*), deer weed (*Acmispon glaber*), sawtooth goldenbush (*Hazardia aquarrosa*), and California sunflower (*Helianthus californicus*).

Corresponding MCV communities:

- *Baccharis pilularis* (coyote brush scrub) Shrubland Alliance
- *Lupinus arboreus* (yellow bush lupine scrub) Shrubland Alliance and Semi-Natural Shrubland Stands
- *Lupinus chamissonis-Ericameria ericoides* (silver dune lupine–mock heather scrub) Shrubland Alliance

Coastal Sage Chaparral Scrub: Consists of drought-deciduous, low, soft-leafed shrubs and herbs on gentle to steep slopes below 1,500 feet in elevation. This community is dominated by California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), black sage (*Salvia mellifera*), purple sage (*Salvia leucophylla*), and California brittle bush (*Encelia californica*). Coastal sage scrub is distributed throughout the SEA on the slopes of the isolated areas inland from the coast and on the coastal cliffs.

Corresponding MCV communities:

- *Artemisia californica* (California sagebrush scrub) Shrubland Alliance
- *Artemisia californica-Eriogonum fasciculatum* (California sagebrush-California buckwheat scrub) Shrubland Alliance
- *Encelia californica* (California brittle bush scrub) Shrubland Alliance
- *Diplacus* [*Mimulus*] *aurantiacus* (bush monkeyflower scrub) Shrubland Alliance
- *Salvia leucophylla* (purple sage scrub) Shrubland Alliance
- *Salvia mellifera* (black sage scrub) Shrubland Alliance
- *Eriogonum cinereum* (ashy buckwheat scrub) Shrubland Alliance
- *Eriogonum fasciculatum* (California buckwheat scrub) Shrubland Alliance
- *Hazardia squarrosa* (sawtooth golden bush scrub) Shrubland Alliance
- *Isocoma menziesii* (Menzie's golden bush scrub) Shrubland Alliance
- *Lotus scoparius* [*Acmispon glaber*] (deer weed scrub) Shrubland Alliance
- *Lupinus albifrons* (silver bush lupine scrub) Shrubland Alliance

Southern Willow Scrub: A riparian community consisting of dense, broad-leafed, winter-deciduous riparian thickets occurring within and adjacent to watercourses. The dominant species of this community within the SEA are willows (*Salix* spp.), with lesser amounts of mulefat (*Baccharis salicifolia*). This community occurs in segments along portions of the drainages and streambeds of isolated sites inland from the shoreline.

Corresponding MCV communities:

- *Salix exigua* (sandbar willow thickets) Shrubland Alliance
- *Salix gooddingii* (black willow thickets) Shrubland Alliance
- *Salix lasiolepis* (arroyo willow thickets) Shrubland Alliance

Non-Native Grassland: Consists of dominant invasive annual grasses that are primarily of Mediterranean origin. Dominant species found within this community include wild oat (*Avena fatua*), slender oat (*Avena barbata*), red brome (*Bromus madritensis* ssp. *rubens*), ripgut brome (*Bromus diandrus*), and herbs, such as black mustard (*Brassica nigra*) and wild radish (*Raphanus raphanistrum*). Non-native grasslands are located in small to large patches throughout the SEA in previously disturbed areas, former agricultural and cattle pastures.

Corresponding MCV communities:

- *Avena* (*barbata*, *fatua*) Semi-Natural Herbaceous Stands
- *Brassica* (*nigra*) and other mustards Semi-Natural Herbaceous Stands
- *Bromus* (*diandrus*, *hordeaceus*)-*Brachypodium distachyon* Semi-Natural Herbaceous Stands
- *Bromus rubens-Schismus* (*arabicus, barbatus*) ([*Bromus madritensis* ssp. *rubens*] red brome or Mediterranean grass grasslands) Semi-Natural Herbaceous Stands
- *Lolium perenne* [*Festuca perennis*] (perennial rye grass fields) Semi-Natural Herbaceous

Stands

Disturbed or Barren Areas: Areas that either completely lack vegetation or are dominated by ruderal species. Ruderal vegetation typically found within the SEA includes non-native grasses and a high proportion of weedy species, including black mustard and thistle species. Several disturbed areas are scattered throughout the SEA.

Corresponding MCV communities:

No corresponding MCV communities at this time

Intertidal and Subtidal Algal Habitats: Common in tidepools and on rocky subtidal substrate down to the macro-alga photosynthetic depth, which varies with water turbidity that is characteristic of the region. This habitat has representatives from all the phyla of algae, and it has not been characterized in the MCV manner. A common large brown alga observed at the tidepools of Point Fermin is feather-boa kelp (*Egregia menziesii*).

Community dominant plant:

- Feather-boa kelp (*Egregia menziesii*)

Surfgrass and Eelgrass Habitats: Characterized by two flowering plants that resemble grass and form dense beds on different substrates and in different conditions. Both types form highly productive habitats for unique assemblages of marine species. NOAA Fisheries and the CDFG consider surfgrass and eelgrass as valuable habitats that should be protected. Surfgrass occurs from Mean Lower Low Water (MLLW) to about 25 foot depth on rocky substrate. Locations known to support substantial surfgrass beds include rocky points and rocky subtidal areas of canyons all along the northern border of the SEA. Eelgrass grows on soft substrate and typically occurs in bays. A form of eelgrass (thought to be *Zostera pacifica)* is found on open coast sand bottom. Eelgrass is an important habitat that supports a community of diverse species from sessile to mobile invertebrates and certain fishes, such as pipefish.

Community dominant plant:

- *Phyllospadix scouleri*, or Scouler's surf grass and *P. torrey* or Torrey's surfgrass
- *Zostera pacifica* (eelgrass)

Kelp Forest Habitat Giant Kelp Beds: Can form to a depth of approximately 99 feet in the ocean. The kelp beds are part of a productive habitat that provide food, attachment sites and shelter for invertebrates and fishes. Giant kelp, the dominant alga of this community, is the fastest lengthening organism known, and it really thrives in nutrient-enriched waters of upwelling. It has been "clocked" at two feet per day extension of its stipe and blades. The kelp beds are an important nursery habitat and recruitment area for juvenile fishes and invertebrates. The Fisheries National Oceanographic and Atmospheric Administration (NOAA) Fisheries, as well as the CDFG consider kelp beds as sensitive.

Community dominant plant:

- *Macrocystis pyrifera* (giant kelp)

Marine Resources

The Palos Verdes coastline is a region where the upwelling of nutrient-rich waters offers a variety of habitats that supports highly productive and extremely diverse marine and coastal communities. Man-made disturbances have seriously diminished the quality and extent of unaffected marine habitats. Today, the SEA possesses limited areas of kelp bed habitats. A kelp bed restoration program begun in the 1960s has apparently succeeded in these areas, and kelp has been reestablished off Point Fermin, in Abalone Cove and offshore of Halfway Point.

Intertidal Zone Habitats: Consist of a variety of coastal habitats periodically covered and uncovered by waves and tides. The rocky shores support a rich assortment of plants and animals including green, brown and red algae. A wide variety of invertebrates compete for space with the plants in this habitat. Mobile invertebrates, such as crabs and snails can be found in great abundance. Fishes are limited to tidepools during high tide, while shorebirds actively forage during low tide. The black abalone (*Haliotis cracherodii*) is a federally-endangered species and critically endangered species of the International Union for Conservation of Nature–Red List (IUCN). At one time, the black abalone was plentiful in the rocky intertidal and nearshore rocky subtidal areas in the SEA down to about 20 feet depth. Whether it still exists in the SEA is unknown, because its current occurrences are widely scattered and much reduced by overfishing and wasting disease.

Nearshore Subtidal Habitat: Includes those marine habitats ranging from the lower level of the intertidal zone to 99 feet. This region supports a variety of assemblages of invertebrates and fishes, and along the coastline of the SEA this habitat is dominated by giant kelp.

Kelp Forest Habitat: Kelp beds dominated by giant kelp are found in some locations in the area. These have tremendous value to the biota of nearshore areas. Where they occur, they may locally account for 90% of the biomass, providing structure and structural complexity for their community from the rocky base through the water column to the surface. Giant kelp is the fastest lengthening organism known, and it thrives in nutrient-enriched waters of upwelling. The giant kelp provides food and habitat for hundreds of species and all the phyla. The kelp beds are an important nursery habitat and recruitment area for juvenile fishes and invertebrates. Many of the species that this habitat supports are the basic components of the food chains of nearshore fishes. Kelp beds are also important because they reduce wave shock to shorelines. This protection helps maintain the abundance and complexity of the marine life found there.

Marine Habitat: Has the greatest diversity of wildlife, with representatives from nearly all the phyla (major groupings of animals, such as jellyfish, mollusks, echinoderms, etc.) and all parts of the food web (trophic levels) for several communities. Many of the marine phyla do not have terrestrial representatives. Some of the vertebrates, such as gray whales, and the plankton use the area as a migratory corridor. The major vegetation communities, each with its own great diversity and all trophic levels, are the benthic algae of rocky substrates, the kelp beds based on giant kelp holding onto rocky subtidal substrate and extending into the water column, and the planktonic, which are based on photosynthesizers that are microscopic and are throughout the water column in photosynthetic depths.

Wildlife

The wildlife found in the SEA is dependent upon the two basic regimes: marine and terrestrial. The shoreline and bluffs that overlook the coastal sections are homes and migratory rest areas for a wide variety of birds and marine life. The interior grasslands and ravines have a very different assemblage than the coast. Some of the SEA areas are separate and isolated from one another and probably

suffer from the effects of the fragmentation of a larger, more contiguous ecosystem, and exhibiting a reduced number of species from what might be expected.

The mountainous Palos Verdes Peninsula juts out into the Pacific Ocean, relative to developed coastline to the north and south and offers many undisturbed habitats for marine and shorebirds. These and offshore rocks offer ideal roosting and feeding sites for numerous birds that affiliated with the coastline. The area is an important stop for migrating birds as they fly along the coast or across the Santa Monica Bay. In addition, the bluff tops and marine terraces, which are now either residences or abandoned agricultural fields, are utilized by many species in winter as feeding grounds. One fully protected species, the American peregrine falcon, and one uncommon species of conservation concern, the prairie falcon, have been known to winter here in recent years.

All wildlife species previously recorded, as well as those expected to occur, within the SEA are indicated in the *Comprehensive Floral & Faunal Compendium* of the *Los Angeles County SEAs*. Sensitive wildlife species occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources section.

Wildlife Movement

The SEA is on the Pacific Flyway migration route, which is used by many birds seasonally and plays an important role as a stopover because of its extensive undisturbed marine resources. It does not fall within any identified terrestrial movement routes for wildlife because it is isolated by the ocean on one side, and enclosed by miles of developed land on the remaining terrestrial sides.

The offshore major part of the SEA is on the annual migration route of the California gray whale (*Eschrichtius robustus*), which is a Convention on International Trade in Endangered Species (CITES) Appendix I animal. This means that they have endangered status, and no trade or harvest is permitted, except by strictly controlled export and import permits that are issued in countries that are party to the convention and have legislation of adoption, which includes the U.S. The gray whale migrates close to shore on its transit during the winter months, from the Bering Sea to lagoons of Baja California for calving and breeding. A whale count station is manned by volunteers at the Point Vicente Park and Interpretive Center that has yearly records, starting in 1979. The whales generally return north offshore. The area may be a migration corridor for other marine animals, as this is part of the great Southern California Bight, which has an eddy circling counterclockwise to the north off the southward flow of the California Current. This flow brings marine organisms (fishes, invertebrates, and plants) that may have major population concentrations in the south to this part of the ocean habitat. Most of these organisms have a planktonic stage that is dependent on the current system to maintain their populations and distribution. Pollution of the ocean waters by development on land will have significant effects that may not be appreciated immediately because of the cryptic nature of subtidal animals and plants.

Other Cites Appendix I mammals have been recorded as using the SEA in the Point Vicente records including: sperm whales (*Physeter macrocephalus*), minke whales (*Balaenoptera acutorostrata*), humpback whales (*Megaptera novaeangliae*), blue whales (*Balaenoptera musculus*), fin whales (*Balaenoptera physalus*), and southern sea otters (*Enhydra lutris nereis*).

Sensitive Biological Resources

Sensitive biological resources are habitats or individual species that have special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, and/or rare. This is due to the species' declining or limited population sizes, which usually results from

habitat loss. Watch lists of such resources are maintained by the California Department of Fish and Game (CDFG), the United States Fish and Wildlife Service (USFWS), and special groups, such as the California Native Plant Society (CNPS). The following sections indicate the habitats as well as plant and animal species present, or potentially present within the SEA, which have been accorded special recognition. When species are federally-listed as endangered or threatened, they often have federally-designated, geographically-specific "critical habitat areas." Critical habitat areas, after extensive study by experts, are judged to be essential to conservation and maintenance of the species. The terrestrial parts of this SEA are virtually all critical habitat for the coastal California gnatcatcher. Many of the broader canyons and marine terrace bluff areas are also critical habitat for the Palos Verdes blue butterfly.

Sensitive Plant Communities and Habitats

The SEA supports several habitat types considered sensitive by resource agencies. These are inventoried by California Department of Fish and Game (CDFG) in the California Natural Diversity Database (CNDDB) [2011]. The CNDDB includes state and federally-listed endangered, threatened, and rare vascular plants, as well as several sensitive vertebrate species. These communities include silver dune lupine–mock heather scrub, California brittle bush scrub, bush monkeyflower scrub, ashy buckwheat scrub, Menzie's golden bush scrub, and black willow thickets, which occur in the SEA. These communities, or closely related designations, are considered high priority communities by the CDFG, which indicates that they are experiencing a decline throughout their range. The array and composition of these communities has been discussed in the Vegetation section. Changes to the classification system mentioned earlier, in some cases divide plant communities into many possible vegetation alliances, not all of which may be considered sensitive. For the purposes here previously listed communities with at least one sensitive alliance in the new format have been listed.

Sensitive Plant Species

The statuses of rare plants are hierarchically categorized by the CNPS using a rank and decimal system. The initial category level of Rare Plant Rank is indicated by the ranks 1A (presumed extinct in California), 1B (rare or endangered in California and elsewhere), 2 (rare or endangered in California but more common elsewhere), 3 (more information needed, a review list), and 4 (limited distribution). In cases where the CNPS has further identified the specific threat to the species, a decimal or Threat Code is added: .1 (seriously endangered in California), .2 (fairly endangered in California), or .3 (not very endangered in California).

The following special-status plant taxa have been reported or have the potential to occur within the SEA, based on known habitat requirements and geographic range information:

- Aphanisma (*Aphanisma blitoides*) RPR 1B.1
- Ventura marsh milk-vetch (*Astragalus pycnostachyus* var. *lanosissimus*) FE, SE, RPR 1B.1
- Coastal dunes milk-vetch (*Astragalus tener* var. *titi*) FE, SE, RPR 1B.1
- Coulter's saltbush (*Atriplex coulteri*) RPR 1B.2
- South Coast saltscale (*Atriplex pacifica*) RPR 1B.2
- Parish's brittlescale (*Atriplex parishii*) RPR 1B.1
- Davidson's saltscale (*Atriplex serenana* var. *davidsonii*) RPR 1B.2
- Southern tarplant (*Centromadia parryi* ssp. *australis*) RPR 1B.1
- Orcutt's pincushion (*Chaenactis glabriuscula* var. *orcuttiana*) RPR 1B.1
- Coastal goosefoot (*Chenopodium littoreum*) RPR 1B.2
- Catalina crossosoma (*Crossosoma californicum*) RPR 1B.2

- Beach spectaclepod (*Dithyrea maritima*) ST, RPR 1B.1
- Many-stemmed dudleya (*Dudleya multicaulis*) RPR 1B.2
- Island green dudleya (*Dudleya virens* ssp. *insularis*) RPR 1B.2
- Southern island mallow (*Lavatera assurgentiflora* ssp. *glabra*) RPR 1B.1
- Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*) RPR 1B.1
- Santa Catalina Island desert-thorn (*Lycium brevipes* var. *hassei*) RPR 1B.1
- Coast woolly-heads (*Nemacaulis denudata* var. *denudata*) RPR 1B.2
- South coast branching phacelia (*Phacelia ramosissima* var. *austrolitoralis*) RPR 4.2
- Brand's star phacelia (*Phacelia stellaris*) FC, RPR 1B.1

Sensitive Animal Species

The following special-status animal species are reported or are likely to be present within the SEA based on habitat requirements and known range attributes:

- Belkin's dune tabanid fly (*Brennania belkini*) CDFG Special Animals List
- Busck's gallmoth (*Carolella busckana*) CDFG Special Animals List
- Sandy beach tiger beetle (*Cicindela hirticollis gravida*) CDFG Special Animals List
- Western beach tiger beetle (*Cicindela latesignata latesignata*) CDFG Special Animals List
- Senile tiger beetle (*Cicindela senilis frosti*) CDFG Special Animals List
- Globose dune beetle (*Coelus globosus*) CDFG Special Animals List
- Monarch butterfly (*Danaus plexippus*) CDFG Special Animals List
- Henne's eucosman moth (*Eucosma hennei*) CDFG Special Animals List
- El Segundo blue butterfly (*Euphilotes battoides allyni*) FE, Xerces: Critical
- Palos Verdes blue butterfly (*Glaucopsyche lygdamus palosverdesensis*) FE, Xerces: Critical
- Lange's El Segundo Dune weevil (*Onychobaris langei*) CDFG Special Animals List
- Wandering skipper (*Panoquina errans*) CDFG Special Animals List
- Dorothy's El Segundo Dune weevil (*Trigonoscuta dorothea dorothea*) CDFG Special Animals List
- Black abalone (*Haliotis cracherodii*) FE
- Silvery legless lizard (*Anniella pulchra pulchra*) FSS, SSC
- Coast horned lizard (*Phrynosoma blainvillii*) BLMS, FSS, SSC
- Western snowy plover (*Charadrius alexandrinus nivosus*) FT, BCC, SSC, ABC, AWL, USBC
- Southwestern willow flycatcher (*Empidonax traillii extimus*) FE, FSS, SE, USBC, AWL, ABC
- California black rail (*Laterallus jamaicensis coturniculus*) BCC, ST, CDFG Fully Protected, USBC, AWL, ABC
- California brown pelican (*Pelecanus occidentalis californicus*) FE, SE
- Coastal California gnatcatcher (*Polioptila californica californica*) FT, SSC, USBC, AWL, ABC
- California least tern (*Sternula antillarum browni*) FE, SE, CDFG Fully Protected, USBC, ABC
- Western mastiff bat (*Eumops perotis californicus*) BLMS, SSC, WBWG High
- Silver-haired bat (*Lasionycteris noctivagans*) WBWG Medium
- San Diego desert woodrat (*Neotoma lepida intermedia*) SSC
- Pocketed free-tailed bat (*Nyctinomops femorosaccus*) SSC, WBWG Medium
- Big free-tailed bat (*Nyctinomops macrotis*) SSC, WBWG Medium-High
- Pacific pocket mouse (*Perognathus longimembris pacificus*) FE, SSC
- American badger (*Taxidea taxus*) SSC
- Minke whale (*Balaenoptera acutorostrata*) CITES Appendix I, IUCN least concern
- Blue whale (*Balaenoptera musculus*) CITES Appendix I, IUCN endangered

- Fin whale (*Balaenoptera physalus*) CITES Appendix I, IUCN endangered
- Southern sea otter (*Enhydra lutris nereis*) CITES Appendix I, IUCN endangered
- California gray whale (*Eschrichtius robustus*) CITES Appendix I, FE, IUCN critically endangered
- Humpback whale (*Megaptera novaeangliae*) CITES Appendix I, IUCN least concern
- Northern elephant seal (*Mirounga angustirostris*) CDFG Fully protected
- Sperm whale (*Physeter macrocephalus*) CITES Appendix I, IUCN vulnerable

The Palos Verdes blue butterfly is found in only within the County. The El Segundo blue butterfly is listed as federally-endangered and is currently known from a few areas on the Peninsula. Additional suitable habitat is found in the SEA, and the hope is that the one population can expand. The federally-threatened coastal California gnatcatcher occurs in the coastal sage scrub of the Peninsula, both in and outside of the SEA. The California least tern feeds in the near offshore areas, may visit the beaches, and may rest on the cliff and headland areas in the SEA. In addition, the silvery legless lizard and coast horned lizard, both state species of special concern, have the potential to occur in the SEA.

Ecological Transition Areas (ETAs)

There are no ETAs designated within this SEA.

Regional Biological Value

The SEA meets all SEA designation criteria and supports many regional biological values. Each criterion and how it is met is described below.

CRITERIA ANALYSIS OF THE PALOS VERDES PENINSULA AND COASTLINE SEA

Criterion		Status	Justification
A)	The habitat of core populations of endangered or threatened plant or animal species.	Met	The Palos Verdes Peninsula is the western-most area of breeding for the threatened coastal California gnatcatcher. The headlands and rocky shoreline provide wintering habitat for two important birds: the fully protected California brown pelican and the state-fully protected American peregrine falcon. The canyons of the SEA support three races of birds that are residents only on the Peninsula and the Channel Islands: insular forms of the orange-crowned warbler, western flycatcher, and Allen's hummingbird. Rare plants, such as southern island mallow t, make this area a very special mainland population for species that otherwise occur only on the offshore islands. Island green dudleya, a rare bluff plant known only from Palos Verdes Peninsula, Santa Catalina Island, and San Nicolas Island, occurs in the Portuguese Bend Landslide.
B)	On a regional basis, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	Unparalleled headlands, rocky shoreline, and the land-sea interface provide for a tremendous variety of biotic resources in the coastline area. Rocky shores support a great number of species, and the upwelling of deep waters provides nutrient-rich waters for the area's kelp

			beds, which are dominated by giant kelp. Kelp beds were formerly common off the Southern California coast wherever rocks were present at shallow depths. However, due to man-made and natural phenomena, this habitat has been severely diminished in the region. The mainland SEA areas contain mainland populations of species that occur chiefly on the offshore Channel Islands. Any population characteristic of an island is of extremely restricted regional distribution.
C)	Within the County, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution	Met	Kelp beds are now rare in the County. These algal communities can account for 90% of the biomass where they occur, and provide food and habitat for hundreds of species. Like terrestrial forests, they moderate the microclimate, reduce wave shock to shorelines and provide shade and shelter to their myriad denizens. The coastal cliffs support coastal sage and coastal strand vegetation, which are rare in Los Angeles because of the scarcity of rocky headlands. The Peninsula's former island status and current maintenance of mainland populations of species that occur chiefly on the offshore Channel Islands are very special. Any population characteristic of an island is of extremely restricted distribution in the County.
D)	Habitat that at some point in the life cycle of a species or group of species, serves as concentrated breeding, feeding, resting, or migrating grounds and is limited in availability either regionally or in the County.	Met	The coastal cliffs provide ideal roosting and feeding sites for numerous shorebirds, gulls, and other seabirds, including the fully-protected California brown pelican. This headland is a principal rest-stop for migrating terrestrial and marine birds on the Pacific Flyway and a wintering area for some migrants. Bluff tops and marine terraces of abandoned agricultural fields are utilized by many species as winter feeding grounds. The Palos Verde Peninsula is the western-most area of breeding for the federally-threatened coastal California gnatcatcher. It has numerous plant and animal species that only occur here and otherwise on the offshore islands, so this is a special area for all phases of their life cycles. The marine area is an important migration area for all of the sealife and marine mammals.
E)	Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community.	Met	Much scientific and educational work has been done on this part of the coastline. State and county agencies have generated a great deal of information about the area. The Peninsula was once an island and has biotic characteristics more like the offshore Channel Islands than the rest of the County. It is an anomaly of an island now attached to the mainland, and thus interesting for biogeographic studies. The Peninsula canyons are the western-most area of breeding coastal California gnatcatchers. Because of the resident birds and plants that occur only on the Palos Verdes Peninsula and the Channel Islands, this area is of scientific interest for study of island biogeography and evolutionary ecology.
F)	Areas that would provide for the preservation of relatively undisturbed	Met	As the only extensive (10 miles long) rocky intertidal shoreline in the County, the coastline is an important

	examples of the original natural biotic communities in the County.		area for preserving its intense biodiversity. It has headlands, rocky shoreline cliffs, rocky intertidal areas, boulder field intertidal areas, kelp beds, coastal strand, ephemeral coastal strand, and coastal sage scrub. The bluffs have a special array of plants found nowhere else on the County mainland. The Peninsula has diverse communities typical of the offshore Channel Islands including coastal sage scrub (which is used by the mainland threatened bird, coastal California gnatcatcher), chaparral, and riparian habitats. The SEA canyons are the least disturbed coastal drainages of the County.

In conclusion, the area is an SEA because it contains: A) the habitat of core populations of endangered and threatened plant and animal species; B-C) biotic communities, vegetative associations, and habitat of plant and animal species that are either unique or are restricted in distribution in the County and regionally; D) concentrated breeding, feeding, resting, and migrating grounds, which are limited in availability in the County; E) biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community; and F) areas that provide for the preservation of relatively undisturbed examples of original natural biotic communities in the County.

14. Point Dume SEA

Location

General

The Point Dume Significant Ecological Area (SEA) is located on the Malibu coastline and forms the northern end of Santa Monica Bay. Zuma Beach lies to the immediate northwest. Paradise Cove is just east. The SEA is important as a headland on the Pacific Flyway, for its nearby marine and its terrestrial habitats, and for critical habitat of the western snowy plover.

The SEA is located in the Point Dume United States Geological Survey (USGS) 7.5' California Quadrangle.

General Boundary and Resources Description

This headland extends into Santa Monica Bay more than a mile beyond the rest of the Malibu coast, and it is located within the Pacific Flyway. The SEA consists of the rocky coastal headland edge and six fingers extending into the interior canyons on the headland. Point Dume is a significant headland used during migration times on the Pacific Flyway. Point Dume is the southernmost habitat for coastal cliff flora such as the giant coreopsis (*Leptosyne gigantea*) and sea-lettuce (*Dudleya caespitosa)*. The SEA is contiguous with the Malibu Coastline SEA, which has notable tidepools with rich marine habitat on the eastern side of Point Dume. Southern California is known for its extensive sandy beaches, so Point Dume, which is one of very few places with rocky intertidal habitat between Palos Verdes Peninsula and the middle coastline of Ventura County, is a rare habitat in the County. The limited public access, the coastal strand vegetation, and the canyon slopes covered by Venturan coastal sage scrub, protect the resource values of this headland, both terrestrial and marine. The terrestrial and marine habitats combined make Point Dume an exceptional and unique SEA. The Marine Life Protection Act designated protected area in Malibu to be the Point Dume State Marine Conservation Area (SMCA) between El Matador State Beach west of Point Dume to the west side of

Point Dume (east end of Zuma Beach), approximately a three-mile coastline. In the Conservation area, take is limited to certain designated fish and squid species for a distance of three nautical miles proceeding due north-south out from the shore. Adjacent, from the west side of Point Dume to the east side of Point Dume at Paradise Cove is designated as the Point Dume State Marine Reserve (SMR), with no take extending to three nautical miles offshore. This includes very fine tidepools on the east side.

Point Dume is one of two remaining areas in the County where a diverse and healthy mixture of terrestrial and marine habitats can be found in close association. Point Dume incorporates the terrestrial habitats: the interior canyons, the unprotected rocky shore with numerous small caves, and the sandy beach pockets; and the Malibu Coastline SEA has the marine habitats that are adjacent: outlying reefs, rocks, kelp beds, and tide pools. The tide pools off of Point Dume are some of the very best remaining in the County. Due to strong upwelling along the coast bringing in nutrient-rich waters, the nearby marine habitat is characterized by highly diverse and productive marine communities. This relative healthiness of both the terrestrial and marine habitats is largely due to limited public access, which has protected the fragile marine and shoreline ecosystems.

Coastal strand vegetation is found on sandy beaches below bluffs that rise 100 to 200 feet above the coast. Giant coreopsis (*Leptosyne gigantea)* and sea-lettuce (*Dudleya caespitosa*) are found in these communities at the southern limit of their range. Several small drainages cut through the bluffs and extend over a mile inland. The slopes are covered by Venturan coastal sage scrub. The value of these communities is increased by the unique geographic position of Point Dume. The area is an important resting and jumping-off point for migratory birds. Without the remaining terrestrial habitats, this refuge would be lost.

The SEA will have critical habitat for the federally-threatened western snowy plover (*Charadrius alexandrinus nivosus*). Currently this critical habitat goes eastward from Trancas Beach, along Zuma Beach, and extends to the northwest sandy area along Point Dume. The plovers use the west sandy habitat of the Point Dume headland, and the critical habitat will eventually extend along the entire west side of the headland into the SEA. (The western snowy plover will also have critical habitat on the seaside of the barrier berm of the Malibu Lagoon.) The snowy plover has over 300 individuals using the beaches of the County for winter roosts, and there is potential for some to over-summer and breed in the County after a hiatus of many decades (Ryan Ecological Consulting, 2010).

Vegetation

Vegetation within the SEA is comprised of several community types. Coastal strand vegetation occurs along the immediate shore and on the cliffs and bluffs, overlooking the ocean coastal dune, and bluff scrub also can be found. In the ravines and upper slopes examples of Venturan coastal sage scrub intergrade with maritime succulent scrub. This is a type of coastal sage scrub, defined by the unusual giant coreopsis, which is found in some of the less disturbed areas of the SEA. Sensitive plant species and plant communities occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources section.

Coastal Strand Vegetation: A community that occurs in the loose sand just above the high-tide line of the coast. This community is characterized by low species diversity because few plants can tolerate the harsh conditions on this dry, sandy, saline soil of high winds, salt spray and high summer temperatures.

Corresponding MCV communities:

- *Abronia latifolia – Ambrosia* spp. (dune mat) Herbaceous Alliance
- *Cakile (edentula, maritima)* (sea rocket stands) Semi-Natural Provisional Herbaceous Alliance

Coastal Bluff and Dune Scrub: Found on the cliffs and bluffs overlooking the ocean. This community formerly was found in many places along the coast, but is now restricted to a few locations. The system consists of fine, sandy soil that dries rapidly. Plants typical of the dune scrub include dune buckwheat, rattle-pod, bladderpod, deer weed, sawtooth goldenbush, and California sunflower.

Corresponding MCV communities:

- *Baccharis pilularis* (coyote brush scrub) Shrubland Alliance
- *Lupinus arboreus* (yellow bush lupine scrub) Shrubland Alliance and Semi-Natural Shrubland Stands
- *Lupinus chamissonis-Ericameria ericoides* (silver dune lupine–mock heather scrub) Shrubland Alliance

Venturan Coastal Sage Scrub: Characterized by the summer drought-deciduous vegetation found near the Southern California coast south of Ventura. It has low, mostly soft-woody shrubs with bare ground underneath and between shrubs. This community is dominated by California sagebrush, California buckwheat, black sage, purple sage, and California encelia.

Corresponding MCV communities:

- *Artemisia californica* (California sagebrush scrub) Shrubland Alliance
- *Artemisia californica-Salvia mellifera* (California sagebrush-black sage scrub) Shrubland Alliance
- *Artemisia californica-Eriogonum fasciculatum* (California sagebrush-California buckwheat scrub) Shrubland Alliance
- *Encelia californica* (California brittle bush scrub) Shrubland Alliance
- *Salvia apiana* (white sage scrub)Shrubland Alliance
- *Salvia leucophylla* (purple sage scrub) Shrubland Alliance
- *Salvia mellifera* (black sage scrub) Shrubland Alliance
- *Eriogonum fasciculatum* (California buckwheat scrub) Shrubland Alliance
- *Hazardia squarrosa* (sawtooth golden bush scrub) Shrubland Alliance
- *Lotus scoparius* ([*Acmispon glaber*] deer weed scrub) Shrubland Alliance
- *Lupinus albifrons* (silver-bush lupine scrub) Shrubland Alliance
- *Malacothamnus fasciculatus* (bush mallow scrub) Shrubland Alliance

Maritime Succulent Scrub: A form of coastal sage scrub with many members of that community, as well as one or more endemic succulent evergreen species. Examples of this can be found throughout the SEA.

Corresponding MCV communities:

- *Leptosyne gigantea* (giant coreopsis scrub) Shrubland Alliance
- *Opuntia littoralis* (coast prickly-pear scrub) Shrubland Alliance
- *Lycium californicum* (desert thorn scrub) Provisional Shrubland Alliance

Marine Resources

The Malibu coastline is a relatively undisturbed coastal region where upwelling of nutrient-rich waters and a variety of habitats support highly productive and extremely diverse marine communities. The terrestrial habitat (here the Point Dume headland) and the marine habitats are integrally tied to one another. Disruption in one will impact the other. The marine habitats feed the seabirds that use the headland, and marine organisms, such as the grunion (fish, *Leuresthes tenuis)* use the sandy shore for spawning. The headland protects the nearshore habitats and controls and filters runoff so that the offshore habitats remain clean and have the terrestrial input of nutrients for which they are adapted. The nearby areas in the Malibu Coastline SEA possesses some of the best kelp bed habitat south of Santa Barbara, and the only remaining natural kelp beds on the mainland coast of the County. Rocky outcrops alternate with sandy stretches along this coastline and are found to a depth of 600 feet. The Point Dume headland typifies the alternating sand and rock on several scales. The Malibu coastline possesses the only complete, undisturbed sandy beaches remaining in the County. The west side of the headland has critical habitat for the snowy plover.

Intertidal Zone Habitats: Consist of a variety of coastal habitats that are periodically covered and uncovered by waves and tides. The rocky shores support a rich assortment of plants and animals including green, brown, and red algae. A wide variety of sessile invertebrates compete for space with the plants in this habitat. Mobile invertebrates, such as crabs and snails, can be found in great abundance. Fishes are chiefly limited to tidepools during high tide. (Grunion spawn on the high-tide areas of the sandy beach.) There is a community of small and microscopic organisms adapted to the interstices of the sand grains of the beach. Shorebirds actively forage in both rocky and sand areas during low tide. The rocky tidepools adjacent to the SEA on its east side are some of the finest remaining in the County. They are in the Malibu Coastline SEA and the Point Dume State Marine Reserve—no take of any kind is permitted.

Nearshore Subtidal Habitat: The Malibu Coastline SEA has many interactions with the biota of the SEA. Marine habitats include the rocky substrate of the lower level of the intertidal zone on the east side of Point Dume, to subtidal rocky areas that support a great diversity of invertebrates and fishes. Near the SEA this habitat is frequently dominated by giant kelp. The sandy offshore habitat on the west side of Point Dume has a wonderful variety of sand-adapted organisms, ranging from fishes to seastars, to many kinds of jellyfish, mollusks, and other invertebrates.

Kelp Forest Habitat: Giant kelp beds are located down to a depth of approximately 99 feet in the ocean surrounding Point Dume in the Malibu Coastline SEA. The kelp beds are part of one of the temperate zone's most productive habitats, by providing food, attachment sites and shelter for invertebrates and fishes. It is a supremely important nursery and recruitment habitat for juvenile fishes and invertebrates, and an important feeding area for seabirds that use Point Dume for roosting.

Wildlife

The wildlife found in the SEA is dependent upon the two basic regimes found there: marine and terrestrial. The shoreline and bluffs overlooking the coastal sections are home to or visited by a wide variety of shorebirds, migrating birds and marine life. The interior grasslands and ravines have a very different assemblage than other nearby coastal areas. The SEA ravines are separate and isolated from one another. They exhibit a reduced number of animal species than otherwise might be expected and probably suffer from the effects of fragmentation of a larger, more contiguous ecosystem.

Point Dume is a peninsula that projects its rocky cliff sides out into the Pacific Ocean relative to low bluffs and beaches to the east and west that are heavily impacted by human activity. Point Dume offers a variety of undisturbed habitats for marine and shorebirds. These cliffs and offshore rocks offer ideal roosting and feeding sites for numerous shorebirds, gulls, and other seabirds.

All wildlife species previously recorded, as well as those expected to occur, within the SEA are indicated in the *Comprehensive Floral & Faunal Compendium* of the *Los Angeles County SEA Update Study 2000 Background Report*. Sensitive wildlife species occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources section.

Wildlife Movement

The SEA is on the Pacific Flyway migration route used by many birds seasonally. It plays an important role as a stopover because of its extensive undisturbed marine resources. Point Dume does not fall within any identified terrestrial movement routes for wildlife because it is isolated by the ocean on one side, and miles of developed land on the remaining sides.

Sensitive Biological Resources

Sensitive biological resources are habitats or individual species that have special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, and/or rare. This is due to the species' declining or limited population sizes, which usually results from habitat loss. Watch lists of such resources are maintained by the California Department of Fish and Game (CDFG), the United States Fish and Wildlife Service (USFWS), and special groups, such as the California Native Plant Society (CNPS). The following sections indicate the habitats as well as plant and animal species present, or potentially present within the SEA, which have been accorded special recognition. When species are federally-listed as endangered or threatened, they often have federally-designated, geographically-specific "critical habitat areas." Critical habitat areas, after extensive study by experts, are judged to be essential to conservation and maintenance of the species. The SEA has proposed critical habitat for the federally-threatened western snowy plover.

Sensitive Plan Communities and Habitats

The SEA supports several habitat types considered sensitive by resource agencies. These are inventoried by California Department of Fish and Game (CDFG) in the California Natural Diversity Database (CNDDB) [2011]. The CNDDB includes state and federally-listed endangered, threatened, and rare vascular plants, as well as several sensitive vertebrate species. These communities include coastal sage chaparral scrub and maritime succulent scrub, which occur throughout the SEA. These communities, or closely related designations, are considered high priority communities by the CDFG, which indicates that they are experiencing a decline throughout their range. The array and composition of these communities has been discussed in the Vegetation section.

Sensitive Plant Species

The following special-status plant taxa have been reported or have the potential to occur within the SEA, based on known habitat requirements and geographic range information:

- Malibu baccharis (*Baccharis malibuensis*) RPR 1B.2
- Coulter's saltbush (*Atriplex coulteri*) RPR 1B.2
- Slender mariposa lily (*Calochortus clavatus* var*. gracilis*) RPR 1B.1
- Plummer's mariposa lily (*Calochortus plummerae*) RPR 1B.2

- Parry's spineflower (*Chorizanthe parryi* var*. parryi*) RPR 1B.1
- Blochman's dudleya (*Dudleya blochmaniae* ssp. *blochmaniae*) RPR 1B.1
- Agoura Hills dudleya (*Dudleya cymosa* ssp*. agourensis*) FT, CSC, RPR 1B.2
- Marcescent dudleya (*Dudleya cymosa* ssp*. marcescens*) FT, SR, RPR 1B.2
- Lyon's pentachaeta (*Pentachaeta lyonii*) FE, SE, RPR 1B.1
- Sonoran maiden fern (*Thelypteris puberula* var*. sonorensis*) RPR 2.2

Sensitive Animal Species

The following special-status animal species are reported or are likely to be present within the SEA based on habitat requirements and known range attributes:

- Coast horned lizard (*Phrynosoma blainvillii*) CSC
- Two-striped garter snake (*Thamnophis hammondii*) CSC
- Western snowy plover (*Charadrius alexandrinus nivosus*) FT, CSC

Ecological Transition Areas (ETAs)

There are no ETAs designated within this SEA.

Regional Biological Value

The SEA meets all SEA designation criteria and supports many regional biological values. Each criterion and how it is met is described below.

CRITERIA ANALYSIS OF THE POINT DUME SEA

Criterion		Status	Justification
A)	The habitat of core populations of endangered or threatened plant or animal species.	Met	This SEA includes habitat that is used by the western snowy plover (*Charadrius alexandrinus nivosus).* The west side of the headland includes federally-designated critical habitat that will expand into the SEA.
B)	On a regional basis, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	The SEA has coastal bluff vegetation on 100-200 feet cliffs, and on the sandy beaches below, is good coastal strand vegetation and habitat. The southern limit of the range for two plants characteristic of the bluffs to the north, giant coreopsis and sea-lettuce is on Point Dume. On the east side of Point Dume, the Malibu Coastline SEA has an excellent rocky intertidal area, which is a habitat that is no longer common in Southern California.
C)	Within the County, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	Point Dume is one of the two remaining areas in the County where a diverse and healthy mixture of terrestrial Venturan coastal sage scrub and coastal strand vegetation are in close association with marine habitats. Its marine habitats consist of an unprotected rocky shore, with sandy beach pockets, and numerous small caves. The contiguous Malibu Coastline SEA has outlying reefs, rocks, and kelp beds. Due to strong upwelling along the coast, the waters are nutrient–rich and foster highly diverse and productive marine

Criterion		Status	Justification
			communities, which are protected somewhat by limited public access on the Point Dume headland.
D)	Habitat that at some point in the life cycle of a species or group of species, serves as concentrated breeding, feeding, resting, or migrating grounds and is limited in availability either regionally or in the County.	Met	The headland of Point Dume extends into Santa Monica Bay more than a mile beyond the rest of the Malibu coast, and it is located within the Pacific Flyway. As a result, the area is an important jumping off point for migratory birds. Without the remaining terrestrial habitats, this refuge would be lost.
E)	Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community.	Met	The close association of native terrestrial vegetation and diverse marine habitats enriched by the nutrient upwelling make the Point Dume area scientifically important for the County. The southern-most point for giant coreopsis and sea lettuce are extreme points for vegetation that are more common to the north.
F)	Areas that would provide for the preservation of relatively undisturbed examples of the original natural biotic communities in the County.	Met	Relative to other coastal areas, the terrestrial vegetation communities at Point Dume are in good condition, in spite of some degradation from increased runoff and human usage. The marine flora and fauna are in excellent condition, and the association is important to conservation of the County's biodiversity.

In conclusion, the area is an SEA because it contains: A) core habitat of the western snowy plover, a federally-threatened species, B-C) biotic communities, vegetative associations, and habitat of plant and animal species that are restricted in distribution in the County and also regionally restricted; D) concentrated breeding, feeding, resting, or migrating grounds, which are limited in availability in the County; E) biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community; and F) areas that provide for the preservation of relatively undisturbed examples of original natural biotic communities in the County.

15. Puente Hills SEA

Location

General

The Puente Hills Significant Ecological Area (SEA) is located in the Puente Hills in the southeastern portion of the County. The Puente Hills are an inland topographical feature that separates the San Gabriel Valley to the north and the coastal plain to the south. The hills are oriented east-west and stretch from the San Gabriel River on the west approximately to the San Bernardino-Los Angeles County line to the east, where they transition into the Chino Hills. The SEA includes portions of the Whittier Narrows Dam Recreation Area and Flood Control Basin, and much of the undeveloped land throughout the Puente Hills. Nearly the entire SEA is designated as the Puente-Chino Hills State Important Bird Area (IBA) by California Audubon. The main area hosts migrating and resident birds

that use the extensive mosaic of lowland terrestrial habitats, and notable extensive areas of grassland and oak and walnut woodlands. This IBA extends well beyond the SEA into Orange and San Bernardino counties, and in general, goes beyond the SEA boundaries in most places. The northwestern disjunct area of the SEA is part of the Los Angeles Flood Control Basin IBA, which hosts many resident and migrating birds that use the wetlands. This IBA extends beyond the SEA on both the Rio Hondo and a long distance upstream along the San Gabriel River.

The SEA encompasses portions of the El Monte, Baldwin Park, Whittier, La Habra and Yorba Linda United States Geological Survey (USGS) 7.5' California Quadrangles. The majority of this SEA lies within unincorporated area of the County.

General Boundary and Resources Description

In the westernmost part of the SEA, boundaries encompass the undeveloped portions of the Montebello Hills. The oil field and transmission lines that occupy this area have protectively-fenced and left most of the coastal sage scrub, which is inhabited by the largest population of the federally-threatened coastal California gnatcatcher (*Polioptila californica californica*) in the County. This area is part of critical habitat for the gnatcatcher. Boundaries of critical habitat extend to Montebello Boulevard on the north side and to the west side of San Gabriel Boulevard, while the SEA boundary stops at the transmission lines' southern edge. Some of the canyons in the oil field have oak woodland.

The SEA has a finger that extends from the Montebello Hills section over San Gabriel Boulevard to the oak woodland (among oil field structures) that borders the Rio Hondo Channel. The SEA finger continues upstream along the natural riparian course of the Rio Hondo to a point where the Rio Hondo is encased as a concrete flood control channel. This area of the Rio Hondo usually has water and is on the migration route for migrating and wintering waterfowl. The riparian area of the Rio Hondo immediately north of San Gabriel Boulevard has long been recognized as important to birds and has been called "Bosque Del Rio Hondo" since Spanish occupation of this area. Abundance of birdlife is frequently mentioned, but the area also has amphibians, reptiles, mammals, and probably fishes.

It is intended that the SEA encompass only natural areas of the basin and portions of the San Gabriel River and Rio Hondo, and the SEA in this area is disjunct from the rest of the Puente Hills. A golf course that is part of the Whittier Narrows Dam County Recreation Area is on the west side of Rio Hondo, and the golf course is not included in the SEA. Likewise, the manicured areas of the County Recreation Area on the east side of Rio Hondo are not included.

Moving east, the southern boundary of the SEA follows the upstream edge of the Whittier Narrows Dam, while the northern boundary goes east along the south side of Durfee Avenue from the east bank of the Rio Hondo. This captures the Flood Control Basin at the confluence of the San Gabriel River and Rio Hondo. The pool at the base of the Whittier Narrows Dam, which often has migrant waterfowl, is included in the SEA. In the Flood Control Basin the connective channel between the Rio Hondo and the San Gabriel River has native riparian vegetation and usually has water. The connective channel is included in both the SEA and the critical habitat for the coastal California gnatcatcher. The northern SEA boundary follows the south side of Durfee Avenue eastward to near the junction with Peck Road. Here the northern SEA boundary follows the northern side of the grounds of the Whittier Narrows Nature Center to the San Gabriel River, which is naturally vegetated with a soft bottom. The southern SEA boundary has outlined the natural vegetation of the flood control basin and connective channel, with a finger extending south downstream along natural riparian vegetation in the San Gabriel River, to the crossing of San Gabriel Boulevard. Across from

the Whittier Narrows Nature Center, the southern boundary is along the southeast side of the San Gabriel River. A finger of the SEA extends upstream along the area of the San Gabriel River, which has soft-bottom and native riparian vegetation upstream about one mile (three-quarters of a mile beyond the crossing of State Route-60, which is a short distance upstream from the Whittier Narrows Nature Center area). This includes the confluence with San Jose Creek that drains the south side of the San Jose Hills, and the north side of the Puente Hills. Currently, the Whittier Narrows area of the SEA outlined above is not physically connected to the remainder of the SEA due to urban development on both sides of Interstate -605.

Much of San Jose Creek is channelized, and the City of Industry is located in the flood plain. Because of this, most wildlife movement cannot use the main watercourse route, which makes Puente Hills the wildlife corridor through the area. A plan for the Whittier Narrows area, sometimes called “the Emerald Necklace,” proposes to eventually have a string of parks along the San Gabriel River and Rio Hondo, stretching from the Whittier Narrows Dam County Recreation Area along the rivers to the Santa Fe Dam area, into the City of Irwindale. This would better connect wildlife from the Puente Hills, Chino Hills, Santa Ana Mountains and the other Peninsular Ranges of Southern California with the San Gabriel Mountains, and the Transverse Ranges across the northern side of the San Gabriel Valley.

Moving east across Interstate-605, the SEA begins at the end of Sycamore Canyon Road and the mouth of Sycamore Canyon (off Workman Mill Road on the south side of the west section of Rose Hills Memorial Park). The northern boundary essentially follows the edge of developed portions of the Rose Hills Memorial Park, the Puente Hills Landfill, and rural residential and suburban developments of the Hacienda Heights area, eastward to Schabarum Regional County Park. The southern boundary in this area tracks the edge of urban development along the southern slopes of the Puente Hills bordering the City of Whittier and the community of La Habra Heights. The SEA in this southern slope area includes some areas impacted by oil production that are otherwise connective by virtue of largely natural habitat of chaparral and grasslands. Much of this area of the SEA is critical habitat for the coastal California gnatcatcher. The critical habitat of the gnatcatcher extends into areas with appropriate habitat for the gnatcatcher among some development, for example, Rose Hills Memorial Park and the Puente Hills Landfill. These areas were not included in the SEA because they did not meet the SEA mapping criteria.

Much of the summit area in the Puente Hills is conserved and under restoration by the Puente Hills Landfill Native Habitat Preservation Authority (PHLNHA), which has sponsored important studies on habitat and wildlife movement, restoration, and the wildlife movement tunnel under Harbor Boulevard at the eastern side of the SEA. The SEA in this western end of the Puente Hills includes important natural drainages on the west side of the Puente Hills, which drain to the San Gabriel River: much of Sycamore Canyon, with a fine riparian oak woodland; and Turnbull Canyon with a mixed riparian forest of ash, sycamore, and oak woodland. The ridges around Turnbull Canyon are mixed grassland and chaparral, with coastal sage scrub and a scattered population of the federally-threatened coastal California gnatcatcher. Mixed chaparral and cactus scrub on the Turnbull Canyon slopes has a local population of the sensitive coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*). Other areas of the southwest slope drainages include Worsham Creek, Verde Creek, Arroyo Pescadero, and San Miguel Creek. Underpasses of Colima Road, which could otherwise block the east-west wildlife movement along the Puente Hills, are used by wildlife as shown by studies sponsored by the PHLNHPA. (SWCA Environmental Consultants, 2012)

A lobe of the SEA goes over the ridge to natural habitat along north-facing slopes. These tributaries of Joe Hill Wash have a mix of oak and walnut woodland habitats along multiple drainages that end

in San Jose Creek. Other areas of north slope drainage to San Jose Creek are included in the SEA on the southeast side of Workman Mill and along the transmission line corridor in the Workman Mill area. The north-slope boundary skirts the developed areas of the community of Hacienda Heights. An area of planned development in the oak woodland just west of Schabarum Regional County Park has been excluded from the SEA.

Continuing east, the northern SEA boundary crosses the Schabarum Park accessory corridor and includes the undeveloped portions, as well as those of neighboring Trailview County Park in the SEA. Here the northern boundary is trending southeast, skirting along the edge of residential development within unincorporated Rowland Heights. The southern SEA boundary in this area skirts development in the community of La Habra Heights and includes the southern slope of Powder Canyon, which has a variety of natural habitats including riparian and north-slope oak woodland, rocky hillsides, chaparral, and some grassland. Powder Canyon is part of the watershed of San Jose Creek. Here the SEA crosses Fullerton Road in a broad swath about a 0.4 mile wide that includes the Powder Canyon undercrossing and Pathfinder Park on the east side. Pathfinder Park has riparian and chaparral habitat. There is an area around the ridgeline development along Vantage Pointe Drive that has been excluded from the SEA.

The northern SEA boundary continues along the edge of development at the southern edge of the communities of Rowland Heights to include walnut woodland, oak woodland, grassland, and chaparral vegetation on the north-facing slopes and central ridge of the Puente Hills. This area includes tributaries in the Puente Hills for the Brea Canyon watershed. The boundary crosses Brea Canyon (Santa Ana River watershed) and State Route-57 at the edge of development in the Ciyt of Diamond Bar, and continues along the boundary of natural vegetation to the San Bernardino-Los Angeles County line. East of State Route-57, this urban-wildland interface is more or less the boundary between development in the eastern San Gabriel Valley and the natural areas of the Firestone Boy Scout Reservation, with its focal area on Tonner Canyon (also in the Santa Ana River watershed).

From the crossing of Fullerton Road, the southern SEA boundary encompasses the naturally-vegetated central ridgeline of the Puente Hills, and extends south along the west side of Harbor Boulevard to include natural area around a wildlife passage tunnel under Harbor Boulevard. This tunnel was constructed by the Puente Hills Landfill Natural Habitat Preservation Authority, and its mud floor has many track prints that attest to frequent use by deer and other animals. The tunnel has the ridgeline area on its west side (with scattered residences), and on the east side are a deep canyon with fine riparian oak woodland, hills with scattered oil wells, walnut woodland, and grasslands. The southern boundary includes the canyon, but excludes the hills and grasslands of the oil field that are on the ridgeline and south of the canyon. On the northern slope of the included canyon is the Vantage Pointe development, which is excluded from the SEA. On the east side of the oil field, the southern SEA boundary trends southeast along natural vegetation boundaries to the Orange-Los Angeles County line. At the Orange-Los Angeles County line, the SEA borders the development in the City of Brea in Orange County for a short distance, and continues through grassland and chaparral to cross the State Route-57 into walnut woodlands, southern oak woodland, chaparral, coastal sage scrub, and riparian woodlands of Tonner Canyon on the Firestone Boy Scout Reservation. Tonner Canyon is in the Santa Ana River watershed, and the ridge separating Brea and Tonner canyons is generally considered the divide between the Puente Hills and the Chino Hills. From here the southern SEA boundary continues eastward on the Orange-Los Angeles County line to the three-way junction with the San Bernardino-Los Angeles County line. For its eastern border in the Chino Hills, the SEA boundary turns north and follows along the San Bernardino-Los Angeles County line to contact with the northern boundary. In Orange County, south of the Orange-

Los Angeles County line, is the Chino Hills State Park, with grasslands, chaparral, and riparian oak woodlands that extend across into the Firestone Boy Scout Reservation.

Critical habitat for the coastal California gnatcatcher is generally coincident with the SEA in the western part of the SEA, but has lobes and fingers that extend into development areas where the preferred natural habitat of the gnatcatcher, coastal sage scrub, coexists with less dense residential areas. East of Fullerton Road, the gnatcatcher critical habitat differs from the SEA. Gnatcatcher critical habitat narrowly includes the Harbor Boulevard wildlife passage tunnel, goes on the south side of the Vantage Point exclusion area, and trends into Orange County on the eastern side of the oilfield that borders the Vantage Point development. There is a small area of gnatcatcher critical habitat in the Firestone Boy Scout Reservation in the County that connects to the large area of critical habitat in Orange County and the Chino Hills.

The majority of the SEA lies within unincorporated County jurisdiction. Other local jurisdictions have also been included within the SEA in order to delineate the boundaries of functioning habitat units. These include the City of Diamond Bar, the City of Industry, the City of La Habra Heights, the City of Montebello, the City of Pico Rivera, the City of South El Monte, and the City of Whittier.

Vegetation

The SEA encompasses the remaining relatively undisturbed habitat areas in the County portion of the Puente Hills. These include portions of the Montebello Hills, Whittier Narrows, Rio Hondo, Sycamore Canyon and Turnbull Canyon to the west; Powder Canyon; and Brea Canyon and Tonner Canyon to the east. Each of these areas contains relatively undisturbed examples of woodland, shrubland, grassland and wetland communities that once existed throughout the inland hills complex of the Los Angeles Basin. Included among these habitats are excellent examples of oak woodland, oak riparian forest, southern willow scrub and walnut woodland. Intermixed with these are stands of mixed chaparral, coastal sage scrub and grasslands, which taken as a whole, form a valuable wildlife habitat unit of regional importance. It should be noted that the SEA includes areas disturbed and developed for rural residential and oil extraction. Generally, these conditions are found in the Montebello Hills, Brea Canyon, La Habra Heights, and the hills above the Whittier area.

Interconnecting corridors for wildlife have a mixture of disturbed habitat areas, native vegetation, naturalized vegetation, and sparsely developed land. While such areas do not represent key regional habitats, they have been recommended for inclusion in the SEA in order to recognize the importance of the wildlife corridor function of the SEA to exchange genetic material between plant and animal populations throughout the Puente Hills, the Chino Hills, the Santa Ana Mountains, and the natural areas of other Peninsular Ranges of Southern and Baja California.

Good examples of the variety of riparian habitat are found near the Whittier Narrows Nature Center, including lowland riparian and freshwater marsh habitat, rich soils deposited from flood waters, and impressive streamside vegetation of willows, sycamores, cottonwoods, and mulefat. The Whittier Narrows Nature Center has records for the County Recreation Area, which document a very rich and diverse vertebrate fauna with 24 species of mammals, over 300 species of birds, 8 reptiles, 4 amphibians, and several fishes. The birds include 65 sensitive species and 50 year-round resident species. Most of these are related in some way to the riparian habitats.

Plant communities identified in the *Significant Ecological Area Description* in 2006 used the standard methodology and terminology of the time. Eight major plant communities found within the Puente Hills SEA were listed in 2006: oak woodland, oak riparian forest, walnut woodland, southern willow scrub, chaparral, coastal sage scrub, freshwater marsh, and non-native grassland. The variety of

topography, soil types, slope aspects and water availability within this SEA creates a range of physical habitats, which support numerous plant species.

Plant species observed or recorded in previous documentation within the SEA are indicated in the *Comprehensive Floral & Faunal Compendium of the Los Angeles County SEAs.* Sensitive plant species occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources section.

Descriptions and general locations of the each plant community present within the SEA are given below.

Oak Woodland: A plant community dominated by species of the oak genus (*Quercus*). Within this SEA this species is the coast live oak (*Quercus agrifolia* var. *agrifolia*), which typically grows to heights of 20 to 40 feet and forms either closed or open tree canopies. Understory vegetation varies from grassland in areas subject to grazing to shrubs where topography is steeper and/or grazing has been relaxed. It may also intergrade with shrub communities. Within this SEA, oak woodland is scattered throughout many hillsides, drainages and broad valleys, it is most prevalent on northfacing slopes and in drainage bottoms. Particularly large complexes of oak woodland are found in Powder Canyon, Brea Canyon, and Tonner Canyon.

Corresponding MCV communities:

- *Quercus agrifolia* (coast live oak woodland) Woodland Alliance

Oak Riparian Forest: A highly related community to oak woodland found in this SEA. This community is also dominated by coast live oak. The primary difference between oak woodland and oak riparian forest is the greater availability of water in riparian situations, which is expressed in a denser tree canopy and higher density of trees. There is also a greater number of hydrophytic (moister favoring) plant species in the understory. Typical riparian trees, such as western sycamore (*Platanus racemosa*) and willow (*Salix* spp.), commonly occur as well. Oak riparian forest is best developed within the Sycamore Canyon, Turnbull Canyon, Powder Canyon, Brea Canyon, and Tonner Canyon drainages. It is also scattered in other drainages throughout the SEA.

Corresponding MCV communities:

- *Quercus agrifolia* (coast live oak forest) Forest Alliance
- *Platanus racemosa* (California sycamore woodlands) Woodland Alliance

Walnut Woodland: Often intergrades with oak dominated woodlands or develops as a distinct community. This community is dominated by the Southern California black walnut (*Juglans californica*), which grows 10 to 30 feet high. More often than not, the Southern California black walnut grows in open stands; however, closed tree canopies are not uncommon. In similar fashion to oak woodlands its understory varies from grasses to shrubs. Thus, it forms stands ranging from savannahs to forests throughout the SEA. It is most common on the hillsides of Brea Canyon and Tonner Canyon, where it forms some of the best developed examples south of Ventura County in Southern California.

Corresponding MCV communities:

- *Juglans californica* (Southern California black walnut groves) Woodland Alliance

Southern Willow Scrub: Well developed southern willow scrub communities are found along several major canyon bottoms in this SEA, particularly Brea Canyon and Tonner Canyon. Smaller patches of this community are also found scattered along smaller drainage and tributaries, as well as at seeps and around artificially created impoundments used for livestock watering. This community is dominated by species of *Salix*, which form nearly monotypic stands, due to their dense growth. These stands generally reach 10 to 20 feet in height with little understory vegetation.

Corresponding MCV communities:

- *Salix exigua* (sandbar willow thickets) Shrubland Alliance
- *Salix lasiolepis* (arroyo willow thickets) Shrubland Alliance

Mixed Chaparral: A shrub community composed of robust species. Within this SEA, these species include laurel sumac (*Malosma laurina*), toyon (*Heteromeles arbutifolia*), lemonadeberry (*Rhus integrifolia*), and western blue-elderberry (*Sambucus nigra* var. *caerulea*). These and other shrub species form dense vegetation covers that grow 5 to 10 feet in height. The development of chaparral is most pronounced and extensive within Sycamore Canyon, Turnbull Canyon, Brea Canyon and Tonner Canyon.

Corresponding MCV communities:

- *Adenostoma fasciculatum* (chamise chaparral) Shrubland Alliance
- *Adenostoma fasciculatum-Salvia apiana* (chamise-white sage chaparral) Shrubland Alliance
- *Arctostaphylos glandulosa* (chamise chaparral) Shrubland Alliance
- *Ceanothus leucodermis* (chaparral whitethorn) Shrubland Alliance
- *Ceanothus spinosus* (greenbark ceanothus chaparral) Shrubland Alliance
- *Ceanothus oliganthus* (hairy leaf ceanothus chaparral) Shrubland Alliance
- *Prunus ilicifolia* (holly leaf cherry chaparral) Shrubland Alliance
- *Rhus ovata* (sugarbush chaparral) Shrubland Alliance

Coastal Sage Scrub: A shrubland community that exhibits less robust structure. This plant community is dominated by California sagebrush (*Artemisia tridentata*), California brittle bush (*Encelia californica*), white sage (*Salvia apiana*), black sage (*Salvia mellifera*), and California buckwheat (*Eriogonum fasciculatum*). Coastal sage scrub also forms dense stands, which grow three to four feet in height. Within this SEA, it is generally found in scattered patches, which are highly integrated with mixed chaparral, including areas used for oil extraction where coastal sage scrub persists.

Corresponding MCV communities:

- *Artemisia californica* (California sagebrush scrub) Shrubland Alliance
- *Artemisia californica-Salvia mellifera* (California sagebrush-black sage scrub) Shrubland Alliance
- *Artemisia californica-Eriogonum fasciculatuma* (California sagebrush-California scrub) Shrubland Alliance
- *Encelia californica* (California brittle bush scrub) Shrubland Alliance
- *Dendromecon rigida* (bush poppy scrub) Shrubland Alliance
- *Keckiella antirrhinoides* (bush penstemon scrub) Shrubland Alliance
- *Salvia apiana* (white sage scrub) Shrubland Alliance
- *Salvia leucophylla* (purple sage scrub) Shrubland Alliance

- *Salvia mellifera* (black sage scrub) Shrubland Alliance
- *Eriogonum cinereum* (ashy buckwheat scrub) Shrubland Alliance
- *Eriogonum fasciculatum* (California buckwheat scrub) Shrubland Alliance
- *Eriogonum wrightii Dwarf* (Wright's buckwheat patches) Shrubland Alliance
- *Hazardia squarrosa* (sawtooth golden bush scrub) Shrubland Alliance
- *Lotus scoparius* [*Acmispon glaber*] (deer weed scrub) Shrubland Alliance
- *Lupinus albifrons* (silver bush lupine scrub) Shrubland Alliance
- *Malacothamnus fasciculatus* (bush mallow scrub) Shrubland Alliance

Non-Native Grassland: Dominated by non-native annual grasses and forbs. These opportunistically growing species include brome grasses, wild oats and mustards. This community became established as a result of livestock grazing, whereby native vegetation is removed (sometimes by mechanical means) and replaced by more opportunistic species. Non-native grassland is found throughout all areas of this SEA.

Corresponding MCV communities:

- *Avena* (*barbata*, *fatua*) (wild oats grasslands) Semi-Natural Herbaceous Stands
- *Brassica* (*nigra*) and other mustards (upland mustards) Semi-Natural Herbaceous Stands
- *Bromus* (*diandrus*, *hordeaceus*)-*Brachypodium distachyon* (annual brome grasslands) Semi-Natural Herbaceous Stands
- *Bromus rubens-Schismus* (*arabicus*, *barbatus*) ([*Bromus madritensis* ssp. *rubens*] red brome or Mediterranean grass grasslands) Semi-Natural Herbaceous Stands
- *Centaurea* (*solstitialis*, *melitensis*) (yellow star-thistle fields) Semi-Natural Herbaceous Stands
- *Lolium perenne* ([*Festuca perennis*] perennial rye grass fields) Semi-Natural Herbaceous Stands

Freshwater Marsh: Small areas supporting freshwater marsh are found at scattered locations in the broader valleys along major drainages. This community may also exist at other locations in and around artificially created impoundments that are used to water livestock. Freshwater marsh requires perennially shallow water or saturated soils. Dominant plants are emergent species, including cattails and bulrushes.

Corresponding MCV communities:

- *Phragmites australis* (common reed marshes) Herbaceous Alliance and Semi-Natural Stands
- *Schoenoplectus californicus* (California bulrush marsh) Herbaceous Alliance
- *Typha* (*angustifolia*, *domingensis*, *latifolia*) (cattail marshes) Herbaceous Alliance
- *Sarcocornia pacifica* (*Salicornia depressa*) ([*Salicornia pacifica*] pickleweed mats) Herbaceous Alliance
- *Lemna* (*minor*) and relatives (duckweed blooms) Provisional Herbaceous Alliance

Wildlife

Wildlife within the SEA has been frequently documented to be very diverse and abundant due to the large acreage of natural open space, the diversity of habitat types, and regional connectivity. While a few wildlife species are entirely dependent on a single vegetative community, the entire mosaic of all the vegetation communities within the SEA and connected areas constitutes a functional ecosystem for a wide variety of wildlife species. This includes areas within the SEA as well as the regional

ecosystem.

Analysis of invertebrates on any given site generally is limited by a lack of specific data; however, the size of the SEA and diversity of habitats present is considered sufficient to encompass healthy populations of a large number of invertebrate species. Amphibian populations are generally restricted in semi-arid and arid habitats, but may be particularly abundant where riparian areas occur. The SEA is likely to support a variety of amphibians in abundance within wetland areas along the major canyon bottoms and the moister oak woodland areas. Many essential reptilian habitat characteristics are present within the SEA. These include open habitats that allow free movement and high visibility and small mammal burrows for cover and escape from predators and extreme weather. These characteristics, as well as the variety of habitat types present, are likely to support a wide variety of reptilian species.

The scrubland, woodland, riparian, and grassland habitats in the SEA provide foraging and cover habitat for year-round residents, seasonal residents, and migrating song birds. In addition, the SEA encompasses many year-round water sources, abundant raptor foraging, perching, and nesting habitat. The combination of these resources as well as the mosaic of many community types provides for a high diversity of bird species. Several of these species may use this SEA as their only consistent occurrence in the southeastern portion of the County.

Not unlike other taxonomic groups, mammal populations within the SEA are diverse and reflective of the unique combination of several habitat types. Unlike many other inland hills within the Los Angeles Basin, this SEA is large enough to support relatively stable large mammal populations despite the urban surroundings.

All wildlife species previously recorded, as well as those expected to occur, within the SEA are indicated in the *Comprehensive Floral & Faunal Compendium* of the *Los Angeles County SEAs*. Sensitive wildlife species occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources section.

Wildlife Movement

Evidence of significant wildlife movement throughout the Puente Hills SEA has recently been documented in a two year carnivore study commissioned by the Santa Monica Mountains Conservancy as part of a multi-jurisdictional effort to establish a region wide wildlife movement linkage. This SEA represents the County portion of a continuous series of natural open space within the Puente Hills and Chino Hills. Overall, this open space extends north and west from State Route 91 (SR-91) in Orange and Riverside Counties to the Whittier Narrows reach of the San Gabriel River. The open space physically links the Puente/Chino Hills with the Santa Ana Mountains and the San Gabriel Mountains, respectively. By virtue of these linkages and a complex of interconnected habitat units throughout the hills, the Puente/Chino Hills function as both an important wildlife linkage and resident habitat area for regional wildlife populations.

Within the SEA itself several habitat units, well defined by major canyons, exist. These include Sycamore Canyon, Turnbull Canyon, Powder Canyon, Brea Canyon and Tonner Canyon. Each of these, in and of themselves, is capable of supporting a diversity and abundance of wildlife. More importantly, however, these habitat units are connected by a series of open space corridors, which allows population exchange to occur. Maintenance of biological diversity and population viability is accorded throughout the SEA and the chance of local species extinctions due to isolation is minimized. This function is acutely important for wide-ranging species that meet their breeding and/or habitat requirements over broad areas.

Although several major arterial roads and highways cross the hills, continued use of undercrossings and surface crossings by wildlife has been documented. This movement is largely east-west trending between large habitat blocks located in the western, central and eastern portions of the SEA. Species documented as moving through the area include bobcat, coyote (*Canis latrans*), gray fox (*Urocyon cinereoargenteus*), and mule deer (*Odocoileus hemionus*).

Sensitive Biological Resources

Sensitive biological resources are habitats or individual species that have special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, and/or rare. This is due to the species' declining or limited population sizes, which usually results from habitat loss. Watch lists of such resources are maintained by the California Department of Fish and Game (CDFG), the United States Fish and Wildlife Service (USFWS), and special groups, such as the California Native Plant Society (CNPS). The following sections indicate the habitats as well as plant and animal species present, or potentially present within the SEA, which have been accorded special recognition. When species are federally-listed as endangered or threatened, they often have federally-designated, geographically-specific "critical habitat areas." Critical habitat areas, after extensive study by experts, are judged to be essential to conservation and maintenance of the species. The SEA has large coincident areas with the designated critical habitat for the coastal California gnatcatcher.

Sensitive Plan Communities and Habitats

The SEA supports several habitat types considered sensitive by resource agencies. These are inventoried by California Department of Fish and Game (CDFG) in the California Natural Diversity Database (CNDDB) [2011]. The CNDDB includes state and federally-listed endangered, threatened, and rare vascular plants, as well as several sensitive vertebrate species. These communities include Engelmann oak woodland, Southern California black walnut groves, chamise-white sage chaparral, holly leaf cherry chaparral, California brittle bush scrub, bush penstemon scrub, white sage scrub, Wright's buckwheat patches, sawtooth golden bush scrub, and pickleweed mats, which occur throughout the SEA. These communities, or closely related designations, are considered high priority communities by the CDFG, which indicates that they are experiencing a decline throughout their range. The array and composition of these communities has been discussed in the Vegetation section.

Sensitive Plant Species

The statuses of rare plants are hierarchically categorized by the CNPS using a rank and decimal system. The initial category level of Rare Plant Rank is indicated by the ranks 1A (presumed extinct in California), 1B (rare or endangered in California and elsewhere), 2 (rare or endangered in California but more common elsewhere), 3 (more information needed, a review list), and 4 (limited distribution). In cases where the CNPS has further identified the specific threat to the species, a decimal or Threat Code is added: .1 (seriously endangered in California), .2 (fairly endangered in California), or .3 (not very endangered in California).

The following special-status plant taxa have been reported or have the potential to occur within the SEA, based on known habitat requirements and geographic range information:

- Nevin's barberry (*Berberis nevinii*) RPR 1B.1, SE, FE
- Round-leaved filaree (*California macrophylla*) RPR 1B.1
- Southern tarplant (*Centromadia parryi* ssp. *australis*) RPR 1B.1

- Peruvian dodder (*Cuscuta obtusiflora* var. *glandulosa*) RPR 2.2
- Many-stemmed dudleya (*Dudleya multicaulis*) RPR 1B.2
- Mesa horkelia (*Horkelia cuneata* ssp. *puberula*) RPR 1B.1
- Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*) RPR 1B.1
- Chaparral ragwort (*Senecio aphanactis*) RPR 2.2
- San Bernardino aster (*Symphyotrichum defoliatum*) RPR 1B.2
- Prostrate vernal pool navarretia (*Navarretia prostrata*) RPR 1B.1
- Plummer's mariposa lily (*Calochortus plummerae*) RPR 1B.2
- Intermediate mariposa lily (*Calochortus weedii* var. *intermedius*) RPR 1B.2
- Vernal barley (*Hordeum intercedens*) RPR 3.2
- California Orcutt grass (*Orcuttia californica*) RPR 1B.1, SE, FE

Sensitive Animal Species

The following special-status animal species are reported or are likely to be present within the SEA based on habitat requirements and known range attributes:

- Western spadefoot (*Spea hammondii*) BLMS, SSC
- Coastal whiptail (*Aspidoscelis tigris stejnegeri*) CDFG Special Animals List
- Rosy boa (*Charina trivirgata*) BLMS, FSS
- Western pond turtle (*Emys marmorata*) BLMS, FSS, SSC
- Coast horned lizard (*Phrynosoma blainvillii*) BLMS, FSS, SSC
- Coast patch-nosed snake (*Salvadora hexalepis virgultea*) SSC
- Cooper's hawk (*Accipiter cooperii*) CDFG Watch List
- Tricolored blackbird (*Agelaius tricolor*) BCC, BLMS, SSC, USBC, AWL, ABC
- Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*) CDFG Watch List
- Long-eared owl (*Asio otus*) SSC, LAA
- Burrowing owl (*Athene cunicularia*) BCC, BLMS, SSC
- Ferruginous hawk (*Buteo regalis*) BCC, BLMS, CDFG Watch List, AWL, LAA
- Coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*) BCC, FSS, SSC
- Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) FC, BCC, FSS, SE
- White-tailed kite (*Elanus leucurus*) CDFG Fully Protected
- Southwestern willow flycatcher (*Empidonax traillii extimus*) FE, FSS, SE, USBC, AWL, ABC
- Merlin (*Falco columbarius*) CDFG Watch List
- Yellow-breasted chat (*Icteria virens*) SSC
- Belding's savannah sparrow (*Passerculus sandwichensis beldingi*) SE
- Coastal California gnatcatcher (*Polioptila californica californica*) FT, SSC, USBC, AWL, ABC
- Bank swallow (*Riparia riparia*) ST
- Least Bell's vireo (*Vireo bellii pusillus*) FE, BCC, SE, USBC, AWL, ABC
- Pallid bat (*Antrozous pallidus*) FSS, BLMS, SSC, WBWG High
- Mexican long-tongued bat (*Choeronycteris mexicana*) SSC, WBWG High
- Western mastiff bat (*Eumops perotis californicus*) BLMS, SSC, WBWG High
- Silver-haired bat (*Lasionycteris noctivagans*) WBWG Medium
- Hoary bat (*Lasiurus cinereus*) WBWG Medium
- Western yellow bat (*Lasiurus xanthinus*) WBWG High
- San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) SSC
- Yuma myotis (*Myotis yumaensis*) BLMS, WBWG Low-Medium

- Pocketed free-tailed bat (*Nyctinomops femorosaccus*) SSC, WBWG Medium
- Big free-tailed bat (*Nyctinomops macrotis*) SSC, WBWG Medium-High
- American badger (*Taxidea taxus*) SSC

Ecological Transition Areas (ETAs)

There is one ETA designated within this SEA. It is an area of scattered residential development interspersed among native habitat along the spine of the Puente Hills.

Regional Biological Value

The SEA meets several SEA designation criteria that consider regional biological values. Each criterion and how it is met is described below.

CRITERIA ANALYSIS OF THE PUENTE HILLS SEA

Criterion		Status	Justification
A)	The habitat of core populations of endangered or threatened plant or animal species.	Met	The population of the California gnatcatcher at the Montebello Hills is probably one of the largest single populations in the U.S. Pairs occur throughout the County portion of the Puente Hills, especially in Sycamore Canyon and Arroyo San Miguel. The coastal cactus wren has significant populations in the Puente Hills, occurring in the Montebello Hills, Sycamore Canyon, Rose Hills, Hellman Park in Whittier, and through Hacienda Heights into Rowland Heights. Several CNPS-Rare plants occur in the Puente Hills, including both Plummer's and Weed's mariposa-lilies.
B)	On a regional basis, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	Several plant communities within this SEA are CDFG highest priority communities due to their restricted distribution in the Southern California region. These communities include walnut woodland, which is scattered throughout this SEA: oak riparian woodland, which is best developed in the major drainages of Sycamore Canyon, Turnbull Canyon, Powder Canyon, Brea Canyon, and Tonner Canyon, but is found elsewhere; stands of southern willow scrub along many of the drainages; scattered freshwater marsh; and coastal sage scrub, which is found in scattered patches over hillsides throughout.
C)	Within the County, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	All of the plant communities and habitats mentioned above as being restricted in distribution on a regional basis are also restricted in distribution within the County.
D)	Habitat that at some point in the life cycle of a species or group of species, serves as concentrated breeding, feeding, resting, or migrating grounds and is limited in	Met	This SEA represents the only large complex of multiple, relatively undisturbed habitats in southeastern portion of the County. It is regionally important to many resident species, as well as migrating species, which would otherwise not be able to meet their habitat requirements. In particular, large mammal and overwintering birds of prey and song birds make use of this area. The Puente Hills are a

Criterion		Status	Justification
	availability either regionally or in the County.		well known migration corridor for migratory songbirds during spring migration (April and May). On foggy May mornings, the hilltops can support hundreds of individual migrant song birds, which forage actively in all available habitats.
E)	Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community.	Met	The Puente Hills represent the clear northern edge of the Peninsular Ranges. For this reason, taxa such as red diamond rattlesnake, occur here at the edge of their range, where they co-occur with the more widespread Pacific rattlesnake. Several bird species extend west through the Puente Hills into the Los Angeles Basin and the Whittier Hills (Oak Titmouse, Grasshopper Sparrow). These species are absent from the floor of the Los Angeles Basin. The Whittier Narrows Nature Center provides the public with extensive information and opportunities for field study of the Whittier Narrows natural environment.
F)	Areas that would provide for the preservation of relatively undisturbed examples of the original natural biotic communities in the County.	Met	Both the oak woodlands and walnut woodlands within this SEA represent excellent relatively undisturbed examples. The walnut woodlands in this area are reported to be the best remaining stands south of Ventura County.

In conclusion, the area is an SEA because it contains: A) habitat of core populations of endangered or threatened plant species; B-C) biotic communities, vegetative associations, and habitat of plant and animal species that are restricted in distribution in the County and regionally; D) concentrated breeding, feeding, resting, or migrating grounds, which are limited in availability in the County; E) populations of scientific interest because they are at range extremes and intermix with species from other areas with known examples of reptiles and birds; and F) areas that provide for the preservation of relatively undisturbed examples of original natural biotic communities in the County.

16. Rio Hondo College Wildlife Santuary SEA

Location

General

The Rio Hondo College Wildlife Sanctuary Significant Ecological Area (SEA) is located on the western edge of the Puente Hills near the San Gabriel River, within the City of Whittier, and south of the Interstate-605. The SEA is the designated a Wildlife Sanctuary of the Rio Hondo College in the northern and eastern part of the campus, and is currently used as a study area by the students and faculty of Rio Hondo College. The SEA includes natural areas bordering two ridgelines—one impacted by transmission line installation and the maintenance roads, and the other with substantially natural areas. Between the two ridgelines is an intermittent drainage with riparian elements. The area includes good examples of riparian woodland, chaparral, oak woodland, coastal sage scrub, and chaparral communities. The entire unpaved campus area is designated critical habitat for the federally-threatened coastal California gnatcatcher (*Polioptila californica californica).*

The SEA is located within the El Monte United States Geological Survey (USGS) 7.5' California Quadrangle.

General Boundary and Resources Description

The SEA boundaries have a roughly triangular shape. The northern boundary begins in an arroyo with walnut woodland toward the west end of the North Entry Road, and goes southeastward along the border of natural habitat, passing the justice buildings near the bottom of the transmission line ridge. The boundary continues along the base of the ridge to the border with the Rose Hills Memorial Park. On the east side, the boundary tracks the edge of the Rose Hills Memorial Park peripheral road towards the southeast, including a slope of probable restored white-sage scrub. Where the peripheral road meets the crest of the southern ridge, the boundary turns northwest and goes along the southern ridge top, countinues down off the ridge northwestward around the Rio Hondo College campus parking lots and buildings to connect with the small walnut woodland.

The northern ridge primarily contains non-native grassland, with a strong component of introduced mustards, but also a strong component of scattered native chaparral shrubs, such as elderberry (*Sambucus* spp.), sumacs (*Rhus* spp.); and in the ravines, dense growths of large chaparral shrubs, including coast live oak (*Quercus agrifolia*). Some of the slopes on the north ridge have prickly-pear shrub. The watercourse between the ridges is riparian with plants, such as mulefat (*Senecio douglasii*) and coyote bush (*Baccharis* spp.). The ravines on the north face of the southern ridge that border the watercourse have fine oak woodland, cherry woodland, and walnut woodland at the upper ends. The SEA provides examples of many of the common and cherished natural habitats of the County for study. Sign of coyote (*Canis latrans*), fox (probably *Urocyon cinereoargenteus*) and bobcat (*Lynx rufus*) can be noted while walking the transmission line northern ridge. The biotic communities within the SEA contain a variety of plant life and an abundant fauna.

Due to location near the extreme northwestern end of the Peninsular Ranges, the SEA is an excellent place to observe the geographical range variability of a number of species that are characteristic of the mountains to the south, and have their northernmost occurrences in the Puente Hills, such as the red diamond rattlesnake (co-occurring with the Pacific rattlesnake).

Vegetation

There are three native plant communities in the SEA: coastal sage chaparral scrub, chaparral and oak woodland. The remainder of the SEA has areas classified as ornamental landscaping, developed and disturbed. Plant communities identified in the *Significant Ecological Area Update Study* by PCR in 2000 used the standard methodology and terminology of the time. Eight major plant communities found within the SEA were listed in 2000, including oak woodland, oak riparian forest, walnut woodland, southern willow scrub, chaparral, coastal sage chaparral scrub, freshwater marsh, and non-native grassland. The variety of topography, soil types, slope aspects and water availability within this SEA create a range of physical habitats that support numerous plant species.

Plant species observed or recorded in previous documentation within the SEA are indicated in the *Comprehensive Floral & Faunal Compendium of the Los Angeles County SEAs.* Sensitive plant species occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources section.

Descriptions and general locations of the each plant community present within the SEA are given below.

Oak Woodland: A plant community dominated by species of the oak genus (*Quercus*). Within this SEA this species is the coast live oak (*Quercus agrifolia* var. *agrifolia*), which typically grows to heights of 20 to 40 feet and forms either closed or open tree canopies. Understory vegetation varies

from grassland in areas subject to grazing to shrubs where topography is steeper and/or grazing has been relaxed. It may also intergrade with shrub communities, in this case coastal sage chaparral scrub. Within this SEA oak woodland occur along the northern boundary.

Corresponding MCV communities:

- *Quercus agrifolia* (coast live oak woodland) Woodland Alliance

Walnut Woodland: Often intergrades with oak dominated woodlands or develops as a distinct community. This community is dominated by the Southern California black walnut (*Juglans californica*), which grows 10 to 30 feet high. More often than not, the Southern California black walnut grows in open stands; however, closed tree canopies are not uncommon. In similar fashion to oak woodlands, its understory varies from grasses to shrubs. It forms stands ranging from savannahs to forests throughout the nearby Puente Hills SEA.

Corresponding MCV communities:

- *Juglans californica* (Southern California black walnut groves) Woodland Alliance

Coastal Sage Scrub: A shrubland community found in this SEA is coastal sage chaparral scrub, which has a high percentage of non-native species. This plant community is dominated by California sagebrush (*Artemisia tridentata*), California brittle bush (*Encelia californica*), white sage (*Salvia apiana*), black sage (*Salvia mellifera*), and California buckwheat (*Eriogonum fasciculatum*). Coastal sage chaparral scrub also forms dense stands, which grow three to four feet in height. Where the coastal sage chaparral scrub community is now found had been cleared and disturbed by past disturbances, such as grading and transition line construction.

Corresponding MCV communities:

- *Artemisia californica* (California sagebrush scrub) Shrubland Alliance
- *Artemisia californica-Salvia mellifera* (California sagebrush-black sage scrub) Shrubland Alliance
- *Artemisia californica-Eriogonum fasciculatum* (California sagebrush-California scrub) Shrubland Alliance
- *Encelia californica* (California brittle bush scrub) Shrubland Alliance
- *Salvia leucophylla* (purple sage scrub) Shrubland Alliance
- *Salvia mellifera* (black sage scrub) Shrubland Alliance
- *Eriogonum fasciculatum* (California buckwheat scrub) Shrubland Alliance
- *Lotus scoparius* [*Acmispon glaber*] (deer weed scrub) Shrubland Alliance
- *Opuntia littoralis* (coast prickly pear scrub) Shrubland Alliance

Chaparral: A shrub community composed of robust, woody species. Within this SEA these species include laurel sumac (*Malosma laurina*), toyon (*Heteromeles arbutifolia*), lemonadeberry (*Rhus integrifolia*) and prickly-pear cactus. These and other shrub species form dense vegetation covers growing 5 to 10 feet in height. The development of chaparral is most pronounced on north facing slopes within the SEA.

Corresponding MCV communities:

- *Adenostoma fasciculatum* (chamise chaparral) Shrubland Alliance

- *Ceanothus oliganthus* (hairy leaf ceanothus chaparral) Shrubland Alliance
- *Rhus ovata* (sugarbush chaparral) Shrubland Alliance

Developed and ornamental landscaping areas include agricultural use areas, ornamental landscaping, and structures, and occupy the majority of the project area. All perimeter areas, sections adjacent to roads, and space not occupied by parking lots or buildings have been landscaped. Some mulefat (*Baccharis salicifolia*) and sage species have been used for landscaping purposes. Species in this vegetation type included pine, acacia, ash, cotoneaster, eucalyptus and California privet. These species have grown large, with extensive canopies, and have developed an understory in some areas.

Disturbed or Barren Areas: Areas that either completely lack vegetation or are dominated by ruderal species. Ruderal vegetation found within the SEA includes a high proportion of weedy species, including black mustard, fennel, tree tobacco, and castor bean. The disturbed areas are a result of previous use for staging maintenance activities or easements.

Corresponding MCV communities:

No corresponding communities at this time

Wildlife

Wildlife within any ecosystem is largely determined by the available plant communities and in the SEA, the relatively small area only allows for limited local foraging and wildlife habitat.

Analysis of the presence of invertebrates is limited by a lack of specific data; however, the size of the SEA and diversity of habitats present is considered sufficient to encompass healthy populations of a large number of invertebrate species.

The potential presence of amphibians varies greatly between habitats within the project site. Terrestrial species may or may not require standing water for reproduction. Terrestrial species avoid desiccation by burrowing underground; within crevices in trees, rocks, and logs; and under stones and surface litter during the day and dry seasons. Due to their secretive nature, terrestrial amphibians are rarely observed, but may be quite abundant if conditions are favorable. Aquatic amphibians are dependent on standing or flowing water for reproduction. Such habitats include fresh water marshes and open water (reservoirs, permanent and temporary pools and ponds, and perennial streams).

Reptilian diversity and abundance varies with habitat type and character. Although some species prefer only one or two plant communities, most will forage in a variety of communities. A number of reptile species prefer open habitats that allow free movement and high visibility. The only reptiles recorded are the western side-blotched lizard (*Uta stansburiana elegans*) and the Great Basin fence lizard (*Sceloporus occidentalis longipes*).

For birds, some of the reestablishing vegetation in the disturbed areas and some areas of the ornamental landscaping provide limited foraging and cover habitat for year-round residents, seasonal residents, and migrating song birds. In addition, there is seasonally available water onsite within the drainage channels. The overall condition of the plant communities is mainly ornamental landscape. For raptors, some of the habitat within the project site could have the potential to provide foraging opportunities and breeding areas for raptors. Trees found along the perimeter of the project site and throughout the campus have the potential to provide suitable perches for foraging over the

open areas and scrub communities. These areas provide habitat for small birds and mammals, which results in a potentially large prey population on the project site. There is remnant coastal sage scrub in the SEA, and this may form a stepping stone for the coastal California gnatcatcher. Both the Puente Hills SEA and the critical habitat of the gnatcatcher are disjunct across Interstate-605. To have connectivity between the gnatcatcher's large population in the Montebello Hills, the SEA extends as a welcoming arm on the east side of Interstate-605. This would be equally important for other aerial fauna and windblown seeds of plants on the west side of Interstate-605.

For mammals, the reestablishing vegetation in the disturbed areas and the landscaped areas on the project site have the potential to support a limited number of mammal species. During field surveys, mammal species were either directly observed or their presence was deduced by diagnostic signs (tracks, scat, burrows, etc.).

All wildlife species previously recorded, as well as those expected to occur, within the SEA are indicated in the *Comprehensive Floral & Faunal Compendium* of the *Los Angeles County SEA Update Study 2000 Background Report*. Sensitive wildlife species occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources section of this document.

Wildlife Movement

The SEA is located in an area of potentially low to moderate value with regards to regional and local terrestrial wildlife movement. The Interstate-605 and industrial development that borders the freeway serves as a barrier for wildlife movement. The SEA is a gateway area for connectivity between the Peninsular Ranges of Southern California and the Transverse Ranges to the north. Naturally, they are connected by use of wildlife, particularly birds, insects, and plant propagules that are found along the San Gabriel River and Rio Hondo, which are only a 0.5 mile to the west of the Rio Hondo College. The San Gabriel River is designated by California Audubon as a State Important Bird Area (IBA), and extended arms of Semi-Natural habitat are important to connectivity for wildlife of the area and the region. Wildlife species could potentially use the SEA and possibly the ornamentally landscaped areas to facilitate movement and provide access to natural resources located in the Puente Hills. A wide variety of wildlife use linkages throughout the SEA from the extreme southeast up to the Rio Hondo College Wildlife Sanctuary, including mountain lion (*Puma concolor*) and a number of medium-sized mammals.

Sensitive Biological Resources

Sensitive biological resources are habitats or individual species that have special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, and/or rare. This is due to the species' declining or limited population sizes, which usually results from habitat loss. Watch lists of such resources are maintained by the California Department of Fish and Game (CDFG), the United States Fish and Wildlife Service (USFWS), and special groups, such as the California Native Plant Society (CNPS). The following sections indicate the habitats as well as plant and animal species present, or potentially present within the SEA, which have been accorded special recognition. When species are federally-listed as endangered or threatened, they often have federally-designated, geographically-specific "critical habitat areas." Critical habitat areas, after extensive study by experts, are judged to be essential to conservation and maintenance of the species. The Rio Hondo College Wildlife Sanctuary is critical habitat for the coastal California gnatcatcher.

Sensitive Plan Communities and Habitats

The SEA supports one habitat type considered sensitive by resource agencies. This is inventoried by California Department of Fish and Game (CDFG) in the California Natural Diversity Database (CNDDB) [2011]. The CNDDB includes state and federally-listed endangered, threatened, and rare vascular plants, as well as several sensitive vertebrate species. This community is coastal sage chaparral scrub and it occupies a part of the SEA. These communities, or closely related designations, are considered high priority communities by the CDFG, which indicates that they are experiencing a decline throughout their range. The array and composition of these communities has been discussed in the Vegetation section.

Sensitive Plant Species

The statuses of rare plants are hierarchically categorized by the CNPS using a rank and decimal system. The initial category level of Rare Plant Rank is indicated by the ranks 1A (presumed extinct in California), 1B (rare or endangered in California and elsewhere), 2 (rare or endangered in California but more common elsewhere), 3 (more information needed, a review list), and 4 (limited distribution). In cases where the CNPS has further identified the specific threat to the species, a decimal or Threat Code is added: .1 (seriously endangered in California), .2 (fairly endangered in California), or .3 (not very endangered in California).

The following special-status plant taxa have been reported or have the potential to occur within the SEA, based on known habitat requirements and geographic range information:

- Southern tarplant (*Centromadia parryi* ssp. *australis*) RPR 1B.1
- Slender mariposa lily (*Calochortus clavatus* var. *gracilis*) RPR 1B.2
- Plummer's mariposa lily (*Calochortus plummerae*) RPR 1B.2
- Intermediate mariposa lily (*Calochortus weedii* var. *intermedius*) RPR 1B.2
- Southern California black walnut (*Juglans californica*) RPR 4.2

Sensitive Animal Species

The following special-status animal species are reported or are likely to be present within the SEA based on habitat requirements and known range attributes:

- Coastal whiptail (*Aspidoscelis tigris stejnegeri*) CDFG Special Animals List
- Rosy boa (*Charina trivirgata*) BLMS, FSS
- Cooper's hawk (*Accipiter cooperii*) CDFG Watch List
- Burrowing owl (*Athene cunicularia*) BCC, BLMS, SSC
- Coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*) BCC, FSS, SSC
- Yellow-breasted chat (*Icteria virens*) SSC
- Coastal California gnatcatcher (*Polioptila californica californica*) FT, SSC, USBC, AWL, ABC
- Pallid bat (*Antrozous pallidus*) FSS, BLMS, SSC, WBWG High
- Western mastiff bat (*Eumops perotis californicus*) BLMS, SSC, WBWG High
- Silver-haired bat (*Lasionycteris noctivagans*) WBWG Medium
- Hoary bat (*Lasiurus cinereus*) WBWG Medium
- Pocketed free-tailed bat (*Nyctinomops femorosaccus*) SSC, WBWG Medium
- Big free-tailed bat (*Nyctinomops macrotis*) SSC, WBWG Medium-High
- American badger (*Taxidea taxus*) SSC

Ecological Transition Areas (ETAs)

There are no ETAs designated within this SEA.

Regional Biological Value

The SEA meets several SEA designation criteria and supports many regional biological values. Each criterion and how it is met described below.

CRITERIA ANALYSIS OF THE RIO HONDO WILDLIFE SANCTUARY SEA

Criterion		Status	Justification
A)	The habitat of core populations of endangered or threatened plant or animal species.	Met	The SEA is critical habitat for the coastal California gnatcatcher.
B)	On a regional basis, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Not Met	The SEA does not contain unique habitat restricted in distribution in the region of Southern California.
C)	Within the County, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution	Not Met	The SEA does not contain unique habitat for the region of the County.
D)	Habitat that at some point in the life cycle of a species or group of species, serves as concentrated breeding, feeding, resting, or migrating grounds and is limited in availability either regionally or in the County.	Met	This SEA is located on the eastern upland area of the San Gabriel River and is considered critical habitat for connectivity of the coastal California gnatcatcher. The largest population of the gnatcatcher in the County is on the west side of the San Gabriel River and the Interstate-605. Critical habitat in the SEA is on the east side of the San Gabriel River and the Interstate-605. The SEA is an arm extending to the rest of the gnatcatcher critical habitat and connecting to the rest of the Puente Hills SEA. The SEA is an important connecting and migration area for plants and wildlife of the Puente-Chino Hills of the Peninsular Ranges.
E)	Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community.	Met	The SEA is part of the education network of the public community colleges of the Los Angeles area. The area is used by the college for scientific study and research on native wildlife and plants. The college maintains field records on the biotic resources of the area. The SEA is relatively undisturbed. As a “choke point” for the wildlife corridor, it is an important area of research and study of connectivity.
F)	Areas that would provide for the preservation of relatively undisturbed examples of the original natural biotic communities in the County.	Not Met	The SEA has little disturbed areas, as well as recovering natural habitat.

In conclusion, the area described is an SEA because it contains: A) core habitat for a threatened species; D) is an important choke point in a significant migration and connective corridor of the County and the region of Southern California; and E) is an important resource to the education community of the County because of its connective status and its natural and recovering habitats.

17. San Andreas SEA

Location

General

The San Andreas Significant Ecological Area (SEA) is located in the western portion of the Antelope Valley in an unincorporated area of the County. The SEA is the second largest SEA and includes many diverse habitats. This is in large part due to the northwestern area being a meeting place for several diverse biomes and wildlife corridors. There are five ecoregions that meet in this area and have biological species that extend along the SEA and San Andreas Fault in the County. These ecoregions include: California Coastal Mountains; California Central Valley; Tehachapi Mountains, which extend to the southern Sierra Nevada; San Gabriel Mountains, which extend to other ranges in the Transverse Ranges; and the Antelope Valley, which is the northwestern end of the Mojave Desert. Wildlife corridors extend along the courses of the mountain ranges, as well as along the San Andreas Fault and Garlock Fault, which provide a great variety of habitats and frequent emergent water that is important for wildlife and plant movement and connectivity. The location and orientation of the SEA coincides with a segment of the San Andreas Fault Zone. The SEA includes a small portion of the western south-facing Tehachapi foothills, which are known for wildflower field displays in years of good rainfall. The SEA goes east and south across grasslands at the western tip of the Antelope Valley, includes Quail Lake, a former sag pond enhanced to receive water from the West Branch of the California Aqueduct. From Quail Lake, the SEA extends up the northern foothills of Liebre Mountain and Sawmill Mountain, and includes: Portal Ridge; large portions of Leona Valley; Ritter Ridge, Fairmont and Antelope buttes; and portions of Anaverde Valley. It also includes a disjunct area that encompasses water bodies along the fault, Lake Palmdale, and Una Lake, with a terminus at Barrel Springs.

The Antelope Valley and adjacent desert slopes of the SEA are recognized by California Audubon as the Antelope Valley (Lancaster) Globally Important Bird Area (IBA). Near Lake Palmdale in the disjunct eastern section of the SEA is part of the Antelope Valley (Lancaster) IBA and near Barrel Springs is part of the Santa Clara River IBA.

The SEA is located at least partially in each of the following United States Geological Survey (USGS) 7.5' California Quadrangles: Lebec, La Liebre Ranch, Neenach School, Fairmont Butte, Little Buttes, Liebre Mountain, Burnt Peak, Lake Hughes, Del Sur, Lancaster West, Sleepy Valley, Ritter Ridge, and Palmdale.

General Boundary and Resources Description

The northwestern tip of the SEA encompasses south-facing foothills at the western end of the Tehachapi Mountains, in the northwest corner of the County, on the eastern side of Tejon Pass. The largest extent of native perennial grassland and diverse wildflower fields occurs in this area of the County.

From the Tehachapi Foothills, the southern boundary goes south-southeast along Interstate-5, including much of Peace Valley in the Gorman area, which is the broad faulted area that includes

Gorman Creek. The SEA boundary crosses the Western Branch of the California Aqueduct, which is south of the junction of Interstate-5 and State Route-138. The boundary continues south along Interstate-5 until the point where the Liebre Mountain ridgeline dips to the highway, and the SEA boundary turns eastward and follows the ridgeline along the northern side of Liebre Mountain.

Along this section of Interstate-5 are several large underpasses for stream courses that are extremely important for wildlife connectivity across Interstate-5. The Angeles National Forest boundary is just east of the highway, and south of the aqueduct. Just north of the Liebre Mountain ridgeline, the San Andreas borders the north, east, and south sides of the eight unit of the Joshua Tree Woodlands SEA. This woodland is an unnamed arroyo, and it has the clumped growth form that Joshua trees (*Yucca brevifolia*) exhibit in hilly areas. The woodland is near the westernmost Joshua tree of the species. The woodland is a range extreme end. The SEA includes the northern slope are of the Angeles National Forest with its diversity of chaparral, grasslands, and oak and conifer forests.

After turning east from Interstate-5 and climbing uphill on the northern slope of Liebre Mountain, the SEA boundary crosses the ridgeline to the south to incorporate natural pristine areas of headwaters for all the branches of Liebre Gulch, which are part of the headwaters for Piru Creek, which is the largest tributary of the Santa Clara River in Ventura County. The SEA boundary returns to the north face of Liebre Gulch at about the location of Sandberg. The boundary tracks the Sawmill Mountain-Maxwell Road, which is generally on the broad ridgeline of the mountains and generally trends in a southeasterly direction. This ridgeline is the headwaters of Castaic Creek, which is the largest tributary of the Santa Clara River in the County. Castaic Creek is above the Castaic Reservoir, which extends into Cienega Canyon and Fish Creek, which is federally-designated critical habitat for the endangered arroyo toad (*Anaxyrus californicus*). In addition, maintenance of pure water in the source areas is critical for the species.

The boundary turns northeast where it meets Lake Hughes Road. This is an extremely important area of connectivity as the canyon along the Lake Hughes Road (Elizabeth Lake Canyon) drains to Castaic Creek and the Santa Clara River, whereas the Amargosa Creek that goes east and west from the Lake Hughes Road in the Fault valley drains to the Antelope Valley in both directions. The junction is topographically broad and well-vegetated though residential, which is excellent for wildlife connectivity in spite of a few houses. This is one of the major connective areas for the Pacific Ocean, the mountains, and the Mojave Desert. Castaic Creek is a principle tributary of the Santa Clara River, which runs to the seacoast in Ventura County. The San Gabriel Mountains are the home of Castaic Creek. The Antelope Valley receives most of the drainages from the San Andreas Fault valley.

The SEA boundary goes north at the junction with Lake Hughes Road and then skirts the Lake Hughes community's extension into Pine Canyon along the San Andreas Fault. In Pine Canyon, the boundary turns north and returns to its southeasterly direction, skirting the Lake Hughes development along the southern edge of Portal Ridge. Portal Ridge is entirely included in the SEA. A side extension of the southern boundary includes Lake Hughes, which is important for migrating waterfowl, with its sheltered position in the Fault valley. The boundary extends along the southern edge of Lake Hughes, Munz Lake, and Elizabeth Lake, and then trends southeast to go along the Leona Divide, including a large portion of Leona Valley.

The entire area along the San Andreas Fault is rich in wetlands and bogs, but Leona Valley has these in abundance, even in many yards. All of the wetlands in the San Andreas Fault valley and Portal Ridge are home to the greatest concentration of the tricolored blackbird in Southern

California, many of which are year-round residents. This bird species has experienced great population declines in recent years and is proposed for listing at both state and federal levels. In the community of Leona Valley, the southern SEA boundary goes along Lost Valley Creek and then along Leona Road to exclude some of the denser residential area in this section. The included area in Leona Valley has many of the bogs that line the Fault and the less populated farm areas along Portal Ridge north of Leona Road.

Around the area of the northward drainage of Bouquet Canyon, the southern SEA boundary dips south around an expansive area of drainages and bogs used by the tricolor blackbird on the old Ritter Ranch. From Ritter Canyon to the east, the boundary follows the old Ritter Ranch high road along the Sierra Pelona, crosses from 40th Street to the California Aqueduct along vegetation in the Anaverde Valley (where the boundary transitions from the Amargosa Creek drainage to the Anaverde Creek drainage), and then follows the aqueduct to the area where Anaverde Creek exits from the Fault valley. At the Lancaster Landfill boundary, the SEA boundary goes north and becomes the north SEA boundary at Verde Point.

The northern boundary of the SEA begins at Tejon Pass next to Interstate-5 and follows the Kern-Los Angeles County line eastward to the intersection of the western branch of the California Aqueduct in the western Tehachapi Foothills. This area along the Kern-Los Angeles County line is a contact boundary with the designated critical habitat for the federally-endangered California condor (*Gymnogyps californicus*), which is a bird that nearly went extinct and was saved by prodigious efforts in captive breeding. The boundary turns southeast to contour along the toe of slopes of low-lying hills where some of the few remaining examples of native perennial bunchgrass communities in California are found. The boundary crosses State Route-138, just east of where Tentrock Canyon also crosses State Route-138 and turns eastward into the Antelope Valley. Here the northern SEA boundary turns east to contour along the foothill area of the northern slope of Liebre Mountain. The boundary continues southeast following the edge of agricultural fields, which are important for raptor foraging. These fields often go along the Los Angeles Aqueduct, which is a little south of the California Aqueduct in this area, or along the California Aqueduct itself.

The boundary eventually tracks along the northeast edge of Fairmont Reservoir (another breeding site for the tricolored blackbird), and turns northeast to include a patchwork of farmed areas between the Fairmont and Antelope buttes, which are known to have tricolored blackbird feeding grounds. The boundary makes an inclusive path to encompass the Broad Canyon Wash, the Fairmont and Antelope buttes, and the Antelope Valley California Poppy Reserve State Park. These desert buttes are concentrated wintering grounds for birds of prey, and provide roosting sites that are surrounded by cultivated fields that support a plentiful food supply of rodents, rabbits, and hares. They are the most westerly buttes in the Mojave Desert, and with their proximity to the San Gabriel Mountains, have unique ecological relationships of scientific interest. Near the southern area of the buttes, the boundary follows agricultural fields along 130th Street West and then 135th Street West south to Munz Ranch Road (Willow Springs Road on some maps). Along 135th Street West, the boundary crosses Myrick Canyon where it spreads out onto the plain of the desert floor. The upstream areas of Myrick Canyon are included in the SEA.

The boundary tracks along the northwest side of Munz Ranch Road and then crosses to include Willow Springs Canyon, where Willow Springs Canyon is most natural. Where Willow Springs Canyon crosses the California Aqueduct, the northern SEA boundary turns east along the California Aqueduct as it passes along the northern base of Portal Ridge. Following the southern edge of the California Aqueduct, the boundary continues in a southeasterly direction to the east side of Ritter Ridge to Leona Siphon. A development along Joshua Tree Ranch Road near the summit of Ritter

Ridge is an area exclude from the SEA. The SEA northern boundary turns east for roughly one quarter mile along the southern edge of a tributary to Amargosa Creek. Where the Amargosa Creek terminates Ritter Ridge, the SEA boundary crosses the creek and ascends along the ridgeline of an unnamed ridge to where it meets the southern boundary at Verde Point.

East across the State Route-14 is a disjunct part of the SEA that incorporates Lake Palmdale and Una Lake and extends along the Fault to 37th Street East, including the ridgelines north and south of Barrel Springs Road, which includes the sag ponds or Barrel Springs. The Palmdale Ditch is included in this part of the SEA. Many migrant birds using the desert water features can be observed at these artificial lakes and the natural springs of this area during the spring and fall migration.

The gap between the two portions of the SEA includes the Antelope Valley Landfill, disturbed lots, and State Route-14.

The majority of land within the SEA lies within unincorporated area of the County. Other jurisdictions include the Angeles National Forest, the City of Palmdale, and the City of Lancaster.

Vegetation

Due to the unique location along a large fault valley that is bordered by pressure ridges, the large variation in elevation and topography, and because it includes a meeting point of large "eco-regions," vegetation within the SEA is the most diverse of any of the County's SEAs. The SEA includes arid desert communities, foothill woodland communities; high elevation piñon pine; chaparral communities; sag pond wetlands; native perennial grasslands; desert and montane riparian; and deciduous, oak, and conifer forest communities. In addition, the transition zones between these communities produce unusual species compositions. At its northwest end, the SEA encompasses a portion of the south-facing foothills of the Tehachapi Mountains, which have wildflower displays in years of good rainfall. Characteristic species include buttercup, poppy, owl's clover, lupines, and many species of sunflowers and daisies. Moving southeast, the SEA contains the north-facing slopes of Liebre and Sawmill mountains. The upper slopes of these mountains are densely vegetated with chaparral and scattered mixed woodlands. The lower slopes are more sparsely vegetated with scrub species, mixed scrub and grassland. The grassland and some ephemeral wildflower fields extend onto the plain of the valley floor. Most of the mountainous portion of the SEA is undisturbed open space, with a few scattered residential developments. The peak of Liebre Mountain represents the highest point in the SEA at 5,701 feet above mean sea level (MSL).

Moving further southeast, Portal Ridge is included in the SEA. This ridge has a series of peaks on the north side of the Fault. Upper slopes are vegetated with dense chaparral, juniper woodland, and Joshua tree woodland, while lower slopes are vegetated with scrub species and grassland. A series of small lakes (originally sag ponds along the Fault) occur along the base of the south-facing slopes including Lake Hughes, Munz Lake, Elizabeth Lake, and other smaller unnamed ponds. Further southeast, the SEA surrounds Amargosa Creek and a large portion of its watershed located in the Leona Valley. All along the north-facing slopes, a number of named and unnamed natural washes, often with flora that is sensitive and prefers watercourses, drain onto the valley floor from the mountains and the Fault. Named canyons are Tentrock; Horse Camp; Cow Spring; Pine; Spencer; Burnside; Adams; Rivera; Baldwin Grade; North Long; South Long; Kings; Bleich; Broad Wash; Price; Myrick; Willow Springs; many unnamed drainages off Portal Ridge and some off Ritter Ridge; Johnson Road Wash; and Railroad. Also included are Godde Pass Wash, Amargosa Creek, and Anaverde Creek. The vegetation transitions to grasslands and wildflower fields, where the SEA stretches north across the valley floor and encircles the Antelope and Fairmont buttes of the Antelope Valley California Poppy Reserve. Numerous large "bald" areas in the higher elevations

have grasslands bordered by shrublands or forests.

The mountainous part of the SEA has an extremely diverse flora, which arises because of its topographic diversity and because of its connectivity to the western end of the SEA. This area is a meeting place for five diverse ecoregions and two or more wildlife corridors. Because of the great vegetation diversity, the area provides an opportunity for educational use, nature study, and scientific research. Foothill woodland extends from the western end of the SEA, all the way to Ritter Ridge, which is an uncommon plant community that contains oak savannahs of blue oak (*Quercus douglasii*) and valley oak (*Quercus lobata*), and gray pine woodland (*Pinus sabiniana*). This community is more common in northern and central California, where it occurs along foothill and valley borders in the inner coastal ranges and western foothills of the Sierra Nevada. This is the only place it occurs in the County. Several component species, such as blue oak, gray pine, and California buckeye (*Aesculus californica*) reach their southern limits here. Slopes and ridge-tops are covered with chaparral and yellow-pine forest, which becomes pinyon-juniper woodland under desert influences on the lower northern slopes. Joshua tree woodland and sagebrush scrub cover the lower desert hillsides.

On the lower slopes and in the valleys south of the main ridgeline, one can find southern oak woodland, valley grassland, riparian woodland, sagebrush scrub, and even coastal sage scrub. All of these are relatively common in the County with the exception of sagebrush scrub. This community, which is dominated by Great Basin sage (*Artemisia tridentata*), is not common south of the Owens Valley in California. Populations in Southern California are probably relics from a prehistoric time when the community extended much further south than it does today.

Ritter Ridge comprises the most easterly portion of the San Gabriel Mountains in the SEA. Slopes on the north side of this ridgeline are vegetated with one of the best Joshua tree and California juniper mixed woodlands in the County. The combination of desert chaparral and foothill woodlands creates habitat for a rich faunal list, with 25 mammals, 53 birds and 19 reptiles recorded. South-facing slopes contain a mixture of scrub and chaparral communities. This section of the SEA includes Amargosa Creek and a portion of its watershed, which is located at the base of the south-facing slopes, and a segment of Anaverde Creek and watershed located in Anaverde Valley. All these creeks and washes support a variety of riparian communities.

The disjunct part of the SEA that includes Palmdale Lake, Una Lake, and Barrel Springs has upland portions vegetated with a desert scrub community with scattered Joshua trees. The lower areas consist of open water ponds, cattail ponds, riparian woodlands, and other wetland communities.

Plant species observed or recorded in previous documentation within the SEA are indicated in the *Comprehensive Floral & Faunal Compendium of the Los Angeles County SEAs.* Sensitive plant species occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources section.

Descriptions and general locations of the each plant community present within the SEA are presented below. These include desert scrub, chaparral, native grassland, non-native grassland, southern willow scrub, foothill woodland, Joshua tree woodland, juniper woodland, valley oak woodland, bigcone Douglas fir-canyon oak woodland, southern cottonwood-willow riparian forest, freshwater marsh, alkali marsh, alluvial wash, and disturbed.

Desert Scrub: A moderately tall, fairly open shrubland with several species that contribute to the canopy. Dominants often include Great Basin sagebrush, antelope bush, saltbush, and/or rabbitbrush with several perennial grasses dispersed between the shrubs. Within the SEA, this

community often intergrades with juniper woodlands and Joshua tree woodlands. Desert scrub is also found on lower slopes within the Fault, on north-facing slopes that transition onto the valley floor. They are also found on the buttes and adjacent valley floor, interspersed with grasslands.

Corresponding MCV communities:

- *Krascheninnikovia lanata* (winterfat scrubland) Shrubland Alliance
- *Suaeda moquinii* ([*Suaeda nigra*] bush seepweed scrub) Shrubland Alliance
- *Atriplex spinifera* (spinescale scrub) Shrubland Alliance
- *Pluchea sericea* (arrow weed thickets) Shrubland Alliance
- *Artemisia tridentata* (big sagebrush) Shrubland Alliance
- *Artemisia tridentata* ssp. *vaseyana* (mountain big sagebrush) Shrubland Alliance
- *Atriplex canescens* (fourwing saltbush scrub) Shrubland Alliance
- *Atriplex confertifolia* (shadscale scrub) Shrubland Alliance
- *Atriplex hymenelytra* (desert holly scrub) Shrubland Alliance
- *Atriplex lentiformis* (quailbush scrub) Shrubland Alliance
- *Acacia greggii* (catclaw acacia thorn scrub) Shrubland Alliance
- *Ericameria paniculata* (black-stem rabbitbrush scrub) Shrubland Alliance
- *Ambrosia salsola* (cheesebrush scrub) Shrubland Alliance
- *Baccharis salicifolia* (mulefat thickets) Shrubland Alliance
- *Larrea tridentata* (creosote bush scrub) Shrubland Alliance
- *Larrea tridentata-Ambrosia dumosa* (creosote bush-white burr sage scrub) Shrubland Alliance
- *Atriplex polycarpa* (allscale scrub) Shrubland Alliance
- *Atriplex spinifera* (spinescale scrub) Shrubland Alliance
- *Eriogonum fasciculatum* (California buckwheat scrub) Shrubland Alliance
- *Eriogonum heermannii* (Heermann's buckwheat patches) Provisional Shrubland Alliance
- *Eriogonum wrightii* (Wright's buckwheat patches) Dwarf Shrubland Alliance
- *Ephedra californica* (California joint fir scrub) Shrubland Alliance
- *Allenrolfea occidentalis* (iodine bush scrub) Shrubland Alliance
- *Sarcobatus vermiculatus* (greasewood scrub) Shrubland Alliance
- *Yucca brevifolia* (Joshua tree woodland) Woodland Alliance
- *Prosopis glandulosa* (mesquite bosque) Woodland Alliance
- *Ambrosia salsola* (cheesebush scrub) Shrubland Alliance
- *Grayia spinosa* (spiny hop sage scrub) Shrubland Alliance
- *Castela emoryi* (crucifixion thorn stands) Shrubland Special Stands
- *Ericameria nauseosa* (rubber rabbitbrush scrub) Shrubland Alliance
- *Gutierrezia sarothrae* (broom snake weed scrub) Provisional Shrubland Alliance
- *Ambrosia dumosa* (white bursage scrub) Shrubland Alliance
- *Eriogonum fasciculatum-Salvia apiana* (California buckwheat-white sage scrub) Shrubland Alliance
- *Lepidospartum squamatum* (scale broom scrub) Shrubland Alliance
- *Purshia tridentata* (bitter bush scrub) Shrubland Alliance
- *Artemisia californica-Eriogonum fasciculatum* (California sagebrush-California buckwheat scrub) Shrubland Alliance
- *Salvia apiana* (white sage scrub) Shrubland Alliance

Chaparral: Consists of broad-leafed or needle-leafed, sclerophyllous (hard-leafed), medium height to

tall shrubs. These shrubs form a dense cover on steep slopes below 5,000 feet in Southern California. Dominant species found within this community include chamise, manzanita, California lilac, laurel sumac, toyon, western mountain-mahogany, and desert mountain-mahogany. This plant community occupies most of the higher elevations within the SEA and is frequently interspersed with scrub and woodlands.

Corresponding MCV communities:

- *Adenostoma fasciculatum* (chamise chaparral) Shrubland Alliance
- *Adenostoma fasciculatum-Salvia apiana* (chamise-white sage chaparral) Shrubland Alliance
- *Arctostaphylos glandulosa* (Eastwood's manzanita chaparral) Shrubland Alliance
- *Arctostaphylos glauca (*bigberry manzanita chaparral) Shrubland Alliance
- *Ceanothus spinosus* (greenbark ceanothus chaparral) Shrubland Alliance
- *Ceanothus oliganthus* (hairy leaf ceanothus chaparral) Shrubland Alliance
- *Prunus ilicifolia* (holly leaf cherry chaparral) Shrubland Alliance

Grassland: Consist of low, herbaceous vegetation that is dominated by grasses, but also harbors native forbs and bulbs, as well as naturalized annual forbs. Grasslands within the SEA include both non-native and native grasslands.

Native grassland consists of at least 10 percent relative cover of native herbaceous plants (grasses and forb species), with the remaining coverage similar to non-native grasslands. North of Quail Lake there are areas where native perennial bunchgrasses and wildflowers dominate. In addition, introduced annual grasses are conspicuously limited. Small patches of native grassland can also be found scattered throughout the SEA. This occurs mostly in openings in coastal sage scrub and mixed with non-native grasslands in significant acreage on and surrounding the buttes, as well as throughout the Tehachapi foothills at the western end of the SEA. The Tehachapi foothills are part of an expansive perennial grassland. Many areas of native grassland, such as those surrounding the buttes, support dense displays of wildflowers, which have carpeted the area in some years and are referred to as “wildflower fields.”

Corresponding MCV communities:

- *Leymus condensatus* (giant wild rye grassland) Herbaceous Alliance
- *Nassella cernua* ([*Stipa cernua*] nodding needle grass grassland) Provisional Herbaceous Alliance
- *Nassella lepida* ([*Stipa lepida*] foothill needle grass grassland) Provisional Herbaceous Alliance
- *Nassella pulchra* ([*Stipa pulchra*] purple needle grass grassland) Herbaceous Alliance

Non-native grassland consists of dominant invasive annual grasses that are primarily of Mediterranean origin. Dominant species found within this community include slender oats, wild oats, ripgut brome, foxtail chess, wild mustard, red-stemmed filaree, Mediterranean schismus, and golden tops. Non-native grasslands are located in small patches throughout the SEA, within more significant acreage on and adjacent to the buttes, and on south-facing slopes of the Tehachapi Mountains.

Corresponding MCV communities:

- *Avena (barbata, fatua)* (wild oats grasslands) Semi-Natural Herbaceous Stands
- *Brassica (nigra)* and other mustards (upland mustards) Semi-Natural Herbaceous Stands

- *Bromus (diandrus, hordeaceus)-Brachypodium distachyon* (annual brome grasslands) Semi-Natural Herbaceous Stands
- *Bromus rubens-Schismus (arabicus, barbatus)* ([*Bromus madritensis* ssp. *rubens*] Red brome or Mediterranean grass grasslands) Semi-Natural Herbaceous Stands
- *Lolium perenne* ([*Festuca perennis*] perennial rye grass fields) Semi-Natural Herbaceous Stands

Wildflower Field: An amorphous mix of herbaceous plants noted for conspicuous annual wildflower displays, although noteworthy displays do not occur every year and appear to depend on rainfall patterns. Dominance varies from site to site and from year to year at any one particular site. Species frequently present include California poppy, tidy tips, dove lupine, valley tassels, purple owl's clover, and broad-leaved gilia. Within the SEA, prominent wildflower fields occur on the south facing slopes of the Tehachapi Mountains and buttes.

Corresponding MCV communities:

None at this time.

Southern Willow Scrub: A riparian community consisting of dense, broad-leafed, winter-deciduous riparian thickets that occur within and adjacent to watercourses. The dominant species of this community within the SEA are arroyo willow, red willow, and black willow. This community occurs in segments along portions of many of the drainages, as well as the periphery of many of the ponds and lakes throughout the SEA.

Corresponding MCV communities:

- *Salix lasiolepis* (arroyo willow thickets) Shrubland Alliance
- *Salix exigua* (sandbar willow thickets) Shrubland Alliance
- *Salix gooddingii* (black willow thickets) Woodland Alliance

Foothill Woodland: A broad community designation encompassing the tree-dominated plant communities occurring transitionally between grasslands and montane chaparral or bigcone Douglas fir-canyon oak woodland. Dominant tree species include interior live oak, blue oak, valley oak, California buckeye, and foothill pine. Foothill woodland occupies much of the western slopes of the SEA.

Corresponding MCV communities:

- *Pinus jeffreyi* (Jeffrey pine forest) Forest Alliance
- *Pinus ponderosa* (Ponderosa pine forest) Forest Alliance
- *Quercus lobata* (valley oak woodland) Woodland Alliance
- *Abies concolor-Pinus lambertiana* (white fir-sugar pine forest) Forest Alliance
- *Abies concolor* (white fir forest) Forest Alliance
- *Pseudotsuga macrocarpa* (bigcone Douglas-fir forest) Forest Alliance
- *Quercus douglasii* (blue oak woodland) Woodland Alliance
- *Umbellularia californica* (California bay forest) Forest Alliance
- *Quercus kelloggii* (California black oak forest) Forest Alliance
- *Aesculus californica* (California buckeye groves) Woodland Alliance
- *Quercus chrysolepis* (canyon live oak forest) Forest Alliance
- *Quercus agrifolia* (coast live oak woodland) Woodland Alliance

- *Pinus coulteri* (Coulter pine woodland) Woodland Alliance
- *Pinus sabiniana* (ghost pine woodland) Woodland Alliance
- *Quercus wislizenii* (interior live oak woodland) Woodland Alliance

Joshua Tree Woodland: An open woodland with Joshua trees, usually as the only arborescent species, and numerous smaller shrub species interspersed between. Shrub species include a great variety with dominants of Great Basin sagebrush, rabbitbrush, creosote bush, and cheese bush. Joshua tree woodland is present on the lower slopes around the Fault in the eastern half of the SEA.

Corresponding MCV communities:

- *Yucca brevifolia* (Joshua tree woodland) Woodland Alliance

Juniper Woodland: An extremely open woodland dominated by California juniper, with understory that is typical of desert scrub. The majority of this community is found on lower slopes in the eastern half of the SEA, and often intermingles with Joshua tree woodland and chaparral communities.

Corresponding MCV communities:

- *Juniperus californica* (California juniper woodland) Woodland Alliance

Valley Oak Woodland: An open woodland community dominated by valley oak. The understory is a grassy savannah that is composed mostly of non-native grasses. Valley oak woodland occurs on the north-facing slope of Liebre Mountain in the western area of the SEA.

Corresponding MCV communities:

- *Quercus lobata* (valley oak woodland) Woodland Alliance

Bigcone Douglas Fir-Canyon Oak Woodland: A dense woodland with a mix of dominant tree species. Canyon oak forms a broken canopy with scattered bigcone Douglas fir, California black oak, and foothill pine. Areas not underneath the canopy are usually dominated by chaparral species, such as scrub oak, manzanita, and California lilac. This community occupies most of the higher elevation slopes within the SEA.

Corresponding MCV communities:

- *Pseudotsuga macrocarpa* (bigcone Douglas-fir forest) Forest Alliance
- *Quercus chrysolepis* (canyon live oak forest) Forest Alliance

Southern Cottonwood-Willow Riparian Forest: An open broad-leafed winter-deciduous riparian forest dominated by Fremont cottonwood, black cottonwood, black willow, and red willow. The southern cottonwood-willow riparian forest within the SEA occupies short segments of Amargosa Creek, as well as the periphery of several lakes and ponds.

Corresponding MCV communities:

- *Populus fremontii* (Fremont cottonwood forest) Forest Alliance
- *Populus trichocarpa* (black cottonwood forest) Forest Alliance

Freshwater Marsh: Develops in areas of still or slow-moving permanent freshwater. This community

is dominated by the perennial, emergent monocot cattails, which reach a height of two to three meters and often form a closed canopy. Bulrushes are dominant below the cattail canopy. Freshwater marsh occurs in small patches along Amargosa Creek and other wetland areas scattered along the Fault.

Corresponding MCV communities:

- *Phragmites australis* (common reed marshes) Herbaceous Alliance and Semi-Natural Stands
- *Schoenoplectus californicus* (California bulrush marsh) Herbaceous Alliance
- *Typha (angustifolia, domingensis, latifolia)* (cattail marshes) Herbaceous Alliance
- *Sarcocornia* [*Salicornia*] *pacifica* (*Salicornia depressa*) (pickleweed mats) Herbaceous Alliance
- *Lemna (minor) and relatives* (duckweed blooms) Provisional Herbaceous Alliance

Alkali Marsh: Similar to the freshwater marsh, but with more salt-tolerant hydrophytes present. Species associated with this community include cattails, *Carex* spp., *Juncus cooperi*, saltgrass, *Nitrophila occidentalis*, *Scirpus nevadensis*, and common reed. Alkali marsh occurs in small segments along Amargosa Creek and other wetland areas scattered along the Fault.

Corresponding MCV communities:

- *Sarcobatus vermiculatus* (greasewood scrub) Shrubland Alliance
- *Schoenoplectus americanus* (American bulrush marsh) Herbaceous Alliance
- *Sporobolus airoides* (alkali sacaton grassland) Herbaceous Alliance
- *Allenrolfea occidentalis* (iodine bush scrub) Shrubland Alliance
- *Atriplex lentiformis* (quailbush scrub) Shrubland Alliance
- *Suaeda moquinii* ([*Suaeda nigra*] bush seepweed scrub) Shrubland Alliance

Alluvial Wash: Also known as floodplain sage scrub, alluvial wash comprises phreatophytic (a plant type that obtains water from the watertable via a long taproot) and upland shrubs that occur in infrequently flooded and scoured habitats such as flood plains, or seasonal streams. The dominant shrub is scalebroom with Great Basin sagebrush, rabbitbrush, sweetbush, and chaparral yucca. Alluvial wash is distributed in larger drainages such as upper Amargosa Creek, Myrick Canyon Wash, Willow Springs Wash and others located throughout the SEA.

Corresponding MCV communities:

- *Baccharis salicifolia* (mulefat thickets) Shrubland Alliance
- *Forestiera pubescens* (desert olive patches) Shrubland Alliance
- *Rosa californica* (California rose briar patches) Shrubland Alliance
- *Salix exigua* (sandbar willow thickets) Shrubland Alliance
- *Salix lasiolepis* (arroyo willow thickets) Shrubland Alliance
- *Acacia greggii* (catclaw acacia thorn scrub) Shrubland Alliance
- *Ephedra californica* (California joint fir scrub) Shrubland Alliance
- *Ericameria paniculata* (black-stem rabbitbrush scrub) Shrubland Alliance
- *Lepidospartum squamatum* (scale broom scrub) Shrubland Alliance
- *Ericameria nauseosa* (rubber rabbitbrush scrub) Shrubland Alliance
- *Ericameria nauseosa-Ericameria teretifolia* (needleleaf rabbitbrush scrub) Shrubland Alliance
- *Gutierrezia sarothrae* (broom snake weed scrub) Provisional Shrubland Alliance

Disturbed or Barren Areas: Areas that either completely lack vegetation or are dominated by ruderal species. Ruderal vegetation typically found within the SEA includes non-native grasses and "weedy" herbaceous species, native and non-native, including mustards, telegraph weed, Russian thistle, dock, yellow star thistle, Australian saltbush, and cocklebur. Several disturbed areas occur scattered throughout the SEA and take the form of residential developments, paved roads, fire breaks, dirt access roads, trails, and other similarly disturbed areas.

Wildlife

Wildlife within the SEA is diverse and abundant due to the large acreage of natural open space and the diversity of habitat types. While a few wildlife species are entirely dependent on a single vegetative community, the entire mosaic of all the vegetation communities within the SEA and adjoining areas constitutes a functional ecosystem. This ecosystem contains a variety of wildlife species, both within the SEA and as part of the regional ecosystem.

Analysis of invertebrates on any given site is generally limited by a lack of specific data; however, the size of the SEA and diversity of habitats present is considered sufficient to encompass healthy populations of a large number of invertebrate species. The wetlands and aquatic habitats within the SEA support diverse faunas of freshwater and alkaline pool arthropods, including native fairy shrimp, brine flies, and tiger beetles. Vernal pools, which are a sensitive habitat, are being discovered and would be expected in a heavily faulted area with many depressions created by faulting. These would not have typical through-flow of erosional features. Vernal pools often have sensitive fauna and flora. Insect orders are particularly well-represented taxonomically, with moderate levels of species endemism including coleoptera, diptera, hymenoptera and diurnal and nocturnal lepidoptera.

Amphibian populations are generally scarce in desert habitats, but may be particularly abundant where desert riparian areas occur or in the mountains. The SEA is likely to support a variety of amphibians within wetland areas along the Fault and the moister woodland areas and canyon bottoms of the mountains. Many essential reptilian habitat characteristics are present within the SEA. These include open habitats that allow free movement and high visibility, and small mammal burrows for cover and escape from predators and extreme weather. These characteristics, as well as a diversity of habitat types are likely to support a wide variety of reptilian species.

The scrubland, woodland, riparian, and grassland habitats in the SEA provide foraging and cover habitat for year-round residents, seasonal residents, and migrating song birds. In addition, the SEA encompasses many year-round water sources, abundant raptor foraging, perching, and nesting habitat. The combination of these resources, as well as the confluence of many community types support an unusually high diversity of bird species. Small and large mammal populations within the SEA are diverse and reflective of the unique convergence of several habitat types.

All wildlife species previously recorded, as well as those expected to occur, within the SEA are indicated in the *Comprehensive Floral & Faunal Compendium* of the *Los Angeles County SEAs*. Sensitive wildlife species occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources.

Wildlife Movement

The SEA includes several important linkages for wildlife movement. The foothills in the western-most part of the SEA are an important linkage between the San Gabriel Mountains, the Tehachapi Mountains, and the Coastal Ranges. This linkage to the Tehachapi Mountains is important because they connect to the southern-most extent of the Sierra Nevada Mountains. The Tehachapi

Mountains represent the only mountain linkage from the Transverse Ranges and the Coast Ranges to the Sierra Nevada Range. This feature may be an important topographic reference for migrating birds, as well as providing high elevation foraging grounds along the migratory route. The several ranges that meet at the western end of the SEA, and provide a valuable link for gene flow between divergent populations of many species. The SEA includes numerous drainages that extend onto the Antelope Valley floor towards resources, such as the Fairmont and Antelope buttes. These washes provide an important linkage for animals traveling between the Valley floor, the buttes and the western part of the San Gabriel Mountains. In addition, Anaverde Creek, Amargosa Creek, and Pine Canyon facilitate east-west wildlife movement through the mountains, Portal Ridge, and Ritter Ridge. Tributary drainages from the Santa Clara River, such as Elizabeth Lake Canyon and San Francisquito Canyon connect the ocean and coastal zones to the Fault. The frequency of valuable riparian communities along this travel route, which are located within an otherwise arid climate, further contributes to the SEA's importance for wildlife and habitat linkages in the region.

Sensitive Biological Resources

Sensitive biological resources are habitats or individual species that have special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, and/or rare. This is due to the species' declining or limited population sizes, which usually results from habitat loss. Watch lists of such resources are maintained by the California Department of Fish and Game (CDFG), the United States Fish and Wildlife Service (USFWS), and special groups, such as the California Native Plant Society (CNPS). The following sections indicate the habitats as well as plant and animal species present, or potentially present within the SEA, which have been accorded special recognition. When species are federally-listed as endangered or threatened, they often have federally-designated, geographically-specific "critical habitat areas." Critical habitat areas, after extensive study by experts, are judged to be essential to conservation and maintenance of the species.

Sensitive Plan Communities and Habitats

The SEA supports several habitat types considered sensitive by resource agencies. These are inventoried by California Department of Fish and Game (CDFG) in the California Natural Diversity Database (CNDDB) [2011]. The CNDDB includes state and federally-listed endangered, threatened, and rare vascular plants, as well as several sensitive vertebrate species. The communities include Joshua tree woodland, valley oak woodland, native grassland, wildflower field, southern cottonwood-willow riparian forest, fresh-water swamp, alkali meadow, and southern willow scrub, and all these occur throughout the SEA. These communities, or closely related designations, are considered high priority communities by the CDFG, which indicates that they are experiencing a decline throughout their range. The array and composition of these communities has been discussed in the Vegetation section.

Sensitive Plant Species

The statuses of rare plants are hierarchically categorized by the CNPS using a rank and decimal system. The initial category level of Rare Plant Rank is indicated by the ranks 1A (presumed extinct in California), 1B (rare or endangered in California and elsewhere), 2 (rare or endangered in California but more common elsewhere), 3 (more information needed, a review list), and 4 (limited distribution). In cases where the CNPS has further identified the specific threat to the species, a decimal or Threat Code is added: .1 (seriously endangered in California), .2 (fairly endangered in California), or .3 (not very endangered in California).

The following special-status plant taxa have been reported or have the potential to occur within the SEA, based on known habitat requirements and geographic range information:

- Nevin's barberry (*Berberis nevinii*) FE, SE, RPR 1B.1
- San Fernando Valley spineflower (*Chorizanthe parryi* var*. fernandina*) FC, SE, RPR 1B.1

In addition, the following species considered by CNPS to be rare, threatened or endangered have the potential to occur:

- Lancaster milk-vetch (*Astragalus preussii* var*. laxiflorus*) RPR 2.3
- Slender mariposa lily (*Calochortus clavatus* var*. gracilis*) RPR 1B.2
- Alkali mariposa lily (*Calochortus striatus*) RPR 1B.2
- Pierson's morning glory (*Calystegia peirsonii*) RPR 4.2
- Parry's spineflower (*Chorizanthe parryi* var*. parryi*) RPR 1B.1
- San Gabriel bedstraw (*Galium grande*) RPR 1B.2
- Plummer's mariposa lily (*Calochortus plummerae*) RPR 1B.2
- Robbins' nemacladus (*Nemacladus secundiflorus* var*. robbinsii*) RPR 1B.2
- Short-joint beavertail (*Opuntia basilaris* var*. brachyclada*) RPR 1B.2
- San Bernardino aster (*Symphyotrichum defoliatum*) RPR 1B.2

Sensitive Animal Species

The following special-status animal species are reported or are likely to be present within the SEA based on habitat requirements and known range attributes:

- Arroyo toad (*Anaxyrus californicus*) FE, SSC
- California red-legged frog (*Rana draytonii*) FT, SSC
- Western pond turtle (*Emys marmorata*) BLMS, SSC, FSS
- San Diego coast horned lizard (*Phrynosoma blainvillii*) BLMS, SSC, FSS
- Coast patch-nosed snake (*Salvadora hexalepis virgultea*) SSC
- Western yellow-billed cuckoo (*Coccyzus americanus* ssp. *occidentalis*) FC, FSS, BCC
- Willow flycatcher (*Empidonax traillii*) SE
- Southwestern willow flycatcher (*Empidonax traillii extimus*) FE, SE, ABC
- California condor (*Gymnogyps californianus*) FE, SE, ABC, CDF
- American peregrine falcon (*Falco peregrinus anatum*) FD, SD CDF, CDFG Fully Protected, BCC
- Least Bell's vireo (*Vireo bellii pusillus*) FE, SE, ABC
- Mohave ground squirrel (*Xerospermophilus mohavensis*) ST

In addition, other state-listed species of concern have the potential to occur:

- Western spadefoot (*Spea hammondii*) BLMS, SSC
- Tehachapi slender salamander (*Batrachoseps stebbinsi*) ST, BLMS, FSS
- Silvery legless lizard (*Anniella pulchra pulchra*) SSC, FSS
- Two-striped garter snake (*Thamnophis hammondii*)
- Cooper's hawk (*Accipiter cooperii)* CDFG Watch List
- Sharp-shinned hawk (*Accipiter striatus*) CDFG Watch List
- Tricolored blackbird (*Agelaius tricolor*) ABC, BLMS, SSC, BCC
- Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*) CDFG Watch

List

- Long-eared owl (*Asio otus*) SSC
- Burrowing owl (*Athene cunicularia*) BLMS, SSC, BCC
- California spotted owl (*Strix occidentalis occidentalis*),
- Ferruginous hawk (*Buteo regalis*) CDFG Watch List, BCC
- Mountain plover (*Charadrius montanus*) FPT, ABC, BLMS, SSC, BCC
- Northern harrier (*Circus cyaneus*) SSC
- Yellow warbler (*Dendroica petechia* ssp. *brewsteri*) SSC, BCC
- White-tailed kite (*Elanus leucurus*) CDFG Fully Protected
- Merlin (*Falco columbarius*) CDFG Watch List
- Prairie falcon (*Falco mexicanus*) CDFG Watch List, BCC
- Bald eagle (*Haliaeetus leucocephalus*) FD, SE, CDF, CDFG Fully Protected, FSS, BCC
- Yellow-breasted chat (*Icteria virens*) SSC
- Western least bittern (*Ixobrychus exilis hesperis*) SSC, BCC
- Loggerhead shrike (*Lanius ludovicianus*) SSC, BCC
- Golden eagle (*Aquila chrysaetos)* CDF, CDFG Fully Protected, CDFG Watch List, BCC
- Osprey (*Pandion haliaetus*) CDF, CDFG Watch List
- Le Conte's thrasher (*Toxostoma lecontei*) ABC, SSC, BCC
- Gray vireo (*Vireo vicinior*) ABC, BLMS, SSC, BCC
- Virginia's warbler (*Oreothlypis virginiae*) ABC, CDFG Watch List, BCC
- Pallid bat (*Antrozous pallidus*) BLMS, SSC, FSS, WBWG High Priority
- Townsend's big-eared bat (*Corynorhinus Plecotus) t. townsendii*) BLMS, SSC, FSS, WBWG High Priority
- Pale big-eared bat (*Corynorhinus Plecotus) t. townsendii pallescens*) BLMS, SSC, FSS, WBWG High Priority
- Spotted bat (*Euderma maculatum*) BLMS, SSC, WBWG High Priority
- Western mastiff bat (*Eumops perotis californicus*) BLMS, SSC, WBWG High Priority
- California leaf-nosed bat (*Macrotus californicus*) BLMS, SSC, FSS, WBWG High Priority
- Yuma myotis (*Myotis yumanensis*) BLMS, WBWG Low-Medium Priority
- Southern grasshopper mouse (*Onychomys torridus ramona*) SSC
- Tehachapi pocket mouse, (*Perognathus alticolus inexpectatus*) SSC, FSS
- American badger (*Taxidea taxus*) SSC

Ecological Transition Areas (ETAs)

ETAs in the SEA include small areas of residential development, orchards, agricultural fields, and "ranchettes."

Regional Biological Value

The SEA meets several SEA designation criteria and supports many regional biological values. Each criterion and how it is met described below.

CRITERIA ANALYSIS OF THE SAN ANDREAS SEA

Criterion	Status	Justification

Criterion		Status	Justification
A)	The habitat of core populations of endangered or threatened plant or animal species.	Not met Met in Future?	Although there are several listed species that occur within the SEA, this criterion is not met due to the lack of known core population areas. The far northwestern border with Kern County is the edge of critical habitat for the California condor. The tricolored blackbird may soon be listed and has its largest population in Southern California within the SEA.
B)	On a regional basis, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	The SEA encompasses a series of marshes and sinks concentrated along the San Andreas Fault Zone, which are both unique and restricted in distribution. The Fairmont and Antelope buttes represent a unique habitat due to their location, as the most westerly buttes of the Mojave Desert and their close proximity to several geographic regions. As the confluence of a number of major geographical areas, the Mojave Desert, the San Gabriel Mountains of the Transverse Ranges, the Coastal Ranges, and the Tehachapi Mountains produces a unique and regionally rare flora that represents a transition between desert, foothill, and several montane environments.
C)	Within the County, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	The confluence of five major geographical areas–the Mojave Desert, the San Gabriel Mountains, the Coastal Ranges, the Tehachapi Mountains, and the Central Valley–has produced the most unique and diverse flora found in the County, and represents a transition between desert, foothill, and montane environments. The SEA also includes the southern limit of the foothill woodland community, blue oak, gray or foothill pine, and California buckeye, rare relic stands of Great Basin sagebrush scrub, and rare wildflower fields.
D)	Habitat that at some point in the life cycle of a species or group of species, serves as concentrated breeding, feeding, resting, or migrating grounds and is limited in availability either regionally or in the County.	Met	The Fairmont and Antelope buttes provide vital habitat to many wide ranging species, which forage in outlying habitat, but use the buttes for nesting, roosting, denning, and refuge. The buttes also serve as concentrated wintering grounds for birds of prey, which are rare in the County, and which forage on grassland and agricultural fields in the vicinity. Lakes and other wetland areas along the Fault and throughout the SEA provide breeding habitat for amphibians and feeding habitat for migrating birds that traverse the slopes adjacent to the Mojave Desert. The Fault is one of the principle wildlife corridors and connective areas for in the County. Major drainages (Santa Clara River, San Francisquito Canyon, and Lake Elizabeth Canyon) run from the coast through the San Gabriel Mountains and end at the Fault, which also has extensive riparian habitat that facilitates migration. The Fault provides the final westernmost linkage to the Mojave Desert (Antelope Valley). The tricolored blackbird is a year-round resident of the SEA.
	Biotic resources that are of scientific interest because they are either an		The transition of several habitat types including: creosote bush scrub, Joshua tree/California juniper mixed woodland,

Criterion		Status	Justification
E)	extreme in physical/geographical limitations, or represent unusual variation in a population or community.	Met	and desert chaparral, makes the SEA valuable for educational and scientific reasons. The close proximity of the Fairmont and Antelope buttes to the San Gabriel Mountains renders them unique in their species composition and ecological relationships and, therefore, of interest to scientists. The concentrated diversity of vegetation types, particularly in the western half of the SEA, creates an outstanding opportunity for educational use. This area also harbors the southern limit of the foothill woodland community, blue oak, gray or foothill pine, and California buckeye, as well as rare relic stands of great basin sagebrush scrub.
F)	Areas that would provide for the preservation of relatively undisturbed examples of the original natural biotic communities in the County.	Met	The slopes of Ritter Ridge support one of the most pristine mixed stands of Joshua tree and California juniper. The location of the SEA at the confluence of five major geographical areas, the Mojave Desert, the Central Valley, the San Gabriel Mountains of the Transverse Ranges, the Coastal Ranges, and the Tehachapi Mountains has produced a community-rich area with desert, foothill, and montane environments. The SEA encompasses large, mostly undisturbed examples of all of these communities.

In conclusion, the area is an SEA because it contains: B-C) biotic communities, vegetative associations, and habitat of plant and animal species that are restricted in distribution in the County and regionally; D) concentrated breeding, feeding, resting, and migrating grounds, which are limited in availability in the County; E) biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community; and F) areas that provide for the preservation of relatively undisturbed examples of original natural biotic communities in the County.

18. San Dimas Canyon and San Antonio Wash SEA

Location

General

The San Dimas Canyon and San Antonio Wash Significant Ecological Area (SEA) is located along the cismontane foothills of the eastern San Gabriel Mountains. Generally, the SEA is centered on the mouths of four major canyons, which flow from the mountains and interconnecting terrain. From east to west, these canyons include San Antonio Canyon above the City of Claremont as one component; and Live Oak, Marshall, and San Dimas canyons above the cities of La Verne and San Dimas as a second component. The SEA incorporates areas with diverse natural habitat ranging from high elevations to the foothill alluvial areas of two of the major drainages of the San Gabriel Mountains. San Dimas Canyon is a tributary of the San Gabriel River. San Antonio Wash is a tributary of the Santa Ana River.

The SEA is found within the Mount Baldy and Ontario U.S. Geological Survey (USGS) 7.5' California Quadrangles.

General Boundary and Resources Description

Over most of its boundaries, particularly to the north, east, and west of both the San Dimas Canyon and San Antonio Wash components, the SEA is bordered by open space within the Angeles National Forest. Generally to the south, however, the borders are mostly defined by the edge of urban development within the San Gabriel Valley. The San Dimas Canyon component covers approximately 5,500 acres and includes portions of Live Oak, Marshall, and San Dimas canyons. The smaller component, San Antonio Canyon, covers approximately 1,200 acres of the San Antonio Canyon alluvial outwash. In total, this SEA encompasses 6,727 acres.

In general, the topography of the SEA is severe, consisting of steep-walled canyons and narrow ridgelines. Elevations range from a high of approximately 3,000 feet above mean sea level (MSL) along the ridges of San Dimas Canyon, to a low of approximately 451 feet above MSL in San Antonio Wash. Several major drainages and numerous tributaries exit the San Gabriel Mountains through this SEA.

The wide range of elevation, topography, slope aspect, and geology represent a wide array of physical habitats within this SEA. Consequently, a number of plant communities exist, including grasslands, riparian, shrublands, woodlands, and forests. Within these major community types, there are many sub-communities, which vary according to plant species dominance. This area contains the last remaining relatively well-developed lower montane riparian habitat in the eastern County. Dammed drainages have created significant reservoirs or flood control basins in the SEA. The SEA is within several jurisdictions including: the Angeles National Forest, the unincorporated area of the County, the City of Claremont, the City of Glendora, the City of La Verne, and the City of San Dimas.

The more westerly component of this SEA generally includes portions of the lower watersheds of San Dimas, Marshall, and Live Oak canyons, which is part of the San Dimas Canyon component. The San Dimas Canyon watershed is part of the Experimental Forest section of the Angeles National Forest. Experiments were conducted and data was collected here during the latter half of the 20th century to determine the relationships among rainfall, topography, vegetation, and runoff. Much of the work and results influenced flood control in the Los Angeles Basin and even other areas of the U.S. The area was carefully protected through very limited and monitored access. The terrain chiefly includes undisturbed natural habitats of rocky canyon walls and canyon forest, riparian areas of many vegetation types, coniferous and oak forest, chaparral, and grassland. A few slopes were altered with vegetation removal in order to experiment on the effect of vegetation, and some of these are still grassland.

This SEA area on the border of the granitic San Gabriel Mountains has unusual rock strata, such as the Glendora Volcanics. Much of the grassland is natural and has unusual vegetation, such as wildflowers that prefer clay substrates. Not too distant from this area are critical habitat areas for the endangered thread-leaved brodiaea (*Brodiaea filifolia*). Some of these brodiaea and other rare wildflowers could occur in appropriate habitat of the SEA in undiscovered populations.

Beginning at Johnstone Peak in the west, the western boundary follows the ridgeline separating Big Dalton Canyon and San Dimas Canyon. Just before this ridgeline is intersected by Big Dalton Canyon Road, the SEA boundary turns east. From the area of Big Dalton Canyon Road, the northern boundary follows and crosses over a series of ridgelines to include the upper portions of several tributary canyons. It continues in this fashion in a southeasterly direction eventually meeting and following the Sunset Ridge Fire Road (Sunset Peak Motorway), which separates Wolfskill and Marshall canyons. The tributaries San Dimas Canyon include Lodi, West Fork of San Dimas, and San Dimas from near the junction with Wolfskill Canyon. The lower section of Wolfskill Canyon with

and below the Wolfskill Falls is included in the SEA. The upper section of Wolfskill is not included in the SEA, but much of Marshall Canyon watershed is included, along with watersheds of Live Oak and Webb canyons in the City of Claremont.

A large lobe of the SEA extends from the Sunset Ridge Fire Road on the dividing ridgeline, to include lush canyon forests and chaparral of the slopes above the City of La Verne and City of Claremont. Most of this lobe is in municipal or private ownership. The Angeles National Forest boundary is about a 0.1 mile south of the Sunset Ridge Fire Road. The eastern boundary leaves the fire road and travels south along a ridgeline, including Live Oak Canyon in the SEA, but separating out the more developed watersheds of Palmer, Cobal, Burbank, and Gail canyons in the City of Claremont. A finger of the SEA includes the lush riparian oak forest of Webb Canyon to the edge of a development. The lobe of the SEA excludes an area around the residences and equestrian areas that surround Live Oak Reservoir. Live Oak Canyon Reservoir and its riparian oak woodland is included as far south as Base Line Road. The ridges and dissected canyons that border Live Oak Reservoir are included as far south as Base Line Road. However, the flat area of the ridge around Live Oak Reservoir and development in the periphery are excluded. The northwestern edge of the lobe includes the riparian area and slopes of Marshall Creek, but excludes developed areas, such as the Marshall Canyon Regional Park and Golf Course. The lobe boundary returns north into the Angeles National Forest at the Sunset Ridge Fire Road along the edge of Marshall Creek and the western ridge of Marshall Canyon.

From Sunset Ridge Fire Road, the southern boundary of the SEA is within the Angeles National Forest and follows the ridgeline that includes the watershed of San Dimas Canyon. The San Dimas Reservoir, with good habitat for waterfowl, is included in the SEA. The SEA extends a finger out of the Angeles National Forest along San Dimas Canyon road to include the riparian habitat along the watercourse, which is a rare example of the lowland riparian community. From the Angeles National Forest boundary and rocky cliffs above the west side of San Dimas Canyon, the SEA boundary follows the ridge of Lodi Canyon (tributary of San Dimas Canyon) to Johnstone Peak.

The eastern, disjunct segment of the SEA (San Antonio Wash) follows the San Bernardino-Los Angeles County line as its eastern boundary from about a 0.5 mile upstream of the San Antonio Dam through the San Antonio debris basin, past the San Antonio Dam, to the natural extent of alluvial fan vegetation south of the Interstate-210. This is at an area about a 0.1 mile north of Base Line Road. Downstream of the San Antonio Dam has the best example of arroyo or wash vegetation that remains in the County, and it extends onto the adjacent alluvial fan. The vegetation is a dry form of coastal sage scrub, with included desert plants that are adapted to coarse substrate. The vegetation is much more dense and stable than the alluvial fan in the arroyos behind Santa Fe Dam (San Gabriel Canyon SEA) and Hansen Dam (Tujunga Valley-Hansen Dam SEA). From its southern point, the SEA turns north to include the natural alluvial fan vegetation and border on the existing residential development on the alluvial fan. At the intersection of the San Antonio Wash with Mount Baldy Road, the SEA boundary follows the southeast side of Mount Baldy Road to the watershed of Chicken Canyon, which is a tributary of San Antonio Wash. The boundary crosses the road and includes the undeveloped part of Chicken Canyon. The boundary follows the minor ridgeline up to Potato Mountain, and goes along the south ridge of Evey Canyon back to cross Mount Baldy Road and return to the San Bernardino-Los Angeles County line in the San Antonio Debris Basin. Evey Canyon is outside the SEA, but is a preserve of the Claremont Colleges, and has excellent riparian canyon habitat. The SEA designation acknowledges the need to protext the Evey Canyon watershed. Small tributary watersheds of San Antonio Canyon with chaparral vegetation are included with the Chicken Canyon area.

Vegetation

The variety of topography, soil types, slope aspects and water availability within the San Dimas Canyon-San Antonio Wash SEA creates a range of physical habitats, which support numerous plant species. Plant species observed or recorded in previous documentation within the SEA are indicated in the *Comprehensive Floral & Faunal Compendium of the Los Angeles County SEAs.* Sensitive plant species occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources section.

Brief descriptions and general locations of each major plant community present within the SEA are provided below, including bigcone Douglas-fir-canyon oak forest, white alder riparian forest, alluvial fan scrub, oak woodland, oak riparian forest, walnut woodland, southern willow scrub, chaparral, coastal sage scrub, and non-native grassland.

Bigcone Douglas-Fir–Canyon Oak Forest: An open to dense forest dominated by bigcone Douglas-fir that is 50 to 80 feet tall over a dense canopy of canyon live oak. It is found scattered throughout the San Dimas Canyon component of this SEA on canyon sides at elevations generally above 2,500 feet, where it occupies rocky substrates. It commonly occurs in small enclaves within chaparral.

Corresponding MCV communities:

- *Pseudotsuga macrocarpa* (bigcone Douglas-fir forest) Forest Alliance
- *Quercus chrysolepis* (canyon live oak forest) Forest Alliance

White Alder Riparian Forest: Found along the lower reaches of San Dimas Canyon. This community is dominated by white alder, which grow 30 to 40 feet high over a shrub understory. It typically grows along streams in bedrock-constrained, steep-sided canyons, which results in a fairly narrow riparian corridor.

Corresponding MCV communities:

- *Alnus rhombifolia* (white alder groves) Forest Alliance

Alluvial Fan Scrub: A shrub community characterized by harsh substrates and subject to episodic flooding and scouring. It is generally restricted to broad canyon outwashes, or alluvial washes. It is found in this SEA at the San Antonio Canyon mouth, where it forms an open shrub vegetation within areas of bare, scoured ground in between.

Corresponding MCV communities:

- *Artemisia californica-Eriogonum fasciculatum* (California sagebrush-California buckwheat scrub) Shrubland Alliance
- *Eriogonum fasciculatum-Salvia apiana* (California buckwheat-white sage scrub) Shrubland Alliance
- *Lepidospartum squamatum* (scale broom scrub) Shrubland Alliance
- *Malosma laurina* (laurel sumac scrub) Shrubland Alliance

Oak Woodland: A plant community dominated by species of the oak genus (*Quercus*). This community includes coast live oak (*Quercus agrifolia* var. *agrifolia*), which typically grows to heights of 20 to 40 feet and the somewhat smaller coast live oak (*Quercus agrifolia* var. *agrifolia*) and canyon oak, and forms either closed or open tree canopies. Understory vegetation varies from

grassland in level areas to shrubs, where topography is steeper. It may also intergrade with shrub communities. This community is scattered throughout the SEA and most prevalent on north-facing slopes and in drainage bottoms.

Corresponding MCV communities:

- *Quercus agrifolia* (coast live oak woodland) Woodland Alliance
- *Quercus chrysolepis* (canyon live oak forest) Forest Alliance
- *Quercus engelmannii* (Engelmann oak woodland) Woodland Alliance

Oak Riparian Forest: A closely related community to oak woodland found in the SEA. This community is also dominated by coast live oak (*Quercus agrifolia* var. *agrifolia*) (canyon oaks at higher elevations). The primary difference between oak woodland and oak riparian forest is the greater availability of water in riparian situations, which is expressed in a denser tree canopy cover and higher density of trees. There are also a greater number of hydrophytic (moisture-favoring) plant species in the understory. Typical riparian trees, such as western sycamore (*Platanus racemosa*) and willow occasionally occur. Oak riparian forest is best developed within the broader, more level gradient drainages of this SEA.

Corresponding MCV communities:

- *Quercus agrifolia* (coast live oak woodland) Woodland Alliance
- *Quercus chrysolepis* (canyon live oak forest) Forest Alliance
- *Quercus engelmannii* (Engelmann oak woodland) Woodland Alliance

Walnut Woodland: Often intergrades with oak dominated woodlands or develops as a distinct community. This community is dominated by the Southern California black walnut (*Juglans californica*), which grows 10 to 30 feet high. More often than not, walnut woodland in this SEA is highly intermixed with oak woodland and chaparral, and large monotypic stands are uncommon.

Corresponding MCV communities:

- *Juglans californica* (Southern California black walnut groves) Woodland Alliance

Southern Willow Scrub: Found along widely scattered reaches of several drainages throughout this SEA. This community is dominated by species of willow, which form nearly monotypic stands due to their dense growth, with an occasional cottonwood. These stands generally reach 10 to 20 feet in height with little understory vegetation.

Corresponding MCV communities:

- *Salix exigua* (sandbar willow thickets) Shrubland Alliance
- *Salix lasiolepis* (arroyo willow thickets) Shrubland Alliance

Chaparral: A shrub community composed of robust species. Within this SEA, a number of chaparral subcommunities are found, which are differentiated by their dominant plant species. These include chamise (*Adenostoma fasciculatum*), buck brush (*Ceanothus* spp.), scrub oak (*Quercus berberidifolia*), coast live oak (*Quercus agrifolia* var. *agrifolia*), and mosaics of these depending on mixtures of species and elevation. These and other shrub species form dense vegetation covers, which grow 5 to 10 feet in height. The development of chaparral is pronounced over large hillside areas throughout both components of the SEA.

Corresponding MCV communities:

- *Adenostoma fasciculatum* (chamise chaparral) Shrubland Alliance
- *Adenostoma fasciculatum-Salvia apiana* (chamise-white sage chaparral) Shrubland Alliance
- *Arctostaphylos glandulosa* (Eastwood's manzanita chaparral) Shrubland Alliance
- *Arctostaphylos glauca* (bigberry manzanita chaparral) Shrubland Alliance
- *Ceanothus greggii* (cup leaf ceanothus chaparral) Shrubland Alliance
- *Ceanothus leucodermis* (chaparral whitethorn) Shrubland Alliance
- *Ceanothus oliganthus* (hairy leaf ceanothus chaparral) Shrubland Alliance
- *Prunus ilicifolia* (holly leaf cherry chaparral) Shrubland Alliance
- *Rhus ovata* (sugarbush chaparral) Shrubland Alliance

Coastal Sage Scrub: A shrubland community that exhibits less robust structure found within this SEA. This plant community is dominated by California sagebrush (*Artemisia tridentata*), California brittle bush (*Encelia californica*), white sage (*Salvia apiana*), black sage (*Salvia mellifera*), and California buckwheat (*Eriogonum fasciculatum*). It also forms dense stands, which grow three to four feet in height. Within this SEA, it is generally found in scattered patches, which are highly integrated with mixed chaparral. These are primarily located in the lower elevation hillsides of both SEA components.

Corresponding MCV communities:

- *Artemisia californica* (California sagebrush scrub) Shrubland Alliance
- *Artemisia californica-Salvia mellifera* (California sagebrush-black sage scrub) Shrubland Alliance
- *Artemisia californica-Eriogonum fasciculatum* (California sagebrush-California buckwheat scrub) Shrubland Alliance
- *Encelia californica* (California brittle bush scrub) Shrubland Alliance
- *Dendromecon rigida* (bush poppy scrub) Shrubland Alliance
- *Salvia apiana* (white sage scrub) Shrubland Alliance
- *Salvia leucophylla* (purple sage scrub) Shrubland Alliance
- *Salvia mellifera* (black sage scrub) Shrubland Alliance
- *Eriogonum fasciculatum* (California buckwheat scrub) Shrubland Alliance
- *Eriogonum fasciculatum-Salvia apiana* (California buckwheat-white sage scrub) Shrubland Alliance
- *Ericameria linearifolia* (narrowleaf goldenbush scrub) Provisional Shrubland Alliance
- *Lotus scoparius* [*Acmispon glaber*] (deer weed scrub) Shrubland Alliance
- *Malacothamnus fasciculatus* (bush mallow scrub) Shrubland Alliance

Non-Native Grassland: Dominated by non-native annual grasses and forbs. These opportunistically growing species include brome grasses, wild oats and mustards. This community became established as a result of livestock grazing and agriculture, as native vegetation is removed, sometimes by mechanical means, and replaced by more opportunistic species. Non-native grassland is found throughout the SEA.

Corresponding MCV communities:

- *Avena* (*barbata, fatua*) (wild oats grasslands) Semi-Natural Herbaceous Stands
- *Brassica* (*nigra*) and other mustards (upland mustards) Semi-Natural Herbaceous Stands

- *Bromus* (*diandrus*, *hordeaceus*)-*Brachypodium distachyon* (annual brome grasslands) Semi-Natural Herbaceous Stands
- *Bromus rubens-Schismus* (*arabicus, barbatus*) ([*Bromus madritensis* ssp. *rubens*] red brome or Mediterranean grass grasslands) Semi-Natural Herbaceous Stands
- *Centaurea* (*solstitialis, melitensis*) (yellow star-thistle fields) Semi-Natural Herbaceous Stands
- *Lolium perenne* [*Festuca perennis*] (perennial rye grass fields) Semi-Natural Herbaceous Stands

Wildlife

Wildlife populations within the SEA are diverse and abundant due to the region's physiographic diversity, its relative isolation, and its location within and adjacent to the Angeles National Forest. Analysis of invertebrates on any given site is generally limited by a lack of specific data; however, the size of the SEA and diversity of habitats present is considered sufficient to encompass healthy populations of a large number of invertebrate species. Fair numbers of amphibians are expected to be present primarily due to the aquatic and semi-aquatic habitats provided within the numerous drainages and several reservoirs. Reptile abundance and diversity are expected to be characteristic for the habitats present, although areas closer to urban development along the southern boundaries of this SEA are likely to be suppressed due to the edge effect.

Bird use, diversity, and abundance within the SEA are expected to be high for several reasons. In general, this SEA provides habitat for a wide range of shrubland, woodland, forest, and riparian species that occur at varying elevations. In particular, the riparian habitats found in drainages throughout this SEA provide essential habitat for riparian-obligate and riparian-favoring species. In addition, a number of migratory birds use this area to move across the northern portion of the Los Angeles Basin. These include a wide spectrum of birds including song birds, waterfowl, and raptorial species.

Similarly, the mammalian fauna is expected to be very diverse and abundant. Virtually all mammalian species found in the forest (with the exception of Nelson's bighorn sheep (*Ovis canadensis nelsoni*)) are expected to be found in this SEA. Frequent observations of American black bear (*Ursus americanus*) and mountain lion (*Puma concolor*) in foothill communities attest to the range of species expected.

Wildlife Movement

Wildlife movement within the SEA takes on two major forms. First, due to the extreme intervening topography, it is logical to expect considerable movement of wildlife up and down the many sizeable drainages, which course through this SEA and connect the forest interior with foothill areas. The larger the watershed of the drainages, the greater the volume of movement. Consequently, this type of movement occurs on a seasonal and more frequent basis, particularly for large mobile mammals, such as American black bear, mountain lion, coyote (*Canis latrans*), bobcat (*Lynx rufus*) and mule deer (*Odocoileus hemionus*), whose full range of habitat needs are typically met over broad areas.

The second major type of movement occurs across the flanks of the foothills and lower mountains, in an east-west direction. Particularly for riparian-favoring migratory birds, a corridor linking lower elevational riparian habitats in the SEA is expected to be of high use and importance. In addition to providing essential habitat for resident riparian birds, this SEA contains some of the best developed riparian habitat for birds, which are seasonal visitors to the cismontane region of the County.

Sensitive Biological Resources

Sensitive biological resources are habitats or individual species that have special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, and/or rare. This is due to the species' declining or limited population sizes, which usually results from habitat loss. Watch lists of such resources are maintained by the California Department of Fish and Game (CDFG), the United States Fish and Wildlife Service (USFWS), and special groups, such as the California Native Plant Society (CNPS). The following sections indicate the habitats as well as plant and animal species present, or potentially present within the SEA, which have been accorded special recognition.

Sensitive Plan Communities and Habitats

The SEA supports several habitat types considered sensitive by resource agencies. These are inventoried by California Department of Fish and Game (CDFG) in the California Natural Diversity Database (CNDDB) [2011]. The CNDDB includes state and federally-listed endangered, threatened, and rare vascular plants, as well as several sensitive vertebrate species. The communities include walnut woodland, southern coast live oak riparian forest, southern willow scrub, coastal sage chaparral scrub, and Riversidean alluvial fan sage scrub, which occur throughout the SEA. These communities, or closely related designations, are considered high priority communities by the CDFG, which indicates that they are experiencing a decline throughout their range. The array and composition of these communities has been discussed in the Vegetation section.

Sensitive Plant Species

The statuses of rare plants are hierarchically categorized by the CNPS using a rank and decimal system. The initial category level of Rare Plant Rank is indicated by the ranks 1A (presumed extinct in California), 1B (rare or endangered in California and elsewhere), 2 (rare or endangered in California but more common elsewhere), 3 (more information needed, a review list), and 4 (limited distribution). In cases where the CNPS has further identified the specific threat to the species, a decimal or Threat Code is added: .1 (seriously endangered in California), .2 (fairly endangered in California), or .3 (not very endangered in California).

The following special-status plant taxa have been reported or have the potential to occur within the SEA, based on known habitat requirements and geographic range information:

- Sonoran maiden fern (*Thelypteris puberula* var. *sonorensis*) RPR 2.2
- Coulter's saltbush (*Atriplex coulteri*) RPR 1B.2
- Davidson's saltscale (*Atriplex serenana* var. *davidsonii*) RPR 1B.2
- Nevin's barberry (*Berberis nevinii*) FE, SE, RPR 1B.1
- Round-leaved filaree (*California macrophylla*) RPR 1B.1
- Smooth tarplant (*Centromadia pungens* ssp. *laevis*) RPR 1B.1
- Parry's spineflower (*Chorizanthe parryi* var. *parryi*) RPR 1B.1
- White-bracted spineflower (*Chorizanthe xanti* var. *leucotheca*) RPR 1B.2
- Slender-horned spineflower (*Dodecahema leptoceras*) FE, SE, RPR 1B.1
- San Gabriel Mountains dudleya (*Dudleya densiflora*) RPR 1B.1
- Many-stemmed dudleya (*Dudleya multicaulis*) RPR 1B.2
- Los Angeles sunflower (*Helianthus nuttallii* ssp. *parishii*) RPR 1A
- Mesa horkelia (*Horkelia cuneata* ssp. *puberula*) RPR 1B.1
- Jokerst's monardella (*Monardella australis* ssp. *jokerstii*) RPR 1B.1

- Rock monardella *(Monardella viridis* ssp*. saxicola)* RPR 4.2
- Prostrate vernal pool navarretia (*Navarretia prostrata*) RPR 1B.1
- White rabbit-tobacco (*Pseudognaphalium leucocephalum*) RPR 2.2
- Chaparral ragwort (*Senecio aphanactis*) RPR 2.2
- Salt spring checkerbloom (*Sidalcea neomexicana*) RPR 2.2
- San Bernardino aster (*Symphyotrichum defoliatum*) RPR 1B.2
- Rigid fringepod (*Thysanocarpus rigidus*) RPR 1B.2
- Thread-leaved brodiaea (*Brodiaea filifolia*) RPR FT, SE, 1B.1
- Slender mariposa lily (*Calochortus clavatus* var. *gracilis*) RPR 1B.2
- Plummer's mariposa lily (*Calochortus plummerae*) RPR 1B.2
- California sawgrass (*Cladium californicum*) RPR 2.2
- California muhly (*Muhlenbergia californica*) RPR 4.3

Sensitive Animal Species

The following special-status animal species are reported or are likely to be present within the SEA based on habitat requirements and known range attributes:

- California diplectronan caddisfly (*Diplectrona californica*) CDFG Special Animals List
- Santa Ana sucker (*Catostomus santaanae*) FT, FSS, SSC
- San Gabriel Mountains slender salamander (*Batrachoseps gabrieli*) FSS
- Large-blotched salamander (*Ensatina klauberi*) FSS, SSC
- Northern leopard frog (*Lithobates pipiens*) FSS, SSC
- Sierra Madre yellow-legged frog (*Rana muscosa*) FE, FSS, SSC
- Coast range newt (*Taricha torosa*) SSC
- Silvery legless lizard (*Anniella pulchra pulchra*) FSS, SSC
- Coastal whiptail (*Aspidoscelis tigris stejnegeri*) CDFG Special Animals List
- San Diego banded gecko (*Coleonyx variegatus abbotti*) CDFG Special Animals List
- Western pond turtle (*Emys marmorata*) BLMS, FSS, SSC
- San Bernardino mountain kingsnake (*Lampropeltis zonata parvirubra*) FSS, SSC
- Coast horned lizard (*Phrynosoma blainvillii*) BLMS, FSS, SSC
- Coast patch-nosed snake (*Salvadora hexalepis virgultea*) SSC
- Two-striped garter snake (*Thamnophis hammondii*) BLMS, FSS, SSC
- Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*) CDFG Watch List
- Grasshopper sparrow (*Ammodramus savannarum*) CDFG Special Animals List
- Bell's sage sparrow (*Amphispiza belli belli*) BCC, CDFG Watch List
- Burrowing owl (*Athene cunicularia*) BCC, BLMS, SSC
- Coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*) BCC, FSS, SSC
- Yellow warbler (*Dendroica petechia brewsteri*) SSC
- White-tailed kite (*Elanus leucurus*) CDFG Fully Protected
- Southwestern willow flycatcher (*Empidonax traillii extimus*) FE, FSS, SE, USBC, AWL, ABC
- Merlin (*Falco columbarius*) CDFG Watch List
- Yellow-breasted chat (*Icteria virens*) SSC
- Coastal California gnatcatcher (*Polioptila californica californica*) FT, SSC, USBC, AWL, ABC
- Least Bell's vireo (*Vireo bellii pusillus*) FE, BCC, SE, USBC, AWL, ABC
- Pallid bat (*Antrozous pallidus*) FSS, BLMS, SSC, WBWG High
- Northwestern San Diego pocket mouse (*Chaetodipus fallax fallax*) SSC

- San Bernardino kangaroo rat (*Dipodomys merriami parvus*) FE, SSC
- Western mastiff bat (*Eumops perotis californicus*) BLMS, SSC, WBWG High
- Hoary bat (*Lasiurus cinereus*) WBWG Medium
- Western yellow bat (*Lasiurus xanthinus*) WBWG High
- San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) SSC
- Yuma myotis (*Myotis yumaensis*) BLMS, WBWG Low-Medium
- San Diego desert woodrat (*Neotoma lepida intermedia*) SSC
- Pocketed free-tailed bat (*Nyctinomops femorosaccus*) SSC, WBWG Medium
- Big free-tailed bat (*Nyctinomops macrotis*) SSC, WBWG Medium-High
- Los Angeles pocket mouse (*Perognathus longimembris brevinasus*) FSS, SSC
- American badger (*Taxidea taxus*) SSC

Ecological Transition Areas (ETAs)

There are no ETAs designated within this SEA.

Regional Biological Value

The SEA meets several SEA designation criteria and supports many regional biological values. Each criterion and how it is met described below.

Criteria Analysis of the San Dimas Canyon and San Antonio Wash SEA

Criterion		Status	Justification
A)	The habitat of core populations of endangered or threatened plant or animal species.	Not Met	Although the SEA contains rare plant populations, it does not contain a core population of a listed species and therefore does not meet this criterion. The lower slopes in and around San Dimas Canyon support one of the largest populations of the coastal cactus wren in the County, which is a subspecies that is very threatened throughout its range, although not officially recognized by listing.
B)	On a regional basis, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	The SEA contains habitat of the rare rock monardella. In addition, several plant communities within this SEA are CDFG highest priority communities due to their restricted distribution in the Southern California region, including: walnut woodland, oak riparian woodland, southern willow scrub, coastal sage scrub, and alluvial fan scrub.
C)	Within the County, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution	Met	All of the plant communities and habitats mentioned as being restricted in distribution on a regional basis, are also restricted in distribution within the County.
D)	Habitat that at some point in the life cycle of a species or group of species, serves as concentrated breeding, feeding, resting, or migrating grounds and is limited in availability either regionally or in the County.	Met	The major canyons within this SEA support well-developed and diverse riparian woodlands, as well as a source of perennial water. These represent important stopover and overwintering areas for a wide variety of migratory birds, as well as essential habitat for resident species of fauna and flora. These canyons also support seasonal and more frequent movement for wide-ranging mammals, which must

			move over large areas to fulfill their habitat requirements. The federally-threatened California gnatcatcher has been sighted (2010) in the Glendora foothills, and probably maintains a small population along the lowest slopes of the San Gabriel Mountains.
E)	Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community.	Not Met	The SEA does not contain biotic resources that are clearly an extreme in physical/geographical limitations, or represent unusual variation in a population or community, and therefore does not meet this criterion. However, the extreme localization of several species of plants in the SEA may indicate geographical processes that are not well understood at this time that merit scientific inquiry.
F)	Areas that would provide for the preservation of relatively undisturbed examples of the original natural biotic communities in the County.	Met	Virtually all of the native biotic communities within this SEA are relatively undisturbed over most of their extent. Because urbanization throughout much of the County's foothill regions has removed large expanses of these communities, those in the SEA are particularly important to the County's natural heritage.

In conclusion, the area is an SEA because it contains: B-C) biotic communities, vegetative associations, and habitat of plant and animal species that are either unique or are restricted in distribution in the County and regionally; D) concentrated breeding, feeding, resting, or migrating grounds, which are limited in availability in the County; and F) areas that would provide for the preservation of relatively undisturbed examples of the original natural biotic communities in the County.

19. San Gabriel Canyon SEA

Location

General

The San Gabriel Canyon Significant Ecological Area (SEA) is located along the cismontane foothills of the eastern section of these mountains. Generally, the SEA is centered on the mouths of three major canyons, which flow from the mountains and interconnecting terrain. From west to east these include, Santa Anita, Monrovia and Sawpit, and San Gabriel canyons, which are located above the cities of Sierra Madre, Arcadia, Monrovia, Duarte, Bradbury, Irwindale, and Azusa. A substantial part of the eastern and southern part of the SEA along the San Gabriel River is in the California Audubon-designated State Important Bird Area (IBA) of the Los Angeles Flood Control Basin IBA. The San Gabriel River has largely been dammed and channelized, but with infrequent clearing of the detention basins and wash areas, substantial parts of the San Gabriel River have reverted to riparian habitat or the even more rare alluvial fan habitat, and this attracts many resident birds, as well as numerous spring and winter migrants.

The SEA is found within the, Mount Wilson, Azusa, San Dimas, and Glendora U.S. Geological Survey (USGS) 7.5' California Quadrangles.

General Boundary and Resources Description

Over most of its boundaries (north, east, and west), the SEA is bordered by open space within the Angeles National Forest. However, generally to the south, the borders are defined by the edge of

urban development within the San Gabriel Valley. The SEA begins in the west at the peak of Mount Wilson within the Angeles National Forest. Traveling east, the northerly boundary follows a major east-west trending ridgeline to Pine Mountain. This ridgeline defines the separation between the watershed of the San Gabriel River West Fork to the north, and the Santa Anita, Sawpit, and lower San Gabriel canyons to the south. These front-range canyons are tributaries of the San Gabriel River.

At Pine Mountain, the boundary turns south to follow the ridgeline that is the western border of the San Gabriel River, and turns east onto a secondary ridge, and descends towards the San Gabriel River near the Morris Reservoir Dam. This easterly boundary crosses the San Gabriel Canyon at Morris Dam and climbs the adjacent ridgeline to Glendora Ridge and the Glendora Ridge Motorway. The southerly boundary follows the motorway to the west, to the point near the mouth of the San Gabriel Canyon where the motorway leaves the ridgeline. The SEA boundary turns north towards the San Gabriel River, and descends to the opening of the San Gabriel Canyon into the Los Angeles Basin. This is between the Glendora Ridge and the mountains near Fish Canyon. The boundary turns along the southeast side of the San Gabriel River floodplain and follows the east side of the San Gabriel River flood control channel. A development near the mouth of Roberts Canyon that is just north of the river mouth has been excluded from the SEA.

In the mouth of the San Gabriel Canyon is a population of the San Gabriel Mountains live-forever (*Dudleya densiflora*), which is unusual in that it has multiple dense flower clusters, whereas other live-forevers have one or several flower stalks with spaced blooms. This live-forever is extremely limited in range and occurs only on the slopes of granitic rubble and canyon walls in the nearby south face of the San Gabriel Mountains. Another population is on private land about one mile upstream of the canyon mouth, on the north-side slope of the Glendora Ridge. Another live-forever population is upstream in nearby Fish Canyon, which is a little downstream of the Fish Canyon Falls. Collections have been made from Mystic Canyon to the east, and Van Tassel Canyon to the west.

The mouth of San Gabriel Canyon and nearby canyons are the principle area for the San Gabriel bedstraw (*Galium grande*), which is another local endemic. The only known populations of the bedstraw and the San Gabriel Mountains live-forever on the planet occur in the County in this small area of the San Gabriel Mountains.

The Los Angeles Flood Control Basin IBA covers all of the SEA in the San Gabriel River and downstream at the Santa Fe Dam Recreation Area. Furthermore, the IBA extends upstream beyond the SEA to the confluence area of the West, North, and East forks of the San Gabriel River in the Angeles National Forest, and it extends downstream beyond Santa Fe Dam to the Whittier Narrows Dam.

A finger of the SEA extends along the San Gabriel River, south of its confluence area with Fish and Van Tassel canyons to pass under the Interstate-210. The finger boundary enlarges around the Santa Fe Flood Control Basin and Recreation Area to include one of the last remaining natural alluvial fan habitats in the County. The Santa Fe Flood Control Basin is one of the most unusual vegetation habitats in the County, and has special sensitive species, as described below in the Vegetation section.

The main SEA boundary continues just west of the Van Tassel Canyon confluence along the north side of the Encanto Equestrian Center, along the northern extent of development in the City of Duarte. A lobe of the SEA encloses the natural habitat of the steep watershed areas of Spinks and Maddox canyons, extending to the edge of development in the City of Bradbury. The ridge bordering the southeast side of Bliss Canyon is the western edge of the lobe, and the boundary crosses Bliss

Canyon at its upper end near the Van Tassel Truck Trail. At this point the boundary of the SEA has reentered the Angeles National Forest. After crossing Bliss Canyon, the boundary follows the southern ridgeline of Spanish Canyon westward to cross out of the Angeles National Forest, tracking around the northern arm of the City of Monrovia. The Sawpit Debris Basin is included in the SEA as is the undeveloped part of Monrovia Canyon Park. To the west of Monrovia Canyon, a lobe of the SEA extends along the undeveloped ridges of the San Gabriel Mountains bordered by the urban edges of the City of Monrovia and City of Arcadia. These communities extend into the mountains where the cities have municipal water rights. The southern boundary skirts the edge of development in Santa Anita Canyon, but includes the Santa Anita Debris Basin, Arcadia Natural Park, Big Santa Anita Dam and Reservoir, and the Santa Anita Canyon stream course above the Dam, which has numerous lease-hold cabins north of the 1600 feet elevation contour. The boundary reenters the Angeles National Forest just north of Arcadia Natural Park.

The southern ridge of Sawpit Canyon, from its dam to about a 0.5 mile upstream has a population of the endangered San Gabriel bedstraw (*Galium grande)*, which is an endemic species of highly restricted distribution. It occurs only on the south slopes of the western section of the San Gabriel Mountains.

Within the SEA, just to the south of Arcadia Natural Park is a Santa Anita Canyon tributary, Clamshell Canyon. On the south banks and ridge of Clamshell Canyon is critical habitat for the federally-endangered Braunton's milk-vetch (*Astragalus brauntonii*), which is a locoweed that prefers interbedded sandstone and carbonate substrate, probably deposited near the coastline of former oceans. Very limited areas of this substrate occur at the boundary of the San Gabriel Mountains in this area. Most of the rocks of the San Gabriel Mountains are igneous granites and metamorphic rocks.

Santa Anita Canyon has some stands of Pacific madrone (*Arbutus menziesii*), which is a plant known elsewhere from the Pacific coast north of Santa Barbara to British Columbia. The Santa Anita stands are isolated occurrences, which is one of the few places madrone is found between Santa Barbara and Baja California.

Near the confluence with Winter Creek in the vicinity of Chantry Flats, the southern boundary of the SEA turns west and climbs the southern ridgeline of Winter Creek, including Winter Creek watershed in the SEA and excluding San Olene Canyon on the south. The boundary follows the ridgeline, marking the southern limits of the Winter Creek watershed to Mount Harvard, and then travels along the Harvard ridgeline to Mount Wilson.

The SEA is comprised of three major canyons: San Gabriel, Sawpit, and Santa Anita. In general, the topography of the SEA is severe, consisting of steep-walled canyons and narrow ridgelines. Elevations range from a high of approximately 5,710 feet above mean sea level (MSL) at Mount Wilson, to a low of approximately 660 feet above MSL in San Gabriel Canyon. Numerous drainages and tributaries of the main canyons are included in the SEA and exit the San Gabriel Mountains into the Los Angeles Basin through this SEA.

The wide range of elevation, topography, slope aspect, and geology represent a wide array of physical habitats within this SEA. Consequently, a number of plant communities exist, including grasslands, riparian, shrublands, woodlands, and forests. Within these major community types, there are many sub-communities, which vary according to plant species dominance. Of particular note, this SEA contains the last remaining relatively well-developed lower montane riparian habitats in the eastern County and dammed drainages that have created significant reservoirs or flood control basins in Sawpit and Santa Anita canyons. Enclaves of sensitive plant species and vegetation

habitats are found here. Other jurisdictions within the SEA include the unincorporated area of the County, the City of Arcadia, City of Monrovia, City of Bradbury, City of Irwindale, City of Duarte, City of Azusa, and the City of Glendora.

Vegetation

There are numerous special vegetation habitats in this SEA. By virtue of elevation, rugged topography of ridges and canyons, variation in aspect due to faulting, and contiguous high elevation areas in the San Gabriel Mountains, this SEA has numerous habitats that are not represented in many or sometimes any of the other SEAs. The coniferous forests, oak tree forests, canyon floras, and various kinds of chaparral contribute to a multitude of habitat types. Some of the very special areas mentioned briefly here are the Santa Fe Dam Recreation Area, which is on an alluvial fan, the canyons that debouche onto the alluvial fans of the Los Angeles Basin, and populations of rare and uncommon species that occur throughout the SEA area.

The floodplain of the San Gabriel River behind Santa Fe Dam supports one of the last examples of alluvial fan, which was once found all along the San Gabriel Mountains where the numerous canyon outwash areas cross the thrust faults that create the mountains, and deposit their sediment loads onto the floor of the Los Angeles Basin. The alluvial fan vegetation supports a community of organisms that is disappearing from the County. It has plant species that are now unusual on the coastal side of the San Gabriel Mountains and uncommon in the Los Angeles Basin, such as California juniper (*Juniperus californica*), white alder (*Alnus rhombifolia*), and the stands of native cactus *Opuntia littoralis* (prickly pear) and *O. parryi* (cholla). It also has many native plants from the alluvial fan community that are still common along the mountain front. This habitat has been largely displaced by urbanization and flood control projects. The bajada, or connected fans, once enabled wildlife movement all along the face of the San Gabriel Mountains and connected the canyon communities with one another. The soft-bottomed channel of the San Gabriel River connects the Santa Fe Recreation area with the San Gabriel Mountains, and the willow- and mulefat-dominated riparian scrub provides the natural base for the community along the river and around the Santa Fe Dam Reservoir. The avian fauna here is very sensitive and directly related to the vegetation that occurs. One of the County's biggest populations of the state and federally-endangered least Bell's vireo (*Vireo bellii pusillus*) occurs and nests at the Santa Fe Dam Recreation area, as well as in other debris basins that have naturally-regenerated growth of willows and other riparian shrubs, where basins that are not scoured by too often. A species of special concern, the yellow-breasted chats (*Icteria virens*) prefer the elderberry and mulefat thickets. Fully-protected white-tailed kites (*Elanus leucurus*) hunt over the low-profile, expansive fan vegetation. The very sensitive coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*), extirpated in most of the County, can breed in the cholla and prickly-pear cactus thickets of the alluvial fan area. Uncommon riparian species, such as rock wren (*Salpinctes obsoletus*), yellow warbler (*Dendroica petechia brewsteri*), and willow goldfinch (*Spinus tristis salicamans*) are frequently encountered in the riparian areas of the Santa Fe Dam Recreation Area.

Special sensitive plants that are extremely localized are found in this SEA. These include the San Gabriel bedstraw and the San Gabriel live-forever. The critical habitat of the endangered Braunton's milk-vetch along Clamshell Canyon is noted. The Pacific madrone in Santa Anita Canyon is an example of what is probably a lone occurrence in the County. There may be other plants like the madrone in botanically-unexplored areas of the rugged front-range of the San Gabriel Mountains in this SEA.

The variety of topography, soil types, slope aspects and water availability within the SEA creates a

range of physical habitats, which support numerous plant species. Plant species observed or recorded in previous documentation within the SEA are indicated in the *Comprehensive Floral & Faunal Compendium of the Los Angeles County SEAs.* Sensitive plant species occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources section.

Brief descriptions and general locations of each major plant community present within the SEA are provided below, including bigcone Douglas fir-canyon oak forest, white alder riparian forest, alluvial fan scrub, oak woodland, oak riparian forest, walnut woodland, southern willow scrub, chaparral, coastal sage scrub, and non-native grassland.

Bigcone Douglas Fir–Canyon Oak Forest: An open to dense forest dominated by bigcone Douglas fir (*Pseudotsuga macrocarpa*) 50 to 80 feet tall over a dense canopy of canyon live oak (*Quercus chrysolepis*). It is found scattered throughout the SEA on canyon sides at elevations generally above 2,500 feet where it occupies rocky substrates. It commonly occurs in fairly small enclaves within chaparral.

Corresponding MCV communities:

- *Pseudotsuga macrocarpa* (bigcone Douglas-fir forest) Forest Alliance
- *Quercus chrysolepis* (canyon live oak forest) Forest Alliance

White Alder Riparian Forest: Along the upper reaches of many drainages in the SEA, white alder riparian forest is found. This community is dominated by white alder (*Alnus rhombifolia*), which grow 30 to 40 feet high over a shrub understory. It typically grows along streams in bedrock-constrained, steep-sided canyons, resulting in a fairly narrow riparian corridor.

Corresponding MCV communities:

- *Alnus rhombifolia* (white alder groves) Forest Alliance

Alluvial Fan Scrub: A shrub community characterized by harsh substrates subject to episodic flooding and scouring. It is generally restricted to broad canyon outwashes, or alluvial washes. It is found in this SEA at the San Gabriel Canyon mouth where it forms an open, shrub-dominated vegetation within areas of bare, scoured ground in between.

Corresponding MCV communities:

- *Artemisia californica-Eriogonum fasciculatum* (California sagebrush-California buckwheat scrub) Shrubland Alliance
- *Eriogonum fasciculatum-Salvia apiana* (California buckwheat-white sage scrub) Shrubland Alliance
- *Lepidospartum squamatum* (scale broom scrub) Shrubland Alliance
- *Malosma laurina* (laurel sumac scrub) Shrubland Alliance

Oak Woodland: A plant community dominated by species of the oak genus (*Quercus*). Within this SEA, this community includes coast live oak (*Q. agrifolia* var. *agrifolia*), which typically grows to heights of 20 to 40 feet and the somewhat smaller interior live oak (*Q. wislizenii*) and canyon oak, and forms either closed or open tree canopies. Understory vegetation varies from grassland in level areas to shrubs where topography is steeper. It may also intergrade with shrub communities. Within this SEA oak woodland is scattered throughout and most prevalent on north-facing slopes and in drainage bottoms.

Corresponding MCV communities:

- *Quercus agrifolia* (coast live oak woodland) Woodland Alliance
- *Quercus engelmannii* (Engelmann oak woodland) Woodland Alliance

Oak Riparian Forest: A highly related community to oak woodlands found in the SEA. This community is also dominated by coast live oak (or canyon oak at higher elevations). The primary difference between oak woodland and oak riparian forest is the greater availability of water in riparian situations, which is expressed in a denser tree canopy and higher density of trees. There are also a greater number of hydrophytic (moister favoring) plant species in the understory. Typical riparian trees, such as western sycamore (*Platanus racemosa*) and willow (*Salix spp.*) occasionally occur. Oak riparian forest is best developed within broader, more level gradient drainages of this SEA.

Corresponding MCV communities:

- *Quercus chrysolepis* (canyon live oak forest) Forest Alliance

Walnut Woodland: Often intergrades with oak dominated woodlands or develops as a distinct community. This community is dominated by Southern California black walnut (*Juglans californica*), which grows 10 to 30 feet high. More often than not, walnut woodland in this SEA is highly intermixed with oak woodland and chaparral, and large monotypic stands are uncommon.

Corresponding MCV communities:

- *Juglans californica* (Southern California black walnut groves) Woodland Alliance

Southern Willow Scrubs: Found along widely scattered reaches of several drainages throughout this SEA. This community is dominated by species of willow, which form nearly monotypic stands due to their dense growth with an occasional cottonwood. These stands generally reach 10 to 20 feet in height with little understory vegetation.

Corresponding MCV communities:

- *Salix exigua* (sandbar willow thickets) Shrubland Alliance
- *Salix lasiolepis* (arroyo willow thickets) Shrubland Alliance

Chaparral: A shrub community composed of robust species. Within this SEA, a number of chaparral subcommunities are found, which are differentiated by their dominant plant species. These include chamise, buck brush (*Ceanothus* spp.), scrub oak (*Quercus durata* var. *gabrielensis*), interior shrub live oak (*Quercus wislizeni* var. *frutescens*), and mosaics of these depending on mixtures of species and elevation. These and other shrub species form dense vegetation covers growing 5 to 10 feet in height. The development of chaparral is pronounced over large hillside areas throughout the SEA.

Corresponding MCV communities:

- *Adenostoma fasciculatum* (chamise chaparral) Shrubland Alliance
- *Adenostoma fasciculatum-Salvia apiana* (chamise-white sage chaparral) Shrubland Alliance
- *Arctostaphylos glandulosa* (chamise chaparral) Shrubland Alliance
- *Arctostaphylos glauca* (bigberry manzanita chaparral) Shrubland Alliance
- *Ceanothus greggii* [*Ceanothus vestitus*] (cup leaf chaparral) Shrubland Alliance

- *Ceanothus leucodermis* (chaparral whitethorn) Shrubland Alliance
- *Ceanothus spinosus* (greenbark ceanothus chaparral) Shrubland Alliance
- *Ceanothus oliganthus* (hairy leaf ceanothus chaparral) Shrubland Alliance
- *Prunus ilicifolia* (holly leaf cherry chaparral) Shrubland Alliance
- *Rhus ovata* (sugarbush chaparral) Shrubland Alliance

Coastal Sage Scrub: A shrubland community exhibiting less robust structure found in this SEA. This plant community is dominated by California sagebrush (*Artemisia tridentata*), California brittle bush (*Encelia californica*), white sage (*Salvia apiana*), black sage (*S. mellifera*), and California buckwheat (*Eriogonum fasciculatum*). It also forms dense stands, which grow three to four feet in height. Within this SEA, it is generally found in scattered patches, which are highly integrated with mixed chaparral. These are primarily located in the lower elevation hillsides of the SEA.

Corresponding MCV communities:

- *Artemisia californica* (California sagebrush scrub) Shrubland Alliance
- *Artemisia californica-Salvia mellifera* (California sagebrush-black sage scrub) Shrubland Alliance
- *Artemisia californica-Eriogonum fasciculatum* (California sagebrush-California buckwheat scrub) Shrubland Alliance
- *Encelia californica* (California brittle bush scrub) Shrubland Alliance
- *Dendromecon rigida* (bush poppy scrub) Shrubland Alliance
- *Salvia apiana* (white sage scrub) Shrubland Alliance
- *Salvia leucophylla* (purple sage scrub) Shrubland Alliance
- *Salvia mellifera* (black sage scrub) Shrubland Alliance
- *Eriogonum cinereum* (ashy buckwheat scrub) Shrubland Alliance
- *Eriogonum fasciculatum* (California buckwheat scrub) Shrubland Alliance
- *Eriogonum fasciculatum-Salvia apiana* (California buckwheat-white sage scrub) Shrubland Alliance
- *Eriogonum wrightii* (Wright's buckwheat patches) Shrubland Alliance
- *Ericameria linearifolia* (narrowleaf goldenbush scrub) Provisional Shrubland Alliance
- *Hazardia squarrosa* (sawtooth golden bush scrub) Shrubland Alliance
- *Lotus scoparius* [*Acmispon glaber*] (deer weed scrub) Shrubland Alliance
- *Lupinus albifrons* (silver bush lupine scrub) Shrubland Alliance
- *Malacothamnus fasciculatus* (bush mallow scrub) Shrubland Alliance

Non-Native Grassland: Dominated by non-native annual grasses and forbs. These opportunistically growing species include brome grasses, wild oats and mustards. Characteristic of other parts of Southern California, this community became established as a result of livestock grazing and agriculture, as native vegetation is removed, sometimes by mechanical means, and replaced by more opportunistic species. Non-native grassland is found throughout the SEA.

Corresponding MCV communities:

- *Avena* (*barbata*, *fatua*) (wild oats grasslands) Semi-Natural Herbaceous Stands

Wildlife

Wildlife populations within the SEA are diverse and abundant due to the region's physiographic diversity, its relative isolation, and its location within and adjacent to the Angeles National Forest.

The analysis of invertebrates is severely limited due to the lack of specific data, however, the SEA is likely to support healthy populations of a diverse assortment of invertebrate species based on the its undisturbed nature and variety of habitats. Fair numbers of amphibians are expected to be present primarily due to the aquatic and semi-aquatic habitats provided within the numerous drainages and several reservoirs. Reptile abundance and diversity are expected to be characteristic for the habitats present, although areas closer to urban development along the southern boundaries of this SEA are likely to be suppressed due to edge effect.

Bird use, diversity, and abundance within the SEA are expected to be high for several reasons. In general, this SEA provides habitat for a wide range of shrubland, woodland, forest, and riparian species that occur at varying elevations. In particular, the riparian habitats found in drainages throughout this SEA provide essential habitat for riparian-obligate and riparian-favoring species. In addition, a number of migratory birds use this area to move across the northern portion of the Los Angeles Basin. These include a wide spectrum of birds including song bird, waterfowl, and raptorial species.

Similarly, the mammalian fauna is expected to be very diverse and abundant. The vast open space of the Angeles National Forest and its diversity of habitats exerts much influence on the great variety of taxa in this SEA. Virtually all mammalian species found in the forest (with the exception of Nelson's bighorn sheep (*Ovis canadensis nelsoni*)) are expected to be found in this SEA. Frequent observations of American black bear (*Ursus americanus*) and mountain lion (*Puma concolor*) in foothill communities attest to the range of species expected.

Wildlife Movement

Wildlife movement within the SEA takes on two major forms. First, due to the extreme intervening topography, it is logical to expect considerable movement of wildlife up and down the sizeable drainages, which course through this SEA to connect the forest interior with foothill areas. Consequently, this type of movement occurs on a seasonal and more frequent basis, particularly for large mobile mammals whose full range of habitat needs are typically met over broad areas, including American black bear, mountain lion, coyote (*Canis latrans*), mule deer (*Odocoileus hemionus*), gray fox (*Urocyon cinereoargenteus*) and other medium-sized mammals.

The second major type of movement occurs across the flanks of the foothills and lower mountains, in an east-west direction. Particularly for riparian-favoring migratory birds, a corridor linking lower elevation riparian habitats in the SEA is of high use and importance. In addition to providing essential habitat for resident riparian birds, this SEA contains some of the best developed riparian habitat for birds, which are seasonal visitors to the cismontane region of the County.

Sensitive Biological Resources

Sensitive biological resources are habitats or individual species that have special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, and/or rare. This is due to the species' declining or limited population sizes, which usually results from habitat loss. Watch lists of such resources are maintained by the California Department of Fish and Game (CDFG), the United States Fish and Wildlife Service (USFWS), and special groups, such as the California Native Plant Society (CNPS). The following sections indicate the habitats as well as plant and animal species present, or potentially present within the SEA, which have been accorded special recognition. When species are federally-listed as endangered or threatened, they often have federally-designated, geographically-specific "critical habitat areas." Critical habitat areas, after extensive study by experts, are judged to be essential to conservation and maintenance of the

species. The Braunton's milk-vetch has critical habitat in this SEA.

Sensitive Plan Communities and Habitats

The SEA supports several habitat types considered sensitive by resource agencies. These are inventoried by California Department of Fish and Game (CDFG) in the California Natural Diversity Database (CNDDB) [2011]. The CNDDB includes state and federally-listed endangered, threatened, and rare vascular plants, as well as several sensitive vertebrate species. These communities include bigcone Douglas-fir forest, California buckwheat-white sage scrub, scale broom scrub, Engelmann oak woodland, Southern California black walnut groves, chamise-white sage chaparral, cup leaf ceanothus chaparral, hairy leaf ceanothus chaparral, holly leaf cherry chaparral, California brittle bush scrub, white sage scrub, ashy buckwheat scrub, Wright's buckwheat patches, narrowleaf goldenbush scrub, and sawtooth golden bush scrub. These communities, or closely related designations, are considered high priority communities by the CDFG, which indicates that they are experiencing a decline throughout their range. The array and composition of these communities has been discussed in the Vegetation section.

Sensitive Plant Species

The statuses of rare plants are hierarchically categorized by the CNPS using a rank and decimal system. The initial category level of Rare Plant Rank is indicated by the ranks 1A (presumed extinct in California), 1B (rare or endangered in California and elsewhere), 2 (rare or endangered in California but more common elsewhere), 3 (more information needed, a review list), and 4 (limited distribution). In cases where the CNPS has further identified the specific threat to the species, a decimal or Threat Code is added: .1 (seriously endangered in California), .2 (fairly endangered in California), or .3 (not very endangered in California).

The following special-status plant taxa have been reported or have the potential to occur within the SEA, based on known habitat requirements and geographic range information:

- Slender silver moss (*Anomobryum julaceum*) RPR 2.2
- Scalloped moonwort (*Botrychium crenulatum*) RPR 2.2
- Sonoran maiden fern (*Thelypteris puberula* var. *sonorensis*) RPR 2.2
- San Gabriel manzanita (*Arctostaphylos glandulosa* ssp. *gabrielensis*) RPR 1B.2
- Braunton's milk-vetch (*Astragalus brauntonii*) FE, RPR 1B.1
- Nevin's barberry (*Berberis nevinii*) FE, SE, RPR 1B.1
- Round-leaved filaree (*California macrophylla*) RPR 1B.1
- Southern tarplant (*Centromadia parryi* ssp. *australis*) RPR 1B.1
- Parry's spineflower (*Chorizanthe parryi* var. *parryi*) RPR 1B.1
- Peruvian dodder (*Cuscuta obtusiflora* var. *glandulosa*) RPR 2.2
- Slender-horned spineflower (*Dodecahema leptoceras*) FE, SE, RPR 1B.1
- San Gabriel River dudleya (*Dudleya cymosa* ssp. *crebrifolia*) RPR 1B.2
- San Gabriel Mountains dudleya (*Dudleya densiflora*) RPR 1B.1
- Many-stemmed dudleya (*Dudleya multicaulis*) RPR 1B.2
- Mesa horkelia (*Horkelia cuneata* ssp. *puberula*) RPR 1B.1
- Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*) RPR 1B.1
- Robinson's pepper-grass (*Lepidium virginicum* var. *robinsonii*) RPR 1B.2
- White rabbit-tobacco (*Pseudognaphalium leucocephalum*) RPR 2.2
- Parish's gooseberry (*Ribes divaricatum* var. *parishii*) RPR 1A

- Chaparral ragwort (*Senecio aphanactis*) RPR 2.2
- San Bernardino aster (*Symphyotrichum defoliatum*) RPR 1B.2
- Greata's aster (*Symphyotrichum greatae*) RPR 1B.3
- Thread-leaved brodiaea (*Brodiaea filifolia*) FT, SE, RPR 1B.1
- Slender mariposa lily (*Calochortus clavatus* var. *gracilis*) RPR 1B.2
- Palmer's mariposa lily (*Calochortus palmeri* var. *palmeri*) RPR 1B.2
- Plummer's mariposa lily (*Calochortus plummerae*) RPR 1B.2
- Intermediate mariposa lily (*Calochortus weedii* var. *intermedius*) RPR 1B.2
- Western sedge (*Carex occidentalis*) RPR 2.3
- California sawgrass (*Cladium californicum*) RPR 2.2
- Vernal barley (*Hordeum intercedens*) RPR 3.2
- California satintail (*Imperata brevifolia*) RPR 2.1

Sensitive Animal Species

The following special-status animal species are reported or are likely to be present within the SEA based on habitat requirements and known range attributes:

- Santa Ana sucker (*Catostomus santaanae*) FT, SSC
- Arroyo chub (*Gila orcuttii*) SSC
- Santa Ana speckled dace (*Rhinichthys osculus* ssp. 3) SSC
- Arroyo toad (*Anaxyrus californicus*) FE, SSC
- San Gabriel Mountains slender salamander (*Batrachoseps gabrieli*) FSS
- Large-blotched salamander (*Ensatina klauberi*) FSS, SSC
- Sierra Madre yellow-legged frog (*Rana muscosa*) FE, FSS, SSC
- Coast range newt (*Taricha torosa*) SSC
- Coastal whiptail (*Aspidoscelis tigris stejnegeri*) CDFG Special Animals List
- Rosy boa (*Charina trivirgata*) BLMS, FSS
- Western pond turtle (*Emys marmorata*) BLMS, FSS, SSC
- Coast horned lizard (*Phrynosoma blainvillii*) BLMS, FSS, SSC
- Two-striped garter snake (*Thamnophis hammondii*) BLMS, FSS, SSC
- Cooper’s hawk (*Accipiter cooperii*) CDFG Watch List
- Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*) CDFG Watch List
- Coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*) SSC, FSS, BCC
- Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) FC, BCC, FSS, SE
- Black swift (*Cypseloides niger*) BCC, SSC, USBC, AWL, ABC
- Yellow warbler (*Dendroica petechia brewsteri*) SSC, BCC
- Southwestern willow flycatcher (*Empidonax traillii extimus*) FE, FSS, SE, USBC, AWL, ABC
- Merlin (*Falco columbarius*) CDFG Watch List
- Yellow-breasted chat (*Icteria virens*) SSC
- Coastal California gnatcatcher (*Polioptila californica californica*) FT, SSC, USBC, AWL, ABC
- Bank swallow (*Riparia riparia*) ST
- Least Bell's vireo (*Vireo bellii pusillus*) FE, BCC, SE, USBC, AWL, ABC
- Pallid bat (*Antrozous pallidus*) FSS, BLMS, SSC, WBWG High
- Western mastiff bat (*Eumops perotis californicus*) BLMS, SSC, WBWG High
- Hoary bat (*Lasiurus cinereus*) WBWG Medium
- Western yellow bat (*Lasiurus xanthinus*) WBWG High

- San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) SSC
- Fringed myotis (*Myotis thysanodes*) BLMS, WBWG High
- Long-legged myotis (*Myotis volans*) BLMS, SSC, WBWG Medium
- Yuma myotis (*Myotis yumaensis*) BLMS, WBWG Low-Medium
- Pocketed free-tailed bat (*Nyctinomops femorosaccus*) SSC, WBWG Medium
- Big free-tailed bat (*Nyctinomops macrotis*) SSC, WBWG Medium-High
- American badger (*Taxidea taxus*) SSC

Ecological Transition Areas (ETAs)

There is one ETA in this SEA in an aggregate quarry at the mouth of Fish Canyon.

Regional Biological Value

The SEA meets several SEA designation criteria and supports many regional biological values. Each criterion and how it is met described below.

CRITERIA ANALYSIS OF THE SAN GABRIEL CANYON SEA

Criterion		Status	Justification
A)	The habitat of core populations of endangered or threatened plant or animal species.	Met	The SEA contains a core habitat area for the endangered plant Braunton's milkvetch. The upper San Gabriel River is a core habitat of several native fishes, one of the last areas where three of five original natives occur together: federally-threatened Santa Ana sucker, and the arroyo chub and Santa Ana speckled dace,which is of state concern. All three live in the San Gabriel River in the SEA area. A local population of the speckled dace is known from the mouth of Fish Canyon. The very rare San Gabriel bedstraw and San Gabriel Mountains live-forever only occur in this area of the world.
B)	On a regional basis, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	The SEA contains habitat of extremely rare plants: San Gabriel bedstraw and the San Gabriel Mountains dudleya. In addition, several plant communities within this SEA are CDFG highest priority communities due to their restricted distribution in the Southern California region. These communities include walnut woodland, oak riparian woodland, southern willow scrub, coastal sage scrub, and alluvial fan scrub. The federally-endangered California gnatcatcher has been recently sighted in the Glendora foothills, and probably maintains a small population along the lowest slopes of the San Gabriel Mountains.
C)	Within the County, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	All of the plant communities and habitats mentioned as being restricted in distribution on a regional basis, are also restricted in distribution within the County.

Criterion		Status	Justification
D)	Habitat that at some point in the life cycle of a species or group of species, serves as concentrated breeding, feeding, resting, or migrating grounds and is limited in availability either regionally or in the County.	Met	The three major canyons within this SEA support well-developed and diverse riparian woodlands, as well as year-round water sources. These represent important stopover and overwintering areas for a wide variety of migratory birds, as well as essential habitat for resident species. These canyons also support seasonal and more frequent movement for wide-ranging mammals, which must move over large areas to fulfill their habitat requirements.
E)	Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community.	Met	The SEA contains biotic resources that are of scientific interest for their very restricted distributions: the San Gabriel bedstraw, the San Gabriel Mountains live-forever, and a local isolated population of the Pacific madrone. The population of Santa Ana speckled dace in Fish Canyon may be the remaining extreme western extent of its population.
F)	Areas that would provide for the preservation of relatively undisturbed examples of the original natural biotic communities in the County.	Met	Virtually all of the native biotic communities within this SEA are relatively undisturbed over most of their extent. Because urbanization throughout much of the County's foothill regions has removed large expanses of these communities, those in the SEA are particularly important to the County's natural heritage.

In conclusion, the area is an SEA because it contains: A) the habitat of core populations of endangered and threatened plant and animal species; B-C) biotic communities, vegetative associations, and habitat of plant and animal species that are either unique or are restricted in distribution in the County and regionally; D) concentrated breeding, feeding, resting, and migrating grounds, which are limited in availability in the County; E) populations of scientific interest because of very restricted distributions and isolated populations; and F) areas that provide for the preservation of relatively undisturbed examples of original natural biotic communities in the County.

20. Santa Clara River SEA

Location

General

The Santa Clara River Significant Ecological Area (SEA) extends along the entire County reach of the Santa Clara River, primarily within unincorporated areas of the County. The SEA encompasses a wide variety of topographic features and habitat types, as well as major tributaries—all of which contribute to this diversity. It is a major biotic corridor for the County (and Ventura County). The orientation and extent of the SEA depends upon the surface and subsurface hydrology of the Santa Clara River, from its headwaters, tributaries, and watershed basin, to the point at which it exits the County's jurisdiction. Nearly all of the SEA is designated by California Audubon as a Globally Important Bird Area (IBA). The Santa Clara River IBA extends beyond the SEA in both upstream and downstream directions (across Soledad Pass to the Barrel Springs area in the Antelope Valley and through Ventura County to the mouth of the River at the Pacific Ocean).

The SEA is located at least partially in each of the following United States Geological Survey

(USGS) 7.5' California Quadrangles: Pacifico Mountain, Acton, Agua Dulce, Sunland, San Fernando, Mint Canyon, Oat Mountain, Newhall, and Val Verde.

General Boundary and Resources Description

The SEA covers a wide variety of topographic features and habitat types, including parts of the watershed tributaries. The biological and ecological functionality of the SEA is integrally linked to the Santa Clara River basin for its entire length. The bio-geographic limits of the SEA would extend downstream through Ventura-Los Angeles County line to its mouth at the Pacific Ocean, and encompass significant tributary drainages of Ventura County (Piru Creek, Sespe Creek, Santa Paula Creek, Wheeler Creek, etc.).

The eastern portion of the SEA follows natural contours at the headwaters of the watershed to incorporate much of upper watershed of Soledad Canyon (which becomes the Santa Clara River), the Kentucky Springs and the Aliso Canyon basins, and the downstream unnamed tributaries of the Santa Clara River to Arrastre Creek. This includes the watershed southern headwater areas within the Angeles National Forest. The headwaters of both Kentucky Springs and Aliso Canyon are in the Angeles National Forest, in semi-arid chaparral and desert scrub habitat; however, the drainages themselves support vegetation of desert and interior riparian habitat, which ranges from Great Basin sagebrush in Kentucky Springs Wash to dense, mature, willow-cottonwood-sycamore woodlands along permanent streams in Aliso Canyon. The surrounding uplands in the basins support pinyon-juniper woodlands, chamise, mountain mahogany, and manzanita-dominated chaparral, buckwheat scrub, and ruderal lands. The alluvial plain formed along the southern margin of the Santa Clara River basin below these canyons supports intact, high diversity xeric alluvial fan sage scrub. Alluvial terraces within both drainages have been extensively cultivated for orchard crops and dryland agriculture, and in more recent years, rural and urban-type residential developments have encroached on the watersheds. The Kentucky Springs basin has a large population of Parish's Great Basin sagebrush (*Artemisia tridentata* ssp. *parishii*), which is considered rare and sensitive in the County. A population of the federally-threatened red-legged frog (*Rana draytonii* FT, SC) is known to inhabit and breed in the Aliso Canyon watershed. Blum Ranch and another area on Aliso Canyon Road are ETAs, with farming development, but important to continuity of the SEA. The Santa Clara River IBA extends in a branch upstream to include Blum Ranch.

The boundary follows the Santa Clara River channel downstream through the Acton basin, paralleling Soledad Canyon Road on the north side, following the toe of the slope of the San Gabriel Mountains to the south. Boundaries continue along the channel margins to the southwest from Acton to Arrastre Creek, where the southern boundary follows watershed contours to take in four upper tributary channels (Arrastre, Moody, and Bootleggers). Downstream from Acton, there are developed areas along the Santa Clara River that are ETAs. From a little upstream of the Arrastre Creek confluence to a little downstream in the vicinity of the railroad stop of Lang (about 13 miles of river), the floodplain of the Santa Clara River is designated critical habitat for the federally-endangered arroyo toad (*Anaxyrus californicus*). Some of the confluence area of Mill Canyon is also critical habitat for the arroyo toad. Part of the area of critical habitat for the toad was also proposed as critical habitat for the state and federally-endangered unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*), which is a small three-inch fish that essentially only occurs in the County. It once was widespread throughout the Los Angeles Basin and beyond, but is now restricted to the upper Santa Clara River. The proposal for critical habitat was never approved, and this is now referred to as "essential habitat" for the fish. The type area for the fish is the Arrastre Creek, where it was first collected and described with a museum specimen.

The habitat along the Santa Clara River supports the largest community of riparian-obligate birds between Santa Ynez River in Santa Barbara County and the Prado Basin in Riverside County. In the Soledad Canyon stretch are breeding summer tanager (*Piranga rubra*) and other desert species, along with some instances of least Bell's vireos (*Vireo bellii pusillus*), coastal cactus wrens (*Campylorhynchus brunneicapillus sandiegensis*), and southwestern willow flycatchers (*Empidonax traillii extimus*) from the coastal influence areas. The area is notable for having a combination of species that are characteristic of the desert and characteristic of coastal-influence.

Just west of the confluence with Arrastre Creek the northern boundary loops up to the slopes of Parker Mountain and the eastern watershed of Hughes Canyon around the basal contours of significant rock outcroppings above the river basin, and on the south side, around the Mill Canyon tributary basin. The rocky buttes on the north side of the river, while only a minor part of the watershed of the river, provide important nesting, roosting, and sheltering habitat values for bats, birds of prey, and other sensitive species foraging along the river corridor. The boundaries stay at the river margins west to the watersheds of two northern tributaries, Nellus and Bobcat canyons. These drainages were identified by the South Coast Wildlands Project as important to connectivity across the Santa Clara River between the western and eastern highland areas of the San Gabriel Mountains.

At the Agua Dulce Canyon drainage, the northern boundary loops around the watershed, including the Vasquez Rocks County Natural Area. Agua Dulce Canyon has a permanent stream and supports high quality riparian habitat from the confluence with the river to the intersection with State Route-14. The Santa Clara River IBA extends upstream to include about one mile of the Agua Dulce Canyon.

The Agua Dulce underpass of State Route-14 is an important crossing of the highway barrier for wildlife. From that point, north riparian areas exist where the creeks (Agua Dulce and Escondido) pass through Vasquez Rocks County Natural Area. The Agua Dulce Canyon extension was included in the SEA for its value as a wildlife corridor to provide connectivity across the Santa Clara River between the western and eastern highland areas of the San Gabriel Mountains. The extension includes the watershed of Bee Canyon, which is a downstream tributary of the Santa Clara River. Bee Canyon has an important population of the federally-endangered slender-horned spineflower (*Dodecahema leptoceras*) in its broad, floodplain area. In the Bee Canyon slopes of coastal sage chaparral, the federally-threatened coastal California gnatcatcher (*Polioptila californica californica*) is sometimes resident. The Bee Canyon area has some underpasses of the State Route-14 that could be used by smaller wildlife if maintained unclogged. The extension includes upper watersheds of Spring and Tick canyons to enhance the connective area. Beyond upper areas of Tick Canyon, the SEA boundaries cross Mint Canyon into the Angeles National Forest and the watershed of Rowher Canyon. The SEA continues to the upper reaches of Rowher Canyon onto the main ridgeline of the Sierra Pelona. At the Mint Canyon crossing, just southwest of the community of Sleepy Valley, a lobe of the SEA extends along Mint Canyon to capture riparian woodlands of coast live oak, with a number of heritage trees (diameters greater than 36 inches). Residences are scattered and the natural communities of chaparral are intact on the canyon slopes.

The southern boundary of the SEA opposite the confluence with Agua Dulce Canyon includes the flood plain. The SEA dips southward into the lower portion of Bear Canyon (tributary of Santa Clara River) and includes undeveloped alluvial terrace slopes of the river downstream of Bear Canyon. The flood plain is a narrowed part of the SEA in the vicinity of Lang, which is a railroad stop on the transcontinental railroad line that runs the length of the Soledad Canyon. Downstream from Lang, the SEA expands to the southern slopes between Lang and Oak Spring Canyon, adjacent to the

river channel. Downstream of Oak Canyon, the SEA narrows to the flood plain, passes Sand Canyon, and reaches the west ridge of Sand Canyon. A broad finger of the SEA goes south along the ridgeline of the Sand Canyon watershed, where the finger expands when it reaches the watershed of Placerita Canyon.

The alluvial fans of Oak Springs Canyon and Sand Canyon are important recharge grounds for the river aquifer. Surface flows from both canyons enter the Santa Clara River basin through natural, unconfined channels. Recognizing the importance of the Sand Canyon drainage, the SEA boundaries are drawn to encompass the entire upper Sand Canyon watershed, which is largely natural with scattered residences, as well as the Sand Canyon tributary, Bear Canyon. Most of the upper Sand Canyon and its Bear Canyon tributary are within the Angeles National Forest, and Sand Canyon originates on the peak of Magic Mountain. These canyons form a natural movement zone for wildlife traversing among the western end of the San Gabriel Mountains, the eastern end of the Santa Susana Mountains, and the Santa Clara River basin. Together, they encompass a spectrum of significant and unique habitat, vegetation and wildlife resources. The major habitat linkage zones and watersheds between the river basin and the Angeles National Forest, and the protected areas of the County (Placerita Canyon Natural Area), have also been included within the SEA boundary. Near the peak of Magic Mountain, the boundary contours to the southwest, and then proceeds west along the Santa Clara Divide to its intersection with the junction of Interstate-5 and State Route-14. Natural areas of the Sand Canyon watershed, along with the major topography of ridgelines, earthquake escarpments, grasslands, and canyon habitat features and watersheds of Bear, Placerita, Whitney, and Elsmere canyons are the important features of the wildlife linkage. Existing rural residential developments are excluded from the SEA, but the remaining natural highland areas of the western banks of the Sand Canyon watershed are included. These are integral parts of the river basin recharge system and functional ecosystem.

Parts of this area have coastal sage scrub and are critical habitat for the threatened coastal California gnatcatcher. The watershed of Placerita Canyon southeast of the State Route-14 is generally critical habitat for the federally-threatened coastal California gnatcatcher. An area of development surrounding the Placerita Creek near State Route-14 is excluded from the critical habitat. The critical habitat area for the gnatcatcher extends along the east side of State Route-14 beyond Placerita Creek and envelops watersheds into the Angeles National Forest along Whitney Canyon, Elsmere Canyon, and southward over the main ridge of the San Gabriel Mountains, into Grapevine Canyon in its upper natural watershed. Upper areas of these canyons with oaks and big-cone Douglas fir are habitat for the California spotted owl (*Strix occidentalis*)

The eastern half of the Los Piñetos undercrossing of State Route-14 on old oil development roads is included, and focuses on a major wildlife conduit connecting the Santa Susana Mountains to the San Gabriel Mountains, and to the Santa Clara River. The adjacent part of the Santa Susana Mountains and Simi Hills SEA includes the west half of the Los Piñetos undercrossing of State Route-14, connecting through the natural oak woodlands and drainages adjacent to the San Fernando Pass. This area, once called “San Francisco” or “Newhall Wedge,” is north and west of the junction of Interstate-5 and State Route-14 with The Old Road running through it. The Newhall Wedge area is nearly all critical habitat for the coastal California gnatcatcher. This critical habitat of the Newhall Wedge is adjacent to the gnatcatcher critical habitat across State Route-14 in the SEA, but is in the Santa Susana Mountains and Simi Hills SEA.

The SEA boundary borders State Route-14 from the north ridge of Grapevine Canyon and heads northeast from the Los Piñetos undercrossing, on the natural side of existing development east of State Route-14. The area around development along Running Horse Road off Placerita Canyon has

been excluded from the SEA. The movie-shoot ranch at the junction of State Route-14 and Placerita Canyon has much area with development or staging excluded, but there is a connected finger of the SEA in Placerita Canyon that leads to the Placerita Canyon watercourse underpass. Much of the watercourse underpass is used by wildlife to transition between the natural areas of Placerita Canyon and the oil field area on the west side of State Route-14. The SEA narrows to the western hills of Sand Canyon beyond the movie-shoot ranch, to avoid developed areas, and continues back to the river margin at Humphreys railway stop, about a 0.4 mile west of its previous point of departure from the river channel. The boundary was drawn to avoid existing major development, but connect the uplands to the river basin. The narrow aperture for the linkage at the Santa Clara River reflects the remnant nature of the last unobstructed terrestrial passageway between the upland areas and the river.

From Sand Canyon westward through the residential neighborhoods of Santa Clarita, the SEA boundary continues on the margins of the flood plain to the confluence with San Francisquito Canyon. The segment of the Santa Clara River passing through the City of Santa Clarita is a dry channel, except during seasonal runoff flows. Some irregular extensions go north into tributaries that have remnant riparian habitat and probable outflows from irrigation runoff that flows into neighborhood storm drains. Regardless of the intermittent nature of water, the river bed elevated areas among braided channels support relatively intact stands of alluvial sage scrub, riparian woodland, and southern riparian scrub. The dry zones are essential to the continued genetic isolation and integrity of the unarmored three-spine stickleback population in the upper reaches of the Santa Clara River.

The boundary extends northward upstream into the reaches of San Francisquito Creek (formerly a separate SEA, but now included with the SEA), following the approved development setback limits, north into the Angeles National Forest (Santa Clara/Mojave Rivers District). The SEA continues nearly the length of the San Francisquito Creek to beyond the junction with South Portal Creek in the vicinity of the community of Green Valley. The Santa Clara River IBA extends in a branch upstream in close proximity to the crossing of Copper Hill Drive.

As the channel enters the Angeles National Forest, flows become less seasonal, and riparian resources expand and diversify. San Francisquito Creek supports dense and mature southern riparian scrub and riparian woodland formations, along with small areas of freshwater marsh, which provide essential wintering areas and resident habitat for waterfowl, wading birds, marshland birds, and a variety of other vertebrate species. The headwaters of San Francisquito Creek are on a low ridge that bounds the San Andreas Fault Zone, and this is an important connective element of the SEA, in that it completes the path from the Pacific Ocean through the mountains to the Mojave Desert. The sub-watershed and flood plain of the San Francisquito Creek perennial flow in the Angeles National Forest jurisdiction is designated critical habitat for the federally-threatened red-legged frog, which extends from about the Angeles National Forest southern boundary to about one mile south of the junction with Bee Canyon. Much of the San Francisquito Creek is considered essential habitat (one of three areas) for the endangered unarmored threespine stickleback, although the fish has not been found in the San Francisquito Canyon in recent years.

The boundaries west of the confluence with San Francisquito Creek follow the river margins under the Interstate-5 to the Castaic Creek confluence, at which point the northern setback line has been drawn around the lower portion of Castaic Creek, which embraces the riparian habitat areas around and above the confluence. Castaic Creek is the tributary with the largest watershed for the Santa Clara River in the County. The SEA boundaries go upstream about four miles along the watercourse of Castaic Creek to the crossing of Lake Hughes Road, which is just downstream of Castaic Lagoon.

The Santa Clara River IBA extends in a branch upstream into Castaic Creek for approximately one mile.

Relatively extensive areas of willow-cottonwood forest and southern riparian scrub occur west of San Francisquito Creek and within the junction zone of Castaic Creek and the Santa Clara River. These river forests support numerous sensitive species and provide multi-layered riparian habitat for a wide diversity of wildlife species, particularly birds of prey and riparian-obligate song birds, such as the federally-endangered least Bell's vireo (*Vireo bellii pusillus*) and the southwestern willow flycatcher (*Empidonax traillii extimus*).

Federally-designated critical habitat for the endangered arroyo toad extends from the east side of Interstate-5, from the junction of the Santa Clara River with San Francisquito Creek, under the Interstate-5, about 5.8 miles to the confluence, with an unnamed drainage just upstream of the confluence of the river with San Martinez Chiquito. The critical habitat area for the toad also includes the flood plain of Castaic Creek as far upstream as the Interstate-5 undercrossing (about 2.5 miles), and for about one mile upstream into the natural area of Hasley Canyon, a tributary of Castaic. Coincident with the critical habitat for the toad is critical habitat for the endangered least Bell's vireo (FE, SE). Critical habitat for the vireo extends along the floodplain from the Rye Canyon undercrossing of the river (west side of Interstate-5), over the Ventura-Los Angeles County line, to about a mile short of the confluence of the Santa Clara River with Piru Creek in Ventura County (about 9 miles). The river area from near Interstate-5 towards the Ventura-Los Angeles County line is "essential habitat" for the threespine stickleback. A disjunct SEA area is on a ridge south of the river bend at Castaic Junction (interchange of Interstate-5 and State Route-126). This area supports a population of the federal candidate and state-endangered San Fernando Valley Spineflower (*Chorizanthe parryi* var. *fernandina*, FC, SE), which is a diminuitive, once-common flower of slopes within the San Fernando Valley and adjacent passes and mountain ranges. The plant became so rare that it was believed to be extinct until it was rediscovered during required surveys for development.

Beyond the confluence with Castaic Creek, the boundaries of the SEA follow the margins of the Santa Clara River channel to the Ventura-Los Angeles County line. The Santa Clara River IBA has a lobelike expansion opposite the confluence with San Martin Chiquito, extending south to cover diverse topography from river cliffs to confluence flood plains in the area around Potrero Canyon.

The Santa Clara River channel and its alluvial terraces and tributary creeks together form the single most important and natural wildlife movement zone through the County. Mobile species can enter the river basin anywhere along its length (outside of developed areas) and proceed in either direction without having to pass through narrow culverts or blind channels, with continuous vegetative cover and only short stretches of dry substrates. The overall drainage course provides a continuum of aquatic and terrestrial movement opportunities, shelter, forage, and resident habitat from the mouth of the river at Ventura County and the Pacific Ocean, to the Antelope Valley. The drainage course connects to both districts of the Angeles National Forest, and links together three large public resource preserves (Vasquez Rocks and Placerita County Natural Areas and the Angeles National Forest).

Vegetation

Plant communities within the SEA include bigcone Douglas fir-canyon oak forest, coast live oak woodland, coast live oak riparian forest, chaparral, coastal sage scrub, coastal sage scrub-chaparral mixed scrub, non-native and native grasslands, alluvial fan sage scrub, southern cottonwood-willow riparian woodland and forest, southern sycamore-alder woodland, southern willow scrub, vernal

pool, pinyon-juniper woodland, juniper woodland, freshwater marsh, and disturbed. Transitional zones (ecotones) between these communities often contain unusual species compositions. Plant species observed or recorded in previous documentation within the SEA are indicated in the *Comprehensive Floral & Faunal Compendium* of the *Los Angeles County SEA Update Study 2000 Background Report*. Sensitive plant species occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources section.

Bigcone Douglas Fir-Canyon Oak Forest: Typically occurs in higher elevation draws on north-facing slopes, and may have incense cedar (*Calocedrus decurrens*), big-leaf maple (*Acer macrophyllum*), California bay (*Umbellularia californica*), and other shade-loving species intermixed, depending upon slope orientation, substrates, and fire history. Understory vegetation is usually dominated by chaparral species, such as scrub oak (*Quercus berberidifolia*), poison oak (*Toxicodendron diversilobum*), wild grape (*Vitis californica*), and manzanita (*Arctostaphylos* spp.). This community occurs on watershed slopes in the eastern portion of the SEA, and in a few of the narrower, more mesic canyons along the southern side of Soledad Canyon.

Corresponding MCV communities:

- *Pseudotsuga macrocarpa* (bigcone Douglas-fir forest) Forest Alliance
- *Quercus chrysolepis* (canyon live oak forest) Forest Alliance

Coast Live Oak Woodland: Consists of moderate-density overstory formations of coast live oak trees (*Quercus agrifolia* var. *agrifolia*), usually on erosional plains or landslides along the margins of canyon bottoms and on lower slopes in chaparral and coastal sage scrub understory habitats. Western blue elderberry (*Sambucus nigra* var. *caerulea*), chaparral currant (*Ribes malvaceum*), skunk bush (*Rhus aromatica*), and California peony (*Paeonia californica*) are frequent in the understory. Extensive stands of this formation occur in Sand, Placerita, Bear, Whitney, Elsmere, and Soledad canyons, and in unnamed tributary canyons to these drainages.

Corresponding MCV communities:

- *Quercus agrifolia* (coast live oak woodland) Woodland Alliance

Coast Live Oak Riparian Forest: A variation of coast live oak woodland wherein the canopy is more closely grown, and the trees occur in narrower formations along watercourses. Willow (*Salix* spp.), California bay, mulefat (*Baccharis salicifolia*), and other riparian species often occur in the understory.

Corresponding MCV communities:

- *Quercus agrifolia* (coast live oak woodland) Woodland Alliance

Juniper Woodland: An open formation dominated by California juniper (*Juniperus californica*), often with an understory of foothill yucca (*Yucca whipplei*), California buckwheat (*Eriogonum fasciculatum*), and other scrub species. This community is found on lower slopes within the eastern portion of the SEA and is mixed with a few Joshua trees and chaparral species in several places.

Corresponding MCV communities:

- *Juniperus californica* (California juniper woodland) Woodland Alliance

Pinyon-Juniper Woodland: In the SEA, pinyon-juniper woodland typically consists of a mixture of singleleaf pinyon pine (*Pinus monophylla*) and California juniper, with mountain mahogany (*Cercocarpus betuloides*), California buckwheat, skunk bush, foothill yucca, penstemons (*Penstemon* spp.), and native grasses (*Stipa*, *Poa*, *Elymus*, etc.). This formation occurs on middle elevation north-facing slopes in the Kentucky Springs watershed, and sporadically along the same orientations south of Acton.

Corresponding MCV communities:

- *Pinus monophylla* (singleleaf pinyon woodlands) Woodland Alliance
- *Juniperus californica* (California juniper woodland) Woodland Alliance

Southern Cottonwood-Willow Riparian Woodland and Forest: A broad-leafed winter-deciduous habitat dominated by Fremont cottonwood (*Populus fremontii*), various species of willow, and occasional alder (*Alnus rhombifolia*) and western sycamore (*Platanus racemosa*). Southern cottonwood-willow riparian woodland (or forest) occurs in numerous reaches of the SEA, forming mature overstory habitat on the Santa Clara River, its main tributaries, oxbow ponds, and alluvial plains. Some of the most extensive formations occur just west of Acton, in upper Aliso Canyon, in lower San Francisquito Canyon, and from Santa Clarita to the Ventura-Los Angeles County line. Large tracts of cottonwood-willow habitat occur in Ventura County as well.

Corresponding MCV communities:

- *Populus fremontii* (Fremont cottonwood forest) Forest Alliance
- *Salix laevigata* (red willow thickets) Woodland Alliance
- *Salix gooddingii* (black willow thickets) Woodland Alliance

Southern Sycamore-Alder Woodland: A formation that most often occurs on broad plains with heavy alluvial substrates, as well as along narrow creeks and streams with high-energy, permanent flows within the SEA. Alders typically occur along the watercourse, while sycamores usually grow a bit further from the active flowing channel. This community is rare within the SEA, as it occurs in only the upper reaches of the watershed and in portions of Bear, Sand, and Placerita canyons and to a lesser extent in Aliso Canyon.

Corresponding MCV communities:

- *Platanus racemosa* (California sycamore woodlands) Woodland Alliance
- *Alnus rhombifolia* (white alder groves) Forest Alliance

Southern Willow Scrub: is a riparian community consisting of dense, broad-leafed, winter-deciduous riparian thickets that occur within and adjacent to seasonal or permanent watercourses. The “scrub” generally is sub-mature, which is a state that often is maintained by frequent heavy over-flooding. The trees attain woodland or forest stature if undisturbed for several decades. Dominant species of this community within the SEA are mulefat, sandbar willow (*Salix exigua*), and arroyo willow (*Salix lasiolepis*). Within the SEA, this community occurs throughout the tributary and primary drainages, wherever the habitat structure is maintained or repeatedly altered by frequent high water flows.

Corresponding MCV communities:

- *Salix exigua* (sandbar willow thickets) Shrubland Alliance
- *Salix lasiolepis* (arroyo willow thickets) Shrubland Alliance

Freshwater Marsh: Develops in areas of still or slow-moving permanent freshwater. This community is dominated by the perennial, emergent cattail (*Typha* spp.) or bulrush (*Schoenoplectus* spp.), which can reach heights of seven feet and grow dense enough to form a closed canopy. This vegetation occurs in scattered ponds and slow-flowing portions of the river and tributaries within the SEA.

Corresponding MCV communities:

- *Phragmites australis* (common reed marshes) Herbaceous Alliance and Semi-Natural Stands
- *Schoenoplectus californicus* (California bulrush marsh) Herbaceous Alliance
- *Typha* (*angustifolia*, *domingensis*, *latifolia*) (cattail marshes) Herbaceous Alliance
- *Lemna* (*minor*) *and relatives* (duckweed blooms) Provisional Herbaceous Alliance

Vernal Pool Systems: Extremely rare in the County. There are only two verified vernal pools currently recognized within the Santa Clara River watershed area: Cruzan Mesa and Plum Canyon. The SEA has been designated for these vernal pools. There are probably unrecognized ephemeral pools all along the river course where soil types are appropriate. For example, there is at least one small documented seasonal pond with typical vernal pool characteristics within the Golden Valley Ranch portion of the upper Placerita-Sand Canyon watershed. This small pool is surrounded by coastal sage scrub, with a band of native needlegrass and melic grass on its fringes. The Golden Valley pool supports Riverside fairy shrimp and western spadefoot toad. It is considered a vernal pool by virtue of its habitat values and species that are unique to this type of seasonal formation.

Corresponding MCV communities:

- *Deinandra fasciculata* (clustered tarweed fields) Herbaceous Alliance
- *Eleocharis macrostachya* (pale spike rush marshes) Herbaceous Alliance
- *Lasthenia californica-Plantago erecta-Vulpia microstachys* (California goldfields-dwarf plantain - six-weeks fescue flower fields) Herbaceous Alliance
- *Juncus arcticus* (var. *balticus*, *mexicanus*) ([*Juncus balticus* ssp. *ater*, *Juncus mexicanus*] Baltic and Mexican rush marshes) Herbaceous Alliance

Chaparral: Consists of sclerophyllous (hard-leaved, evergreen), medium height to tall shrubs that form a dense cover on steep slopes, usually below 5,000 feet in Southern California. Dominant species found within this community include scrub oaks (*Quercus*, several species), chamise, manzanita, wild lilac (*Ceanothus* spp.), toyon (*Heteromeles arbutifolia*), and western mountain-mahogany on north-facing exposures; buckwheat, foothill yucca, chamise, hoary-leaf lilac (*Ceanothus cuneatus*), black sage (*Salvia mellifera*), and goldenbush (*Ericameria linearifolia*) on south-facing slopes. This plant community occupies most of the basin slopes along the Santa Clara River and on interior ridges and slopes within the watersheds and drainages west of Acton. Chaparral also occurs on some of the higher elevations of the eastern watershed portions of the SEA, where the shrubs frequently are interspersed as understory formations within oak and conifer woodlands.

Corresponding MCV communities:

- *Adenostoma fasciculatum* (chamise chaparral) Shrubland Alliance
- *Adenostoma fasciculatum-Salvia apiana* (chamise- white sage chaparral) Shrubland Alliance
- *Arctostaphylos glandulosa* (Eastwood's manzanita chaparral) Shrubland Alliance
- *Arctostaphylos glauca* (bigberry manzanita chaparral) Shrubland Alliance

- *Ceanothus cuneatus* (hoary leaf ceanothus chaparral) Shrubland Alliance
- *Ceanothus greggii* [*vestitus*] (cup leaf ceanothus chaparral) Shrubland Alliance
- *Ceanothus leucodermis* (chaparral whitethorn) Shrubland Alliance
- *Prunus ilicifolia* (holly leaf cherry chaparral) Shrubland Alliance

Coastal Sage Scrub and Coastal Sage Scrub-Chaparral Mixed Scrub: Formations that typically occur on south or west-facing slopes within the western portion of the SEA. Some sites may be artifacts of fire frequency or occurrence, while other areas appear to be stable scrub communities. Dominant species are typically California sagebrush (*Artemisia californica*), purple sage (*Salvia leucophylla*), black sage, white sage (*S. apiana*), goldenbush, buckwheat, foothill yucca, California brittle bush (*Encelia californica*), golden yarrow (*Eriophyllum confertiflorum*), chamise, hoary-leaf lilac, and a variety of annuals and bulbs. Excellent examples of coastal sage scrub occur in upper Placerita Canyon watershed and on the ridgeline to the north, along the Santa Clara River just east of Sand Canyon, and in San Francisquito Canyon.

Corresponding MCV communities:

- *Artemisia californica* (California sagebrush scrub) Shrubland Alliance
- *Artemisia californica-Salvia mellifera* (California sagebrush-black sage scrub) Shrubland Alliance
- *Artemisia californica-Eriogonum fasciculatum* (California sagebrush-California buckwheat scrub) Shrubland Alliance
- *Encelia californica* (California brittle bush scrub) Shrubland Alliance
- *Dendromecon rigida* (bush poppy scrub) Shrubland Alliance
- *Salvia apiana* (white sage scrub) Shrubland Alliance
- *Salvia leucophylla* (purple sage scrub) Shrubland Alliance
- *Salvia mellifera* (black sage scrub) Shrubland Alliance
- *Eriogonum fasciculatum* (California buckwheat scrub) Shrubland Alliance
- *Eriogonum fasciculatum-Salvia apiana* (California buckwheat-white sage scrub) Shrubland Alliance
- *Ericameria linearifolia* (narrowleaf goldenbush scrub) Provisional Shrubland Alliance
- *Lotus scoparius* ([*Acmispon glaber*] deer weed scrub) Shrubland Alliance
- *Malacothamnus fasciculatus* (bush mallow scrub) Shrubland Alliance

Alluvial Fan Sage Scrub: Sometimes also known as floodplain sage scrub, generally consists of a mixture of shrubs, which colonize and persist within infrequently scoured and flooded terrain, such as floodplains, alluvial plains, or along seasonal streams. The dominant shrub in most washes is scalebroom (*Lepidospartum squamatum*), but thick leaf yerba santa (*Eriodictyon crassifolium*), Great Basin sagebrush, rabbitbrush (*Ericameria nauseosa*), skunk bush, holly leaf cherry (*Prunus ilicifolia*), and foothill yucca also usually occur in the habitat type, and may be dominant, depending upon substrates and subsurface hydrology. This vegetation type is common throughout the alluvial plains and washes in the SEA, and form particularly high diversity stands along the southern margin of the river at Acton, on uplands east of the Sand Canyon confluence, along the dry reaches of the river in Santa Clarita, and in lower San Francisquito Canyon. Extensive stands of Parish's Great Basin sagebrush-dominated alluvial scrub occur around Acton and in the Kentucky Springs portion of the SEA. Lower reaches of tributary drainages to the Santa Clara River often support unusual vegetation types (not addressed in the MCV) with dominance by holly leaf cherry. In addition, the Santa Clara River floodplain provides an avenue of westward range extension for a small number of species more typically associated with the Mojave Desert flora and otherwise not expected within the

cismontane region of Southern California. These include sandpaper plant (*Petalonyx thurberi*) and arrow weed (*Pluchea sericea*).

Corresponding MCV communities:

- *Artemisia californica-Eriogonum fasciculatum* (California sagebrush-California buckwheat scrub) Shrubland Alliance
- *Artemisia tridentata* (big sagebrush) Shrubland Alliance
- *Eriodictyon crassifolium* (thick leaf yerba santa scrub) Provisional Alliance
- *Eriogonum fasciculatum-Salvia apiana* (California buckwheat-white sage scrub) Shrubland Alliance
- *Lepidospartum squamatum* (scale broom scrub) Shrubland Alliance
- *Malosma laurina* (laurel sumac scrub) Shrubland Alliance

Native and Non-Native Grassland Communities: Consist of low, herbaceous vegetation dominated by grasses, with native formations generally mixed with native bulbs and other herbaceous species, and often intermixed with naturalized annual taxa. There are representatives of native grasslands scattered within the SEA, most notably patches of different needlegrass (*Stipa*) species and melic (*Melica*) grasses on clay soils in Placerita Canyon, on slope wetlands and around oak woodlands on the ridge north of Placerita Canyon, and on less-disturbed xeric slopes in the eastern portion of the SEA. Seeps in chaparral often support homogeneous stands of giant wildrye (*Leymus condensatus*). Other native grasses occur sporadically within most natural habitats along the Santa Clara basin.

Non-native grassland consists of invasive annual grasses that are primarily of Mediterranean origin. Dominant species within this community include wild oats (*Avena* spp.), bromes (*Bromus* spp.), and other grasses, along with wild mustards (*Brassica*, *Hirschfeldia*, and *Sisymbrium* spp.) and other disturbance-facilitated "weedy" taxa. Non-native grasslands and other ruderal formations are the dominant understory on most disturbed substrates, particularly grazed areas.

Corresponding MCV communities:

- *Leymus condensatus* (giant wild rye grassland) Herbaceous Alliance
- *Nassella* [*Stipa*] *cernua* (nodding needle grass grassland) Provisional Herbaceous Alliance
- *Nassella* [*Stipa*] *lepida* (foothill needle grass grassland) Provisional Herbaceous Alliance
- *Nassella* [*Stipa*] *pulchra* (purple needle grass grassland) Herbaceous Alliance
- *Avena* (*barbata*, *fatua*) (wild oats grasslands) Semi-Natural Herbaceous Stands
- *Brassica* (*nigra*) *and Other Mustards* (upland mustards) Semi-Natural Herbaceous Stands
- *Bromus* (*diandrus,hordeaceus*)-*Brachypodium distachyon* (annual brome grasslands) Semi-Natural Herbaceous Stands
- *Bromus rubens-Schismus* (*arabicus*, *barbatus*) ([*Bromus madritensis* ssp. *rubens*] red brome or Mediterranean grass grasslands) Semi-Natural Herbaceous Stands
- *Centaurea* (*solstitialis*, *melitensis*) (yellow star-thistle fields) Semi-Natural Herbaceous Stands
- *Lolium perenne* [*Festuca perennis*] (perennial rye grass fields) Semi-Natural Herbaceous Stands

Disturbed or Barren Areas: These areas either completely lack vegetation or are dominated by ruderal species. Ruderal vegetation typically found within the SEA includes non-native and native grasses and "weedy" herbaceous species, including doveweed, mustards, wire lettuce, sow thistle, telegraph weed, Russian thistle, dock, yellow star thistle, Australian saltbush, and cocklebur.

Disturbed areas occur throughout the SEA on fallow agricultural sites, disked fields, abandoned pastures, residential development, paved road margins, fire breaks, dirt access roads, trails, and other similarly disturbed areas.

Corresponding MCV communities:

None at this time.

In a 2006 report submitted to PCR by South Coast Wildlands, in cooperation with the Upper Santa Clara Biodiversity Work Group, entitled *Wildlands of the Santa Clara River Watershed: Restoring and Maintaining the Integrity and Health of the River and its Watershed*, indicate several plant communities not previously identified as being present in the area. Desert scrub and Joshua tree woodland were described as being present in the eastern part of the watershed. Mainland holly leaved cherry woodland was also identified as a sensitive plant community that is common in the area and is included above as a subset of chaparral, *Prunus ilicifolia* (holly leaf cherry chaparral) Shrubland Alliance.

Wildlife

Wildlife within the SEA is extremely diverse and abundant, commensurate with extensive acreages of natural open space and the great diversity of habitat types within the Santa Clara River channels and on the surrounding uplands. While a few wildlife species may be entirely dependent upon or obligate within a single vegetative community, the mosaic of vegetation communities within the SEA and adjoining uplands constitutes a continuum of functional ecosystems. These ecosystems support a wide variety of wildlife species, within the SEA boundaries and as a part of the regional ecosystem.

Analysis of invertebrates on any given site generally is limited by a lack of specific data, but the size of the SEA and diversity of habitats present are considered sufficient to support healthy populations of a very large number of invertebrate species, probably in excess of 2,500 species. The riparian formations, wetlands, and aquatic habitats within the SEA support diverse faunas of arthropods, including native fairy shrimp, craneflies, blackflies and other aquatic dipterans, stoneflies, caddisflies, and dobsonflies, water boatmen, giant water bugs, ground beetles, diving beetles, and tiger beetles. Terrestrial insects occur around riparian corridors and in scrub habitats, and are particularly abundant in oak-dominated habitats. Insect orders are very well-represented taxonomically, and with some habitat specialization within the SEA include orthoptera, neuroptera, coleoptera, diptera, hymenoptera and lepidoptera.

Amphibians are abundant and relatively diverse within moister woodland areas, along montane canyon bottoms, in riparian areas, and within surface water features of the SEA. The overall riparian systems of the Santa Clara River basin support abundant populations of California and Baja California chorus frogs (*Pseudacris cadaverina*, *P. hypochondriaca*), California toad (*Anaxyrus boreas halophilus*), western spadefoot toad (*Spea hammondii*), American bullfrog (*Lithobates catesbeianus*), and African clawed frog (*Xenopus laevis*)—of which the latter two species are non-native. San Francisquito Canyon also supports populations of California red-legged frog (*Rana draytonii*) and arroyo toad (*Anaxyrus californicus*). Arboreal salamander (*Aneides lugubris*), garden slender salamander (*Batrachoseps major*), and painted ensatina (*Ensatina eschscholtzii picta*) are also present within mesic habitats in the SEA.

Open scrub, chaparral and alluvial fan habitats support diverse reptile populations, and the overall herpetofauna of the SEA includes numerous lizard species, along with southwestern pond turtle (*Emys marmorata*) in Agua Dulce and Bear canyons, as well as some parts of the main river

channel. Yucca night lizard (*Xantusia vigilis*), western side-blotched lizard (*Uta stansburiana elegans*), Great Basin fence lizard (*Sceloporus occidentalis longipes*), Skilton's skink (*Plestiodon skiltonianus skiltonianus*), San Diego alligator lizard (*Elgaria multicarinata webbii*), coastal whiptail (*Aspidoscelis tigris stejnegeri*), coast horned lizard (*Phrynosoma blainvillii*), California legless lizard (*Anniella pulchra*), and San Diego banded gecko (*Coleonlyx variegatus abbotti*) would be expected within the SEA.

The SEA also supports a robust snake fauna, including desert threadsnake (*Rena humilis cahuilae*), red racer (*Coluber flagellum piceus*), California striped racer (*Coluber lateralis lateralis*), coast patch-nosed snake (*Salvadora hexalepis virgultea*), northern three-lined boa (*Lichanura orcutti*), San Diego gopher snake (*Pituophis catenifer annectens*), California glossy snake (*Arizona elegans occidentalis*), California kingsnake (*Lampropeltis getula californiae*), California mountain kingsnake (*Lampropeltis zonata*), long-nosed snake (*Rhinocheilus lecontei*), San Diego nightsnake (*Hypsiglena ochrorhyncha klauberi*), Baja California lyresnake (*Trimorphodon biscutatus lyrophanes*), western black-headed snake (*Tantilla planiceps*), two-striped garter snake (*Thamnophis hammondii*), San Bernardino ring-necked snake (*Diadophis punctatus modestus*), and southern Pacific rattlesnake (*Crotalus oreganus helleri*).

Bird diversity within the SEA is related to habitat opportunities for year-round residents, seasonal residents, migrating raptors, and song birds. Coastal sage scrub and chaparral host a suite of birds that are typical of such sites at lower elevations over most of the coastal slopes of Southern California. The most productive sites for resident coastal sage scrub and chaparral birds are around riparian and freshwater systems, which also attract large numbers of migrants during the spring and fall. Coastal sage and chaparral birds resident or breeding within the SEA include California quail (*Callipepla californica*), greater roadrunner (*Geococcyx californianus*), black-chinned hummingbird (*Archilochus alexandri*), Anna's hummingbird (*Calypte anna*), Costa's hummingbird (*C. costae*), coastal California gnatcatcher (*Polioptila californica californica*), northern mockingbird (*Mimus polyglottos*), California thrasher (*Toxostoma redivivum*), phainopepla (*Phainopepla nitens*), spotted towhee (*Pipilo maculatus*), Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*), California towhee (*Melozone crissalis*), black-chinned sparrow (*Spizella atrogularis*), lark sparrow (*Chondestes grammacus*), Bell's sage sparrow (*Amphispiza belli belli*), and lazuli bunting (*Passerina amoena*). Oak woodlands and riparian areas support many more species. Notable species include band-tailed pigeon (*Patagioenas fasciata*), western wood-pewee (*Contopus sordidulus*), summer tanager (*Piranga rubra*), black-headed grosbeak (*Pheucticus melanocephalus*), Bullock's oriole (*Icterus bullockii*), several swallow species, western yellow-billed cuckoo (*Coccyzus americanus occidentalis*), southwestern willow flycatcher (*Empidonax traillii extimus*), and least Bell's vireo (*Vireo bellii pusillus. Species associated with ruderal sites and grasslands include California horned lark* (*Eremophila alpestris actia*), savannah sparrow (*Passerculus sandwichensis*), and grasshopper sparrow (*Ammodramus savannarum*). Birds of prey (*including common migrants*) observed within the SEA include white-tailed kite (*Elanus leucurus*), northern harrier (*Circus cyaneus*), sharp-shinned hawk (*Accipiter striatus*), Cooper's hawk (*Accipiter cooperii*), red-shouldered hawk (*Buteo lineatus*), Swainson's hawk (*Buteo swainsoni*), red-tailed hawk (*Buteo jamaicensis*), golden eagle (*Aquila chrysaetos*), American kestrel (*Falco sparverius*), merlin (*Falco columbarius*), and prairie falcon (*Falco mexicanus*). Resident owl species within the SEA boundaries include barn owl (*Tyto alba*), great horned owl (*Bubo virginianus*), long eared owl (*Asio otus*), and California spotted owl (*Strix occidentalis occidentalis*).

Native mammal diversity within the SEA is considerable. These include bats (at least seven species), rodents (at least four species of deer mice, two species of woodrat, Beechey ground squirrel, western gray squirrel, and more), two types of rabbits and one hare, mule deer (*Odocoileus*

hemionus), coyote (*Canis latrans*), common gray fox (*Urocyon cinereoargenteus*), bobcat (*Lynx rufus*), cougar (*Puma concolor*), striped skunk (*Mephitis mephitis*), western spotted skunk (*Spilogale gracilis*), long-tailed weasel (*Mustela frenata*), American badger (*Taxidea taxus*), northern raccoon (*Procyon lotor*), and broad-footed mole (*Scapanus latimanus*). Black bear (*Ursus americanus*) also occur within the SEA boundaries, at least occasionally, but the San Gabriel Mountains population was introduced for game use, and this species is not native within the SEA.

Wildlife species previously recorded, as well as those expected to occur, within the SEA are indicated in the *Comprehensive Floral & Faunal Compendium* of the *Los Angeles County SEA Update Study 2000 Background Report*. Sensitive wildlife species occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources section.

Wildlife Movement

Historically (and prehistorically) the riparian corridor along the Santa Clara River has served as the primary east-west linkage between the Pacific coastline, coast ranges, interior ranges, high desert and southern Sierra (via the Tehachapi Range). Animals moving through the Santa Clara drainage had unobstructed passage along the river and within the riparian systems between the coastal lowlands of Ventura County and the Mojave Desert. The tributary routes extend south into the Santa Susana Mountains, south and north into the San Gabriel Mountains, northward via Castaic, Bouquet and San Francisquito tributaries (over the coastal ranges and San Gabriel Mountains of the Transverse Ranges and into the San Joaquin Valley), west into the central coast ranges, or east through the Tehachapi Mountains, and into the southern Sierra Nevada. The present configuration of the tributary drainages has impinged upon connectivity from the Santa Clarita Valley to the north, but the Santa Clara River remains relatively intact and open. The SEA embraces the river corridor and the linkage zones that are considered essential to ensuring connectivity and resource values within the historic movement zones for all of the wildlife species present within the County portion of the Santa Clara River, including mountain lion, coyote, bobcat, and several medium-sized mammals, as well as birds, reptiles, amphibians, and fishes.

Sensitive Biological Resources

Sensitive biological resources are habitats or individual species that have special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, and/or rare. This is due to the species' declining or limited population sizes, which usually results from habitat loss. Watch lists of such resources are maintained by the California Department of Fish and Game (CDFG), the United States Fish and Wildlife Service (USFWS), and special groups, such as the California Native Plant Society (CNPS). The following sections indicate the habitats as well as plant and animal species present, or potentially present within the SEA, which have been accorded special recognition. When species are federally-listed as endangered or threatened, they often have federally-designated, geographically-specific "critical habitat areas." Critical habitat areas, after extensive study by experts, are judged to be essential to conservation and maintenance of the species. Species with critical habitat in the SEA include the red-legged frog, arroyo toad, least Bell's vireo, and coastal California gnatcatcher. A species with essential habitat (critical habitat was proposed but not designated for species listed before 1978) is the unarmored threespine stickleback (fish).

Sensitive Plan Communities and Habitats

The SEA supports several habitat types considered sensitive by resource agencies. These are inventoried by California Department of Fish and Game (CDFG) in the California Natural Diversity

Database (CNDDB) [2011]. The CNDDB includes state and federally-listed endangered, threatened, and rare vascular plants, as well as several sensitive vertebrate species. These communities include bigcone Douglas-fir forest, Fremont cottonwood forest, black willow thickets, California sycamore woodlands, clustered tarweed fields, chamise-white sage chaparral, holly leaf cherry chaparral, California brittle bush scrub, white sage scrub, California buckwheat-white sage scrub, narrowleaf goldenbush scrub, thick leaf yerba santa scrub, scale broom scrub, giant wild rye grassland, nodding needle grass grassland, foothill needle grass grassland, and purple needle grass grassland. These communities, or closely related designations, are considered high priority communities by the CDFG, which indicates that they are experiencing a decline throughout their range. The array and composition of these communities has been discussed in the Vegetation section.

Sensitive Plant Species

The following special-status plant taxa have been reported or have the potential to occur within the SEA, based on known habitat requirements and geographic range information:

- Nevin's barberry (*Berberis nevinii*) FE, SE, RPR 1B.1
- Round-leaved filaree (*California macrophylla*) RPR 1B.1
- Peirson's morning-glory (*Calystegia peirsonii*) RPR 4.2
- Southern tarplant (*Centromadia parryi* ssp. *australis*) RPR 1B.1
- San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*) FC, SE, RPR 1B.1
- Slender-horned spineflower (*Dodecahema leptoceras*) FE, SE, RPR 1B.1
- Palmer's grapplinghook (*Harpagonella palmeri*) RPR 4.2
- Newhall sunflower (*Helianthus inexpectatus*) RPR 1B.1
- Los Angeles sunflower (*Helianthus nuttallii* ssp. *parishii*) RPR 1A
- Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*) RPR 1B.1
- Davidson's bushmallow (*Malacothamnus davidsonii*) RPR 1B.2
- Moran's navarretia (*Navarretia fossalis*) FT, RPR 1B.1
- White rabbit-tobacco (*Pseudognaphalium leucocephalum*) RPR 2.2
- Chaparral ragwort (*Senecio aphanactis*) RPR 2.2
- Mason's neststraw (*Stylocline masonii*) RPR 1B.1
- Greata's aster (*Symphyotrichum greatae*) RPR 1B.3
- Slender mariposa lily (*Calochortus clavatus* var. *gracilis*) RPR 1B.2
- Plummer's mariposa lily (*Calochortus plummerae*) RPR 1B.2
- California Orcutt grass (*Orcuttia californica*) RPR FE, SE, 1B.1

Sensitive Animal Species

The following special-status animal species are reported or are likely to be present within the SEA based on habitat requirements and known range attributes:

- Riverside fairy shrimp (*Streptocephalus woottoni*) FE
- Santa Ana sucker (*Catostomus santaanae*) FT, FSS, SSC
- Unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*) FE, FSS, SE, CDFG Fully Protected
- Arroyo chub (*Gila orcuttii*) FSS, SSC
- Arroyo toad (*Anaxyrus californicus*) FE, SSC
- California red-legged frog (*Rana draytonii*) FT, SSC
- Western spadefoot (*Spea hammondii*) BLMS, SSC

- Silvery legless lizard (*Anniella pulchra pulchra*) FSS, SSC
- Coastal whiptail (*Aspidoscelis tigris stejnegeri*) CDFG Special Animals List
- Rosy boa (*Charina trivirgata*) BLMS, FSS
- Western pond turtle (*Emys marmorata*) BLMS, FSS, SSC
- Coast horned lizard (*Phrynosoma blainvillii*) BLMS, FSS, SSC
- Coast patch-nosed snake (*Salvadora hexalepis virgultea*) SSC
- Two-striped garter snake (*Thamnophis hammondii*) BLMS, FSS, SSC
- Cooper's hawk (*Accipiter cooperii*) CDFG Watch List
- Tricolored blackbird (*Agelaius tricolor*) BCC, BLMS, SSC, USBC, AWL, ABC
- Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*) CDFG Watch List
- Grasshopper sparrow (*Ammodramus savannarum*) CDFG Special Animals List
- Bell's sage sparrow (*Amphispiza belli belli*) BCC, CDFG Watch List
- Golden eagle (*Aquila chrysaetos*) BCC, BLMS, CDFG Watch List, CDFG Fully Protected, CDF
- Burrowing owl (*Athene cunicularia*) BCC, BLMS, SSC
- Ferruginous hawk (*Buteo regalis*) BCC, BLMS, CDFG Watch List, AWL, LAA
- Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) FC, BCC, FSS, SE
- Yellow warbler (*Dendroica petechia brewsteri*) SSC
- White-tailed kite (*Elanus leucurus*) CDFG Fully Protected
- Southwestern willow flycatcher (*Empidonax traillii extimus*) FE, FSS, SE, USBC, AWL, ABC
- California horned lark (*Eremophila alpestris actia*) CDFG Watch List, LAA
- Prairie falcon (*Falco mexicanus*) BCC, CDFG Watch List, LAA
- American peregrine falcon (*Falco peregrinus anatum*) BCC, FSS, SE, CDF, CDFG Fully Protected, AWL, ABC
- California condor (*Gymnogyps californianus*) FE, SE, CDF, CDFG Fully Protected, USBC, AWL, ABC
- Yellow-breasted chat (*Icteria virens*) SSC
- Loggerhead shrike (*Lanius ludovicianus*) BCC, SSC, LAA
- Coastal California gnatcatcher (*Polioptila californica californica*) FT, SSC, USBC, AWL, ABC
- Bank swallow (*Riparia riparia*) ST
- Least Bell's vireo (*Vireo bellii pusillus*) FE, BCC, SE, USBC, AWL, ABC
- Pallid bat (*Antrozous pallidus*) FSS, BLMS, SSC, WBWG High
- Pallid San Diego pocket mouse (*Chaetodipus fallax pallidus*) SSC
- Spotted bat (*Euderma maculatum*) BLMS, SSC, WBWG High
- Western mastiff bat (*Eumops perotis californicus*) BLMS, SSC, WBWG High
- Silver-haired bat (*Lasionycteris noctivagans*) WBWG Medium
- Hoary bat (*Lasiurus cinereus*) WBWG Medium
- Western yellow bat (*Lasiurus xanthinus*) WBWG High
- San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) SSC
- California leaf-nosed bat (*Macrotus californicus*) FSS, SSC, WBWG High
- Fringed myotis (*Myotis thysanodes*) BLMS, WBWG High
- Long-legged myotis (*Myotis volans*) BLMS, SSC, WBWG Medium
- Yuma myotis (*Myotis yumaensis*) BLMS, WBWG Low-Medium
- San Diego desert woodrat (*Neotoma lepida intermedia*) SSC
- Big free-tailed bat (*Nyctinomops macrotis*) SSC, WBWG Medium-High
- Southern grasshopper mouse (*Onychomys torridus ramona*) SSC

- American badger (*Taxidea taxus*) SSC

Ecological Transition Areas (ETAs)

ETAs within this SEA are often scattered residential and camping development along the Santa Clara River, but also include development, such as ranches, a sewage treatment plant, and an aggregate mine. Disturbed stream or riverbed or potential for disturbance is the chief reason for ETAs in this SEA.

Regional Biological Value

The SEA meets several SEA designation criteria and supports many regional biological values. Each criterion and how it is met described below.

CRITERIA ANALYSIS OF THE SANTA CLARA RIVER SEA

Criterion		Status	Justification
A)	The habitat of core populations of endangered or threatened plant or animal species.	Met	The only existing natural population of the federally-endangered unarmored three-spine stickleback is within the Santa Clara River and its tributaries, and all of its essential habitat is in this SEA. The federally-threatened Santa Ana sucker occurs in the river, as does the state species of concern, the arroyo chub. The population of state and federally-endangered slender-horned spineflower in Bee Canyon is one of fewer than seven known occurrences for this species, one of only two known occurrences in the County, and one of its largest populations. San Francisquito Creek has a breeding area for the endangered red-legged frog. The San Fernando Valley spineflower (at Newhall Ranch in Interstate-5 vicinity) is found in only a few nearby places. Some of the critical habitat for the threatened California coastal gnatcatcher is included in this SEA. Western spadefoot, which is a species of concern, is extremely rare and local in the County away from this SEA. One of the largest, if not largest populations of least Bell's vireo in the County occurs along the river in the vicinity of the crossing of Interstate-5 near Newhall Ranch. Many RPR-listed rare plants occur within the SEA. Critical habitat occurs in the SEA for the listed arroyo toad, the red-legged frog, the coastal California gnatcatcher, and the least Bell's vireo.
B)	On a regional basis, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	The low-elevation bigcone Douglas fir-canyon oak forests above Placerita Canyon, the vernal pool in the Placerita Canyon-Sand Canyon divide, the native grassland on the Golden Valley Ranch (upper Placerita Canyon), and the alluvial fans with sage scrub in lower San Francisquito Canyon, Kentucky Springs and Acton are unique and regionally restricted biotic communities. Additionally, the riparian forests and woodlands along the Santa Clara River are among the most extensive, diverse and intact vegetative stands of this type in Southern California. Rare aquatic species, such as the unarmored three-spined stickleback, Santa Ana sucker, red-legged frog, least Bell's vireo, summer tanager, spineflower, and many others represented within the SEA are found nowhere else in the

Criterion		Status	Justification
			region.
C)	Within the County, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	The cottonwood-willow forests and woodlands, alluvial fan sage scrub, and coast live oak riparian forest are best represented in the County within the SEA. The lower elevation examples of bigcone Douglas fir-canyon oak forest communities where they mix with low-elevation biota are restricted to the edges of mountain habitat communities, which are regionally rare and also designated in this SEA.
D)	Habitat that at some point in the life cycle of a species or group of species, serves as concentrated breeding, feeding, resting, or migrating grounds and is limited in availability either regionally or in the County.	Met	The Santa Clara River is simultaneously an oasis running through a dry landscape and an extension of coastal conditions into the dry interior. For this reason, it supports unique populations of aquatic and amphibious species, as well as arid lands species extending towards the coast and coastal species' extension inland. It is a principle migratory route for the County plants and animals and a center of diversity for the County. The Santa Clara River and its tributaries provide breeding opportunities for numerous species otherwise not known to breed within the County, including California red-legged frog, summer tanager, southwestern willow flycatcher, and the unarmored three-spined stickleback . The extensive riparian areas shelter dozens of migrant songbird species during winter, including high concentrations of white-crowned and golden-crowned sparrows, fox sparrow, yellow-rumped warbler, dark-eyed junco, and sharp-shinned hawk. The SEA embraces the river corridor and the linkage zones that are considered essential to ensuring connectivity and resource values for many of the wildlife species that are present within the County portion of the Santa Clara River.
E)	Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community.	Met	The Santa Clara River represents a unique example of a drainage that stretches from the desert to the coast through the mountains. Its resources are, by definition, present at their geographic extremes. Plants such as western juniper, snake cholla, basin sagebrush, and birds, such as summer tanager are at the southwestern edges of their ranges along the river. Coastal taxa extend to the headwaters in the Acton area. High elevation species, such as bigcone Douglas fir, spotted owl, and Steller's jay occur at fairly low elevations at the edges of Santa Clara River valley, on north facing slopes that remain cool all summer.
F)	Areas that would provide for the preservation of relatively undisturbed examples of the original natural biotic communities in the County.	Met	The SEA encompasses some of the highest quality, least disturbed and biotically intact acreage of bigcone Douglas-fir-canyon oak forest, riparian forest and woodland, coastal sage scrub, and alluvial fan sage scrub that remains in the County, and one of the three known vernal pools along the river. Vernal pools are rare everywhere in California.

In conclusion, the area is an SEA because it contains: A) the habitat of core populations of endangered and threatened plant and animal species; B-C) biotic communities, vegetative associations, and habitat of plant and animal species that are either unique or are restricted in

distribution in the County and regionally; D) concentrated breeding, feeding, resting, or migrating grounds, which are limited in availability in the County; E) numerous examples of species at their habitat extremes as the coastal and desert influences meet; and F) areas that provide for the preservation of relatively undisturbed examples of original natural biotic communities in the County.

21. Santa Felicia SEA

Location

General

The Santa Felicia Significant Ecological Area (SEA) is located northwest of the City of Santa Clarita within unincorporated area of the County. Some of the SEA extends into the Angeles National Forest. The area is west of the Interstate-5, north of State Route-126 and encompasses almost the entire County portion of the Santa Felicia watershed that drains into Lake Piru and Piru Creek. Piru Creek has the largest watershed of any tributary of the Santa Clara River. The SEA is largely composed of natural coastal slopes of the western San Gabriel Mountains, with south-facing slopes of coastal sage scrub and grasslands, north-facing slopes of oak woodland and chaparral, and canyons of riparian oak forest and other riparian habitats. This habitat has been diminished by development, and the SEA is one place in the County where the natural habitat remains.

The SEA is located at least partially in each of the following United States Geological Survey (USGS) 7.5' California Quadrangles: Whitaker Peak and Val Verde.

General Boundary and Resources Description

Starting at the north end of the SEA boundary on the Ventura-Los Angeles County line, the northern SEA boundary is about one-quarter to one-half mile north of the boundary of Angeles National Forest, with private property as it follows along the northern ridgeline of Devil Canyon. Most of the SEA captures the natural, coastal sage scrub-covered south-facing slopes, oak-forests and mixed chaparral of the north-facing slopes, and deep ravines with riparian oak forest in the canyons. Devil Canyon is a major tributary of Piru Creek (at Lake Piru) in Ventura County. Where the Devil Canyon watershed contacts the southern ridgeline off Townsend Peak, the SEA boundary turns south along a ridge that separates Santa Felicia Canyon and its tributaries on the west side, from Palomas Canyon on the east side. The boundary goes south out of the Angeles National Forest into private lands about a 0.75 mile south of Townsend Peak. To capture the watershed tributaries, the eastern boundary follows the dominant ridgeline between Palomas Canyon and Santa Felicia Canyon, and then between Santa Felicia Canyon and Violin Canyon after Palomas Canyon joins Violin Canyon. There is a triple divide for the watersheds of Violin Canyon (which joins Castaic Creek), the watershed of Romero Canyon, which joins Hasley Canyon before it joins Castaic Canyon, and Santa Felicia Canyon, which is a tributary of Piru Creek. At the triple divide, the SEA boundary turns west to follow the ridge of the Santa Felicia watershed. The boundary crosses Loma Verde (peak), where it separates Santa Felicia Canyon from Romero Canyon, and the unnamed headwater creeks of Hasley Canyon, excluding the rapidly developing areas. About a mile southwest of Loma Verde Canyon, the SEA boundary turns south and west to encompass the watershed of Oak Canyon, with coast live oaks and riparian forest. The SEA boundary goes north along the Ventura-Los Angeles County line, crossing riparian forest of Santa Felicia Canyon and Devil Canyon into the Angeles National Forest, where it joins the north ridge of Devil Canyon. Most of the SEA is included in the wildlife movement linkage Sierra Madre-Castaic Connection that was outlined by the South Coast Wildlands study of linkages (Penrod, *et al*. 2005).

The SEA includes a wide variety of topographic features and habitat types. The orientation and extent of the SEA encompasses the surface and subsurface hydrology of the Santa Felicia watershed, from its headwater, tributaries, and basin to the point at which it exits the County jurisdiction.

The SEA encompasses most of the County portion of the Santa Felicia watershed that drains into Lake Piru. This watershed is largely undeveloped and contains vast stands of coastal sage scrub and chaparral communities on south- and north-facing slopes. In addition to the undisturbed upland habitats, the watershed includes examples of mixed riparian (sycamore-willow), oak riparian and coast live oak forests and alluvial scrub in the bottomlands. Grasslands occur in areas where grazing may have taken place; however, there is little invasion of these ruderal taxa into the native communities. A brief summary of the plant communities present, or likely to occur, within the SEA is provided in the Vegetation section.

Vegetation

The plant communities within the SEA are composed of numerous plant species. These plant species are adapted to a Mediterranean climate with a cool, wet season followed by a hot, dry season. Due to the topographic complexity and coastal and desert influences, the SEA supports a wide diversity of plant species.

Plant communities within the SEA include: coast live oak woodland, coast live oak riparian forest, chaparral, coastal sage chaparral scrub, non-native and native grasslands, alluvial fan sage scrub, and sycamore-willow riparian woodland.

Plant species observed or recorded in previous documentation within the SEA are indicated in the *Comprehensive Floral & Faunal Compendium of the Los Angeles County SEAs.* Sensitive plant species occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources section.

Descriptions and general locations of the each plant community present within the SEA are given below.

Coastal Sage Chaparral Scrub Communities: Consist of drought-deciduous, low, soft-leaved shrubs and herbs on gentle to steep slopes below 5,000 feet in elevation. Several dominant species may occur within scrub communities, with some areas overwhelmingly dominated by one or two species. Dominant species include California sagebrush (*Artemisia tridentata*), California buckwheat (*Eriogonum fasciculatum*), California brittle bush (*Encelia californica*), purple sage (*Salvia leucophylla*), and deerweed (*Acmispon glaber*). Coastal sage chaparral scrub is found at the lower elevations within the SEA on drier south-facing slopes, but can also be found on the north-facing slopes and canyons.

Corresponding MCV communities:

- *Artemisia californica* (California sagebrush scrub) Shrubland Alliance
- *Artemisia californica-Salvia mellifera* (California sagebrush-black sage scrub) Shrubland Alliance
- *Artemisia californica-Eriogonum fasciculatum* (California sagebrush-California buckwheat scrub) Shrubland Alliance
- *Encelia californica* (California brittle bush scrub) Shrubland Alliance
- *Dendromecon rigida* (bush poppy scrub) Shrubland Alliance

- *Salvia leucophylla* (purple sage scrub) Shrubland Alliance
- *Salvia mellifera* (black sage scrub) Shrubland Alliance
- *Eriogonum fasciculatum* (California buckwheat scrub) Shrubland Alliance
- *Ericameria linearifolia* (narrowleaf goldenbush scrub) Provisional Shrubland Alliance
- *Lotus scoparius* [*Acmispon glaber*] (deer weed scrub) Shrubland Alliance
- *Malacothamnus fasciculatus* (bush mallow scrub) Shrubland Alliance

Alluvial Fan Scrub: Consists of a mixture of shrubs that colonize sandy-gravelly flood deposited soils within intermittent creeks, arroyos, and drier terraces in large washes. Dominant species include California buckwheat (*Eriogonum fasciculatum*), scalebroom (*Lepidospartum squamatum*), quail bush (*Atriplex lentiformis*), and white sage (*Salvia apiana*).

Corresponding MCV communities:

- *Artemisia californica-Eriogonum fasciculatum* (California sagebrush-California buckwheat scrub) Shrubland Alliance
- *Lepidospartum squamatum* (scale broom scrub) Shrubland Alliance
- *Malosma laurina* (laurel sumac scrub) Shrubland Alliance
- *Salvia apiana* (white sage scrub) Shrubland Alliance

Coast Live Oak Woodlands: Commonly occur along drainages that experience at least a seasonal flow or in other areas under mesic conditions. Soil structure and soil moisture are the most important factors for the survival of oak woodlands; soils must be deep, uncompacted, fertile, well-aerated, and well-drained. This community is dominated by coast live oak (*Quercus agrifolia* var. *agrifolia*). If sufficient groundwater is present, western sycamore (*Platanus racemosa*), which is usually associated with riparian habitats, may also occur in the oak woodland. Oak woodlands occupy areas within the canyons and drainages of the SEA.

Corresponding MCV community:

- *Quercus agrifolia* (coast live oak woodland) Woodland Alliance

Coast Live Oak Riparian Forest: A variation of coast live oak woodland, where the canopy is more closely grown, and the trees occur in narrower formations along watercourses. Willow, California bay (*Umbellularia californica*), mulefat (*Baccharis salicifolia*), and other riparian species often occur in the understory.

Corresponding MCV community:

- *Quercus agrifolia* (coast live oak woodland) Woodland Alliance

Sycamore-Willow Riparian Woodland: May include the following: western sycamore (*Platanus racemosa*), black willow (*Salix gooddingii*), arroyo willow (*Salix lasiolepis*), skunkbush (*Rhus aromatica*), and California blackberry (*Rubus ursinus*).

Corresponding MCV Community:

- *Platanus racemosa* (California sycamore woodland) Woodland Alliance

Grassland Communities: Consist of low, herbaceous vegetation that is dominated by grasses, but generally also harbors native forbs and bulbs, as well as naturalized annual forbs. Topographic

factors that contribute to grassland presence include gradual slopes or flat areas with deep, well-developed soils in areas below 3,000 feet. The species richness of grassland communities is dependent upon a number of land use factors, including intensity and duration of natural or anthropogenic disturbances, such as grazing.

Native grassland is often associated with coastal sage chaparral scrub and is found in pockets in close proximity to coastal sage chaparral scrub and non-native grassland. This community consists of at least 10 percent relative cover of native herbaceous plants (grasses and forbs). The remaining vegetative cover is made up of non-native grasses found in annual grassland and a variety of annual, showy flowers such as golden stars (*Bloomeria crocea*) and blue-eyed grass (*Sisyrinchium bellum*). Native grassland may be found scattered throughout the SEA, mostly in openings in coastal sage chaparral scrub and mixed with non-native grasslands.

Corresponding MCV communities:

- *Leymus condensatus* (giant wild rye grassland) Herbaceous Alliance
- *Nassella* [*Stipa*] *cernua* (nodding needle grass grassland) Provisional Herbaceous Alliance
- *Nassella* [*Stipa*] *lepida* (foothill needle grass grassland) Provisional Herbaceous Alliance
- *Nassella* [*Stipa*] *pulchra* (purple needle grass grassland) Herbaceous Alliance

Non-native grassland consists of dominant invasive annual grasses that are primarily of Mediterranean origin. Dominant species found within this community include slender wild oat (*Avena barbata*), wild oat (*Avena fatua*) ripgut brome (*Bromus diandrus*), and red brome (*Bromus madritensis* ssp*. rubens*).

Corresponding MCV communities:

- *Avena* (*barbata*, *fatua*) (wild oats grasslands) Semi-Natural Herbaceous Stands
- *Brassica* (*nigra*) and other mustards (upland mustards) Semi-Natural Herbaceous Stands
- *Bromus* (*diandrus*, *hordeaceus*)-*Brachypodium distachyon* (annual brome grasslands) Semi-Natural Herbaceous Stands
- *Bromus rubens-Schismus* (*arabicus*, *barbatus*) ([*Bromus madritensis* ssp*. rubens*] red brome or Mediterranean grass grasslands) Semi-Natural Herbaceous Stands
- *Centaurea* (*solstitialis*, *melitensis*) (yellow star-thistle fields) Semi-Natural Herbaceous Stands
- *Lolium perenne* [*Festuca perennis*] (perennial rye grass fields) Semi-Natural Herbaceous Stands

Wildlife

The SEA provides for extremely diverse and abundant wildlife, commensurate with extensive acreages of natural open space and great diversity of habitat types, within the stream channels and on the surrounding uplands. While a few wildlife species may be entirely dependent upon or obligate within a single vegetative community, the mosaic of vegetation communities within the area and adjoining uplands constitutes a continuum of functional ecosystems. These ecosystems support a wide variety of wildlife species, within the SEA boundaries and as a part of the regional ecosystem.

Analysis of invertebrates on any given site generally is limited by a lack of specific data, but the size of the SEA and diversity of habitats present are considered sufficient to support healthy populations of a very large number of invertebrate species. The riparian formations and aquatic habitats within

the SEA support diverse faunas of arthropods, which may include native fairy shrimp, craneflies, blackflies and other aquatic dipterans, stoneflies, caddisflies, and dobsonflies, water boatmen, giant water bugs, ground beetles, diving beetles, and tiger beetles. Terrestrial insects are abundant around riparian corridors and in scrub habitats, particularly in oak-dominated habitats.

Amphibians are abundant and relatively diverse within moister woodland areas, along montane canyon bottoms, in riparian areas, and within surface water features. The overall riparian systems of the SEA provide habitat for a number of frog and toad populations, which may include populations of Baja California chorus frog (*Pseudacris hypochondriaca*) and California chorus frog (*P. cadaverina*), California toad (*Anaxyrus halophilus*), and western spadefoot (*Spea hammondii*), as well as the federally-endangered arroyo toad (*Anaxyrus californicus*). The federally-threatened California red-legged frog (*Rana draytonii*) has a known population and critical habitat in Michael Creek to the north. This frog could occur in Lake Piru and during times of very high water in the SEA. Open scrub, chaparral and alluvial fan habitats support diverse reptile populations, and the overall herpetofauna of the SEA would encompass numerous lizard species as well as a robust snake fauna.

Bird diversity within the SEA is related to habitat opportunities for year-round residents, seasonal residents, migrating raptors, and song birds. Coastal sage chaparral scrub and chaparral host a suite of birds typical of such sites at lower elevations over most of the coastal slopes of Southern California. The most productive sites for resident coastal sage chaparral scrub and chaparral birds are around riparian and freshwater systems, which also attract large numbers of migrants during the spring and fall. Oak woodlands and riparian areas generally support many more species. Notable species include the summer tanager (*Piranga rubra*), Bullock's oriole (*Icterus bullockii*), black-headed grosbeak (*Pheucticus melanocephalus*), band-tailed pigeon (*Patagioenas fasciata*), western wood-pewee (*Contopus sordidulus*), several swallow species, western yellow-billed cuckoo (*Coccyzus americanus occidentalis*), willow flycatcher (*Empidonax traillii*), least Bell's vireo (*Vireo bellii pusillus*), and the California condor (*Gymnogyps californianus*).

Native mammal diversity within the SEA is considerable. These likely include bats, rodents, squirrels, rabbits, moles, weasels, American badger (*Taxidea taxus*), skunks, raccoon (*Procyon lotor*), gray fox (*Urocyon cinereoargenteus*), bobcat (*Lynx rufus*), coyote (*Canis latrans*), mountain lion (*Puma concolor*), and mule deer (*Odocoileus hemionus*).

Wildlife Movement

The SEA provides riparian corridors, which serve as linkages between the Pacific coastline, coast ranges, interior ranges, the high desert and southern Sierras (via the Tehachapi Range). Animals move through the Santa Felicia watershed along and within the riparian systems between Piru Lake in Ventura County and the San Gabriel Mountain range and beyond. The tributary drainages in this SEA appear fully intact and open and support regional movement by many wildlife species. Most of the SEA was designated as an important wildlife movement linkage—Sierra Madre-Castaic Connection—which was outlined by the South Coast Wildlands study of linkages (Penrod, *et al*. 2005).

Sensitive Biological Resources

Sensitive biological resources are habitats or individual species that have special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, or otherwise rare. This is due to the species' declining or limited population sizes, which usually results from habitat loss. Watch lists of such resources are maintained by the California Department of Fish and Game (CDFG), the United States Fish and Wildlife Service (USFWS), and special groups, such

as the California Native Plant Society (CNPS). The following sections indicate the habitats as well as plant and animal species present, or potentially present within the SEA, which have been accorded special recognition. When species are federally-listed as endangered or threatened, they often have federally-designated, geographically-specific "critical habitat areas." Critical habitat areas, after extensive study by experts, are judged to be essential to conservation and maintenance of the species.

Sensitive Plan Communities and Habitats

The SEA supports several habitat types considered sensitive by resource agencies. These are inventoried by California Department of Fish and Game (CDFG) in the California Natural Diversity Database (CNDDB) [2011]. The CNDDB includes state and federally-listed endangered, threatened, and rare vascular plants, as well as several sensitive vertebrate species. These communities include chamise-white sage chaparral, holly leaf cherry chaparral, California brittle bush scrub, narrowleaf goldenbush scrub, scale broom scrub, white sage scrub, California sycamore woodland, giant wild rye grassland, nodding needle grass grassland, foothill needle grass grassland, and purple needle grass grassland, which occur throughout the SEA.

Sensitive Plant Species

The following special-status plant taxa have been reported or have the potential to occur within the SEA, based on known habitat requirements and geographic range information:

- Braunton's milk-vetch (*Astragalus brauntonii*) FE, RPR 1B.1
- Nevin's barberry (*Berberis nevinii*) FE, SE, RPR 1B.1
- Round-leaved filaree (*California macrophylla*) RPR 1B.1
- Peirson's morning-glory (*Calystegia peirsonii*) RPR 4.2
- San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*) FC, SE, RPR 1B.1
- Slender-horned spineflower (*Dodecahema leptoceras*) FE, SE, RPR 1B.1
- Palmer's grapplinghook (*Harpagonella palmeri*) RPR 4.2
- Newhall sunflower (*Helianthus inexpectatus*) RPR 1B.1
- Los Angeles sunflower (*Helianthus nuttallii* ssp. *parishii*) RPR 1A
- Davidson's bushmallow (*Malacothamnus davidsonii*) RPR 1B.2
- Ojai navarretia (*Navarretia ojaiensis*) RPR 1B.1
- White rabbit-tobacco (*Pseudognaphalium leucocephalum*) RPR 2.2
- Chaparral ragwort (*Senecio aphanactis*) RPR 2.2
- Greata's aster (*Symphyotrichum greatae*) RPR 1B.3
- Slender mariposa lily (*Calochortus clavatus* var. *gracilis*) RPR 1B.2
- Late-flowered mariposa lily (*Calochortus fimbriatus*) RPR 1B.2
- Plummer's mariposa lily (*Calochortus plummerae*) RPR 1B.2
- California Orcutt grass (*Orcuttia californica*) RPR FE, SE, 1B.1

Sensitive Animal Species

The following vertebrate species are state and/or federally-listed as endangered or threatened, and are known to have occurred within the SEA or have potential to occur in the SEA:

- Riverside fairy shrimp (*Streptocephalus woottoni*) FE
- Cuckoo wasp [no common name] (*Ceratochrysis longimala*) CDFG Special Animals List
- Arroyo toad (*Anaxyrus californicus*) FE, SSC

- California red-legged frog (*Rana draytonii*) FT, SSC
- Western spadefoot (*Spea hammondii*) BLMS, SSC
- Coastal whiptail (*Aspidoscelis tigris stejnegeri*) CDFG Special Animals List
- Western pond turtle (*Emys marmorata*) BLMS, FSS, SSC
- Coast horned lizard (*Phrynosoma blainvillii*) BLMS, FSS, SSC
- Coast patch-nosed snake (*Salvadora hexalepis virgultea*) SSC
- Two-striped garter snake (*Thamnophis hammondii*) BLMS, FSS, SSC
- Cooper's hawk (*Accipiter cooperii*) CDFG Watch List
- Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*) CDFG Watch List
- Grasshopper sparrow (*Ammodramus savannarum*) CDFG Special Animals List
- Bell's sage sparrow (*Amphispiza belli belli*) BCC, CDFG Watch List
- Burrowing owl (*Athene cunicularia*) BCC, BLMS, SSC
- Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) FC, BCC, FSS, SE
- Yellow warbler (*Dendroica petechia brewsteri*) SSC
- White-tailed kite (*Elanus leucurus*) CDFG Fully Protected
- California horned lark (*Eremophila alpestris actia*) CDFG Watch List, LAA
- Prairie falcon (*Falco mexicanus*) BCC, CDFG Watch List, LAA
- California condor (*Gymnogyps californianus*) FE, SE, CDF, CDFG Fully Protected, USBC, AWL, ABC
- Yellow-breasted chat (*Icteria virens*) SSC
- Loggerhead shrike (*Lanius ludovicianus*) BCC, SSC, LAA
- Coastal California gnatcatcher (*Polioptila californica californica*) FT, SSC, USBC, AWL, ABC
- Least Bell's vireo (*Vireo bellii pusillus*) FE, BCC, SE, USBC, AWL, ABC
- Pallid bat (*Antrozous pallidus*) FSS, BLMS, SSC, WBWG High
- Spotted bat (*Euderma maculatum*) BLMS, SSC, WBWG High
- Western mastiff bat (*Eumops perotis californicus*) BLMS, SSC, WBWG High
- San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) SSC
- California leaf-nosed bat (*Macrotus californicus*) FSS, SSC, WBWG High
- San Diego desert woodrat (*Neotoma lepida intermedia*) SSC
- American badger (*Taxidea taxus*) SSC

Ecological Transition Areas (ETAs)

There are no ETAs designated within this SEA.

The SEA meets several SEA designation criteria and supports many regional biological values. Each criterion and how it is met described below.

CRITERIA ANALYSIS OF THE SANTA FELICIA SEA

Criterion		Status	Justification
A)	The habitat of core populations of endangered or threatened plant or animal species.	Not Met	The SEA does not include known core habitat.

Criterion		Status	Justification
B)	On a regional basis, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	The natural mountainous terrain and vegetation habitats of the SEA, which is a coastal drainage, have been diminished elsewhere within Southern California through development. The SEA encompasses a fine example of vegetation that has not been impacted very much by development.
C)	Within the County, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	This is a somewhat remote area where natural flora and natural bottoms remain in the canyons, invasive predators are nonexistent, and human intrusion is minimal, which is a rare habitat in the County.
D)	Habitat that at some point in the life cycle of a species or group of species, serves as concentrated breeding, feeding, resting, or migrating grounds and is limited in availability either regionally or in the County.	Met	The SEA encompasses important tributaries (Santa Felicia Canyon and Devil Canyon) of Piru Creek. Piru Creek is the major tributary of the Santa Clara River. Nearly all of the drainages within the SEA are natural with sensitive habitats of all kinds of riparian forest. These drainages are all migratory corridors for both plants and animals that connect the San Gabriel Mountains with the Santa Clara River and the coast, the Sierra Madre-Castaic Connection.
E)	Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community.	Not Met	The Santa Felicia watershed is not known as a physical/geographical extreme habitat.
F)	Areas that would provide for the preservation of relatively undisturbed examples of the original natural biotic communities in the County.	Met	The Santa Felicia watershed is an excellent example of the inland watercourses and their vegetation on the coastal side of the Transverse Ranges. It is largely undisturbed, and a number of the drainages are still perennial.

In conclusion, the area is an SEA because it contains: B-C) biotic communities, vegetative associations, and habitat of plant and animal species that are restricted in distribution in the County and regionally; D) concentrated breeding, feeding, resting, and migrating grounds, which are limited in availability in the County; and F) areas that provide for the preservation of relatively undisturbed examples of original natural biotic communities in the County.

22. Santa Monica Mountains SEA

Location

General

The Santa Monica Mountains Significant Ecological Area (SEA) is located within the Santa Monica Mountains in a mostly unincorporated area of the County. Much of the area is in the Santa Monica Mountains National Recreation Area, but is privately owned. Many of the federal lands under the jurisdiction of the National Park Service (NPS) are included in the SEA designation. Many of the

state parklands, notably Malibu Creek State Park and Topanga State Park, are also included in the SEA. The SEA includes nearly all of the canyons and ridges from the Ventura-Los Angeles County line, and east to Sullivan Canyon, which is near the communities of Pacific Palisades Brentwood to the south, and Encino to the north. From south to north, the SEA extends from the Pacific Ocean shoreline or urban-wildland interface of Malibu, through the unincorporated area of the Santa Monica Mountains proper, to the northern edge of the SEA extending along the undeveloped southern edge of the San Fernando Valley or irregularly along the Ventura-Los Angeles County line. It should be stated that this SEA recognizes the rare habitat of a small regional mountain range with a high diversity of topography and moisture regimes, and with vegetation adapted to a Mediterranean climate, which is globally rare, existing elsewhere only along western portions of continents at 30-40° latitude[1]. Although the habitats may seem common within the Santa Monica Mountains, in terms of limited indigenous global ranges of the constituent species, their special adaptations to climate, the relatively intact character of the habitats, and the plant assemblage of the Santa Monica Mountains are unique. Development within the SEA that extends the nearby expansive urban development of the Los Angeles Basin and San Fernando Valley needs to be carefully considered to preserve these special resources.

The SEA is located at least partially in each of the following United States Geological Survey (USGS) 7.5' California Quadrangles: Thousand Oaks, Calabasas, Canoga Park, Triunfo Pass, Point Dume, Malibu, and Topanga.

General Boundary and Resources Description

Within the SEA boundary, there are a number of areas that are not a part of the SEA due to dense development. For example, La Sierra, Malibu Lake, and most of the City of Malibu have been excluded.

The majority of the SEA lies within the unincorporated area of the County. Other jurisdictions include the City of Malibu, the City of Los Angeles, City of Calabasas, the City of Agoura Hills, the City of Hidden Hills, and the City of Westlake Village.

From the Ventura-Los Angeles County line to the vicinity of Topanga Beach, the southern boundary of the SEA irregularly contacts the boundary of the Malibu Coastline SEA, which extends offshore about a 0.8 mile to capture the kelp beds and rich natural marine communities of and off the coastline of the Santa Monica Mountains. The sandy beaches along this SEA are the least disturbed beaches of the County, some of them completely natural. This is a remnant of the typical rock and sand shoreline that once occurred along the coast of Southern California. From Mugu Lagoon to Latigo Point (the County portion starting at the Ventura-Los Angeles County line and Leo Carillo State Beach), this is an ASBS (Area of Special Biological Significance), which is a marine area designated by the State Water Resources Control Board as having exceptionally good water quality and natural community features. Populated and disturbed areas along the shore are not included in

[1] Six regions on Earth have a coastal climate where ocean currents mediate an equable climate yet cause most precipitation to occur outside the summer period of most intense sunlight and most vegetative growth for many plants. These are California, the Mediterranean Basin, portions of South Australia, South Africa, and Chile

the SEA.

Beginning at the intersection of the Ventura-Los Angeles County line and State Route-1, the southern area of the SEA includes all the terrestrial area of Leo Carrillo State Beach (a state park that has much beautiful upland acreage of grasslands, coastal chaparral, and an excellent riparian area of sycamore-oak forest along the Arroyo Sequit). The Arroyo Sequit from the coast to the junction of West and East forks and about a 0.5 mile of the West Fork are federally-designated critical habitat for the southern steelhead (*Oncorhynchus mykiss irideus*), which is a salmon that runs upstream for breeding, but spends most of its life in the ocean. The young fish, however, spend the first year of life in fresh water.

At the eastern boundary of Leo Carillo State Beach, an unnamed canyon is excluded from the SEA, but San Nicolas Canyon with its riparian woodland is included all the way to the shore. Urban areas to the east of San Nicolas Canyon are also excluded. The Los Alisos and Lechuza Canyon immediate drainages are included up to the highway. From Lechuza Canyon, the excluded area extends north to the southern border of Charmlee Natural Area (a County park supporting grasslands and chaparral). Much of the Encinal Canyon drainage is included in the SEA north of State Route-1, and the Steep Hill Canyon drainage is included north of State Route-1. Trancas Canyon is densely settled in the area near the coastline; only the steeper, natural section is included in the SEA. To the east, a large excluded area encompasses the dense habitation of the Malibu Riviera.

The SEA includes the riparian forest of Zuma Canyon as it exits onto the coastal plain, with a small sub-watershed designated critical habitat for the federally-endangered Braunton's milkvetch (*Astragalus brauntonii*). This rare plant is narrowly endemic to four mountain ranges of Southern California that have a particular marine-originated rock stratum of interbedded carbonates and sandstones. The SEA also includes portions of the riparian forest of Ramirez Canyon, where it has not been impacted by development in the Malibu Riviera. The natural area of Escondido Canyon and its 150 feet waterfall is included. Latigo Canyon is included north of State Route-1, where chaparral intergrades with walnut and oak woodlands along the drainages and north-facing slopes. East of Latigo Canyon, the boundary of the excluded area follows the ridges immediately north of State Route-1 to join the highway west of Solstice Canyon. Solstice Canyon and its County Park are included in the SEA. These support grasslands, chaparral, and a fine riparian area of sycamore-oak forest along Solstice Canyon. Puerco and Marie Canyon drainages are included north of State Route-1.

In the vicinity of Winter Canyon, the boundary follows Malibu Canyon Road to exclude the central community area of Malibu in another large island. A finger of the SEA extends through central Malibu along Malibu Creek in the area of Malibu Creek State Park and Malibu Lagoon State Beach to include the Creek and Malibu Lagoon south of Pacific Coast Highway. This is one of the points of contact between the Santa Monica Mountains SEA and the Malibu Coastline SEA. Malibu Creek from the shore to its major bend to the west in Malibu Canyon is federally-designated critical habitat for the southern steelhead. Coincident with the steelhead critical habitat along Malibu Creek and all brackish portions of the Malibu Lagoon are designated critical habitat for the endangered tidewater goby (*Eucyclogobius newberryi*). This little two-inch fish was once common in brackish water of coastal lagoons of streams the length of the State of California. This pristine habitat is disappearing

(the fish is apparently gone from San Francisco Bay), and any location where the tidewater goby is still found is a unique place.

The Malibu Lagoon is the only remaining intact coastal lagoon in the County[2], and still has its perennial stream to maintain the brackish conditions that are essential to the diverse and unique group of species of coastal lagoons. The federally-endangered southern steelhead passes through this lagoon on its upstream and downstream spawning runs, and its young fish (smolts) may spend some time in the lagoon before entering their oceanic habitat. The passage is critical habitat for the steelhead, as well as for the endangered tidewater goby (*Eucyclogobius newberryi*). This lagoon has one of the County's three [3] remaining saltmarshes, with dominant species of pickleweeds (*Arthrocnemum subterminale* and *Salicornia pacifica*). The Malibu Lagoon supports a good representation of coastal strand community (now groomed off many of the recreational beaches), is a resting stop on the Pacific Flyway (over 200 species of birds reported), and has many resident avian species. From fall to spring, it supports a flock of the federally-threatened western snowy plover (*Charadrius alexandrinus nivosus*), and there are recent indications that some may over-summer to breed (after a hiatus in breeding of many decades, Ryan Ecological Consulting, 2010). The pickleweed is valuable non-breeding habitat for the state-endangered Belding's savannah sparrow (*Passerculus sandwichensis beldingi*).

East of central Malibu, the excluded area borders primarily follow the less-inhabited ridges that border Carbon and Las Flores canyons and about a 0.5 mile north of State Route-1. East of Las Flores Canyon, the border of the excluded area follows a transmission line to skirt an old oil field. At the western ridge of Piedra Gorda, the SEA boundary follows the ridgeline southeast to State Route-1. From Piedra Gorda, the SEA boundary closely tracks State Route-1 along the substantial sea cliffs, avoiding two small developed areas north of the highway near the mouths of Pena and Tuna canyons. The SEA includes all of the meandering Topanga Canyon Creek at Topanga Beach. Upstream nearly to the community of Fernwood, Topanga Canyon is federally-designated critical habitat for the southern steelhead. Near the shore in Topanga Canyon Creek is critical habitat for the tidewater goby. This is the eastern point of contact between the Malibu Coastline SEA and SEA. It is also at this point where the shoreline where there are no more excluded areas.

The SEA includes Parker Mesa, north of State Route-1, and is coterminous with the boundary for the City of Los Angeles towards the north. About one mile north of the coast, the boundary extends to the east, contouring around the ridgelines that border the populated areas of Santa Ynez, Pulga, and Temescal canyons, with some residential areas on the ridges excluded from the SEA. These three canyons contain riparian oak and sycamore forests, which are a good variety of canyon habitats that include rocky outcrops and small waterfalls, are preserved in their upper reaches by inclusion in the Topanga State Park. The upstream areas of Santa Ynez, Pulga, and Temescal canyons that are uphill from the community of Palisades Highlands include much of federally-designated critical habitat for the Braunton's milkvetch. The boundary skirts Will Rogers State Park, but includes much of the unpopulated part of Rustic Canyon.

[2] Ballona Creek lagoon is also in Los Angeles County, but exists in a disturbed condition.

[3] The three areas with salt marsh in Los Angeles County are Alamitos Bay, Ballona Lagoon, and Malibu Lagoon.

At Rustic Canyon, the boundary follows the eastern ridge to the north. Tracing the edge of development along the eastern slope of the canyon, the boundary continues north and eventually crosses over the ridgeline and into the undeveloped part of Sullivan Canyon. The boundary then follows the eastern slope of Sullivan Canyon and continues north along the ridgeline between Sullivan Canyon and Mandeville Canyon. After crossing the main ridge of the coastal zone and Mulholland Drive near San Vicente Mountain, the SEA boundary reaches and includes the sub-watershed of Encino Reservoir.

On the west side of Encino Reservoir, the SEA boundary turns west and follows the edge of development on the northern slopes of the Santa Monica Mountains that form the southern border of the San Fernando Valley. Some development is excluded on the east side of Topanga Canyon and the Calabasas Highlands area. The upper reaches of Topanga Canyon are included, and the SEA crosses the ridge to include the upper slopes of a natural drainage that is opposite to Topanga Canyon on the San Fernando Valley side.

West of Calabasas Park, the SEA boundary extends northeast and contours along the upper slopes of McCoy Canyon to include a finger of SEA on the north ridge of McCoy Canyon, which is part of state park land. On the west side of Calabasas Park and Hidden Hills, the boundary crosses State Route-101 along the western edge of development in Hidden Hills north to the County line. The undeveloped portion of Gates Canyon within the Simi Hills and its watershed is included north to the Ventura-Los Angeles County line, excluding a ridgetop island and developed portions of the City of Calabasas. A narrow finger of connection joins the portion of the SEA east of the City of Calabasas to the area west of the City, north of State Route-101 along a tributary of Las Virgenes Creek. Las Virgenes is an important tributary of Malibu Creek, and although this area is not in the coastal zone, it represents a portion of the upper coastal watershed. Further to the west, the boundary extends north again to encompass the open space from Las Virgenes Road along the Ventura-Los Angeles County line to the edge of development within the City of Agoura Hills. Within this portion of the SEA, Cheseboro Canyon contains fine natural, undeveloped sections of canyon just east of the City of Agoura Hills that are administered by both the NPS and the State Park system. The SEA includes all of undeveloped Cheseboro Canyon and the undeveloped western ridge of Cheseboro's important tributary, Palo Comado Canyon. This is the western terminus of the SEA that lies north of State Route-101.

An important feature of this area is a small tributary of Las Virgenes Creek (and ultimately Malibu Creek) named Liberty Canyon. The underpass of State Route-101 at Liberty Canyon Road along the drainage conveys relatively less vehicular traffic than other freeway crossings within several miles, and is one of the few active wildlife passage areas along the entire extent of State Route-101 through the Santa Monica Mountains. All other watercourse and street crossings of State Route-101 are very constrained or else entirely impassible for wildlife. There are widely documented concerns for the consequences of genetic isolation for the small band of mountain lions (*Puma concolor*) of the Santa Monica Mountains. Mountain lions that are known to use this area of the SEA to transit back and forth between the Santa Monica Mountains and the greater lion populations of the Simi Hills and north. The area north of the Liberty Canyon underpass is natural chaparral, watercourses, and grassland administered by the Santa Monica Mountains Conservancy. South of State Route-101, development is present with a very narrow corridor of natural habitat that includes valley oak (*Quercus lobata*) along the creek of Liberty Canyon.

A small island of developed area south of State Route-101 and along Liberty Canyon is excluded from the SEA. From the Liberty Canyon underpass south of State Route-101 the SEA boundary follows the north-facing side of an unnamed ridge at the southern end of the City of Agoura Hills

towards the northern slopes of Ladyface Mountain. This is a chaparral-dominated area with numerous canyons and ridges supporting federally-threatened Agoura Hills dudleya (*Dudleya cymosa* ssp. *agourensis*), and one of the nine critical habitat areas in the County of Los Angeles and in the SEA for the state- and federally-endangered Lyon's pentachaeta (*Pentachaeta lyonii*), as well as other uncommon and rare plants, such as Fish's milkwort (*Polygala cornuta* var. *fishiae*), Sonoran maiden fern (*Thelypteris puberula* var. *sonorensis*), and the southern-most known occurrence of the California juniper (*Juniperus californica*) within the County. The SEA northern boundary crosses Kanan Dume Road in the area where Lindero Canyon formerly joined Medea Creek and continues its contour along the north-facing ridge of Ladyface Mountain, which also supports Agoura Hills dudleya, Lyon's pentachaeta, Ojai navarretia (*Navarretia ojaiensis*), and other rare and sensitive plants on its chaparral-covered slopes. A small area with development and fill along the south side of Kanan Dume Road has been excluded from the SEA.

The SEA boundary veers to the southwest to avoid the developed areas of Westlake Village, but includes Las Virgenes Reservoir in the SEA and three more of the critical habitat areas for the Lyon's pentachaeta. A finger includes an undeveloped section of Triunfo Canyon. A short distance southwest of Las Virgenes Reservoir, the boundary crosses Decker Canyon road and extends west to the Ventura-Los Angeles County line, which is another area of critical habitat for the Lyon's pentachaeta. Most of the critical habitat areas for Lyon's pentachaeta in the County are covered by the North Area Plan regulations for the Santa Monica Mountains, but some critical habitat areas also occur in the coastal zone. The boundary then follows the Ventura-Los Angeles County line to the southwest all the way to the coast and State Route-1 where the northern and the southern boundary join at Leo Carillo State Beach.

Vegetation

The SEA includes most of the Santa Monica Mountains range. This east-west trending range is geologically complex, and because of its unique geological history and rugged topography with many microhabitats, it has a flora that is unlike any other place in the County. There are about 900 species of vascular plants—an exceptionally diverse flora for an area of its size. (Raven et al., 1986) The County portion of the Santa Monica Mountains are characterized by steep, rugged terrain of mountain slopes and canyons, with elevations ranging from sea level to over 2,800 feet above mean sea level (MSL) at Castro Peak. The Santa Monica Mountains are bounded by the Pacific Ocean to the south, the Oxnard Plain to the west, the Los Angeles Basin to the east, and the San Fernando Valley and Simi Hills on the north. The SEA includes numerous minor and major canyons. Named canyons include Trancas Canyon, Zuma Canyon, Ramirez Canyon, Escondido Canyon, Solstice Canyon, Corral Canyon, Malibu Canyon, Carbon Canyon, Los Flores Canyon, Tuna Canyon, Topanga Canyon, Santa Ynez Canyon, Temescal Canyon, Sullivan Canyon, Lobo Canyon, Triunfo Canyon, Las Virgenes Canyon, Liberty Canyon, Palo Comado Canyon, and Stokes Canyon. Major drainages within the SEA include the Arroyo Sequit, Zuma Canyon Creek, Malibu Creek, Los Flores Canyon Creek, Topanga Canyon Creek, Triunfo Creek, Las Virgenes Creek, and Medea Creek.

These drainages all support well-developed riparian communities, which are a type of sensitive and rare community that is essential to the biodiversity of the County. Natural watercourses provide water, food and cover for a variety of animal species and provide an ecological link between the upland and marine environments. Additionally, they contribute to regional and continental connectivity by providing shelter and forage for many migratory bird species, which maintains biodiversity over several spatial scales. Many riparian corridors within the SEA contain perennial sections that are among the last remaining major drainages in the Santa Monica Mountains in an undeveloped condition. In the canyon bottoms are riparian forests, which are sensitive habitats

because of their rarity and loss to channelization and development. Most riparian forests in the Santa Monica Mountains are of western sycamore (*Platanus racemosa*) and coast live oak (*Quercus agrifolia* var. *agrifolia*), Fremont and black cottonwood (*Populus fremontii* ssp. *fremontii* and *P. trichocarpa*) and leatherleaf ash (*Fraxinus velutina*). The upstream and upper canyon ridges are dry and support coastal sage scrub, which blends with the more mesic chaparral of the lower slopes. The rich riparian community of plants supports abundant wildlife populations that include amphibians and birds dependent on surface moisture, and mule deer and mountain lion, the latter of which is an indicator of large-scale ecosystem health.

The endangered Lyon's pentachaeta (*Pentachaeta lyonii*) prefers compact, undisturbed soil on the upper coastal slope areas of many of these streams. Because such areas are often flat and may be cleared of other plants, this puts the plant in the path of development. This "daisy" is a narrow endemic of Los Angeles and Ventura counties, and has recently lost about half of its known population. Most of the critical habitat for Lyon's pentachaeta occurs in the northern area of the SEA. At the south end of the artificial Malibu Lake on Triunfo Creek, in the rolling slope area of Medea Creek that is south of the City of Agoura Hills, near the confluences of Lobo and Triunfo creeks and La Sierra Canyon and Triunfo Creek, on the east and west ridgelines of Las Virgenes Reservoir extending to the drainage junction with Triunfo Creek along Decker Road to the ridgeline area of Mulholland Highway, and in the area of Saddle Rock on the Mulholland Highway. These are about half of the areas of critical habitat named for the plant. The remainder are in nearby Ventura County extending between the Santa Susana Mountains in the north, and the Santa Monica Mountains in this area.

Because of the undisturbed conditions, with riparian forests filtering and cooling the waters, Arroyo Sequit, Malibu Creek, and Topanga Canyon still support extremely rare spawning runs of the federally-endangered southern steelhead. Historically, steelhead was known from Solstice and Zuma canyons as well, and it is likely that all the major drainages, which once had perennial water and extended to the shore in the rainy season supported this species.

The majority of the SEA consists of undisturbed open space with scattered rural residential communities and a few high-density residential developments. Open space within the SEA is mostly vegetated with dense stands of chaparral. Other types of vegetation, such as woodlands and grasslands, occur in smaller portions scattered throughout the SEA on moist or north facing slopes and canyon bottoms. Lesser amounts of coastal sage scrub are also present, primarily on low-elevation, dry south-facing slopes, ridgelines, or as early successional communities in previously disturbed areas.

Topanga Canyon State Park and Malibu Creek State Park have pristine areas of all the characteristic habitats of the Santa Monica Mountains: chaparral, oak woodland, grasslands, and coastal sage scrub. Some of the principally-named canyons of Malibu Creek State Park with diverse riparian habitat on north-facing slopes include Fern, Mendenhall, and Lost Cabin canyons. The headwaters of the major drainages of the Santa Monica Mountains often lie outside park jurisdictions, but most retain intact natural communities that contribute to a clean water source. Many of these with scattered development are included in the SEA.

The perennial stream of Cold Creek lies in the center of a relatively undisturbed natural sandstone basin that has a diversity of flora reflecting the extreme range in physical conditions of the watershed, from cool wet streambed to hot dry rocky ridges, making the area a remarkable concentration of native vegetative diversity. Pristine stands of chaparral, southern oak woodland,

coastal sage scrub, and riparian woodland all support the unusual species found in the streamside areas such as stream orchid (*Epipactis gigantea*), scarlet monkeyflower (*Mimulus cardinalis*), ocellated Humboldt lily (*Lilium humboldtii* var. *ocellatum*), big-leaf maple (*Acer macrophyllum*), and redshank (*Adenostoma sparsifolium*). Redshank has a widely disjunct distribution, with scattered populations from San Diego to Santa Barbara County. Redshank is common in the southern portion of the Cold Creek watershed, but this population and another within Decker and Encinal canyons represent two of the few localities of this species within the County. Flowering ash (*Fraxinus dipetala*), usually a diminutive tree of 15-20 feet, can grow to 40 feet here. This diversity supports good populations of stream animals: turtles, lizards, snakes, and amphibians. There are a number of private reserves and study facilities in the watershed, including a university field station. Pierce College has a collection of the plants in its herbarium and also an insect collection for the Cold Creek area.

Where drainage conditions result in moist sandstone and micro-slumping of developing soil, this creates a variety of habitats in close proximity to one another. There can be very unusual associations of species—xerophytic chaparral yucca (*Yucca whipplei*) and lance-leaf live-forever next to a diverse array of moisture-dependent ferns, mosses, liverworts, and hornworts. A north-east draining tributary of Las Flores called “Hepatic Gulch,” with a cirrhotic sandstone rock formation, has an unusual assemblage of uncommon plants and a good diversity of wildflowers. Adjacent to seasonally mesic moss-dominated areas supporting California saxifrage (*Micranthes californica*) are silver birds-foot trefoil (*Acmispon argophyllus* var. *argophyllus*), Wright’s buckwheat (*Eriogonum wrightii* var. *membranaceum*), wooly paintbrush (*Castilleja foliolosa*), redskin onion (*Allium haematochiton*), and mariposa lilies (*Calochortus* spp).

Tuna and Pena canyons are the last coast drainages of the central Santa Monica Mountains that have not had development in the watershed or between the canyon mouth and the coast. Tuna Canyon has a perennial stream. Due to the coastal exposure, the riparian woodlands in the canyon bottoms are in excellent health and support healthy wildlife populations. The extensive coast live oak woodland in the riparian area is known to support over 300 species of various plants and animals. Animals utilize the stream as a water source and forage in the chaparral and coastal sage scrub on adjacent hillsides. These areas are important to migratory song bird and waterfowl species.

Temescal, Rustic, and Sullivan canyons are excellent representatives of the dry chaparral and coastal sage scrub plant communities found in the interior canyons of the Santa Monica Mountains. The canyons are less steep than others and their open form favors vegetation with less understory growth, which provides great examples of lush intermittent stream courses. They each have hiking trails and a drier canyon flora, even within stream beds. To the east is the dense urban habitat of the City of Los Angeles. Wildlife use these canyons as linkage and movement corridors, which connect the coastal populations and those of the interior valleys.

Encino Reservoir has the best undisturbed stand of inland chaparral, coastal sage scrub and streamside vegetation remaining on the inland slope of the Santa Monica Mountains. Inland chaparral develops where the moist coastal air rarely intrudes, and its characteristic species composition is different from similar communities on the coastal side of the mountains. In addition, the freshwater habitat is present along the shores of the Reservoir, so that the overlap of habitats provides a greater number of resources than each habitat would have alone.

The sections of Las Virgenes Canyon and Medea Creek within the SEA support exceptionally diverse wildflower populations, and if rainfall patterns are propitious, wildflower fields may cover large sections of the Canyon slopes. The surrounding canyon slopes support lush growth of coastal

sage scrub and other chaparral. The Canyon itself has some floral elements that are characteristic of interior or even desert conditions: the California juniper (*Juniperus californica*) is found only in the Santa Monica Mountains, and narrowleaf goldenbush (*Ericameria linearifolia*) is another interior plant that is common in this canyon and rare elsewhere in the SEA. A variety of live-forever (*Dudleya* spp.), species are present on the canyon walls and rock outcrops, including chalk lettuce (*D. farinosa*), lance-leaf live-forever (*D. lanceolata*), and federally-threatened Agoura Hills dudleya (*D. cymosa* ssp. *agourensis*). One of the critical habitat areas for Lyon's pentachaeta is in this section of the SEA.

South of Liberty Canyon is La Sierra Canyon, which is an important tributary of Triunfo Creek, with exceptional floral biodiversity. La Sierra Canyon has a flora that includes elements found in only a few known places in the Santa Monica Mountains. Some of these are the rare state and federally-endangered Santa Monica Mountains live-forever (*Dudleya cymosa* ssp. *marcescens*); the creek dogwood (*Cornus glabrata,* known only from one other site in the Santa Monicas); the giant chain fern (*Woodwardia fimbriata*, which is exceptionally large in this locality); ocellated Humboldt lily (*Lilium humboldtii* ssp. *ocellatum*, which is also very tall in this locality), and dense stands of big-leaf maple (*Acer macrophyllum*, which is one of the uncommon, large-leaved, deciduous trees of Southern California that is an obligate of moist stream habitat); dense stands of coast live oak (*Quercus agrifolia* var. *agrifolia*, protected by County ordinance and an oak woodland management plan); and very rare anywhere in the County, dense streamside stands of California bay (*Umbellularia californica*).

Palo Comado Canyon is one of the remaining areas with the emblematic California habitat of mixed southern oak woodland and savannah on rolling grassy hills. This type of habitat was one of the first to disappear with of the arrival of European settlers and the use of water diversions for the irrigation of crops. Agriculture made way for dense urban development, and very little of the oak savannah that was typical of Southern California ranchos remain. What was left was heavily impacted by cattle grazing. Along with facilitating non-native grasses that have displaced the native fields of wildflowers, cattle often consume the oak seedlings that would otherwise have replaced oaks that succumb to old age, which converts the woodlands into grasslands. Trees in Palo Comado Canyon support abundant populations of raptors, woodpeckers, western gray squirrels, quail and other savannah species. The ridgelines around the canyons support coastal sage scrub and other kinds of chaparral. The savannah, canyons, and ridgetop chaparral combine to support the connectivity that wildlife and plant populations need to sustain themselves, and this area has been named in a number of studies as very important to the continued genetic exchange and population replenishment of the County and other parts of Southern California.

Vegetation within the SEA is comprised of a large variety of community types. The diversity of the communities reflects the topography of the Santa Monica Mountains. The southern slopes are strongly affected by moist marine weather, while the northern slopes are influenced by drier inland weather conditions. In addition, the steepness of many slopes causes sharp differences in vegetation on either side of the ridges. All plant species observed or recorded in previous documentation within the SEA are indicated in the *Comprehensive Floral & Faunal Compendium* of the *Los Angeles County SEAs*. Sensitive plant species and plant communities occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources section.

Descriptions and general locations of the each plant community present within the SEA, including chaparral, redshank chaparral, coastal sage scrub, non-native grassland, native grassland, walnut woodland, valley oak woodland, coast live oak woodland, southern willow scrub, cottonwood-willow riparian forest, oak riparian forest, salt marsh, sycamore-alder woodland, freshwater marsh, and

disturbed communities are presented below.

Chaparral: Consists of broad-leafed or needle-leafed, sclerophyllous (hard-leafed), medium height to tall shrubs that form a dense cover on steep slopes below 5,000 feet in Southern California. Dominant species found within this community include ceanothus, toyon, scrub oak, sugar bush, holly-leaved cherry, holly leaf redberry, chamise, laurel sumac, and manzanita. This plant community occurs throughout the SEA and occupies most of the higher elevations and steep slopes.

Corresponding MCV communities:

- *Adenostoma fasciculatum* (chamise chaparral) Shrubland Alliance
- *Adenostoma fasciculatum-Salvia apiana* (chamise-white sage chaparral) Shrubland Alliance
- *Arctostaphylos glandulosa* (Eastwood's manzanita chaparral) Shrubland Alliance
- *Arctostaphylos glauca* (bigberry manzanita chaparral) Shrubland Alliance
- *Ceanothus megacarpus* (big pod ceanothus chaparral) Shrubland Alliance
- *Ceanothus spinosus* (greenbark ceanothus chaparral) Shrubland Alliance
- *Ceanothus oliganthus* (hairy leaf ceanothus chaparral) Shrubland Alliance
- *Prunus ilicifolia* (holly leaf cherry chaparral) Shrubland Alliance
- *Rhus ovata* (sugarbush chaparral) Shrubland Alliance

Redshank Chaparral: A very similar community to the chaparral described above, with the exception that red shank is the dominant species with lesser amounts of other chaparral species. This community is less common. It occurs in small patches, on steep slopes throughout the SEA.

Corresponding MCV communities:

- *Adenostoma sparsifolium* (redshank chaparral) Shrubland Alliance

Coastal Sage Scrub: Consists of drought-deciduous, low, soft-leafed shrubs and herbs on gentle to steep slopes under 1,500 feet in elevation. This community is dominated by California sagebrush, California buckwheat, black sage, purple sage, and California encelia. Coastal sage scrub is distributed throughout the SEA along dry ridgelines, slopes, and other areas previously disturbed by fire.

Corresponding MCV communities:

- *Artemisia californica* (California sagebrush scrub) Shrubland Alliance
- *Artemisia californica-Salvia mellifera* (California sagebrush-black sage scrub) Shrubland Alliance
- *Artemisia californica-Eriogonum fasciculatum* (California sagebrush-California buckwheat scrub) Shrubland Alliance
- *Encelia californica* (California brittle bush scrub) Shrubland Alliance
- *Dendromecon rigida* (bush poppy scrub) Shrubland Alliance
- *Diplacus aurantiacus* (bush monkeyflower scrub) Shrubland Alliance
- *Salvia apiana* (white sage scrub) Shrubland Alliance
- *Salvia leucophylla* (purple sage scrub) Shrubland Alliance
- *Salvia mellifera* (black sage scrub) Shrubland Alliance
- *Eriogonum cinereum* (ashy buckwheat scrub) Shrubland Alliance
- *Eriogonum fasciculatum* (California buckwheat scrub) Shrubland Alliance
- *Hazardia squarrosa* (sawtooth golden bush scrub) Shrubland Alliance

- *Isocoma menziesii* (Menzie's golden bush scrub) Shrubland Alliance
- *Lotus scoparius LotusAcmispon scoparius* ([*Acmispon glaber*] deer weed scrub) Shrubland Alliance
- *Lupinus albifrons* (silver bush lupine scrub) Shrubland Alliance
- *Malacothamnus fasciculatus* (bush mallow scrub) Shrubland Alliance

Native Grassland: Consists of at least 10 percent cover of native herbaceous plants (grasses and forbs) with the remaining coverage similar to non-native grasslands. Small patches of native grassland can be found scattered throughout the SEA, mostly in openings in coastal sage scrub and mixed with non-native grasslands.

Grassland communities consist of low, herbaceous vegetation that is dominated by grasses. Grasslands also harbor native forbs and bulbs, as well as naturalized annual forbs. Grasslands within the SEA include both non-native grasslands and native grasslands. Non-native grassland consists of dominant invasive annual grasses that are primarily of Mediterranean origin. Dominant species found within this community include wild oat, slender oat, red brome, ripgut brome, and herbs, such as black mustard and wild radish. Non-native grasslands are located in small to large patches throughout the SEA in previously disturbed areas, cattle pastures, valley bottoms, and along road sides.

Corresponding MCV communities:

- *Avena* (*barbata, fatua*) Semi-Natural Herbaceous Stands
- *Brassica* (*nigra*) and other mustards Semi-Natural Herbaceous Stands
- *Bromus* (*diandrus, hordeaceus*)-*Brachypodium distachyon* Semi-Natural Herbaceous Stands
- *Bromus rubens-Schismus* (*arabicus, barbatus* [*Bromus madritensis* ssp. *rubens*]) Semi-Natural Herbaceous Stands
- *Lolium perenne* ([*Festuca perennis*] perennial rye grass fields) Semi-Natural Herbaceous Stands

Coast Live Oak Woodland: Is dominated by coast live oak and has a poorly developed shrub layer, which may include toyon, currant, gooseberry, laurel sumac, elderberry, and mulefat. Some coast live oak woodlands in the area include scattered California walnut or valley oaks. This community occurs throughout the SEA, often along canyon bottoms and more mesic, north-facing slopes.

Corresponding MCV communities:

- *Quercus agrifolia* (coast live oak woodland) Woodland Alliance

Valley Oak Woodland: An open woodland community dominated by valley oak. The understory is a grassy savannah composed mostly of non-native grasses. Valley oak woodland occurs mostly on the north slope of the Santa Monica Mountains in shaded ravines and on north-facing slopes.

Corresponding MCV communities:

- *Quercus lobata* (valley oak woodland) Woodland Alliance

Walnut Woodland: An open woodland dominated by Southern California black walnut. Occurring on moist, fine-textured soils, the open tree canopy usually has a grassy understory. Other characteristic species include coast live oak, sugar bush, and skunk bush. This community occurs mostly on the north slope of the Santa Monica Mountains in shaded ravines and on north-facing slopes.

Corresponding MCV communities:

- *Juglans californica* (California walnut groves) Woodland Alliance

Southern Willow Scrub: A riparian community consisting of dense, broad-leafed, winter-deciduous riparian thickets occurring within and adjacent to watercourses. The dominant species of this community within the SEA are arroyo willow with lesser amounts of mulefat. This community occurs in segments along portions of several of the drainages as well as along the periphery of many of the ponds and lakes throughout the SEA.

Corresponding MCV communities:

- *Salix exigua* (sandbar willow thickets) Shrubland Alliance
- *Salix lasiolepis* (arroyo willow thickets) Shrubland Alliance

Cottonwood-Willow Riparian Forest: An open broad-leafed winter-deciduous riparian forest dominated by Fremont cottonwood, black cottonwood, black willow, and red willow. This community occurs in segments along of many of the drainages, ponds, and lakes throughout the SEA.

Corresponding MCV communities:

- *Populus fremontii* (California sycamore woodlands) Forest Alliance
- *Salix gooddingii* (black willow thickets) Woodland Alliance
- *Salix laevigata* (red willow thickets) Woodland Alliance
- *Populus trichocarpa* (black cottonwood forest) Forest Alliance

Sycamore-Alder Riparian Woodland: A tall, open, broad-leafed, winter-deciduous streamside woodland dominated by western sycamore and alder. These stands often form a closed canopy forest and even may appear as trees scattered in a shrubby thicket of sclerophyllous and deciduous species. This community is found infrequently within the SEA along the lower reaches of several major creeks.

Corresponding MCV communities:

- *Platanus racemosa* (California sycamore woodlands) Woodland Alliance
- *Alnus rhombifolia* (white alder groves) Forest Alliance

Oak Riparian Forest: An open woodland of dense evergreen sclerophyllous riparian woodland dominated by coast live oak. This type appears to be richer in herbs and poorer in understory shrubs than other riparian communities. This community occurs along many streams and canyon bottoms scattered throughout the SEA.

Corresponding MCV communities:

- *Quercus agrifolia* (coast live oak woodland) Woodland Alliance

Freshwater Marsh: Develops in areas of still or slow-moving permanent freshwater. This community is dominated by the perennial, emergent monocot cattails, which reach a height of four to five meters and often form a closed canopy. Bulrushes are dominant below the cattail canopy. Freshwater marsh is relatively uncommon. It occurs in small patches in natural or created sinks with water sources.

Corresponding MCV communities:

- *Phragmites australis* (common reed marshes) Herbaceous Alliance and Semi-Natural Stands
- *Lepidium latifolium* (perennial pepper weed patches) Semi-Natural Herbaceous Stands
- *Eleocharis macrostachya* (pale spike rush marshes) Herbaceous Alliance
- *Schoenoplectus californicus* (California bulrush marsh) Herbaceous Alliance
- *Typha* (*angustifolia, domingensis, latifolia*) (cattail marshes) Herbaceous Alliance
- *Sarcocornia pacifica* (*Salicornia depressa*) (pickleweed mats) Herbaceous Alliance

- *Juncus arcticus* (var. *balticus, mexicanus*) (Baltic and Mexican rush marshes) Herbaceous Alliance
- *Juncus effusus* (soft rush marshes) Herbaceous Alliance
- *Lemna* (*minor*) *and Relatives* (duckweed blooms) Provisional Herbaceous Alliance

Salt Marsh: Similar to the freshwater marsh described above, but with more salt-tolerant hydrophytes present. Species associated with this community include cattails, pickleweed, and saltgrass. Salt marsh is rare. Within the SEA it is known only from Malibu Lagoon and in the County, and only two other places.

Corresponding MCV communities:

- *Distichlis spicata* (salt grass flats) Herbaceous Alliance
- *Spartina foliosa* (California cordgrass marsh) Herbaceous Alliance
- *Arthrocnemum subterminale* (Parish's glasswort patches) Herbaceous Alliance
- *Atriplex lentiformis* (quailbush scrub) Shrubland Alliance

Rock Outcrop: A sparsely vegetated community occurring on cliffs and rock outcroppings of sedimentary, metamorphic, and volcanic rocks along the ridges and peaks of the hills and mountains. Between the rocks and in the crevices, the few plants found are usually representative of a chaparral species composition. Other plants often found on the rock faces in protected areas include *Dudleya*, *Selaginella*, and various lichens.

Corresponding MCV communities:

No corresponding communities at this time

Disturbed or Barren Areas: Areas that either completely lack vegetation or are dominated by ruderal species. Ruderal vegetation typically found within the SEA includes non-native grasses and a high proportion of weedy species, including black mustard and thistle species. Several disturbed areas are scattered throughout the SEA and take the form of residential developments, paved roads, fire breaks, dirt access roads, trails, and other similarly disturbed areas.

Corresponding MCV communities:

No corresponding communities at this time

Wildlife

Wildlife within the SEA is generally diverse and abundant due to large acreages of natural open space and diversity of habitat types. While a few wildlife species are entirely dependent on a single vegetative community, the entire mosaic of all the vegetation communities within the SEA and

adjoining areas constitute a functional ecosystem for a variety of wildlife species, both within the SEA and as part of the regional ecosystem.

The analysis of invertebrates is severely limited due to the lack of data; the SEA, however, undoubtedly supports healthy populations of a diverse assortment of invertebrate species. Amphibian populations are plentiful in the SEA due to the high moisture content provided by coastal conditions as well as the large number of drainages and year-round water supplies. The SEA is also likely to support a variety of amphibians within the moister woodland areas and canyon bottoms. Many habitat characteristics essential to reptiles are present within the SEA. These include rock outcroppings that allow for high visibility and small mammal burrows for cover and escape from predators and extreme weather. These characteristics, as well as the variety of habitat types present, are likely to support a wide variety of reptilian species.

The scrubland, woodland, riparian, and grassland habitats in the SEA provide foraging and cover habitat for year-round residents, seasonal residents, and migrating song birds. In addition, the SEA encompasses many year-round water sources located throughout the SEA and abundant raptor foraging, perching, and nesting habitat along the northern slopes of the Santa Monica Mountains. The southern edge of the SEA, along the coast, is part of the Pacific Flyway. The combination of these resources, as well as the confluence of many community types provides an unusually high diversity of bird species. Mammal populations within the SEA are diverse and reflect the large size of the SEA and great variation in topography and community types.

All wildlife species previously recorded, as well as those expected to occur, within the SEA are indicated in the *Comprehensive Floral & Faunal Compendium* of the *Los Angeles County SEAs*. Sensitive wildlife species occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources section.

Wildlife Movement

The SEA contains major features that are important to wildlife movement. For the mammals and other large terrestrial wildlife, it is important to recognize the crossing area of State Route-101 freeway at Liberty Canyon, and this has been detailed in the General Boundary and Resources Description section. Future highway modifications in this far western area of the County may take the need for wildlife connectivity into account. On the eastern end of the mountains (separated from the SEA by the communities of Brentwood and Encino in the City of Los Angeles) the California Department of Transportation, or Caltrans, has undertaken widening conversion of one of the bridges to incorporate a vegetated area on the bridge that will encourage wildlife transit between the mountain sections west and east of Interstate-405. This is the first such endeavor in County.

The many natural drainages and ridgelines of the Santa Monica Mountains connect populations in a netlike web, and development should always take account of the importance of these natural areas to wildlife connectivity.

The major coastal drainages with natural habitat shading and cooling the waters support a very unique and rare wildlife movement, which is the spawning runs of the federally-endangered southern steelhead. Spawning run areas and young fish habitat are in critical habitat areas of Arroyo Sequit, Malibu, and Topanga Canyons. Historically, steelhead were known from Solstice and Zuma canyons as well, and it is likely that all the major drainages that once had perennial water and extended to the shore in the rainy season supported this species.

Although wildlife movement is hampered by rural development in the SEA, animals are still able to move through the Santa Monica Mountains in many areas. Due to its large size and topographic complexity, linkages in many directions occur within the SEA. However, there are also various bottlenecks. Edelman (1990) identifies Malibu Creek State Park as the central core habitat area in the Santa Monica Mountains, serving as a connective hub between the Simi Hills to the north and the open space preserves of Topanga State Park to the east, and Mugu State Park to the west (which is near the Ventura-Los Angeles County line, but within Ventura County). These linkages allow movement among large open space areas within the SEA as well as between areas outside the SEA, such as the Simi Hills and the western extent of the Santa Monica Mountains in Ventura County. The genetic flow through these areas is crucial in maintaining the diversity and viability of the species within the Santa Monica Mountains. Open space linkages between Kanan Road and Calabasas Parkway along State Route-101, as indicated by the National Park Service, are of particular importance for continued connectivity of wildlife populations, due to a lack of alternative routes and encroachment of development (Nelson, 2000). Although there are significantly large open spaces within the SEA, maintaining habitat linkages between them is critical in providing for long-term sustainability. A wide variety of wildlife use linkages throughout the SEA, including mountain lion, coyote, mule deer, bobcat, and a number of medium-sized mammals.

Sensitive Biological Resources

Sensitive biological resources are habitats or individual species that have special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, and/or rare. This is due to the species' declining or limited population sizes, which usually results from habitat loss. Watch lists of such resources are maintained by the California Department of Fish and Game (CDFG), the United States Fish and Wildlife Service (USFWS), and special groups, such as the California Native Plant Society (CNPS). The following sections indicate the habitats as well as plant and animal species present, or potentially present within the SEA, which have been accorded special recognition. When species are federally-listed as endangered or threatened, they often have federally-designated, geographically-specific "critical habitat areas." Critical habitat areas, after extensive study by experts, are judged to be essential to conservation and maintenance of the species. The SEA has a number of these for a number of species, as discussed in the General Boundary and Resources Description section. The Santa Monica Mountains SEA has critical habitat for the southern steelhead (fish), the tidewater goby, Braunton's milkvetch, and Lyon's pentachaeta. There is proposed critical habitat for the western snowy plover in the SEA.

Sensitive Plan Communities and Habitats

The SEA supports several habitat types considered sensitive by resource agencies. These are inventoried by California Department of Fish and Game (CDFG) in the California Natural Diversity Database (CNDDB) [2011]. The CNDDB includes state and federally-listed endangered, threatened, and rare vascular plants, as well as several sensitive vertebrate species. These communities include coastal sage chaparral scrub, native grassland, valley oak woodland, walnut woodland, southern willow scrub, southern cottonwood-willow riparian forest, sycamore-alder woodland, southern coastal live oak riparian forest, fresh-water swamp, and alkali swamp, all of which occur throughout the SEA. These communities, or closely related designations, are considered high priority communities by the CDFG, which indicates that they are experiencing a decline throughout their range. The array and composition of these communities has been discussed in the Vegetation section.

Sensitive Plant Species

The statuses of rare plants are hierarchically categorized by the CNPS using a rank and decimal

system. The initial category level of Rare Plant Rank is indicated by the ranks 1A (presumed extinct in California), 1B (rare or endangered in California and elsewhere), 2 (rare or endangered in California but more common elsewhere), 3 (more information needed, a review list), and 4 (limited distribution). In cases where the CNPS has further identified the specific threat to the species, a decimal or Threat Code is added: .1 (seriously endangered in California), .2 (fairly endangered in California), or .3 (not very endangered in California).

The following species occur, or are known to have occurred, or have the potential to occur in the SEA area:

- Santa Susana tarplant (*Deinandra minthornii*) CDFG Rare, RPR 1B.2
- Lyon's pentachaeta (*Pentachaeta lyonii*) FE, SE, RPR 1B.1
- Beach spectaclepod, (*Dithyrea maritima*) ST, RPR 1B.1
- Blochman's dudleya (*Dudleya blochmaniae* ssp. *blochmaniae*) FT, RPR 1B.2
- Marcescent dudleya (*Dudleya cymosa* ssp. *marcescens*) FT, RPR, 1B.2]
- Santa Monica dudleya (*Dudleya cymosa* ssp. *ovatifolia*) FT, RPR 1B.2
- Braunton's milk-vetch (*Astragalus brauntonii*) FE, RPR 1B.1
- Salt marsh bird's beak (*Chloropyron maritimum* ssp. *maritimum*) FE, SE, RPR 1B.2

In addition, the following species considered by CNPS to be rare, threatened or endangered have the potential to occur:

- Sonoran maiden fern (*Thelypteris puberula* var. *sonorensis*) RPR 2.2
- Southern tarweed (*Centromadia parryi* ssp. *australis*) RPR 1B.1
- Coulter's goldfields (*Lasthenia glabrata* var. *coulteri*) RPR 1B.1
- Coulter's saltbrush (*Atriplex coulteri*) RPR 1B.2
- Parish's brittlescale (*Atriplex parishii*) RPR 1B.1
- Mud nama (*Nama stenocarpum*) RPR 2.2
- Salt spring checkerbloom (*Sidalcea neomexicana*) RPR 2.2
- Ojai navarretia (*Navarretia ojaiensis*) RPR 1B.1
- Parry's spineflower (*Chorizanthe parryi* var. *parryi*) RPR 1B.1
- Plummer's mariposa lily (*Calochortus plummerae*) RPR 1B.2

Sensitive Animal Species

The following vertebrate species are state and/or federally-listed endangered or threatened, and are known to occur or have the potential to occur in the SEA:

- Tidewater goby (*Eucyclogobius newberryi*) FE, SSC
- Steelhead – Southern California ESU (*Onchorynchus mykiss irideus*) FE, SSC
- Western snowy plover (*Charadrius alexandrinus nivosus*) FT, ABC, SSC, BCC
- Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) FC, FSS, BCC
- Southwestern willow flycatcher (*Empidonax traillii extimus*) FE, SE, ABC
- American peregrine falcon (*Falco peregrinus anatum*) FD, SD CDF, CDFG Fully Protected, BCC
- Bald eagle (*Haliaeetus leucocephalus*) FD, SE, CDF, CDFG Fully Protected, FSS, BCC
- Bank swallow (*Riparia riparia*) ST
- California least tern (*Sternula antillarum browni*) FE, SE, ABC, CDFG Fully Protected
- Least Bell's vireo (*Vireo bellii pusillus*) FE, SE, ABC

The western snowy plover, which feeds and resides in the wrack line areas, has designated critical habitat on Zuma Beach from Trancas Canyon to the northeastern side of Point Dume (within the Point Dume SEA). This is proposed to expand on Point Dume, but also to expand to include Malibu Beach, from the pier to Malibu Point, and the area around the seaward side of the Malibu Lagoon, which is included in this SEA (where it contacts the Malibu Coastline SEA).

The southern steelhead lives in the coastal and oceanic marine waters for most of its life. It uses the coastal streams for spawning runs to breed. Some fish may die on these runs, but many of this particular species return to the ocean and may spawn again. The creeks become the habitat for the first year of the young fish's lives. Here they mature to smolts and make their run to the ocean. In the ocean, they mature and spend most of their lives. The Arroyo Sequit has the lower section and much of its west fork designated as critical habitat, with known, naturally occurring spawning beds and habitat for young fish. The lower areas of Malibu Creek and Topanga Creek are also designated critical habitat.

In addition, following CDFG-listed Special Animals have the potential to utilize habitats within the SEA:

- Callippe silverspot butterfly (*Speyeria callippe callippe*) FE
- Arroyo chub (*Gila orcutti*) FSS, SSC
- California red-legged frog (*Rana draytonii*) FT, SSC
- Western spadefoot (*Spea hammondii*) BLMS, SSC
- Coast range newt (*Taricha torosa*) SSC
- Silvery legless lizard (*Anniella pulchra pulchra*) SSC, FSS
- Southwestern pond turtle (*Emys marmorata*) BLMS, SSC, FSS
- San Diego mountain kingsnake (*Lampropeltis zonata pulchra*) FSS, SSC
- Coast horned lizard (*Phrynosoma blainvillii*) BLMS, SSC, FSS
- Coast patch-nosed snake (*Salvadora hexalepis virgultea*) SSC
- Two-striped garter snake (*Thamnophis hammondii*) BLMS, SSC, FSS
- Cooper's hawk (*Accipiter cooperii*) CDFG Watch List
- Sharp-shinned hawk (*Accipiter striatus*) CDFG Watch List
- Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*) CDFG Watch List
- Bell's sage sparrow (*Amphispiza belli belli*) ABC, CDFG Watch List, BCC
- Golden eagle (*Aquila chrysaetos*) CDF, CDFG Fully Protected, CDFG Watch List, BCC
- Short-eared owl (*Asio flammeus*) ABC, SSC
- Long-eared owl (*Asio otus*) SSC
- Coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*) SSC, FSS, BCC
- California horned lark (*Eremophila alpestris actia*) CDFG Watch List
- Northern harrier (*Circus cyaneus*) SSC
- Black swift (*Cypseloides niger*) ABC, SSC, BCC
- Yellow warbler (*Dendroica petechia brewsteri*) SSC, BCC
- White-tailed kite (*Elanus leucurus*) CDFG Fully Protected
- Merlin (*Falco columbarius*) CDFG Watch List
- Prairie falcon (*Falco mexicanus*) CDFG Watch List, BCC
- Yellow-breasted chat (*Icteria virens*) SSC
- Least bittern (*Ixobrychus exilis*) SSC, BCC
- Loggerhead shrike (*Lanius ludovicianus*) SSC, BCC

- California brown pelican (*Pelecanus occidentalis californicus*) FD, SD, CDFG Fully Protected
- Pallid bat (*Antrozous pallidus*) BLMS, SSC, FSS, WBWG: High Priority
- Townsend's big-eared bat (*Corynorhinus townsendii townsendii*) BLMS, SSC, FSS, WBWG High Priority
- Spotted bat (*Euderma maculatum*) BLMS, SSC, WBWG High Priority
- Western mastiff bat (*Eumops perotis californicus*) BLMS, SSC, WBWG High Priority
- San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) SSC
- South coast marsh vole (*Microtus californicus stephensi*) SSC
- Occult little brown bat (*Myotis lucifugus occultus*) CDFG Special Animals List, WBWG Medium Priority
- San Diego desert woodrat (*Neotoma lepida intermedia*) SSC
- Los Angeles pocket mouse (*Perognathus longimembris brevinasus*) SSC, FSS
- American badger (*Taxidea taxus*) SSC

Ecological Transition Areas (ETAs)

There are six designated ETAs within the north area of the SEA, but none in the coastal zone of the SEA. These ETAs are semi-natural areas next to developed areas that did not meet all mapping criteria for SEA designation. The ETAs are either farmed or residential areas considered important to SEA continuity and maintenance of upland parts of the coastal watershed. Extended urban areas are excluded, but small urban areas are included in the SEA because of coastal restrictions that apply to environmental review of proposed development.

Regional Biological Value

The SEA meets all SEA designation criteria and supports many regional biological values. Each criterion and how it is met is described below.

CRITERIA ANALYSIS OF THE SANTA MONICA MOUNTAINS SEA

Criterion		Status	Justification
A)	The habitat of core populations of endangered or threatened plant or animal species.	Met	The SEA provides habitat for the following listed species: Lyon's pentachaeta (FE, SE); beach spectaclepod (ST); Blochman's dudleya (FT); marcescent dudleya (FT); Santa Monica dudleya (FT); Braunton's milk-vetch (FE); salt marsh bird's beak (FE, SE); tidewater goby (FE); steelhead – Southern California ESU (FE); western snowy plover (FT); western yellow-billed cuckoo (SE); southwestern willow flycatcher (FE, SE); American peregrine falcon (SE); bald eagle (FT); bank swallow (ST); California least tern (FE, SE); least Bell's vireo (FE, SE). The SEA contains designated critical habitat for Lyon's pentachaeta, Braunton's milk-vetch, tidewater goby, steelhead, and western snowy plover.
B)	On a regional basis, biotic communities, vegetative associations, and habitat of	Met	Upper La Sierra Canyon contains an unusually rich and diverse stand of canyon flora, including marcescent dudleya, creek dogwood, and many unusually large specimens of other rare plant species; Malibu

Criterion		Status	Justification
	plant or animal species that are either unique or are restricted in distribution.		Lagoon is the only intact natural lagoon between Point Mugu in Ventura County and Anaheim Bay in Orange County; Malibu Canyon contains a unique mix of floral species that are uncommon in the region, such as black cottonwood and leather leaf ash, as well as a regionally unique mixture of inland and coastal species; regionally rare volcanic rock formations create unique communities where they occur.
C)	Within the County, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	Malibu Lagoon is the only natural lagoon in the County; upper La Sierra Canyon contains an unusually rich and diverse stand of canyon flora, including marcescent dudleya, creek dogwood, and many unusually large specimens of other rare plant species; and Malibu Canyon contains a regionally unique mix of floral species htat are uncommon in the County, such as black cottonwood and leather leaf ash, as well as a unique mix of inland and coastal species.
D)	Habitat that at some point in the life cycle of a species or group of species, serves as concentrated breeding, feeding, resting, or migrating grounds and is limited in availability either regionally or in the County.	Met	The Malibu Lagoon and the upstream riparian woodland in Malibu Creek is an important migrating bird refuge, with over 200 species recorded. Tuna and Pena canyons are an important area to migratory birds due to their combined qualities of healthy vegetation, riparian woodland, surface moisture, undeveloped land, and an unobstructed opening to the coast. The SEA also contains habitat linkages between large open space areas within the SEA and areas outside the SEA, such as the Simi Hills and the western extent of the Santa Monica Mountains in Ventura County. Such linkages are crucial in maintaining regional plant and animal population health and viability.
E)	Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community.	Met	The SEA includes a myriad of unique and pristine natural areas that are important for nature study and scientific research; the range of extremes of many species, such as the California juniper, linear-leaved goldenbush, splendid mariposa lily (*Calochortus venustus*), and valley oak; and disjunct and unique populations of redshank, island mountain-mahogany, lyre snake, mountain quail, hirsute rain-beetle, and the Jerusalem cricket.
F)	Areas that would provide for the preservation of relatively undisturbed examples of the original natural biotic communities in the County.	Met	Zuma Canyon is one of the last major drainages in the Santa Monica Mountains with a year-round stream that supports a rich riparian community and remains in an undeveloped state; Cold Creek includes an excellent example of an undisturbed natural sandstone basin with springs and a perennial stream; Tuna and Pena canyons are the last drainages in the central and eastern Santa Monica Mountains that have no development between the canyon mouth at the coast and upper areas of the watershed; Palo Comado and Cheseboro canyons support one of the last examples of an oak woodland savannah of any significant size in the County; Temescal, Rustic, and Sullivan canyons represent contiguous, self-contained watersheds that are large enough to support representative samples of native flora and fauna; the area surrounding Encino Reservoir supports the best undisturbed stand of an inland chaparral, coastal sage scrub, and streamside vegetation remaining on the inland slope of the Santa Monica Mountains.

In conclusion, the area is an SEA because it contains: A) the habitat of core populations of endangered and threatened plant and animal species; B-C) biotic communities, vegetative associations, and habitat of plant and animal species that are either unique or are restricted in distribution in the County and regionally; D) concentrated breeding, feeding, resting, or migrating grounds, which are limited in availability in the County; E) biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community; and F) areas that provide for the preservation of relatively undisturbed examples of original natural biotic communities in the County.

23. Santa Susana Mountains and Simi Hills SEA

Location

General

The Santa Susana Mountains and Simi Hills Significant Ecological Area (SEA) is located northwest of the San Fernando Valley within unincorporated areas of the County and the City of Los Angeles, west of Chatsworth. The area is south of State Route-126 and the Santa Clara River, west of the Interstate-5, and includes much of the Santa Susana Mountains to the north, the Santa Susana Pass, Chatsworth Reservoir, and the eastern portion of the Simi Hills to the south. This SEA encompasses much of the natural area of the Santa Susana Mountains in the County. The north face of the Santa Susana Mountains is the southwestern watershed of the Santa Clara River in the County, and on the south face, the Santa Susana Mountains are part of the direct coastal watershed as well as part of the watershed of the Los Angeles River. The Simi Hills are part of the direct coastl drainage in their southern area. The variations in vegetation communities are extensive. The area in the Santa Susana Mountains covered by the SEA is considered an important connective wildlife corridor among the San Gabriel Mountains, the Santa Clara River, and the Santa Monica Mountains.

The SEA is located at least partially in each of the following United States Geological Survey (USGS) 7.5' California Quadrangles: Calabasas, Canoga Park, Oat Mountain, Santa Susana, Val Verde, and Newhall.

General Boundary and Resources Description

The entire western boundary of the SEA follows the Ventura-Los Angeles County line from El Escorpion Park, west of the intersection of Valley Circle Boulevard and Vanowen Street in the West Hills community of the San Fernando Valley, and north to an area just south of the Santa Clara River near Salt Canyon Road. El Escorpion Park is adjacent to state park land just across the Ventura-Los Angeles County line. The small ridgeline where the SEA begins just south of El Escorpion Park separates the coastal drainage of Las Virgenes (tributary of Malibu Creek) from drainages that flow into the San Fernando Valley and the Los Angeles River. El Escorpion Park is at the southern end of Bell Canyon Park, which is also on Ventura-Los Angeles County line. The watercourse of Bell Canyon flows through the park. The SEA continues north, including the natural watershed of Dayton Canyon. Here on the southern side of Dayton Canyon is designated critical habitat for the Braunton's milk vetch (*Astragalus brauntonii*), which is a locoweed that prefers a substrate of intermixed sandstone and carbonate beds, which is probably deposited at the margins of a former seacoast. The SEA circles around the community of Lakeside Park , which is excluded from the SEA, and then encircles and includes the Chatsworth Reservoir along boundaries of private property. The western boundary of the SEA follows the Ventura-Los Angeles County line, but bends to exclude development in upper Woolsey Canyon and Chatsworth Lake Manor.

From Chatsworth Reservoir, the SEA continues north with the west side along the Ventura-Los Angeles County line and the east side tracing natural habitat at the edge of the Simi Hills and the San Fernando Valley. The SEA extends eastward to include all of the Santa Susana Pass area, much of which is preserved in the Santa Susana Pass State Historic Park. Just across the Ventura-Los Angeles County line near State Route-118 in Ventura County are Corriganville Park, a former and current natural movie production area, and Rocky Peak Park. Corriganville is a regional park of the City of Simi Hills; Rocky Peak Park is administered by the Santa Monica Mountains Conservancy. Rocky Peak Park is the former Runkle Ranch and stretches from State Route-118 five miles northward to Las Llajas Canyon. The Park is a vital wildlife habitat linkage between the Simi Hills and the Santa Susana Mountains. Spectacular sandstone boulders, outcroppings, oak savannahs, and perennial water sources provide diverse habitat for vertebrates and a number of rare plants. The Ventura-Los Angeles County line and the SEA boundary cross directly over Rocky Peak here.

A very important wildlife passage between the Santa Susana Mountains and the Simi Hills is just west of the Ventura-Los Angeles County line connecting Corriganville Park and the Runkle Ranch. It is a broad tunnel under the freeway, which enabled the connection of the property that was divided by constructing State Route-118. This tunnel connects dirt roads and trails on either side, and is regularly used by mountain lions and other wildlife.

Most of the SEA from State Route-118 northward is designated critical habitat for the coastal California gnatcatcher (*Polioptila californica californica*), which is a diminutive bird that is becoming rare due to loss of its preferred habitat, which is coastal sage scrub. The critical habitat for this bird extends across the Ventura-Los Angeles County line along the extent of the Santa Susana Mountains into Ventura County.

North of State Route-118, the SEA excludes development in the area of Hialeah Springs (but includes the springs), and circles round the development to include the more sparse settlement in the Deer Lake Highlands area. The SEA boundary goes north along the watercourse of Browns Canyon to the confluence with Mormon Canyon. Here the SEA boundary climbs the ridgeline that separate Browns Canyon and Mormon Canyon to include Browns Canyon and the Michael D. Antonovich Regional Park at Joughin Ranch, and exclude the Mormon Canyon. Continuing up the ridge to its origin on the crest of Oat Mountain, the SEA boundary turns eastward along the ridgeline, excluding the oil fields in the upper reaches of Mormon Canyon and including the extensive natural areas of the north slope of the Santa Susana Mountains.

Along the Ventura-Los Angeles County line north of Rocky Peak, the SEA boundary crosses Blind Canyon (draining to San Fernando Valley), then Llajas Canyon (draining to Simi Valley and ultimately Mugu Lagoon), then El Toro and Chivo canyons (also draining to Mugu Lagoon). Northwest of Chivo, the crest of the Santa Susana Mountains is crossed, and drainages are tributaries of Salt Canyon and the Santa Clara River. The north edge of the critical habitat for the coastal California gnatcatcher is crossed near the crest, where the south-facing slopes that favor coastal sage scrub give way to the ridgeline and north-facing slopes that promote denser chaparral and oak woodlands. At the northern boundary of the SEA, the Santa Clara River SEA is contiguous as is the critical habitat for the state and federally-endangered least Bell's vireo (*Vireo bellii pusillus)*, which is a small bird that usually nests next to perennial water.

From the northwesterly corner, the boundary travels east along the north side of Salt Canyon, and then along the northern side of the Salt Canyon East Fork. Where the East Fork turns south, the SEA boundary continues east to encompass the steeper southern areas along Potrero Canyon and

all of the Pico Canyon drainage south of Potrero. The SEA boundary is truncated at the Stevenson Ranch development, including the Wickham Canyon tributary of Pico in the SEA, but excluding most of Dewitt Canyon. This boundary of the SEA is essentially following the northern edge of the Salt Creek open space that was approved with the Newhall Ranch Specific Plan. In the vicinity of Pico Canyon, the boundary continues eastward to encompass the Lyon Canyon watershed and an unnamed watershed just north of Lyon up to the west side of Interstate-5. Along Interstate-5, the SEA boundary continues along the line of natural vegetation (west and southwest side of Gavin Canyon) including the watersheds of tributaries Towsley, Wiley, Leaming, Rice, and East canyons. The boundary continues east along the western edge of Interstate-5 to an area just west of the Angeles City line, near the interchange with State Route-14. Here the boundary excludes the drainage of Sunshine Canyon, which is involved in the Sunshine Canyon Landfill used by both the City of Los Angeles and the County. Critical habitat for the coastal California gnatcatcher is the watersheds of Towsley, Wiley, Rice, and East canyons south of the Interstate-5 below about the 2400 feet elevation contour.

North across the Interstate-5 is the Newhall Wedge. The Newhall Wedge is a very rugged part of the Santa Susana Mountains, with substantial natural vegetation of oak woodlands, chaparral, and coastal sage scrub. The Newhall Wedge is truncated by the flood plains of tributaries of the South Fork of the Santa Clara River to the north, east and west, and these flood plains have had extensive development as the City of Santa Clarita. (Gavin Canyon is one of these tributaries.) Important connective areas are the road crossings of the Interstate-5 and State Route-14. The connection to the Santa Clara River SEA is the Los Pinetos Road underpass of the State Route-14. Consistent wildlife movement has been recorded with motion-activated cameras there. The Weldon Canyon Road overpass of the Interstate-5 is another connection for the Newhall Wedge with the main part of the SEA. The Old Road underpass of the Interstate-5 is a broad connection. The Calgrove underpass is another broad connection, but busy with traffic. Natural areas are adjacent to all these under- and overpasses. The South Fork of the Santa Clara River is formed by the junction of Towsley, Wiley and East canyons in the northeast corner of Michael D. Antonovich Open Space. Its underpass of Interstate-5 has a natural bottom that is used frequently by wildlife, but on the east side of Interstate-5 there is a series of 15 feet drops and channeled sides, which is unlikely that terrestrially-tied wildlife would continue into the populated parts of the City of Santa Clarita along the South Fork. Critical habitat for the coastal California gnatcatcher is in most of the Newhall Wedge part of the SEA between the Interstate-5 and the Sierra Highway that is just west of State Route-14.

On the west side of Sunshine Canyon, a broad lobe of the SEA extends along the ridgeline, which separates Sunshine and Bee Canyon to include Bee Canyon Park and Mission Point of O'Melveny Park. This is an area with walnut woodlands, oak woodlands, grasslands, and chaparral including coastal sage scrub, which is the diverse and green vegetation typical of the Santa Susana Mountains. Critical habitat for the coastal California gnatcatcher covers O'Melveny Park, except for the ridgeline of Mission Point, which is above the 2400 feet contour. The SEA boundary travels west from Mission Point along the ridgeline above the Aliso Canyon Oil Field and turns south at the western edge of the Aliso Canyon Oil Field, along the ridgeline between Mormon and Browns canyons. Critical habitat for the coastal California gnatcatcher extends below about the 2400 feet contour (including Mormon and Browns canyons) and roughly is within the SEA north of State Route-118.

The SEA includes a variety of topographic features; the northern portion of the SEA encompasses Oat Mountain and much of the Santa Susana Mountains from the Ventura-Los Angeles County line east to Interstate-5. Portions of many of the canyons associated with the Santa Susana Mountains and Oat Mountain are also included, such as Salt Canyon, Potrero Canyon, Pico Canyon, Towsley

Canyon, El Toro Canyon, Sulphur Canyon, Devil Canyon, Ybarra Canyon, Browns Canyon, Bee Canyon, and Mormon Canyon. Several perennial stream areas occur within these canyons, and there are many natural springs. The north slopes of the Santa Susana Mountains are within the Santa Clara River watershed, which drains the Los Padres National Forest to the north, the Angeles National Forest to the northeast and east, and the Santa Susana Mountains to the south and southeast. The remainder of the SEA is within the Los Angeles River watershed. The majority of the land in the SEA is natural open space with very sparse disturbances in the form of ranches, oil wells, and unimproved access roads. The SEA consists of east-west and northwest trending primary ridges and north-south trending secondary ridges.

The peak of Oat Mountain represents the highest point in the SEA at 3,747 feet above mean sea level (MSL). From Oat Mountain, one can appreciate the diverse influences that create extremely diverse habitat within this SEA. One can see downstream along the Santa Clara River to the mouth of the Pacific Ocean and to the northern Channel Islands. Across the San Fernando Valley are the Santa Monica Mountains, and the Simi Hills enclose the west end of the Valley. To the east are the ascending ridges of the San Gabriel Mountains, and to the northeast the Santa Clara River continues upstream towards the Antelope Valley and the Mojave Desert. Coastal, valley, montane, and desert influences all meet within this small mountain range.

Open space within the SEA supports this great variety of communities, but is dominated by chaparral, oak woodlands, coastal sage scrub, bigcone Douglas-fir-canyon oak woodland, and grasslands; however, there are numerous examples of special vegetation. Not uncommon are cherry woodlands, which are dominated by holly leaf cherry (Prunus ilicifolia). These mountains are a meeting area of the (regular) Douglas fir (*Pseudotsuga menziesii*) and the bigcone Douglas-fir (*Pseudotsuga macrocarpa*). There are a number of special endemic plants, such as the Santa Susana tarweed (*Deinandra minthornii*), which is a tarplant like few others since it is perennial. Its distribution spreads through the Simi Hills and into the Santa Monica Mountains, but it is primarily at home among the sandstone boulders and terraces, which prevail in the Santa Susana Mountains. The Santa Susana Mountains are the only known place in the County with members of the uncommon Palmer's oak (*Quercus palmeri).* This desert oak can be very long-lived. A clone found in Riverside County was judged to have started from an acorn in the last Ice Age, over 10,000 years ago. Other oaks with groves in the Santa Susanas include coast live oak (*Quercus agrifolia*), valley oak (*Q. lobata*), canyon live oak (*Q. chrysolepis*), scrub oak (*Quercus berberidifolia*), and interior live oak (*Q. wislezenii*). The numerous creeks and canyons support riparian scrub and woodland communities with oaks, sycamores, and willows. There are walnut woodlands of the California black walnut (*Juglans californica*) mixed with flowering ash (*Fraxinus dipetala*) and Mexican elderberry (*Sambucus mexicana*) and coast live oak. Flowering ash may be a tree up to 60 feet tall in the Santa Susana Mountains, whereas it usually is a low tree or even spindly shrub. The woodlands dominated by walnuts and flowering ash appear to be unique to the Santa Susana Mountains. The bigcone Douglas-fir-canyon live oak forest at higher elevations represents one of the northwesternmost examples of this community. At its southern end, the SEA includes the eastern portion of the Simi Hills, including the east-facing slopes descending from Chatsworth Peak. Chatsworth Reservoir forms a portion of the south boundary and is currently dry, except for a small detention basin north of the reservoir.

Chatsworth Reservoir is now dry and is a superfund clean-up site due to the dumping of chemicals from a rocket facility that used to be in the Simi Hills. However, it has a variety of very interesting habitat with several protected avian communities of songbirds and geese, which makes it valuable for bird study by students, researchers, and naturalists. There is a perennial pond at the north end that supports freshwater marsh, which is an extremely scarce habitat in the County and Southern

California. This pond is on the Pacific Flyway, and supports numerous kinds of waterfowl during the spring and fall migration periods, especially because of the adjacent grasslands. The periphery of the reservoir is savannah, with a mixture of valley and coast live oaks (*Quercus lobata* and *Q. agrifolia*), some in small stands.

The majority of the SEA is within the unincorporated area of the County.

Vegetation

The plant communities within the SEA are composed of numerous plant species. These plant species are adapted to a Mediterranean climate with a cool, wet season followed by a hot, dry season. Due to the topographic complexity and coastal and desert influences, the SEA supports a wide diversity of plant species.

Plant species observed or recorded in previous documentation within the SEA are indicated in the *Comprehensive Floral & Faunal Compendium of the Los Angeles County SEAs.* Sensitive plant species occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources section.

Descriptions and general locations of each plant community present within the SEA are given below. These include chaparral, coastal sage scrub, alluvial scrub, coast live oak woodlands, valley oak woodland, mainland cherry forest, non-native grassland, native grassland, southern willow scrub, southern cottonwood-willow riparian forest, and disturbed communities.

Chaparral: Consists of a broad mix of evergreen species and generally occurs below 5,000 feet in Southern California. Dominant species consist of broad-leaved or needle-leafed sclerophyllous (hard-leafed) shrubs, forming a dense, impenetrable cover with little or no understory growth. The understory typically consists of considerable accumulation of leaf litter. In areas of less dense shrub cover, the understory consists of non-native grasses and other annual forbs. Dominant species include chamise, laurel sumac (*Malosma laurina*), hoary-leaf ceanothus (*Ceanothus crassifolius*), chapparal whitethorn (*Ceanothus leucodermis*), and toyon (*Heteromeles arbutifolia*). Chaparral is the dominant plant community within the SEA and covers many of the steep slopes and hillsides in the upper elevations.

Corresponding MCV communities:

- *Adenostoma fasciculatum* (chamise chaparral) Shrubland Alliance
- *Adenostoma fasciculatum-Salvia apiana* (chamise-white sage chaparral) Shrubland Alliance
- *Arctostaphylos glauca* (bigberry manzanita chaparral) Shrubland Alliance
- *Ceanothus crassifolius* (hoary leaf ceanothus chaparral) Shrubland Alliance
- *Ceanothus leucodermis* (chaparral whitethorn) Shrubland Alliance
- *Ceanothus megacarpus* (big pod ceanothus chaparral) Shrubland Alliance
- *Ceanothus spinosus* (greenbark ceanothus chaparral) Shrubland Alliance
- *Ceanothus oliganthus* (hairy leaf ceanothus chaparral) Shrubland Alliance
- *Prunus ilicifolia* (holly leaf cherry chaparral) Shrubland Alliance
- *Rhus ovata* (sugarbush chaparral) Shrubland Alliance

Coastal Sage Scrub Communities: Consist of drought-deciduous, low, soft-leaved shrubs and herbs on gentle to steep slopes below 3,000 feet in elevation. Several dominant species may occur within scrub communities, with some areas overwhelmingly dominated by one or two species. California

sagebrush (*Artemisia tridentata*), California buckwheat (*Eriogonum fasciculatum*), California brittle bush (*Encelia californica*), purple sage (*Salvia leucophylla*), and deerweed (*Acmispon glaber*). Coastal sage scrub is found at the lower elevations within the SEA on drier south-facing slopes, but can also be found on the north-facing slopes and canyon of the Santa Susana Mountains.

Corresponding MCV communities:

- *Artemisia californica* (California sagebrush scrub) Shrubland Alliance
- *Artemisia californica-Salvia mellifera* (California sagebrush-black sage scrub) Shrubland Alliance
- *Artemisia californica-Eriogonum fasciculatum* (California sagebrush-California buckwheat scrub) Shrubland Alliance
- *Encelia californica* (California brittle bush scrub) Shrubland Alliance
- *Dendromecon rigida* (bush poppy scrub) Shrubland Alliance
- *Isocoma menziesii* (Menzie's golden bush scrub) Shrubland Alliance
- *Salvia apiana* (white sage scrub) Shrubland Alliance
- *Salvia leucophylla* (purple sage scrub) Shrubland Alliance
- *Salvia mellifera* (black sage scrub) Shrubland Alliance
- *Eriogonum cinereum* (ashy buckwheat scrub) Shrubland Alliance
- *Eriogonum fasciculatum* (California buckwheat scrub) Shrubland Alliance
- *Ericameria linearifolia* (narrowleaf goldenbush scrub) Provisional Shrubland Alliance
- *Hazardia squarrosa* (sawtooth golden bush scrub) Shrubland Alliance
- *Lotus scoparius* ([*Acmispon glaber*] deer weed scrub) Shrubland Alliance
- *Lupinus albifrons* (silver bush lupine scrub) Shrubland Alliance
- *Malacothamnus fasciculatus* (bush mallow scrub) Shrubland Alliance

Alluvial Scrub: Consists of a mixture of shrubs that colonize sandy-gravelly flood deposited soils within intermittent creeks, arroyos, and drier terraces in large washes. This community intergrades with sage scrub communities and riparian communities and, therefore, occurs adjacent to these communities. Great basin sagebrush (*Artemisia tridentata*), scalebroom (*Lepidospartum squamatum*), quail bush (*Atriplex lentiformis*), and skunk bush (*Rhus aromatica*). Alluvial scrub is predominantly found at the northern end of the SEA in Salt Canyon.

Corresponding MCV communities:

- *Artemisia californica-Eriogonum fasciculatum* (California sagebrush-California buckwheat scrub) Shrubland Alliance
- *Lepidospartum squamatum* (scalebroom scrub) Shrubland Alliance
- *Malosma laurina* (laurel sumac scrub) Shrubland Alliance

Coast Live Oak Woodlands: Commonly occur along drainages that experience at least a seasonal flow or in other areas under mesic conditions. Soil structure and soil moisture are the most important limiting factors for the survival of oak woodlands; soils must be deep, uncompacted, fertile, well-aerated, and well-drained. This community is dominated by coast live oak. If sufficient groundwater is present, western sycamore (*Platanus racemosa*), which is usually associated with riparian habitats, may also occur in the oak woodland. Oak woodlands occupy areas within the canyons and drainages of the SEA.

Corresponding MCV communities:

- *Quercus agrifolia* (coast live oak woodland) Woodland Alliance

Valley Oak Woodland: An open-canopy woodland found on deep, well-drained alluvial soils below 2,000 feet. This community is almost exclusively dominated by valley oak (*Quercus* lobata) with a grassy understory to form a savannah-like community. This community is located in small pockets in the eastern portion of the SEA.

Corresponding MCV communities:

- *Quercus lobata* (valley oak woodland) Woodland Alliance

Mainland Cherry Forest: Not well described, but is typically composed of tall stands of holly leaf cherry (*Prunus ilicifolia*) on rocky, dry, north-facing slopes. Within the SEA, coast live oak is co-dominant within this community and can be found in canyons in the northern portion of the SEA. This community can also be found in association with alluvial scrub in the northwestern portion of the SEA as it approaches the Santa Clara River.

Corresponding MCV communities:

- *Prunus ilicifolia* (Holly leaf cherry chaparral) Shrubland Alliance

Grassland Communities: Consist of low, herbaceous vegetation that are dominated by grasses but generally also harbor native forbs and bulbs, as well as naturalized annual forbs. Topographic factors that contribute to grassland presence include gradual slopes or flat areas with deep, well-developed soils in areas below 3,000 above MSL. The species richness of grassland communities is dependent upon a number of land use factors, including intensity and duration of natural or anthropogenic disturbances, such as grazing. Heavily grazed grasslands have a lower species richness.

Native grassland is often associated with coastal sage scrub and is found in pockets in close proximity to coastal sage scrub and non-native grassland. This community consists of at least 10 percent relative cover of native herbaceous plants (grasses and forbs). The remaining vegetative cover is made up of non-native grasses found in annual grassland and a variety of annual, showy flowers, such as golden stars (*Bloomeria crocea*) and blue-eyed grass (*Sisyrinchium bellum*). Small patches of native grassland can be found scattered throughout the SEA mostly in openings in coastal sage scrub and mixed with non-native grasslands.

Corresponding MCV communities:

- *Leymus condensatus* (giant wild rye grassland) Herbaceous Alliance
- *Nassella cernua* ([*Stipa cernua*] nodding needle grass grassland) Provisional Herbaceous Alliance
- *Nassella lepida* ([*Stipa lepida*] foothill needle grass grassland) Provisional Herbaceous Alliance
- *Nassella pulchra* ([*Stipa pulchra*] purple needle grass grassland) Herbaceous Alliance

Non-native grassland consists of dominant invasive annual grasses that are primarily of Mediterranean origin. Dominant species found within this community include slender wild oat (*Avena barbata*), wild oat (*A. fatua*), ripgut brome (*Bromus diandrus*), and red brome (*B. madritensis* ssp. *rubens*).

Corresponding MCV communities:

- *Avena (barbata, fatua)* (Wild oats grasslands) Semi-Natural Herbaceous Stands
- *Brassica (nigra) and other mustards* (Upland mustards) Semi-Natural Herbaceous Stands
- *Bromus (diandrus,hordeaceus)-Brachypodium distachyon* (Annual brome grasslands) Semi-Natural Herbaceous Stands
- *Bromus rubens-Schismus (arabicus, barbatus)* ([*Bromus madritensis* ssp. *rubens*] Red brome or Mediterranean grass grasslands) Semi-Natural Herbaceous Stands
- *Centaurea (solstitialis, melitensis)* (Yellow star-thistle fields) Semi-Natural Herbaceous Stands
- *Lolium perenne* ([*Festuca perennis*] perennial rye grass fields) Semi-Natural Herbaceous Stands

Southern Willow Scrub: A riparian community occurring within and adjacent to watercourses. The vegetation within this community is adapted to seasonal flooding. Southern willow scrub is characterized by dense, broad leafed, winter-deciduous riparian thickets dominated by one or more willow species (*Salix* spp.) Most stands are too dense to allow understory development. The dominant species of this community within the SEA are arroyo willow (*Salix lasiolepis*), and red willow (*S. laevigata*), with less common associates such as mulefat (*Baccharis salicifolia*). This community occurs in segments along portions of the intermittent drainages within the SEA.

Corresponding MCV communities:

- *Salix exigua* (Sandbar willow thickets) Shrubland Alliance
- *Salix lasiolepis* (Arroyo willow thickets) Shrubland Alliance

Southern Cottonwood-Willow Riparian Forest: Consists of an open, broad-leaved, winter-deciduous riparian forest dominated by Fremont cottonwood (*Populus fremontii*), black cottonwood (*P. trichocarpa*), and several willow species, including arroyo willow and red willow. This community occupies much of the Santa Clara River adjacent to the northern boundary of the SEA, and also occurs within the larger, intermittent and perennial drainages within the SEA.

Corresponding MCV communities:

- *Populus fremontii* (fremont cottonwood forest) Forest Alliance
- *Populus trichocarpa* (black cottonwood forest) Forest Alliance

Disturbed or Barren Areas: Areas that either completely lack vegetation or are dominated by ruderal species. Ruderal vegetation typically found onsite include non-native grasses and a high proportion of weedy species, including tocalote, telegraph weed, tree tobacco, doveweed, black mustard, and thistle species. Several disturbed areas occur scattered throughout the SEA and take the form of residential developments, highways, fire breaks, dirt access roads, trails, transmission poles, and other similarly disturbed areas.

Corresponding MCV communities:

No corresponding communities at this time

Wildlife

Wildlife within the SEA is generally diverse and abundant due to the large acreage of natural open

space and the diversity of habitat types. While a few wildlife species are entirely dependent on a single vegetative community, the entire mosaic of all the vegetation communities within the SEA and adjoining areas constitutes a functional ecosystem for a variety of wildlife species; this applies to the SEA and the regional ecosystem.

The analysis of invertebrates in this study is difficult due to the lack of data, although limited studies have been conducted. The SEA is believed to support healthy populations of a diverse assortment of countless invertebrate species. Amphibian populations are generally restricted in semi-arid and arid habitats but may be particularly abundant where riparian areas occur. The SEA is likely to support a variety of amphibians in abundance within wetland areas along the major canyon bottoms and the moister oak woodland areas. Many essential reptilian habitat characteristics, such as open habitats that allow free movement and high visibility, and small mammal burrows for cover and escape from predators and extreme weather, are present within the SEA. These characteristics, as well as the variety of habitat types present, are likely to support a wide variety of reptilian species.

The scrubland, woodland, riparian, and grassland habitats in the SEA provide foraging and cover habitat for year-round residents, seasonal residents, and migrating song birds. In addition, the SEA encompasses many year-round water sources, abundant raptor foraging, perching, and nesting habitat. The combination of these resources, as well as the mosaic of many community types, provide for an unusually high diversity of bird species. Several of these species may use this SEA as their only consistent occurrence in the southeastern portion of the County.

Mammal populations within the SEA are diverse and reflective of the diversity of habitat types. Unlike many other inland hills within the Los Angeles Basin, this SEA is large enough to support relatively stable and large mammal populations despite the urban surroundings; even the large carnivores, including the black bear and mountain lion, are known from the SEA. This indicates the presence of intact food chains and complete communities that have a complex, resilient food web.

All wildlife species previously recorded, as well as those expected to occur, within the SEA are indicated in the *Comprehensive Floral & Faunal Compendium* of the *Los Angeles County SEAs*. Sensitive wildlife species occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources section.

Wildlife Movement

The SEA includes several important linkages for wildlife movement. The Simi Hills and Santa Susana Mountains provide a vast open space corridor to foster wildlife movement between the Santa Monica Mountains to the south, San Gabriel Mountains to the east, and Los Padres National Forest to the north in the western San Gabriel Mountains of the Transverse Ranges. Dense, natural habitat associated with the majority of the SEA provides excellent opportunities for concealment and water sources, while the grasslands provide an abundance of prey. Examples of wildlife that use these linkages include mountain lion (*Puma concolor*), mule deer (*Odocoileus hemionus*), coyote (*Canis latrans*), bobcat (*Lynx rufus*), and a number of medium-sized animals.

Sensitive Biological Resources

Sensitive biological resources are habitats or individual species that have special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, and/or rare. This is due to the species' declining or limited population sizes, which usually results from habitat loss. Watch lists of such resources are maintained by the California Department of Fish and Game (CDFG), the United States Fish and Wildlife Service (USFWS), and special groups, such as

the California Native Plant Society (CNPS). The following sections indicate the habitats as well as plant and animal species present, or potentially present within the SEA, which have been accorded special recognition. When species are federally-listed as endangered or threatened, they often have federally-designated, geographically-specific "critical habitat areas." Critical habitat areas, after extensive study by experts, are judged to be essential to conservation and maintenance of the species. Critical habitats for the Braunton's milkvetch and coastal California gnatcatcher are described in the General Boundary and Resources Description section.

Sensitive Plan Communities and Habitats

The SEA supports several habitat types considered sensitive by resource agencies. These are inventoried by California Department of Fish and Game (CDFG) in the California Natural Diversity Database (CNDDB) [2011]. The CNDDB includes state and federally-listed endangered, threatened, and rare vascular plants, as well as several sensitive vertebrate species. These communities include chamise-white sage chaparral, holly leaf cherry chaparral, California brittle bush scrub, white sage scrub, narrowleaf goldenbush scrub, sawtooth golden bush scrub, scalebroom scrub, valley oak woodland, holly leaf cherry chaparral, giant wild rye grassland, nodding needle grass grassland, foothill needle grass grassland, purple needle grass grassland, Fremont cottonwood forest, and black cottonwood forest, which occur throughout the SEA. These communities, or closely related designations, are considered high priority communities by the CDFG, which indicates that they are experiencing a decline throughout their range. The array and composition of these communities has been discussed in the Vegetation section.

Sensitive Plant Species

The statuses of rare plants are hierarchically categorized by the CNPS using a rank and decimal system. The initial category level of Rare Plant Rank is indicated by the ranks 1A (presumed extinct in California), 1B (rare or endangered in California and elsewhere), 2 (rare or endangered in California but more common elsewhere), 3 (more information needed, a review list), and 4 (limited distribution). In cases where the CNPS has further identified the specific threat to the species, a decimal or Threat Code is added: .1 (seriously endangered in California), .2 (fairly endangered in California), or .3 (not very endangered in California).

The following special-status plant taxa have been reported or have the potential to occur within the SEA, based on known habitat requirements and geographic range information:

- Norris' beard moss (*Didymodon norrisii*) RPR 2.2
- Sonoran maiden fern (*Thelypteris puberula* var. *sonorensis*) RPR 2.2
- Braunton's milk-vetch (*Astragalus brauntonii*) FE, RPR 1B.1
- Nevin's barberry (*Berberis nevinii*) FE, SE, RPR 1B.1
- Round-leaved filaree (*California macrophylla*) RPR 1B.1
- Peirson's morning-glory (*Calystegia peirsonii*) RPR 4.2
- Southern tarplant (*Centromadia parryi* ssp. *australis*) RPR 1B.1
- San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*) FC, SE, RPR 1B.1
- Santa Susana tarplant (*Deinandra minthornii*) Rare, RPR 1B.2
- San Gabriel bedstraw (*Galium grande*) RPR 1B.2
- Palmer's grapplinghook (*Harpagonella palmeri*) RPR 4.2
- Newhall sunflower (*Helianthus inexpectatus*) RPR 1B.1
- Los Angeles sunflower (*Helianthus nuttallii* ssp. *parishii*) RPR 1A
- Mesa horkelia (*Horkelia cuneata* ssp. *puberula*) RPR 1B.1

- Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*) RPR 1B.1
- Davidson's bushmallow (*Malacothamnus davidsonii*) RPR 1B.2
- Mud nama (*Nama stenocarpum*) RPR 2.2
- Moran's navarretia (*Navarretia fossalis*) FT, RPR 1B.1
- Ojai navarretia (*Navarretia ojaiensis*) RPR 1B.1
- White rabbit-tobacco (*Pseudognaphalium leucocephalum*) RPR 2.2
- Chaparral ragwort (*Senecio aphanactis*) RPR 2.2
- Greata's aster (*Symphyotrichum greatae*) RPR 1B.3
- Slender mariposa lily (*Calochortus clavatus* var. *gracilis*) RPR 1B.2
- Late-flowered mariposa lily (*Calochortus fimbriatus*) RPR 1B.2
- Plummer's mariposa lily (*Calochortus plummerae*) RPR 1B.2
- Chaparral nolina (*Nolina cismontana*) RPR 1B.2
- California Orcutt grass (*Orcuttia californica*) FE, SE, RPR 1B.1

Sensitive Animal Species

The following vertebrate species are state and/or federally-listed as endangered or threatened, and have the potential to occur in the SEA:

- Riverside fairy shrimp (*Streptocephalus woottoni*) FE
- Unarmored threespine stickleback (*Gasterosteus aculeatus williamsoni*) FE, FSS, SE, CDFG Fully Protected
- Arroyo toad (*Anaxyrus californicus*) FE, SSC
- California red-legged frog (*Rana draytonii*) FT, SSC
- Sierra Madre yellow-legged frog (*Rana muscosa*) FE, FSS, SSC
- Western spadefoot (*Spea hammondii*) BLMS, SSC
- Silvery legless lizard (*Anniella pulchra pulchra*) FSS, SSC
- Coastal whiptail (*Aspidoscelis tigris stejnegeri*) CDFG Special Animals List
- Rosy boa (*Charina trivirgata*) BLMS, FSS
- San Bernardino ringneck snake (*Diadophis punctatus modestus*) FSS
- Western pond turtle (*Emys marmorata*) BLMS, FSS, SSC
- San Diego mountain kingsnake (*Lampropeltis zonata pulchra*) FSS, SSC
- Coast horned lizard (*Phrynosoma blainvillii*) BLMS, FSS, SSC
- Coast patch-nosed snake (*Salvadora hexalepis virgultea*) SSC
- Two-striped garter snake (*Thamnophis hammondii*) BLMS, FSS, SSC
- Cooper's hawk (nesting) (*Accipiter cooperii*) CDFG Watch List
- Tricolored blackbird (nesting colony) (*Agelaius tricolor*) BCC, BLMS, SSC, USBC, AWL, ABC
- Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*) CDFG Watch List
- Grasshopper sparrow (*Ammodramus savannarum*) CDFG Special Animals List
- Bell's sage sparrow (*Amphispiza belli belli*) BCC, CDFG Watch List
- Golden eagle (nesting and wintering) (*Aquila chrysaetos*) BCC, BLMS, CDFG Watch List, CDFG Fully Protected, CDF
- Burrowing owl (burrow sites) (*Athene cunicularia*) BCC, BLMS, SSC
- Western yellow-billed cuckoo (*nesting*) (*Coccyzus americanus occidentalis*) FC, BCC, FSS, SE
- Yellow warbler (nesting) (*Dendroica petechia brewsteri*) SSC
- White-tailed kite (nesting) (*Elanus leucurus*) CDFG Fully Protected

- California horned lark (*Eremophila alpestris actia*) CDFG Watch List, LAA (full species, coastal slope)
- California condor (*Gymnogyps californianus*) FE, SE, CDF, CDFG Fully Protected, USBC, AWL, ABC
- Yellow-breasted chat (nesting) (*Icteria virens*) SSC
- Loggerhead shrike (nesting) (*Lanius ludovicianus*) BCC, SSC, LAA (coastal slope wintering)
- Coastal California gnatcatcher (*Polioptila californica californica*) FT, SSC, USBC, AWL, ABC
- Bank swallow (nesting) (*Riparia riparia*) ST
- Least Bell's vireo (*Vireo bellii pusillus*) FE, BCC, SE, USBC, AWL, ABC
- Pallid bat (*Antrozous pallidus*) FSS, BLMS, SSC, WBWG High
- Spotted bat (*Euderma maculatum*) BLMS, SSC, WBWG High
- Western mastiff bat (*Eumops perotis californicus*) BLMS, SSC, WBWG High
- Silver-haired bat (*Lasionycteris noctivagans*) WBWG Medium
- Western red bat (*Lasiurus blossevilli*) FSS, WBWG High
- Hoary bat (*Lasiurus cinereus*) WBWG Medium
- San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) SSC
- California leaf-nosed bat (*Macrotus californicus*) FSS, SSC, WBWG High
- South coast marsh vole (*Microtus californicus stephensi*) SSC
- Western small-footed myotis (*Myotis ciliolabrum*) BLMS, WBWG Medium
- Yuma myotis (*Myotis yumaensis*) BLMS, WBWG Low–Medium
- San Diego desert woodrat (*Neotoma lepida intermedia*) SSC
- Southern grasshopper mouse (*Onychomys torridus ramona*) SSC
- Los Angeles pocket mouse (*Perognathus longimembris brevinasus*) FSS, SSC
- American badger (*Taxidea taxus*) SSC

Ecological Transition Areas (ETAs)

There are no ETAs designated within this SEA.

Regional Biological Value

The SEA meets several SEA designation criteria and supports many regional biological values. Each criterion and how it is met described below .

CRITERIA ANALYSIS OF THE SANTA SUSANA MOUNTAINS AND SIMI HILLS SEA

Criterion		Status	Justification
A)	The habitat of core populations of endangered or threatened plant or animal species.	Met	Most of the SEA has critical habitat for the coastal California gnatcatcher. A population of the Braunton's milkvetch has critical habitat in the Simi Hills part of the SEA. The SEA has robust populations of rare plants, such as the Plummer's mariposa lily and the Santa Susana tarweed.
B)	On a regional basis, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted	Met	The SEA contains habitat of the extremely rare Santa Susana tarplant. In addition, several plant communities within the SEA are CDFG highest inventory priority communities due to their restricted distribution in the Southern California region. These

Criterion		Status	Justification
	in distribution.		communities include: coastal sage scrub, alluvial scrub, valley oak woodland, valley oak savannah, mainland cherry woodland, native grassland, southern willow scrub, and cottonwood-willow riparian forest.
C)	Within the County, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	All of the plant communities and habitats mentioned above as being restricted in distribution on a regional basis are further restricted in distribution within the County.
D)	Habitat that at some point in the life cycle of a species or group of species, serves as concentrated breeding, feeding, resting, or migrating grounds and is limited in availability either regionally or in the County.	Met	The open space of the SEA allows for connectivity between the Santa Monica Mountains and the San Gabriel Mountains (both the eastern and western sections). Due to the development within the San Fernando Valley and the valley of the Santa Clara River, this is an important corridor for gene flow and species movement.
E)	Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community.	Met	The SEA contains several populations that are unusual or at the extreme ends of their distributions: Douglas-fir, both big cone and the Douglas-fir common to the north, and coastal California gnatcatcher at its western extent. Several unusual vegetation alliances are in the Mountains, for example groves of walnuts and flowering ash. Flowering ash are uncommonly tall. The Santa Susana Mountains contain some representatives of the desert Palmer's oak, which is unusual in the County.
F)	Areas that would provide for the preservation of relatively undisturbed examples of the original natural biotic communities in the County.	Met	The relatively undisturbed nature and large size of the plant communities within the Santa Susana Mountains and Simi Hills provides many undisturbed examples of native, natural communities within the County.

In conclusion, the area is an SEA because it contains: A) core habitats of listed species; B-C) biotic communities, vegetative associations, and habitat of plant and animal species that are restricted in distribution in the County and regionally; D) a very essential migration corridor, which is limited in availability in the County; E) unusual populations at the extreme ends of their distributions that are of scientific interest; and F) areas that provide for the preservation of relatively undisturbed examples of original natural biotic communities in the County.

24. Terminal Island (Pier 400) SEA

Location

General

The Terminal Island (Pier 400) Significant Ecological Area (SEA) is located in the southernmost part of the County within the Port of Los Angeles. Terminal Island (Pier 400) supports one of the few remaining areas for breeding utilized by the endangered least terns. The SEA is an artificial dredge spoil

island located generally in San Pedro Bay within the Port of Los Angeles. Pier 400 is in the outer harbor area, and the least tern nesting area is on the southern end. It is protected from future development per inter-agency agreement among the Port of Los Angeles, U.S. Fish and Wildlife Service, California Department of Fish and Game, and the U.S. Army Corps of Engineers. The area was specifically designed for least tern nesting and is maintained with buffer from the surrounding Port development, close range to foraging areas, and clearing of the flat sandy area to have little vegetation. During the nesting season (April-August) the site is designated as a no-trespassing area. When least terns nest outside the designated boundaries, a buffer is established for the nest(s) until the chicks are fledged. At other times, the Port may use the site for temporary purposes as long as it is restored prior to the following nesting season. The SEA corresponds directly to the California Audubon-designated Globally Important Bird Area (IBA), Pier 400 Tern Colony IBA.

The site is located in the Long Beach and San Pedro Quadrangles of the United States Geological Survey (USGS) 7.5 Minute Map Series (USGS, 1964).

General Boundary and Resources Description

The SEA is not on a natural island. It is an approximately 15-acre fenced area on the south end of Pier 400, part of Terminal Island, in the Los Angeles Harbor. The area is maintained, prepared, and monitored annually by the Port of Los Angeles for the least tern. The nesting site was created, along with the entire Pier 400 peninsula, of material dredged from the Los Angeles Harbor from 1995-2003. The substrate consists of sand with small rocks and many shell pieces. Non-native flora colonize the area every year. Every year before the breeding period, the Port of Los Angeles has the plants surveyed and then cleared to prepare the terrain for what least terns prefer—a flat sandy area that is virtually free of vegetation that the terns can scrape to provide a shallow depression for their eggs. The northern part of Pier 400 is now a shipping container terminal. There is an undeveloped area, covered with low, volunteer vegetation, west of the SEA that may someday be used by the Port. The SEA site has been used by the least tern for nesting since it was created in 1997. The SEA and the adjacent field on the west are separated and protected from Port activity by a chainlink fence with locked gate. In addition, the SEA has a peripheral chick fence to keep the chicks from wandering off the SEA area.

Vegetation

The vegetation in this SEA was removed in 2003 and 2004 to allow additional nesting area for the least tern. The common species seen include sea rocket (*Cakile maritima*), tree tobacco (*Nicotiana glauca*), Bermuda grass (*Cynodon dactylon*), puncture vine (*Tribulus terrestris*), and sow thistle (*Sonchus oleraceus*). This removal was judged a success, and clearing has been continued in recent years. Sensitive plant communities have not been found on the site.

Wildlife

Wildlife diversity and abundance within the SEA is limited by its remote location, only accessible by terrestrial animals after traversing long distances through industrial facilities and the narrow, paved causeway of access. Feral cats, rats and mice, and birds associated with development in the region, such as gulls, crows, rock doves, house finches, house sparrows and mockingbirds have been recorded in the area. Native herons that could prey upon the least tern chicks have been observed in the area. The site was also used for breeding in 2011 by two other species that prefer bare, scraped areas: black skimmers (*Rynchops niger*) and Caspian terns (*Hydroprogne caspia*). Many types of shore birds are found nearby.

Wildlife Movement

The site is a low quality habitat for terrestrial animal foraging, and it does not lie within any identified terrestrial movement routes for wildlife. However, it is well located as a linkage site for migratory waterfowl and some birds, specifically the least tern. Surrounding bay waters on three sides provide suitable area for the least tern foraging. The principle prey items they seek are small, schooling fish that frequent the surface area of bay and estuarine waters.

Sensitive Biological Resources

Sensitive biological resources are habitats or individual species that have special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, and/or rare. This is due to the species' declining or limited population sizes, which usually results from habitat loss. Watch lists of such resources are maintained by the California Department of Fish and Game (CDFG), the United States Fish and Wildlife Service (USFWS), and special groups, such as the California Native Plant Society (CNPS). The following sections indicate the habitats as well as plant and animal species present, or potentially present within the SEA, which have been accorded special recognition.

The site of this SEA is entirely artificial, but it provides the least terns the ideal kind of substrate they prefer: a flat sandy area, devoid of vegetation, that they can scrape for a nesting depression. Artificially created sites (inadvertently created by development) are frequently chosen for breeding by least terns. The site has been used by the least tern for nesting since it was created in 1997 and has been continually managed for this use.

Sensitive Plan Communities and Habitats

The SEA supports no habitat types considered sensitive by resource agencies, namely the CDFG California Natural Diversity Data Base (CNDDB) [2011].

Sensitive Plant Species

No sensitive plants are expected to occur within this SEA.

Sensitive Animal Species

The California least tern (*Sternula antillarum browni*) is both state and federally-endangered. It nests in the SEA and forages in shallow water near the nest site. The western snowy plover (*Charadrius alexandrus nivosus*) is listed as a federally-threatened species and California species of concern, and migrants have been seen but have not nested. Black skimmers ([F-BCC, CA-SSC]) used the site for nesting in the 2011 season.

Ecological Transition Areas (ETAs)

There are no ETAs designated within this SEA.

Regional Biological Value

The SEA meets several SEA designation criteria and supports many regional biological values. Each criterion and how it is met is described below.

Criterion		Status	Justification
A)	The habitat of core populations of endangered or threatened plant or animal species.	Met	This area was set aside because endangered least terns use it for breeding in the summer. Their breeding depends on availability of forage fish, and they may not use the area consistently. In addition there may be some breeding by the black skimmer (bird of concern for the State and USFWS).
B)	On a regional basis, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	This area was set aside because endangered least terns use it for breeding in the summer. Their breeding depends on availability of forage fish, and they may not use the area consistently. In addition there may be some breeding by the black skimmer (bird of concern for the State and USFWS).
C)	Within the County, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	The least tern typically breeds in flat sandy areas that are created by disturbance, but are free of disturbance and vegetation during the breeding period. The area needs to be close to a source of the terns' prey, which are small, estuarine or surface-schooling marine fishes. The choice breeding areas require no disturbance because the terns make an unsheltered scoop for a nest, and eggs and nestlings would be crushed by constant traffic of vehicles or pedestrians. This kind of habitat was once common along the beaches of Southern California, but has nearly disappeared as estuaries have been filled and channelized, and sandy beaches have become a favorite Southern California recreation area.
D)	Habitat that at some point in the life cycle of a species or group of species, serves as concentrated breeding, feeding, resting, or migrating grounds and is limited in availability either regionally or in the County.	Met	Los Angeles has many fine beaches that are potential nesting sites, but nearly all have become recreation areas. The terns have continued to use the areas with protection from disturbance, which are a small number compared to the previously available undisturbed sites.
E)	Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community.	Met	The Terminal Island site is named as an SEA for the summer bird breeding that occurs.
F)	Areas that would provide for the preservation of relatively undisturbed examples of the original natural biotic communities in the County.	Not Met	Due to the artificial construct of the area, the SEA does not serve as a relatively undisturbed example of the original natural biotic communities in the County.

In conclusion, the area is an SEA because it contains: A) the habitat of core populations of

endangered and threatened plant and animal species; B-C) biotic communities, vegetative associations, and habitat of plant and animal species that are either unique or are restricted in distribution in the County and regionally; D) concentrated breeding, feeding, resting, or migrating grounds, which are limited in availability in the County; and E) biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community.

25. Tujunga Valley and Hansen Dam SEA

Location

General

The Tujunga Valley and Hansen Dam Significant Ecological Area (SEA) is located on the northern edge of the San Fernando Valley. The SEA consists of the Tujunga Valley and Wash, starting in the riparian areas of the Big Tujunga, which is the main tributary of the Los Angeles River, within the Angeles National Forest and stretching to include Hansen Dam, Hansen Dam Flood Control Basin, Hansen Dam Park, Hansen Dam Golf Course, Tujunga Wash, and industrial areas downstream of the Hansen Dam. The SEA is entirely in the City of Los Angeles. Most of the part of the SEA upstream, including the Hansen Dam, is a California Audubon-designated State Important Bird Area (IBA), which is part of the Los Angeles Flood Control Basin IBA. The Big Tujunga area is recognized for its great importance to migrating birds on the Pacific Flyway as well as the very rare habitat of alluvial fan scrub, which has uncommon resident birds. The Tujunga Wash above Hansen Dam and into the Angeles National Forest beyond the SEA is designated critical habitat for the federally-threatened Santa Ana sucker (*Catastomus santaanae*). Two other fishes of the original native four for the Los Angeles River also occur in the Wash and upstream in the Big Tujunga: arroyo chub (*Gila orcuttii*) and an unnamed subspecies of the speckled dace group (*Rhinichthys osculus* ssp. 3).

The SEA is located within portions of the United States Geological Survey (USGS) 7.5' California Quadrangles: San Fernando, Sunland and Van Nuys.

General Boundary and Resources Description

The SEA boundary encompasses the Tujunga Valley Wash and the Hansen Dam Recreation area. The SEA begins in the Angeles National Forest downstream of the confluence of Pipe Canyon with the Big Tujunga, and generally includes the Wash area for much of its extent. The Wash most of the time has water, and from downstream at Hansen Lake (in the Hansen Dam Park) to beyond the upstream area of the SEA, is critical habitat for the federally-threatened Santa Ana sucker (*Catostomus santaanae*). This critical habitat extends beyond the SEA and beyond the Big Tujunga Dam to near the headwaters in both Mill Creek and the Upper Big Tujunga Canyon. The state fish species of concern, speckled dace (*Rhinichthys osculus* ssp. 3) and arroyo chub (*Gila orcuttii*) also occur here. A finger extends off the Wash, up a ridge with native chaparral habitat towards Mount Lukens. The boundary travels east to west, and the Wash receives multiple tributaries from the north and south as it flows west. The northeastern end of the Los Angeles Flood Basins IBA begins at about the crossing of Oro Vista Avenue over the Big Tujunga Wash. The clubhouse part of the Angeles National Golf Club next to Foothill Boulevard is excluded from the SEA, but most of the golf course, which has the natural braids of the wash running among its greens, is included in the SEA. East and adjacent to the golf course is a state reserve area for the state and federally-endangered slender-horned spineflower (*Dodecahema leptoceras*). This diminutive wash plant is known locally from Santa Clarita to the east end of the San Bernardino Mountains, and south to the Santa Ana Mountains. It is endangered due to all kinds of development that alters wash flood plains. The golf

course area once had and may still have some plants.

The Wash, golf course, and the reserve area have an unusual remnant vegetation of alluvial fan scrub, with California junipers (*Juniperus californica*), cactus patches of prickly-pear (*Opuntia littoralis*) and cholla (*O. parryi*), in conjunction with the usual riparian and scrub plants. The very sensitive coastal cactus wren (*Campylorhynchus brunneicapillus sandiegensis*) is in residence in this area. The natural area of riparian vegetation is on the banks of the Wash, golf course, and reserve next to the Wash, as well as with a remnant native forest in the stream course of Haines Canyon Creek, which joins the Wash at the golf course. This kind of habitat, which once covered the bajada of coalescing coastal alluvial fans next to the mountains of the County has been nearly extirpated by development and flood control. It is only represented in a few places in the County. The San Gabriel Canyon SEA has another example at the Santa Fe Dam Recreation Area. Migratory waterfowl often use the ponds of the golf course that are filled by Haines Canyon Creek and the Big Tujunga. The alluvial fan habitat mixed with riparian forest continues across the Interstate-210 as the Big Tujunga Wash approaches and flows into Hansen Dam Park.

The SEA has a broad undercrossing of the Interstate-210, which includes a braid of its tributary Haines Canyon Creek crossing under Foothill Boulevard next to Wentworth Street. The Wentworth Street undercrossing is important to wildlife, as it connects to somewhat dispersed horse ranchettes in the Shadow Hills and from there to the natural areas of the Verdugo Mountains and the Verdugo Mountains SEA. Mountain lions may live in the Verdugo Mountains, which would be an important connection for that population as well as for other animals and plants of the Verdugo Mountains.

The Hansen Dam Park is a meeting area for migratory birds with its perennial water and riparian forest that includes some giant sycamores (*Platanus racemosa*) and cottonwoods (*Populus fremontii*). It is a favorite of bird watchers, and the species list has about 260 species. Unusual species have been observed here, such as the federally-endangered coastal California gnatcatcher (*Polioptila californica californica*). Downstream of the Dam, the Hansen Dam Golf Course is included as an ETA, since the pools and mix of native riparian vegetation along with the ornamentals is attractive to wildlife. The downstream side of the earthen Hansen Dam has been planted with coastal sage scrub, and may be attractive to the gnatcatcher. The quarry and recharge areas have many spots of willow scrub and occasional other native vegetation. The quarry and the recharge pool areas are included in the SEA as ETAs up to the undercrossing of San Fernando Boulevard.

The area southwest of the Dam is used as a spreading ground. This has created several freshwater marsh areas that are used by marsh birds, migratory waterfowl, and shore birds. The area is also valuable as a wildlife corridor. The vegetation in the Tujunga Valley runs nearly uninterrupted from the foot of the Verdugo Mountains well up into the San Gabriel Mountains. The area has been recognized for its importance, and is used by the Audubon Society and local universities and colleges as a sample of a rapidly disappearing habitat type. As a result, the resources of the area are well known.

Vegetation

The SEA possesses several important features. The floodplain behind Hansen Dam supports one of the last examples of open coastal sage scrub vegetation that was once found in the numerous arroyos of the Los Angeles Basin. Portions of the river bottom have surface moisture, and support small pockets of fresh water marsh, which is another limited resource in the County. The remainder of the arroyo and surrounding hillsides are dry, and support several species of plants that are otherwise found only on the desert slopes of the San Gabriel Mountains. Populations of Nevin's barberry (*Berberis nevinii*) and slender-horned spineflower have been found in the Tujunga Valley

Wash. Both species are extremely limited in distribution and have been placed on the federal endangered species list.

Vegetation within the SEA is comprised of a variety of community types. The diversity of the communities reflects the topography of the area. All plant species observed or recorded in previous documentation within the SEA are indicated in the *Comprehensive Floral & Faunal Compendium* of the *Los Angeles County SEA Update Study 2000 Background Report*. Sensitive plant species and plant communities occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources section.

Descriptions and general locations of the each plant community present within the SEA are given below.

Chaparral: A shrub community composed of robust species. Within this SEA, a number of chaparral sub-communities are found, which are differentiated by their dominant plant species. These include chamise (*Adenostoma fasciculatum*), buck brush (*Ceanothus* spp.), scrub oak (*Quercus berberidifolia*), interior live oak (*Quercus wislizenii*) and mosaics of these depending on mixes of species and elevation. These and other shrub species form dense vegetation covers growing 5 to 10 feet in height. The development of chaparral is pronounced over large hillside areas throughout the SEA.

Corresponding MCV communities:

- *Adenostoma fasciculatum* (chamise chaparral) Shrubland Alliance
- *Adenostoma fasciculatum-Salvia apiana* (chamise-white sage chaparral) Shrubland Alliance
- *Ceanothus greggii* [*vestitus*] (cup leaf ceanothus chaparral) Shrubland Alliance
- *Ceanothus oliganthus* (hairy leaf ceanothus chaparral) Shrubland Alliance
- *Prunus ilicifolia* (holly leaf cherry chaparral) Shrubland Alliance
- *Rhus ovata* (sugarbush chaparral) Shrubland Alliance

Coastal Sage Scrub: Consists of drought-deciduous, low, soft-leafed shrubs and herbs on gentle to steep slopes under 1,500 feet in elevation. This community is dominated by California sagebrush, California buckwheat (*Eriogonum fasciculatum*), black sage (*Salvia mellifera*), purple sage (*Salvia leucophylla*), and California brittle bush (*Encelia californica*). Coastal sage scrub is distributed throughout the SEA along dry ridgelines, slopes, and other areas previously disturbed by fire.

Corresponding MCV communities:

- *Artemisia californica* (California sagebrush scrub) Shrubland Alliance
- *Artemisia californica-Salvia mellifera* (California sagebrush-black sage scrub) Shrubland Alliance
- *Artemisia californica-Eriogonum fasciculatum* (California sagebrush-California buckwheat scrub) Shrubland Alliance
- *Encelia californica* (California brittle bush scrub) Shrubland Alliance
- *Dendromecon rigida* (bush poppy scrub) Shrubland Alliance
- *Diplacus* [*Mimulus*] *aurantiacus* (bush monkeyflower scrub) Shrubland Alliance
- *Salvia apiana* (white sage scrub) Shrubland Alliance
- *Salvia leucophylla* (purple sage scrub) Shrubland Alliance
- *Salvia mellifera* (black sage scrub) Shrubland Alliance
- *Eriogonum fasciculatum* (California buckwheat scrub) Shrubland Alliance

- *Lotus scoparius* [*Acmispon glaber*] (deer weed scrub) Shrubland Alliance

Non-Native Grassland: Consists of dominant invasive annual grasses that are primarily of Mediterranean origin. Dominant species found within this community include wild oat (*Avena fatua*), slender oat, red brome, ripgut brome (*Bromus diandrus*), and herbs such as black mustard and wild radish. Non-native grasslands are located in small to large patches throughout the SEA in previously disturbed areas, cattle pastures, valley bottoms, and along road sides.

Corresponding MCV communities:

- *Avena* (*barbata*, *fatua*) Semi-Natural Herbaceous Stands
- *Brassica* (*nigra*) and other mustards Semi-Natural Herbaceous Stands
- *Bromus* (*diandrus*, *hordeaceus*)-*Brachypodium distachyon* Semi-Natural Herbaceous Stands
- *Bromus rubens-Schismus* (*arabicus*, *barbatus*) Semi-Natural Herbaceous Stands
- *Lolium perenne* ([*Festuca perennis*] perennial rye grass fields) Semi-Natural Herbaceous Stands

Coast Live Oak Woodland: Dominated by coast live oak (*Quercus agrifolia* var. *agrifolia*) with a poorly developed shrub layer, which may include toyon (*Heteromeles arbutifolia*), golden currant (*Ribes aureum*), laurel sumac (*Malosma laurina*), western blue elderberry (*Sambucus nigra* var. *caerulea*), and mulefat (*Baccharis salicifolia*). Some coast live oak woodlands in the area include scattered Southern California black walnut (*Juglans californica*) or valley oak (*Quercus lobata*). This community occurs throughout the SEA and generally along canyon bottoms and more mesic north-facing slopes.

Corresponding MCV communities:

- *Quercus agrifolia* (coast live oak woodland) Woodland Alliance

Cottonwood-Willow Riparian Forest: An open broad-leafed winter-deciduous riparian forest dominated by Fremont cottonwood (*Populus fremontii*), arroyo willow (*Salix lasiolepis*), and red willow (*Salix laevigata*). This community occurs in segments along of many of the drainages, ponds, and lakes throughout the SEA.

Corresponding MCV communities:

- *Populus fremontii* (Fremont cottonwood woodlands) Forest Alliance
- *Salix lasiolepis* (arroyo willow thickets) Woodland Alliance
- *Salix laevigata* (red willow thickets) Woodland Alliance

Freshwater Marsh: Small areas supporting freshwater marsh are found at scattered locations. Freshwater marsh requires perennially shallow water or saturated soils. Dominant plants are emergent species including cattails and bulrushes.

Corresponding MCV communities:

- *Phragmites australis* (common reed marshes) Herbaceous Alliance and Semi-Natural Stands
- *Schoenoplectus californicus* (California bulrush marsh) Herbaceous Alliance
- *Typha* (*angustifolia*, *domingenis*, *latifolia*) (cattail marshes) Herbaceous Alliance
- *Lemna* (*minor*) and relatives Provisional (duckweed blooms) Herbaceous Alliance

Disturbed or Barren Areas: Areas that either completely lack vegetation or are dominated by ruderal species. Ruderal vegetation typically found within the SEA include non-native grasses and a high proportion of weedy species, including black mustard and thistle species. Several disturbed areas are scattered throughout the SEA and take the form of residential developments, paved roads, fire breaks, dirt access roads, trails, and other similarly disturbed areas.

Corresponding MCV communities:

No corresponding communities at this time

Wildlife

Wildlife within the SEA is generally diverse and abundant due to large acreages of natural open space and diversity of habitat types. While a few wildlife species are entirely dependent on a single vegetative community, the entire mosaic of all the vegetation communities within the SEA and adjoining areas constitutes a functional ecosystem for a variety of wildlife species, both within the SEA and as part of the regional ecosystem.

The analysis of invertebrates in this study is severely limited due to the lack of data; the SEA, however, undoubtedly supports healthy populations of a diverse assortment of invertebrate species. The native fish populations have been augmented with many additions of non-native fishes from other places, particularly those that are often fished. Amphibian populations are plentiful in the SEA due to the high moisture content provided by freshwater marshes present, as well as the large number of drainages and flood control basin.

The SEA is also likely to support a variety of amphibians within the moister woodland areas and canyon bottoms. Common amphibians to the area are salamanders, Baja California chorus frog (*Pseudacris hypochondriaca*), and California toad (*Anaxyrus halophilus*). Many essential reptilian habitat characteristics are present within the SEA. These include rock outcroppings that allow for high visibility and small mammal burrows for cover and escape from predators and extreme weather. These characteristics, as well as the variety of habitat types present, are likely to support a wide variety of reptilian species. Common reptiles to the area are lizards and snakes. The area southwest of the Dam is used as a spreading ground. This has created several fresh water marsh areas that are used by marsh birds, migratory waterfowl, and shore birds. The many year-round water sources located throughout the SEA provide for abundant raptor foraging, perching, and nesting habitat along the slopes of the San Gabriel and Verdugo Mountain Ranges.

The scrubland, woodland, riparian, and grassland habitats in the SEA provide foraging and cover habitat for year-round residents and seasonal residents. Within the Hansen Dam Recreation Area, the mammals that are expected to be found are typical of those that would “occur regularly in disturbed areas and the urban edge.” These include California ground squirrel (*Spermophilus beecheyi*), Botta’s pocket gopher (*Thomomys bottae*), Virginia opossum (*Didelphis virginiana*), desert cottontail (*Sylvilagus audubonii*), striped and spotted skunks (*Mephitis mephitis and Spilogale gracilis*), raccoon (*Procyon lotor*), coyote (*Canis latrans*), mule deer (*Odocoileus hemionus*), etc. The combination of these resources, as well as the confluence of many community types provides a high diversity of animal species.

Wildlife Movement

Although wildlife movement is hampered by development surrounding the SEA to the south, animals are still able to move through the adjacent hills and valleys, and through the Verdugo Mountains,

well up into the San Gabriel Mountains. Due to its large size and topographic complexity, many linkages are certain to occur within the SEA at various bottlenecks. These linkages allow movement between large open space areas within the SEA. Although there are significantly large open spaces within the SEA, contiguous habitat linkages between them are critical in reducing bottlenecks and providing for long-term sustainability. A wide variety of wildlife use linkages throughout the SEA, including mountain lion (*Puma concolor*), coyote, mule deer, bobcat (*Lynx rufus*), and a number of medium-sized mammals. The Wentworth Street underpass of Interstate-210 is a conduit for wildlife through the dispersed residential neighborhoods of the Shadow Hills. The Shadow Hills are the westernmost extent of the Verdugo Mountains, which provide a large area of natural habitat for wildlife.

Sensitive Biological Resources

Sensitive biological resources are habitats or individual species that have special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, and/or rare. This is due to the species' declining or limited population sizes, which usually results from habitat loss. Watch lists of such resources are maintained by the California Department of Fish and Game (CDFG), the United States Fish and Wildlife Service (USFWS), and special groups, such as the California Native Plant Society (CNPS). The following sections indicate the habitats as well as plant and animal species present, or potentially present within the SEA, which have been accorded special recognition. When species are federally-listed as endangered or threatened, they often have federally-designated, geographically-specific "critical habitat areas." Critical habitat areas, after extensive study by experts, are judged to be essential to conservation and maintenance of the species. Most of the stream course of this SEA is critical habitat for the federally-threatened Santa Ana sucker, and also provides habitat for two co-occurring native fish of state concern, the speckled dace and the arroyo chub.

Sensitive Plan Communities and Habitats

The SEA supports several habitat types considered sensitive by resource agencies. These are inventoried by California Department of Fish and Game (CDFG) in the California Natural Diversity Database (CNDDB) [2011]. The CNDDB includes state and federally-listed endangered, threatened, and rare vascular plants, as well as several sensitive vertebrate species. The array and composition of these communities has been discussed earlier in this section (see Section 2, Vegetation, above). These communities include chamise-white sage chaparral, holly leaf cherry chaparral, California brittle bush scrub, bush monkeyflower scrub, white sage scrub, and Fremont cottonwood woodlands, which occur throughout the SEA. These communities, or closely related designations, are considered high priority communities by the CDFG, which indicates that they are experiencing a decline throughout their range. The array and composition of these communities has been discussed in the Vegetation section.

Sensitive Plant Species

The statuses of rare plants are hierarchically categorized by the CNPS using a rank and decimal system. The initial category level of Rare Plant Rank is indicated by the ranks 1A (presumed extinct in California), 1B (rare or endangered in California and elsewhere), 2 (rare or endangered in California but more common elsewhere), 3 (more information needed, a review list), and 4 (limited distribution). In cases where the CNPS has further identified the specific threat to the species, a decimal or Threat Code is added: .1 (seriously endangered in California), .2 (fairly endangered in California), or .3 (not very endangered in California).

The following special-status plant taxa have been reported or have the potential to occur within the SEA, based on known habitat requirements and geographic range information:

- Braunton's milk-vetch (*Astragalus brauntonii*) FE, RPR 1B.1
- Nevin's barberry (*Berberis nevinii*) FE, SE, RPR 1B.1
- Lewis' evening-primrose (*Camissonia lewisii*) RPR 3
- Southern tarplant (*Centromadia parryi* ssp. *australis*) RPR 1B.1
- San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*) FC, SE, RPR 1B.1
- Parry's spineflower (*Chorizanthe parryi* var. *parryi*) RPR 1B.1
- Slender-horned spineflower (*Dodecahema leptoceras*) FE, SE, RPR 1B.1
- Mesa horkelia (*Horkelia cuneata* ssp. *puberula*) RPR 1B.1
- Coulter's goldfields (*Lasthenia glabrata* ssp. *coulteri*) RPR 1B.1
- Davidson's bushmallow (*Malacothamnus davidsonii*) RPR 1B.2
- White rabbit-tobacco (*Pseudognaphalium leucocephalum*) RPR 2.2
- Chaparral ragwort (*Senecio aphanactis*) RPR 2.2
- Greata's aster (*Symphyotrichum greatae*) RPR 1B.3
- Slender mariposa lily (*Calochortus clavatus* var. *gracilis*) RPR 1B.2
- Plummer's mariposa lily (*Calochortus plummerae*) RPR 1B.2
- California satintail (*Imperata brevifolia*) RPR 2.1

Sensitive Animal Species

The following special-status animal species are reported or have the potential to occur within the SEA, based on known habitat requirements and known range attributes:

- California red-legged frog (*Rana draytonii*) FT, SSC
- Western spadefoot (*Spea hammondii*) BLMS, SSC
- Coast Range newt (*Taricha torosa*) SSC
- Silvery legless lizard (*Anniella pulchra pulchra*) FSS, SSC
- Coastal whiptail (*Aspidoscelis tigris stejnegeri*) CDFG Special Animals List
- Western pond turtle (*Emys marmorata*) BLMS, FSS, SSC
- Coast horned lizard (*Phrynosoma blainvillii*) BLMS, FSS, SSC
- Two-striped garter snake (*Thamnophis hammondii*) BLMS, FSS, SSC
- Cooper's hawk (*Accipiter cooperii*) CDFG Watch List
- Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*) CDFG Watch List
- Bell's sage sparrow (*Amphispiza belli belli*) BCC, CDFG Watch List
- Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) FC, BCC, FSS, SE
- White-tailed kite (*Elanus leucurus*) CDFG Fully Protected
- Southwestern willow flycatcher (*Empidonax traillii extimus*) FE, FSS, SE, USBC, AWL, ABC
- California horned lark (*Eremophila alpestris actia*) CDFG Watch List, LAA
- Prairie falcon (*Falco mexicanus*) BCC, CDFG Watch List, LAA
- American peregrine falcon (*Falco peregrinus anatum*) BCC, FSS, SE, CDF, CDFG Fully Protected, AWL, ABC
- Coastal California gnatcatcher (*Polioptila californica californica*) FT, SSC, USBC, AWL, ABC
- Least Bell's vireo (*Vireo bellii pusillus*) FE, BCC, SE, USBC, AWL, ABC
- Pallid bat (*Antrozous pallidus*) FSS, BLMS, SSC, WBWG High
- Spotted bat (*Euderma maculatum*) BLMS, SSC, WBWG High

- Western mastiff bat (*Eumops perotis californicus*) BLMS, SSC, WBWG High
- Silver-haired bat (*Lasionycteris noctivagans*) WBWG Medium
- Hoary bat (*Lasiurus cinereus*) WBWG Medium
- Western yellow bat (*Lasiurus xanthinus*) WBWG High
- San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) SSC
- California leaf-nosed bat (*Macrotus californicus*) FSS, SSC, WBWG High
- San Diego desert woodrat (*Neotoma lepida intermedia*) SSC
- Big free-tailed bat (*Nyctinomops macrotis*) SSC, WBWG Medium-High
- Southern grasshopper mouse (*Onychomys torridus ramona*) SSC
- Los Angeles pocket mouse (*Perognathus longimembris brevinasus*) FSS, SSC
- American badger (*Taxidea taxus*) SSC
- Santa Ana sucker (*Catostomus santaanae*) FT, SSC
- Arroyo chub (*Gila orcuttii*) SSC
- Santa Ana speckled dace (*Rhinichthys osculus* ssp. 3) SSC

Ecological Transition Areas (ETAs)

ETAs in this SEA are chiefly on the south side of Hansen Dam and include the dam restoration of coastal sage scrub, the golf course with intermixed native and ornamental plants, a quarry, and the spreading grounds along the course of the Tujunga Creek. These areas are very attractive to birds, both residents and migrants, and connect the values of the SEA resource area to areas both upstream and downstream from the SEA.

Regional Biological Value

The SEA meets all SEA designation criteria and supports many regional biological values. Each criterion and how it is met is described below.

CRITERIA ANALYSIS OF THE TUJUNGA VALLEY AND HANSEN DAM SEA

Criterion		Status	Justification
A)	The habitat of core populations of endangered or threatened plant or animal species.	Met	The Tujunga Valley Wash supports populations of the federally-endangered plants Nevin's barberry and slender-horned spineflower. Most of the SEA is critical habitat for the federally-threatened Santa Ana sucker. Two other sensitive native fishes, speckled dace and arroyo chub, co-occur with the sucker. Coastal California gnatcatcher may be a resident of the area. The coastal cactus wren nests in the alluvial fan vegetation of the SEA.
B)	On a regional basis, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	The stream is naturally perennial, but largely controlled by the upstream Big Tujunga Dam. Similar wash and floodplain habitat of these plants and fishes is under considerable pressure from development and from flood-control hard channelization throughout Southern California. The rarity of the vegetation extends to other biota that use these areas, and these plants are indicators for a widespread loss of this kind of habitat. Several birds considered species of special concern

			occur in the SEA. They typically occupy alluvial scrub areas ,such as the outwash fans formerly found where mountain canyons exit onto the plain of the Los Angeles Basin, and are in this habitat in the SEA.
C)	Within the County, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution	Met	The wash and floodplain habitat of these plants, fishes, and birds is under considerable pressure from development and for flood-control hard channelization throughout Los Angeles and is much diminished from the continuous habitat it once was.
D)	Habitat that at some point in the life cycle of a species or group of species, serves as concentrated breeding, feeding, resting, or migrating grounds and is limited in availability either regionally or in the County.	Met	This SEA is located on one of the main tributaries of the Los Angeles River, Tujunga Canyon and connects with the Hansen Dam flood and recharge area. In spite of the channelization of the Los Angeles River, this area is still an important connecting and migration area for plants and wildlife between the San Gabriel Mountains, the Verdugo Mountains, and the San Fernando Valley. It is an important rest area for aerial fauna traveling between the Santa Monica Mountains and the San Gabriel Mountains.
E)	Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community.	Met	The scarcity of natural alluvial wash and fan habitats in Los Angeles ensures that the remaining ones are good areas for scientific study of birds and other organisms that were once more common in the Los Angeles area.
F)	Areas that would provide for the preservation of relatively undisturbed examples of the original natural biotic communities in the County.	Met	The Tujunga Valley Wash is a relatively undisturbed example of the alluvial washes and fans that once lined the mountains of Los Angeles. It is near a fresh water marsh area used as a spreading ground that is southwest of the dam. A fresh water marsh near the stream exit from the mountains would have been typical of the former configuration with faults along the mountain base, creating uneven ground that would contain marsh pockets. Now most of this type of area has been developed for residences, and most of the washes have been altered as flood control projects. The Wash, therefore, is important to preserve.

In conclusion, the area is an SEA because it contains: A) the habitat of core populations of endangered and threatened plant and animal species; B-C), biotic communities, vegetative associations, and habitat of plant or animal species that are restricted in distribution on a regional basis and limited in availability in the County; D) habitat for breeding, feeding, resting, and migrating that is limited both in the County and regionally; E) biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community; and F) areas that provide for the preservation of relatively undisturbed examples of original natural biotic communities in the County.

26. Valley Oaks Savannah SEA

Location

General

The Valley Oaks Savannah Significant Ecological Area (SEA) is located north of the Santa Susana Mountains, approximately one mile south of the Santa Clara River and one mile north of Pico Canyon. The SEA is bordered on the east by Interstate-5 and is situated between Valencia Boulevard and Stevenson Ranch Parkway. To the west, the SEA is bordered by the foothills of the Santa Susana Mountains. The habitat within the SEA was once the emblem of Spanish California, with rolling hills, grasslands and spaced giant valley oaks. This was a chief habitat in the San Fernando Valley when it was filled with wildlife, such as herds of pronghorn. Under the influence of European settlers, these areas were at first cattle range, and then gradually developed into residential neighborhoods.

The SEA is located in the Newhall United States Geological Survey (USGS) 7.5' California Quadrangle.

General Boundary and Resources Description

The SEA is bordered to the east by Interstate-5 and is situated between Valencia Boulevard on the north and Stevenson Ranch Parkway on the south of the SEA. To the west, the SEA is bordered by the West Ridge residential area of Valencia to the north, and the foothills of the Santa Susana Mountains to the south. The SEA boundary outlines an irregular area of undisturbed grassland savannah with hundreds of valley oaks (*Quercus lobata*). In the north, the SEA includes a small part of the TPC of Valencia (a private golf club) that has retained a number of its valley oaks on the ridges between sections of the golf course. The topography is rolling ridges that trend northeast-southwest along the edge of development. The West Ridge development is on graded areas of those rolling ridges.

The SEA is almost completely undisturbed, except for a few dirt roads. This area contains one of the last remaining stands of valley oak (*Quercus lobata*) in the Santa Clarita Valley. The site consists of specimen trees scattered over the SEA. The adjoining natural hills to the southwest of the SEA have a mixture of plants from the coastal sage chaparral scrub and chaparral communities, which are typical of those found in the Santa Clarita Valley. Other vegetation on the SEA in the southwest area includes coastal sage chaparral scrub and non-native grasses.

The majority of the SEA consists of undisturbed open space bordered by a few high density residential developments. Open space that adjoins the SEA to the southwest is mostly vegetated with dense stands of chaparral. Other types of vegetation, such as woodlands and grasslands, occur in smaller portions that are scattered throughout the adjacent land on moist or north-facing slopes and canyon bottoms. Lesser amounts of coastal sage chaparral scrub are also present, chiefly as an early successional community in areas that have been previously disturbed.

Vegetation

All plant species observed or recorded in previous documentation within the SEA are indicated in the *Comprehensive Floral & Faunal Compendium* of the *Los Angeles County SEA Update Study 2000 Background Report*. More recent survey findings have also been reviewed here in order to reflect the current status of the area. Findings from the Santa Clarita Valley Area Plan, Los Angeles

Department of Regional Planning, 2010 have been reviewed and included. Sensitive plant species and plant communities occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources section.

Descriptions and general locations of the each plant community present within the SEA are given below.

Valley Oak Savannah: An open-canopy woodland found on deep, well-drained alluvial soils below 2,000 feet. This community is almost exclusively dominated by valley oak with scattered coast live oaks (*Quercus agrifolia* var. *agrifolia*) in some areas and a grassy understory of California buckwheat, forming a savannah-like community throughout much of the SEA.

Corresponding MCV communities:

- *Quercus lobata* (valley oak woodland) Woodland Alliance

Coastal Sage Chaparral Scrub Communities: Consist of drought-deciduous, low, soft-leaved shrubs and herbs on gentle to steep slopes under 3,000 feet in elevation. Several dominant species may occur within scrub communities, with some areas overwhelmingly dominated by one or two species. Dominant species include California sagebrush, California buckwheat, California brittle bush (*Encelia californica*), purple sage (*Salvia leucophylla*), bush mallow (*Malacothamnus fasciculatus*), Menxie's goldenbush (*Isocoma menziesii*), and deer weed (*Acmispon glaber*).

Corresponding MCV communities:

- *Artemisia californica* (California sagebrush scrub) Shrubland Alliance
- *Artemisia californica-Salvia mellifera* (California sagebrush-black sage scrub) Shrubland Alliance
- *Artemisia californica-Eriogonum fasciculatum* (California sagebrush-California buckwheat scrub) Shrubland Alliance
- *Encelia californica* (California brittle bush scrub) Shrubland Alliance
- *Dendromecon rigida* (bush poppy scrub) Shrubland Alliance
- *Isocoma menziesii* (Menzie's golden bush scrub) Shrubland Alliance
- *Salvia apiana* (white sage scrub) Shrubland Alliance
- *Salvia leucophylla* (purple sage scrub) Shrubland Alliance
- *Salvia mellifera* (black sage scrub) Shrubland Alliance
- *Eriogonum fasciculatum* (California buckwheat scrub) Shrubland Alliance
- *Ericameria linearifolia* (narrowleaf goldenbush scrub) Provisional Shrubland Alliance
- *Lotus scoparius* [*Acmispon glaber*] (deer weed scrub) Shrubland Alliance
- *Malacothamnus fasciculatus* (bush mallow scrub) Shrubland Alliance

Grassland Communities: Consist of low, herbaceous vegetation dominated by grasses, but generally also harbor native forbs and bulbs, as well as naturalized annual forbs. Non-native grassland consists of dominant invasive annual grasses that are primarily of Mediterranean origin. Dominant species found within this community include wild oat, slender wild oat, foxtail chess, ripgut brome, along with scattered coastal sage chaparral scrub species. Non-native grasslands occur along the western portion of the north boundary of the SEA.

Corresponding MCV communities:

- *Avena* (*barbata*, *fatua*) Semi-Natural Herbaceous Stands
- *Brassica* (*nigra*) and Other Mustards Semi-Natural Herbaceous Stands
- *Bromus* (*diandrus*,*hordeaceus*)-*Brachypodium distachyon* Semi-Natural Herbaceous Stands
- *Bromus rubens-Schismus* (*arabicus*, *barbatus*) [*Bromus madritensis* ssp. *rubens*] Semi-Natural Herbaceous Stands
- *Lolium perenne* [*Festuca perennis*] (perennial rye grass fields) Semi-Natural Herbaceous Stands

Disturbed or Barren Areas: Areas that either completely lack vegetation or are dominated by ruderal species. Ruderal vegetation typically found within the SEA include non-native grasses and a high proportion of weedy species, including black mustard and thistle species. The primary disturbed areas within the SEA are dirt roadways.

Corresponding MCV communities:

None at this time.

Wildlife

Wildlife populations within the SEA are limited in diversity due to the area's physiographic size and its nearly complete surrounding by development. While a few wildlife species are entirely dependent on a single vegetative community, the entire mosaic of all the vegetation communities within the SEA and adjoining areas constitutes a functional ecosystem for a variety of wildlife species, both within the SEA and as part of the regional ecosystem.

The analysis of invertebrates is severely limited due to the lack of specific data; however, the SEA is likely to support small healthy populations of invertebrate species based on its undisturbed nature and type of habitat. Acorns within the Valley Oak Savannah provide a valuable food source for a variety of wildlife. Also, the mature trees are an important source of nesting and roosting habitat for birds and other arboreal vertebrates. The scrubland, woodland, and grassland habitats in and adjacent to the SEA provide foraging and cover habitat for year-round residents, seasonal residents, and migrating song birds. In addition, the SEA contains abundant raptor foraging, perching, and nesting habitat. Mammal populations within the SEA respond favorably to these habitats. Although mammal populations within the SEA are expected to be limited due to the size of the SEA, they are still likely to utilize the area based on the habitats present. Amphibians may not be abundant due to the lack of water in the SEA; however, shaded areas within the woodland may be moist enough to allow for a few species to occupy the site. Reptilian diversity within the SEA is highest within patches of coastal sage chaparral scrub and may be abundant due the presence of alluvial wash habitat on adjacent property.

Wildlife Movement

Wildlife movement within the SEA is limited to local movement of foraging animals. Although the SEA does not support regional corridors itself, adjacent lands to the west and northwest may be important linkages for wildlife movement to and from the Santa Susana Mountains and the Santa Clara River. The location of the SEA, therefore, may be important as a corridor buffer and/or adjacent foraging grounds.

Sensitive Biological Resources

Sensitive biological resources are habitats or individual species that have special recognition by

federal, state, or local conservation agencies and organizations as endangered, threatened, and/or rare. This is due to the species' declining or limited population sizes, which usually results from habitat loss. Watch lists of such resources are maintained by the California Department of Fish and Game (CDFG), the United States Fish and Wildlife Service (USFWS), and special groups, such as the California Native Plant Society (CNPS). The following sections indicate the habitats as well as plant and animal species present, or potentially present within the SEA, which have been accorded special recognition.

Sensitive Plan Communities and Habitats

The SEA supports four plant community types considered sensitive by resource agencies. These are inventoried by California Department of Fish and Game (CDFG) in the California Natural Diversity Database (CNDDB) [2011]. The CNDDB includes state and federally-listed endangered, threatened, and rare vascular plants, as well as several sensitive vertebrate species. These communities include valley oak woodland, California brittle bush scrub, white sage scrub, and narrowleaf goldenbush scrub. The valley oak woodland occupies the majority of the SEA, and the remaining alliances occur in the southwestern part of the SEA. These communities, or closely related designations, are considered high priority communities by the CDFG, which indicates that they are experiencing a decline throughout their range. The array and composition of these communities has been discussed in the Vegetation section.

Sensitive Plant Species

The statuses of rare plants are hierarchically categorized by the CNPS using a rank and decimal system. The initial category level of Rare Plant Rank is indicated by the ranks 1A (presumed extinct in California), 1B (rare or endangered in California and elsewhere), 2 (rare or endangered in California but more common elsewhere), 3 (more information needed, a review list), and 4 (limited distribution). In cases where the CNPS has further identified the specific threat to the species, a decimal or Threat Code is added: .1 (seriously endangered in California), .2 (fairly endangered in California), or .3 (not very endangered in California).

The following special-status plant taxa have been reported or have the potential to occur within the SEA, based on known habitat requirements and geographic range information:

- Peirson's morning-glory (*Calystegia peirsonii*) RPR 4.2
- San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*) RPR 1B.1, SE, federal candidate (FC)
- Short-joint beavertail (*Opuntia basilaris* var. *brachyclada*) RPR 1B.2
- White rabbit-tobacco (*Pseudognaphalium leucocephalum*) RPR 2.2
- Slender mariposa lily (*Calochortus clavatus* var. *gracilis*) RPR 1B.2
- Plummer's mariposa lily (*Calochortus plummerae*) RPR 1B.2

Sensitive Animal Species

The following special-status animal species are reported or have the potential to occur within the SEA, based on known habitat requirements and known range attributes:

- Western spadefoot (*Spea hammondii*) BLMS, SSC
- Silvery legless lizard (*Anniella pulchra pulchra*) FSS, SSC
- Coastal whiptail (*Aspidoscelis tigris stejnegeri*) CDFG Special Animals List

- Rosy boa (*Charina trivirgata*) BLMS, FSS
- Coast horned lizard (*Phrynosoma blainvillii*) BLMS, FSS, SSC
- Cooper's hawk (*Accipiter cooperii*) CDFG Watch List
- Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*) CDFG Watch List
- Grasshopper sparrow (*Ammodramus savannarum*) CDFG Special Animals List
- Bell's sage sparrow (*Amphispiza belli belli*) BCC, CDFG Watch List
- Burrowing owl (*Athene cunicularia*) BCC, BLMS, SSC
- White-tailed kite (*Elanus leucurus*) CDFG Fully Protected
- California horned lark (*Eremophila alpestris actia*) CDFG Watch List, LAA
- Loggerhead shrike (*Lanius ludovicianus*) BCC, SSC, LAA
- Coastal California gnatcatcher (*Polioptila californica californica*) FT, SSC, USBC, AWL, ABC
- Pallid bat (*Antrozous pallidus*) FSS, BLMS, SSC, WBWG High
- Spotted bat (*Euderma maculatum*) BLMS, SSC, WBWG High
- Western mastiff bat (*Eumops perotis californicus*) BLMS, SSC, WBWG High
- Hoary bat (*Lasiurus cinereus*) WBWG Medium
- San Diego black-tailed jackrabbit (*Lepus californicus bennettii*) SSC
- California leaf-nosed bat (*Macrotus californicus*) FSS, SSC, WBWG High
- San Diego desert woodrat (*Neotoma lepida intermedia*) SSC

Ecological Transition Areas (ETAs)

There are no ETAs designated within this SEA.

Regional Biological Value

The SEA meets all SEA designation criteria and supports many regional biological values. Each criterion and how it is met is described below.

CRITERIA ANALYSIS OF THE VALLEY OAKS SAVANNAH SEA

Criterion		Status	Justification
A)	The habitat of core populations of endangered or threatened plant or animal species.	Met	The County considers oaks as indicators of the presence of important biological communities for preservation, and the uncommon valley oaks of the western areas of the County are especially valued.
B)	On a regional basis, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	The County has the southern boundary of occurrence for the valley oak, which has its core population in the California Central Valley. This makes the valley oak areas important for Southern California—they are very uncommon for the region as a whole.
C)	Within the County, biotic communities, vegetative associations, and habitat of plant or animal species that	Met	The valley oak is uncommon in the County, and the western areas with this species are scattered.

Criterion		Status	Justification
	are either unique or are restricted in distribution.		
D)	Habitat that at some point in the life cycle of a species or group of species, serves as concentrated breeding, feeding, resting, or migrating grounds and is limited in availability either regionally or in the County.	Met	Oaks are the basic structure for complex communities of organisms. They form shelter and provide many ecosystem functions that facilitate breeding, feeding, resting, and migration. As the basis of the community, it is important to conserve this habitat.
E)	Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community.	Met	The valley oaks of the County are on the southern edge of the species' range. This makes them important as the extreme in physical and geographical limits for the scientific study of the species.
F)	Areas that would provide for the preservation of relatively undisturbed examples of the original natural biotic communities in the County.	Met	Although the SEA area is small, this savannah is natural and representative of a natural biotic community that has chiefly been lost in the County.

In conclusion, the area is an SEA because it contains: A) the habitat of core populations of endangered and threatened plant and animal species; B-C) biotic communities, vegetative associations, and habitat of plant and animal species that are either unique or are restricted in distribution in the County and regionally; D) concentrated breeding, feeding, resting, or migrating grounds, which are limited in availability in the County; E) biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community; and F) a natural savannah of valley oaks, once a common habitat on the west side of the County.

27. Verdugo Mountains SEA

Location

General

The Verdugo Mountains Significant Ecological Area (SEA) is located within the Verdugo Mountains. This SEA encompasses the Verdugo Mountains south of Interstate-210 and east of the Interstate-5, as well as a portion of these mountains north of Interstate-210.

The Verdugo Mountains are a wilderness island in the middle of the urbanized metropolitan area of the County, surrounded by the cities of Los Angeles, Burbank and Glendale. This area is cherished by the local communities, much of which are designated agricultural with many equestrian properties. The Verdugo Mountains have retained a rural atmosphere despite their proximity to urban Los Angeles. The

Verdugo Mountains currently encompass wilderness area, which ranges through various chaparral, coastal sage chaparral scrub, southern willow scrub, coast live oak woodland and forest ecosystems, and many riparian areas with seasonal waterfalls. It is one of the few remaining natural regions in the Los Angeles area that supports abundant native wildlife and habitats, and also contains several rare and sensitive plant and animal species. The geographic location of the Verdugo Mountains makes them important for scientific study, genetic interchange between otherwise isolated populations, and recreation for urban residents.

The SEA is located at least partially in each of the following United States Geological Survey (USGS) 7.5' California Quadrangles: Burbank, Sunland, and Pasadena.

General Boundary and Resources Description

The SEA is an island refuge, providing what remains of a link between plant and animal populations found in the Santa Monica and San Gabriel mountains. Genetic interchange, by way of this linkage is important in perpetuating the genetic variability in isolated populations, and the maintenance of healthy ecosystems. Chaparral and coastal sage chaparral scrub cover the hillsides of the mountains, with lush riparian vegetation, including California bay (*Umbellularia californica*), western sycamore (*Platanus racemosa*), coast live oak (*Quercus agrifolia* var. *agrifolia*), ferns, and ocellated Humboldt lily (*Lilium humboldtii* ssp. *ocellatum*), which are found in most of the stream drainages. These plant communities provide habitat that is essential to the diverse and abundant fauna that are found in the area. The mountains are also home to the northernmost population of mission manzanita (*Xylococcus bicolor*).

The proximity of the mountains to urban areas provides an excellent opportunity to study the interaction between wild animal populations and humans. The area has already been used for studies concerned with public health. The Interstate-210 crosses the northern edge and there is some intrusion of development along La Tuna Canyon Road. Residential development is beginning to trim the area and has been excluded from the SEA. However, present human use of the natural, native area has been low and has not significantly affected the natural resources found in the Verdugo Mountains.

The northernmost point of the SEA is in the Shadow Hills district of the City of Los Angeles at the west side of the undercrossing of Sunland/Foothill Boulevard beneath the Interstate-210. The freeway frontage is native vegetation and connective to the north with the Wentworth Street undercrossing of Interstate-210. The connection is through native vegetation along the freeway frontage and among dispersed equestrian ranchettes in the Shadow Hills. Wentworth Street ends a short distance east of Interstate-210 at the Angeles National Golf Club, which has its greens interspersed among braided stream courses of the Big Tujunga Canyon alluvial fan. The golf course is part of the SEA. The native vegetation along the freeway, at the restored County Public Works area on the north side of Wentworth, and the native vegetation among the residences of Shadow Hills is all considered an important conduit for wildlife traversing among the San Gabriel Mountains, the SEA, and the Verdugo Mountains.

The SEA boundary follows southward along the southwest side of the Interstate-210 for about a half mile and then crosses to the northeast side of Interstate-210, along a ridge that connects to slopes with natural, native habitat that continues east, along the southern border of the communities of Sunland and Tujunga. In the vicinity of Pasko Peak, the SEA border is drawn around development in the southern edge of the community of Tujunga. The SEA border recrosses the Interstate-210 and then La Tuna Canyon Road. The crossing boundary goes along the east side of a northern tributary of La Tuna Canyon.

A paved road goes along the stream course in La Tuna Canyon, and the SEA includes about two miles

of native, natural vegetation bordered on the eastern, undeveloped section of the road. The developed western end of La Tuna Canyon Road is excluded from the SEA in a “cherry stem” configuration.

After crossing Interstate-210 and La Tuna Canyon Road, the SEA tracks the southern side of natural habitat along the Interstate-210 for about a mile. The boundary trends irregularly southeast excluding development in the flatter areas that border the Verdugo Wash in the Verdugo City District of Glendale. The SEA includes the incised canyons of Sheep Corral, Cunningham, Henderson, Engleheard, and unnamed others, which are all tributaries of the channelized Verdugo Wash.

In the relatively narrowed area around the State Route-2 (Verdugo Canyon) between the San Rafael Hills on the west and the Verdugo Mountains on the East, the SEA continues irregularly south along the natural, native vegetation of the steep hillsides of the Verdugo Mountains that border Glendale. The SEA includes many unnamed canyons and also Ayars Canyon and Deer Creek at the end of Beaudry Boulevard. The unnamed canyon north of Dead Horse Canyon has a possible wildlands connection with the San Rafael Hills. Its northeast-facing slope along Sunshine Drive has chiefly native vegetation and ends in the Verdugo Park on Verdugo Boulevard. Across Verdugo Boulevard is Glendale Community College. The College’s eastern border is a natural ridge that connects with the Mountain Avenue overpass of State Route-2 and native vegetation of the San Rafael Hills. Verdugo Boulevard and its development is a substantial block to terrestrial wildlife movement, but aerial fauna and plant seeds can connect fairly easily along this path. In the vicinity of Dead Horse Canyon, the SEA boundary turns generally westward and proceeds irregularly around development in Glendale, including natural parts of Toll, Hillcrest, Sherer, Idelwood, Pomeroy, Brand, and Childs canyons.

The lobe of the Verdugo Mountains between Hillcrest and Brand canyons is the area with the shortest possible traverse, which is a little less than two miles, to the Santa Monica Mountains in Griffith Park. Aerial fauna and plant seeds can easily make the journey, and the Los Angeles River channel at the base of the Santa Monica Mountains has developed a natural bottom and riparian habitat that must be inviting to migrants. A city park and a cemetery are on the route. The Verdugo Mountains are often viewed as one of the principle connections between the Santa Monica Mountains and the San Gabriel Mountains. However, it must be noted that this corridor is highly fragmented and probably impassable for most terrestrial wildlife.

Curving to the northwest in Burbank, the SEA boundary includes the natural, native vegetation of Elmwood, Story, Deer, and Sunset canyons. Sunset Canyon excludes a cherry-stem shaped area around a development. The Wildwood Canyon Park is included in the SEA with its many stately sycamore and coast live oak trees along the narrow stream course. In Stough Canyon the DeBell Municipal Golf course is excluded, as is the paved section of Stough Canyon Road and the buildings of the Stough Canyon Nature Center; however, the hillsides around Stough Canyon Road are included with a lobe of the SEA including the west ridge of Stough. On the west side of this ridge are the excluded Starlight Bowl and a nearby landfill. Continuing northwest, the SEA includes the natural, undeveloped uppermost elevations of McClure, Brace, Cabrini canyons in Burbank, and Fisher, Jeffries, and Chandler canyons of Sun Valley.

North of Chandler is the developed south side of La Tuna Canyon Road, where the SEA boundary turns west along natural vegetation, using lot lines in part, which delineate the extent of fuel modification in this area of high fire hazard. The SEA boundary includes the north-facing south side of La Tuna Canyon for a distance of about three miles. The boundary crosses the road at the point where development stops and natural vegetation is on both sides of the road. From this point, the boundary continues the cherry-stem exclusion westward along the border of natural vegetation on the south-facing slope of La Tuna Canyon. Near the northwestern end of the Verdugo Mountains and La Tuna Canyon, the La Tuna

stream joins the West Burbank Flood Control Channel. The SEA boundary includes the McDonald Creek drainage (tributary of La Tuna) and loops around the north ridge of McDonald Creek, changing direction to the northeast. The SEA boundary includes the natural area along the northern edge of the Verdugo Mountains by again following the edge of development in the Shadow Hills district of the City of Los Angeles. The boundary joins the northernmost point of the SEA near the undercrossing of Interstate-210 for Sunland/Foothill Boulevard.

The SEA is wholly within incorporated boundaries (cities of Los Angeles, Glendale, and Burbank), but much is preserved in conservation easements under the guidance of the Santa Monica Mountains Conservancy.

Vegetation

Vegetation within the SEA is comprised of a large variety of community types. The diversity of the communities reflects the topography of the Verdugo Mountains. The southern slopes are affected by moist marine weather conditions, while the northern slopes are influenced by drier inland weather conditions. In addition, the steepness of many slopes causes sharp differences in vegetation on either side of a ridge. All plant species observed or recorded in previous documentation within the SEA are indicated in the *Comprehensive Floral & Faunal Compendium* of the *Los Angeles County SEA Update Study 2000 Background Report* and other analyses conducted for this area. Sensitive plant species and plant communities occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources section.

Descriptions and general locations of the each plant community present within the SEA are given below.

Chaparral: A shrub community composed of robust species. Within this SEA, a number of chaparral subcommunities are found, and differentiated by their dominant plant species. These include chamise (*Adenostoma fasciculatum*), buck brush (*Ceanothus* spp.), scrub oak (*Quercus berberidifolia*), coast live oak (*Quercus agrifolia* var. *agrifolia*) and mosaics of these, depending on mixes of species and elevation. These and other shrub species form dense vegetation covers growing 5 to 10 feet in height. The development of chaparral is pronounced over large hillside areas throughout the SEA.

Corresponding MCV communities:

- *Adenostoma fasciculatum* (chamise chaparral) Shrubland Alliance
- *Adenostoma fasciculatum-Salvia apiana* (chamise-white sage chaparral) Shrubland Alliance
- *Arctostaphylos glauca* (bigberry manzanita chaparral) Shrubland Alliance
- *Ceanothus greggii* [*vestitus*] (cup leaf ceanothus chaparral) Shrubland Alliance
- *Ceanothus leucodermis* (chaparral whitethorn) Shrubland Alliance
- *Ceanothus oliganthus* (hairy leaf ceanothus chaparral) Shrubland Alliance
- *Prunus ilicifolia* (olly leaf cherry chaparral) Shrubland Alliance

Coastal Sage Chaparral Scrub: A shrubland community exhibiting less robust structure found in this SEA is coastal sage chaparral scrub. This plant community is dominated by California sagebrush (*Artemisia tridentata*), California brittle bush (*Encelia californica*), black sage (*Salvia mellifera*), and California buckwheat (*Eriogonum fasciculatum*). It also forms dense stands, which grow three to four feet in height. Within this SEA, it is generally found in scattered patches, which are highly integrated with mixed chaparral. These are primarily located in the lower elevation hillsides of the SEA.

Corresponding MCV communities:

- *Artemisia californica* (California sagebrush scrub) Shrubland Alliance
- *Artemisia californica-Eriogonum fasciculatum* (California sagebrush-California buckwheat scrub) Shrubland Alliance
- *Encelia californica* (California brittle bush scrub) Shrubland Alliance
- *Salvia leucophylla* (purple sage scrub) Shrubland Alliance
- *Salvia mellifera* (black sage scrub) Shrubland Alliance
- *Eriogonum fasciculatum* (California buckwheat scrub) Shrubland Alliance
- *Lotus scoparius* [*Acmispon glaber*] (deer weed scrub) Shrubland Alliance
- *Malacothamnus fasciculatus* (bush mallow scrub) Shrubland Alliance

Coast Live Oak Woodland: A plant community dominated by *Quercus agrifolia.* Within the SEA, this community includes coast live oak, which typically grows to heights of 20 to 40 feet, and forms either closed or open tree canopies. Oak woodland is most commonly found on north-facing slopes and in drainage bottoms and often intergrades with shrub communities. Understory vegetation varies from grassland in level areas to shrubs where topography is steeper.

Corresponding MCV community:

- *Quercus agrifolia* (coast live oak woodland) Woodland Alliance

Southern Willow Scrub: Found along widely scattered reaches of several drainages throughout this SEA. This community is dominated by species of willow (*Salix* spp.), which form nearly monotypic stands due to their dense growth, with an occasional cottonwood. These stands generally reach 10 to 20 feet in height with little understory vegetation.

Corresponding MCV communities:

- *Salix lasiolepis* (arroyo willow thickets) Shrubland Alliance

Riparian Forest: Along the major drainages, riparian forest is found. Typically, riparian forest grows along streams in bedrock-constrained, steep-sided canyons, resulting in a fairly narrow riparian corridor. The specific dominant plants are not known, but riparian trees such as California bay (*Umbellularia californica*), white alder (*Alnus rhombifolia*), coast live oak, western sycamore (*Platanus racemosa*) and willow occur. There are also a greater number of hydrophytic (moister favoring) plant species in the understory.

Corresponding MCV communities:

- *Alnus rhombifolia* (white alder groves) Forest Alliance
- *Umbellularia californica* (California bay forest) Forest Alliance
- *Quercus agrifolia* (coast live oak woodland) Woodland Alliance
- *Platanus racemosa* (California sycamore woodlands) Woodland Alliance

Wildlife

Wildlife within the SEA is generally diverse and abundant due to large acreages of natural open space and diversity of habitat types. While a few wildlife species are entirely dependent on a single vegetative community, the entire mosaic of all the vegetation communities within the SEA and adjoining areas constitutes a functional ecosystem for a variety of wildlife species, both within the

SEA and as part of the regional ecosystem.

The analysis of invertebrates is severely limited due to the lack of data; the SEA, however, undoubtedly supports healthy populations of a diverse assortment of invertebrate species. Amphibian populations are plentiful in the SEA due to the high moisture content provided by coastal conditions, as well as the large number of drainages and year-round water supplies. The SEA is also likely to support a variety of amphibians within the moister woodland areas and canyon bottoms. Many essential reptilian habitat characteristics are present within the SEA. These include rock outcroppings that allow for high visibility and small mammal burrows for cover and escape from predators and extreme weather. These characteristics, as well as the variety of habitat types present, are likely to support a wide variety of reptilian species.

The scrubland, woodland, riparian, and grassland habitats in the SEA provide foraging and cover habitat for year-round residents, seasonal residents, and migrating song birds. In addition, the SEA encompasses many year-round water sources that are located throughout the SEA and abundant raptor foraging, perching, and nesting habitat along the northern slopes of the Verdugo Mountains. The combination of these resources, as well as the confluence of many community types provides an unusually high diversity of bird species. Mammal populations within the SEA are diverse and reflective of the large size and variation of topography and community types.

All wildlife species previously recorded, as well as those expected to occur, within the SEA are indicated in the *Comprehensive Floral & Faunal Compendium* of the *Los Angeles County SEA Update Study 2000 Background Report*. Sensitive wildlife species occurring or potentially occurring within the SEA are discussed in the Sensitive Biological Resources section.

Wildlife Movement

Although wildlife movement is hampered by adjacent rural development in proximity to the SEA, animals are still able to move through the Verdugo Mountains in many areas. Due to its large size and topographic complexity, many linkages occur within the SEA at various bottlenecks. These linkages allow movement between large open space areas within the SEA, as well as between areas outside the SEA toward the Angeles National Forest. The genetic flow through these areas is crucial in maintaining the diversity and viability of the species within the Verdugo Mountains. Some areas of probable, possible, and perhaps future connection have been indicated in the General Boundary and Resources section. Although there are significantly large open spaces within the SEA, contiguous habitat linkages between them is critical in reducing bottlenecks and providing for long-term sustainability. A wide variety of wildlife use linkages throughout the SEA, including mountain lion (*Puma concolor*), coyote (*Canis latrans*), mule deer (*Odocoileus hemionus*), bobcat (*Lynx rufus*), as well as a number of medium-sized mammals.

Sensitive Biological Resources

Sensitive biological resources are habitats or individual species that have special recognition by federal, state, or local conservation agencies and organizations as endangered, threatened, and/or rare. This is due to the species' declining or limited population sizes, which usually results from habitat loss. Watch lists of such resources are maintained by the California Department of Fish and Game (CDFG), the United States Fish and Wildlife Service (USFWS), and special groups, such as the California Native Plant Society (CNPS). The following sections indicate the habitats as well as plant and animal species present, or potentially present within the SEA, which have been accorded special recognition.

Sensitive Plan Communities and Habitats

The SEA supports several habitat types considered sensitive by resource agencies. These are inventoried by California Department of Fish and Game (CDFG) in the California Natural Diversity Database (CNDDB) [2011]. The CNDDB includes state and federally-listed endangered, threatened, and rare vascular plants, as well as several sensitive vertebrate species. These communities include chamise-white sage chaparral, holly leaf cherry chaparral, California brittle bush scrub, California bay forest, and California sycamore woodlands, which occur throughout the SEA. These communities, or closely related designations, are considered high priority communities by the CDFG, which indicates that they are experiencing a decline throughout their range. The array and composition of these communities has been discussed in the Vegetation section.

Sensitive Plant Species

The statuses of rare plants are hierarchically categorized by the CNPS using a rank and decimal system. The initial category level of Rare Plant Rank is indicated by the ranks 1A (presumed extinct in California), 1B (rare or endangered in California and elsewhere), 2 (rare or endangered in California but more common elsewhere), 3 (more information needed, a review list), and 4 (limited distribution). In cases where the CNPS has further identified the specific threat to the species, a decimal or Threat Code is added: .1 (seriously endangered in California), .2 (fairly endangered in California), or .3 (not very endangered in California).

The following special-status plant taxa have been reported or have the potential to occur within the SEA, based on known habitat requirements and geographic range information:

- Sonoran maiden fern (*Thelypteris puberula* var. *sonorensis*) RPR 2.2
- Nevin's barberry (*Berberis nevinii*) FE, SE, RPR 1B.1
- Lewis' evening-primrose (*Camissonia lewisii*) RPR 3
- San Fernando Valley spineflower (*Chorizanthe parryi* var. *fernandina*) FC, SE, RPR 1B.1
- Parry's spineflower (*Chorizanthe parryi* var. *parryi*) RPR 1B.1
- Peruvian dodder (*Cuscuta obtusiflora* var. *glandulosa*) RPR 2.2
- Palmer's grapplinghook (*Harpagonella palmeri*) RPR 4.2
- Davidson's bushmallow (*Malacothamnus davidsonii*) RPR 1B.2
- White rabbit-tobacco (*Pseudognaphalium leucocephalum*) RPR 2.2
- Greata's aster (*Symphyotrichum greatae*) RPR 1B.3
- Slender mariposa lily (*Calochortus clavatus* var. *gracilis*) RPR 1B.2
- Plummer's mariposa lily (*Calochortus plummerae*) RPR 1B.2
- California sawgrass (*Cladium californicum*) RPR 2.2
- California satintail (*Imperata brevifolia*) RPR 2.1
- Ocellated Humboldt lily (*Lilium humboldtii* ssp. *ocellatum*) RPR 4.2

Sensitive Animal Species

The following special-status animal species are reported or have the potential to occur within the SEA, based on known habitat requirements and known range attributes:

- Silvery legless lizard (*Anniella pulchra pulchra*) FSS, SSC
- Coastal whiptail (*Aspidoscelis tigris stejnegeri*) CDFG Special Animals List
- Rosy boa (*Charina trivirgata*) BLMS, FSS
- Coast horned lizard (*Phrynosoma blainvillii*) BLMS, FSS, SSC

- Southern California rufous-crowned sparrow (*Aimophila ruficeps canescens*) CDFG Watch List
- Bell's sage sparrow (*Amphispiza belli belli*) BCC, CDFG Watch List
- Southwestern willow flycatcher (*Empidonax traillii extimus*) FE, FSS, SE, USBC, AWL, ABC
- Least Bell's vireo (*Vireo bellii pusillus*) FE, BCC, SE, USBC, AWL, ABC
- Pallid bat (*Antrozous pallidus*) FSS, BLMS, SSC, WBWG High
- Western mastiff bat (*Eumops perotis californicus*) BLMS, SSC, WBWG High
- Silver-haired bat (*Lasionycteris noctivagans*) WBWG Medium
- Hoary bat (*Lasiurus cinereus*) WBWG Medium
- Western yellow bat (*Lasiurus xanthinus*) WBWG High
- Big free-tailed bat (*Nyctinomops macrotis*) SSC, WBWG Medium-High
- American badger (*Taxidea taxus*) SSC

Ecological Transition Areas (ETAs)

There are no ETAs designated within this SEA.

Regional Biological Value

The SEA meets all SEA designation criteria and supports many regional biological values. Each criterion and how it is met is described below.

CRITERIA ANALYSIS OF THE VERDUGO MOUNTAINS SEA

Criterion		Status	Justification
A)	The habitat of core populations of endangered or threatened plant or animal species.	Not Met	No critical habitats are designated within this SEA.
B)	On a regional basis, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution.	Met	The Verdugo Mountains combined is an extensive, relatively undisturbed island of natural vegetation in an urbanized area, which is very rare in Southern California.
C)	Within the County, biotic communities, vegetative associations, and habitat of plant or animal species that are either unique or are restricted in distribution	Met	The Verdugo Mountains combined is an extensive, relatively undisturbed island of natural chaparral and canyon vegetation. It is an important island refuge for migration among the mountain ranges of the northern portion of the County. Aerial animals and plant seeds can easily traverse the distances between the Verdugo Mountains and Santa Monica, Santa Susana, and the San Gabriel mountains. The Verdugo Mountains serve as the centerpiece of these connections. The hillsides are covered by chaparral and coastal sage chaparral scrub. The canyons' riparian vegetation includes California bay, sycamores, ferns and tiger lilies. These plant communities provide habitat that is essential to the diverse and abundant fauna found in the area.
D)	Habitat that at some point in the life cycle of a species or group of species, serves as	Met	The Verdugo Mountains serve as an arm of the San Gabriel Mountains, extending towards the eastern end of

	concentrated breeding, feeding, resting, or migrating grounds and is limited in availability either regionally or in the County.		the Santa Monica Mountains in Griffith Park—only two miles distant. Aerial animals and plant seeds easily cross the gap. The Verdugo Mountains are exceedingly important for connections among the Santa Monica, Santa Susana, and the San Gabriel mountains. Genetic interchange, by way of this linkage, is important in perpetuating the genetic variability in isolated populations, which maintains healthy ecosystems and resilience to climate change.
E)	Biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community.	Met	The geographic location of the Verdugo Mountains makes them important for scientific study, genetic interchange between otherwise isolated populations, and recreation for urban residents. The area has already been used for studies concerned with public health.
F)	Areas that would provide for the preservation of relatively undisturbed examples of the original natural biotic communities in the County.	Met	The Verdugo Mountains have been impacted by dirt roads, one paved road in Tuna Canyon, fuel breaks, transmission lines and isolated buildings for houses, radio towers, and water tanks. Because of their extent, however, the Verdugo Mountains are still considered largely natural and little impacted—a prime example of the chaparral and coastal sage chaparral scrub once prevalent in the County coastal areas.

In conclusion, the area is an SEA because it contains: B-C) biotic communities, vegetative associations, and habitat of plant and animal species that are either unique or are restricted in distribution in the County and regionally; D) concentrated breeding, feeding, resting, or migrating grounds, which are limited in availability in the County; E) biotic resources that are of scientific interest because they are either an extreme in physical/geographical limitations, or represent unusual variation in a population or community; and F) areas that provide for the preservation of relatively undisturbed examples of original natural biotic communities in the County.

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V. Coastal Zone Resources

Ballona Wetlands

For a description of the resources in the Ballona Wetlands, please refer to the description for the Marina Del Rey below, and the description for the Ballona Wetlands Significant Ecological Area (SEA) in Section IV.

Marina Del Rey[4]

Marina Del Rey is a man-made feature that occupies part of the historical estuary near the mouth of Ballona Creek. Prior to the arrival of Europeans, the Ballona area was an ancient estuary of the Los Angeles River, with the mouth of the river entering the Pacific Ocean north of the Westchester Bluffs, forming a broad coastal plain with seasonal and permanent wetlands extending north and east toward higher ground in present-day Santa Monica[5]. A long range of natural sand dunes cut off the ocean from the majority of the low-lying ground, which featured a network of tidal channels and extensive salt marsh (i.e., the historical “Venice Marshes” or “Ballona Wetlands”). Until a flood in the

[4] Adapted from Hamilton, RA and Cooper, DS, 2010. Conservation and Management Plan for Marina Del Rey, Los Angeles County, California. Prepared for the County Los Angeles Department of Beaches and Harbors and the Department of Regional Planning.

[5] Cooper, D. S. 2008. The use of historical data in the restoration of the avifauna of the Ballona Wetlands, Los Angeles County, California. Natural Areas Journal 28:83–90.

early 1800s, the Los Angeles River emptied at Santa Monica Bay, along the current course of Ballona Creek.[6] The historical landscape along the coast west of present-day Lincoln Boulevard (i.e., an area encompassing all of Marina Del Rey) likely consisted of wide tidal channels and mudflats, salt marshes, coastal dunes, pockets of freshwater and/or brackish marsh, as well as riparian scrub. Also present was a coastal prairie community described by researchers as far back as the 1930s (e.g., "the meadow" referred to by von Bloeker 1943[7]). These are generally the habitat types typical of coastal estuaries throughout Southern California and northwestern Baja California, Mexico.[8] Comparable coastal estuaries on broad plains in Southern California include Carpinteria Marsh, Mugu Lagoon, Alamitos Bay, Bolsa Chica, Upper Newport Bay, and the Tijuana River Estuary.

By the mid-1900s, much of Ballona Creek had been excavated and routed through a channel, at first earthen (1920s), then concrete-lined (late 1930s), principally to control floods in the Ballona Valley that regularly destroyed cropland and generally hindered development. The most serious and final impact to lower Ballona Creek and the majority of its natural wetlands came in the early 1960s, with the completion of Marina Del Rey, which eliminated nearly all the functional wetlands north of the Ballona Creek channel and left only a small remnant to the south, along Culver Boulevard. However, just as the creation of Marina Del Rey development entailed the elimination of certain natural habitats, it created novel ones, with the addition of hundreds of evergreen, semi-tropical, trees, as well as irrigated lawns and man-made structures.

Today the channel waters of Marina Del Rey and its breakwater are designated by California Audubon as a part of the Ballona Wetlands State Important Bird Area (IBA), recognizing the important natural resources that still occur in this district of the County. The IBA includes the Ballona Lagoon in nearby Venice, the Del Rey Lagoon across Ballona Creek in Playa Del Rey, the least tern nesting area on Venice City Beach, the Strand Beach south of the Ballona Channel opening, the Ballona Channel, the Ballona Wetlands both north and south of the Ballona Channel, and Bluff Creek that feeds the Ballona Freshwater Marsh. The IBA designation recognizes this as a unit, all the parts contributing to the welfare of the whole. As an example, the federally-endangered least terns that breed on Venice City Beach need to forage widely, in all parts of the IBA waters and beyond in order to successfully raise their young to fledglings.

Vegetation

Vegetation of the Marina Del Rey has not been formally described; however, the Conservation &

[6] Gumprecht B. 1999. The Los Angeles River: Its Life, Death, and Possible Rebirth. Johns Hopkins University Press, Baltimore, MD.

[7] von Bloeker, J. C. 1943. The fauna and flora of the El Segundo sand dunes: Birds of El Segundo and Playa del Rey. Bulletin of the Southern California Academy of Sciences 42:1–30 (Part 1) and 90–103 (Part 2).

[8] Grewell, B. J., Callaway, J. C., and Ferren, W. R., Jr. 2007. Estuarine wetlands. Pp. 124–154 in Terrestrial Vegetation of California (M. G. Barbour, T. Keeler-Wolf, and A. A. Schoenherr, eds.). University of California Press, Berkeley. Pickart, A. J., and Barbour, M. G. 2007. Beach and dune. Pp. 155–179 in Terrestrial Vegetation of California (M. G. Barbour, T. Keeler-Wolf, and A. A. Schoenherr, eds.). University of California Press, Berkeley.

Management Plan for Marina Del Rey, Los Angeles County, California (Hamilton and Cooper, 2010.) discusses six areas within Marina Del Rey with regard to their value as avian resource areas. Because no vegetation map has been prepared for the Marina, these areas are listed individually below, along with any corresponding natural or Semi-Natural vegetation types that are to be expected within each of the six areas.

Oxford Stormwater Retention Basin**:** Provides a flood-control function for the development and is lined with native and non-native species. The shoreline of the basin has been landscaped extensively with non-native trees and shrubs, especially small-flowered myoporum (*Myoporum laetum*). The myoporum landscaping currently in poor health, presumably due to an infestation of the myoporum thrip (*Klambothrips myopori*).

Corresponding MCV communities:

- *Schinus* (*molle*, *terebinthifolius*)-*Myoporum laetum* (Pepper tree or Myoporum groves) Semi-Natural Woodland Stands
- *Eucalyptus* (*globulus*, *camaldulensis*) (Eucalyptus groves) Semi-Natural Woodland Stands

Ballona Lagoon: The northern extent of the former coastal lagoon at the mouth of the Ballona Wetlands, and now the southern extension of the “Grand Canal” in Venice (adjacent to and just west of Marina Del Rey), this site has been known as “Ballona Lagoon” since 1996 when extensive habitat restoration was completed in an effort to bring back a native coastal scrub community. The lagoon is tidal, and a band of mudflat is usually exposed around the entire lagoon, but only the upper/northern end drains completely except during the most extreme low tides. Saltmarsh vegetation forms a ring around the upper mudflat, below the coastal scrub.

Corresonding MCV communities

- *Schinus* (*molle*, *terebinthifolius*)-*Myoporum laetum* (pepper tree or myoporum groves) Semi-Natural Woodland Stands
- *Carpobrotus edulis* or other ice plants (ice plant mats) Semi-Natural Herbaceous Stands
- *Sarcocornia pacifica* (*Salicornia depressa*) (pickleweed mats) Herbaceous Alliance
- Orcutt's pincushion (*Chaenactis glabriuscula* var. *orcuttiana*) new Alliance

Del Rey Lagoon: This area is entirely landscaped with lawn and ornamental non-native *Ficus* and *Acacia* trees.

Corresonding MCV communities: None at this time.

Ballona Wetlands: This, the main tidal marsh area remaining at Ballona, is located between the Ballona Creek channel and Culver Boulevard. It features extensive pickleweed (*Salicornia* spp.) marsh habitat, muddy tidal channels, and a large saltpan that is irregularly moistened by rain, dense fog, and high tides.

Corresonding MCV communities

- *Sarcocornia pacifica* (*Salicornia depressa*) (pickleweed mats) Herbaceous Alliance

Ballona Freshwater Marsh: This marsh, constructed in 2003 at the corner of Lincoln and Jefferson Boulevards, just south of Marina Del Rey, supports large expanses of tules, cattails, and other freshwater marsh vegetation.

Corresonding MCV communities

- *Schoenoplectus acutus* (hardstem bulrush marsh) Herbaceous Alliance
- *Schoenoplectus californicus* (California bulrush marsh) Herbaceous Alliance
- *Typha* (*angustifolia*, *domingensis*, *latifolia*) (cattail marshes) Herbaceous Alliance

Centinela Confluence: This refers to the tidally-influenced confluence of Ballona Creek at the Centinela Channel, just south of the State Route-90 bridge. A patch of tall, lush grasses serves as a consistent roosting and foraging location for herons, egrets, brown pelicans, gulls, terns, and shorebirds.

Corresonding MCV communities: None at this time.

Wildlife

As reviewed by Cooper[9], many bird species associated with freshwater marsh, coastal lagoon, and riparian habitats were lost from the Ballona area during the early period of development (pre-1930s); many saltmarsh species, including waterfowl and shorebirds that occurred in large flocks, suffered heavy losses during the middle period (1940s to 1960s); and since the 1960s, many open-country species, particularly those of agricultural fields and extensive grasslands, have either been extirpated or experienced serious declines.

Cooper (2006[10]) documented the ongoing colonization of the local area by bird species that require tall trees for breeding and/or foraging, and by species frequently associated with human habitation. This colonization phenomenon has intensified as the Marina's non-native landscaping has matured, providing much more structural complexity than was present formerly, but at the expense of numerous species that depend on natural, wild habitats for their persistence in the landscape or for refueling during long migrations. Currently, the area is used extensively by nesting and foraging great blue heron (*Ardea herodias*), great egret (*A. alba*), snowy egret (*Egretta thula*), black-crowned night heron (*Nycticorax nycticorax*), and double-crested cormorant (*Phalacrocorax auritus*).

A well-documented least tern colony (federally and state-listed Endangered) is present nearby at Venice Beach and is known to have suffered predation by crows and black-crowned night herons, both of which are dependent on non-native landscaping and artificial structures within and surrounding Marina Del Rey for nesting substrate.

[9] Cooper, D. S. 2008. The use of historical data in the restoration of the avifauna of the Ballona Wetlands, Los Angeles County, California. Natural Areas Journal 28:83–90.

[10] Cooper, D. S. 2006. Annotated checklist of extirpated, reestablished, and newly-colonized avian taxa of the Ballona Valley, Los Angeles County, California. Bulletin of the Southern California Academy of Sciences 105:91–112.

Sensitive Biological Resources

The statuses of rare plants are hierarchically categorized by the CNPS using a rank and decimal system. The initial category level of Rare Plant Rank (RPR) is indicated by the ranks 1A (presumed extinct in California), 1B (rare or endangered in California and elsewhere), 2 (rare or endangered in California but more common elsewhere), 3 (more information needed, a review list), and 4 (limited distribution). In cases where the CNPS has further identified the specific threat to the species, a decimal or Threat Code is added: .1 (seriously endangered in California), .2 (fairly endangered in California), or .3 (not very endangered in California).

The following special-status plant taxa have been reported or have the potential to occur within the SEA, based on known habitat requirements and geographic range information:

- Southern tarplant (*Centromadia parryi ssp. australis*) RPR 1B.1
- Orcutt's pincushion (*Chaenactis glabriuscula var. orcuttiana*) RPR 1B.1
- Coastal goosefoot (*Chenopodium littoreum*) RPR 1B.2
- Coulter's goldfields (*Lasthenia glabrata ssp. coulteri*) RPR 1B.1
- Ballona cinquefoil (*Potentilla multijuga*) RPR 1A
- Estuary seablite (*Suaeda esteroa*) RPR 1B.2

The following special-status animal species are reported or are likely to be present within the SEA based on habitat requirements and known range attributes:

- Mimic tryonia (*Tryonia imitator*) CDFG Special Animals List
- Wandering skipper (*Panoquina errans*) CDFG Special Animals List
- Silvery legless lizard (*Anniella pulchra pulchra*) FSS, SSC
- Two-striped garter snake (*Thamnophis hammondii*) BLMS, FSS, SSC
- Tricolored blackbird (*Agelaius tricolor*) BCC, BLMS, SSC, USBC, AWL, ABC
- Western snowy plover (*Charadrius alexandrinus nivosus*) FT, BCC, SSC, ABC, AWL, USBC
- California black rail (*Laterallus jamaicensis coturniculus*) BCC, ST, CDFG Fully Protected, USBC, AWL, ABC
- Belding's savannah sparrow (*Passerculus sandwichensis beldingi*) SE
- California least tern (*Sternula antillarum browni*) FE, SE, CDFG Fully Protected, USBC, ABC
- South coast marsh vole (*Microtus californicus stephensi*) SSC
- Southern California saltmarsh shrew (*Sorex ornatus salicornicus*) SSC

San Clemente Island

San Clemente Island lies approximately 63 miles south of the City of Long Beach and 78 miles west of the City of San Diego. San Clemente Island is approximately 24 miles long and 5 miles across at its widest point. It has a land area of approximately 57 square miles. Since 1934, San Clemente Island has been owned and operated by the U.S. Navy. More than a dozen range and operational areas are clustered within a 60 mile radius of San Clemente Island. The Commander-in-Chief, Naval Forces, Pacific (CINCPACFLT) is the major claimant for San Clemente Island, and the Naval Air Station, North Island (NASNI) is responsible for its administration.

The climate of the Island is classified as semi-arid, which is similar to the Southern California coastal areas, except for more fog and overcast weather and cooler year-round temperatures. Aided by the Santa Ana winds, temperatures exceeding 90 degrees occasionally occur between August and October. Rainfall is slight and occurs mostly between the months of November and April (San

Clemente Island Master Plan).

The Island is a very important biological resource for the County, California, and the U.S. Any island is a microcosm of evolutionary processes, and studies of island biota lead to many insights on biological community processes—how food webs are structured and how to maintain them in the context of impacts. The Island has 14 endemic plants (known only from the Island; 6 of which are federally-endangered) and 29 other plants known only from the Island and other Channel Islands (the northern ones and Santa Catalina Island). Some of the Island's endemics have their closest relatives on islands off of Baja California, which is over 500 miles away, and not the nearest neighboring islands. The plants had a major setback with about 400 years of goat and pig grazing, but the Navy has finally removed the last of these (a goat in 1992), and plants have responded vigorously to predation relief in most cases.

There is multiple federal recognition of the Island's resources. The Island has endemic birds, notably the federally-endangered shrike (*Lanius ludovicianus mearnsi*) and the federally-threatened San Clemente sage sparrow (*Amphispiza belli clementeae*). The shrike crashed to a population of 14 birds in 1998, but with a Navy recovery program of incubating eggs, the shrikes have rebounded to about 200 individuals. The chief predators were or are the introduced black rat and feral cats, but the goats did major indirect damage by undermining and browsing the trees that the shrike needs to breed. The Island has an endemic federally-threatened Island night lizard (*Xantusia riversiana*), and a subspecies of the island fox (*Urocyon littoralis clementae*) that is state-threatened and monitored by the Navy. Although it does not include offshore reefs, rocks, and pinnacles under the jurisdiction of the armed forces, the California Coastal National Monument, under the Bureau of Land Management in the U.S. Department of the Interior, manages the rocks within one nautical mile of the coast of the Island under this program.

State recognition has been equally strong. The Island has many state-recognized sensitive species. The Island is designated by the California State Water Resources Control Board as an ASBS (Area of Special Biological Significance), which is a marine area with exceptionally good water quality and natural community features. Populated and disturbed areas along the shore are zones of exception, and there is one small designated area at the sewage outfall out of 100 natural gullies and ephemeral streams and 23 known Navy discharges. The Island is reputedly a favorite of snorkelers and divers for the marine life, and its waters are on the main migration path for the CITES Appendix I California gray whale (*Eschrichtius robustus*).

The Island and its nearshore out to about 0.8 mile offshore is designated by California Audubon as the San Clemente Island Globally Important Bird Area (IBA). Over 240 bird species regularly use the Island, and about 30 species inhabit the Island year-round.

The Island has unique features that are mysterious in some respects—phenomena waiting for discovery. The Island is nearly surrounded by sea cliffs, which in their steepness, provide the protection from predators (including introduced rats) that seabirds need for breeding. It is probable that some breeding by marine birds is unknown, since they often forage and return to feed their offspring at night, which is a difficult phenomenon to observe for predators and humans alike. Colonies are yet to be discovered. A known marine bird that has this breeding pattern is the federal candidate for listing, Xantus' murrelet (*Synthliboramphus hypoleucus*). Because it is so distant from shore, this Island has many oceanic influences that are unique for the Channel Islands—much more than the other nearby islands. For example, an oceanic bird, the red-tailed tropic bird (*Phaethon rubricauda*), once had some breeding on Pyramid Head before this area became part of the shore bombardment range. The Ashy storm-petrel (*Oceanodroma homochroa*), which is a state species of

concern and one of the rarest storm-petrels, is known to breed in the Seal Cove area, and could also be breeding elsewhere on the Island.

Vegetation

Despite the Island's barren look, a large variety of plant life is present. The Island harbors 14 endemic plants and 29 insular endemic plants restricted to the Channel Island system (San Clemente Island Master Plan).

Domestic animals introduced to the Island, including cats, pigs, and goats, have greatly impacted the native plant communities. Beginning in 1875, the introduction of Spanish goats drastically altered the ecological structure of the Island due to constant foraging and grazing. Native plants and animals were significantly reduced, which resulted in an effort to remove the goats from the Island. By 1992, the U.S. Fish and Wildlife Service removed all goats and pigs from the Island (USFWS, California Channel Islands Species Recovery Plan).

Plant communities on the Island were classified using standard methodology and terminology. Most of the communities discussed correspond directly with those listed in Holland's Preliminary Descriptions of the Terrestrial Natural Communities of California (1986 and 1992 update). Other communities are named based on dominant species within them and/or commonly used terminology. Descriptions and general locations of each plant community on the Island, including maritime desert scrub, maritime sage scrub, island woodland, grassland, coastal salt marsh, and disturbed areas are given below.

In recent years, ecologists have refined previous vegetation classification approaches to define communities primarily by their constituent plant assemblages, and have now widely adopted the classification system described by Sawyer, Keeler-Wolf and Evens in A Manual of California Vegetation, Second Edition 2009 (MCV). This has become the accepted standard recognized by the California Department of Fish and Game, the California Native Plant Society and the U.S. Fish and Wildlife Service.

The important difference between current and earlier methods is that earlier classifications were based on a variety of factors, such as physiographic features, as in the case of vernal pools; or by specific plants, as in the case of coast live oak woodland; or by the use of commonly accepted terms, as in chaparral. In the MCV, plant communities are defined with more precision as botanical alliances where one, or occasionally two, plant species are dominant or co-dominant with a host of other possible associated plants. The MCV lists no one plant community called "chaparral" because in habitats of this type, any one of a variety of shrubs can be dominant and influence the character of the vegetation. For example, in a location where chamise (*Adenostoma fasciculatum*) is predominant, the alliance is classified as an *Adenostoma fasciculatum* Shrubland Alliance, while close by, greenbark ceanothus (*Ceanothus spinosus*) may emerge as the most common shrub and this is termed a *Ceanothus spinosus* Shrubland Alliance.

The transition to the new MCV format is ongoing. Not all alliances have been fully described and new ones are still being recognized. As such, a significant amount of field work and site surveying for accuracy would be needed to verify all existing alliances on the Island, as well as extensive research to define every alliance in the new MCV plant communities' format. The more familiar nomenclatures will continue to be used for the Island when appropriate.

An effort has been made to conform to this new format. Descriptions and general locations of each plant community as described in the California Channel Islands Species Recovery Plan (USFWS,

1984) appear below. The plant communities correspond to the classifications used in that document. Each was considered baseline information and evaluated for the potential presence of alliances as described in the MCV. Alliances with matching profiles of the given criteria are listed. In many cases, only with further investigation can the presence of some alliances be confirmed. In addition, it should be noted that not all alliances are listed within this description as many alliances have yet to be defined and new alliances are still being discovered. Descriptions and general locations of the each plant community present on the Island are given below.

Maritime Desert Scrub - (Lycium Phase, Typical Phase, and Cholla Phase): Includes a mixture of low growing, dry-season deciduous scrubs and cactus located along the southern and western shores. The predominant deciduous shrubs include California desert-thorn (*Lycium californicum*) and island senecio (*Senecio lyonii*), while California brittle-bush (*Encelia californica*) and California sagebrush (*Artemisia californica*) are the predominant maritime sage scrub species. Coastal prickly-pear (*Opuntia littoralis*) also exists in abundance. The south-facing slopes at the southern end of the island are dominated by coastal cholla (*Cylindropuntia prolifera*), but box thorn and cunyado (*Bergerocactus emoryi*) also exist.

Corresponding MCV communities:

- *Lycium californicum* (California desert-thorn) Shrubland Provisional Alliance
- *Encelia californica* (California brittle bush scrub) Shrubland Alliance
- *Artemisia californica* (California sagebrush scrub) Shrubland Alliance
- *Opuntia littoralis* (coast prickly pear scrub) Shrubland Alliance

Maritime Sage Scrub: Located on steep eastern slopes and in some canyons on the west side of the Island. Lemonadeberry (*Rhus integrifolia*) can be found on both sides of the Island on relatively level ground. Many types of chaparral shrubs are present, including chamise, island ceanothus (*Ceanothus megacarpus* var. *insularis*), Catalina crossosoma (*Crossosoma californicum*), Channel Island tree poppy (*Dendromecon harfordii*), toyon (*Heteromeles arbutifolia*), laurel sumac (*Malosma laurina*), Catalina cherry (*Prunus ilicifolia* ssp. *lyonii*), island redberry (*Rhamnus pirifolia*), blue elderberry (*Sambucus nigra* var. *caerulea*), and poison oak (*Toxicodendrom diversilobum*).

Corresponding MCV communities:

- *Rhus integrifolia* (lemonade berry scrub) Shrubland Alliance
- *Ceanothus megacarpus* (big pod ceanothus chaparral) Shrubland Alliance
- *Malosma laurina* (laurel sumac scrub) Shrubland Alliance

Island Woodland: Located in the western and eastern canyons, is the only tree vegetation type present on the Island. It includes Catalina cherry, Santa Cruz Island ironwood (*Lyonothamnus floribundus* ssp. *aspleniifolius*), island oak (*Quercus tomentella*), blue elderberry, and toyon.

Corresponding MCV communities:

- *Prunus ilicifolia* (holly leaf cherry chaparral) Shrubland Alliance
- *Lyonothamnus floribundus* (Catalina ironwood groves) Woodland Special Stands
- *Quercus tomentella* (Island oak groves) Woodland Special Stands

Grasslands: Cover the central uplands of the Island. Although dominated by exotic annual herbs, scattered native wildflowers also exist. Native perennial needlegrass, larkspur, and brodiaea are also

present.

Corresponding MCV communities:

- *Bromus (diandrus, hordeaceus)-Brachypodium distachyon* (annual brome grasslands) Semi-Natural Herbaceous Stands
- *Bromus rubens-Schismus* (arabicus, barbatus) (red brome or Mediterranean grass grasslands) Semi-Natural Herbaceous Stands
- *Lasthenia californica-Plantago erecta-Vulpia microstachys* (California goldfields-dwarf plantain-six-weeks fescue flower fields) Herbaceous Alliance
- *Nassella [Stipa] pulchra* (purple needle grass grassland) Herbaceous Alliance

Coastal Strand and Dunes: Coastal strand and dune vegetation is restricted to small areas along the south and northwest coasts of the Island. Predominantly associated with sandy substrates, several species typical of this vegetation type also occur in scattered rocky areas behind beaches. Introduced crystalline iceplant (*Mesembryanthemum crystallinum*) and grasses are abundant.

Corresponding MCV communities:

- *Carpobrotus edulis* or other ice plants (ice plant mats) Semi-Natural Herbaceous Stands
- *Abronia latifolia - Ambrosia chamissonis* (dune mat) Herbaceous Alliance

Coastal Salt Marsh: Exist on the south side of the Island. These areas are proximate to the impact zone of the shore bombardment range, and therefore, the biological information is somewhat limited. However, pickleweed (*Salicornia pacifica*), alkali heath (*Frankenia salina*), saltgrass (*Distichlis spicata*), and California sea-blite (*Suaeda californica*) are known to exist.

Corresponding MCV communities:

- *Sarcocornia* [*Salicornia*] *pacifica* (*Salicornia depressa*) (pickleweed mats) Herbaceous Alliance
- *Frankenia salina* (alkali heath marsh) Herbaceous Alliance
- *Distichlis spicata* (salt grass flats) Herbaceous Alliance

Disturbed Areas: Mainly consist of plants that are native to the Old World. Once limited to ruderal areas, these areas have expanded and exotic species are now common throughout the Island.

Corresponding MCV communities:

- *Avena* (*barbata*, *fatua*) (wild oats grasslands) Semi-Natural Herbaceous Stands
- *Brassica nigra* and other mustards (upland mustards) Semi-Natural Herbaceous Stands
- *Bromus* (*diandrus*, *hordeaceus*)-*Brachypodium distachyon* (annual brome grasslands) Semi-Natural Herbaceous Stands
- *Bromus rubens-Schismus* (*arabicus*, *barbatus*) (red brome or Mediterranean grass grasslands) Semi-Natural Herbaceous Stands

(USFWS, California Channel Islands Species Recovery Plan)

Wildlife

An abundance of marine mammals thrive in waters surrounding the Island. The most prominent are

the California sea lion (*Zalophus californianus*) and the harbor seal (*Phoca vitulina*); however, porpoises and whales are frequently sighted. The Island is in the path of a migration route, which along with great depths and caves, creates a rich and varied marine environment (San Clemente Island Master Plan).

The Island supports a unique assortment of terrestrial fauna. There are two lizard species on the Island: western side-blotched lizard (*Uta stansburiana elegans*) and the San Clemente Island night lizard (*Xantusia riversiana reticulata*). As many as 240 bird species inhabit the Island at various periods of the year. Around 30 species breed on the Island, while the other species are mainly migrants. Some of the bird species include island horned lark (*Eremophila alpestris insularis*), western meadowlark (*Sturnella neglecta*), white-crowned sparrow (*Zonotrichia leucophrys*), American kestrel (*Falco sparverius*), Gambel's quail (*Callipepla gambelii*), and the exotic chukar (*Alectoris chukar*). Waterbirds are attracted to the rocky shore of the Island, which provides opportunities for foraging and resting. Some of the waterbirds on the Island include western gull (*Larus occidentalis*), Brandt's cormorant (*Phalacrocorax penicillatus*), California brown pelican (*Pelecanus occidentalis californicus*), royal tern (*Thalasseus maximus*), black oystercatcher (*Haematopus bachmani*), and Xantus' murrelet (*Synthliboramphus hypoleucus*) (USFWS, California Channel Islands Species Recovery Plan).

The Island is also home to the following bat species: California myotis (*Myotis californicus*), fringed myotis (*M. thysanodes*), Townsend's big-earned bat (*Corynorhinus townsendii*), and Mexican free-tailed bat (*Tadarida brasiliensis*). The San Clemente deer mouse (*Peromyscus maniculatus clementis*) is also native to the Island. One of the most notable mammals on the Island is the San Clemente Island fox (*Urocyon littoralis clementae*), which inhabits most of the Island (USFWS, California Channel Islands Species Recovery Plan).

Sensitive Biological Resources

The statuses of rare plants are hierarchically categorized by the CNPS using a rank and decimal system. The initial category level of Rare Plant Rank (RPR) is indicated by the ranks 1A (presumed extinct in California), 1B (rare or endangered in California and elsewhere), 2 (rare or endangered in California but more common elsewhere), 3 (more information needed, a review list), and 4 (limited distribution). In cases where the CNPS has further identified the specific threat to the species, a decimal or Threat Code is added: .1 (seriously endangered in California), .2 (fairly endangered in California), or .3 (not very endangered in California).

The following special-status plant taxa have been reported or have the potential to occur on San Clemente Island, based on known habitat requirements and geographic range information:[11]

[11] Status abbreviations: ABC: American Bird Conservancy Green List; BLMS: Bureau of Land Management Sensitive Species; CDF: California Department of Forestry and Fire Protection Sensitive Species; CDFG: California Department of Fish and Game; FD: Federally delisted; FE: Federally listed as Endangered; FSS: USDA Forest Service Sensitive Species; FT: Federally listed as Threatened; RPR: Rare Plant Rank; SE: State-listed as Endangered; SD: State delisted; SSC: CDFG Species of Special Concern; WBWG: Western Bat Working Group: High, Medium or Low priority

- Woven-spored lichen (*Texosporium sancti-jacobi*) CDFG Special Plants List, RPR 1B.2
- Red sand-verbena (*Abronia maritima*) RPR 4.2
- San Clemente Island bird's-foot trefoil (*Acmispon argophyllus* var. *adsurgens*) SE, RPR 1B.1
- San Clemente Island lotus (*Acmispon dendroideus* var. *traskiae*) FE, SE, RPR 1B.1
- Aphanisma (*Aphanisma blitoides*) RPR 1B.1
- Island sagebrush (*Artemisia nesiotica*) RPR 4.3
- San Miguel Island milk-vetch (*Astragalus miguelensis*) RPR 4.3
- San Clemente Island milk-vetch (*Astragalus nevinii*) RPR 1B.2
- Coulter's saltbush (*Atriplex coulteri*) RPR 1B.2
- South Coast saltscale (*Atriplex pacifica*) RPR 1B.2
- Golden-spined cereus (*Bergerocactus emoryi*) RPR 2.2
- Island morning-glory (*Calystegia macrostegia* ssp. *amplissima*) RPR 4.3
- San Clemente Island evening-primrose (*Camissonia guadalupensis* ssp. *clementina*) RPR 1B.2
- San Clemente Island paintbrush (*Castilleja grisea*) FE, SE, RPR 1B.2
- Island ceanothus (*Ceanothus megacarpus* var. *insularis*) RPR 4.3
- Seaside cistanthe (*Cistanthe maritima*) RPR 4.2
- Nevin's woolly sunflower (*Constancea nevinii*) RPR 1B.3
- Small-flowered morning-glory (*Convolvulus simulans*) RPR 4.2
- Catalina crossosoma (*Crossosoma californicum*) RPR 1B.2
- Trask's cryptantha (*Cryptantha traskiae*) RPR 1B.1
- Island tarplant (*Deinandra clementina*) RPR 4.3
- San Clemente Island larkspur (*Delphinium variegatum* ssp. *kinkiense*) FE, SE, RPR 1B.1
- Thorne's royal larkspur (*Delphinium variegatum* ssp. *thornei*) RPR 1B.1
- South island bush-poppy (*Dendromecon harfordii* var. *rhamnoides*) RPR 1B.1
- Bright green dudleya (*Dudleya virens* ssp. *virens*) RPR 1B.2
- San Clemente Island buckwheat (*Eriogonum giganteum* var. *formosum*) RPR 1B.2
- Island buckwheat (*Eriogonum grande* var. *grande*) RPR 4.2
- Island poppy (*Eschscholzia ramosa*) RPR 4.3
- Cliff spurge (*Euphorbia misera*) RPR 2.2
- San Clemente Island bedstraw (*Galium catalinense* ssp. *acrispum*) SE, RPR 1B.2
- Showy island snapdragon (*Gambelia speciosa*) RPR 1B.2
- Nevin's gilia (*Gilia nevinii*) RPR 4.3
- San Clemente Island hazardia (*Hazardia cana*) RPR 1B.2
- Decumbent goldenbush (*Isocoma menziesii* var. *decumbens*) RPR 1B.2
- Island jepsonia (*Jepsonia malvifolia*) RPR 4.2
- Southern island mallow (*Lavatera assurgentiflora* ssp. *glabra*) RPR 1B.1
- Robinson's pepper-grass (*Lepidium virginicum* var. *robinsonii*) RPR 1B.2
- Pygmy leptosiphon (*Leptosiphon pygmaeus* ssp. *pygmaeus*) RPR 1B.2
- San Clemente Island woodland star (*Lithophragma maximum*) FE, SE, RPR 1B.1
- San Nicolas Island lomatium (*Lomatium insulare*) RPR 1B.2
- Guadalupe Island lupine (*Lupinus guadalupensis*) RPR 1B.2
- Santa Catalina Island desert-thorn (*Lycium brevipes* var. *hassei*) RPR 1B.1
- California box-thorn (*Lycium californicum*) RPR 4.2
- Santa Cruz Island ironwood (*Lyonothamnus floribundus* ssp. *aspleniifolius*) RPR 1B.2
- San Clemente Island bush-mallow (*Malacothamnus clementinus*) FE, SE, RPR 1B.1
- Leafy malacothrix (*Malacothrix foliosa* ssp. *foliosa*) RPR 4.2

- Dunedelion (*Malacothrix incana*) RPR 4.3
- Small-flowered microseris (*Microseris douglasii* ssp. *platycarpha*) RPR 4.2
- Island bush monkeyflower (*Mimulus flemingii*) RPR 4.3
- Blair's munzothamnus (*Munzothamnus blairii*) RPR 1B.2
- Mud nama (*Nama stenocarpum*) RPR 2.2
- Many-flowered phacelia (*Phacelia floribunda*) RPR 1B.2
- Island oak (*Quercus tomentella*) RPR 4.2
- Island redberry (*Rhamnus pirifolia*) RPR 4.2
- Santa Catalina figwort (*Scrophularia villosa*) RPR 1B.2
- Santa Cruz Island rock cress (*Sibara filifolia*) FE, RPR 1B.1
- Woolly seablite (*Suaeda taxifolia*) RPR 4.2
- Southern island clover (*Trifolium palmeri*) RPR 4.2
- San Clemente Island brodiaea (*Brodiaea kinkiensis*) RPR 1B.2
- California dissanthelium (*Dissanthelium californicum*) RPR 1B.2
- Vernal barley (*Hordeum intercedens*) RPR 3.2
- Appressed muhly (*Muhlenbergia appressa*) RPR 2.2
- San Clemente Island triteleia (*Triteleia clementina*) RPR 1B.2

The following special-status animal species are reported or are likely to be present on San Clemente Island based on habitat requirements and known range attributes:

- San Clemente Island snail (*Micrarionta gabbi*) CDFG Special Animals List
- San Clemente Island blunt-top snail (*Sterkia clementina*) CDFG Special Animals List
- Horseshoe snail (*Xerarionta intercisa*) CDFG Special Animals List
- Senile tiger beetle (*Cicindela senilis frosti*) CDFG Special Animals List
- Island night lizard (*Xantusia riversiana*) FT
- San Clemente sage sparrow (*Amphispiza belli clementeae*) FT, BCC, SSC, ABC
- Western snowy plover (*Charadrius alexandrinus nivosus*) FT, BCC, SSC, ABC, AWL, USBC
- San Clemente loggerhead shrike (*Lanius ludovicianus mearnsi*) FE, SSC
- Ashy storm-petrel (*Oceanodroma homochroa*) BCC, SSC, ABC
- Xantus' murrelet (*Synthliboramphus hypoleucus*) FC, BCC, ST, ABC
- San Clemente Island fox (*Urocyon littoralis clementae*) ST

Santa Catalina Island

Santa Catalina Island, part of the Channel Islands chain, is approximately 21 miles long and 8 miles wide. The Island consists of two parts connected by a low-lying isthmus at Two Harbors. The larger (southeastern) portion can be generally characterized by rolling hills with a gradual decent into the sea. The smaller (northwestern) portion is extremely steep and rugged with steep shoreline palisades. Level terrain on the Island is limited to the floors of a few large coastal canyons and areas, such as Avalon, Pebbly Beach, White's Landing, Middle Ranch, Two Harbors, and Emerald Bay. Mount Orizaba, which is located in the central portion of the Island, represents the highest peak at 2,069 feet above mean sea level (MSL).

The climate of the Island is similar to the mainland with wet mild winters and long dry periods. The majority of the Island is relatively undisturbed, consisting of grasslands, coastal sage scrub, woodlands, and chaparral. Disturbed areas include minor camping areas, paved roads, dirt roads, radio tower pads, reservoirs and a landfill.

Because of habitation, proximity to Los Angeles, the work of the Catalina Island Conservancy, and the Wrigley Marine Science Center, the Island has been studied more than any of the other California offshore islands, with national, state, and County recognition in many ways. Nationally, all of the many offshore rocks and islets within 12 nautical miles of the coast are part of the California Coastal National Monument, which is managed by the Bureau of Land Management in the U.S. Department of the Interior. Of the 64 State-recognized sensitive plants, 3 are federally endangered and 1 is federally threatened. Two vertebrates have federal status: the federal candidate marine bird Xantus' murrelet (*Synthliboramphus hypoleucus*) and the federally-endangered Santa Catalina Island fox (*Urocyon littoralis catalinae*). The fox has recently recovered from an epidemic of distemper by a combination of the luck, in that the northwestern population was so isolated and hardly suffered, and by managed captive breeding.

The State Water Resources Control Board has named a number of areas as ASBS (Area of Special Biological Significance) for the water quality and the coincident diversity of the marine resources. These are the Northwest Santa Catalina Island ASBS #25 (20.9 miles of coastline from Isthmus Cove to Catalina Head), the Southeast Santa Catalina Island ASBS #28 (2.9 miles centered on Seal Rocks), the Western Santa Catalina ASBS #26 (4 miles of coastline from Little Harbor south to Ben Weston Beach), and the Farnsworth Bank ASBS #27 (37 acres on a submerged pinnacle, about 60 feet deep at the top, and covered with many kinds of encrusting organisms, such as the purple hydrocoral *Allopora californica*).

The State has also designated a number of State Marine Conservation Areas (SMCA) and three *de facto* State Marine Reserves (SMR) around the Island. In these conservation areas, the take method and what may be fished is limited very specifically and differs for each area. (1) Centered on Farnsworth Bank is the Farnsworth Offshore SMCA that extends from 1 to 3 nautical miles offshore and (2) the Farnsworth Onshore SMCA that extends from the coastline to meet the Farnsworth Offshore SMCA about 1 nautical mile. (3) All of Cat Harbor on the south side of the Isthmus is in Cat Harbor SMCA with take restricted to recreational fishing for marine aquatic plants and finfish. (4) Arrow Point to Lion Head Point SMCA extends from mean high tide out to 1000 feet offshore. (5) Bird Rock SMCA is centered on Bird Rock off the northwest coast and extends from the offshore boundary of Blue Cavern SMCA to 3 nautical miles offshore, with boundaries drawn due N-S off the end points of Blue Cavern SMCA. (6) Blue Cavern SMCA is really a reserve, with no take allowed even of sport fish. (7) Long Point SMR has no take allowed, which is usual for reserves. (8) Casino Point SMCA on the north end of Avalon Bay is really a reserve, with no take allowed. (9) Lover's Cove SMCA on the south side of Avalon Bay has common provisions, but includes the unusual one of the allowance of fish feeding (for the viewers on the glass-bottomed boats).

The California Department of Fish and Game maintains a list of sensitive species (all rare and uncommon), which includes those designated federally. There are 64 plants, 5 snails, and 5 vertebrates listed for the Island.

California Audubon has designated the Island and its surrounding waters to about 0.8 miles offshore as part of the Northern Channel Islands Globally Important Bird Area (IBA).

The County requires special biological review of development on the Island if the project involves a parcel that has a designated Significant Ecological Area (SEA). These areas were all specified on the basis of significant island vegetation, and in a few cases, included marine algae. There are 37 designated SEAs on the Island: Arrow Point; Avalon Canyon; Toyon Canyon; Ben Weston Beach-Mills Landing-Sentinel Rock; Bird Rock; Black Point, Black Jack Mountain and Echo Lake; Blue Cavern Point-Fishermans Cove; Buffalo Springs Reservoirs; Bulrush Canyon; Cactus Peak; Cape

Canyon; Cherry Valley; Cottonwood Canyon; Descanso Canyon; Fourth of July Cove; Gallagher Canyon; Geiger Coves; Haypress Area-Hamilton Canyon; Indian Rock; Isthmus; Isthmus Canyon; Johnsons Landing; Little Harbor-Shark Harbor-Indian Head Point; Middle Ranch Canyon; Mount Orizaba; Parsons Landing; Pebbly Beach Canyon; Renton Mine Road; Silver Peak; Skull Canyon; Sweetwater Canyon; White Cove; and Wild Boar Gully.

Vegetation

Vegetation on the Island is composed of a large variety of plant community types. The rugged topography, steep and rocky shoreline, and generally undisturbed condition of the Island has produced a unique diversity of vegetative communities. Historically, the Island was mostly brushland dominated by chamise (*Adenostoma fasciculatum*) and island ceanothus (*Ceanothus megacarpus* var. *insularis*) on the northern slopes, and California sagebrush (*Artemisia californica*) and Santa Catalina Island buckwheat (*Eriogonum giganteum* var. *giganteum*) on the south-facing slopes. Following the introduction of feral herbivores (goats, pigs, deer, and bison), this brushland was replaced in most areas by island scrub oak (*Quercus pacifica*), laurel sumac (*Malosma laurina*), toyon (*Heteromeles arbutifolia*), lemonadeberry (*Rhus integrifolia*), black sage (*Salvia mellifera*), and white sage (*S. apiana*), which dominate today. The lack of a significant fire history and minimal differences in vegetation along elevation gradients (due to an abundance of moisture) has resulted in slope orientation as a major determinant for species presence/absence.

Plant communities on the Island were classified using standard methodology and terminology. Most of the communities discussed correspond directly with those listed in Holland's Preliminary Descriptions of the Terrestrial Natural Communities of California (1986 and 1992 update). Other communities are named based on dominant species within them and/or commonly used terminology. Descriptions and general locations of each plant community on the Island, including maritime succulent scrub, southern coastal bluff scrub, island chaparral, island oak woodland, ironwood woodland, island cherry woodland, non-native grassland, native grassland, and disturbed are given below.

In recent years, ecologists have refined previous vegetation classification approaches to define communities primarily by their constituent plant assemblages, and have now widely adopted the classification system described by Sawyer, Keeler-Wolf and Evens in A Manual of California Vegetation, Second Edition 2009 (MCV). This has become the accepted standard recognized by the California Department of Fish and Game, the California Native Plant Society and the United States Fish and Wildlife Service.

The important difference between current and earlier methods is that earlier classifications were based on a variety of factors, such as physiographic features, as in the case of vernal pools; or by specific plants, as in the case of coast live oak woodland; or by the use of commonly accepted terms, as in chaparral. In the MCV, plant communities are defined with more precision as botanical alliances where one, or occasionally two, plant species are dominant or co-dominant with a host of other possible associated plants. The MCV lists no one plant community called chaparral because in habitats of this type any one of a variety of shrubs can be dominant and influence the character of the vegetation. For example, in a location where chamise (*Adenostoma fasciculatum*) is predominant it is classified as an *Adenostoma fasciculatum* Shrubland Alliance, while close by greenbark ceanothus (*Ceanothus spinosus*) may emerge as the most common shrub and this is termed a *Ceanothus spinosus* Shrubland Alliance.

The transition to the new MCV format is ongoing. Not all alliances have been fully described and

new ones are still being recognized. As such, a significant amount of field work and site surveying for accuracy would be needed to verify all existing alliances on the Island, as well as extensive research to define every alliance in the new MCV plant communities' format. The more familiar nomenclatures will continue to be used for the Island when appropriate.

An effort has been made to conform to this new format. Descriptions and general locations of each plant community as described in the California Channel Islands Species Recovery Plan (USFWS, 1984) appear below. The plant communities correspond to classifications used in that document. Each was considered baseline information and evaluated for the potential presence of alliances as described in the MCV. Alliances with matching profiles of given criteria are listed. In many cases only with further investigation can the presence of some alliances be confirmed. In addition, it should be noted that not all alliances are listed within this description, as many alliances have yet to be defined and new alliances are still being discovered. Descriptions and general locations of the each plant community present on the Island are given below.

Maritime Succulent Scrub: A low, open scrub of soft-leaved shrubs and herbs with a rich admixture of stem and leaf succulents occurring on steep coastal slopes. This community is dominated by California sagebrush and coastal prickly-pear (*Opuntia littoralis*), which is located mainly on the exposed, dry south-facing slopes typically with well-drained soils. Other species associated with this community include Catalina crossosoma (*Crossosoma californica*), California brittle-bush (*Encelia californica*), Santa Catalina Island buckwheat, bedstraw (*Galium* spp.), island broom (*Acmispon dendroideus* var. *dendroideus*), laurel sumac, lemonadeberry, and black sage.

Corresponding MCV communities:

- *Artemisia californica* (California sagebrush scrub) Shrubland Alliance
- *Opuntia littoralis* (coast prickly pear scrub) Shrubland Alliance
- *Encelia californica* (California brittle bush scrub) Shrubland Alliance
- *Deinandra clementina-Eriogonum giganteum* (island buckwheat-island tar plant scrub) Provisional Shrubland Alliance
- *Malosma laurina* (laurel sumac scrub) Shrubland Alliance
- *Rhus integrifolia* (lemonade berry scrub) Shrubland Alliance
- Salvia mellifera (black sage scrub) Shrubland Alliance

Southern Coastal Bluff Scrub**:** A low scrub community adapted to exposed areas with nearly constant winds and high salt content. It consists of the largest reservoir of sensitive species and island endemics due to its location within inaccessible areas. This community is dominated by giant coreopsis (*Leptosyne gigantea*), Catalina crossosoma, *Dudleya* spp., Santa Catalina Island buckwheat, and island tarplant (*Deinandra clementina*) (David Carroll and Associates (DCA), 1994). Southern coastal bluff scrub, which occurs on the precipitous cliff, faces typically near the mouths of canyons and adjacent to some of the Island's disturbed areas on the steep seaward (east-facing) slopes and bluffs.

Corresponding MCV communities:

- *Leptosyne gigantea* (giant coreopsis scrub) Shrubland Alliance
- *Deinandra clementina-Eriogonum giganteum* (island buckwheat-island tar plant scrub) Provisional Shrubland Alliance

Island Chaparral**:** Consists of tall broad-leafed shrubs that form a dense cover on steep slopes. Dominant species found within this community include island and MacDonald's scrub oaks (*Quercus pacifica* and *Q. macdonaldii*), feltleaf ceanothus (*Ceanothus arboreus*), chamise, island red berry, and Santa Catalina Island manzanita (*Arctostaphylos catalinae*). Island chaparral occupies canyon bottoms, most of the higher elevations, and steep, north-facing slopes.

Corresponding MCV communities:

- *Quercus pacifica* (island scrub oak chaparral) Shrubland Alliance
- *Ceanothus megacarpus* (big pod ceanothus chaparral) Shrubland Alliance
- *Adenostoma fasciculatum* (chamise chaparral) Shrubland Alliance

Island Oak Woodland: Dominated by canyon oak (*Quercus chrysolepis*) with a poorly developed shrub layer, which includes wild blackberry (*Rubus ursinus*), poison oak, heart-leaved penstemon (*Keckiella cordifolia*), and southern chaparral honeysuckle (*Lonicera subspicata* var. *denudata*). Some island oak woodlands along riparian habitat include scattered arroyo willows (*Salix lasiolepis*). This community occurs in relatively moist, protected canyon bottoms with rich alluvial soils.

Corresponding MCV communities:

- *Quercus chrysolepis* (canyon live oak forest) Forest Alliance

Island Ironwood Forest: An upland community characterized by a dominance of Catalina ironwood (*Lyonothamnus floribundus* ssp. *floribundus*). The Island endemic is a broad-leaved tree and occurs in groves of 50-100 trees located along the north- and east-facing slopes (DCA 1994). Other species occasionally associated with the ironwood forest include island scrub oak and Santa Catalina Island manzanita. The understory is sparse, supporting a number of herbaceous annuals and ferns. This community is typically found in protected canyons with rich alluvial soils in the northern portion of the Island.

Corresponding MCV communities:

- *Lyonothamnus floribundus* (Catalina ironwood groves) Woodland Special Stands

Island Cherry Woodland: An open, dense woodland dominated by Catalina cherry (*Prunus ilicifolia* ssp. *lyonii*) with an understory consisting of Santa Catalina figwort (*Scrophularia villosa*), cudweed (*Gnaphalium* spp.), common chickweed (*Cerastium glomeratum*), wild cucumber (*Marah macrocarpa*), Santa Catalina Island bushmallow (*Malacothamnus fasciculatus* var. *catalinensis*), island morning-glory (*Calystegia macrostegia* ssp. *amplissima*), and many of weedy forb and grass species. This community occurs mostly along riparian habitats and in valley/canyon bottoms in the northern portion of the Island.

Corresponding MCV communities:

- *Prunus ilicifolia* (Holly leaf cherry chaparral) Shrubland Alliance

Grassland: Consist of low, herbaceous vegetation that are dominated by grasses, but generally also harbor native forbs and bulbs as well as naturalized annual forbs. Non-native grassland consists of dominant invasive annual grasses that are primarily of Mediterranean origin. Dominant species found within this community include slender oats (*Avena barbata*), wild oats (*A. fatua*), ripgut brome (*Bromus diandrus*), red brome (*B. madritensis* ssp. *rubens*), and wild mustards (*Brassica*,

Hirschfeldia, and *Sisymbrium* spp.). Non-native grasslands are located in small patches throughout the Island; along many of the ridges and gentle slopes with shallow clay or clay loam substrates; and in more significant acreage, on rolling hills in the southeastern portion of the Island. Native grassland consists of at least 10 percent cover of native grass species with the remaining coverage similar to non-native grasslands. Small patches of native grassland can be found on the Island mostly mixed with non-native grasslands.

Corresponding MCV communities:

- *Avena* (*barbata*, *fatua*) (Wild oats grasslands) Semi-Natural Herbaceous Stands
- *Bromus* (*diandrus*, *hordeaceus*)-*Brachypodium distachyon* (Annual brome grasslands) Semi-Natural Herbaceous Stands
- *Bromus rubens-Schismus* (*arabicus*, *barbatus*) (Red brome or Mediterranean grass grasslands) Semi-Natural Herbaceous Stands
- *Brassica nigra* and other mustards (Upland mustards) Semi-Natural Herbaceous Stands

Disturbed Areas: Areas that either completely lack vegetation or are dominated by ruderal species within developed areas. Vegetation typically include horehound (*Marrubium vulgare*) and tree tobacco (*Nicotiana glauca*). Several disturbed areas occur throughout the Island and take the form of residential developments, paved roads, fire breaks, dirt access roads, trails, and other similarly disturbed areas.

Corresponding MCV communities: None at this time.

Wildlife

Wildlife on the Island is diverse and abundant due to the large acreage of natural open space and the diversity of habitat types. While a few wildlife species are entirely dependent on a single vegetative community, the vegetation communities within the area and adjoining areas constitute a functional ecosystem for a variety of wildlife species.

The analysis of invertebrates is severely limited due to the lack of data. The Island, however, supports healthy populations of a diverse assortment of countless invertebrate species. Amphibian populations are generally abundant and diverse due to the high moisture content provided under the shade of woodlands and the abundance of drainages. Many essential reptilian habitat characteristics are present. These include open habitats that allow free movement and high visibility and small mammal burrows for cover and escape from predators and extreme weather. These characteristics as well as the variety of habitat types present are likely to support a wide variety of reptilian species.

The scrubland, woodland, riparian, and grassland habitats provide foraging and cover habitat for year-round residents, seasonal residents, and migrating song birds. In addition, several year-round water sources and abundant raptor foraging, perching, and nesting habitat are located throughout the area. The combination of these resources as well as the confluence of many community types provides for a high diversity of bird species. Unlike other taxonomic groups, mammal populations are diverse and reflective of the unique island habitat types.

Wildlife Movement

Wildlife movement occurs throughout the Island. Concentrated movement corridors or bottlenecks are uncommon on the Island due to the abundance of uninterrupted open space and the lack of disturbed areas. In general, movement takes place in large drainages, along ridgelines, and along

dirt roads. However, the small isthmus at Two Harbors represents a significant reduction in the ability for animals to move freely between the two parts of the Island. Movement across the isthmus has been further restricted by human encroachment of the Two Harbors community and Island visitors. Although a lack of movement across the isthmus may isolate some animal populations and reduce the genetic diversity on either side, this division has provided a unique opportunity for restoration by isolating and removing feral animals from the Island.

Sensitive Biological Resources

The statuses of rare plants are hierarchically categorized by the CNPS using a rank and decimal system. The initial category level of Rare Plant Rank is indicated by ranks 1A (presumed extinct in California), 1B (rare or endangered in California and elsewhere), 2 (rare or endangered in California but more common elsewhere), 3 (more information needed, a review list), and 4 (limited distribution). In cases where the CNPS has further identified the specific threat to the species, a decimal or Threat Code is added: .1 (seriously endangered in California), .2 (fairly endangered in California) or .3 (not very endangered in California).

The following special-status plant taxa have been reported or have the potential to occur on Santa Catalina Island, based on known habitat requirements and geographic range information:

- Baja rock lichen (*Graphis saxorum*) CDFG Special Plants List
- Red sand-verbena (*Abronia maritima*) RPR 4.2
- Island broom (*Acmispon dendroideus* var. *dendroideus*) RPR 4.2
- Aphanisma (*Aphanisma blitoides*) RPR 1B.1
- Santa Catalina Island manzanita (*Arctostaphylos catalinae*) RPR 1B.2
- Coulter's saltbush (*Atriplex coulteri*) RPR 1B.2
- South Coast saltscale (*Atriplex pacifica*) RPR 1B.2
- Davidson's saltscale (*Atriplex serenana* var. *davidsonii*) RPR 1B.2
- Golden-spined cereus (*Bergerocactus emoryi*) RPR 2.2
- Round-leaved filaree (*California macrophylla*) RPR 1B.1
- Island ceanothus (*Ceanothus megacarpus* var. *insularis*) RPR 4.3
- Southern tarplant (*Centromadia parryi* ssp. *australis*) RPR 1B.1
- Island mountain-mahogany (*Cercocarpus betuloides* var. *blancheae*) RPR 4.3
- Catalina Island mountain-mahogany (*Cercocarpus traskiae*) FE, SE, RPR 1B.1
- Seaside cistanthe (*Cistanthe maritima*) RPR 4.2
- Nevin's woolly sunflower (*Constancea nevinii*) RPR 1B.3
- Small-flowered morning-glory (*Convolvulus simulans*) RPR 4.2
- Catalina crossosoma (*Crossosoma californicum*) RPR 1B.2
- Island tarplant (*Deinandra clementina*) RPR 4.3
- South island bush-poppy (*Dendromecon harfordii* var. *rhamnoides*) RPR 1B.1
- Western dichondra (*Dichondra occidentalis*) RPR 4.2
- Beach spectaclepod (*Dithyrea maritima*) ST, 1B.1
- Greene's dudleya (*Dudleya greenei*) RPR 4.2
- Catalina Island dudleya (*Dudleya virens* ssp. *hassei*) RPR 1B.2
- Island green dudleya (*Dudleya virens* ssp. *insularis*) RPR 1B.2
- Bright green dudleya (*Dudleya virens* ssp. *virens*) RPR 1B.2
- Santa Catalina Island buckwheat (*Eriogonum giganteum* var. *giganteum*) RPR 4.3
- Island buckwheat (*Eriogonum grande* var. *grande*) RPR 4.2

- Island poppy (*Eschscholzia ramosa*) RPR 4.3
- Cliff spurge (*Euphorbia misera*) RPR 2.2
- Santa Catalina Island bedstraw (*Galium catalinense* ssp. *catalinense*) RPR 1B.2
- Nuttall's island bedstraw (*Galium nuttallii* ssp. *insulare*) RPR 4.3
- Showy island snapdragon (*Gambelia speciosa*) RPR 1B.2
- Nevin's gilia (*Gilia nevinii*) RPR 4.3
- Palmer's grapplinghook (*Harpagonella palmeri*) RPR 4.2
- Island rush-rose (*Helianthemum greenei*) FT, RPR 1B.2
- Decumbent goldenbush (*Isocoma menziesii* var. *decumbens*) RPR 1B.2
- Island jepsonia (*Jepsonia malvifolia*) RPR 4.2
- Southern island mallow (*Lavatera assurgentiflora* ssp. *glabra*) RPR 1B.1
- Fragrant pitcher sage (*Lepechinia fragrans*) RPR 4.2
- Santa Barbara honeysuckle (*Lonicera subspicata* var. *subspicata*) RPR 1B.2
- Santa Catalina Island desert-thorn (*Lycium brevipes* var. *hassei*) RPR 1B.1
- California box-thorn (*Lycium californicum*) RPR 4.2
- Santa Catalina Island ironwood (*Lyonothamnus floribundus* ssp. *floribundus*) RPR 1B.2
- Small-flowered microseris (*Microseris douglasii* ssp. *platycarpha*) RPR 4.2
- Santa Catalina Island monkeyflower (*Mimulus traskiae*) RPR 1A
- Coast woolly-heads (*Nemacaulis denudata* var. *denudata*) RPR 1B.2
- Short-lobed broomrape (*Orobanche parishii* ssp. *brachyloba*) RPR 4.2
- Lyon's pentachaeta (*Pentachaeta lyonii*) FE, SE, RPR 1B.1
- Engelmann oak (*Quercus engelmannii*) RPR 4.2
- Island scrub oak (*Quercus pacifica*) RPR 4.2
- Island oak (*Quercus tomentella*) RPR 4.2
- Island redberry (*Rhamnus pirifolia*) RPR 4.2
- Santa Catalina Island currant (*Ribes viburnifolium*) RPR 1B.2
- Santa Catalina figwort (*Scrophularia villosa*) RPR 1B.2
- Chaparral ragwort (*Senecio aphanactis*) RPR 2.2
- Santa Cruz Island rock cress (*Sibara filifolia*) FE, RPR 1B.1
- Wallace's nightshade (*Solanum wallacei*) RPR 1B.1
- Woolly seablite (*Suaeda taxifolia*) RPR 4.2
- Southern island clover (*Trifolium palmeri*) RPR 4.2
- Catalina mariposa lily (*Calochortus catalinae*) RPR 4.2
- California dissanthelium (*Dissanthelium californicum*) RPR 1B.2
- Vernal barley (*Hordeum intercedens*) RPR 3.2
- Chaparral rein orchid (*Piperia cooperi*) RPR 4.2

The following special-status animal species are reported or are likely to be present on Santa Catalina Island based on habitat requirements and known range attributes:

- Santa Catalina lancetooth (*Haplotrema catalinense*) CDFG Special Animals List
- Shepard's snail (*Pristiloma shepardae*) CDFG Special Animals List
- Catalina mountainsnail (*Radiocentrum avalonense*) CDFG Special Animals List
- San Clemente Island blunt-top snail (*Sterkia clementina*) CDFG Special Animals List
- Sandy beach tiger beetle (*Cicindela hirticollis gravida*) CDFG Special Animals List
- Santa Catalina garter snake (*Thamnophis hammondii* ssp.) CDFG Special Animals List
- Bald eagle (*Haliaeetus leucocephalus*) SE, CDF, CDFG Fully Protected

- Xantus' murrelet (*Synthliboramphus hypoleucus*) FC, BCC, ST, ABC
- Santa Catalina Island shrew (*Sorex ornatus willetti*) SSC
- Santa Catalina Island fox (*Urocyon littoralis catalinae*) FE, ST

Santa Monica Mountains

For a description of the resources in the Santa Monica Mountains, please refer to the description for the Santa Monica Mountains Significant Ecological Area (SEA) in Section IV.

V. Watersheds

Antelope Valley

The Antelope Valley area is a unit of the Lahontan hydrologic region. The southern half of this hydrologic region is located in the Antelope Valley. Unlike the coastal watersheds in the County, it is a closed basin on the edge of the Mojave Desert, having no outlet to the ocean or major river system. As a component of this area, numerous streams drain the north-facing San Gabriel Mountains, carrying rainfall and snow melt from the Angeles National Forest into the valley. Significant stream systems in the Antelope Valley are Amaroosa Creek, Big Rock Creek, and Little Rock Creek.

During most years the rainfall in the Antelope Valley is scant, averaging less than 8 inches per year. Every few years major storms cause flooding, sending sheets of water flow across the eastern portion of the Antelope Valley to the dry lakebeds of Rosamond and Rodgers lakes in Kern County. Uninhibited by development, the sheet flow filters into the groundwater basin or evaporates on the lakebeds, leaving the surface smooth and flat. This natural runoff process is important for two reasons: 1) it benefits the local communities with groundwater recharge, and 2) it seasonally resurfaces the dry lake beds, which are used for aircraft landings at Edwards Air Force Base.

The Lahontan Regional Water Quality Control Board monitors the Antelope watershed through its Basin Plan for the region. The Basin Plan calls for land use controls to help reduce pollutants in stormwater runoff. In particular, the Plan advocates limiting impervious surfaces, restoring natural vegetation and protecting the headwaters of stream channels and riparian areas.

Los Angeles River Watershed

The Los Angeles River watershed covers 834 square miles, a small part of which extends into Ventura County. It includes the San Fernando Valley and is the largest watershed in the Los Angeles Basin. The river extends 51 stream miles, from the confluence of Bell Creek and Arroyo Calabasas, to the Pacific Ocean. Numerous tributaries feed the River as it flows through the San Fernando Valley and the coastal plain to the Long Beach Harbor. These tributaries include Tujunga Wash, Verdugo Wash, Arroyo Seco, Rio Hondo, and Compton Creek. Several important biotic communities exist in the northern tributaries that feed the river, including freshwater marsh areas in Tujunga Canyon and the Hansen Flood Control Basin. The natural habitat in these tributaries provides a semi-protected corridor for wildlife between the Angeles National Forest and the river.

By 1960, the Los Angeles River was lined with concrete along most of its length by the U.S. Army Corps of Engineers in order to prevent the loss of lives and property from flood damage. As a result, the river's sole purpose for years was efficient water conveyance—carrying stormwater from the land to the ocean as quickly as possible. Efforts continue under the auspices of the Los Angeles County

Flood Control District to capture as much stormwater as possible and redirect it to regional groundwater recharge areas to replenish groundwater basins, saving thousands of acre-feet of water every year.

The volume of pollutants that enters the Los Angeles River is extremely high due to accumulated urban stormwater runoff from the hundreds of square miles of impervious land uses that flank the river. To address these problems, the County, the Flood Control District, local jurisdictions, a variety of stakeholders, and the Los Angeles Regional Water Quality Control Board are implementing programs to reduce the number and concentration of pollutants that enter the river.

Over the past two decades, interest the river's recreational and ecological functions has reemerged, culminating in a river-wide planning effort in the 1990s, which resulted in the adoption of the *Los Angeles River Master Plan* by the Board of Supervisors in 1996. The plan was created through a cooperative effort by the Departments of Public Works, Regional Planning, Parks and Recreation and many river stakeholder groups for the enhancement of aesthetic, recreational, flood control and environmental functions of the river. The plan seeks to do so by expanding bikeway, walking and equestrian trails to and along the river, enhancing existing trails and habitat with landscaping, and promoting economic development opportunities. Since the adoption of the plan, an advisory committee has overseen many new river projects, including bike trails, pocket parks, equestrian trail enhancements, river art and signage. So much public interest in the river has been generated that many more improvements are anticipated in the future.

The County is also working with various organizations and agencies that are involved in watershed-related planning activities, such as the San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy, the Council for Watershed Health, and the Flood Control District. The attention being paid to the watershed has resulted in a better understanding of its functions and generated an unprecedented network of residents, private organizations and government entities dedicated to watershed management.

Compton Creek Sub-Watershed

Compton Creek drains an area of approximately 42 square miles, including portions of the Cities of Carson, Compton, Long Beach, Los Angeles, Lynwood, and South Gate and portions of the County unincorporated communities of Florence-Firestone, Willowbrook, and Rancho Dominguez. Compton Creek drains into the Los Angeles River, which then empties into San Pedro Bay at the eastern edge of the Long Beach Harbor.

With more than 700,000 residents, the Compton Creek watershed is highly urbanized and most of its drainage courses are lined with concrete. Approximately 97 percent of the land area is occupied by homes, businesses, roads, and similar uses. As a result of excess levels of trash and coliform bacteria, surface and groundwater quality in Compton Creek has been degraded, natural hydrologic functions modified, and plant and wildlife diversity reduced.

In recent years, various groups, cities, and agencies have worked to transform Compton Creek into a valued community asset, improve and expand open space, optimize water resources, preserve and restore habitat, and create a network of trails and bike paths. Some of these efforts have been informally coordinated, in recognition of the potential to extend benefits beyond the borders of individual cities, create opportunities to leverage benefits, and maximize funding resources.

Los Angeles Harbor Watershed

The major river system within the area that drains to Los Angeles Harbor is the Dominguez Channel. The Dominguez Channel watershed, part of the larger Los Angeles Harbor watershed, is located within the southern portion of County and encompasses approximately 110 square miles of intensely urban area. Approximately 81 percent of the watershed is developed. Residential development covers nearly 40 percent of the watershed, and another 41 percent is made up by industrial, commercial and transportation uses. With a population of nearly 1 million, considerable demands are made on infrastructure and services within the watershed. Local water supply is limited and the majority of water use is provided by imported sources. Parkland and open space are in short supply and generally are deficient. Another significant stream system within the Los Angeles Harbor watershed is Wilmington Drain.

There are significant stormwater pollution issues in this watershed. For example, old waste disposal practices have left DDT and PCBs deposited in the channel bottom, which are carried to the harbor in land and acquatic sediment swept up and re-suspended by stormwater.

Nine unincorporated County islands are located within this urban-industrial watershed and each of these areas affects and is affected by the health and function of Dominguez Channel and its tributaries.

San Gabriel River Watershed

The San Gabriel River watershed encompasses part of the Angeles National Forest, the San Gabriel Valley, and large urban areas in southeast portion of the County. It is bounded by the Los Angeles River on much of its west flank, and extends to San Bernardino and Orange counties. Totaling more than 640 square miles, the watershed has extensive areas of un-channeled tributaries, which support riparian and woodland habitats. Its northern reaches in the Angeles National Forest are dramatically different from the developed 167 square miles in the Los Angeles Basin. It is such an important county resource that the U.S. Congress preserved two wilderness areas within this watershed. The San Gabriel Wilderness Area—36,215 acres—along the West Fork of the San Gabriel River, and Sheep Mountain Wilderness Area, 31,680 acres along the East Fork.

The main watercourse in this watershed is the San Gabriel River. The river extends 59 stream miles from the Angeles National Forest to the Pacific Ocean, draining 350 square miles of land. It also recharges groundwater tables in several basins. The major tributaries that feed the river include Coyote Creek, Walnut Creek, Puente Creek and San Jose Creek. The upper section of the San Gabriel River and its tributaries are still considered relatively pristine. However, intensive recreational use and erosion due to wildfires in this area may threaten water quality and wildlife that depend on the river. The middle section of the river has been extensively modified throughout the San Gabriel Valley to diminish flood damage and encourage groundwater recharge. The lower section, similar to the Los Angeles River, is lined with concrete from Firestone Boulevard to the bay. In contrast to the upper and middle sections of the river, dry weather flow in the lower section stems primarily from urban runoff and treated effluent from municipal wastewater treatment facilities.

A clear link exists between the health of this watershed and the quality of life for millions of county residents. The upper reaches of the San Gabriel River support wildlife, deliver drinking water and provide a myriad of recreational opportunities. To protect and enhance the multiple benefits of this resource a river-wide planning effort entitled *San Gabriel River Master Plan was adopted in 2006*. This effort, spearheaded by Los Angeles County Department of Public Works, brings together a

dynamic group of stakeholders, including the thirteen cities along the river, residents, environmental groups and many business and community leaders.

The County is working with stakeholders involved in other planning activities, such as the San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy, the Santa Monica Mountains Conservancy, and the Flood Control District. Together, stakeholders developed a watershed and open space plan in 2001 entitled *Common Ground: From the Mountains to the Sea* that provides general guidelines for improvement of the San Gabriel and Lower Los Angeles Rivers watersheds through community development, public awareness, preservation of open space and creation of recreational opportunities—particularly along the rivers.

Santa Clara River Watershed

The Santa Clara River watershed is an extensive hydrologic system that encompasses the western portion of the Angeles National Forest in the County and eastern portion of Los Padres National Forest in Ventura County. The Santa Clara River—an essential component of this watershed—recharges local groundwater, provides riparian habitat and supplies water to downstream agricultural lands in Ventura County. It is the largest relatively unaltered river system in Southern California, and the single most important natural wildlife corridor in the County. The river and its tributaries provide drainage for approximately 654 square miles of the upper watershed within the County. The river's major tributaries include Soledad Canyon, Castaic Creek, San Francisquito Canyon Creek, Bouquet Canyon Creek, Sand Canyon Creek, Mint Canyon Creek and Santa Clara River South Fork. Several endangered species are found in this watershed, including the Arroyo Toad and the Unarmored Three-spine Stickleback. Another important stretch of the river supports a variety of riparian-obligate songbirds and birds of prey between Castaic Junction and Blue Cut near the Ventura County line, where the groundwater basin thins and narrows, forcing groundwater toward the surface.

A link exists between the health of this watershed, particularly its tributaries, and development in the area. Urban expansion in the 1990s and early 2000s impacted the watershed on several levels, including a reduction in local water supplies and disappearing open space. Furthermore, the land use activities in this area have created many square miles of impervious surfaces, which have created more urban runoff and reduced the amount of water that would naturally percolate into groundwater basins. By employing watershed management techniques, the County aims to curb this trend.

In addition to these ongoing efforts, the County has expanded its Significant Ecological Area overlay in several areas of the watershed, including the headwaters of the Santa Clara River and the Santa Susana Mountains. Further information on Significant Ecological Areas is located in the SEA section of this Element.

Santa Monica Bay Coastal Watersheds

The County of Los Angeles, other agencies, cities, and stakeholders coordinate the management of the coastal watersheds of Santa Monica Bay as two distinct management areas due to the vast differences in land use and population density: North Santa Monica Bay watersheds (North Bay) and the South Santa Monica Bay watersheds (South Bay). The North Bay consists of the Malibu Creek and Topanga Creek watersheds as well as sixteen other rural coastal watersheds. North Bay watersheds are primarily natural open space with low-density residential developments. The South Bay includes Ballona Creek watershed, Marina Del Rey, and 10 urban coastal sub-watersheds. Although vastly different from one another, these watersheds have a direct impact on the quality and

quantity of water delivered to the Santa Monica Bay. The Malibu Creek watershed traverses a rural mountainous area, while the Ballona Creek watershed is comprised of intensely urban development.

The coastal watersheds of the Santa Monica extend from the Ventura-Los Angeles County line to outer Cabrillo Beach in San Pedro. This length includes 44 beaches along 55 miles of coastline attracting over 55 million beach visitors each year. While the Malibu Creek and Ballona Creek watersheds also drain to Santa Monica Bay, they are typically managed as separate areas due to their significant size. A Bacteria Total Maximum Daily Load (Bacteria TMDL) for the Santa Monica Bay Beaches became effective on July 15, 2003.

Ballona Creek Sub-Watershed

The Ballona Creek watershed is located in the western portion of the County and is approximately 130 square miles in size. It is highly urbanized and is home to more than 1.6 million residents. It includes the cities of Beverly Hills and West Hollywood, portions of the cities of Culver City, Inglewood, Los Angeles, Santa Monica, Caltrans facilities, the Ballona Wetlands, and the unincorporated communities of Marina Del Rey, Baldwin Hills, Ladera Heights and a portion of Playa Del Rey. Three significant tributaries of Ballona Creek area: Centinela Creek, Sepulveda Canyon Channel and Benedict Canyon Channel.

Over the years, the urbanization of the Ballona Creek watershed routed many small tributaries through storm drains. These storm drains collect runoff from city streets and carry it to major tributaries and eventually to Ballona Creek, which flows into the Santa Monica Bay. Major contributors to the impaired water quality in the Creek are urban runoff and illegal dumping. These pollutants significantly contribute to pollution in the Santa Monica Bay, degrading ecosystems and recreational opportunities.

The Ballona Creek Trash TMDL became effective on August 11, 2005. To comply with this regulation, the County of Los Angeles adopted an aggressive strategy to reduce the amount of trash entering Ballona Creek from unincorporated areas. The Ballona Creek Metals TMDL became effective on October 29, 2008, the Ballona Creek Toxics TMDL became effective on January 11, 2006, and the Ballona Creek Bacteria TMDL became effective on April 27, 2007

Malibu Creek Sub-Watershed

Malibu Creek watershed is the largest rural watershed in North Santa Monica Bay. It is approximately 109 square miles and consists of over 75 percent natural open space. The Malibu Creek watershed encompasses a major portion of the Santa Monica Mountains and is one of many sub-watersheds that drain the mountain range. Over the past twenty years, the number of residents living in the Malibu Creek watershed has doubled. This growth and development has increased runoff, sedimentation and demand for imported water, and caused various tributaries that feed Malibu Creek to be channelized. As a result, the natural flow of water within the watershed has changed, degrading oak and riparian woodlands, steelhead trout populations, and the Malibu Lagoon.

The primary watercourse draining this watershed is Malibu Creek, which flows into Malibu Lagoon.

The health and function of Malibu Creek and its tributaries is an important issue as these waterways drain 109 square miles of the watershed into Malibu Lagoon and the Santa Monica Bay—a National Estuary.[12] Two important plant communities comprise the lagoon: the coastal salt marsh and coastal strand, and over 200 species of birds use the lagoon as a refuge.

A clear link exists between the health of Malibu Creek watershed, particularly Malibu Creek, and development in the mountains. Land use activities account for about half of all pollutants that enter the Malibu watershed drainage. Pollution sources include roadway runoff, septic system overflow, new construction, and vegetation clearance.

The Santa Monica Mountains North Area Plan, adopted by the Board of Supervisors in 2000, and the 1986 Local Coastal Plan address the adverse affect of development on the Santa Monica Mountains. These plans, which cover portions of the mountains north of the Coastal Zone, significantly restrict the potential number of dwelling units that may be built in the mountains. The guiding principle of the plan is to let the land dictate the site and type of development that should be allowed.

In addition to these plans, the County has expanded its Significant Ecological Area overlay in several parts of the watershed, encompassing a majority of the mountain range from Ventura County to the City of Los Angeles. Further information on Significant Ecological Areas is located in the SEA section of this Element.

The Malibu Creek Bacteria TMDL became effective on January 24, 2006, and a Trash TMDL became effective on July 7, 2009.

Marina Del Rey Sub-Watershed

The Marina Del Rey watershed is approximately two square miles in size and its drainage area is mostly within the City of Los Angeles. The unincorporated marina and harbor were mainly constructed from remnants of the Ballona Creek Wetlands and Estuary. The Marina Del Rey Harbor, Mothers' Beach, and Back Basins Bacteria TMDL became effective on March 18, 2004 and a Toxics TMDL became effective on March 22, 2006.

V. Agricultural Resource Areas Methodology

Figure 6.5 in the Conservation and Natural Resources Element shows the County's Agricultural Resource Areas (ARA), where the County promotes the preservation of agricultural activities. The ARA boundaries were derived in part from previously defined Agricultural Opportunity Areas (AOA) in the Antelope Valley Area Plan of 1986. The adopted AOA boundaries were refined to include farmland identified by the State Department of Conservation, including Prime Farmland, Farmland of Statewide Importance, Farmland of Local Importance, and Unique Farmland.

To reflect changes in land uses and address environmental concerns, the following were excluded from the ARAs:

[12] The Santa Monica Bay is designated a National estuary under the U.S. EPA's National Estuaries Program.

- Sensitive Environmental Resource Areas (SERA);
- Significant Ecological Areas (SEA) and Ecological Transition Areas (ETA);
- Approved specific plan areas;
- Approved large-scale renewable energy facilities; and
- Areas designated either Urban & Built-Up Land or Other by the State Department of Conservation, with the exception of isolated island areas or small parcels adjacent to viable agricultural lands.

Finally, to ensure larger contiguous acres of agricultural land uses and farming viability, areas that permit densities higher than 1 dwelling unit per 10 acre (RL 10), as well as non-residential categories were removed, as were areas less than 40 contiguous acres in size.

Appendix F: Parks and Recreation Element Resources

I. County Parks and Recreation Inventory

Table F.1: County Parks and Recreation Inventory

Park	Park Planning Area	Park Classification	Type	Acreage
Acton Park	1	Community	Local	12.0
Acton Wash Sanctuary	1	Special Use	Regional	75.0
Adventure Park	9	Community	Local	15.0
Alondra Community Regional Park	10	Community Regional	Local	53.0
Alondra Golf Course	10	Special Use	Regional	151.0
Alpine Butte Wildlife Sanctuary	1	Special Use	Regional	323.0
Altadena Golf Course	7	Special Use	Regional	58.0
Amigo Park	9	Neighborhood	Local	5.0
Apollo Community Regional Park	1	Community Regional	Regional	54.0
Arboretum and Botanic Garden	7	Special Use	Regional	119.0
Arcadia Community Regional Park	7	Community Regional	Regional	53.0
Athens Park	8	Community Regional	Regional	19.0
Atlantic Avenue Park	8	Neighborhood	Local	2.0
Avocado Heights Park	6	Neighborhood	Local	8.0
Bassett Park	6	Neighborhood	Local	10.0
Belvedere Community Regional Park	8	Community Regional	Regional	31.0

Park	Park Planning Area	Park Classification	Type	Acreage
Mary McLeod Bethune Park	8	Neighborhood	Local	5.0
Big Rock Creek Wildlife Sanctuary	1	Special Use	Regional	161.0
Blalock Sanctuary	1	Special Use	Regional	140.0
Bill Blevins Park	6	Neighborhood	Local	5.0
Bodger Park	10	Community	Local	12.0
Frank G Bonelli Regional Park	6	Regional	Regional	1,797.0
Thomas S. Burton Park	6	Neighborhood	Local	12.0
Butte Valley Wildflower Sanctuary	1	Special Use	Regional	351.0
Roy Campanella Park	8	Neighborhood	Local	9.0
George Washington Carver Park	8	Neighborhood	Local	6.0
Castaic Lake State Recreation Area	2	Regional	Regional	12,658.0
Castaic Sports Complex	2	Community Regional	Regional	54.0
Cerritos Community Regional Park	9	Community Regional	Regional	84.0
Charter Oak Park	6	Community	Local	12.0
Chesebrough Park	2	Neighborhood	Local	7.0
City Terrace Park	8	Community	Local	15.0
Countrywood Park	6	Neighborhood	Local	6.0
Crescenta Valley Community Regional Park	3	Community Regional	Regional	38.0
Dalton Park	6	Neighborhood	Local	5.0

Park	Park Planning Area	Park Classification	Type	Acreage
Del Aire Park	10	Neighborhood	Local	7.0
Del Valle Park	2	Neighborhood	Local	5.0
Descanso Gardens	7	Special Use	Regional	149.0
Desert Pines Sanctuary	1	Special Use	Regional	99.0
Devil's Punchbowl Natural Area	1	Special Use	Regional	1,259.0
Dexter Park	3	Community Regional	Regional	40.0
Diamond Bar Golf Course	6	Special Use	Regional	172.0
East Rancho Dominguez Park	9	Neighborhood	Local	6.0
Eaton Canyon Golf Course	7	Special Use	Regional	66.0
Eaton Canyon Nature Center	7	Special Use	Regional	198.0
El Cariso Community Regional Park	2	Community Regional	Regional	80.0
El Cariso Golf Course	2	Special Use	Regional	83.0
Enterprise Park	9	Community	Local	10.0
Fair Oaks Park	2	Neighborhood	Local	6.0
Charles S. Farnsworth Park	7	Community	Local	15.0
John Anson Ford Amphitheatre	8	Special Use	Regional	31.0
Deane Dana Friendship Park and Nature Center	10	Special Use	Regional	119.0
Ganesha Park	7	Pocket	Local	0.6
Carl O. Gerhardy Wildlife Sanctuary	1	Special Use	Regional	547.0
Kenneth Hahn State Recreation Area	5	Regional	Regional	308.0

Park	Park Planning Area	Park Classification	Type	Acreage
William S. Hart Regional Park	2	Special Use	Regional	162.0
Hasley Canyon Equestrian Center	2	Special Use	Regional	67.0
Hasley Canyon Park	2	Neighborhood	Local	5.0
Maggie Hathaway Golf Course	8	Special Use	Regional	13.0
Gloria Heer Park	6	Neighborhood	Local	10.0
Eastside Eddie Heredia Boxing Club	8	Pocket	Local	0.2
Hollywood Bowl	5	Special Use	Regional	69.0
Rueben Ingold Parkway	5	Pocket	Local	3.0
Jackrabbit Flats Wildlife Sanctuary	1	Special Use	Regional	114.0
Helen Keller Park	8	Neighborhood	Local	7.0
Knollwood Golf Course	5	Special Use	Regional	150.0
Knollwood Pool	5	Special Use	Regional	Part of golf course
Jake Kuredjian Park	5	Neighborhood	Local	6.0
La Mirada Community Regional Park	9	Regional	Regional	76.0
La Mirada Golf Course	9	Special Use	Regional	127.0
Ladera Park	5	Community	Local	16.0
Lakewood Golf Course	9	Special Use	Regional	177.0
George Lane Park	1	Community	Local	14.0
Lennox Park	10	Neighborhood	Local	6.0
Loma Alta Park	7	Neighborhood	Local	18.0

Park	Park Planning Area	Park Classification	Type	Acreage
Los Amigos Golf Course	9	Special Use	Regional	146.0
Los Robles Park	6	Neighborhood	Local	5.0
Los Verdes Golf Course	10	Special Use	Regional	163.0
Earvin "Magic" Johnson Park	8	Community Regional	Regional	104.0
Manzanita Park	6	Community	Local	12.0
David March Park	2	Neighborhood	Local	12.0
Marshall Canyon Golf Course	6	Special Use	Regional	157.0
Marshall Canyon Park	6	Special Use	Regional	119.0
Allen J. Martin Park	6	Neighborhood	Local	7.0
Everett Martin Park	1	Neighborhood	Local	6.0
Amelia Mayberry Park	9	Community	Local	14.0
McNees Park	9	Pocket	Local	0.6
Mescal Wildlife Sanctuary	1	Special Use	Regional	99.0
Michillinda Park	7	Pocket	Local	2.0
Mona Park	8	Neighborhood	Local	8.0
Monteith Parkway	5	Pocket	Local	0.6
Monument Park	7	Pocket	Local	0.4
Mountain Meadows Golf Course	6	Special Use	Regional	189.0
Northbridge Park	2	Neighborhood	Local	9.0
Eugene A. Obregon Park	8	Neighborhood	Local	11.0
Jesse Owens Community Regional Park	8	Community Regional	Regional	9.0

Park	Park Planning Area	Park Classification	Type	Acreage
Pacific Crest Park	2	Neighborhood	Local	9.0
Pamela Park	7	Neighborhood	Local	3.0
Park Learning Grove County Park	10	Pocket	Local	0.5
Parque de los Suenos	8	Pocket	Local	1.6
El Parque Nuestro	8	Pocket	local	0.6
Pathfinder Community Regional Park	6	Community Regional	Regional	29.0
Theodore Payne Wildlife Sanctuary	1	Special Use	Regional	157.0
Pearblossom Park	1	Neighborhood	Local	8.0
Peck Road Water Conservation Park	7	Special Use	Regional	155.0
Pepperbrook Park	6	Neighborhood	Local	5.0
Phacelia Wildlife Sanctuary	1	Special Use	Regional	160.0
Pickens Park	3	Pocket	Local	0.2
Pico Canyon Park	2	Neighborhood	Local	21.0
Placerita Canyon Nature Center	2	Special Use	Regional	507.0
Rimgrove Park	6	Neighborhood	Local	8.0
Dr. Richard H. Rioux Memorial Park	2	Community	Local	17.0
Virginia Robinson Gardens	5	Special Use	Regional	6.0
Jackie Robinson Park	1	Neighborhood	Local	9.0
Franklin D. Roosevelt Park	8	Community Regional	Regional	24.0
Carolyn Rosas Park	6	Neighborhood	Local	6.0

Park	Park Planning Area	Park Classification	Type	Acreage
Rowland Heights County Park	6	Community	Local	6.0
Ruben F. Salazar Park	8	Neighborhood	Local	8.0
San Angelo Park	6	Neighborhood	Local	9.0
San Dimas Canyon Community Regional Park	6	Regional	Regional	19.0
San Dimas Canyon Nature Center	6	Special Use	Regional	110.0
Santa Anita Golf Course	7	Special Use	Regional	131.0
Santa Catalina Island Interpretive Center	11	Special Use	Regional	0.6
Santa Fe Dam Recreational Area	7	Regional	Regional	989.0
Saybrook Park	8	Neighborhood	Local	6.0
Peter F. Schabarum Regional Park	6	Regional	Regional	575.0
Sorensen Park	9	Community	Local	11.0
Stephen Sorenson Park	2	Community Regional	Regional	108.0
South Coast Botanic Garden	10	Special Use	Regional	82.0
William Steinmetz Park	6	Community	Local	12.0
Sunshine Park	6	Neighborhood	Local	7.0
Tesoro Adobe Historic Park	2	Special Use	Regional	2.0
Trailview Park	6	Pocket	Local	51.0
Tujunga Ponds Wildlife Sanctuary	3	Special Use	Regional	13.0
Two Strike Park	3	Neighborhood	Local	8.0
Val Verde Community	2	Community	Regional	58.0

Park	Park Planning Area	Park Classification	Type	Acreage
Regional Park		Regional		
Valleydale Park	6	Neighborhood	Local	9.0
Vasquez Rocks Natural Area & Nature Sanctuary	2	Special Use	Regional	913.0
Veterans Memorial Community Regional Park	3	Community Regional	Regional	97.0
Victoria Community Regional Park	9	Community Regional	Regional	34.0
Victoria Golf Course	9	Special Use	Regional	167.0
Walnut Creek Community Regional Park	6	Special Use	Regional	55.2
Walnut Nature Park	8	Special Use	Regional	0.4
Chester Washington Golf Course	8	Special Use	Regional	126.0
Col. Leon H. Washington Park	8	Neighborhood	Local	13.0
Ted Watkins Memorial Park	8	Community Regional	Regional	28.0
West Creek Park	2	Community	Local	16.9
Charles White Park	7	Neighborhood	Local	5.0
Whittier Narrows Golf Course	7	Special Use	Regional	15.0
Whittier Narrows Nature Center	7	Special Use	Regional	Part of WNRA
Whittier Narrows Recreation Area (WNRA)	7	Regional	Regional	1,293.0

Appendix G: Noise Element Resources

I. Sound Descriptors

Sound may be described in terms of three variables: amplitude, frequency, and time pattern.

Amplitude

Sound pressure is the amplitude or measure of the difference between atmosphere pressure (with no sound present) and the total pressure (with sound present). Although there are measures of sound amplitude, sound pressure is the fundamental measure and is the basic ingredient of the various measurement descriptors.

The unit of sound pressure is the decibel (dB) scale. The decibel scale is a logarithmic, not linear scale. A logarithmic scale is used because the range of sound intensities is so great that it is convenient to compress the scale to encompass all the sounds that need to be measured. The human ear has a wide range of responses to sound amplitude. Sharp, painful sound is 10 million times greater in sound pressure than the least audible sound. In decibels, this 10 million to 1 ratio is simplified logarithmically to 140 dB.

Another property of the decibel scale is that the sound pressure levels of two separate sounds are not directly (arithmetically) additive. For example, if sound of 70 dB is added to another sound of 70 dB, the total is only a 3-decibel increase (73 dB), not a doubling to 140 dB. Furthermore, if two sounds are of different levels, the lower level adds less to the higher as this difference increases. If the difference is as much as 10 dB, the lower level adds almost nothing to the higher level. In other words, adding a 60 decibel sound to a 70 decibel sound only increases the total sound pressure level less than one-half decibel.

Frequency

The rate at which a sound source vibrates, or makes the air vibrate, determines frequency. The unit of time is usually one second and the term “Hertz” (Hz) is used to designate the number of cycles per second.

The human ear and that of most animals has a wide range of responses. Humans can identify sounds with frequencies from about 16 Hz to 20,000 Hz. Because pure tones are relatively rare in life situations, most sounds consist of a complex mixture of multiple frequencies.

Time Pattern

The temporal nature of sound may be described in terms of its pattern of time and level: continuity, fluctuation, impulsiveness, intermittency. Continuous sounds are those produced for relatively long periods at a constant level, such as the ringing of a telephone or aircraft take-offs and landings. Impulse noises are sounds that are produced in an extremely short span of time, such as a pistol shot or a hand clap. Fluctuating sounds vary in level over time, such as the loudness of traffic sounds at a busy intersection.

II. Noise Measurement

Noise measurements are made in accordance with existing standards and regulations. Sound is measured by a sound level meter (SLM), which is a device that can give the measured sound pressure level (SPL). The Los Angeles County Noise Control Ordinance specifies SLM needs to satisfy the requirements pertinent for type S2A meters, in accordance with the American National Standards Institutes (ANSI) specifications or the most recent revision (1985 ANSI S1.4A).

In accordance with the Los Angeles County Noise Control Ordinance, noise measurements in the field are made utilizing the SLM set at A-weighting scale on the "slow mode" meter response except for impulsive noise (SLM set on "fast mode"). In general, the noise level is measured four to five feet above the ground, and 10 feet or more from the nearest reflective surface (i.e. walls), where possible.

The following are the basic measurements of noise:

Ambient Noise

The composite of noise from all sources near and far. In this context, the ambient noise level constitutes the normal or existing level of environmental noise at a given location.

Decibel, dB

A unit measurement describing the amplitude of sound, equal to 20 times the logarithm to the base of 10, or the ratio of the pressure of the sound measured to the reference pressure, which are 20 micropascals.

Impulsive Noise

The noise from impacts or explosions, e.g., from a pile driver, punch press or gunshot. The Los Angeles County Noise Control Ordinance defines impulsive noise as a sound of short duration that is usually less than one second and of high intensity, with an abrupt onset and rapid decay.

Intrusive Noise

The noise that intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, time of occurrence, tonal or informational content, and the prevailing noise level.

Leq

Equivalent energy level. The sound level corresponding to a steady state sound level that contains the same total energy as a time varying signal over a given sample period. Leq is typically computed over 1, 8 and 24-hour sample periods.

Noise Contours

Lines drawn about a noise source that indicates equal levels of noise exposure.

Pure Tone

A sound that is made up of only one frequency. The Los Angeles County Noise Control Ordinance defines “pure tone noise” as any sound that can be judged as audible as a single pitch or a set of single pitches.

Statistical Values

These are statistical methods used to account for the variance in noise levels throughout a given measurement period. L(%) is a way of expressing the noise level that is exceeded for a percentage of time in a given measurement period. For example, the County uses the L50 as a statistical value. Thirty minutes is 50 percent of 60 minutes, so the L50 is the noise level that is equal to or exceeded for 30 minutes in a 60 minute measuring period.

Weighted Level

The sound level in decibels as measured on a sound level meter using the A weighting filter network. This filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the response of the human ear, which gives a good correlation with subjective reactions to noise.

III. Federal Guidelines

Table G.1: Federal Guidelines for Acceptable Environmental Noise Levels

Authority and Specified Sound Levels (dBA)	Criteria Objectives
EPA Levels Document (1974)	
55 dBA Ldn outdoors	For the protection of public health and welfare with an adequate margin of safety.
45 dBA Ldn indoors	
Federal Inter-Agency Committee on Noise (FICON)	
65 dBA Ldn outdoors	Generally compatible for residential development.
>65 – 75 dBA	Residential use discouraged.
HUD	
65 dBA Ldn outdoors	Acceptable for housing without special acoustical consideration.
>65 – 75 dBA Ldn outdoors	Normally unacceptable, but acceptable with acoustical sound isolation.
[illegible]	[illegible]

	existence of overriding benefits.
FHWA	
57 dBA Ldn (1H) 60 dBA Ldn (1h) outdoors	Activity category "A": Lands on which serenity and quiet are of extraordinary significance.
67 dBA Ldn (1h) 70 dBA Ldn (1h) outdoors	Activity category "B": Picnic areas, recreation areas, residences, motels, schools, churches, libraries, and hospitals.
72 dBA Ldn (1h) 75 dBA Ldn (1h) outdoors	Activity category "C": Developed lands not in Categories "A" and "B" above.
52 dBA Ldn (1h) outdoors	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals and auditoriums.
FAA	
65 dBA Ldn outdoors	Compatible for residential, public and commercial uses.
>65 – 70 dBA Ldn outdoors	Compatible for commercial building uses. Compatible for public building use with 25 dBA building envelope aircraft noise reduction (NR). Not compatible for residential, but interior acceptable with 25 dBA building envelope NR.
>70 – 75 dBA Ldn outdoors	Compatible for commercial building use with 25 dBA building envelope NR. Compatible for public building use with 30 dBA building envelope aircraft noise reduction (NR). Not compatible for residential, but interior acceptable with 30 dBA building envelope NR.
>75 – 80 dBA Ldn outdoors	Compatible for commercial building use with 30 dBA building envelope NR. Not compatible for public building use. Not compatible for residential, but interior acceptable with 35 dBA building envelope NR.

>80 dBA Ldn outdoors	Not acceptable for commercial, public, or residential use buildings.

IV. Noise Contours

Figure G.1: Noise Contours for the Unincorporated Areas (coming soon)

V. Noise Barriers

Noise barriers include any man-made or natural feature that blocks or diminishes sound in its path from the source to the receiver, with concrete block walls and earthen berms being the more common kinds of man-made construction. A noise barrier reduces sound levels by breaking the direct line of sight between the noise source and the receiver. Effectiveness of noise mitigation barriers is primarily a function of height, the location in relation to the sound source and, to a lesser degree, the shape of the edge of the barrier. Since walls have a finite height, sound energy reaches the receptor by bending (diffraction) over the top of any barrier at a reduced intensity. An analysis based on application of the FHWA TNM "Look-up Tables"[13] demonstrates the effectiveness of noise barriers of varying heights at controlling noise from a sample of traffic, consisting of 1,000 automobiles traveling at 60 mph with the receptor at a distance of 100 meters (340 feet). The difference between a "no barrier" scenario and one with a 2 meter-high (6.5 feet) barrier results in an auditory noticeable condition, a decrease of approximately 7 dBA. The noise insertion loss resulting from the installation of a 3 meter high (9.8 feet) barrier is even more dramatic, lowering ambient noise levels by 12 dBA.

Also, the precise location of barriers between the sound source and the receptor plays a pivotal role in sound attenuation. Studies cited by Caltrans clearly indicate that the best results to minimize noise are obtained when the noise barrier is either close to either the sound source or to the receptor. Finally, the shape of barriers has an additional, substantial effect on noise attenuation and sound propagation. Most traffic noise prediction models factor in smooth edges on the noise barriers. However, research has shown that increased noise attenuation can be achieved with jagged edges on the noise barriers to create greater diffraction of the sound path. Results to date show "significant improvement (3-8 dB) for a barrier with a random edge profile compared to one of the same average height with a straight edge."[14]

Noise barriers (sound walls) are the most widely used method of mitigating noise from traffic. Caltrans characterizes noise barriers as the most reasonable noise abatement option available to

[13] FHWA. Traffic Noise Model, 1998.

[14] "Noise Barriers with Random Edge Profiles", Acoustical Society of America's 129th Meeting, May – June 1995; see "Jagged-edge Noise Barriers" in ICA/ASA 98' Lay Language Papers, June 1998.

the state to reduce highway and freeway noise.[15] This is due to barrier insertion being very effective in reducing noise sources that are close to the ground. Also, established land use patterns often pose constraints at the site of many proposed mitigation measures; that is, there is no available land for any other mitigation technique other than a noise barrier. Thus, construction of noise barriers is limited to those situations where other alternatives, such as open space, simply do not exist due to lack of available land or space. Overall, public reaction to highway noise barriers appears to be generally positive, though some residents have argued that aesthetics or view protection values are often sacrificed. In this regard, it should be noted that Caltrans has discovered that vegetation as a factor in noise attenuation does not appear to be significant, and it takes either a considerable depth of plant material or a considerable density of it for any substantial attenuation of sound.

[15] Technical Noise Supplement, Caltrans, October 1998, Section N-6000.

Appendix H: Safety Element Resources

I. Historic Wildfires in Los Angeles County

Table H.1: Los Angeles County Wildfire Incident Statistics (2007-2010)

Fire Name	**Year**	**Acres Burned**	**Structures**	
			Damaged	*Destroyed*
Buckweed/ Agua Dulce	2007	38,356	30	43
Canyon	2007	4,500	14	8
Magic	2007	2,824	0	0
Ranch	2007	58,401	2	10
Meadow Ridge	2007	20	0	0
October	2007	100	0	0
Sayre	2008	11,262	0	634
Sesnon	2008	14,703	11	78
Marek	2008	4,824	10	42
Osito	2009	304	0	0
Morris	2009	2,168	0	0
Station	2009	160,577	57	209
Crown	2010	14,000	6	10
Briggs	2010	530	0	0
Totals		**312,569**	**130**	**1,034**

Source: Cal Fire Fire Incident Reports

*Data on structures damaged and destroyed was not available for all wildfires, just for the ones listed above.

Table H.2: Acres Burned in Los Angeles County (2004-2010)

Year	Unincorporated Los Angeles County	Other Jurisdictions	All Jurisdictions
2004	34,353.58	361.80	34,715.38
2005	5,221.09	23,834.87	29,055.96
2006	7,355.35	163.66	7,519.01
2007	116,893.76	2,231.35	119,125.11
2008	30,714.17	401.92	31,116.09
2009	162,265.62	870.78	163,136.40
2010	1,513.99	45.02	1,559.01
Totals	**358,317.56**	**27,909.40**	**386,226.96**

Source: Los Angeles County Fire Department, Information Management Section, 2010.

II. Awareness Floodplain Mapping

The intent of the Awareness Floodplain Mapping project by the California Department of Water Resources (DWR) is to identify all pertinent flood hazard areas by 2015 for areas that are not mapped under the Federal Emergency Management Agency's (FEMA) National Flood Insurance Program (NFIP). The Awareness project will also provide the community and residents with an additional tool in understanding potential flood hazards currently not mapped as a regulated floodplain. The awareness maps identify the 100-year flood hazard areas using approximate assessment procedures. These floodplains will be shown as flood prone areas without specific depths and other flood hazard data. Awareness floodplain maps will be added as they become available.

Figure H.1 identifies the currently mapped Awareness Floodplains for the County mapped in the following USGS quadrangles: Neenach School, Rosamond Lake, Redman, Burnt Peak, Lake Hughes, Del Sur, Lancaster West, Lancaster East, Alpine Butte, Hi Vista, Adobe Mountain, Warm Springs Mountain, Green Valley, Sleepy Valley, Ritter Ridge, Littlerock, Lovejoy Buttes, El Mirage, Newhall, Mint Canyon, Agua Dulce, Acton, Pacifico Mountain, Juniper Hills, Valyermo, Mescal Creek, Oat Mountain, San Fernando, Sunland, Condor Peak, Crystal Lake, Mount San Antonio, Burbank, Mt. Wilson, and Glendora.

For more information, please visit DWR's web site at: http://www.water.ca.gov/floodmgmt/lrafmo/fmb/fes/awareness_floodplain_maps/los_angeles.

Figure H.1: Awareness Floodplain Map

III. Development in Flood Hazard Zones

Tables H.3, H.4, and H.5 represent developments that are located within the County's flood hazard zones. Table H.3 lists planned development located within flood hazard zones. This list was generated using case information from the Los Angeles County Department of Regional Planning's case tracking system and GIS data, and includes approved developments only. Tables H.4 and H.5 list existing development located within flood hazard zones. This list was generated using the Los Angeles Region Imagery Acquisition Consortium (LAR-IAC) building outline data to determine whether parcels with existing structures intersect with flood hazard zones.

Table H.6 lists the existing roadways that are located within flood hazard zones.

Table H.3: Planned Development in Flood Hazard Zones

Table H.4: Existing Single Family Development in Flood Hazard Zones

Table H.5: Existing Development in Flood Hazard Zones

Table H.6: Existing Roadways in Flood Hazard Zones

IV. Repetitive Loss Sites

As of January 3, 2011, FEMA identified 55 repetitive loss properties located within the unincorporated areas of the County. The County has since reduced this number to 43 repetitive loss properties by clarifying property locations or incorporating flood hazard mitigation measures. The County adopted a Floodplain Management Plan on May 11, 2010 to mitigate the flooding of 35 repetitive loss properties.

V. Active Faults

Cabrillo Fault

The Cabrillo Fault consists of several en echelon strands striking 20 to 25 degrees west of north and dipping 50 to 75 degrees (Ziony and Yerkes, 1985). The onshore portion of the fault lies on the Palos Verdes Peninsula and extends offshore into the San Pedro Bay.

Cucamonga Fault

The Cucamonga Fault Zone consists of one to three subparallel anastomosing strands of up to one kilometer in width and measuring between 20 and 25 kilometers in length (Morton and Matti, 1987; Wesnousky, 1987; Ziony and Yerkes, 1985). This segment is sometimes referred to as Sierra Madre Fault Segment E. The frontal fault zone in this area strikes about 70 degrees east of north and has moderate to steep northerly dips. Some workers confine this fault zone segment to the frontal southern margin of the San Gabriel and San Bernardino Mountains, from San Antonio Canyon to the west and Lytle Creek to the east (Morton and Matti, 1987; Smith, 1977; Lamar, et al., 1973). Morton and Matti (1987) suggest, however, that because of the complex structural relations at the west end, the Fault could be interpreted to extend farther west and merge with the Sierra Madre Fault System as a through-going, segmented, frontal fault system.

Hollywood Fault

The Hollywood Fault is mapped as a narrow strand that trends along the southern front of the Santa Monica Mountains (Ziony and Yerkes, 1985; Weber, et al., 1980). Ziony and Yerkes (1985) list the fault as having reverse or reverse oblique motion. The eastern segment of the Hollywood Fault Zone trends through the Repetto Hills as a complex series of faults and folds within the Puente Formation. In this area, the fault and several splays are in close proximity to the Raymond Fault (which is an Alquist Priolo-Special Studies Zone, or APSSZ). Physiographic features such as scarps and inclined spurs are interpreted as evidence of Holocene movement along the eastern 17 kilometers of the Hollywood Fault (Ziony and Yerkes, 1985; Weber, et al., 1980). The age of movement along the western portion of the Hollywood Fault is not reported, suggesting the Fault has been inactive for the last 750,000 years.

Holser Fault

The Holser Fault is a south dipping reverse fault consisting of several closely spaced strands that strike from 80 degrees east of north to 70 degrees west of north (Ziony and Yerkes, 1985; Winterer and Durham, 1962). The Fault Zone is as much as 1.5 kilometers wide along its western portion. The portion of the Fault transecting the County is approximately 13 kilometers long.

Ziony and Yerkes (1985) list offset stratigraphy and physiography as clear evidence of Late Quaternary movement. The Fault is shown as active for the following reasons: 1) the Fault is associated with known active faults, accommodating the north-south shortening between the San Cayetano and Santa Susana faults in a complex zone of south-dipping reverse faults (Yeats, 1987; Yeats et al., 1985; Ziony and Jones, 1989; Smith, 1977); 2) the Fault intersects an APSSZ fault; and 3) geomorphic evidence (i.e., drainage control of several streams including Piru Creek) supports a Holocene, or at least Late Quaternary age for the Holser Fault (Yeats et al, 1985).

Although no Holocene deposits are known, to date, to be displaced by the Fault (Allan Seward, 1990 personal communication), no published trenching program has conclusively shown the Fault Zone to be inactive. Trenching across the APSSZ segment of the San Gabriel Fault may have indirectly proven that the Fault is active, since the San Gabriel Fault may be a reactivated tear fault in the Holser Thrust System (Tom Rockwell, 1990 personal communication).

Llano Fault

The Llano Fault is located west of Victorville in the Mojave Desert. The Fault strikes 65 degrees west of north along a single-strand with a presumed dip to the southwest (Ziony and Yerkes, 1985). The reverse fault shows evidence of Holocene monoclinal folding and is shown as active by Ziony and Jones (1989).

Malibu Coast Fault

The onshore Malibu Coast Fault consists of several subparallel strands trending east-west along the southern margin of the western Santa Monica Mountains. The onshore Fault Zone is comprised of reverse faults with dips averaging between 45 and 80 degrees to the north, with zones of deformation as wide 0.5 kilometers (Ziony and Yerkes, 1985). There is an offshore portion of the Fault merging with the northern strand of the Santa Monica Fault, as interpreted by Weber (1980) and Crook and Ward (1983).

As early as 1965, Wentworth and Yerkes (1965) reported that the fault cut terrace deposits older than 25,000 years. The State fault evaluation conducted in 1977 concluded that the Fault was well-defined, but because no Holocene displacement had been documented, the Fault was not zoned within the APSSZ Act. Such evidence has recently been reported for a portion of the Fault located at the intersection of Kanan Dume Road and Pacific Coast Highway. Converse Consultants, working with Dr. Roy Schlemon, have found evidence of Holocene displacement within colluvial soils determined to be 5,000 to 6,000 years old at this location (oral communication, Greg Rzonak, 1988).

Mission Hills Fault

The Mission Hills Fault trends east-northeast to east-west for 10 kilometers along the south side of Mission Hills. The Fault is expressed by young fault morphology in some instances. The width has been described as a single-strand occurring within a zone as narrow as 150 feet (Ziony and Yerkes, 1985). Smith (1978) has interpreted the age of the Fault as late Pleistocene; however, Slosson (1977) and Kowalewsky (1978) documented Holocene rupture based on evidence of bedrock thrust over Holocene-aged soil. Ziony and Jones (1989) concur with a possible Holocene Age.

Newport-Inglewood Fault Zone

The trace of the Newport-Inglewood Fault Zone is marked by a series of low-lying hills including the Cheviot Hills, Baldwin Hills, Rosecrans Hills, Dominquez Hills, Signal Hill, and Reservoir Hill. These hills are sites of oil fields in which faulted anticlines form structural traps. The Fault Zone consists of a set of left stepping, discontinuous faults, which indicates a through-going right-lateral strike-slip fault at depth. Harding (1973) indicates that the Fault Zone is a nearly-vertical, right-lateral strike-slip fault at depth. The Fault Zone is covered under the APSSZ Act. Five separate en echelon faults comprise the Fault Zone in the County. These faults are as follows (Ziony and Yerkes, 1985):

- **Inglewood:** Northwest-trending fault with stratigraphic evidence of late Quaternary movement and recent physiographic features. Normal to normal-right-oblique sense of movement. Possible source of 1920 earthquake.
- **Potrero:** Northwest trending fault with normal to normal-right-oblique sense of movement with Late Quaternary physiographic features and groundwater impediments along trace in late Quaternary alluvial deposits (Poland and others, 1959). Numerous small earthquakes nearby.
- **Avalon-Compton:** Northwest-trending, vertical fault, which experienced movement in 1941 and 1944. Has reverse-right-oblique sense of movement and Late Quaternary physiographic features and groundwater impediments (Poland and others, 1959).
- **Cherry-Hill:** Northwest-trending near vertical fault with reverse-right-oblique sense of movement. Late Quaternary activity evidenced by offset stratigraphy, physiographic features, and groundwater impediments. Numerous small earthquakes east of trace.
- **Reservoir Hill-Seal Beach:** Northwest-trending, near vertical fault with normal-right-oblique or right-lateral strike-slip sense of movement. Late Quaternary activity is evidenced by offset stratigraphy, physiographic features, and groundwater impediments. Numerous small earthquakes east of trace.

North Hollywood Fault

The North Hollywood Fault, listed as a “possible fault in North Hollywood" by Ziony and Yerkes (1985), dips vertically along a single-strand approximately 2 kilometers in length. This Fault is but one of many groundwater impediments (faults) within the San Fernando Valley; however, Weber, et

al., (1980) noted that the Fault formed an ENE-trending, linear break in topography on older quadrangle maps published in 1901 and 1926. Weber (1980) noted that because the south-facing physiographic lineament apparently offset youthful deposits of the Tujunga Wash, the fault may be Holocene in age.

Northridge Hills Fault

The Northridge Hills Fault consists of nine en echelon strands each with zones approximately 0.7 kilometers wide (Ziony and Yerkes, 1985). The Fault Zone strikes 70 to 80 degrees west of north through the central San Fernando Valley. The style of slip is probably reverse, with a dip of 35 degrees north near the surface and 80 degrees north at depth (Ziony and Yerkes, 1985). Several aftershocks of the 1971 San Fernando Earthquake occurred coincident with the subsurface extension of the fault (Ziony and Yerkes, 1985). The Fault has been described as Late Quaternary Age by many workers (Ziony, et al., 1974; Barnhardt and Slosson, 1973; Wentworth and Yerkes, 1971); however, Ziony and Yerkes (1985) have reinterpreted groundwater offset data and fault physiography to suggest possible Holocene Age activity. Additional evidence of activity is the folding and warping of Holocene and Pleistocene Age sediments exposed during trench excavations by George Larson (Jerry Treiman, 1989; personal communication). Ziony and Jones (1989) show the Fault as possibly Holocene.

Palos Verdes Fault Zone

The portion of the Palos Verdes Fault Zone in the County can be discussed in terms of three separate segments: 1) the San Pedro Bay segment, 2) the onshore segment, and 3) the Santa Monica Bay segment (Ziony and Yerkes, 1985*).*

All segments are believed to possess reverse right oblique or reverse motion (Ziony and Yerkes, 1987). The San Pedro Bay segment is characterized as a complex zone of en echelon faults with evidence of offset Holocene stratigraphy (Fischer, et al., 1987). Fischer and others (1987) state that the eastern faults of the zone displace seismic reflectors or horizons that represent Holocene surficial sediments.

The onshore segment of the Palos Verdes Fault Zone is depicted by Ziony and Jones (1989) as Late Quaternary; however, Woodward and Clyde (1983) point to several factors that suggest Holocene displacements have occurred along the Palos Verdes Peninsula. These factors include the extensive deformation of the 120,000 year old terrace and apparent Holocene folding of the Gaffy anticline, a probable drag feature related to movement on the Palos Verdes Fault. This portion of the Fault is considered active despite the lack of unequivocal evidence for Holocene displacement.

The Santa Monica Bay segment is inferred to be a Late Quaternary feature by Ziony and Yerkes, (1985); however, increased seismicity in this offshore area, especially in association with the longest, single coherent strand in Santa Monica Bay, suggests that this segment is active.

Raymond Fault Zone

The Raymond Fault Zone consists of one to three strands, which diverge from the Sierra Madre Fault Zone in the area of Monrovia and trend to South Pasadena. Ziony and Yerkes (1985) indicate that the sense of movement on the Fault is reverse-left-oblique. Crook, et al., (1987) have presented a detailed description of numerous physiographic features that attest to the Fault's recent activity. The most impressive feature is the nearly continuous fault scarp between Monrovia Canyon and

Arroyo Seco. The Fault displaces recent alluvium and forms a significant groundwater barrier, which has been the subject of several previous studies.

Numerous trench studies and radiometric dating of exposed sediments has allowed definition of five major seismic events in the last 36,000 to 155,000 years B.P., and an additional three events, which cannot be dated precisely in the last 29,000 years (Crook, et al., 1987). Crook, et al., (1987) infer an average recurrence interval of 3,000 years, with an average vertical displacement of 0.4 meters per event. A maximum credible earthquake of ML6-3/4 can reasonably be assumed if the entire 22 kilometer length of the Fault were to break. Crook, et al., (1987) have also recognized a scarp feature in alluvium on the south side of the Raymond Fault in the South Pasadena area. This Fault, named the York Boulevard Fault, lies outside of the APSSZ, but due to its close proximity, is identified as active.

Redondo Canyon Fault

The Redondo Canyon Fault is presumed to be a single strand, which strikes 80 to 85 degrees east of north as it trends offshore from a point just north of the Palos Verdes Peninsula down Redondo Canyon. The fault length is approximately 13 kilometers and the dip is unknown. Scattered small earthquakes have occurred near the fault trace.

San Andreas Fault Zone

The San Andreas Fault Zone extends from northwest to southeast across the County. Numerous fault related geomorphic features, such as linear troughs are present over much of its length. The sense of displacement on the Fault is right-lateral strike-slip and most faults within the zone are vertical (Ziony and Yerkes, 1985). The California Division of Mines and Geology has completed a multi-year study of the San Andreas Fault through which detailed maps of the Fault Zone and the geologic units they affect have been compiled (Barrows, 1979; Beeby, 1979; Kahle, 1980; Barrows, et al., 1985).

Activity along the San Andreas Fault Zone has been recorded during historic events, including the Magnitude 7.1, 1989 Lorna Prieta Earthquake, the 1906 Magnitude 8 earthquake in San Francisco, and the 1857 Magnitude 7.9 Fort Tejon event. The segment in the County is one of eight discrete fault segments, with each segment exhibiting a unique character and return period for damaging earthquakes along strike of the more than 1,000 kilometer long fault. The 1857 event is believed to have ruptured the section in County.

Offset stratigraphy of Holocene deposits provides evidence that rupture occurs on the San Andreas Fault at Pallet Creek on the average of every 145 to 200 years (Seih, 1984). This work has given rise to an assessment that the Mojave Segment stands a 30 percent chance of being the origin of a 7.5 Magnitude earthquake by the year 2018 (Davis, et al., 1988).

San Antonio Fault

The San Antonio Fault is not well studied. It is a left-lateral strike slip fault interposed and oblique to the San Andreas and Sierra Madre/Cucamonga Fault Zones. On the basis of seismicity data, Hauksson (in press) has suggested that it may be a northern segment of the San Jose Fault, which has been associated with significant seismicity. However, it is its suspect relationship (tear fault) with the Cucamonga and the Sierra Madre faults, and reports of fault trench evidence showing left-lateral displacement of the Cucamonga Fault by the San Antonio Fault, that suggest the fault should be

considered active; at least until detailed investigation proves otherwise.

San Fernando Fault Zone

The San Fernando Fault was not known until February 9, 1971, at which time it ruptured and caused extensive damage in the northern and eastern San Fernando Valley. The San Fernando Fault is comprised of five major reverse-left-oblique en echelon strands that vary in strike from 75 degrees east of north to 70 degrees west of north. The Fault dips 50 degrees north near the surface and shallows to 35 degrees north at depth. The total length is at least 17 kilometers (Ziony and Yerkes, 1985).

The five segments consist of:

- **Reservoir Segment:** Extends from the lower Van Norman reservoir embankment eastward along the east flank of a series of low hills where it meets the Mission Wells segment.
- **Mission Wells Segment:** Located 1.5 kilometers east of Lower Van Norman Lake. Small south facing scarps define the trends of the fault segment. Surface cracks from the 1971 earthquake displayed left lateral offsets (USGS, 1971).
- **Sylmar Segment:** Well-defined zone of fractures that extends from the southern corner of Hubbard Street and Glenoaks Boulevard to south of Lopez Dam. The zone generally ranges from 75 to more than 200 meters in width (USGS, 1971).
- **Tujunga Thrust:** Extends along the base of the hills on the north side of Tujunga Valley eastward into Little Tujunga Canyon.
- **Lake View Segment:** Continuation of Tujunga segment, trends eastward along the low hills from Little Tujunga Wash to Big Tujunga Wash.

These faults were zoned within the APSSZ Act in 1976. It is generally recognized that the eastern fault segments are structurally related to the Sierra Madre Fault System; however, the structural relationship of the western segment is less well-defined. The western San Fernando segment may have structural ties to the Mission Hills Fault.

San Gabriel Fault

The San Gabriel Fault is reported by Ziony and Yerkes (1985) to consist of a zone of en echelon strands striking 45 to 65 degrees west of north with dips between 50 to 80 degrees toward the north. The Fault displays a complex sense of movement that appears to change from one section of the fault to another (Stitt, 1986). The San Gabriel Fault has been divided by various workers into a number of different segmentation schemes (Ehlig, 1973; Weber, 1979; Ziony and Yerkes, 1985; Stitt, 1986; Wesnousky, 1987).

Recent exploratory subsurface work near Castaic indicates that a portion of the segment cuts Holocene alluvium dated by radiocarbon methods as 8140 ± B.P., 777 ± 60 years B.P., and 3500 ± 250 years B.P. (Cotton, 1986). The State has designated a 10 kilometer portion of the San Gabriel Fault that includes this site as an APSSZ fault. Stitt (1986) has stated that the segment of the San Gabriel Fault to the northwest is apparently not Late Quaternary because the fault is buried by the Plio-Pleistocene Hungry Valley Formation. However, Roquemore, 1989 (personal communication) has submitted evidence for Holocene movement in the Violin Canyon area to the APSSZ fault evaluation program in apparent contradiction to Stitt's (1986) interpretation. In light of this evidence, the active segment of the San Gabriel Fault is extended to Violin Canyon. Ziony and Jones (1989) concur with this interpretation. Segment SG-B is arbitrarily extended to the southeast until the San

Gabriel splits into the Dillon and Demille Fault. Weber (1979) notes that the evidence for the recency of faulting becomes less clear-cut at this point. The geomorphic and stratigraphic evidence documented by Weber (1979) still suggests Late Quaternary movement.

Santa Susana Fault

The Santa Susana Fault dips north along the southern flank of the Santa Monica Mountains, extending eastward until it merges with the Sierra Madre Fault System (Yeats, 1987). Wenousky (1986) and Ziony and Yerkes (1985) assign a length of 38 kilometers and 28 kilometers, respectively. The Fault dips 0 to 30 degrees in the near surface, which results in a fault zone width between 0.25 and 1.5 kilometers (Ziony and Yerkes, 1985).

The eastern portion of the Fault experienced reverse-left-oblique sympathetic rupture during the 1971 San Fernando Earthquake (Saul and Weber, 1975). This portion of the Fault has been designated an APSSZ fault. To the west of the APSSZ, in the Porter Ranch area, subsurface trench investigations have revealed minor faults within terrace deposits. No faulting was observed within an overlying fanglomerate that was carbon-dated as 10,010± 580 years y.b.p. (Lung and Weick, 1987). However, massive landsliding and bedding plane faulting have been prevented an unequivocal determinations of the age of faulting for this portion of the fault. Based on this uncertainty, the western portion of the fault is considered active.

Sierra Madre Fault System

The Sierra Madre Fault System lies at the southern base of the San Gabriel Mountains. Ziony and Yerkes (1985) indicate that the Fault System consists of one to five anastomosing strands in a zone as wide as one kilometer. The Fault System has a reverse sense of slip and forms a complex zone with two identified sections. Each section consists of a mechanically coherent salient (Crook, et al., 1987). These sections extend: 1) from Mount Wilson to Big Tujunga Canyon (14 kilometers); and 2) from Big Tujunga Canyon to Arroyo Seco (17 kilometers). Crook, et al., (1987) estimate a maximum credible earthquake of magnitude (ML) 7 for these segments, and an average recurrence interval between major shocks longer than 5,000 years.

The fault segments in numerous places have juxtaposed basement bedrock over alluvium and dip northerly below the steep topographic front of the San Gabriel Mountains. Barriers to groundwater flow have been cited as evidence of alluvial-buried faults of the Sierra Madre Fault System (Proctor and Kalin, 1965; Shelton, 1955). Offset Holocene deposits are reported along the two segments and have been designated as APSSZ faults. The mechanically distinct segments are designated active. Note that the APSSZ segment is correctly identified as a segment of the Sierra Madre Fault and not as the Mount Lukens Thrust, as described by Smith, 1978.

Verdugo Fault

The Verdugo Fault trends northward along the west flank of the Verdugo Mountains and separates a Precambrian Age basement complex on the east from alluvial and sedimentary Tertiary strata on the west. The Fault consists of multiple strands in a zone 0.5 to 1.0 kilometers in width as evidenced by southwest facing scarps in alluvium in the Burbank area (Ziony and Yerkes, 1985; Weber, et al., 1980). The fault apparently dips 45 to 60 degrees to the northeast and forms groundwater cascades in the alluvium north of the terminus of the Verdugo Mountains. On the north, the Fault may curve westward and join the Mission Hills Fault. To the southeast of the Verdugo Mountains, the Fault becomes less well-defined and shallows in dip as it trends through Verdugo Wash where it

apparently connects with the Eagle Rock Fault. Groundwater cascades and surface scarps are evidence of recent activity along the Fault (Weber, et al., 1980).

Whittier Fault Zone

The Whittier Fault Zone consists of one to three subparallel strands in a zone as wide as 1.2 kilometers. The length of the Whittier Fault to the point where it merges with the Elsinore Fault Zone is approximately 45 kilometers; however, Wesnousky (1986) has defined a longer Whittier segment (74 kilometers). The 14 kilometer length within the County strikes 65 to 85 degrees to the northwest and dips 65 to 80 degrees to the north. The sense of movement on the Whittier Fault is believed to be reverse right oblique (Ziony and Yerkes, 1985), or nearly pure right slip (Gath and Rockwell, in press). Evidence of offset Holocene stratigraphy northwest of Brea Canyon in Orange County is recognized by Ziony and Jones (1989); however, these workers interpret the northwesternmost portion of the Whittier Fault in the County as late Quaternary. Gath, et al., (1988) and Leighton, et al., (1987) have uncovered evidence of offset Holocene stratigraphy four kilometers east of the City of Whittier in Arroyo San Miguel near Colima Boulevard. Based on these trench studies, the Fault is considered active along its entire length in the County.

Appendix I: Public Services and Facilities Element Resources

I. Imported Water Sources

Colorado River Aqueduct

To alleviate some of the financial burden of importing water from the Colorado River, Los Angeles and several other cities formed the Metropolitan Water District of Southern California under the California Metropolitan Water District Act of 1927. The 242-mile long Colorado River Aqueduct carries a billion gallons (2,778 acre-feet) of water daily to Southern California. The County relies on the Colorado River Aqueduct for some of its water supply.

California, along with a number of other states, share water that is diverted from the Colorado River. Over the past few decades, California has been utilizing more than its allocation of 4.4 million acre-feet of water annually from the Colorado River. Water agencies throughout the California, including the Metropolitan Water District, are implementing programs to reduce water drawn from this source to the initial allocation agreement, through water banking, conservation, and recycling.

State Water Project

Following World War II, the California Legislature approved the Burns-Porter Act, which commits the state to the development of a 440-mile aqueduct system that would bring rainwater and snowmelt from Northern California to Southern California. Since 1972, the State Water Project has delivered water to 29 water agencies along the route, including the Antelope Valley-East Kern Water Agency, Castaic Lake Water Agency, Metropolitan Water District, and the San Gabriel Valley Municipal Water District. The delivery capacity of the State Water Project is currently 2.4 million acre-feet annually, of which water agencies in the County are granted a portion, depending on their contract with the State and available supply.

II. Water Suppliers

The following section outlines the water suppliers that serve the unincorporated areas of the County:

Antelope Valley-East Kern Water Agency

The Antelope Valley-East Kern Water Agency (AVEK) holds the third largest entitlement to water from the State Water Project; only the Metropolitan Water District and Kern Water Company have higher entitlements. AVEK's district boundaries extend 2400 square miles from the Antelope Valley in the County and well into Kern County. Since 1953, AVEK has brought water to major consumers, including farmers and Edwards Air Force Base. AVEK imports 75,000 acre-feet of water into its district annually. However, demand for water in the Antelope Valley is higher than current delivery capacities.

Castaic Lake Water Agency

The Castaic Lake Water Agency (CLWA) monitors groundwater and provides imported water from the State Water Project to four retail water purveyors for distribution in the Santa Clarita Valley: the Los Angeles County Waterworks District 36, Newhall County Water District, Santa Clarita Water

Company, and Valencia Water Company. These agencies collect and maintain data on precipitation, groundwater quality, consumption rates, and surface water delivery throughout the Santa Clarita Valley. The data serves as an indicator of overall water conditions, and is used to project available water supplies and prevent over-drafting of valley groundwater basins.

The Santa Clarita Valley extracts approximately 40 percent of its water supply from groundwater basins. Historically, water use in the Santa Clara Valley was predominantly agricultural. Today, urban development is the primary user, and irrigation demands are expected to continue to decline as the urban areas in the Valley expand.

Littlerock Creek Irrigation District

The Littlerock Creek Irrigation District (LCID) is a public entity that was created in the late 1880s. LCID was instrumental, along with the Palmdale Water District, in constructing the Littlerock Dam. The completion of the dam in 1924 made it possible to store water runoff from the Angeles National Forest.

Metropolitan Water District

The Metropolitan Water District (MWD) serves a vast area of California's South Coast region, from Oxnard to Mexico's border, supplying water to most of south Los Angeles County. It was created in 1928 to develop, store, and distribute water at wholesale rates to its member agencies, who in turn distribute the water to end users. Twenty-seven member agencies contract with MWD and together serve approximately 300 cities and unincorporated communities in Southern California.

The MWD is responsible for purchasing much of Southern California's water from the Colorado River and State Water Project to meet the region's growing demand. The MWD is Southern California's primary water wholesaler, supplying member cities and water districts with approximately two million acre-feet, or 650 billion gallons of water, annually. One acre-foot of water is equivalent to the amount of water covering an acre of land—about the size of a football field—one foot deep.

Palmdale Water District

The Palmdale Water District is one of the oldest water districts in the Antelope Valley. Its roots began in the late 1800s as a water provider for agricultural irrigation. What began as a wooden trestle carrying creek water for farms is now an underground canal feeding Palmdale Lake with water from the Littlerock Dam. Much of this water supplies the expanding urban population in the Antelope Valley. In 1963, the Palmdale Water District began purchasing water from the State Water Project to supplement groundwater and water from Littlerock Dam.

Appendix J: Economic Development Element Resources

I. Industrial Land Analysis

Introduction

This analysis, which was developed in cooperation with the Los Angeles County Community Development Commission (CDC) and the Los Angeles County Economic Development Corporation (LAEDC) in 2008, inventories and analyzes existing industrial land uses, zoning, and policies to inform site-specific policy recommendations. These recommendations have in part informed the development of the General Plan Land Use Policy Map and related policies in the General Plan.

Industrial Land Classifications

For this analysis, the County's industrial lands were classified into the following districts:

- **Employment Protection Districts**: These areas represent economically viable industrial and employment-rich lands, where industrial zoning and industrial land use designations should remain, and where policies to protect industrial land from other uses (residential and commercial) should be enforced.

- **Flex Districts**: These are areas that due to existing conditions on the ground and surrounding uses, could allow for development of non-industrial uses and mixed-uses, where appropriate, but also allow light industrial or office/professional uses that are compatible with residential uses. These recommendations may call for a change in land use designation and/or zoning and will be implemented through community-based planning efforts.

The Industrial Land Analysis includes correction areas within each study area. These correction areas identify individual uses or specific parcels where previous land use decisions have resulted in incompatible land use patterns and require a zoning and/or land use change.

The scope of this analysis includes the industrially-designated and zoned land in the unincorporated areas, with the exception of those in the Santa Clarita Valley and Antelope Valley.

The following unincorporated communities were considered in the analysis:

- Avocado Heights
- Covina Islands
- East Los Angeles
- East Pasadena-East San Gabriel
- Florence-Firestone
- Hacienda Heights
- Lennox
- Lopez Canyon
- North Whittier
- Rancho Dominguez
- Rowland Heights

- South San Jose Islands - South Walnut
- South Whittier - Sunshine Acres
- West Carson
- West Puente Valley
- West Rancho Dominguez - Victoria
- West Whittier - Los Nietos
- Whittier Narrows - South El Monte
- Willowbrook

Methodology

The County's industrial areas, whether designated or zoned industrial, were analyzed.

LA PLAN (a subsidiary of LAEDC) staff conducted field surveys on the County's industrial land. The field survey looked at a number of important variables, including:

- Current conditions and use of the industrial site and/or industrial district;
- Current conditions of the land uses adjacent to the industrial site and/or industrial district;
- Development and/or redevelopment activities taking place in the vicinity of the industrial site and/or the industrial district;
- Real estate market data (local industrial vacancy and absorption figures at the time of the study).
- Absorption rate, which is the historical amount of square footage absorbed over a period of time; and
- Utilization and/or "high use" of land. Utilization can be a comparative term in relation to adjoining uses or simply a matter of the amount of building on a given parcel. For this analysis, many parcels were considered underutilized due to the poor condition of the facilities in an area, with good access and visibility, and with an occasional upgraded industrial facility close by.

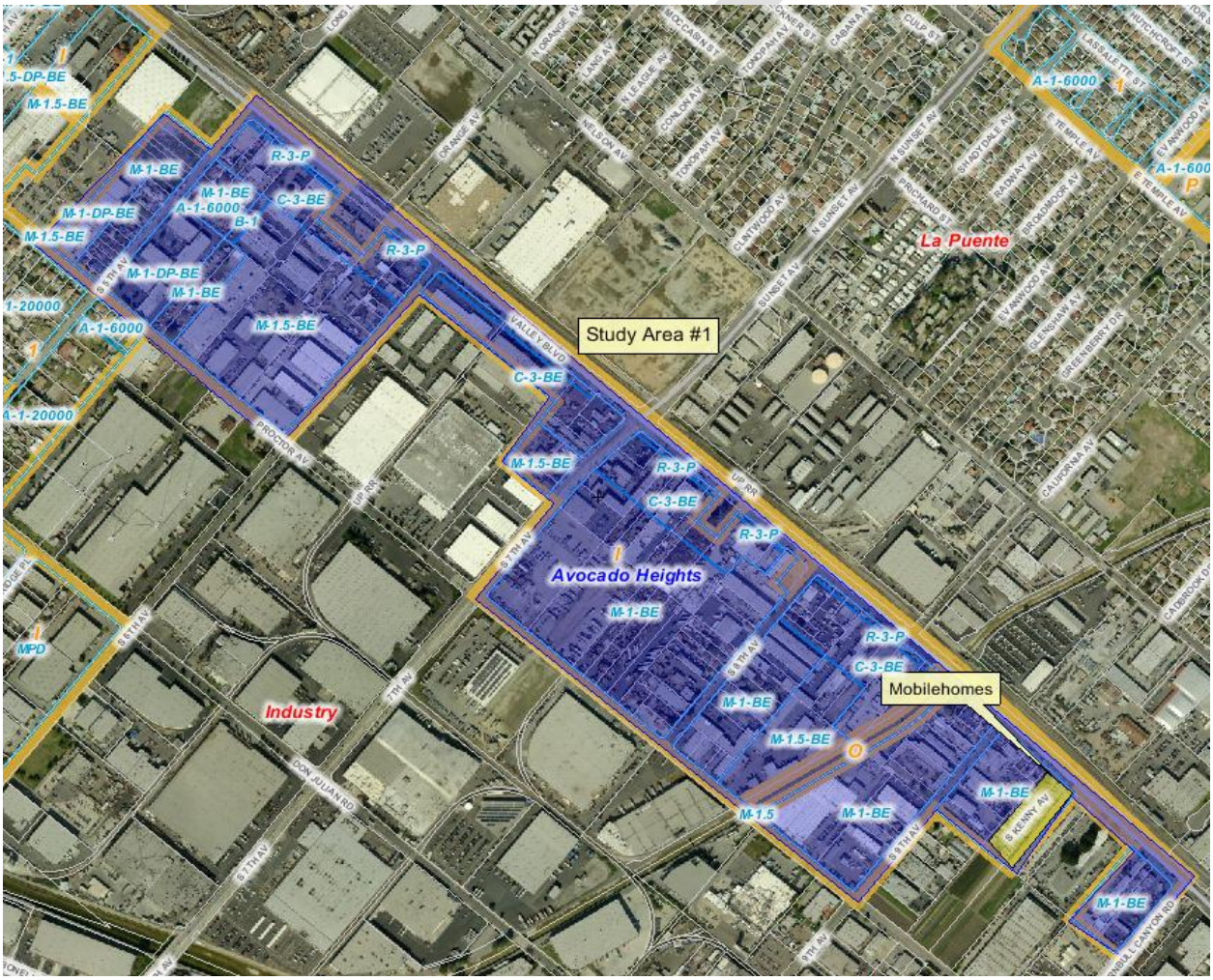
The staff also reviewed the sites using GIS and aerial photographs.

Study Areas

Avocado Heights

Avocado Heights has several industrial districts, and consists of five study areas. Nearly all of the industrially-zoned land in Avocado Heights is occupied by operating businesses; however, on many parcels, the utilization of industrial land is low when compared to surrounding industrial land in other local jurisdictions. There is a lot of opportunity for significant rehabilitation to generate cleaner industrial and/or office and professional uses.

Figure J.1: Avocado Heights Study Area 1



Study Area 1: The industrial district in Study Area 1 runs along Valley Boulevard and contains industrial uses, along with a few supporting commercial businesses. The parcels are adjacent to rehabilitated and high-use industrial parcels in the City of Industry to the south, and the City of La Puente to the north, and a Union Pacific rail line that runs parallel to Valley Boulevard. The existing businesses and the level of industrial activity in the region, in addition to the large parcel sizes, demonstrate the viability of the industrial land. The County's industrial parcels and uses are not on

par with the surrounding uses in other local jurisdictions, and incentives for redevelopment and rehabilitation of the industrial parcels in Study Area 1 is recommended. Additionally, future residential uses should not be allowed in these intensive industrial districts. The mobilehome park should retain its industrial land use and zoning designation.

Recommendation: Employment Protection District

Figure J.2: Avocado Heights Study Area 2

Study Area 2: The current land use is industrial. The parcels are surrounded by high-use industrial parcels in the City of Industry on all sides, except for the residential uses in Avocado Heights, which border the northwest portion of Study Area 2. The existing businesses and the level of industrial activity in the region, in addition to the large parcel sizes, demonstrate the viability of the industrial land.

Recommendation: Employment Protection District

Figure J.3: Avocado Heights Study Area 3

Study Area 3: The industrial district in Study Area 3 runs along Valley Boulevard and is bisected by Workman Mill Road to the north. The land use and zoning are industrial, and the majority of the area has industrial uses. The northern, eastern, and western portions of Study Area 3 house intensive industrial uses in the City of Industry and the City of La Puente, while the southern portion of contains low-density, single family residential uses in Avocado Heights. Past Workman Mill Road, all of the industrially designated parcels are used for commercial, office, or residential purposes. The existing businesses and the level of industrial activity in the region, in addition to the large parcel sizes, demonstrate the viability of the industrial land. The County's industrial parcels and uses, such as auto salvage operations, are not on par with the surrounding uses in other local jurisdictions, and are located adjacent to residential uses. Incentives for redevelopment and rehabilitation of the industrial parcels in Study Area 3 are recommended.

Recommendation: Employment Protection District

Correction Areas: North of Workman Mill Road, change land use and zoning to commercial and

residential, as appropriate.

Figure J.4: Avocado Heights Study Area 4

Study Area 4: The industrial parcels in Study Area 4 are shallow and run along Valley Boulevard. To the north of Study Area 4 are rehabilitated and high-use industrial parcels in the City of Industry and a Union Pacific rail line. Directly across Valley Boulevard lies a row of commercial uses backed by low-density, single family residences. The current land uses on the parcels in Study Area 4 are industrial. However, the existing businesses and the level of industrial activity are not on par with the surrounding uses, and the shallow parcel sizes will make it difficult for any future high-use industrial redevelopment. There is opportunity for redevelopment of Study Area 4 as it can house supportive commercial uses for the adjacent, high-employment work sites. Due to its proximity to the rail line and the presence of adjacent industrial uses, residential uses are not recommended in Study Area 4.

Recommendation: Flex District

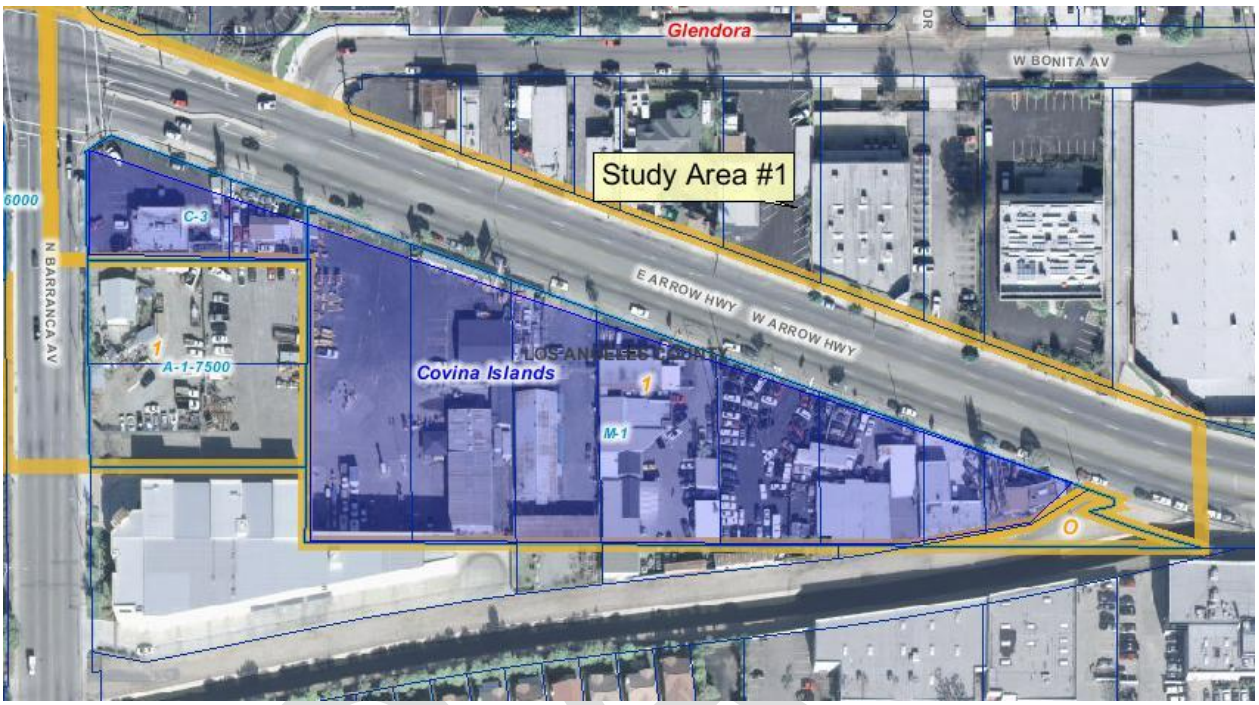
Figure J.5: Avocado Heights Study Area 5

Study Area 5: The industrial district in Study Area 5 lies directly east of the San Gabriel River and the Interstate-605, and is surrounded by intensive industrial uses in the City of Industry. The current uses in Study Area 5 are industrial. Businesses have rehabilitated these industrial lands and they stand at a high-use. The large parcel sizes, current use and access to transportation routes demonstrate the viability of the industrial land. The parcels in the northeast corner of Study Area 5 is shared with the City of Industry. This can add complications to any future redevelopment of the parcel.

Recommendation: Employment Protection District

Covina Islands

Figure J.6: Covina Islands Study Area 1



Study Area 1: There is one small industrial district in the Covina Islands along Arrow Highway at the intersection of Barranca Avenue. The current uses in Study Area 1 are a mix of commercial, light industrial and automobile repair related services. There is an inconsistency in the Category 1 (Low Density Residential) land use designation and the M-1 (Light Manufacturing) zoning. Study Area 1 is isolated due to the San Dimas Wash to the south, and the current industrial parcels are not viable in their current state for future jobs-rich uses. There are highly utilized industrial uses to the east in the City of Glendora, while residential, commercial and public uses surround Study Area 1 in other directions. The intersection of Arrow Highway and Barranca Avenue primarily contains commercial and residential uses. It is recommended that Study Area 1 be transitioned into potentially higher uses in the future.

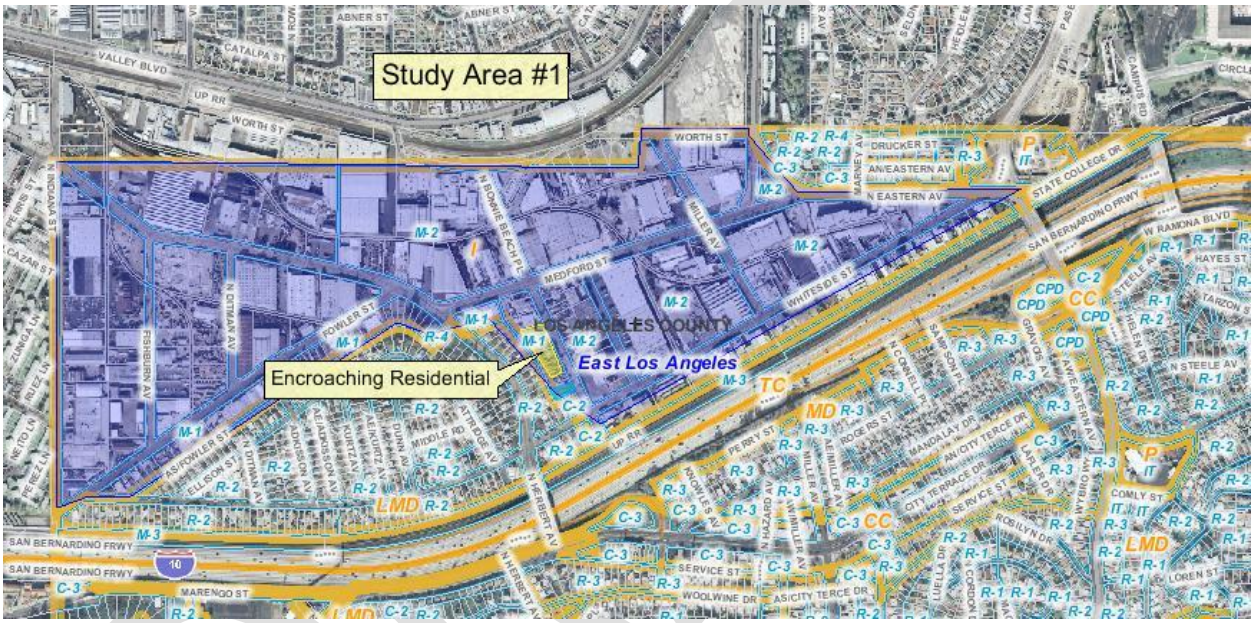
Recommendation: Flex District

Correction Areas: Change the land use designation to Light Industrial.

East Los Angeles

East Los Angeles has two primary areas of industrial activity and several narrow corridors that are zoned CM (Commercial-Manufacturing). The CM-zoned corridors primarily house commercial-based businesses that are interspersed with low-volume, light industrial activity. Both of the industrial districts in East Los Angeles continue to extend outside of the unincorporated area borders. However, in East Los Angeles, the industrial uses, building conditions, and utilization rates vary greatly from surrounding local jurisdictions. As with other industrial districts in the unincorporated areas, residential properties are mixed in and around industrial properties.

Figure J.7: East Los Angeles Study Area 1



Study Area 1: Study Area 1 is the (former) Whiteside Redevelopment Project Area for the County. The current land use in Study Area 1 is a combination of light and heavy industrial uses. Study Area 1 is prime industrial land and is recommended to be an Employment Protection District. Between N. Herbert Avenue and Bonnie Beach is a residential pocket that is surrounded by heavy industrial uses. It is recommended that this type of development be prohibited in important industrial districts.

Recommendation: Employment Protection District

Figure J.8: East Los Angeles Study Area 2

Study Area 2: The industrial district in Study Area 2 lies directly north of a large railroad yard and rail line, and other heavy industrial properties to the south in the City of Commerce, and is a combination of industrial, commercial, and residential uses. To the east and north, Study Area 2 is adjacent to medium-density residential neighborhoods. These industrial parcels are smaller than the adjacent industrial parcels, and their proximity to residential uses inhibits high-volume, heavy industrial uses. A transition to a higher and better use of industrial mixed use and commercial support uses is recommended for this area. The area with larger industrial lots in the southern portion of Study Area 2 that is adjacent to the rail yards should be protected for industrial use.

Recommendation: Employment Protection District in sub-area, with the remaining areas as a Flex District

Correction Areas: Designate the land use and zone for the park along Bonnie Beach Place as Open Space Parks and Recreation (OS-PR).

East Pasadena - East San Gabriel

Figure J.9: East Pasadena – East San Gabriel Study Area 1

Study Area 1: East Pasadena-East San Gabriel has one small industrial district. Study Area 1 lies just north of a Union Pacific rail line and the City of Rosemead. The adjacent parcels in Rosemead are large-lot industrial uses with some local-serving commercial sites. To the east of Study Area 1 is a wide utility transmission corridor. The current uses in Study Area 1 are industrial warehousing and food processing businesses. These industrial lands, which are high-use and employment-rich and in close proximity to other job centers, should be protected.

Recommendation: Employment Protection District

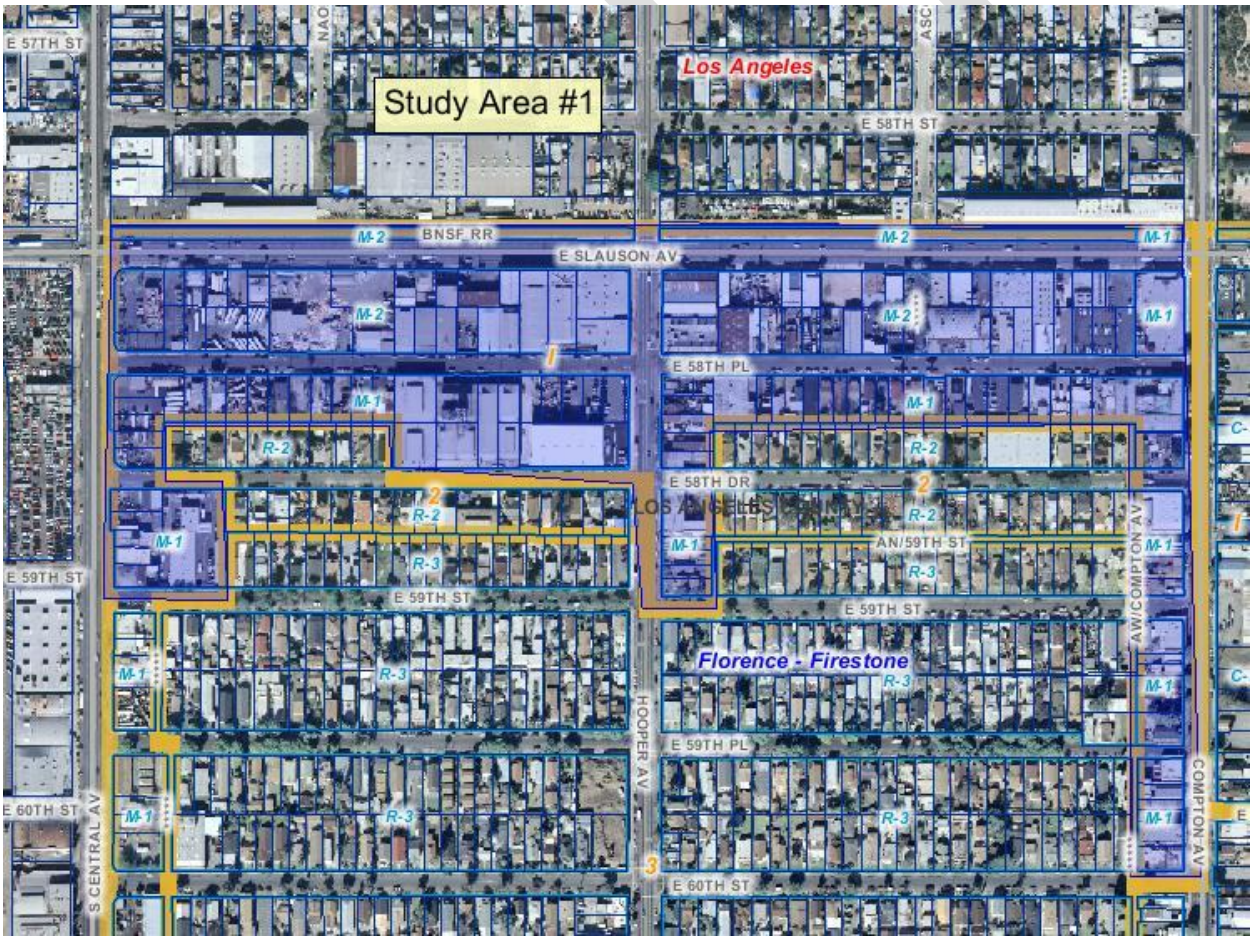
Correction Areas: Study Area 1 has a land use designation of Category 1 (Low Density Residential) that should be changed to Light Industrial (IL).

Florence-Firestone

Much of the economic activity in the Florence-Firestone area is considered local in nature, with services such as recycling, machinery parts and maintenance, and auto uses serving nearby industrial districts and communities. Commercial services and light industrial activities, such as pallet yards and warehousing are scattered in between single family homes. Because of the prominence and adjacency of lower density residential uses, there are conflicts between noxious uses and housing. Compared to the industrial areas within surrounding cities, the industrial land in Florence-Firestone is less-intense, providing fewer jobs and income opportunities for businesses.

There are several nodes of industrial activity in Florence-Firestone. The areas around the Alameda Corridor, particularly south of Florence Avenue, contain the highest density of industrial employment. Municipal policies along the Alameda Corridor typically support the allocation of adjacent land for industrial uses, both to mitigate environmental hazards to households, as well as to use rail infrastructure to promote economic development activities.

Figure J.10: Florence-Firestone Study Area 1

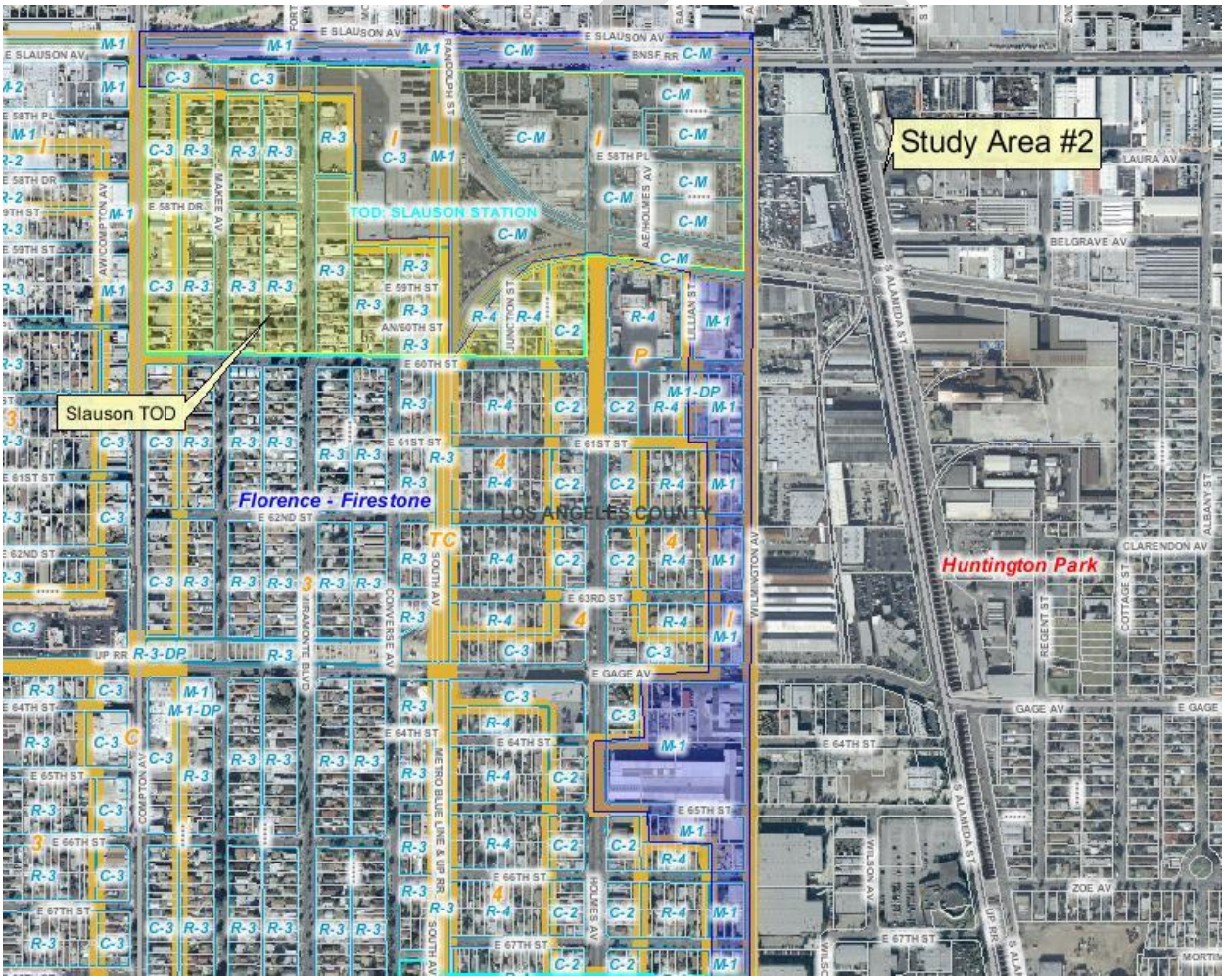


Study Area 1: The existing industrial uses in Study Area 1 are primarily small businesses on small lots that are directly adjacent to residential areas. The majority of the uses are not employment-rich

businesses—a large number of auto dismantling, recycling and other low-intensity uses exist. The conditions of these structures indicate age and a lack of investment. Across Central Avenue and immediately west of Study Area 1 in the City of Los Angeles is a higher-intensity industrial area containing transportation and warehousing activities. To the north of the Study Area across Slauson Avenue is a combination of residential, commercial and small industrial uses. Slauson Avenue also contains the right-of-way of the Burlington Northern – Santa Fe Railroad, which Metro is studying as a future light-rail transit corridor. Just south of Study Area 1 within Florence-Firestone along east 58th Drive, there are a number of residential properties adjacent to industrial uses. There are opportunities to explore the conversion of Study Area 1 to allow for office and professional mixed uses, with additional opportunities for redevelopment of underutilized industrial parcels along both Central Avenue and Compton Avenue.

Recommendation: Flex District

Figure J.11: Florence-Firestone Study Area 2

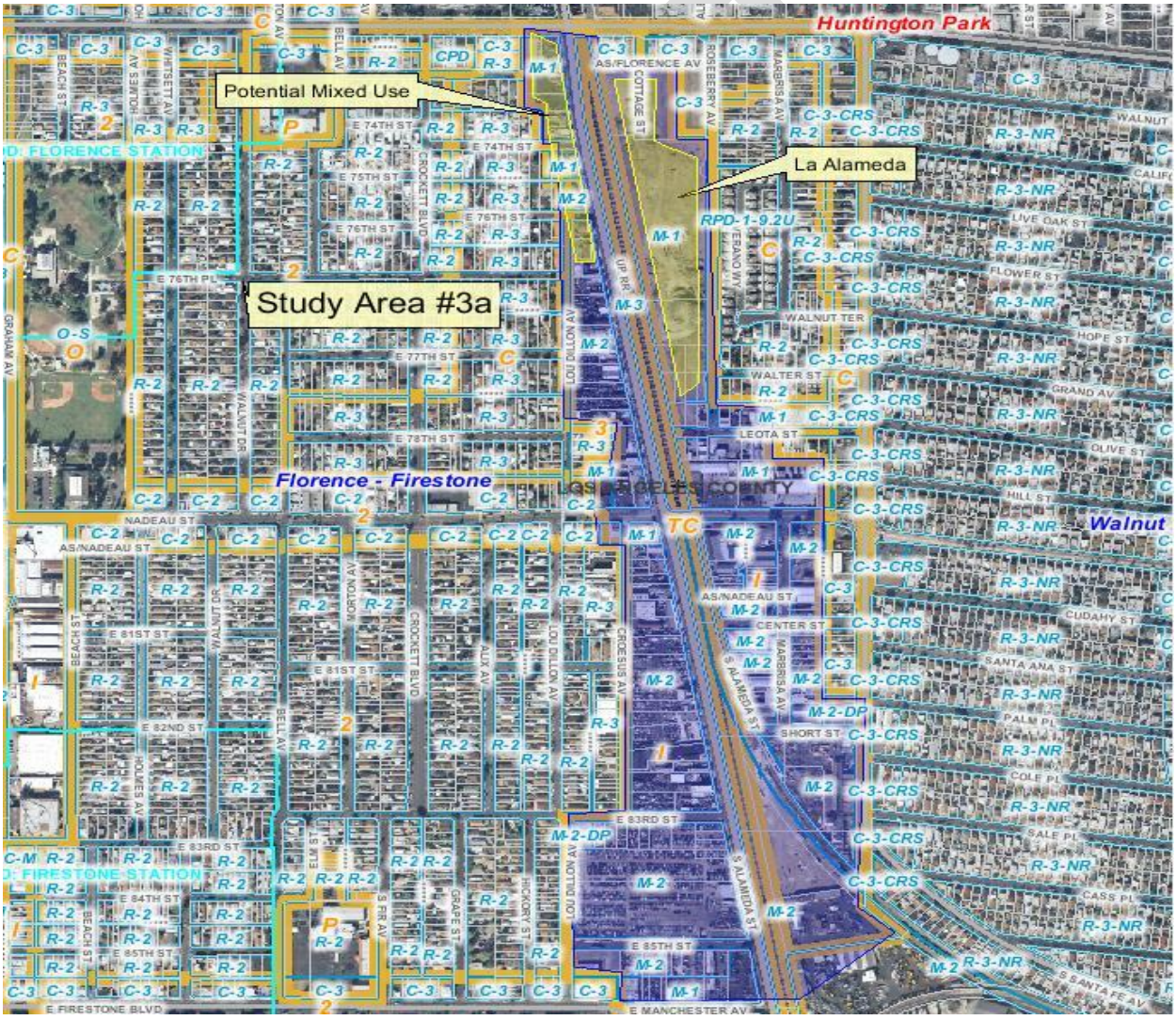


Study Area 2: Study Area 2 consists of a mix of heavy and light industrial uses, truck storage, scrap/auto metal dismantling and similar businesses, which are primarily on small parcels. A portion

of the industrial land in Study Area 2 is located within the Slauson Station TOD, which is intended to promote mixed uses and increased residential activity around transit nodes. However, there is very little residential or commercial activity currently in Study Area 2 or in the TOD. The City of Huntington Park and the Alameda Corridor lie east of Study Area 2 across Wilmington Avenue. Both the City and the Alameda Corridor Transportation Authority have policies to encourage industrial activity along the corridor. The City's redevelopment of older warehouses has attracted higher-intensity and employment-rich uses. It is recommended to explore higher uses of land in Study Area 2 to support transit-oriented development or the possibility of an industrial TOD.

Recommendation: Flex District

Figure J.12: Florence-Firestone Study Area 3a

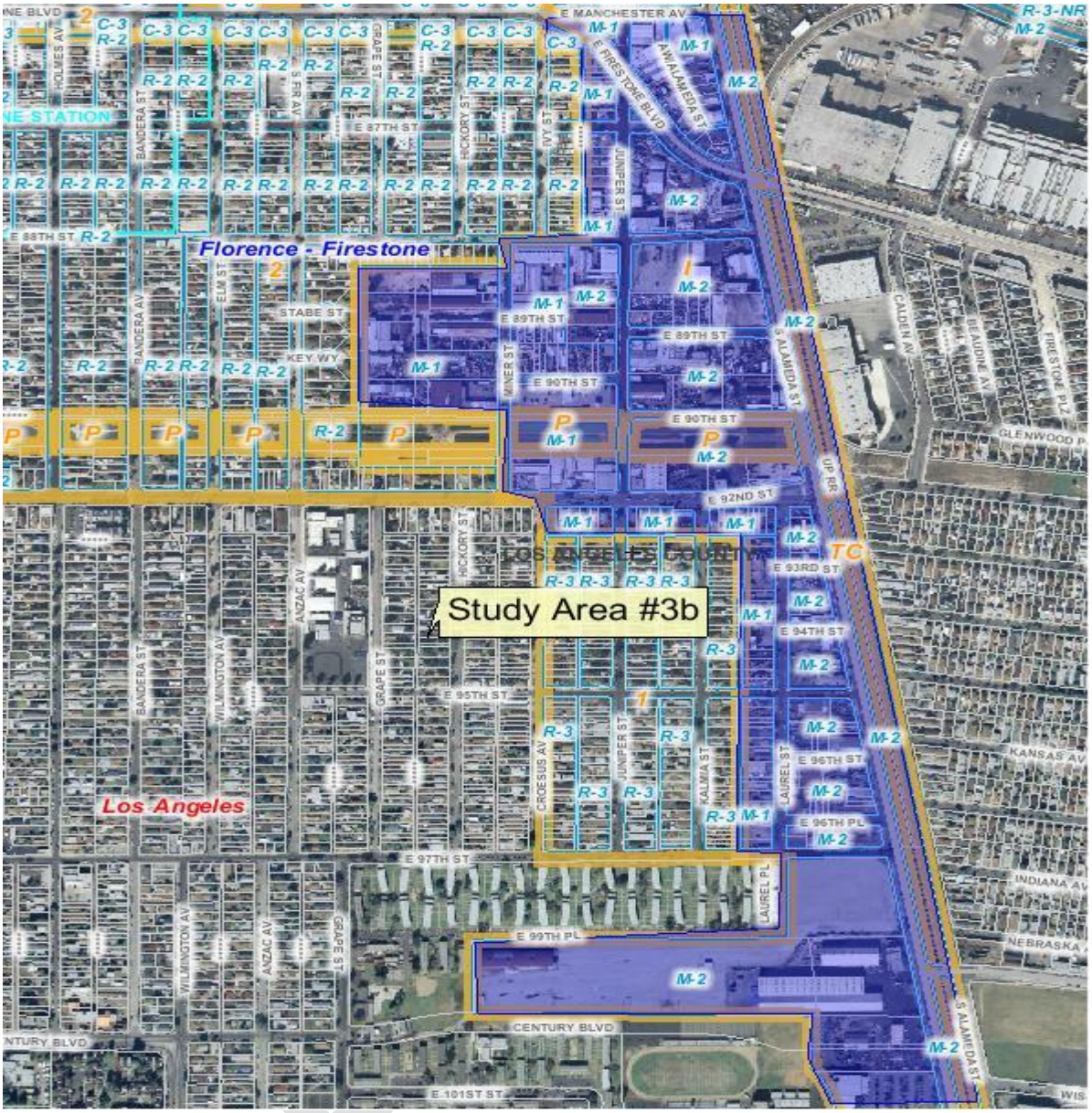


Study Area 3a: Study Area 3a is bounded to the north by Florence Avenue. The La Alameda Shopping Center is the result of the conversion of several large industrial parcels into a commercial strip shopping center. This commercial center could provide an anchor to spur redevelopment

activities on surrounding industrial land, although the further conversion of other large industrial properties in the area to commercial uses is not recommended. Study Area 3a runs along the Alameda Corridor. Study Area 3a contains valuable, viable industrial land in proximity to transit, as well as adjacency to rehabilitated industrial land in the City of South Gate. The industrial uses across from the La Alameda Shopping Center are small, shallow parcels that consist primarily of auto dismantling businesses directly adjacent to residential neighborhoods. South of Nadeau Street, the industrial lands on both sides of Alameda Street offer greater opportunity for industrial redevelopment due to the larger size of the underutilized parcels. The existing industrial uses in Study Area 3a is low intensity development, which generate minimal tax revenue and create very few low wage jobs.

Recommendation: Flex District across from La Alameda Shopping Center, with the remaining areas as an Employment Protection District.

Figure J.13: Florence-Firestone Study Area 3b



Study Area 3b: Study Area 3b lies between E. Manchester Avenue/Firestone Boulevard to the north and E. 103rd Street to the south, and continues along Alameda Street and the Alameda Corridor. Study Area 3b provides immediate development opportunities because of its proximity to Interstate-105, the size of the parcels, and the distance from residential uses. The County's industrial parcels and uses are not on par with the surrounding uses in other local jurisdictions, and are characterized by auto dismantling and metal scrapping businesses. Incentives for redevelopment and rehabilitation of the industrial parcels in Study Area 3b are recommended.

Recommendation: Employment Protection District

Figure J.14: Florence-Firestone Study Area 4

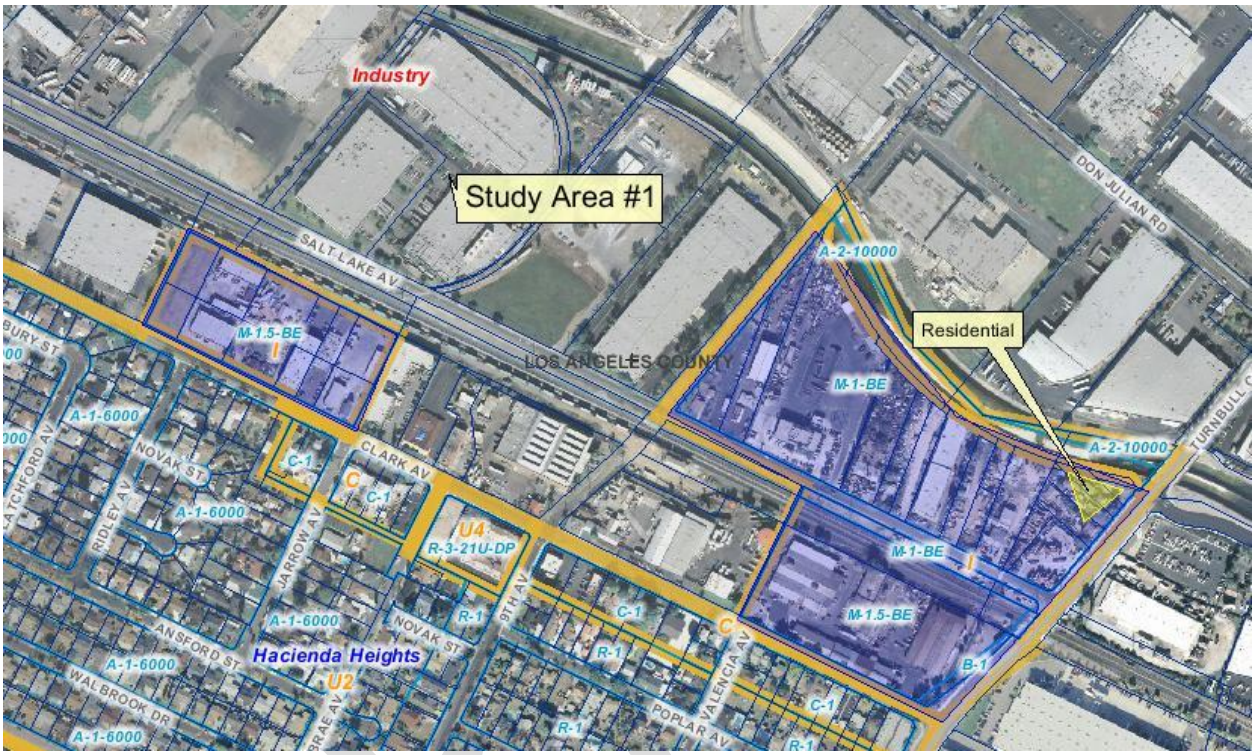
Figure J.15: Florence-Firestone Study Area 5

Study Areas 4 and 5: Study Areas 4 and 5 lie along the metro Blue Line transit corridor, and both are adjacent to parks and residential uses. The majority of uses in the Study Areas are industrial or commercial-manufacturing related. However, due to their proximity to transit, existing residential uses, and TODs, it is recommended that opportunities for transition to mixed-uses and other higher potential uses be explored.

Recommendation: Flex Districts

Hacienda Heights

Figure J.16: Hacienda Heights Study Area 1



Study Area 1: Hacienda Heights has one industrial area that lies adjacent to heavily industrialized districts in the City of Industry to the north. To the south of Study Area 1 lies a strip of neighborhood commercial uses that is backed by residential neighborhoods. The Hacienda Heights industrial parcels are being fully utilized for industrial purposes, except for a few residential properties in the northeast corner of the area. These parcels should remain industrially zoned.

Recommendation: Employment Protection District

Lennox

Figure J.17: Lennox Study Area 1

Study Area 1: Lennox has one long industrial area that is separated from the rest of the community by Interstate-405. It lies adjacent to other highly industrialized uses that are directly adjacent to LAX. The northern portion of Study Area 1 contains one large industrially designated parcel that is used

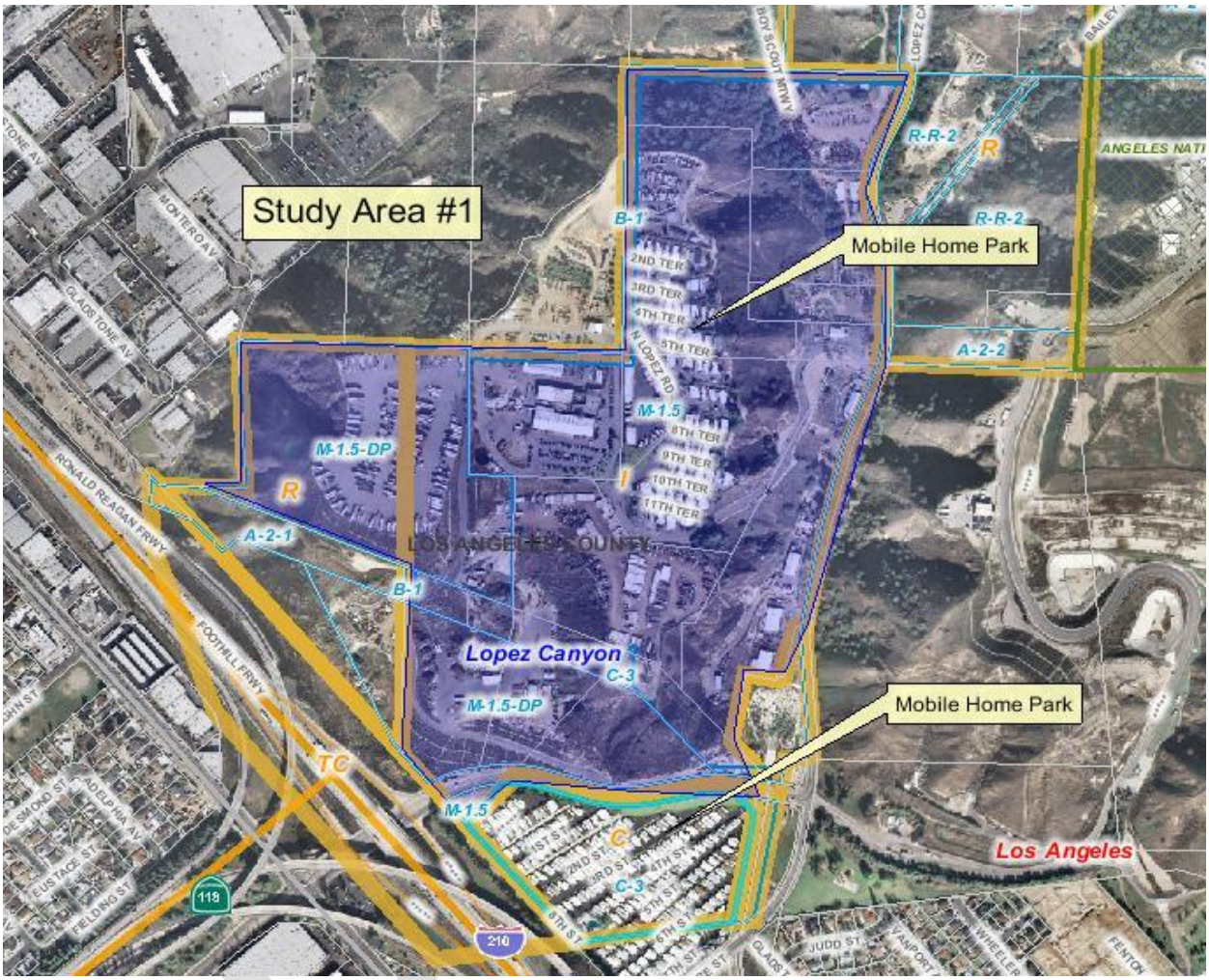
for public storage, a hotel, and some residential units. Public storage is a high-intensity use of land that is not employment-rich. Large-scale public storage uses are not recommended for industrial districts. Due to the proximity to the freeway and to the LAX landing strips, it is recommended that further residential uses not be allowed and that Study Area 1 be protected for long-term industrial uses.

Recommendation: Employment Protection District

Correction Areas: The northern portion of Study Area 1, from W. 104th Street to Century Boulevard, should be redesignated with commercial and residential land use designations, as appropriate. There is also one area west of the freeway that has an Industrial (I) land use designation, but contains a residential use that should be corrected.

Lopez Canyon

Figure J.18: Lopez Canyon Study Area 1



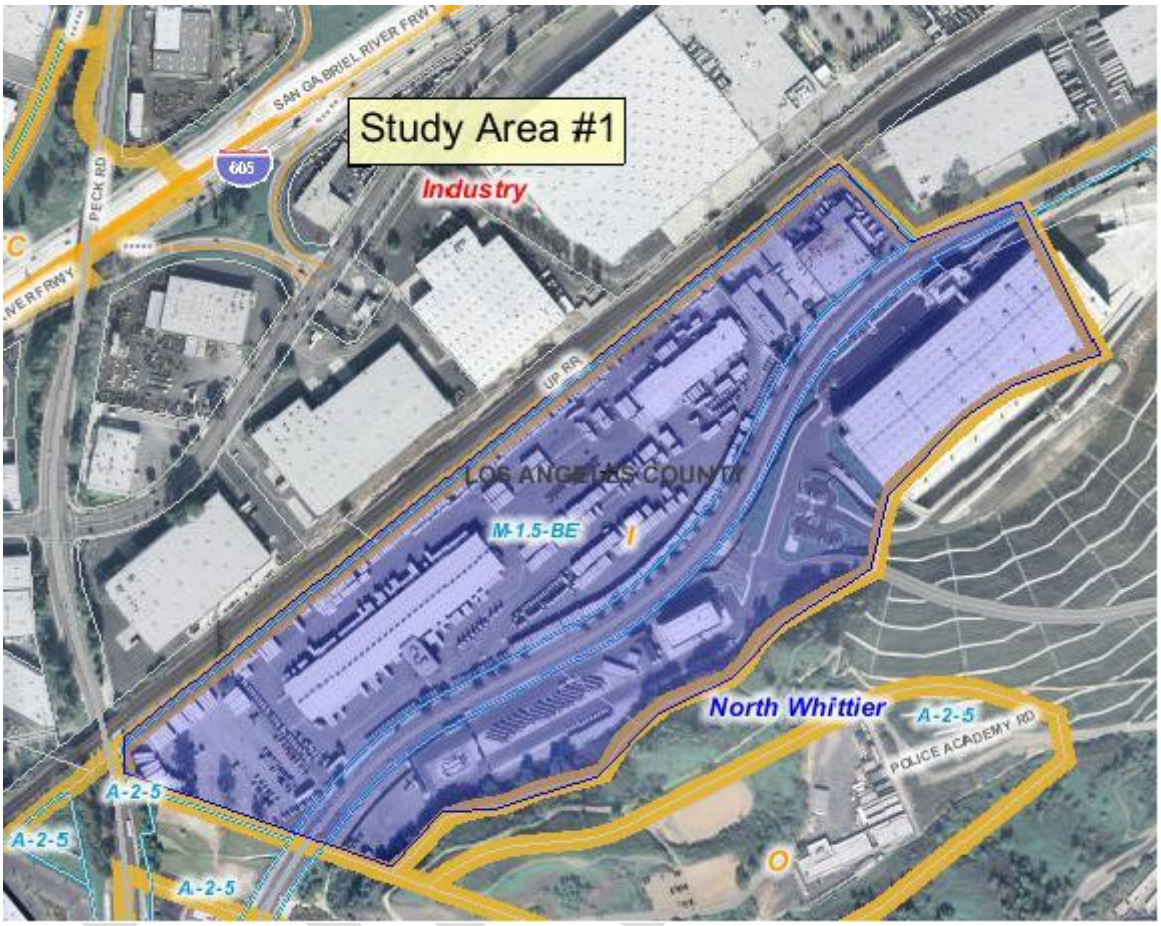
Study Area 1: Study Area 1 in Lopez Canyon lies directly north of Interstate-210 on sloping hills that lead into the Angeles National Forest. The majority of the southern portion of Study Area 1 is surrounded by industrial uses in the City of Los Angeles. Between Study Area 1 and the Interstate-210 is a parcel designated Commercial (C), which is a large mobilehome park, and in the middle of the industrial district is another mobilehome park. The County's industrial parcels and uses are not on par with the surrounding uses in the City of Los Angeles, and the hilly terrain precludes large-scale residential development. The western portion of Study Area 1 has a land use designation of Rural (R) with an M-1.5 DP (Restricted Heavy Manufacturing) zone.

Recommendation: Employment Protection District

Correction Areas: Change the Rural (R) land use designation to Light Industrial (IL).

North Whittier

Figure J.19: North Whittier Study Area 1



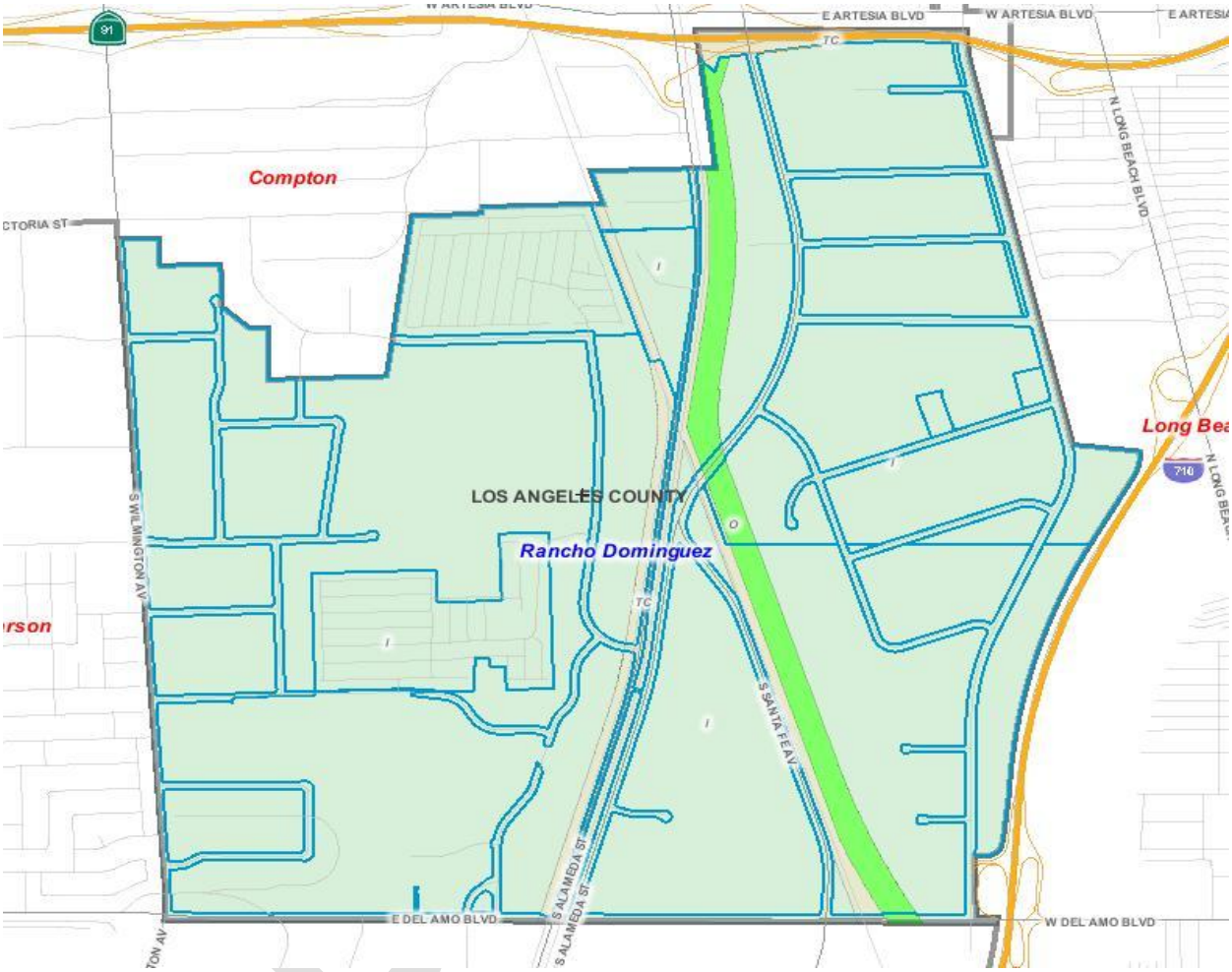
Study Area 1: The industrial district in North Whittier lies directly southeast of the Interstate-605 and high-level industrial uses in the City of Industry. The Puente Hills Landfill lies directly south of Study Area 1. The existing industrial uses in Study Area 1 are rehabilitated, and are surrounded by other industrial uses and a rail line.

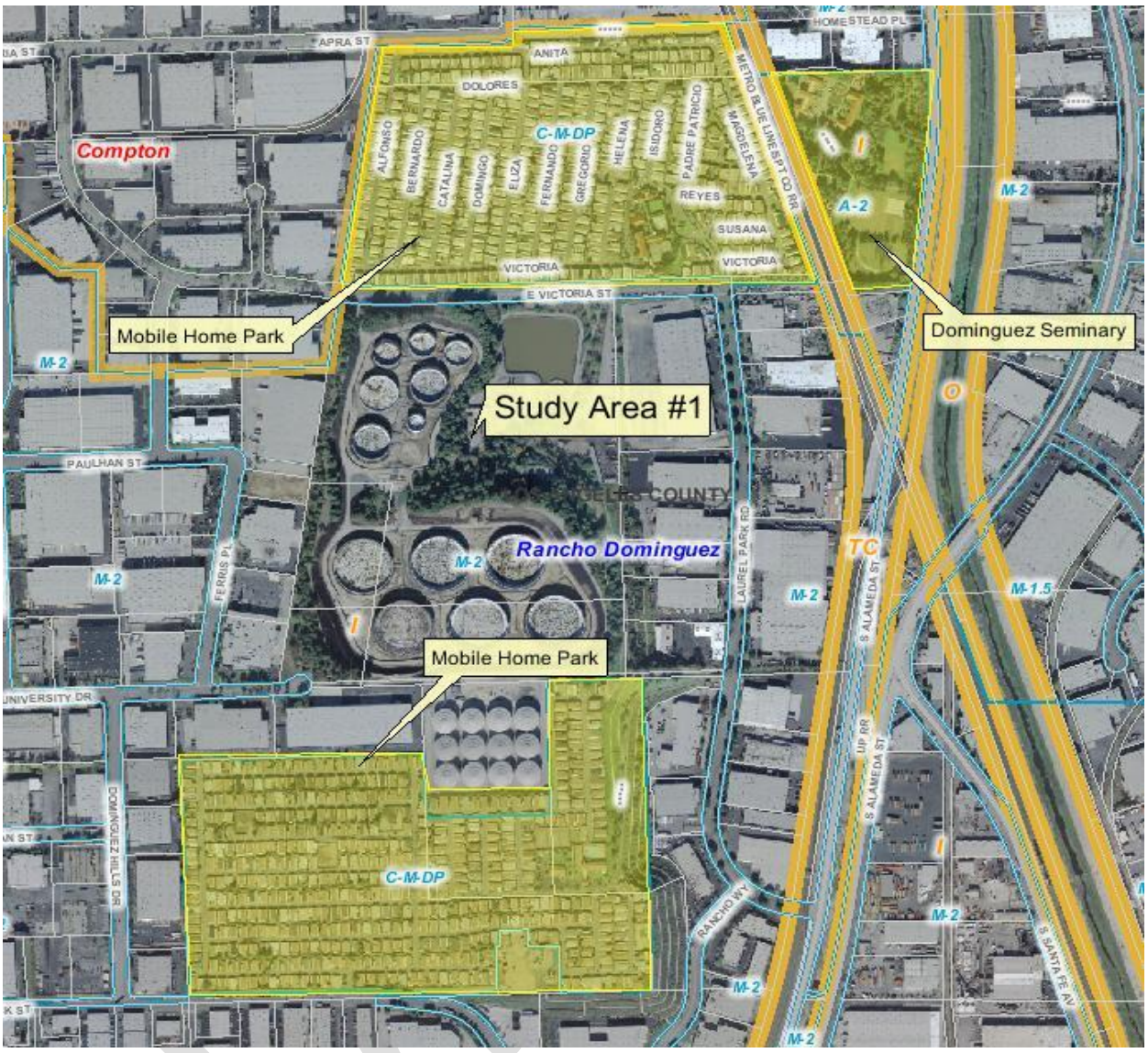
Recommendation: Employment Protection District

Rancho Dominguez

Rancho Dominguez is a large industrial area in the South Bay region. This is a highly industrialized and employment-rich region with direct access to the Ports of Los Angeles and Long Beach, the Alameda Corridor, and the Interstate-710.

Figure J.20: Rancho Dominguez Study Area 1



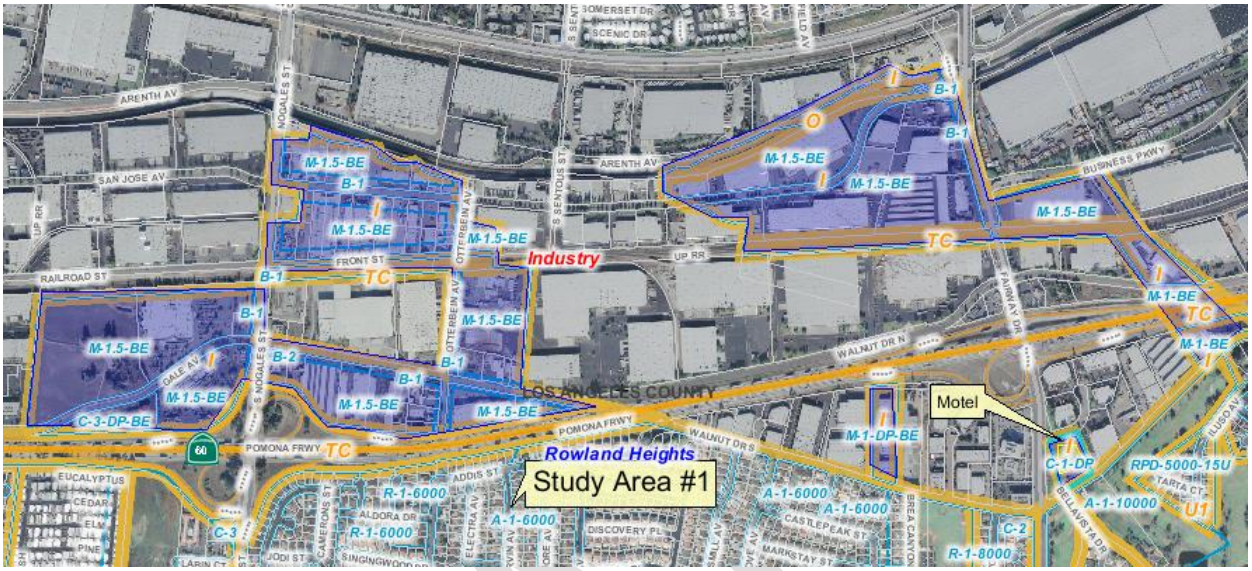


Study Area 1: The majority of the existing industrial uses in Study Area 1 are rehabilitated. However, there are a number of industrial parcels that could be rehabilitated for higher and better uses. This is important industrial land that is employment-rich and important on a regional economic scale. All efforts should be made to preserve the viability of the industrial land in Rancho Dominguez. Of concern are two major mobilehome parks and a historical seminary/museum that are entirely surrounded by heavy and light industrial uses. It is recommended that future projects of this nature not be allowed in these areas and that opportunities for relocation of the mobilehome parks are pursued.

Recommendation: Employment Protection District

Rowland Heights

Figure J.21: Rowland Heights Study Area 1



Study Area 1: Study Area 1 is being fully utilized for industrial purposes. The one exception is a motel sitting on an industrial parcel as noted on the map above with a C-1-DP (Restricted Business) zone. The properties surrounding the industrial parcels in Rowland Heights are similarly heavy industrial. Study Area 1 has access to the State Route-60 and to a Union Pacific rail line. The State Route-60 also provides a wide buffer from the residential uses in Rowland Heights. This is viable industrial land that should be protected.

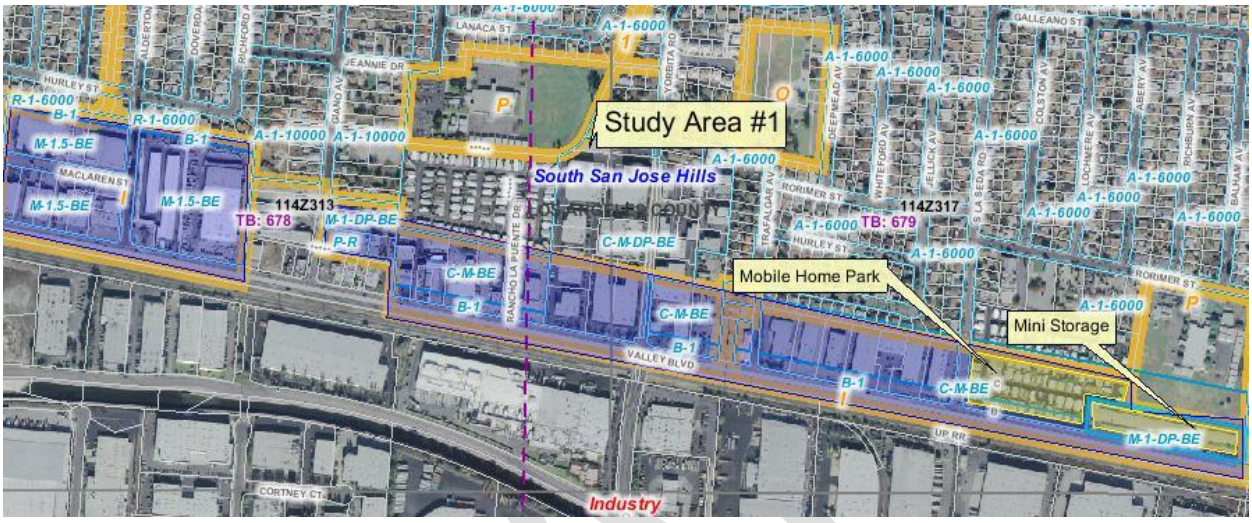
Recommendation: Employment Protection District

Correction Areas: Change motel parcel to a commercial land use.

South San Jose Hills – South Walnut

South San Jose Hills–South Walnut contains two separate Study Areas of industrial activity. Both areas stretch along Valley Boulevard and contain a mix of commercial and industrial uses.

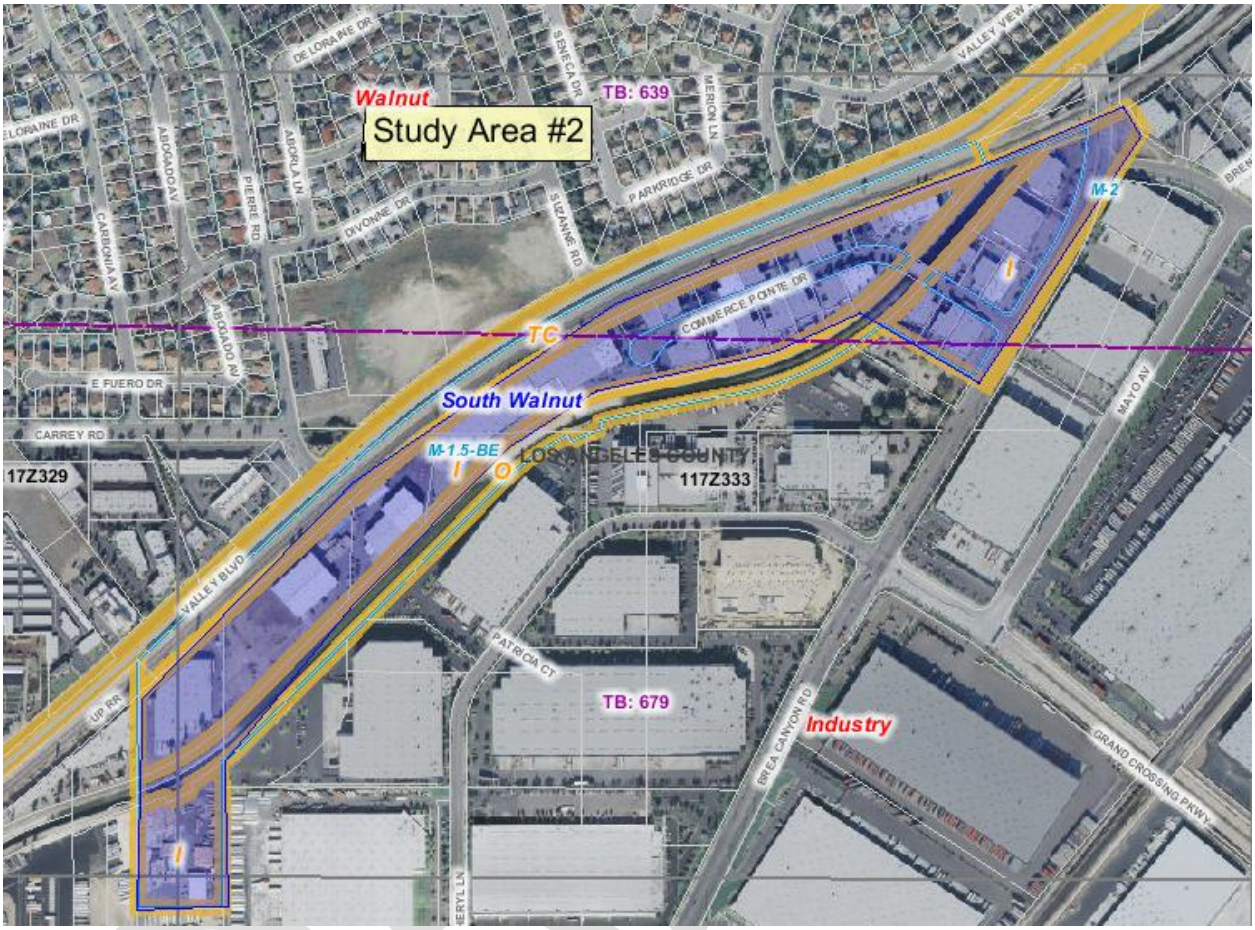
Figure J.22: South San Jose Hills – South Walnut Study Area 1



Study Area 1: Study Area 1 stretches along Valley Boulevard and is bordered on the north by low to medium density residential neighborhoods, and on the south by heavily industrialized parcels in the City of Industry. Much of Study Area 1 is zoned for C-M (Commercial Manufacturing), which allows for less intensive industrial uses. There are a number of parcels that have converted to other uses, including a large mobilehome park, a large storage facility, and a church, which suggest a trend in the encroachment of non-industrial uses into the southeast portion of Study Area 1.

Recommendation: Employment Protection District

Figure J.23: South San Jose Hills – South Walnut Study Area 2



Study Area 2: Study Area 2 in South Walnut is an industrial district that stretches along Valley Boulevard and is bordered on the north by low to medium density residential neighborhoods in the City of Walnut, and on the south by heavily industrialized parcels in the City of Industry. The parcels in Study Area 2 are high-use, valuable industrial lands that are well-buffered from adjacent residential uses.

Recommendation: Employment Protection District

South Whittier – Sunshine Acres

Figure J.24: South Whittier – Sunshine Acres Study Area 1

Study Area 1: Study Area 1 is an industrial district that is located at the intersection of Florence/Mill Avenues and Telegraph Road and is surrounded by residential and commercial uses on all sides. The majority of parcels in Study Area 1 have already been converted to commercial or commercial/office uses. The land use designation of Category 1 (Low Density Residential) is also inconsistent with the M-1 (Light Manufacturing) zoning designation.

Correction Areas: Change land use designations to commercial.

Figure J.25: South Whittier – Sunshine Acres Study Area 2

Study Area 2: Study Area 2 in South Whittier–Sunshine Acres is located along the Imperial Highway and lies directly north of high-use industrial parcels in the City of Santa Fe Springs. Residential uses and a few commercial parcels lie within Study Area 2, and to the north, northeast and northwest of Study Area 2. There are inconsistencies between the Category 1 land use designation (Low Density Residential) and many of the parcels zoned M-1 (Light Manufacturing). There is a mix of light industrial uses and auto related businesses on the M-1 and commercially-zoned parcels, and their proximity to the large-scale industrial uses to the south demonstrate the viability of the industrial land. It is recommended that the industrial uses be supported, and efforts be made to rehabilitate these parcels to be compatible with the higher-use industrial activities to the south.

Recommendation: Employment Protection District

Correction Areas: Change all industrial parcels to Light Industrial (IL) land use designation. Change the zoning for the residential parcel north of Leffingwell Road to R-1 (Single Family Residential). Change commercial zoning to light industrial zoning.

West Carson

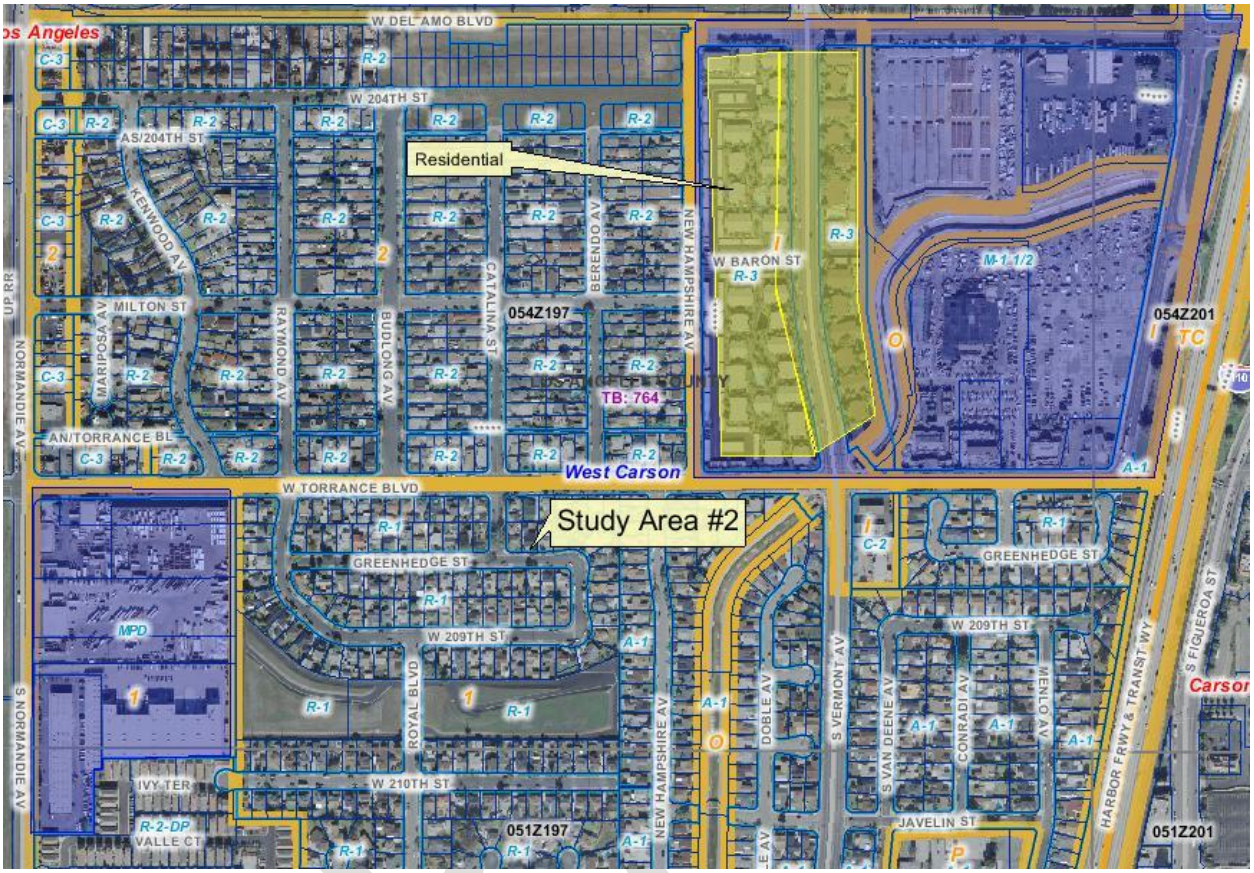
There are several, diverse industrial districts located throughout West Carson. The proximity to the Interstate-110 and Interstate-405 and to the industrial corridor leading out of the Ports of Los Angeles and Long Beach present West Carson with a number of opportunities and challenges. The Los Angeles County Harbor-UCLA Medical Center complex in the heart of West Carson also provides an anchor for future development and redevelopment activities.

Figure J.26: West Carson Study Area 1

Study Area 1: Study Area 1 lies south of Interstate-405, west of Interstate-110 and north of Del Amo Boulevard. The non-contiguous industrial parcels in Study Area 1 are heavily industrialized and surrounded by similar industrial uses. These are viable, employment-rich industrial lands with access to freeways.

Recommendation: Employment Protection District

Figure J.27: West Carson Study Area 2

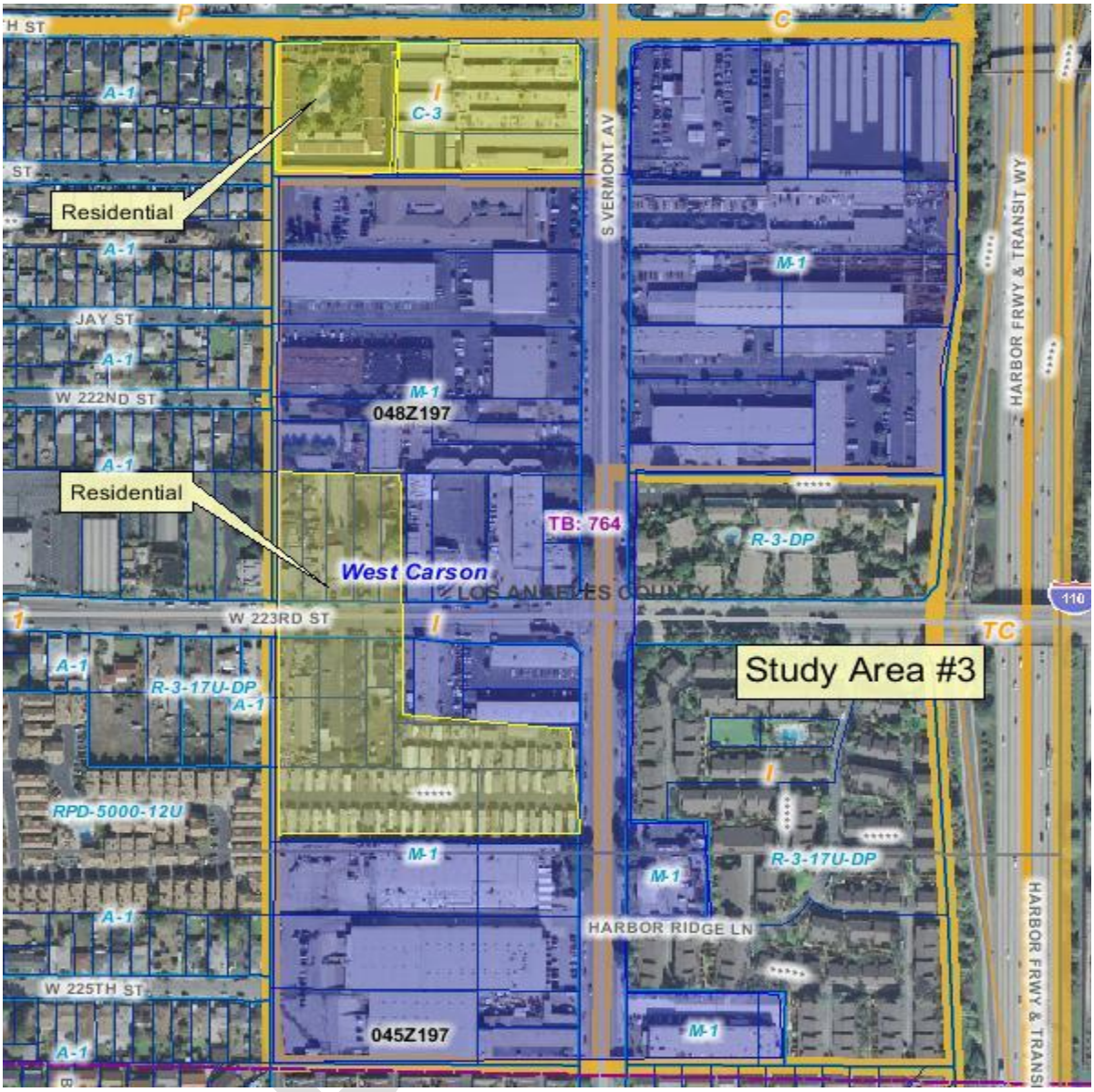


Study Area 2: The two non-contiguous industrial parcels in Study Area 2 are heavily industrialized, with the exception of a large, high-density residential project south of West Del Amo Boulevard and east of New Hampshire Avenue. The land use is Industrial (I), however, the zoning is R-3 (Limited Multiple Residential) for these parcels. This area should be redesignated as residential. There is one small industrial block with a C-2 (Neighborhood Business) zone south of Torrance Boulevard that is currently a gas station and store. The remaining industrial parcels in Study Area 2 are very large and in relatively good condition, and should be protected.

Recommendation: Employment Protection District

Correction Areas: Redesignate residential projects to residential (H30), and the parcels with C-2 (Neighborhood Business) zoning to commercial land use designations. The land use designation for the industrial district along Normandie Avenue should be changed from Category 1 (Low Density Residential) to an industrial land use designation.

Figure J.28: West Carson Study Area 3



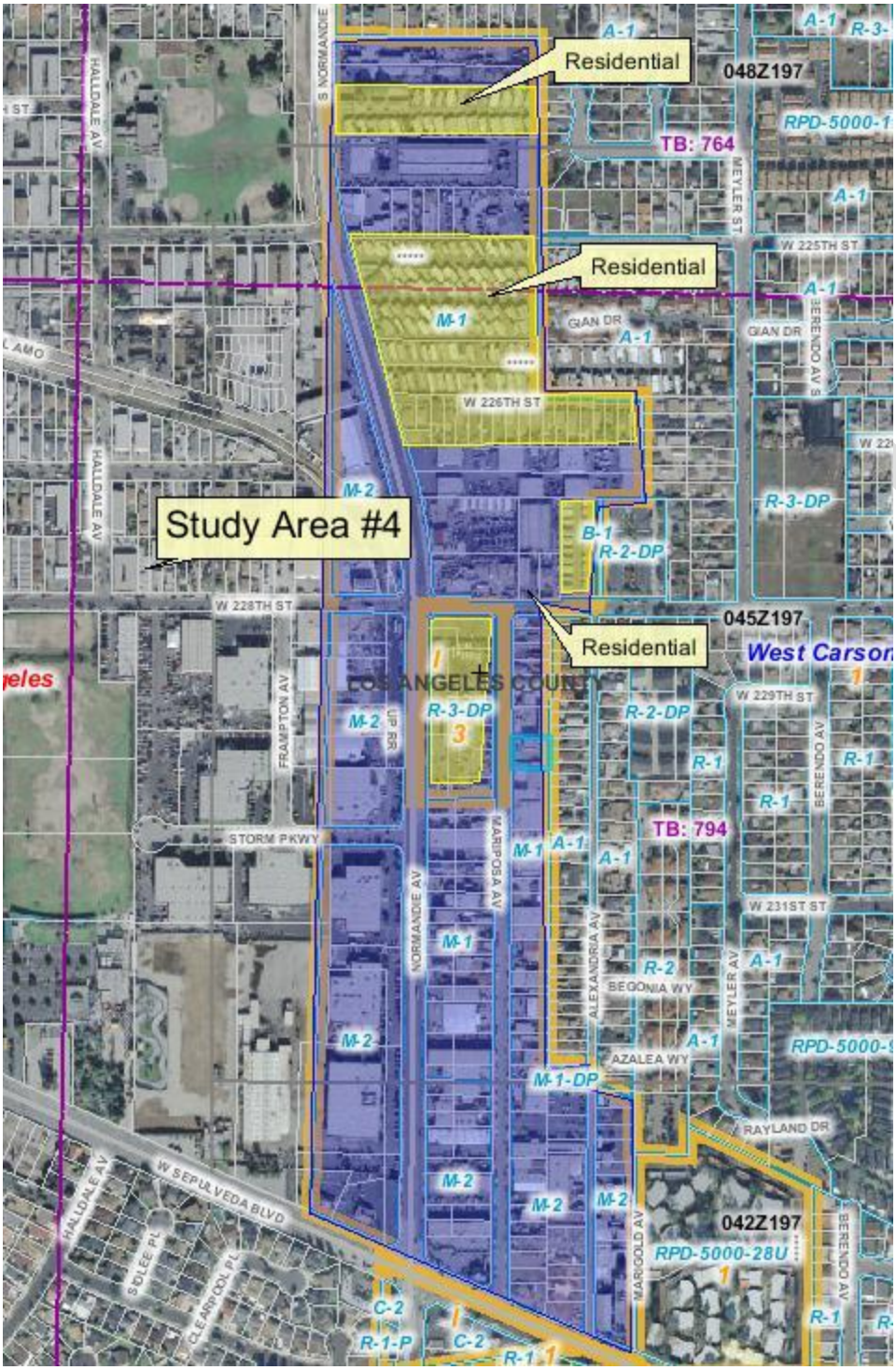
Study Area 3: Study Area 3 has seen a significant amount of land conversions, from industrial to residential uses. There are also commercial uses dispersed throughout Study Area 3 on industrially zoned parcels. The existing industrial uses are viable and in relatively good condition. However, Study Area 3 is in close proximity to the Harbor-UCLA Medical Center complex and is seeing a significant amount of large-scale residential development. There are major opportunities in this area for mixed-use development, including light industrial or research/support uses for the medical center.

Recommendation: Flex District

Correction Areas: Change parcels with an Industrial (I) land use designation, which have been

converted to other uses, to a residential land use designation (H18 and H30).

Figure J.29: West Carson Study Area 4



Study Area 4: Study Area 4 has also seen a significant amount of industrial land converted to residential uses, and these are recommended to be Flex Districts. One project has created a

residential island in the middle of the entire industrial district. It is recommended that residential projects surrounded by industrial land not be allowed in the future. There are several automotive wreckage and other types of businesses in the northern portion of Study Area 4, and the new townhome project in the middle of this district could be a good reason to attempt some rehabilitation of underutilized properties. Along both sides of Normandie Avenue in the southern portion of Study Area 4, the industrial uses that remain are viable and in relatively good condition, and are adjacent to industrial parcels in the City of Los Angeles.

Recommendation: Employment Protection District and Flex District

Figure J.30: West Carson Study Area 5

Study Area 5: Study Area 5 is a long industrial district between Vermont Avenue and the Interstate-110. It lies adjacent to heavy industrial uses across the freeway in the City of Carson. Study Area 5 has good access to the freeway and is close to the Ports of Long Beach and Los Angeles. The industrial uses that are in the northern portion of Study Area 5 are viable and in relatively good condition. The southern portion of Study Area 5 has large industrial parcels that are currently underutilized.

Recommendation: Employment Protection District

West Puente Valley

Figure J.31: West Puente Valley Study Area 1

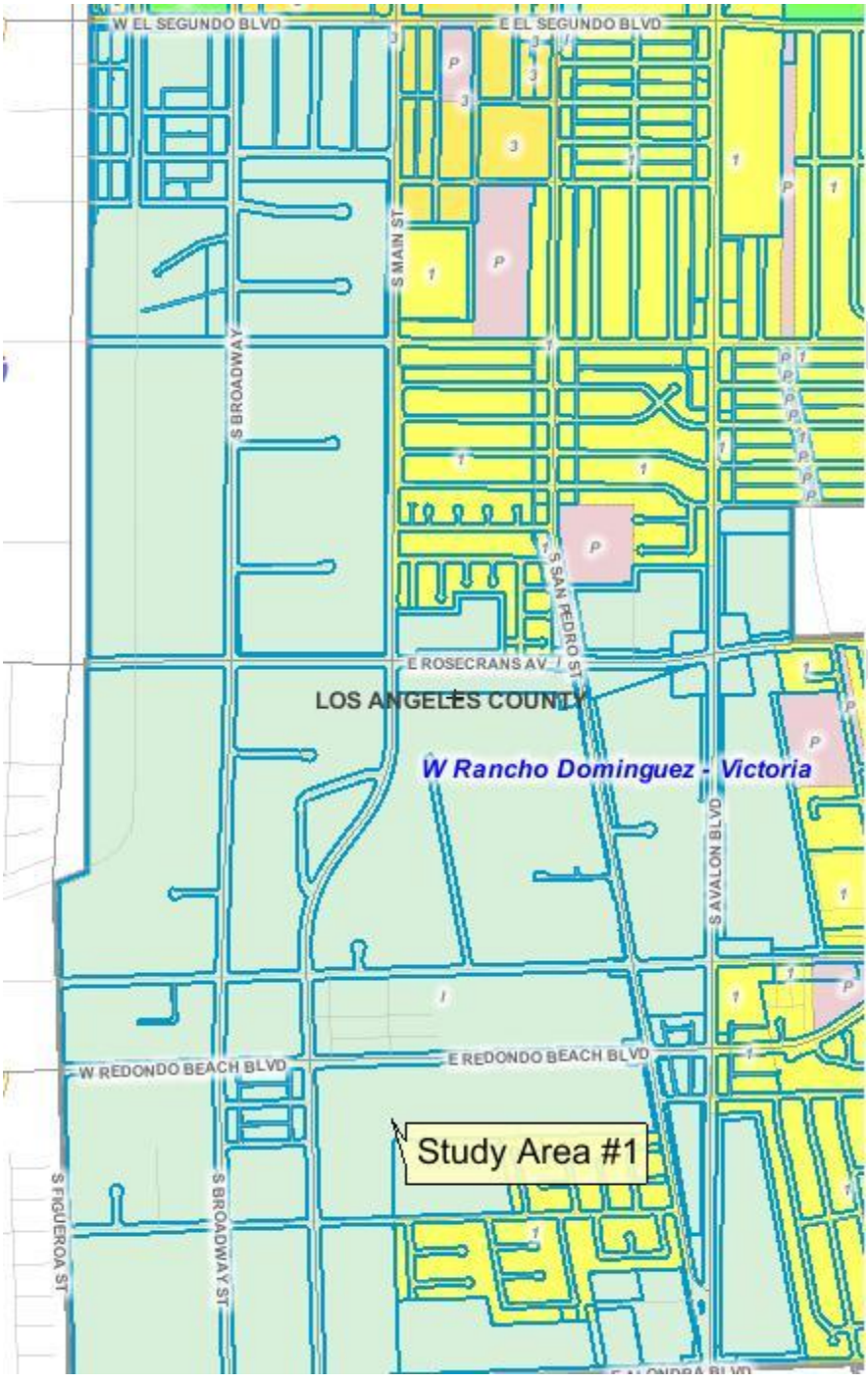
Study Area 1: The one industrial district in West Puente Valley is fully occupied and used for industrial purposes. The adjacent property within the unincorporated area is residential. The adjacent properties that are not in the unincorporated area contain a school, large industrial businesses, and an open air flea market that is also used as a drive-in theater. There is an inconsistency between the Category 1 (Low Density Residential) land use designation and the M 1.5 (Light Manufacturing) zones.

Recommendation: Employment Protection District

Correction Areas: Change the land use designation to Light Industrial (IL).

West Rancho Dominguez - Victoria

Figure J.32: West Rancho Dominguez – Victoria Study Area 1



Study Area 1: West Rancho Dominguez-Victoria has a large industrial district with a variety of facilities, in varying degrees of usage and conditions. The size and density of the area, the large industrial parcels, and its proximity to adjacent industrial districts shows that the industrial area is viable and should be protected. There is one residential project in Study Area 1 that is surrounded by heavy and light industrial uses. Future projects of this nature should be restricted in this area.

Recommendation: Employment Protection District

West Whittier – Los Nietos

Figure J.33: West Whittier – Los Nietos Study Area 1

Study Area 1: The industrial district in West Whittier–Los Nietos is fully utilized for industrial purposes. Across Washington Boulevard is another high-use industrial district. Residential uses surround the rest of Study Area 1. Rehabilitation could be beneficial for some structures, especially those near adjacent residential uses, and the industrial section between Chatfield Avenue and Sorenson Avenue has some residential pockets. The existing industrial uses are viable and are appropriate for the area. There are some plan and zone inconsistencies between the Category 1 (Low Residential Density) land use designation and the industrial zoning.

Recommendation: Employment Protection District

Correction Areas: Change land use designation to Light Industrial (IL)

Figure J.34: West Whittier – Los Nietos Study Area 2

Study Area 2: Study Area 2 lies just north of Whittier Boulevard between the Interstate-605 to the east and the San Gabriel River to the west. The two residential areas need to be redesignated from Industrial (I) to single family residential (H9).

Correction Areas: Change land use designation to single family residential (H9).

Whittier Narrows / South El Monte

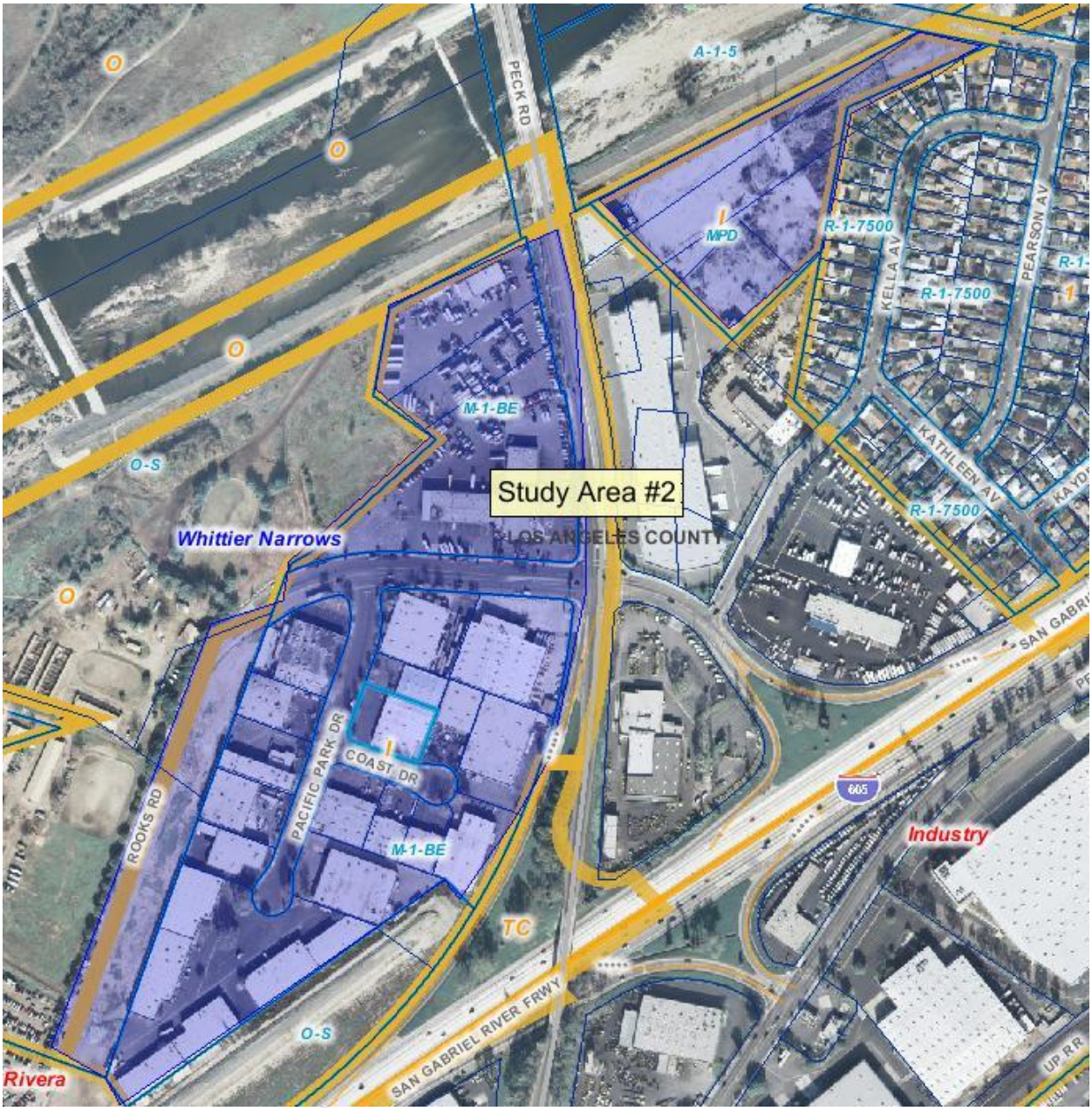
Figure J.35: Whittier Narrows/South El Monte Study Area 1

Study Area 1: The majority of Study Area 1 is used by the Los Angeles County Sanitation District, and the existing industrial use is updated and fully utilizes the property. The industrial parcels are adjacent to both industrial and residential districts, with many natural borders already formed. There is close access to the State Route-60 and the Interstate-605. Little development is necessary or possible. There are a few areas with land use and zoning inconsistencies.

Recommendation: Employment Protection District

Correction Areas: Along the north side of the State Route-60, the R-A (Residential-Agricultural) zones should be changed to industrial zones. South of the freeway, there is a large parcel with an M-1-DP (Light Manufacturing) zone, with a Category 1 (Low Residential Density) land use designation that should be changed to a Light Industrial (IL) land use. The two parcels at the intersection of Workman Mill Road and the water channel are residential and commercial uses and their land use designation and zones should be changed.

Figure J.36: Whittier Narrows/South El Monte Study Area 2



Study Area 2: Study Area 2 is located north of the Interstate-605 and is used for industrial purposes. The area is surrounded by industrial parcels and has access to the Interstate-605. The existing industrial uses are in good condition and viable.

Recommendation: Employment Protection District

Willowbrook

Figure J.37: Willowbrook Study Area 1

Study Area 1: Study Area 1 is located north of the Interstate-105 and is bordered by the Alameda Corridor to the east and S. Mona Boulevard to the west. To the north of Study Area 1, in the City of Los Angeles, is a large lumber company. Much of the western portion of the Study Area is

developed with single and multifamily residential uses. The Industrial land use designations and the residential zoning are inconsistent. These areas should be changed to residential (H18 or H30), depending on the existing density. Another correction area is an R-2 (Two Family Residential) zoned parcel that is owned by the Los Angeles Unified School District and is currently developed as a school. The remaining parcels in Study Area 1 are developed with light industrial, warehousing and distribution, or light manufacturing uses. There are many potential conflicts with auto-related and salvaging businesses near residential neighborhoods. However, the proximity to the Alameda Corridor warrants the protection of the remaining industrial parcels in Study Area 1.

Recommendation: Flex District

Correction Areas: Residential areas need a change in land use designation to residential (H18 or H30). Change R-2 (Two Family Residential) parcel owned by LAUSD to public/semi-public (P) land use designation.

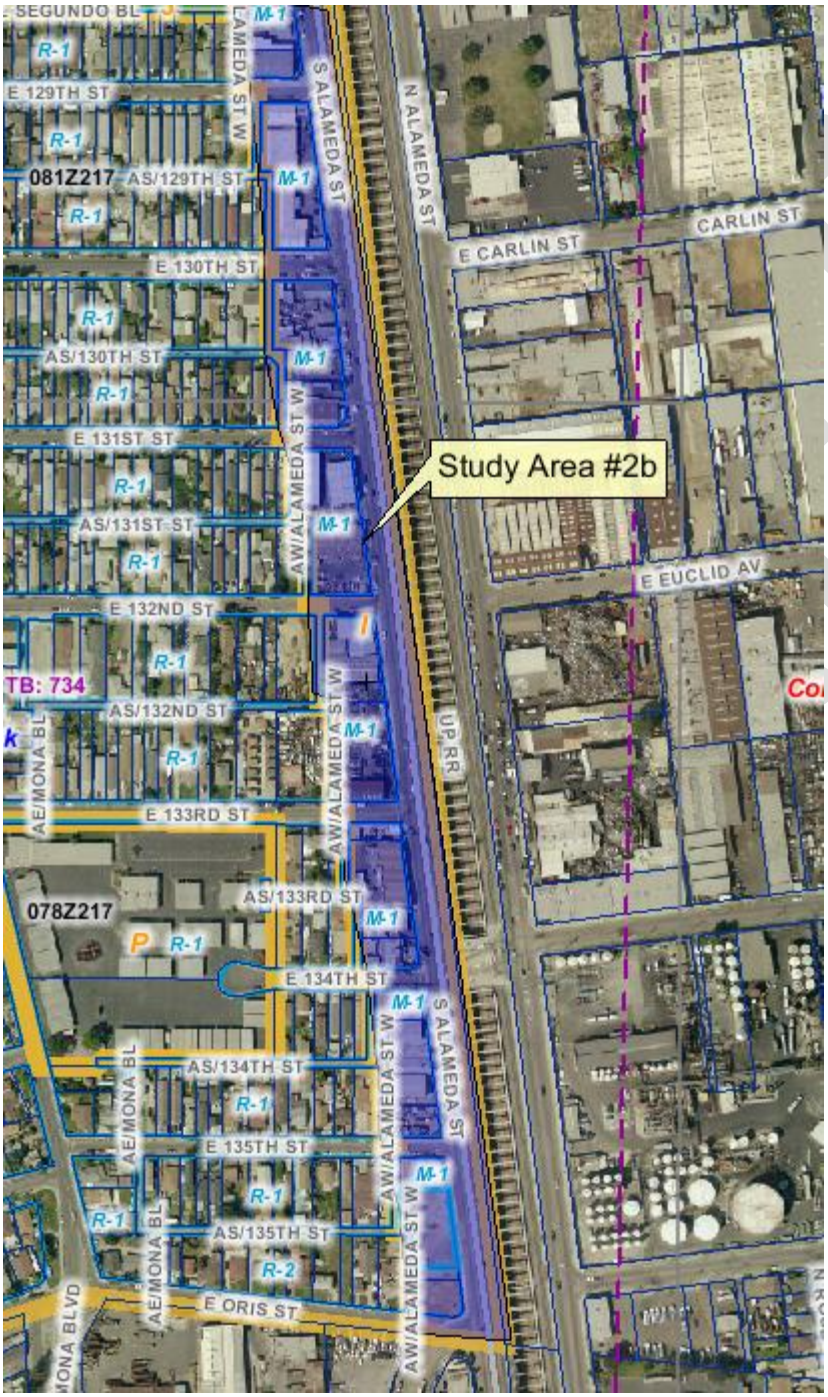
Figure J.38: Willowbrook Study Area 2a

Study Area 2a: Study Area 2a extends from E. 124th Street to the north to El Segundo Boulevard to the south. The eastern portion of Study Area 2a is bordered by the Alameda Corridor. This is a large industrial district that is filled with light manufacturing and other industrial uses. There are numerous parcels used for storage and auto-related uses, which are not employment-rich uses. Study Area 2a has the potential for significant rehabilitation and redevelopment of many of the industrial parcels. There are several single family and multifamily residential dwellings that are surrounded by industrial

uses throughout Study Area 2a. Future residential uses should be prohibited in this area.

Recommendation: Employment Protection District

Figure J.39: Willowbrook Study Area 2b



Study Area 2b: Study Area 2b in Willowbrook is a narrow area consisting of industrial uses that extends along the Alameda Corridor, from El Segundo Boulevard to the north, down to Oris Street to the south. Dense single family neighborhoods lie west of Study Area 2b, while across the Alameda Corridor to the east, are light and heavy industrial uses in the City of Compton. All of the industrially zoned parcels in Study Area 2b are being used for light manufacturing and other industrial purposes. Utilization of a buffer zone could be helpful in reducing conflicts with adjacent residential neighborhoods.

Recommendation: Employment Protection District

Table J.1: Industrial Land Analysis Summary

Unincorporated Community	Employment Protection District	Flex District	Correction Area
Avocado Heights			
Study Area 1	x		
Study Area 2	x		
Study Area 3	x		x
Study Area 4		x	
Study Area 5	x		
Covina Islands			
Study Area 1		x	x
East Los Angeles			
Study Area 1	x		
Study Area 2	x	x	x
E. Pasadena - E. San Gabriel			
Study Area 1	x		x
Florence – Firestone			
Study Area 1		x	
Study Area 2		x	
Study Area 3a	x	x	
Study Area 3b	x		
Study Area 4		x	
Study Area 5		x	
Hacienda Heights			
Study Area 1	x		

Lennox			
Study Area 1	**x**		**x**
Lopez Canyon			
Study Area 1	**x**		**x**
North Whittier			
Study Area 1	**x**		
Rancho Dominguez			
Study Area 1	**x**		
Rowland Heights			
Study Area 1	**x**		**x**
S. San Jose Islands - S. Walnut			
Study Area 1	**x**		
Study Area 2	**x**		
South Whittier - Sunshine Acres			
Study Area 1			
Study Area 2	**x**		**x**
West Carson			
Study Area 1	**x**		
Study Area 2	**x**		**x**
Study Area 3		**x**	**x**
Study Area 4	**x**		**x**
Study Area 5	**x**		
West Puente Valley			
Study Area 1	**x**		**x**

West Rancho Dominguez - Victoria			
Study Area 1	**x**		
West Whittier - Los Nietos			
Study Area 1	**x**		**x**
Study Area 2			
Whittier Narrows - South El Monte			
Study Area 1	**x**		**x**
Study Area 2	**x**		
Willowbrook			
Study Area 1		**x**	**x**
Study Area 2a	**x**		
Study Area 2b	**x**		

II. General Policy Recommendations

The following general policy recommendations are based on the analysis of the County's industrial land:

Disparity in Site Conditions

In comparison to County industrial land, industrial areas in adjacent cities are in better physical condition and have had greater success in targeting higher-uses and more employment-rich industrial businesses. Despite the sometimes less-desirable site conditions, the County's industrial land is valuable and strategically located, and therefore should not be converted to non-industrial uses. However, significant economic and physical improvements are needed to make these areas competitive in attracting the County's target industries, as outlined in the Economic Development Element.

Recommendation:

- In collaboration with stakeholders, implement incentives, create programs, and apply for grants for the rehabilitation and upgrading of underutilized industrial areas.

Allowable Uses

The County's industrial districts have many industrial parcels with low-job generating uses, such as

auto scrap yards, salvage sites, truck or auto storage businesses, and both small and large-scale public storage sites. These uses on County industrial land are in a much higher proportion to that of adjacent local jurisdictions.

Recommendations:

- Clarify the intended uses for the County's industrial land use categories, and revise the industrial zones to limit or discourage low-job generating uses, such as public storage sites.
- Implement regulations to limit the number of low-jobs generating businesses in a given area through community-based planning efforts.

Residential Uses

The analysis highlights several parcels in industrial areas across the County where a residential project is entirely surrounded by industrial uses. There are also several instances of large mobilehome parks situated on some of the County's most valuable industrial land. Similarly, many industrial districts and some heavy industrial uses are directly adjacent to residential neighborhoods. Allowing residential uses in industrial areas creates numerous compatibility issues, including exposure to noise, toxins, safety concerns, and other environmental impacts, and creates tension between the residential community and industrial business owners and their operations. The County should provide clear policy direction to maintain industrial lands for employment-rich uses, but also to restrict residential uses in heavily industrialized districts and appropriately buffer industrial districts from residential neighborhoods.

Recommendations:

- Restrict residential uses in Employment Protection Districts, and ensure that the zoning for these areas limits the ability to convert these lands into non-industrial uses. Create and implement a buffer zone around Employment Protection Districts.

- Allow mixed-uses, supporting commercial development and residential uses near industrial uses only in Flex Districts, and establish clear guidelines for development to ensure compatibility between mixed-uses and industrial uses.

- For mobilehome parks and other residential uses in Employment Protection Districts, work with stakeholders to identify opportunities to relocate existing residential uses.

Table H.3: Planned Development in Flood Hazard Zones

APN	Description of Project	Community Name
3038030029	(RA) 15 SF LOTS ON 15.5 AC	ANTELOPE VALLEY
3038030005	(RA) 15 SF LOTS ON 15.5 AC	ANTELOPE VALLEY
3038030028	(RA) 15 SF LOTS ON 15.5 AC	ANTELOPE VALLEY
3102024012	(RV) 9SF LOTS ON 2.43 AC IN R1-7.5K	ANTELOPE VALLEY
3049029044	(TN) 1 SF LOT ON 7.89 AC & 3 C LOTS ON 6.51 AC	ANTELOPE VALLEY
3366032009	(TN) 16 (5 AC) SF LOTS ON 80 AC	ANTELOPE VALLEY
3225025011	(TN) 16 SF LOTS ON 165 ACRES IN A2-2	ANTELOPE VALLEY
3338001017	(TN) 16 SF LOTS ON 80.0 AC IN A1-1	ANTELOPE VALLEY
3258025024	(TN) 160 SF LOTS ON 800 AC IN A2-5	ANTELOPE VALLEY
3038012001	(TN) 2 SF LOTS ON 0.84 AC IN RA-7.5K	ANTELOPE VALLEY
3216013022	(TN) 2 SF LOTS ON 10.0 AC IN A1-1	ANTELOPE VALLEY
3058016021	(TN) 2 SF LOTS ON 10.0 AC IN A2-5	ANTELOPE VALLEY
3220017003	(TN) 2 SF LOTS ON 4.7 AC	ANTELOPE VALLEY
3102026045	(TN) 20 SF LOTS ON 5.0 AC IN R1-7.5K	ANTELOPE VALLEY
3102026026	(TN) 20 SF LOTS ON 5.0 AC IN R1-7.5K	ANTELOPE VALLEY
3102026028	(TN) 20 SF LOTS ON 5.0 AC IN R1-7.5K	ANTELOPE VALLEY
3102026029	(TN) 20 SF LOTS ON 5.0 AC IN R1-7.5K	ANTELOPE VALLEY
3102026027	(TN) 20 SF LOTS ON 5.0 AC IN R1-7.5K	ANTELOPE VALLEY
3145033085	(TN) 23 SF LOTS ON 112.6 AC IN D2-1	ANTELOPE VALLEY
3145033086	(TN) 23 SF LOTS ON 112.6 AC IN D2-1	ANTELOPE VALLEY
3145033083	(TN) 23 SF LOTS ON 112.6 AC IN D2-1	ANTELOPE VALLEY
3049027004	(TN) 3 SF & 1 C LOTS ON 8.37 ACRES IN C3 & A2-10K	ANTELOPE VALLEY
3049027003	(TN) 3 SF & 1 C LOTS ON 8.37 ACRES IN C3 & A2-10K	ANTELOPE VALLEY
3060016016	(TN) 3 SF LOTS ON 22.5 AC	ANTELOPE VALLEY
3258026011	(TN) 30 SF LOTS ON 155.0 AC IN A2-2	ANTELOPE VALLEY
3258026012	(TN) 30 SF LOTS ON 155.0 AC IN A2-2	ANTELOPE VALLEY
3258026010	(TN) 30 SF LOTS ON 155.0 AC IN A2-2	ANTELOPE VALLEY
3038030004	(TN) 36 SF LOTS ON 40.0 AC IN RA-10K	ANTELOPE VALLEY
3208042903	(TN) 4 SF LOTS ON 144 AC IN RA-10K, RA-13K, A1-1	ANTELOPE VALLEY
3208042027	(TN) 4 SF LOTS ON 144 AC IN RA-10K, RA-13K, A1-1	ANTELOPE VALLEY
3208042023	(TN) 4 SF LOTS ON 144 AC IN RA-10K, RA-13K, A1-1	ANTELOPE VALLEY
3208042020	(TN) 4 SF LOTS ON 144 AC IN RA-10K, RA-13K, A1-1	ANTELOPE VALLEY
3058010006	(TN) 4 SF LOTS ON 28.0 AC IN A2-5	ANTELOPE VALLEY
3208018038	(TN) 4 SF LOTS ON 4.89 ACRES	ANTELOPE VALLEY
3208018040	(TN) 4 SF LOTS ON 4.89 ACRES	ANTELOPE VALLEY
3208018041	(TN) 4 SF LOTS ON 4.89 ACRES	ANTELOPE VALLEY
3208018039	(TN) 4 SF LOTS ON 4.89 ACRES	ANTELOPE VALLEY
3042024903	(TN) 4 SF LOTS ON 58.34 AC IN RA-10K	ANTELOPE VALLEY
3042024056	(TN) 4 SF LOTS ON 58.34 AC IN RA-10K	ANTELOPE VALLEY
3042024055	(TN) 4 SF LOTS ON 58.34 AC IN RA-10K	ANTELOPE VALLEY
3279001036	(TN) 5 (4 SF+1 REMAINDER) LOTS/119 AC	ANTELOPE VALLEY
3279001042	(TN) 5 (4 SF+1 REMAINDER) LOTS/119 AC	ANTELOPE VALLEY
3279001041	(TN) 5 (4 SF+1 REMAINDER) LOTS/119 AC	ANTELOPE VALLEY
3279001040	(TN) 5 (4 SF+1 REMAINDER) LOTS/119 AC	ANTELOPE VALLEY
3279001043	(TN) 5 (4 SF+1 REMAINDER) LOTS/119 AC	ANTELOPE VALLEY
3279001039	(TN) 5 (4 SF+1 REMAINDER) LOTS/119 AC	ANTELOPE VALLEY
3102025087	(TN) 5 SF LOTS ON 1.26 AC IN R1-7.5K	ANTELOPE VALLEY
3022005276	(TN) 54 INDUSTRIAL/AGRICULTURAL LOTS ON 17,470 AC	ANTELOPE VALLEY
3110012011	(TN) 59 SF LOTS + 1 RETENTION LOT ON 30 AC	ANTELOPE VALLEY
3102030025	(TN) 85 SFR ON 20 AC	ANTELOPE VALLEY
3049019007	(TN) 9 SF + 2 PF LOTS ON 9.41 ACRES	ANTELOPE VALLEY
3103031037	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031036	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031035	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031034	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031033	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031032	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031031	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031030	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031029	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031028	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031004	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031005	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031017	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031018	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031020	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031021	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031022	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031023	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031016	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031002	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031006	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031001	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031007	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031013	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031024	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY

APN	Description of Project	Community Name
3103031011	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031012	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031010	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031014	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031015	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031025	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031008	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031026	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031019	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031009	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031003	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3102021035	1 STY MUFFLER SHOP	ANTELOPE VALLEY
3233004015	2). A 441 sq. ft. one story detached garage. Garage shall not exceed an elevation of 15ft.	ANTELOPE VALLEY
3027015030	10 PIT BULL TERRIERS ON 1.32 AC IN A1-1	ANTELOPE VALLEY
3103020046	10' REAR YD SETBACK	ANTELOPE VALLEY
3038014019	10 UNITS	ANTELOPE VALLEY
3103028026	101 single family lots	ANTELOPE VALLEY
3103006005	14 UNIT BLDG	ANTELOPE VALLEY
3103029076	16 single family lots	ANTELOPE VALLEY
3103029075	16 single family lots	ANTELOPE VALLEY
3208018018	1-STORY SINGLE FLY RESIDENCE	ANTELOPE VALLEY
3038014006	2 FREESTAND DBL & SGL FACED	ANTELOPE VALLEY
3242004021	2 MOBILE HOMES IN C3 ON .14 AC	ANTELOPE VALLEY
3103010018	2 SIGNS/REFACE AND REPLACE	ANTELOPE VALLEY
3228022022	2 UNITS & 1 EXISTING	ANTELOPE VALLEY
3102021031	2,706 SQ HALL	ANTELOPE VALLEY
3228020012	20' FRT SETBACK	ANTELOPE VALLEY
3227011009	20' FRT YD	ANTELOPE VALLEY
3227011008	20' FRT YD SETBACK	ANTELOPE VALLEY
3228019023	20' FRT YD SETBACK	ANTELOPE VALLEY
3227028043	20' SETBACK VARIANCE	ANTELOPE VALLEY
3203002007	20 YEAR CONT'.D USE OF AIRPARK FACILITY	ANTELOPE VALLEY
3227026056	2'6" FRT SETBACK	ANTELOPE VALLEY
3228024019	27' R SETBACK	ANTELOPE VALLEY
3056006008	2-CAR GARAGE & GAME ROOJ	ANTELOPE VALLEY
3243014011	2-CAR GARAGE LAUNDRY/BONUS RM	ANTELOPE VALLEY
3101027028	2-LOT LLA	ANTELOPE VALLEY
3103027035	2ND UNIT & GARAGE	ANTELOPE VALLEY
3382020008	2-STORY SFR & 2-CAR GARAGE	ANTELOPE VALLEY
3228019011	3 BD RM ADDITION	ANTELOPE VALLEY
3036017018	320 square foot two story addition to the existing rear dwelling	ANTELOPE VALLEY
3036017017	320 square foot two story addition to the existing rear dwelling	ANTELOPE VALLEY
3175001013	325' ANTENNA	ANTELOPE VALLEY
3205002096	4 sfr LOTS	ANTELOPE VALLEY
3224003017	498 SPACE RECREATONAL VEHICLE RESORT WITH EXISTING GOLF COURSE	ANTELOPE VALLEY
3224003012	498 SPACE RECREATONAL VEHICLE RESORT WITH EXISTING GOLF COURSE	ANTELOPE VALLEY
3224003013	498 SPACE RECREATONAL VEHICLE RESORT WITH EXISTING GOLF COURSE	ANTELOPE VALLEY
3224003015	498 SPACE RECREATONAL VEHICLE RESORT WITH EXISTING GOLF COURSE	ANTELOPE VALLEY
3046012038	5 DOGS ON 10.0 AC IN A1-10K	ANTELOPE VALLEY
3227010023	5' REAR SETBACK	ANTELOPE VALLEY
3103010008	6 APTS	ANTELOPE VALLEY
3038014020	6 UNITS	ANTELOPE VALLEY
3038014015	6 UNITS	ANTELOPE VALLEY
3027028001	7 DOGS	ANTELOPE VALLEY
3228025029	8' 6" FRT SETBACK	ANTELOPE VALLEY
3103029045	82 SFH ON TRACTS 45068 & 52394	ANTELOPE VALLEY
3251012024	OAKS).	ANTELOPE VALLEY
3251012025	OAKS).	ANTELOPE VALLEY
3102025062	A/C IN S YD	ANTELOPE VALLEY
3150018011	ADD 1,200 SQ. FT. MANUFACTURED HOME AS GRANNY	ANTELOPE VALLEY
3103027026	ADD EXTRA BATHROOM	ANTELOPE VALLEY
3220018010	ADD OFFICE TO EXIST WATER CO SERVICE YARD	ANTELOPE VALLEY
3102018900	ADD TO DISTRICT OFFICE BLDG	ANTELOPE VALLEY
3102021034	ADD TO EXISTING BLDG	ANTELOPE VALLEY
3102017021	ADD TO FIRE STA	ANTELOPE VALLEY
3101021002	ADD TO GAS STATION	ANTELOPE VALLEY
3103010900	ADD TO OFF BLDG & ROOF SIGN	ANTELOPE VALLEY
3209001015	ADD TO SINGLE FAMILY RESIDENC	ANTELOPE VALLEY
3101020032	ADD TO SINGLE FAMILY RESIDENCE	ANTELOPE VALLEY
3058027012	ADD TO SINGLE FLY RES	ANTELOPE VALLEY
3251014031	ADD TO USED CAR LOT	ANTELOPE VALLEY
3205007008	ADDITION	ANTELOPE VALLEY
3137006003	ADDITION	ANTELOPE VALLEY
3264012038	ADDITION TO EXISTING CHURCH	ANTELOPE VALLEY
3264012037	ADDITION TO EXISTING CHURCH	ANTELOPE VALLEY
3209003031	ADMINISTRATIVE OAK TREE PERMIT - one encroachment	ANTELOPE VALLEY
3102021036	ADV SIGN	ANTELOPE VALLEY
3039019064	AGRI ONLY	ANTELOPE VALLEY

APN	Description of Project	Community Name
3025054275	AGRI USE	ANTELOPE VALLEY
3310006040	AGRI USE	ANTELOPE VALLEY
3217020032	AGRICULTURAL BARN & POWER	ANTELOPE VALLEY
3036014040	AGRICULTURAL USE	ANTELOPE VALLEY
3275004025	AGRICULTURE BUILDING	ANTELOPE VALLEY
3310012017	AGRICULTURE USE	ANTELOPE VALLEY
3056024037	ALLOW USE OF MOBILEHOME AS CARETAKER'S RESIDENCE	ANTELOPE VALLEY
3103010045	AMBULANCE SERVICE	ANTELOPE VALLEY
3111012011	AN ADDITION TO A SINGLE FAMILY HOME	ANTELOPE VALLEY
3268002011	Annual Fiesta within the Our Lady of Solitude Church grounds.	ANTELOPE VALLEY
3049020029	APPRVL OF FISHING TACKLE SHOP	ANTELOPE VALLEY
3103023049	APT BLDG	ANTELOPE VALLEY
3103001003	Automoblie maintence shop, carwash and retail.	ANTELOPE VALLEY
3208007043	BARN	ANTELOPE VALLEY
3208012108	BARN/STORAGE FACILITY	ANTELOPE VALLEY
3038007006	BILLBOARD	ANTELOPE VALLEY
3102018012	BILLBOARD	ANTELOPE VALLEY
3208018014	BUILD NEW 576 SQ.FT. GARAGE	ANTELOPE VALLEY
3251014043	C.U.P. TO INSTALL AN 80' CELLULAR MONOPOLE	ANTELOPE VALLEY
3242030012	CAMP	ANTELOPE VALLEY
3235005029	CAMPGROUND SERVING CHRONICALLY ILL CHILDREN	ANTELOPE VALLEY
3235005031	CAMPGROUND SERVING CHRONICALLY ILL CHILDREN	ANTELOPE VALLEY
3235005032	CAMPGROUND SERVING CHRONICALLY ILL CHILDREN	ANTELOPE VALLEY
3242034004	CAMPGROUND SERVING CHRONICALLY ILL CHILDREN	ANTELOPE VALLEY
3242034003	CAMPGROUND SERVING CHRONICALLY ILL CHILDREN	ANTELOPE VALLEY
3242034001	CAMPGROUND SERVING CHRONICALLY ILL CHILDREN	ANTELOPE VALLEY
3049007030	CARETAKER'S MOBILEHOME ON 1.0 AC IN C3	ANTELOPE VALLEY
3307009084	CARETAKERS RESIDENCE IN A2-1	ANTELOPE VALLEY
3307009086	CARETAKERS RESIDENCE IN A2-1	ANTELOPE VALLEY
3307009085	CARETAKERS RESIDENCE IN A2-1	ANTELOPE VALLEY
3307009083	CARETAKERS RESIDENCE IN A2-1	ANTELOPE VALLEY
3251013020	CHANNEL LTRS WALL SIGNS	ANTELOPE VALLEY
3042003013	CHURCH & EDUCATION WING ON 2.5 AC	ANTELOPE VALLEY
3049021011	CHURCH AND SCHOOL ON 3.7 AC IN A2-10K	ANTELOPE VALLEY
3102017019	CHURCH CONST. & RENOVATION	ANTELOPE VALLEY
3042001022	CHURCH EXPANSION	ANTELOPE VALLEY
3216017019	CHURCH FACILITY ON 6.0173 AC IN A1-1	ANTELOPE VALLEY
3042001043	CHURCH, SCHOOL, SENIOR APARTMENTS	ANTELOPE VALLEY
3251013055	CNVRT SERVICE AREA TO MINIMART	ANTELOPE VALLEY
3102016019	COMM LOT	ANTELOPE VALLEY
3102016020	COMM LOT	ANTELOPE VALLEY
3037006025	COMMERCIAL BLDG	ANTELOPE VALLEY
3228033001	COMMERCIAL DEV	ANTELOPE VALLEY
3250015903	CONSTRUCT A 100' TALL WIRELESS TELECOMMUNICATIONS	ANTELOPE VALLEY
3205008036	CONSTRUCTION OF UNMANNED WIRELESS FACILITY	ANTELOPE VALLEY
3302020019	CONT GOLF COURSE IN RA-10K	ANTELOPE VALLEY
3064016010	CONT HORSE RANCH WITH CARETAKERS' RESIDENCE ON 240	ANTELOPE VALLEY
3209016019	CONT REC VEHICLE PARK ON 223.0 AC IN RR-1 & A2-1	ANTELOPE VALLEY
3209018057	CONT REC VEHICLE PARK ON 223.0 AC IN RR-1 & A2-1	ANTELOPE VALLEY
3209016025	CONT REC VEHICLE PARK ON 223.0 AC IN RR-1 & A2-1	ANTELOPE VALLEY
3209011013	CONT. KEEPING WILD ANIMALS & CARETAKER RESIDENCES	ANTELOPE VALLEY
3048015012	CONT'D. USE OF WILD ANIMAL MENAGERIE	ANTELOPE VALLEY
3048015270	CONT'D. USE OF WILD ANIMAL MENAGERIE	ANTELOPE VALLEY
3027010037	CONTINUE EXISTING MOBILEHOME PARK	ANTELOPE VALLEY
3036015022	CONTINUE OPERATION OF SPECIAL-USE AIRPORT	ANTELOPE VALLEY
3175021015	CONTINUE USE OF EXISTING LEGALLY NONCONFORMING AUTO DISMANTLING YARD	ANTELOPE VALLEY
3175021028	CONTINUE USE OF EXISTING LEGALLY NONCONFORMING AUTO DISMANTLING YARD	ANTELOPE VALLEY
3145029030	CONVERT GARAGE TO WORK SHOP	ANTELOPE VALLEY
3251014023	CONVERT PATIO TO DININGROOM	ANTELOPE VALLEY
3049002044	COVER SHADE FOR MOTORHOME	ANTELOPE VALLEY
3044029005	DENSITY CONTROLLED DEVELOPMENT/SEWAGE TREATMENT PL	ANTELOPE VALLEY
3044028016	DENSITY CONTROLLED DEVELOPMENT/SEWAGE TREATMENT PL	ANTELOPE VALLEY
3044006079	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006059	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006070	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006071	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006014	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006025	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006036	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006047	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006057	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006058	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006015	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006037	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006046	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006072	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006073	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006016	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY

APN	Description of Project	Community Name
3044006023	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006038	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006045	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006017	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006022	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006039	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006044	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006018	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006043	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006019	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006020	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006042	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035900	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035001	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035020	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035021	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035040	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035041	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035059	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035060	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035068	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035002	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035019	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035042	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035058	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035061	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035067	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035022	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035070	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035066	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035003	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035043	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035057	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035071	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035062	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035023	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035038	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035065	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035072	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035004	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035044	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035056	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035063	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035024	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035037	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035064	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035073	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035005	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035016	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035025	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035036	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035074	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035055	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035054	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035075	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035006	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035015	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035026	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035046	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035082	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035076	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035007	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035014	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035027	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035047	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035077	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035078	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035008	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035028	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035033	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035048	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035009	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035012	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035029	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035032	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035049	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035080	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035051	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY

APN	Description of Project	Community Name
3044035011	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035030	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035031	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035050	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035081	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006009	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006030	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006084	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006031	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006052	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006053	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006065	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006083	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006029	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006066	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006032	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006051	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006054	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006063	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006082	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006067	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006011	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006028	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006033	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006055	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006062	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006081	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006068	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006027	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006034	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006049	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006080	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006060	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006069	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006026	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006035	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006048	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006041	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035039	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035035	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035053	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006050	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035018	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035034	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006056	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035069	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035052	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035079	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035017	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035045	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006024	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035013	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006064	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006010	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006012	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006013	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006040	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006085	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006021	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006061	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3242023031	DETACHED GARAGE	ANTELOPE VALLEY
3027014025	DINER	ANTELOPE VALLEY
3041009035	DWELLING & APT TO CHURCH	ANTELOPE VALLEY
3046026006	ELECTRIC USE FOR AGRICULTURE	ANTELOPE VALLEY
3102022024	EXCESSIVE DOMESTIC ANIMAL PERMIT	ANTELOPE VALLEY
3219014056	parking provided.	ANTELOPE VALLEY
3145011906	EXPAND SEWAGE PLANT	ANTELOPE VALLEY
3145040913	EXPAND SEWAGE PLANT	ANTELOPE VALLEY
3145040909	EXPAND SEWAGE PLANT	ANTELOPE VALLEY
3145040921	EXPAND SEWAGE PLANT	ANTELOPE VALLEY
3145040901	EXPAND SEWAGE PLANT	ANTELOPE VALLEY
3145040911	EXPAND SEWAGE PLANT	ANTELOPE VALLEY
3145040903	EXPAND SEWAGE PLANT	ANTELOPE VALLEY
3145040904	EXPAND SEWAGE PLANT	ANTELOPE VALLEY
3145040914	EXPAND SEWAGE PLANT	ANTELOPE VALLEY
3145040912	EXPAND SEWAGE PLANT	ANTELOPE VALLEY
3145040910	EXPAND SEWAGE PLANT	ANTELOPE VALLEY
3145040908	EXPAND SEWAGE PLANT	ANTELOPE VALLEY

APN	Description of Project	Community Name
3145040920	EXPAND SEWAGE PLANT	ANTELOPE VALLEY
3145040906	EXPAND SEWAGE PLANT	ANTELOPE VALLEY
3145040916	EXPAND SEWAGE PLANT	ANTELOPE VALLEY
3145040907	EXPAND SEWAGE PLANT	ANTELOPE VALLEY
3145040919	EXPAND SEWAGE PLANT	ANTELOPE VALLEY
3145040905	EXPAND SEWAGE PLANT	ANTELOPE VALLEY
3145040917	EXPAND SEWAGE PLANT	ANTELOPE VALLEY
3145040918	EXPAND SEWAGE PLANT	ANTELOPE VALLEY
3145040915	EXPAND SEWAGE PLANT	ANTELOPE VALLEY
3116007900	EXPAND SEWAGE PLANT	ANTELOPE VALLEY
3102001060	EXPANSION OF CHURCH (CLASSROOMS, PARKING, ETC.)	ANTELOPE VALLEY
3101016039	EXPANSION OF STORAGE UNIT	ANTELOPE VALLEY
3208019005	FOX FEED STORE	ANTELOPE VALLEY
3102022051	FREESTANDING DBL FACED SIGN	ANTELOPE VALLEY
3103006042	FREESTANDING DBL FACED SIGN	ANTELOPE VALLEY
3103023015	FREESTANDING SINGLE FACES SIGN	ANTELOPE VALLEY
3227031021	FRONT YARD SETBACKS	ANTELOPE VALLEY
3227016034	FRONT YD SETBACKS	ANTELOPE VALLEY
3227030007	FRT SETBACK MODIFICATION	ANTELOPE VALLEY
3103009033	FUELING FACILITY WITH FOOD MAR	ANTELOPE VALLEY
3227017026	GARAGE	ANTELOPE VALLEY
3242021025	GARAGE	ANTELOPE VALLEY
3279018014	GARAGE & UPPER FLR STORAGE	ANTELOPE VALLEY
3110005032	GARAGE CONVERSION	ANTELOPE VALLEY
3153040024	GARAGE FOR PKG PERSONAL AUTOS	ANTELOPE VALLEY
3227029038	GARAGE/HOBBY ROOM	ANTELOPE VALLEY
3049029049	GAS STATION AND LIQUOR STORE	ANTELOPE VALLEY
3049029048	GAS STATION AND LIQUOR STORE	ANTELOPE VALLEY
3208020014	GAZEBO, PATIO COVER & ADDITION	ANTELOPE VALLEY
3056004052	GRADING	ANTELOPE VALLEY
3175003009	GRADING PLAN	ANTELOPE VALLEY
3046001025	GRANNY HOUSE ON 1.0 AC IN A1-10K	ANTELOPE VALLEY
3102025084	GRANNY HOUSE ON 1.25 AC IN R1-7.5K	ANTELOPE VALLEY
3278020025	GRANNY HOUSING	ANTELOPE VALLEY
3046012046	GRANNY UNIT	ANTELOPE VALLEY
3103023028	GUEST HOUSE	ANTELOPE VALLEY
3049002040	GUEST HOUSE & 3-CAR GARAGE	ANTELOPE VALLEY
3209003064	GUEST HOUSE/BED/BATH/LIV RMS	ANTELOPE VALLEY
3027013902	GYM WITH PARKING SHORTFALL	ANTELOPE VALLEY
3027013901	GYM WITH PARKING SHORTFALL	ANTELOPE VALLEY
3027013900	GYM WITH PARKING SHORTFALL	ANTELOPE VALLEY
3217022003	HARDWARE STORE, ETC IN PROPOSED C3-DP	ANTELOPE VALLEY
3217022002	HARDWARE STORE, ETC IN PROPOSED C3-DP	ANTELOPE VALLEY
3056032053	HILLSIDE	ANTELOPE VALLEY
3056033087	HILLSIDE	ANTELOPE VALLEY
3056011040	HILLSIDE	ANTELOPE VALLEY
3056011038	HILLSIDE	ANTELOPE VALLEY
3056011039	HILLSIDE	ANTELOPE VALLEY
3208012109	HILLSIDE MANAGEMENT	ANTELOPE VALLEY
3208008046	HILLSIDE MANAGEMENT FOR TR 46205	ANTELOPE VALLEY
3215003001	HORSE TRAINING CTR	ANTELOPE VALLEY
3080022006	INTERIM MANAGEMENT PLAN (IMP95064)	ANTELOPE VALLEY
3080022002	INTERIM MANAGEMENT PLAN (IMP95064)	ANTELOPE VALLEY
3080021001	INTERIM MANAGEMENT PLAN (IMP95064)	ANTELOPE VALLEY
3220014031		ANTELOPE VALLEY
3209020900	LITTLE LEAGUE FACILITIES ON 7.1 AC IN A2-1	ANTELOPE VALLEY
3102017014	LIVE ENTERTAINMENT	ANTELOPE VALLEY
3086013015	LOG HOUSE	ANTELOPE VALLEY
3228009030	LOT COMBINATION	ANTELOPE VALLEY
3234015036	LOT COMBINATION; SANITATION	ANTELOPE VALLEY
3227010034	LOT CONBINATION	ANTELOPE VALLEY
3227021027	LOT CONBINATION	ANTELOPE VALLEY
3204010075	M/H	ANTELOPE VALLEY
3056014045	MAF HOME & GARAGE	ANTELOPE VALLEY
3061005016	MAINTAIN & EXPAND EXISTING MONASTERY&YOUTH CAMP	ANTELOPE VALLEY
3061005015	MAINTAIN & EXPAND EXISTING MONASTERY&YOUTH CAMP	ANTELOPE VALLEY
3061025010	MAINTAIN & EXPAND EXISTING MONASTERY&YOUTH CAMP	ANTELOPE VALLEY
3061006019	MAINTAIN & EXPAND EXISTING MONASTERY&YOUTH CAMP	ANTELOPE VALLEY
3061024001	MAINTAIN & EXPAND EXISTING MONASTERY&YOUTH CAMP	ANTELOPE VALLEY
3061025017	MAINTAIN & EXPAND EXISTING MONASTERY&YOUTH CAMP	ANTELOPE VALLEY
3060016002	MAINTAIN & EXPAND EXISTING MONASTERY&YOUTH CAMP	ANTELOPE VALLEY
3275019021	MANFG HOME	ANTELOPE VALLEY
3056014044	MANUF HOME W/TWO CAR GARAGE	ANTELOPE VALLEY
3056014048	MANUFACTURED HOME WITH GARAGE	ANTELOPE VALLEY
3227028045	MANUFACTURED HOME/GARAGE	ANTELOPE VALLEY
3227028044	MANUFACTURED HOME/GARAGE	ANTELOPE VALLEY
3234024035	Market, gas station and sale of a full line of alcoholic beverages for off-site consumption in C-2-DP Zone.	ANTELOPE VALLEY
3208011064	MENAGERIE CARETAKER MH IN A2-1 FOR 10 YRS	ANTELOPE VALLEY

APN	Description of Project	Community Name
3102016023	METAL CONTAINERS FOR STORAGE	ANTELOPE VALLEY
3042006009	METAL GAR	ANTELOPE VALLEY
3208004039	MFG HOME	ANTELOPE VALLEY
3242015003	MFG HOME	ANTELOPE VALLEY
3022018022	MFG OF SANDSTONE PRODUCTS	ANTELOPE VALLEY
3233005021	MINOR CP, ADD WIND GENERATOR	ANTELOPE VALLEY
3115002013	MINOR CUP - WIND TURBINE	ANTELOPE VALLEY
3376007014	MINOR WECS'N - 80' TOWER	ANTELOPE VALLEY
3216018038	MOBIL HOME	ANTELOPE VALLEY
3027027051	MOBILE FOOD PREPARATION	ANTELOPE VALLEY
3243027001	MOBILE HOME & CHAPEL	ANTELOPE VALLEY
3216018034	MOBILE HOME DURING CONSTRUCT	ANTELOPE VALLEY
3049014019	MOBILE HOME FOR CARETAKER RESIDENCE	ANTELOPE VALLEY
3056017032	MOBILEHOME DURING CONSTRUCTION	ANTELOPE VALLEY
3056017014	MOBILEHOME DURING CONSTRUCTION	ANTELOPE VALLEY
3037026013	MOBILEHOME DURING CONSTRUCTION	ANTELOPE VALLEY
3036013036	MOBILEHOME DURING CONSTRUCTION	ANTELOPE VALLEY
3036014015	MOBILEHOME DURING CONSTRUCTION	ANTELOPE VALLEY
3152013007	MOBILEHOME DURING CONSTRUCTION	ANTELOPE VALLEY
3038013017	MOBILEHOME DURING CONSTRUCTION	ANTELOPE VALLEY
3366029001	MOBILEHOMES (2) AND RESIDENCES (3) FOR CARETAKERS	ANTELOPE VALLEY
3101017016	NEW SIGNAGE AT GAS STATION	ANTELOPE VALLEY
3027013048	NEW 3500 SQ FT CHURCH BLDG IN A2-1	ANTELOPE VALLEY
3233010016		ANTELOPE VALLEY
3302019017	New fence in and light posts.	ANTELOPE VALLEY
3056031011	NEW HOME	ANTELOPE VALLEY
3056024066	NEW RESIDENCE	ANTELOPE VALLEY
3056024053	NEW RESIDENCE	ANTELOPE VALLEY
3056024067	NEW RESIDENCE	ANTELOPE VALLEY
3027011025	new single family residence with attached two car garage	ANTELOPE VALLEY
3278001017	the new addition shall exceed 23 feet in height	ANTELOPE VALLEY
3219009006	New two story duplex w/ an attached four car carport	ANTELOPE VALLEY
3216012025	NFG HIME & GARAGE	ANTELOPE VALLEY
3227020017	OAK TREE PERMIT TO ENCROACH ON 8 TREES	ANTELOPE VALLEY
3038006001	OFF-SITE DBL-FACED FREESTAND	ANTELOPE VALLEY
3102018009	OFF-SITE FREESTAND DBL-FACED	ANTELOPE VALLEY
3264011023	OFF-SITE SALE OF ALCOHOL FOR MINI-MARKET	ANTELOPE VALLEY
3302021092	ON-SALE BEER TO EXISTING CLUB HOUSE (GOLF COURSE)	ANTELOPE VALLEY
3103007001	ON-SITE ALCOHOL AT RESTAURANT (LICENSE CHANGE)	ANTELOPE VALLEY
3223003027	ORCHARCD & HORSE FARM	ANTELOPE VALLEY
3101016035	PAINT AND BODY REPAIR SHOP	ANTELOPE VALLEY
3278027014	PERMIT FOR EIGHT DOGS IN 6 KENNELS	ANTELOPE VALLEY
3208024033	PLANT NURSERY	ANTELOPE VALLEY
3036014035	OF 16 TREES AND 2 OAK TREES RESPECTIVELY.	ANTELOPE VALLEY
3101017006	POLE	ANTELOPE VALLEY
3101017007	POLE	ANTELOPE VALLEY
3233004025	PRIVATE AIRPORT	ANTELOPE VALLEY
3233004027	PRIVATE AIRPORT	ANTELOPE VALLEY
3103006045	Proposal for two removals (none heritage) and one encroachment (none heritage).	ANTELOPE VALLEY
3175016020	Proposed 415sq. ft. single story addition.	ANTELOPE VALLEY
3145011120	Proposed 449sq. ft single story addition.	ANTELOPE VALLEY
3103010038	Proposing a 188 sq.ft. single story addition	ANTELOPE VALLEY
3042018015	PROPOSING A 464 SQUARE FOOT SINGLE STORY ADDITOIN TO AN EXISTING DUPLEX	ANTELOPE VALLEY
3220014045	Proposing a 728 square foot single story addition to the existing dwelling	ANTELOPE VALLEY
3046028026	Proposing a new single family dwelilng with an attached two car garage and two car carport	ANTELOPE VALLEY
3042005002	Proposing to build a detached dwelling with four car garage underneath	ANTELOPE VALLEY
3208012110	RANCH HOUSE & PATIO	ANTELOPE VALLEY
3227020032	REMDL ESTATE OFF/TAKEOUT PIZZA	ANTELOPE VALLEY
3027015027	REMODEL	ANTELOPE VALLEY
3233017006	fence on the western property line.	ANTELOPE VALLEY
3384001800	REMOVE & REPLACE HVAC UNITS	ANTELOPE VALLEY
2846004010	REMOVE 2 DEAD OAK TREES	ANTELOPE VALLEY
2846016017	REMOVE 3 OAKS	ANTELOPE VALLEY
3227026052	REMOVE 4 OAKS	ANTELOPE VALLEY
3306002940	REQUEST FOR PLOT PLAN APPRVL	ANTELOPE VALLEY
3102018024	RESTAURANT	ANTELOPE VALLEY
3208024021	RESTAURANT	ANTELOPE VALLEY
3027013034	RESTAURANT	ANTELOPE VALLEY
3242005004	RESTAURANT	ANTELOPE VALLEY
3208014102	RETAIL GAME ARCADE & BILLIARDS IN EXISTING RETAIL	ANTELOPE VALLEY
3228017017	RETAIN WALL	ANTELOPE VALLEY
3228006005	RETROACTIVE - THREE REMOVALS	ANTELOPE VALLEY
3227024036	RV STORAGE SHED	ANTELOPE VALLEY
3027015033	SALE OF BEER & WINE FOR OFF-SITE CONSUMPTION	ANTELOPE VALLEY
3027015025	SALE OF BEER & WINE FOR OFF-SITE CONSUMPTION	ANTELOPE VALLEY
3046001040	SALE OF BEER & WINE FOR OFF-SITE CONSUMPTION	ANTELOPE VALLEY
3042019010	SALE OF FULL LIQUOR FOR MINI-MARKET	ANTELOPE VALLEY
3175003001	SANITARY LANDFILL,RECYCLING & HAULING	ANTELOPE VALLEY

APN	Description of Project	Community Name
3056028108	SEA	ANTELOPE VALLEY
3056028107	SEA	ANTELOPE VALLEY
3056018079	SEA	ANTELOPE VALLEY
3056018081	SEA	ANTELOPE VALLEY
3046008042	SECOND DWELLING UNIT FOR SF RESIDENTIAL	ANTELOPE VALLEY
3044027030	SECOND SFR ON LOT	ANTELOPE VALLEY
3101016037	SECOND UNIT	ANTELOPE VALLEY
3220013050	SENIOR CITIZEN RES ON 2.5 AC IN A1-1	ANTELOPE VALLEY
3042026008	SENIOR CITIZEN RESIDENCE MOBILEHOME	ANTELOPE VALLEY
3110008009	SENIOR CITIZEN RESIDENCE ON 1.25 AC	ANTELOPE VALLEY
3220015009	SENIOR CITIZEN'S RESIDENCE	ANTELOPE VALLEY
3101020019	SENIOR CITIZEN'S RESIDENCE	ANTELOPE VALLEY
3260024048	SENIOR CITIZENS' RESIDENCE	ANTELOPE VALLEY
3260024049	SENIOR CITIZENS' RESIDENCE	ANTELOPE VALLEY
3264010033	SERV STA WITH ALCOHOL SALES ON 1.25 AC IN C3	ANTELOPE VALLEY
3227023010	SETBACK	ANTELOPE VALLEY
3234023024	SETBACK	ANTELOPE VALLEY
3227031043	SETBACK	ANTELOPE VALLEY
3227015028	SETBACK AVERAGING	ANTELOPE VALLEY
3102018014	SETBACKS	ANTELOPE VALLEY
3103010026	SETBACKS	ANTELOPE VALLEY
3227009023	SETBACKS	ANTELOPE VALLEY
3227026057	SETBACKS	ANTELOPE VALLEY
3042024018	SEWAGE TREATMENT PLANT	ANTELOPE VALLEY
3042024021	SEWAGE TREATMENT PLANT	ANTELOPE VALLEY
3042024020	SEWAGE TREATMENT PLANT	ANTELOPE VALLEY
3153040013	SF DETACHED POOL HOUSE	ANTELOPE VALLEY
3046011033	SFR	ANTELOPE VALLEY
3027018011	SFR	ANTELOPE VALLEY
3223003025	SFR	ANTELOPE VALLEY
3056024063	SFR	ANTELOPE VALLEY
3208022001	SFR	ANTELOPE VALLEY
3208012096	SFR & GARAGE	ANTELOPE VALLEY
3374011004	SFR AND GUEST HOUSE	ANTELOPE VALLEY
3056005054	SFR- CONVERT TO PERMANENT	ANTELOPE VALLEY
3252012020	SIGN	ANTELOPE VALLEY
3205008006	SINGLE FAMILY RESIDENCE	ANTELOPE VALLEY
3057017055	SINGLE FAMILY HOME	ANTELOPE VALLEY
3056025009	SINGLE FAMILY RES & GARAGE	ANTELOPE VALLEY
3101027029	SINGLE FAMILY RESIDENCE	ANTELOPE VALLEY
3205013033	SINGLE FAMILY RESIDENCE	ANTELOPE VALLEY
3208017032	SINGLE FAMILY RESIDENCE	ANTELOPE VALLEY
3056027064	SINGLE FLY RESIDENCE	ANTELOPE VALLEY
3208012121	SINGLE FLY RESIDENCE	ANTELOPE VALLEY
3216015031	SINGLE FLY RESIDENCE	ANTELOPE VALLEY
3056031023	SINGLE FLY RESIDENCE	ANTELOPE VALLEY
3056006007	SINGLE FLY RESIDENCE	ANTELOPE VALLEY
3216018039	SINGLE FLY RESIDENCE	ANTELOPE VALLEY
3056024032	Single Story Dwelling with a detached 2 car garage on a hillside	ANTELOPE VALLEY
3251013056	SIZZLER RESTAURANT	ANTELOPE VALLEY
3366020003	SRF & HORSE TRAINING FACILITY	ANTELOPE VALLEY
3038002025	STEEL BLDG FOR AUTO REKPAIRS	ANTELOPE VALLEY
3208033083	STEEL BUILDING FOR STORAGE	ANTELOPE VALLEY
3042026002	STORAGE AREA FOR VEHICLES	ANTELOPE VALLEY
3227010035	STORAGE BARN	ANTELOPE VALLEY
3042025020	STORAGE RM & SWIMMING POOL	ANTELOPE VALLEY
3233016021	TEMP MOBILE HOME	ANTELOPE VALLEY
3208004041	TEMP MOBILE HOME F/BLDG CONST	ANTELOPE VALLEY
3047020036	TEMP RESIDENCE	ANTELOPE VALLEY
3042004001	TEMPORARY MOBILE HOME	ANTELOPE VALLEY
3049010021	TEMPORARY PARISH HALL & CLASSROOMS	ANTELOPE VALLEY
2846014015	Temporary use permit for June 4, 2005 and July 24, 2005	ANTELOPE VALLEY
3227010031	THREE O.T. ENCROACHMENTS	ANTELOPE VALLEY
3228004038	THREE OAK TREE ENCROACHMENTS	ANTELOPE VALLEY
3047009015	TO BUILD 50 SFR ON 100.1 AC	ANTELOPE VALLEY
3209001019	TO BUILD SENIOR CITIZEN RESIDENCE	ANTELOPE VALLEY
3227029043	To legalize an existing dog kennel	ANTELOPE VALLEY
3275007002	To legalize an existing dog kennel	ANTELOPE VALLEY
3275007001	To legalize an existing dog kennel	ANTELOPE VALLEY
3042026010	TRAILER	ANTELOPE VALLEY
3042026011	TRAILER	ANTELOPE VALLEY
3204014022	TRAILER DURING CONSTRUCTION	ANTELOPE VALLEY
3279019005	TRAILER DURING CONSTRUCTION	ANTELOPE VALLEY
3228015034	TRAVEL TRAILER DURING CONSTR	ANTELOPE VALLEY
3242006008	TREE FARM	ANTELOPE VALLEY
3102018023	TSIRE STORE	ANTELOPE VALLEY
3101016036	UNMANNED TELECOMMUNICATION FACILITY	ANTELOPE VALLEY
3209001012	WATER FAC & CARETAKER TRAILER ON 3.9 AC IN A2-1	ANTELOPE VALLEY

APN	Description of Project	Community Name
3209003058	WATER STORAGE AND DIST SYSTEMS	ANTELOPE VALLEY
3209003059	WATER STORAGE AND DISTRIBUTION FACILITY	ANTELOPE VALLEY
3209003061	WATER STORAGE AND DISTRIBUTION FACILITY	ANTELOPE VALLEY
3209003060	WATER STORAGE AND DISTRIBUTION FACILITY	ANTELOPE VALLEY
3208007005	WELL	ANTELOPE VALLEY
3310003014	WIND ENERGY CONVERSION SYSTEM - NON COMMERCIAL	ANTELOPE VALLEY
3038004800	WIRELESS COMMUNICATIONS FACILITY	ANTELOPE VALLEY
3150018021	WIRELESS FACILITY	ANTELOPE VALLEY
3275013004	WIRELESS TELECOM FACILITY W/TRANSMISSION EQUIPMEN	ANTELOPE VALLEY
3115010025	WIRELESS TELECOM FACILITY	ANTELOPE VALLEY
3115010024	WIRELESS TELECOM FACILITY	ANTELOPE VALLEY
3102017016	WIRELESS TELECOMMUNICATION FACILITY	ANTELOPE VALLEY
3251014045	WIRELESS TELECOMMUNICATION FACILITY	ANTELOPE VALLEY
3209020064	WORKSHOP	ANTELOPE VALLEY
3061025013	XMAS TREE FARM	ANTELOPE VALLEY
3102023025	YARD MOD & GARAGE	ANTELOPE VALLEY
3103031027	YARD MODIFICATION	ANTELOPE VALLEY
3205011008	ENCROACHMENT OF EXISTING BARN BEING CONVERTED TO SFR	ANTELOPE VALLEY
3227030029	YM TO ACCOMADATE SANITATION	ANTELOPE VALLEY
3049007025	ZC	ANTELOPE VALLEY
7016016013	2-STORY SFR & 2-CAR GARAGE	CERRITOS ISLANDS
7016016061	2-STORY SFR W/ATTACHED GARAGE	CERRITOS ISLANDS
7016016059	2-STORY SFR W/ATTACHED GARAGE	CERRITOS ISLANDS
7016016060	2-STORY SFR W/ATTACHED GARAGE	CERRITOS ISLANDS
7016016045	BUILD 2 STORY HOME	CERRITOS ISLANDS
7016015083	CHURCH & PRESCHOOL IN R2	CERRITOS ISLANDS
7016016053	ONE OAK TREE IN THE RIGHT OF WAY, CONDO CONVERSION	CERRITOS ISLANDS
7016015086	Proposing a single story addition of 351 sq.ft. to the existing dwelling	CERRITOS ISLANDS
7016015120	Proposing a single story addition of 351 sq.ft. to the existing dwelling	CERRITOS ISLANDS
6180018006	1-STORY SFR W/2-CAR GARAGE	EAST RANCHO DOMINGUEZ
6184001044	ADD TO SFR	EAST RANCHO DOMINGUEZ
7302013006	ADD TO SFR & 2-CAR GARAGE	EAST RANCHO DOMINGUEZ
6195018015	ADDITION OF S.F.R.	EAST RANCHO DOMINGUEZ
6181027910	BONUS WITH 10 PERCENT (22 UNITS) SET ASIDE FOR LOWER INCOME HOUSEHOLDS.	EAST RANCHO DOMINGUEZ
6195019037	ADULT DAY CARE FACILITY	EAST RANCHO DOMINGUEZ
6180013001	BILLBOARD	EAST RANCHO DOMINGUEZ
6185010049	BILLBOARD SIGN	EAST RANCHO DOMINGUEZ
6180015018	CAR REPAIR SHOP,OFF & R/ROOM	EAST RANCHO DOMINGUEZ
6181023023	CNVERT 2 APTS TO 4 APTS	EAST RANCHO DOMINGUEZ
6180018002	CNVERT CHURCH TO RETAIL STORE	EAST RANCHO DOMINGUEZ
6185010045	COMMERCIAL BLDG	EAST RANCHO DOMINGUEZ
6195018022	CONDO CONVERSION OF 11 UNITS IN 5 BUILDINGS ON 0.38 GROSS ACRES.	EAST RANCHO DOMINGUEZ
6180010006	CONSTRUCT A DUPLEX IN A C-3 ZONE (RESIDENTIAL)	EAST RANCHO DOMINGUEZ
6185010063	CONTINUE EXISTING DUPLEXES IN COMMERCIAL ZONE	EAST RANCHO DOMINGUEZ
6180024007	DEV PROG	EAST RANCHO DOMINGUEZ
6180024013	DEV PROG	EAST RANCHO DOMINGUEZ
6180024012	DEV PROG	EAST RANCHO DOMINGUEZ
6180014002	ILUMINATED CHANNEL LETTER SIGN	EAST RANCHO DOMINGUEZ
6180014001	ILUMINATED CHANNEL LETTER SIGN	EAST RANCHO DOMINGUEZ
6181026024	LIVE POULTRY DEALER	EAST RANCHO DOMINGUEZ
6180005024	MINIMALL W/2 FD	EAST RANCHO DOMINGUEZ
6180004025	New 3,300 square foot two story dwelling	EAST RANCHO DOMINGUEZ
6181032029	New SFR with attached two car carport	EAST RANCHO DOMINGUEZ
6180004014	OFC SPACE	EAST RANCHO DOMINGUEZ
6180016010	OFFICE BLDG	EAST RANCHO DOMINGUEZ
6181027909	OFFICE BLDG IN M1 ON 2.6 AC	EAST RANCHO DOMINGUEZ
6181025019	one story sfr with 2-car garage	EAST RANCHO DOMINGUEZ
6181023003	PARKING PERMIT FOR REDUCED/TANDEM PARKING	EAST RANCHO DOMINGUEZ
6181022003	GROSS ACRES.	EAST RANCHO DOMINGUEZ
6181022002	GROSS ACRES.	EAST RANCHO DOMINGUEZ
6181027906	PROPOSED 58,000 SQ.FT. LIGHT INDUSTRIAL BLDG.	EAST RANCHO DOMINGUEZ
6181027907	PROPOSED 58,000 SQ.FT. LIGHT INDUSTRIAL BLDG.	EAST RANCHO DOMINGUEZ
6181027911	PROPOSED 58,000 SQ.FT. LIGHT INDUSTRIAL BLDG.	EAST RANCHO DOMINGUEZ
6185006035	Proposed 772 sq. ft. single story addition.	EAST RANCHO DOMINGUEZ
6195001016	Proposed 87.5 sq. ft single story addition (to be legalize).	EAST RANCHO DOMINGUEZ
6181026015	Proposed tenant improvement of an existing retail space 3600 into two 1800 square foot spaces.	EAST RANCHO DOMINGUEZ
6180022044	yard setback along the North side and 3'-6" along the South side (lot width is 32'; side setbacks are 10% of the	EAST RANCHO DOMINGUEZ
6185010054	RENEWING RCUP 96025, Renewal of Existing WTF	EAST RANCHO DOMINGUEZ
6181023034	RESIDENTIAL IN C2 ZONE/UNCOVERED PARKING	EAST RANCHO DOMINGUEZ
6180016005	RETAIL STORE	EAST RANCHO DOMINGUEZ
7302005015	ROOMS & BATHROOM ADDITION	EAST RANCHO DOMINGUEZ
7301019016	SECOND UNIT ADDT. + 4 CAR CP	EAST RANCHO DOMINGUEZ
6180005008	SIGN REVIEW	EAST RANCHO DOMINGUEZ
6185015015	TO OPEN A TIRE SHOP	EAST RANCHO DOMINGUEZ
6185015025	TO OPEN A TIRE SHOP	EAST RANCHO DOMINGUEZ
6180001031	2.3 TO RD 3.1	EAST RANCHO DOMINGUEZ
6180001032	2.3 TO RD 3.1	EAST RANCHO DOMINGUEZ
6180001035	2.3 TO RD 3.1	EAST RANCHO DOMINGUEZ

APN	Description of Project	Community Name
6180001037	2.3 TO RD 3.1	EAST RANCHO DOMINGUEZ
6180001039	2.3 TO RD 3.1	EAST RANCHO DOMINGUEZ
6180001038	2.3 TO RD 3.1	EAST RANCHO DOMINGUEZ
6180001036	2.3 TO RD 3.1	EAST RANCHO DOMINGUEZ
6180001040	2.3 TO RD 3.1	EAST RANCHO DOMINGUEZ
6180001033	2.3 TO RD 3.1	EAST RANCHO DOMINGUEZ
6180001034	2.3 TO RD 3.1	EAST RANCHO DOMINGUEZ
6180003019	WIRELESS TELECOMMUNICATIONS FACILITY	EAST RANCHO DOMINGUEZ
2526017014	10 FT FRONT YARD SETBACKS	KAGEL CANYON
2526001077	1-STORY SFR	KAGEL CANYON
2526025012	ADD CLUBHOUSE FOR COMM KITCHEN	KAGEL CANYON
2526020022	SETBACK	KAGEL CANYON
2526014044	Single Story Dwelling with a detached 2 car garage on a hillside	KAGEL CANYON
4201003902	[illegible]	LADERA HEIGHTS / VIEWPARK - WINDSOR HILLS
5009005903	[illegible]	LADERA HEIGHTS / VIEWPARK - WINDSOR HILLS
5009006009	[illegible]	LADERA HEIGHTS / VIEWPARK - WINDSOR HILLS
5009006271	[illegible]	LADERA HEIGHTS / VIEWPARK - WINDSOR HILLS
7185019020	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019036	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019037	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019038	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019039	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019040	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019041	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019042	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019044	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019045	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019046	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019047	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019048	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019049	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019050	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019051	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019052	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019053	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019054	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019055	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019056	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019057	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019058	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019059	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019060	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019061	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019062	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019063	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019064	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019065	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019066	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019067	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019068	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019069	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019070	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019071	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019072	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019073	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019074	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019075	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019076	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019077	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019078	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019079	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019080	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019081	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019082	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019083	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019084	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019043	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019017	MULTIFAMILY RESIDENTIAL USE IN C-1 ZONE	LONG BEACH ISLAND
2846002014	PAINT BOOTH	LOPEZ CANYON
4456010022	(TN) 10 SF & 1 OS LOTS ON 85.0 AC	MALIBU COASTAL ZONE
4455016902	(TN) 47 SF & 3 OS LOTS ON 272 AC IN A1-1	MALIBU COASTAL ZONE
4445006032	2 STORY ADDITION	MALIBU COASTAL ZONE
4455019016	2 STORY SFR / W 4 CAR GARAGE	MALIBU COASTAL ZONE
4452027011	2ND FLR ADDITION	MALIBU COASTAL ZONE
4456039007	2-STORY SINGLE FLY RESIDENCE	MALIBU COASTAL ZONE
4445008802	above ground storage tank-4,000 gallons	MALIBU COASTAL ZONE
4455042007	ADD OF MASTER BEDROOM	MALIBU COASTAL ZONE
4438020048	ADDITION & REMODEL	MALIBU COASTAL ZONE

APN	Description of Project	Community Name
4438029010	ADDITION TO EXISTING SFR	MALIBU COASTAL ZONE
4455039004	ADDITION TO SFR	MALIBU COASTAL ZONE
4440006004	ALLOW ENCROACHMENT OF 18 OAK TREES	MALIBU COASTAL ZONE
4438027009	BRIDGE	MALIBU COASTAL ZONE
4445024007	CONT RES,CAMP,CABINS & OFF/MKT I4	MALIBU COASTAL ZONE
4440006005	CONTINUE EXISTING OUTDOOR THEATRE	MALIBU COASTAL ZONE
4440013026	CONVT GRGE LIV RM & STAIRCASE	MALIBU COASTAL ZONE
4440028008	FIRE REPAIR	MALIBU COASTAL ZONE
4455028044	FOR PRIVATE EQUESTRIAN USE	MALIBU COASTAL ZONE
4438008036	FRONT SETBACKS	MALIBU COASTAL ZONE
4456005003	FRONT YD SETBACK	MALIBU COASTAL ZONE
4438025037	GROUTED RIP-RAP, FENCE, ETC	MALIBU COASTAL ZONE
4456004004	HORSE STABLE	MALIBU COASTAL ZONE
4456005004	HORSE STABLE	MALIBU COASTAL ZONE
4456021016	IMPRV FOUNDATION STORAGE AREA	MALIBU COASTAL ZONE
4438008032	INSTAL SWIMMING POOL & SPA	MALIBU COASTAL ZONE
4444025023	LOT TIE	MALIBU COASTAL ZONE
4444026026	LOT TIE	MALIBU COASTAL ZONE
4452027023	MEDIA ROOM ADDITION	MALIBU COASTAL ZONE
4448002900	MOTEL IN C2 ON 47.5 AC	MALIBU COASTAL ZONE
4456039006	NEW 2-STORY RESIDENCE	MALIBU COASTAL ZONE
4456031035	NEW SFR	MALIBU COASTAL ZONE
4445030005	new three car garage, single car carport and a laundry room.	MALIBU COASTAL ZONE
4461031026	OAK TREE PERMIT TO ENCROACH ON FOUR OAK TREES	MALIBU COASTAL ZONE
4445028015	ON SITE SALE OF ALCOHOLIC BEVERAGES	MALIBU COASTAL ZONE
4448029020	ONE OAK REMOVED; THREE ENCROACHMENTS	MALIBU COASTAL ZONE
4438031021	POWER POLE	MALIBU COASTAL ZONE
4443001002	REMODEL EXISTING RESTAURANT	MALIBU COASTAL ZONE
4438002029	REMOVE 1 TREE AND 2 ENCROACHMENTS	MALIBU COASTAL ZONE
4462031007	REMOVE 5+ OAK TREES IN A1-1	MALIBU COASTAL ZONE
4438009044	RENEWAL OF EXPIRED RCUP 96136 (PROJECT 96136) AND ADDING 1 NEW CABINET	MALIBU COASTAL ZONE
4438007010	REPAIRS TO STORM DAMAGED BLDG	MALIBU COASTAL ZONE
4438023008	RESIDENTIAL CONSISTENCY	MALIBU COASTAL ZONE
4445006023	REVIEW FOR PARKING	MALIBU COASTAL ZONE
4440028007	SALE OF BEER & WINE IN RESTAURANT	MALIBU COASTAL ZONE
4438031022	SECOND RES UNIT ON 8.4 AC IN A1-1	MALIBU COASTAL ZONE
4456012022	SEVERAL ENCROACHMENTS; NO REMOVALS	MALIBU COASTAL ZONE
4440017028	SFR	MALIBU COASTAL ZONE
4440017029	SFR	MALIBU COASTAL ZONE
4438012007	SFR	MALIBU COASTAL ZONE
4461015038	SFR	MALIBU COASTAL ZONE
4461015009	SFR	MALIBU COASTAL ZONE
4461015026	SFR	MALIBU COASTAL ZONE
4461015032	SFR	MALIBU COASTAL ZONE
4461015030	SFR	MALIBU COASTAL ZONE
4438023004	SFR	MALIBU COASTAL ZONE
4462004019	SURFACE MINING PERMIT	MALIBU COASTAL ZONE
4456015007	swimming pool addition	MALIBU COASTAL ZONE
4452012028	TALL WALL	MALIBU COASTAL ZONE
4455028093	THREE CARETAKERS' MOBILEHOMES	MALIBU COASTAL ZONE
4445028013	TO ENCROACH WITHIN THE PROTECTED ZONE OF TWO OAK TREES.	MALIBU COASTAL ZONE
4445008900	TWO OAK TREE REMOVALS - NEW PUBLIC LIBRARY	MALIBU COASTAL ZONE
4452027019	WALL	MALIBU COASTAL ZONE
4473001900	wireless	MALIBU COASTAL ZONE
4444023901	WIRELESS "MICROCELL" FACILITY	MALIBU COASTAL ZONE
4224005910	ADD LIVE ENTERTAINMENT TO EXIST COCKTAIL LOUNGE	MARINA DEL REY
4224003901	BONUS WITH 10 PERCENT (22 UNITS) SET ASIDE FOR LOWER INCOME HOUSEHOLDS.	MARINA DEL REY
4224006900	CDP TO INSTALL NEW SLUICE GATES & REPAIR FLAP GATE	MARINA DEL REY
4224006904	CHARTER SERVICE FOR BOATS	MARINA DEL REY
4224006913	CHARTER SERVICE FOR BOATS	MARINA DEL REY
4224006905	CHARTER SERVICE FOR BOATS	MARINA DEL REY
4224005906	DEMOLISH/REBUILD 2 ONE-STORY COMMERCIAL STRUCTURES	MARINA DEL REY
4224003900	LESS THAN REQUIRED PARKING	MARINA DEL REY
4224006915	ON-SITE SALE OF ALCOHOLIC BEVERAGES IN RESTAURANT	MARINA DEL REY
4224002900	Prposed a new two story dwelling attached to the existing dwelling	MARINA DEL REY
4224006911	FOR ON-SITE CONSUMPTION AT 4215 ADMIRALTY WAY, MARINA DEL REY	MARINA DEL REY
4224006907	Temporary use permit for June 4, 2005 and July 24, 2005	MARINA DEL REY
4224005903	del Rey Specific Plan area, in the Playa del Rey Zoned District. (Neg Dec)	MARINA DEL REY
8124030016	RM ADD	NORTH WHITTIER
7306014007	2 ABOVE GROUND DIESEL TANKS	RANCHO DOMINGUEZ
7306019100	4 Industrial Lots/3.85 Acres	RANCHO DOMINGUEZ
7306019098	4 Industrial Lots/3.85 Acres	RANCHO DOMINGUEZ
7306019099	4 Industrial Lots/3.85 Acres	RANCHO DOMINGUEZ
7306019097	4 Industrial Lots/3.85 Acres	RANCHO DOMINGUEZ
7306002064	60 FOOT MONOPOLE DESIGNED AS A LIGHT STANDARD	RANCHO DOMINGUEZ
7306019086	ADD OF EMPLOYEES LUNCH ROOM	RANCHO DOMINGUEZ
7318007065	ALLOW OPERATION OF PAPER RECYCLING FACILITY IN M-2	RANCHO DOMINGUEZ
7306017001	CELLULAR TELEPHONE FACILITY	RANCHO DOMINGUEZ

APN	Description of Project	Community Name
7306019095	CONSTRUCTION & OPERATION/UNMANNED COMMNCTNS FAC.	RANCHO DOMINGUEZ
7306021033	CONTINUED OPERATION OF WIRELESS TELECOMM. FACILITY	RANCHO DOMINGUEZ
7306019056	EXP CARDBOARD BOX PLANT/OFFICE	RANCHO DOMINGUEZ
7306004024	FREESTANDING SIGN	RANCHO DOMINGUEZ
7306014046	LESS THAN REQD PKG FOR IND/WAREHSE ON 2.7 AC IN M2	RANCHO DOMINGUEZ
7306019910	LESS THAN REQUIRED PARKING	RANCHO DOMINGUEZ
7306014057	METAL RECYCLING PLANT IN PROPOSED M2-DP	RANCHO DOMINGUEZ
7306014056	METAL RECYCLING PLANT IN PROPOSED M2-DP	RANCHO DOMINGUEZ
7306018045	NEW RAISED CONC. DOCK	RANCHO DOMINGUEZ
7306013027	Non-illuminated sign of 120 SQ FT	RANCHO DOMINGUEZ
7306018031	OFC	RANCHO DOMINGUEZ
7306003054	OFF SITE PARKING	RANCHO DOMINGUEZ
7306017012	OIL STORAGE & SHIPPING FACILITY IN M-2	RANCHO DOMINGUEZ
7306018032	PARKING PERMIT	RANCHO DOMINGUEZ
7318008023	Proposing a 195 square foot single story addition	RANCHO DOMINGUEZ
7318007063	RECONFIGURATION OF PARKING LOT	RANCHO DOMINGUEZ
7306004031	REDUCE LANDSCAPING	RANCHO DOMINGUEZ
7306014061	SIGN	RANCHO DOMINGUEZ
7306018039	UNMANNED TELECOMMUNICATIONS FACILITY	RANCHO DOMINGUEZ
7318011810	UNMANNED WIRELESS FACILITY/50 FOOT TALL MONOPALM	RANCHO DOMINGUEZ
7306013037	WALL OPENINGS & LOADING PITS	RANCHO DOMINGUEZ
7318023041	WAREHOUSE	RANCHO DOMINGUEZ
7318023020	WAREHOUSE	RANCHO DOMINGUEZ
7306014009	WAREHOUSE	RANCHO DOMINGUEZ
2812005032	(RA) 38 SF LOTS ON 41.42 AC IN A2-1	SANTA CLARITA VALLEY
2812005033	(RA) 38 SF LOTS ON 41.42 AC IN A2-1	SANTA CLARITA VALLEY
2813013017	(RA) 55 SF LOTS ON 80 ACRES	SANTA CLARITA VALLEY
2813014001	(RA) 55 SF LOTS ON 80 ACRES	SANTA CLARITA VALLEY
2813027036	(RA) 55 SF LOTS ON 80 ACRES	SANTA CLARITA VALLEY
2813027035	(RA) 55 SF LOTS ON 80 ACRES	SANTA CLARITA VALLEY
2866022013	(RV) 158 SF LOTS ON 30.25 AC 1 OS & 2 PF LOTS	SANTA CLARITA VALLEY
2866022034	(RV) 158 SF LOTS ON 30.25 AC 1 OS & 2 PF LOTS	SANTA CLARITA VALLEY
2866022035	(RV) 158 SF LOTS ON 30.25 AC 1 OS & 2 PF LOTS	SANTA CLARITA VALLEY
2866022049	(RV) 158 SF LOTS ON 30.25 AC 1 OS & 2 PF LOTS	SANTA CLARITA VALLEY
2826038042	(RV) 240 SF 10 OS & 3 C LOTS ON 213 AC IN RPD1-1.4	SANTA CLARITA VALLEY
2826038043	(RV) 240 SF 10 OS & 3 C LOTS ON 213 AC IN RPD1-1.4	SANTA CLARITA VALLEY
2865036033	(TN) 2 C LOTS ON 14.4 AC - MAJOR LAND	SANTA CLARITA VALLEY
3231022003	(TN) 2 SF LOTS ON 0.49 ACRE IN A1-10K	SANTA CLARITA VALLEY
3244022034	(TN) 2 SF LOTS ON 11.87 AC	SANTA CLARITA VALLEY
3247042032	(TN) 2 SF LOTS ON 12.55 AC IN A2-2	SANTA CLARITA VALLEY
2865018900	(TN) 2 SF LOTS ON 2 ACRES	SANTA CLARITA VALLEY
3244083007	(TN) 2 SF LOTS ON 20.7 AC	SANTA CLARITA VALLEY
3244083002	(TN) 2 SF LOTS ON 20.7 AC	SANTA CLARITA VALLEY
3244083015	(TN) 2 SF LOTS ON 20.7 AC	SANTA CLARITA VALLEY
3244083005	(TN) 2 SF LOTS ON 20.7 AC	SANTA CLARITA VALLEY
3244083004	(TN) 2 SF LOTS ON 20.7 AC	SANTA CLARITA VALLEY
3231004034	(TN) 2 SF LOTS ON 6.22 ACRES IN A1-1	SANTA CLARITA VALLEY
3231004033	(TN) 2 SF LOTS ON 6.22 ACRES IN A1-1	SANTA CLARITA VALLEY
3247032048	(TN) 209SF, 1GOLF, 2 OS, 2 ST) LOTS/432 ACRES	SANTA CLARITA VALLEY
3247032047	(TN) 209SF, 1GOLF, 2 OS, 2 ST) LOTS/432 ACRES	SANTA CLARITA VALLEY
3247032035	(TN) 209SF, 1GOLF, 2 OS, 2 ST) LOTS/432 ACRES	SANTA CLARITA VALLEY
2826020032	(TN) 280 SF, 1 PARK ON 262.78 AC (ACTIVE FILE)	SANTA CLARITA VALLEY
2826020020	(TN) 280 SF, 1 PARK ON 262.78 AC (ACTIVE FILE)	SANTA CLARITA VALLEY
3247048006	(TN) 4 SF LOTS ON 10.0 AC	SANTA CLARITA VALLEY
3247048005	(TN) 4 SF LOTS ON 10.0 AC	SANTA CLARITA VALLEY
2865015007	(TN) 4 SF LOTS/1.1 AC	SANTA CLARITA VALLEY
3210009008	(WECS-N) WIND TOWER	SANTA CLARITA VALLEY
3231004043	`SETBACKS NORTH & SOUTH P/LINE	SANTA CLARITA VALLEY
2865015047	RD AND FERGUSON RD	SANTA CLARITA VALLEY
2865015048	RD AND FERGUSON RD	SANTA CLARITA VALLEY
2865015049	RD AND FERGUSON RD	SANTA CLARITA VALLEY
2865015050	RD AND FERGUSON RD	SANTA CLARITA VALLEY
2865015051	RD AND FERGUSON RD	SANTA CLARITA VALLEY
2865015052	RD AND FERGUSON RD	SANTA CLARITA VALLEY
2865015053	RD AND FERGUSON RD	SANTA CLARITA VALLEY
2865015054	RD AND FERGUSON RD	SANTA CLARITA VALLEY
2865015055	RD AND FERGUSON RD	SANTA CLARITA VALLEY
2865015056	RD AND FERGUSON RD	SANTA CLARITA VALLEY
2865015057	RD AND FERGUSON RD	SANTA CLARITA VALLEY
2865015058	RD AND FERGUSON RD	SANTA CLARITA VALLEY
2865015059	RD AND FERGUSON RD	SANTA CLARITA VALLEY
2865015060	RD AND FERGUSON RD	SANTA CLARITA VALLEY
2865015061	RD AND FERGUSON RD	SANTA CLARITA VALLEY
2865015062	RD AND FERGUSON RD	SANTA CLARITA VALLEY
2865015063	RD AND FERGUSON RD	SANTA CLARITA VALLEY
2865015064	RD AND FERGUSON RD	SANTA CLARITA VALLEY
2813024014	1 SF LOT ON 17.65 AC IN RR, C3 & A1-1	SANTA CLARITA VALLEY
2813012005	2). A 441 sq. ft. one story detached garage. Garage shall not exceed an elevation of 15ft.	SANTA CLARITA VALLEY

APN	Description of Project	Community Name
2813017024	CYN RD APPROXIMATELY ONE MILE WEST OF SIERRA HIGHWAY	SANTA CLARITA VALLEY
2813013028	100-BED GRP HOME/DEVELOPMENTALLY DISABLED	SANTA CLARITA VALLEY
2865093005	114 DETACHED SFR CONDOMINIUMS	SANTA CLARITA VALLEY
2840004021	1225# OFFICE	SANTA CLARITA VALLEY
2865036034	150 SENIOR APARTMENTS IN C-3-DP ZONE	SANTA CLARITA VALLEY
3210011017	151 SITES	SANTA CLARITA VALLEY
3247049011	1-STORY SFR W/ATTACHED GARAGE	SANTA CLARITA VALLEY
3247026061	2 CAR GARAGE WITH BATH	SANTA CLARITA VALLEY
3231006003	2 RACCOONS 2 OPOSSUMS & 2 DEER	SANTA CLARITA VALLEY
3270013067	20' FRT SETBACK	SANTA CLARITA VALLEY
3244019007	applicant is requesting a zone change, cup density bonus, plan amendment, and condos	SANTA CLARITA VALLEY
2812010002	2500 DU (1298 SFR, 1202 MFR IN HM, RPD)	SANTA CLARITA VALLEY
2812010001	2500 DU (1298 SFR, 1202 MFR IN HM, RPD)	SANTA CLARITA VALLEY
3244030005	2-LOT LLA	SANTA CLARITA VALLEY
2866004910	3,000,000 SQ FT INDUSTRIAL ON 238 NET AC IN MPD	SANTA CLARITA VALLEY
2866004905	3,000,000 SQ FT INDUSTRIAL ON 238 NET AC IN MPD	SANTA CLARITA VALLEY
2866004906	3,000,000 SQ FT INDUSTRIAL ON 238 NET AC IN MPD	SANTA CLARITA VALLEY
2866004909	3,000,000 SQ FT INDUSTRIAL ON 238 NET AC IN MPD	SANTA CLARITA VALLEY
2865021902	3,000,000 SQ FT INDUSTRIAL ON 238 NET AC IN MPD	SANTA CLARITA VALLEY
3270016050	4-BED ROOM SINGLE FAMILY RES	SANTA CLARITA VALLEY
3247033036	6 FT HIGH WALL IN FRONT YARD	SANTA CLARITA VALLEY
2813024004	7 SF LOTS/139.7 ac & 1 remainder parcel (8.23 ac)	SANTA CLARITA VALLEY
2813024007	7 SF LOTS/139.7 ac & 1 remainder parcel (8.23 ac)	SANTA CLARITA VALLEY
2853002001	7 SF LOTS/139.7 ac & 1 remainder parcel (8.23 ac)	SANTA CLARITA VALLEY
2853001007	7 SF LOTS/139.7 ac & 1 remainder parcel (8.23 ac)	SANTA CLARITA VALLEY
2853006006	7 SF LOTS/139.7 ac & 1 remainder parcel (8.23 ac)	SANTA CLARITA VALLEY
2853001007	84 total l ots; 75 single family lots	SANTA CLARITA VALLEY
2853002001	84 total l ots; 75 single family lots	SANTA CLARITA VALLEY
2865008044	ADD TO COMMERCIAL BLDG	SANTA CLARITA VALLEY
3213009053	ADD OF 2ND FLOOR TO SFR	SANTA CLARITA VALLEY
2865008048	ADD TO DRIVE THRU RESTAURANT	SANTA CLARITA VALLEY
3213007034	ADD TO SFR & SERVANT QTRS	SANTA CLARITA VALLEY
3247030100	ADDITIONS TO RESIDENCE	SANTA CLARITA VALLEY
3247050013	ADDL OF GUEST HOUSE	SANTA CLARITA VALLEY
2853002003	ADULT RESID FAC FOR 15 ON 4.5 AC IN C3	SANTA CLARITA VALLEY
2841015010	1). A 592 sq. ft. one story addition to the existing single family residence. 2). Conver the existing 440 sq. ft. attached garage into living area. 3). New 360 sq. ft. attached carport. 4). Setbacks: Interior Siide Yard is 5.5ft., St	SANTA CLARITA VALLEY
2865012010	AUTO SERVICE/SALES OF NEW CARS, REST & COMM RETAIL	SANTA CLARITA VALLEY
2865012007	AUTO SERVICE/SALES OF NEW CARS, REST & COMM RETAIL	SANTA CLARITA VALLEY
2865012011	AUTO SERVICE/SALES OF NEW CARS, REST & COMM RETAIL	SANTA CLARITA VALLEY
2865012008	AUTO SERVICE/SALES OF NEW CARS, REST & COMM RETAIL	SANTA CLARITA VALLEY
2812005040	BARN	SANTA CLARITA VALLEY
3247037049	BARN	SANTA CLARITA VALLEY
3231018002	BEER & WINE TO EXISTING RESTAURANT	SANTA CLARITA VALLEY
2865036029	BEER AND WINE SALE	SANTA CLARITA VALLEY
2853002008	BEER/WINE AT EXISTING RESTAURANT	SANTA CLARITA VALLEY
3231012003	BLDG SITE, WHOLESALE ROOFING	SANTA CLARITA VALLEY
2865014053	BUILD 750' GARAGE	SANTA CLARITA VALLEY
2865021019	C.U.P. TO INSTALL A 40' MONOPOLE & CELLULAR SITE	SANTA CLARITA VALLEY
3213006016	CARETAKER TRAILER RESIDENCE	SANTA CLARITA VALLEY
3212017040	CARETAKERS RESIDENCE ON 23.42 AC IN RR-1	SANTA CLARITA VALLEY
2866002050	CHILDREN FACILITY & RETAILSTOR	SANTA CLARITA VALLEY
2866005806	CHILDREN FACILITY & RETAILSTOR	SANTA CLARITA VALLEY
2866002053	CHILDREN FACILITY & RETAILSTOR	SANTA CLARITA VALLEY
2865018040	CHURCH FACILITY INCLUDING DAY CARE	SANTA CLARITA VALLEY
2813008012	CHURCH W/RELATED FACILITIES	SANTA CLARITA VALLEY
3270008038	CLASS ROOM PROJECT	SANTA CLARITA VALLEY
3270008042	CLINIC	SANTA CLARITA VALLEY
3270002057	COMM BLDG	SANTA CLARITA VALLEY
3270020004	COMM BLDG- EXPRESSO BAR	SANTA CLARITA VALLEY
2812006900	COMMERCIAL COACH CLASSROOM	SANTA CLARITA VALLEY
2865016041	COMMERCIAL SERVICE/RETAIL BUSINESS	SANTA CLARITA VALLEY
2865016031	COMMERCIAL SERVICE/RETAIL BUSINESS	SANTA CLARITA VALLEY
2865016028	COMMERCIAL SERVICE/RETAIL BUSINESS	SANTA CLARITA VALLEY
2865016030	COMMERCIAL SERVICE/RETAIL BUSINESS	SANTA CLARITA VALLEY
2865016026	COMMERCIAL SERVICE/RETAIL BUSINESS	SANTA CLARITA VALLEY
3271030081	CONCEPTUAL PLAN IND PARK IN M1.5-DP & C3-DP & GRAD	SANTA CLARITA VALLEY
3271030076	CONCEPTUAL PLAN IND PARK IN M1.5-DP & C3-DP & GRAD	SANTA CLARITA VALLEY
3271030072	CONCEPTUAL PLAN IND PARK IN M1.5-DP & C3-DP & GRAD	SANTA CLARITA VALLEY
3271030074	CONCEPTUAL PLAN IND PARK IN M1.5-DP & C3-DP & GRAD	SANTA CLARITA VALLEY
3271030088	CONCEPTUAL PLAN IND PARK IN M1.5-DP & C3-DP & GRAD	SANTA CLARITA VALLEY
3271030073	CONCEPTUAL PLAN IND PARK IN M1.5-DP & C3-DP & GRAD	SANTA CLARITA VALLEY
3271030075	CONCEPTUAL PLAN IND PARK IN M1.5-DP & C3-DP & GRAD	SANTA CLARITA VALLEY
3271030077	CONCEPTUAL PLAN IND PARK IN M1.5-DP & C3-DP & GRAD	SANTA CLARITA VALLEY
3271030078	CONCEPTUAL PLAN IND PARK IN M1.5-DP & C3-DP & GRAD	SANTA CLARITA VALLEY
3271030079	CONCEPTUAL PLAN IND PARK IN M1.5-DP & C3-DP & GRAD	SANTA CLARITA VALLEY
3271030080	CONCEPTUAL PLAN IND PARK IN M1.5-DP & C3-DP & GRAD	SANTA CLARITA VALLEY

APN	Description of Project	Community Name
3271030083	CONCEPTUAL PLAN IND PARK IN M1.5-DP & C3-DP & GRAD	SANTA CLARITA VALLEY
3271030090	CONCEPTUAL PLAN IND PARK IN M1.5-DP & C3-DP & GRAD	SANTA CLARITA VALLEY
3271030082	CONCEPTUAL PLAN IND PARK IN M1.5-DP & C3-DP & GRAD	SANTA CLARITA VALLEY
3271030089	CONCEPTUAL PLAN IND PARK IN M1.5-DP & C3-DP & GRAD	SANTA CLARITA VALLEY
3271030087	CONCEPTUAL PLAN IND PARK IN M1.5-DP & C3-DP & GRAD	SANTA CLARITA VALLEY
2866002060	CONCEPTUAL PLAN IND PARK IN M1.5-DP & C3-DP & GRAD	SANTA CLARITA VALLEY
2865012916	CONST OF CASTIC SPORTS COMPLEX	SANTA CLARITA VALLEY
3213021017	CONST. OF HANGAR BUILDING TO EXISTING AIRPARK	SANTA CLARITA VALLEY
2813013022	CONT EXIST CARETAKER'S MOBILEHOME IN C3	SANTA CLARITA VALLEY
2848011013	CONT EXPLOSIVE MANUFACTURING	SANTA CLARITA VALLEY
3210017040	CONTINUE EXISTING TRAILER & RV PARK	SANTA CLARITA VALLEY
3214022012	CONTINUE THEATER	SANTA CLARITA VALLEY
3210011019	CONTINUED OPERATION OF RECREATIONAL TRAILER PARK	SANTA CLARITA VALLEY
3247030073	CONVERT EXIST RESIDENCE TO SECOND UNIT	SANTA CLARITA VALLEY
2826022035	PROGRAM ZONING, RESIDENTIAL USE IN A COMMERCIAL ZONE, AND ONSITE PROJECT GRADING	SANTA CLARITA VALLEY
2826023014	PROGRAM ZONING, RESIDENTIAL USE IN A COMMERCIAL ZONE, AND ONSITE PROJECT GRADING	SANTA CLARITA VALLEY
2826022026	PROGRAM ZONING, RESIDENTIAL USE IN A COMMERCIAL ZONE, AND ONSITE PROJECT GRADING	SANTA CLARITA VALLEY
2826022027	PROGRAM ZONING, RESIDENTIAL USE IN A COMMERCIAL ZONE, AND ONSITE PROJECT GRADING	SANTA CLARITA VALLEY
3231011002	CONTROLLED DEVELOPMENT AND RPD ZONE.	SANTA CLARITA VALLEY
3271007051	DECREASE 20' TO 10'	SANTA CLARITA VALLEY
3214017032	demolishing a garage and adding on to the existing sfr	SANTA CLARITA VALLEY
3214017031	demolishing a garage and adding on to the existing sfr	SANTA CLARITA VALLEY
3214017030	demolishing a garage and adding on to the existing sfr	SANTA CLARITA VALLEY
3214017033	demolishing a garage and adding on to the existing sfr	SANTA CLARITA VALLEY
3270021900	DEPARTMENT OF PUBLIC WORK	SANTA CLARITA VALLEY
2844037009	DEVELOPMENT PROGRAM	SANTA CLARITA VALLEY
3247037054	ELECTRIC METER	SANTA CLARITA VALLEY
2840004037	ELEVEN TREES FOR ENCROACHMENT	SANTA CLARITA VALLEY
3272028017	ENCROACH & TRIM ONE OAK	SANTA CLARITA VALLEY
2848013018	ENCROACH 4 OAKS	SANTA CLARITA VALLEY
3209010034	EXPAND EXISTING RV PARK IN A2-5, RR & C3	SANTA CLARITA VALLEY
2826003015	EXPAND TENT CAMPGRND/CONTINUE TRAVEL TRAILER/MRKT/	SANTA CLARITA VALLEY
3247033016	EXSITING 113-SPACE IMOBILEHOME PARK	SANTA CLARITA VALLEY
3213010900	FIRE STATION	SANTA CLARITA VALLEY
3231006009	For Hillside Management and Density-Controlled Development.	SANTA CLARITA VALLEY
3271014025	FRONT YD MOD	SANTA CLARITA VALLEY
3271014023	FRT YD MOD	SANTA CLARITA VALLEY
3271009016	FRT YD SETBACK	SANTA CLARITA VALLEY
3247054006	GARAGE TO STORE TRAVEL TRAILER	SANTA CLARITA VALLEY
2813007009	GRANNY UNIT IN A1-1	SANTA CLARITA VALLEY
3270012024	GUEST HOUSE & NEW SFR	SANTA CLARITA VALLEY
3247033037	GUEST HOUSE	SANTA CLARITA VALLEY
3244083001	HILLSIDE DEVELOPMENT	SANTA CLARITA VALLEY
3247042035	HILLSIDE MANAGEMENT	SANTA CLARITA VALLEY
3247042034	HILLSIDE MANAGEMENT	SANTA CLARITA VALLEY
3247042038	HILLSIDE MANAGEMENT	SANTA CLARITA VALLEY
2865023011	HILLSIDE MANAGEMENT	SANTA CLARITA VALLEY
3247030076	HILLSIDE MANAGEMENT	SANTA CLARITA VALLEY
3247042036	HILLSIDE MANAGEMENT	SANTA CLARITA VALLEY
3247042037	HILLSIDE MANAGEMENT	SANTA CLARITA VALLEY
3247030102	HORSE BARN	SANTA CLARITA VALLEY
2826007021	HOTEL & COMMERCIAL BLDGS IN PROPOSED C3-DP	SANTA CLARITA VALLEY
2865014025	IND BLDG JOBBY/WOOD/METAL/SHOP	SANTA CLARITA VALLEY
2865008019	INDUSTRIAL & OFFICE BLDGS	SANTA CLARITA VALLEY
2865008035	INDUSTRIAL & OFFICE BLDGS	SANTA CLARITA VALLEY
2812012006	SITE GRADING OVER 100,000 CUBIC YARDS	SANTA CLARITA VALLEY
2802002003	SITE GRADING OVER 100,000 CUBIC YARDS	SANTA CLARITA VALLEY
2802002005	SITE GRADING OVER 100,000 CUBIC YARDS	SANTA CLARITA VALLEY
2802002002	SITE GRADING OVER 100,000 CUBIC YARDS	SANTA CLARITA VALLEY
2839001017	SITE GRADING OVER 100,000 CUBIC YARDS	SANTA CLARITA VALLEY
2802003005	PUBLIC PARK, 9 NEIGHBORHOOD PARKS, 25 OPEN SPACE LOTS, 13 DEBRIS BASIN LOTS, 4 WATER	SANTA CLARITA VALLEY
3210015017	INTERIM MANAGEMENT PLAN	SANTA CLARITA VALLEY
3213013026	KEEP HORSES ON PROPERTY	SANTA CLARITA VALLEY
3214022022	LIVE ENTERTAINMENT, RESTAURANT, BAR & 3 SF RES IN	SANTA CLARITA VALLEY
3270016047	LOT TIE AND Y/M	SANTA CLARITA VALLEY
2865002003	METAL BLDG	SANTA CLARITA VALLEY
2865002017	METAL BLDG	SANTA CLARITA VALLEY
3231004039	METAL STORAGE BARN	SANTA CLARITA VALLEY
3213025016	MFG HOME & GARAGE	SANTA CLARITA VALLEY
3214020044	MOBILE HOME	SANTA CLARITA VALLEY
3214003009	MOBILE HOME	SANTA CLARITA VALLEY
3247033032	MOBILE TRAILER DURING CONST	SANTA CLARITA VALLEY
3213006030	MOBILEHOME	SANTA CLARITA VALLEY
2841023056	MOBILEHOME DURING COURSE OF CO	SANTA CLARITA VALLEY
3212017033	MOBILEHOME PARK, 57 MH SPACES & 8 RV SPACES	SANTA CLARITA VALLEY
2865015025	MODEL HOME	SANTA CLARITA VALLEY
2866001001	MODEL HOMES AND TRACT OFFICE	SANTA CLARITA VALLEY
2865010030	MOTEL ON 2.07 AC IN C3	SANTA CLARITA VALLEY

APN	Description of Project	Community Name
2865010031	MOTEL ON 2.07 AC IN C3	SANTA CLARITA VALLEY
2848013014	MOTION PICTURE SETS	SANTA CLARITA VALLEY
2865009022	MULTI F R	SANTA CLARITA VALLEY
3247032015	New 417 square foot single story addition to the existing dwelling	SANTA CLARITA VALLEY
2865002001	NEW SELF-SRVC STORAGE FACILITY	SANTA CLARITA VALLEY
2826127008	New two story additon to the existing front unit and two separate detached two car carports	SANTA CLARITA VALLEY
2865018034	New two story duplex with an attached four car garage	SANTA CLARITA VALLEY
2865018033	New two story duplex with an attached four car garage	SANTA CLARITA VALLEY
2865023006	New two story duplex with an attached four car garage	SANTA CLARITA VALLEY
2848012066	OFFICE BLDG	SANTA CLARITA VALLEY
2865096002	OIL WELLS IN A1-20K	SANTA CLARITA VALLEY
2865096003	OIL WELLS IN A1-20K	SANTA CLARITA VALLEY
2865096004	OIL WELLS IN A1-20K	SANTA CLARITA VALLEY
2865096005	OIL WELLS IN A1-20K	SANTA CLARITA VALLEY
2865096006	OIL WELLS IN A1-20K	SANTA CLARITA VALLEY
2865096015	OIL WELLS IN A1-20K	SANTA CLARITA VALLEY
2865096016	OIL WELLS IN A1-20K	SANTA CLARITA VALLEY
2865096017	OIL WELLS IN A1-20K	SANTA CLARITA VALLEY
2865096029	OIL WELLS IN A1-20K	SANTA CLARITA VALLEY
2865096031	OIL WELLS IN A1-20K	SANTA CLARITA VALLEY
2865096032	OIL WELLS IN A1-20K	SANTA CLARITA VALLEY
2865096033	OIL WELLS IN A1-20K	SANTA CLARITA VALLEY
2865096034	OIL WELLS IN A1-20K	SANTA CLARITA VALLEY
2865096030	OIL WELLS IN A1-20K	SANTA CLARITA VALLEY
2865096001	OIL WELLS IN A1-20K	SANTA CLARITA VALLEY
2865096014	OIL WELLS IN A1-20K	SANTA CLARITA VALLEY
2865014048	AND PARKER ROAD IN CASTAIC	SANTA CLARITA VALLEY
2865014047	AND PARKER ROAD IN CASTAIC	SANTA CLARITA VALLEY
2865014073	AND PARKER ROAD IN CASTAIC	SANTA CLARITA VALLEY
2865014074	AND PARKER ROAD IN CASTAIC	SANTA CLARITA VALLEY
2865014075	AND PARKER ROAD IN CASTAIC	SANTA CLARITA VALLEY
2865014076	AND PARKER ROAD IN CASTAIC	SANTA CLARITA VALLEY
2865014077	AND PARKER ROAD IN CASTAIC	SANTA CLARITA VALLEY
2865014078	AND PARKER ROAD IN CASTAIC	SANTA CLARITA VALLEY
2865014079	AND PARKER ROAD IN CASTAIC	SANTA CLARITA VALLEY
2865014080	AND PARKER ROAD IN CASTAIC	SANTA CLARITA VALLEY
2865014081	AND PARKER ROAD IN CASTAIC	SANTA CLARITA VALLEY
2865014061	AND PARKER ROAD IN CASTAIC	SANTA CLARITA VALLEY
2865014062	AND PARKER ROAD IN CASTAIC	SANTA CLARITA VALLEY
2865014063	AND PARKER ROAD IN CASTAIC	SANTA CLARITA VALLEY
2865014064	AND PARKER ROAD IN CASTAIC	SANTA CLARITA VALLEY
2865014065	AND PARKER ROAD IN CASTAIC	SANTA CLARITA VALLEY
2865014066	AND PARKER ROAD IN CASTAIC	SANTA CLARITA VALLEY
2865014067	AND PARKER ROAD IN CASTAIC	SANTA CLARITA VALLEY
2865014068	AND PARKER ROAD IN CASTAIC	SANTA CLARITA VALLEY
2865014069	AND PARKER ROAD IN CASTAIC	SANTA CLARITA VALLEY
2865014070	AND PARKER ROAD IN CASTAIC	SANTA CLARITA VALLEY
2865014071	AND PARKER ROAD IN CASTAIC	SANTA CLARITA VALLEY
2865014072	AND PARKER ROAD IN CASTAIC	SANTA CLARITA VALLEY
3272028070	ONE OAK TREE REMOVAL	SANTA CLARITA VALLEY
3231007041	ON-SITE SALES ALCOHOL	SANTA CLARITA VALLEY
3210007020	PERMIT FOR BEER & WINE & RENEWAL OF CARETAKER'S RE	SANTA CLARITA VALLEY
2848010312	OF 16 TREES AND 2 OAK TREES RESPECTIVELY.	SANTA CLARITA VALLEY
2840004033	PORTABLE GARAGES FOR STORAGE	SANTA CLARITA VALLEY
3272028075	POWER FOR WELLS	SANTA CLARITA VALLEY
2865009025	PREFAB OFFICE & TOOL SHED	SANTA CLARITA VALLEY
3247030105	PRIVATE SCHOOL USE	SANTA CLARITA VALLEY
2812005042	PROPOSED WATER WELL FOR HORSES	SANTA CLARITA VALLEY
3270012055	Proposing a new patio and new swimming pool	SANTA CLARITA VALLEY
2853002006	RADIO STATION & 3 ANTENNA TOWERS	SANTA CLARITA VALLEY
3214039013	SITE	SANTA CLARITA VALLEY
3244083011	RECREATIN RM ADD TO SFR	SANTA CLARITA VALLEY
3271007031	REDUCE SETBACK ON EAST SIDE	SANTA CLARITA VALLEY
3271010007	REDUCED FRT YD	SANTA CLARITA VALLEY
2865015011	RELOCATION PERMIT/EXSTNG HOME	SANTA CLARITA VALLEY
3270007027	REMODEL FLOOR PLAN	SANTA CLARITA VALLEY
2826005902	REMOVE 1 OAK AND TRIM 1 OAK	SANTA CLARITA VALLEY
2826006900	REMOVE 1 OAK AND TRIM 1 OAK	SANTA CLARITA VALLEY
2848009020	OAK TREE REMOVALS AND 5 ENCROACHMENTS TO RELOCATE DRIVEWAY PER DPW	SANTA CLARITA VALLEY
2848010020	OAK TREE REMOVALS AND 5 ENCROACHMENTS TO RELOCATE DRIVEWAY PER DPW	SANTA CLARITA VALLEY
2812009133	re-new wireless telecommunications facility	SANTA CLARITA VALLEY
3214025028	REOPEN CHURCH	SANTA CLARITA VALLEY
2865036046	REQUEST FOR WALL SIGN	SANTA CLARITA VALLEY
3247032040	REQUEST TO CHANGE ZONING FROM R-1 TO RPD-5000-10U.	SANTA CLARITA VALLEY
3231013031	RESIDENCE	SANTA CLARITA VALLEY
3214039033	RESTAURANT	SANTA CLARITA VALLEY
3270021017	RESTAURANT	SANTA CLARITA VALLEY
3270021018	RESTAURANT	SANTA CLARITA VALLEY

APN	Description of Project	Community Name
2865030013	RETAIL, RESTAURANT AND DAY CARE FACILITY	SANTA CLARITA VALLEY
2865030012	RETAIL, RESTAURANT AND DAY CARE FACILITY	SANTA CLARITA VALLEY
3214016016	equestrian related events and community events (i.e. barbeques etc.)	SANTA CLARITA VALLEY
2865016044	RM ADDITION	SANTA CLARITA VALLEY
3244083019	SEA NO. 19; RESIDENTIAL IN AN SEA; PM19899	SANTA CLARITA VALLEY
3244083010	SEA NO. 19; RESIDENTIAL IN AN SEA; PM19899	SANTA CLARITA VALLEY
3244083009	SEA NO. 19; RESIDENTIAL IN AN SEA; PM19899	SANTA CLARITA VALLEY
3213020057	SENIOR CITIZEN RESIDENCE	SANTA CLARITA VALLEY
3213025041	SENIOR CITIZEN RESIDENCE - 1,000 SQ. FT.	SANTA CLARITA VALLEY
2865016038	SETBACK	SANTA CLARITA VALLEY
3213025013	SF MODULAR HOME & GARAGE	SANTA CLARITA VALLEY
3244021011	SFR	SANTA CLARITA VALLEY
3270016036	SFR	SANTA CLARITA VALLEY
3270016020	SFR	SANTA CLARITA VALLEY
3270016016	SFR	SANTA CLARITA VALLEY
3270016053	SFR	SANTA CLARITA VALLEY
3270020009	SFR	SANTA CLARITA VALLEY
3271015044	SFR	SANTA CLARITA VALLEY
3270017047	SFR	SANTA CLARITA VALLEY
2841015048	SFR	SANTA CLARITA VALLEY
3271020056	SFR	SANTA CLARITA VALLEY
3244025025	SFR	SANTA CLARITA VALLEY
3270020002	SFR & YARD MODIFICATION	SANTA CLARITA VALLEY
2813006008	SFR IN RR-1	SANTA CLARITA VALLEY
3247042021	SFR, GARAGE & BARN	SANTA CLARITA VALLEY
2865013097	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013098	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013099	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013100	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013101	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013102	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013103	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013104	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013105	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013119	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013120	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013121	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013122	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013124	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013125	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013126	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013127	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013128	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013129	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013130	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013131	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013132	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013133	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013134	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013135	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013136	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013137	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013138	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013139	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013140	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013152	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013096	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013123	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013153	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
3213024017	SINGLE FAMILY RESIDENCE	SANTA CLARITA VALLEY
3270017036	SINGLE FAMILY RESIDENCE	SANTA CLARITA VALLEY
3214016022	SINGLE FAMILY RESIDENCE	SANTA CLARITA VALLEY
3247026038	SINGLE FAMILY RESIDENCE	SANTA CLARITA VALLEY
3247054004	SINGLE FAMILY RESIDENCE	SANTA CLARITA VALLEY
3247042022	SINGLE FAMILY RESIDENCE	SANTA CLARITA VALLEY
2812005044	SINGLE FLY DWELLING	SANTA CLARITA VALLEY
2865015039	STORAGE BLDG	SANTA CLARITA VALLEY
2826009052	SUBSTITUTE NC USE	SANTA CLARITA VALLEY
3210016018	SURFACE MINING	SANTA CLARITA VALLEY
2826023033	TELEPHONE EQUIPMENT STA	SANTA CLARITA VALLEY
2826007017	TELEPHONE REPEATER STATION, COM EQUIP BLDG	SANTA CLARITA VALLEY
3247033031	TEM P MOBILE HOME	SANTA CLARITA VALLEY
3247042019	TEMP 2-BED ROOM TRAILER	SANTA CLARITA VALLEY
3247042004	TEMP MBL HM DURING CNSTRCTN	SANTA CLARITA VALLEY
3231018047	Temporary use permit for June 4, 2005 and July 24, 2005	SANTA CLARITA VALLEY
2865001027	To authorize a WTF disguised as a 60-ft monopalm at an existing church and multi-purpose facility.	SANTA CLARITA VALLEY
2865001005	To authorize a WTF disguised as a 60-ft monopalm at an existing church and multi-purpose facility.	SANTA CLARITA VALLEY
2826009086	the Playa del Rey Zoned District. (Neg Dec)	SANTA CLARITA VALLEY

APN	Description of Project	Community Name
2826025015	classroom, office, and multi-purpose room facilities, and provide 101 parking spaces.	SANTA CLARITA VALLEY
2826023026	GARDENA	SANTA CLARITA VALLEY
3247051020	To create 4 SF lots on 13.17 acres located at 30740 Burlwood Drive in Castaic.	SANTA CLARITA VALLEY
2865036047	TO CREATE TWO COMMERCIAL PARCELS ON 8.79 ACRES. LEASE PROJECT ONLY MAP.	SANTA CLARITA VALLEY
2841015047	TO CREATE TWO SINGLE-FAMILY PARCELS ON 4.93 GROSS ACRES.	SANTA CLARITA VALLEY
2848010905	THE SUBJECT PROPERTY IS LOCATED AT THE NORTHWEST CORNER OF VIA PRINCESSA AND LOST	SANTA CLARITA VALLEY
2848013017	TO OPERATE AND MAINTAIN MOTION PICTURE SETS	SANTA CLARITA VALLEY
3247032041	2.3 TO RD 3.1	SANTA CLARITA VALLEY
3231006006	2.3 TO RD 3.1	SANTA CLARITA VALLEY
3247032011	2.3 TO RD 3.1	SANTA CLARITA VALLEY
3247032010	2.3 TO RD 3.1	SANTA CLARITA VALLEY
2865002016	TRUCK STORAGE & OFFICE SPACE IN M1-DP	SANTA CLARITA VALLEY
2865011016	UNMANNED TELECOMMUNICATIONS SITE	SANTA CLARITA VALLEY
3231013801	UNMANNED WIRELESS TELECOMMUNICATIONS FACILITY	SANTA CLARITA VALLEY
3212010045	VESTING MINOR LAND DIVISION, 4SF LOTS/20.15 ACRES	SANTA CLARITA VALLEY
3270013004	WIRELESS TELECOM FACILITY W/TRANSMISSION EQUIPMEN	SANTA CLARITA VALLEY
3271010074	YARD MODIFICATION	SANTA CLARITA VALLEY
3270001044	YARD MODIFICATION	SANTA CLARITA VALLEY
2063021035	(TN) 10 SF LOTS, HM	SANTA MONICA MOUNTAINS NORTH AREA
2063021043	(TN) 10 SF LOTS, HM	SANTA MONICA MOUNTAINS NORTH AREA
2063021038	(TN) 10 SF LOTS, HM	SANTA MONICA MOUNTAINS NORTH AREA
2063021041	(TN) 10 SF LOTS, HM	SANTA MONICA MOUNTAINS NORTH AREA
2063021039	(TN) 10 SF LOTS, HM	SANTA MONICA MOUNTAINS NORTH AREA
4462005018	(TN) 15 SF LOTS & 1 REC LOT ON 4.64 AC	SANTA MONICA MOUNTAINS NORTH AREA
2055010901	(TN) 4 SF LOTS ON 811 AC	SANTA MONICA MOUNTAINS NORTH AREA
2052009900	(TN) 4 SF LOTS ON 811 AC	SANTA MONICA MOUNTAINS NORTH AREA
2063016021	1 PRUNING AND 3 ENCROACHENTS	SANTA MONICA MOUNTAINS NORTH AREA
4462005008	2-CAR GARAGE/SHOP & STORAGE	SANTA MONICA MOUNTAINS NORTH AREA
2063001026	3 OT ENCROACHMENTS	SANTA MONICA MOUNTAINS NORTH AREA
2063002098	3 OT ENCROACHMENTS	SANTA MONICA MOUNTAINS NORTH AREA
4464001021	4 SINGLE FAMILY RESIDENCES IN ZONE R-R-1	SANTA MONICA MOUNTAINS NORTH AREA
4464001022	4 SINGLE FAMILY RESIDENCES IN ZONE R-R-1	SANTA MONICA MOUNTAINS NORTH AREA
4464001911	4 SINGLE FAMILY RESIDENCES IN ZONE R-R-1	SANTA MONICA MOUNTAINS NORTH AREA
4464001023	4 SINGLE FAMILY RESIDENCES IN ZONE R-R-1	SANTA MONICA MOUNTAINS NORTH AREA
2063033041	6' FENCE ON TOP OF 4' RETAININ	SANTA MONICA MOUNTAINS NORTH AREA
4464002003	6' TO 12' WALL	SANTA MONICA MOUNTAINS NORTH AREA
4440005011	9 TREES ENCROACHMENT WITHIN DRIPLINE	SANTA MONICA MOUNTAINS NORTH AREA
2063033040	ADD 3 GARAGE;POOL HOUSE	SANTA MONICA MOUNTAINS NORTH AREA
4441001026	ADD TO SFR & RECREATION ROOM	SANTA MONICA MOUNTAINS NORTH AREA
2063003036	ADD/REMODEL OF SWIMMING POOL	SANTA MONICA MOUNTAINS NORTH AREA
2058001014	ADDITION TO SFR	SANTA MONICA MOUNTAINS NORTH AREA
2063048009	CARETAKER MOBILEHOME	SANTA MONICA MOUNTAINS NORTH AREA
2063048011	CARETAKER MOBILEHOME	SANTA MONICA MOUNTAINS NORTH AREA
2063048006	CARETAKER MOBILEHOME	SANTA MONICA MOUNTAINS NORTH AREA
2063048004	CARETAKER MOBILEHOME	SANTA MONICA MOUNTAINS NORTH AREA
2063048007	CARETAKER MOBILEHOME	SANTA MONICA MOUNTAINS NORTH AREA
2063048008	CARETAKER MOBILEHOME	SANTA MONICA MOUNTAINS NORTH AREA
2063048012	CARETAKER MOBILEHOME	SANTA MONICA MOUNTAINS NORTH AREA
2063048003	CARETAKER MOBILEHOME	SANTA MONICA MOUNTAINS NORTH AREA
2063048002	CARETAKER MOBILEHOME	SANTA MONICA MOUNTAINS NORTH AREA
2063003037	CARETAKER UNIT/USE EXIST MOBILEHOME INTERIM	SANTA MONICA MOUNTAINS NORTH AREA
2063003039	CARETAKER'S RESIDENCE/MOBILEHOME	SANTA MONICA MOUNTAINS NORTH AREA
4441001039	CONST NEW HOUSE AND GARAGE	SANTA MONICA MOUNTAINS NORTH AREA
4441029033	CONT TRAILER COURT	SANTA MONICA MOUNTAINS NORTH AREA
4436005010	CONTINUE PRIVATE SCHOOL,SUMMER CAMP, PICNIC AREA	SANTA MONICA MOUNTAINS NORTH AREA
4436005004	CONTINUE PRIVATE SCHOOL,SUMMER CAMP, PICNIC AREA	SANTA MONICA MOUNTAINS NORTH AREA
4438002012	DAYCARE CENTER FOR 40 CHILDREN IN R1-10K	SANTA MONICA MOUNTAINS NORTH AREA
2063003020	DEV OF EQUESTRIAN FACILITY	SANTA MONICA MOUNTAINS NORTH AREA
2063002088	ELECT IMPROVEMENT/CAMPGROUND	SANTA MONICA MOUNTAINS NORTH AREA
2063001019	ENCROACHMENT WITHIN PROTECTED ZONES OF 9 OAK TREES	SANTA MONICA MOUNTAINS NORTH AREA
4441001038	GARAGE CONV. & NEW GARAGE	SANTA MONICA MOUNTAINS NORTH AREA
2058001007	GRADING & SFR	SANTA MONICA MOUNTAINS NORTH AREA
2063001016	GRADING 35000 CY	SANTA MONICA MOUNTAINS NORTH AREA
2063014032	HILLSIDE	SANTA MONICA MOUNTAINS NORTH AREA
2063003013	HILLSIDE MANAGEMENT	SANTA MONICA MOUNTAINS NORTH AREA
2063015017	HORSE CORRAL IN SIDEYD	SANTA MONICA MOUNTAINS NORTH AREA
2063016022	INSTALLATION OF WIRELESS TELECOMMUNICATIONS	SANTA MONICA MOUNTAINS NORTH AREA
2063019037	LAB IN RESIDENTIAL ZONE	SANTA MONICA MOUNTAINS NORTH AREA
2049019059	LESS THAN REQD PKG FOR MINI STORAGE IN M1	SANTA MONICA MOUNTAINS NORTH AREA
2063019049	New 417 square foot single story addition to the existing dwelling	SANTA MONICA MOUNTAINS NORTH AREA
2063019048	New 417 square foot single story addition to the existing dwelling	SANTA MONICA MOUNTAINS NORTH AREA
2063019045	NEW SFR	SANTA MONICA MOUNTAINS NORTH AREA
4441001054	OAK TREE PERMIT - HOUSE & GARAGE	SANTA MONICA MOUNTAINS NORTH AREA
2058007038	OFC BLDG	SANTA MONICA MOUNTAINS NORTH AREA
2058010006	ONE OAK ENCROACHMENT	SANTA MONICA MOUNTAINS NORTH AREA
4464002049	ONE OAK TREE ENCROACHMENT	SANTA MONICA MOUNTAINS NORTH AREA
2063021045	ONE OAK TREE ENCROACHMENT	SANTA MONICA MOUNTAINS NORTH AREA
4455029021	PATIO	SANTA MONICA MOUNTAINS NORTH AREA

APN	Description of Project	Community Name
2063001021	PRIVATE FAMILY MEMBERSHIP CLUB	SANTA MONICA MOUNTAINS NORTH AREA
2063001025	PRIVATE FAMILY MEMBERSHIP CLUB	SANTA MONICA MOUNTAINS NORTH AREA
2063002097	PRIVATE FAMILY MEMBERSHIP CLUB	SANTA MONICA MOUNTAINS NORTH AREA
4462004025	car carport tandem	SANTA MONICA MOUNTAINS NORTH AREA
4436006011	REMODEL & ADD TO SLR	SANTA MONICA MOUNTAINS NORTH AREA
2063002093	REMOVAL OF OAK TREE	SANTA MONICA MOUNTAINS NORTH AREA
4464023031	REMOVE 1 OAK TREE	SANTA MONICA MOUNTAINS NORTH AREA
4464023030	REMOVE 1 OAK TREE	SANTA MONICA MOUNTAINS NORTH AREA
4455028086	REMOVE FIVE (5) OAK TREES FOR S.F.R.	SANTA MONICA MOUNTAINS NORTH AREA
2063016015	RENOVATE & ADDITION TO SFR	SANTA MONICA MOUNTAINS NORTH AREA
2063001023	RETROACTIVE PERMIT FOR PRUNING OF 22 OAK TREES	SANTA MONICA MOUNTAINS NORTH AREA
4434022007	RM ADD	SANTA MONICA MOUNTAINS NORTH AREA
2058003011	S.F.R., GARAGE, PATIO, POOL	SANTA MONICA MOUNTAINS NORTH AREA
2058024006	SF RESID IN RR-1	SANTA MONICA MOUNTAINS NORTH AREA
2058024008	SF RESID IN RR-1	SANTA MONICA MOUNTAINS NORTH AREA
2058024007	SF RESID IN RR-1	SANTA MONICA MOUNTAINS NORTH AREA
2058024010	SF RESID IN RR-1	SANTA MONICA MOUNTAINS NORTH AREA
2058024011	SF RESID IN RR-1	SANTA MONICA MOUNTAINS NORTH AREA
2058002064	SFR	SANTA MONICA MOUNTAINS NORTH AREA
4434023003	SFR	SANTA MONICA MOUNTAINS NORTH AREA
4440005003	SFR & GUEST HOUSE	SANTA MONICA MOUNTAINS NORTH AREA
4464001903	SFR IN RR-1	SANTA MONICA MOUNTAINS NORTH AREA
2063003030	SINGLE FAMILY & EQUESTRIAN CARETAKER QUARTERS	SANTA MONICA MOUNTAINS NORTH AREA
2063006022	RESIDENTIAL PLANNED DEVELOPMENT AND GRADING WITHIN THE SANTA MONICA MOUNTAINS NORTH	SANTA MONICA MOUNTAINS NORTH AREA
4436006010	To legalize an existing dog kennel	SANTA MONICA MOUNTAINS NORTH AREA
2063036001	WIRELESS TELECOMMUNICATIONS INSTALLATION	SANTA MONICA MOUNTAINS NORTH AREA
8730004006	EXPAND CHURCH & SCHOOL FACILITIES	SOUTH SAN JOSE HILLS
8725005906	New two story duplex with an attached four car garage	SOUTH SAN JOSE HILLS
8730004032	TELECOMMUNICATION FACILITY WITH A 60' MONOPOLE	SOUTH SAN JOSE HILLS
8741001044	TANDEM PARKING	VALINDA
7350001131	ANTENNA ATOP 60' MONOPOLE ON 0.03 AC IN M1.5	WEST CARSON
7409003035	CARNIVAL ON 7/29-7/31/05	WEST CARSON
7348001001	SIGN	WEST CARSON
7409003036	SIGN	WEST CARSON
8178021046	(TN) 13 SF LOTS/2.13 AC	WEST WHITTIER - LOS NIETOS
8174015011	2 UNIT	WEST WHITTIER - LOS NIETOS
8174015006	ADD CAR PORT & LEGALIZE UNIT	WEST WHITTIER - LOS NIETOS
8173023007	ADD TO COMM/INDUSTRIAL DEV	WEST WHITTIER - LOS NIETOS
8174014035	ADDITION TO EXISTING SINGLE FA	WEST WHITTIER - LOS NIETOS
8130028069	AUTO CENTER POLE SIGN WITH ELECTRONIC READERBOARD	WEST WHITTIER - LOS NIETOS
8176018014	CARPORT & GARAGE MODIFICATION	WEST WHITTIER - LOS NIETOS
8130019030	CELLULAR TELE ON 0.23 AC IN C3-BE	WEST WHITTIER - LOS NIETOS
8177019905	CELLULAR TELEPHONE ON EXISTING 90' TOWER	WEST WHITTIER - LOS NIETOS
8177026049	CONSTRUCTION OF ARCO SERVICE STATION/AM-PM MARKET	WEST WHITTIER - LOS NIETOS
8178019046	DENSITY BONUS FOR LOW/MODERATE INCOME HOUSING	WEST WHITTIER - LOS NIETOS
8178019047	DENSITY BONUS FOR LOW/MODERATE INCOME HOUSING	WEST WHITTIER - LOS NIETOS
8178019048	DENSITY BONUS FOR LOW/MODERATE INCOME HOUSING	WEST WHITTIER - LOS NIETOS
8178019049	DENSITY BONUS FOR LOW/MODERATE INCOME HOUSING	WEST WHITTIER - LOS NIETOS
8178019050	DENSITY BONUS FOR LOW/MODERATE INCOME HOUSING	WEST WHITTIER - LOS NIETOS
8178019052	DENSITY BONUS FOR LOW/MODERATE INCOME HOUSING	WEST WHITTIER - LOS NIETOS
8178019053	DENSITY BONUS FOR LOW/MODERATE INCOME HOUSING	WEST WHITTIER - LOS NIETOS
8178019054	DENSITY BONUS FOR LOW/MODERATE INCOME HOUSING	WEST WHITTIER - LOS NIETOS
8178019055	DENSITY BONUS FOR LOW/MODERATE INCOME HOUSING	WEST WHITTIER - LOS NIETOS
8178019056	DENSITY BONUS FOR LOW/MODERATE INCOME HOUSING	WEST WHITTIER - LOS NIETOS
8178019059	DENSITY BONUS FOR LOW/MODERATE INCOME HOUSING	WEST WHITTIER - LOS NIETOS
8178021055	DENSITY BONUS FOR LOW/MODERATE INCOME HOUSING	WEST WHITTIER - LOS NIETOS
8178021056	DENSITY BONUS FOR LOW/MODERATE INCOME HOUSING	WEST WHITTIER - LOS NIETOS
8178021057	DENSITY BONUS FOR LOW/MODERATE INCOME HOUSING	WEST WHITTIER - LOS NIETOS
8178019058	DENSITY BONUS FOR LOW/MODERATE INCOME HOUSING	WEST WHITTIER - LOS NIETOS
8178019057	DENSITY BONUS FOR LOW/MODERATE INCOME HOUSING	WEST WHITTIER - LOS NIETOS
8178019051	DENSITY BONUS FOR LOW/MODERATE INCOME HOUSING	WEST WHITTIER - LOS NIETOS
8178021058	DENSITY BONUS FOR LOW/MODERATE INCOME HOUSING	WEST WHITTIER - LOS NIETOS
8178021026	GUEST HOUSE	WEST WHITTIER - LOS NIETOS
8176012001	IRON FENCE	WEST WHITTIER - LOS NIETOS
8177001009	PLANT NURSERY	WEST WHITTIER - LOS NIETOS
8174012018	San Gabriel Community Standards District	WEST WHITTIER - LOS NIETOS
8174027034	Proposing a new retaining wall not to excedd 6' in height	WEST WHITTIER - LOS NIETOS
8176016028	Proposing a single story addition to an existing fourplex	WEST WHITTIER - LOS NIETOS
8176016027	Proposing a single story addition to an existing fourplex	WEST WHITTIER - LOS NIETOS
8130023018	REAR YD SETBACKS	WEST WHITTIER - LOS NIETOS
8171002033	RESTAURANT	WEST WHITTIER - LOS NIETOS
8177018031	RETAIL STRIP CENTER WITH POSSIBLE FOOD USE	WEST WHITTIER - LOS NIETOS
8173023023	SELF STORAGE WITH BUS. OFFICE/CARETAKER'S APT.	WEST WHITTIER - LOS NIETOS
8176001804	WIRELESS FACILITY ON EXISTING SCE LATTICE TOWER located at the end of Choisser St.	WEST WHITTIER - LOS NIETOS
6154017037	1-STORY SFR, GARAGE & CARPORT	WILLOWBROOK
6154020023	AUTO DISMANTLING AND PARTS SALES ON 0.97 AC IN M1	WILLOWBROOK
6155033016	CONT'D. USE OF MARKET W/OFF-SITE ALCOHOL IN R-2	WILLOWBROOK
6155033017	CONT'D. USE OF MARKET W/OFF-SITE ALCOHOL IN R-2	WILLOWBROOK

APN	Description of Project	Community Name
6154017030	PROPOSED 1-STORY RES.	WILLOWBROOK
6155032030	REAR YD SETBACKS	WILLOWBROOK
6155032031	SETBACKS	WILLOWBROOK
6154012048	SFR & 2-CAR DETACHED GARAGE	WILLOWBROOK
6154013042	SINGLE FAMILY RES.	WILLOWBROOK
6154013043	SINGLE FAMILY RES.	WILLOWBROOK
6154015017	Yard Mod. SFR with 2 car garage.	WILLOWBROOK

Table H.4: Existing Development in Flood Hazard Zones

APN	Assessor Use Code - Type	Community Name
3027027060	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	ANTELOPE VALLEY
3042022020	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	ANTELOPE VALLEY
3101017005	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	ANTELOPE VALLEY
3101017013	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	ANTELOPE VALLEY
3102017008	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	ANTELOPE VALLEY
3102021026	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	ANTELOPE VALLEY
3102021033	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	ANTELOPE VALLEY
3103006001	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	ANTELOPE VALLEY
3103023006	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	ANTELOPE VALLEY
3103023044	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	ANTELOPE VALLEY
3175023001	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	ANTELOPE VALLEY
3027014016	Commercial - Commercial	ANTELOPE VALLEY
3027014021	Commercial - Commercial	ANTELOPE VALLEY
3027015034	Commercial - Commercial	ANTELOPE VALLEY
3038014011	Commercial - Commercial	ANTELOPE VALLEY
3049020016	Commercial - Commercial	ANTELOPE VALLEY
3049020053	Commercial - Commercial	ANTELOPE VALLEY
3049022006	Commercial - Commercial	ANTELOPE VALLEY
3049022008	Commercial - Commercial	ANTELOPE VALLEY
3049022033	Commercial - Commercial	ANTELOPE VALLEY
3049029004	Commercial - Commercial	ANTELOPE VALLEY
3049029007	Commercial - Commercial	ANTELOPE VALLEY
3101016006	Commercial - Commercial	ANTELOPE VALLEY
3101017010	Commercial - Commercial	ANTELOPE VALLEY
3102018904	Commercial - Commercial	ANTELOPE VALLEY
3103010019	Commercial - Commercial	ANTELOPE VALLEY
3103023005	Commercial - Commercial	ANTELOPE VALLEY
3103023042	Commercial - Commercial	ANTELOPE VALLEY
3175007028	Commercial - Commercial	ANTELOPE VALLEY
3208019006	Commercial - Commercial	ANTELOPE VALLEY
3208019022	Commercial - Commercial	ANTELOPE VALLEY
3208026002	Commercial - Commercial	ANTELOPE VALLEY
3208026008	Commercial - Commercial	ANTELOPE VALLEY
3209001023	Commercial - Commercial	ANTELOPE VALLEY
3228024026	Commercial - Commercial	ANTELOPE VALLEY
3228025031	Commercial - Commercial	ANTELOPE VALLEY
3228033025	Commercial - Commercial	ANTELOPE VALLEY
3242004002	Commercial - Commercial	ANTELOPE VALLEY
3242015007	Commercial - Commercial	ANTELOPE VALLEY
3307014053	Commercial - Commercial	ANTELOPE VALLEY
3037008024	Commercial - Hotel and Motel	ANTELOPE VALLEY
3049003010	Commercial - Nursery or Greenhouse	ANTELOPE VALLEY
3049004006	Commercial - Nursery or Greenhouse	ANTELOPE VALLEY
3049025024	Commercial - Office Building	ANTELOPE VALLEY
3102017018	Commercial - Office Building	ANTELOPE VALLEY
3102026037	Commercial - Office Building	ANTELOPE VALLEY
3103005028	Commercial - Office Building	ANTELOPE VALLEY
3224003020	Commercial - Office Building	ANTELOPE VALLEY
3242003005	Commercial - Office Building	ANTELOPE VALLEY
3102022016	Commercial - Parking Lot	ANTELOPE VALLEY
3251013035	Commercial - Parking Lot	ANTELOPE VALLEY
3251013036	Commercial - Parking Lot	ANTELOPE VALLEY
3049020046	Commercial - Professional Building	ANTELOPE VALLEY
3049022038	Commercial - Professional Building	ANTELOPE VALLEY
3103010035	Commercial - Professional Building	ANTELOPE VALLEY
3049025012	Commercial - Restaurant, Cocktail Lounge	ANTELOPE VALLEY
3102018010	Commercial - Restaurant, Cocktail Lounge	ANTELOPE VALLEY
3102018022	Commercial - Restaurant, Cocktail Lounge	ANTELOPE VALLEY
3103007002	Commercial - Restaurant, Cocktail Lounge	ANTELOPE VALLEY
3103010037	Commercial - Restaurant, Cocktail Lounge	ANTELOPE VALLEY
3103010046	Commercial - Restaurant, Cocktail Lounge	ANTELOPE VALLEY
3103023009	Commercial - Restaurant, Cocktail Lounge	ANTELOPE VALLEY
3049029050	Commercial - Service Shop Radio & Television Repair, Refrigeration Service, *	ANTELOPE VALLEY
3103005051	Commercial - Service Station	ANTELOPE VALLEY
3103005052	Commercial - Service Station	ANTELOPE VALLEY
3103023041	Commercial - Service Station	ANTELOPE VALLEY
3103009027	Commercial - Store	ANTELOPE VALLEY
3101017014	Commercial - Store	ANTELOPE VALLEY
3038002024	Commercial - Store	ANTELOPE VALLEY
3038007001	Commercial - Store	ANTELOPE VALLEY
3038007003	Commercial - Store	ANTELOPE VALLEY
3049007028	Commercial - Store	ANTELOPE VALLEY
3049022031	Commercial - Store	ANTELOPE VALLEY
3101016007	Commercial - Store	ANTELOPE VALLEY
3101016040	Commercial - Store	ANTELOPE VALLEY
3102017022	Commercial - Store	ANTELOPE VALLEY
3102018011	Commercial - Store	ANTELOPE VALLEY

APN	Assessor Use Code - Type	Community Name
3102021029	Commercial - Store	ANTELOPE VALLEY
3102022017	Commercial - Store	ANTELOPE VALLEY
3103009029	Commercial - Store	ANTELOPE VALLEY
3103009030	Commercial - Store	ANTELOPE VALLEY
3103010015	Commercial - Store	ANTELOPE VALLEY
3205013010	Commercial - Store	ANTELOPE VALLEY
3208014086	Commercial - Store	ANTELOPE VALLEY
3228012022	Commercial - Store	ANTELOPE VALLEY
3228034021	Commercial - Store	ANTELOPE VALLEY
3242003002	Commercial - Store	ANTELOPE VALLEY
3242005005	Commercial - Store	ANTELOPE VALLEY
3306008005	Commercial - Store	ANTELOPE VALLEY
3027011002	Commercial - Store Combination (w/ Office or Residential)	ANTELOPE VALLEY
3027011005	Commercial - Store Combination (w/ Office or Residential)	ANTELOPE VALLEY
3038014013	Commercial - Store Combination (w/ Office or Residential)	ANTELOPE VALLEY
3049020014	Commercial - Store Combination (w/ Office or Residential)	ANTELOPE VALLEY
3049020018	Commercial - Store Combination (w/ Office or Residential)	ANTELOPE VALLEY
3049020047	Commercial - Store Combination (w/ Office or Residential)	ANTELOPE VALLEY
3049029033	Commercial - Store Combination (w/ Office or Residential)	ANTELOPE VALLEY
3101017001	Commercial - Store Combination (w/ Office or Residential)	ANTELOPE VALLEY
3102021011	Commercial - Store Combination (w/ Office or Residential)	ANTELOPE VALLEY
3102022054	Commercial - Store Combination (w/ Office or Residential)	ANTELOPE VALLEY
3145013029	Commercial - Store Combination (w/ Office or Residential)	ANTELOPE VALLEY
3153040029	Commercial - Store Combination (w/ Office or Residential)	ANTELOPE VALLEY
3203003005	Commercial - Store Combination (w/ Office or Residential)	ANTELOPE VALLEY
3205012019	Commercial - Store Combination (w/ Office or Residential)	ANTELOPE VALLEY
3220018004	Commercial - Store Combination (w/ Office or Residential)	ANTELOPE VALLEY
3242006006	Commercial - Store Combination (w/ Office or Residential)	ANTELOPE VALLEY
3242015011	Commercial - Store Combination (w/ Office or Residential)	ANTELOPE VALLEY
3049027025	Commercial - Supermarket	ANTELOPE VALLEY
3049027027	Commercial - Supermarket	ANTELOPE VALLEY
3275021030	Dry Farm	ANTELOPE VALLEY
3029010009	Dry Farm - Desert	ANTELOPE VALLEY
3038002011	Dry Farm - Desert	ANTELOPE VALLEY
3038002012	Dry Farm - Desert	ANTELOPE VALLEY
3038003008	Dry Farm - Desert	ANTELOPE VALLEY
3038004010	Dry Farm - Desert	ANTELOPE VALLEY
3039003038	Dry Farm - Desert	ANTELOPE VALLEY
3039020032	Dry Farm - Desert	ANTELOPE VALLEY
3044018002	Dry Farm - Desert	ANTELOPE VALLEY
3048027301	Dry Farm - Desert	ANTELOPE VALLEY
3057013023	Dry Farm - Desert	ANTELOPE VALLEY
3059027312	Dry Farm - Desert	ANTELOPE VALLEY
3064012083	Dry Farm - Desert	ANTELOPE VALLEY
3064016022	Dry Farm - Desert	ANTELOPE VALLEY
3064020044	Dry Farm - Desert	ANTELOPE VALLEY
3078021010	Dry Farm - Desert	ANTELOPE VALLEY
3079004008	Dry Farm - Desert	ANTELOPE VALLEY
3080018017	Dry Farm - Desert	ANTELOPE VALLEY
3085010006	Dry Farm - Desert	ANTELOPE VALLEY
3113002019	Dry Farm - Desert	ANTELOPE VALLEY
3115007053	Dry Farm - Desert	ANTELOPE VALLEY
3145001008	Dry Farm - Desert	ANTELOPE VALLEY
3145017041	Dry Farm - Desert	ANTELOPE VALLEY
3145020011	Dry Farm - Desert	ANTELOPE VALLEY
3145020012	Dry Farm - Desert	ANTELOPE VALLEY
3145020107	Dry Farm - Desert	ANTELOPE VALLEY
3145021111	Dry Farm - Desert	ANTELOPE VALLEY
3145023055	Dry Farm - Desert	ANTELOPE VALLEY
3152004004	Dry Farm - Desert	ANTELOPE VALLEY
3152009038	Dry Farm - Desert	ANTELOPE VALLEY
3152016017	Dry Farm - Desert	ANTELOPE VALLEY
3154013002	Dry Farm - Desert	ANTELOPE VALLEY
3154016026	Dry Farm - Desert	ANTELOPE VALLEY
3154017004	Dry Farm - Desert	ANTELOPE VALLEY
3162009028	Dry Farm - Desert	ANTELOPE VALLEY
3205002030	Dry Farm - Desert	ANTELOPE VALLEY
3208003038	Dry Farm - Desert	ANTELOPE VALLEY
3208004040	Dry Farm - Desert	ANTELOPE VALLEY
3208006025	Dry Farm - Desert	ANTELOPE VALLEY
3208012089	Dry Farm - Desert	ANTELOPE VALLEY
3208022014	Dry Farm - Desert	ANTELOPE VALLEY
3209003034	Dry Farm - Desert	ANTELOPE VALLEY
3209011010	Dry Farm - Desert	ANTELOPE VALLEY
3216015022	Dry Farm - Desert	ANTELOPE VALLEY
3218007006	Dry Farm - Desert	ANTELOPE VALLEY
3218007008	Dry Farm - Desert	ANTELOPE VALLEY
3219009003	Dry Farm - Desert	ANTELOPE VALLEY
3220008008	Dry Farm - Desert	ANTELOPE VALLEY

APN	Assessor Use Code - Type	Community Name
3220017027	Dry Farm - Desert	ANTELOPE VALLEY
3220018023	Dry Farm - Desert	ANTELOPE VALLEY
3220019032	Dry Farm - Desert	ANTELOPE VALLEY
3220019041	Dry Farm - Desert	ANTELOPE VALLEY
3225024008	Dry Farm - Desert	ANTELOPE VALLEY
3225025015	Dry Farm - Desert	ANTELOPE VALLEY
3233016010	Dry Farm - Desert	ANTELOPE VALLEY
3238010017	Dry Farm - Desert	ANTELOPE VALLEY
3242001009	Dry Farm - Desert	ANTELOPE VALLEY
3242002001	Dry Farm - Desert	ANTELOPE VALLEY
3242006001	Dry Farm - Desert	ANTELOPE VALLEY
3256006008	Dry Farm - Desert	ANTELOPE VALLEY
3260023016	Dry Farm - Desert	ANTELOPE VALLEY
3264009043	Dry Farm - Desert	ANTELOPE VALLEY
3264010006	Dry Farm - Desert	ANTELOPE VALLEY
3264010007	Dry Farm - Desert	ANTELOPE VALLEY
3264011001	Dry Farm - Desert	ANTELOPE VALLEY
3264012036	Dry Farm - Desert	ANTELOPE VALLEY
3264016009	Dry Farm - Desert	ANTELOPE VALLEY
3275007014	Dry Farm - Desert	ANTELOPE VALLEY
3275013009	Dry Farm - Desert	ANTELOPE VALLEY
3278003007	Dry Farm - Desert	ANTELOPE VALLEY
3278005015	Dry Farm - Desert	ANTELOPE VALLEY
3278005024	Dry Farm - Desert	ANTELOPE VALLEY
3278005025	Dry Farm - Desert	ANTELOPE VALLEY
3278007022	Dry Farm - Desert	ANTELOPE VALLEY
3278009015	Dry Farm - Desert	ANTELOPE VALLEY
3278009025	Dry Farm - Desert	ANTELOPE VALLEY
3278009026	Dry Farm - Desert	ANTELOPE VALLEY
3278010021	Dry Farm - Desert	ANTELOPE VALLEY
3278010022	Dry Farm - Desert	ANTELOPE VALLEY
3278010027	Dry Farm - Desert	ANTELOPE VALLEY
3278010028	Dry Farm - Desert	ANTELOPE VALLEY
3278010029	Dry Farm - Desert	ANTELOPE VALLEY
3278018013	Dry Farm - Desert	ANTELOPE VALLEY
3278018022	Dry Farm - Desert	ANTELOPE VALLEY
3278022002	Dry Farm - Desert	ANTELOPE VALLEY
3278026009	Dry Farm - Desert	ANTELOPE VALLEY
3278026011	Dry Farm - Desert	ANTELOPE VALLEY
3278026012	Dry Farm - Desert	ANTELOPE VALLEY
3278027006	Dry Farm - Desert	ANTELOPE VALLEY
3278027007	Dry Farm - Desert	ANTELOPE VALLEY
3278027009	Dry Farm - Desert	ANTELOPE VALLEY
3279016024	Dry Farm - Desert	ANTELOPE VALLEY
3302019027	Dry Farm - Desert	ANTELOPE VALLEY
3302019079	Dry Farm - Desert	ANTELOPE VALLEY
3302020008	Dry Farm - Desert	ANTELOPE VALLEY
3306006019	Dry Farm - Desert	ANTELOPE VALLEY
3306007030	Dry Farm - Desert	ANTELOPE VALLEY
3306008012	Dry Farm - Desert	ANTELOPE VALLEY
3307008024	Dry Farm - Desert	ANTELOPE VALLEY
3307008033	Dry Farm - Desert	ANTELOPE VALLEY
3307008034	Dry Farm - Desert	ANTELOPE VALLEY
3307009096	Dry Farm - Desert	ANTELOPE VALLEY
3307010019	Dry Farm - Desert	ANTELOPE VALLEY
3307010024	Dry Farm - Desert	ANTELOPE VALLEY
3307010049	Dry Farm - Desert	ANTELOPE VALLEY
3307010050	Dry Farm - Desert	ANTELOPE VALLEY
3307010057	Dry Farm - Desert	ANTELOPE VALLEY
3307010065	Dry Farm - Desert	ANTELOPE VALLEY
3310003008	Dry Farm - Desert	ANTELOPE VALLEY
3310004045	Dry Farm - Desert	ANTELOPE VALLEY
3310005032	Dry Farm - Desert	ANTELOPE VALLEY
3338017023	Dry Farm - Desert	ANTELOPE VALLEY
3342020030	Dry Farm - Desert	ANTELOPE VALLEY
3346003030	Dry Farm - Desert	ANTELOPE VALLEY
3374017015	Dry Farm - Desert	ANTELOPE VALLEY
3374023005	Dry Farm - Desert	ANTELOPE VALLEY
3376012002	Dry Farm - Desert	ANTELOPE VALLEY
3376012020	Dry Farm - Desert	ANTELOPE VALLEY
3376013004	Dry Farm - Desert	ANTELOPE VALLEY
3376013018	Dry Farm - Desert	ANTELOPE VALLEY
3382006001	Dry Farm - Desert	ANTELOPE VALLEY
3382006014	Dry Farm - Desert	ANTELOPE VALLEY
3382020017	Dry Farm - Desert	ANTELOPE VALLEY
3203003011	Dry Farm - Pasture	ANTELOPE VALLEY
3228002002	Dry Farm - Pasture	ANTELOPE VALLEY
3366017005	Dry Farm - Pasture	ANTELOPE VALLEY
3022005900	Government Owned Property	ANTELOPE VALLEY

APN	Assessor Use Code - Type	Community Name
3022006270	Government Owned Property	ANTELOPE VALLEY
3022006274	Government Owned Property	ANTELOPE VALLEY
3022007900	Government Owned Property	ANTELOPE VALLEY
3022012919	Government Owned Property	ANTELOPE VALLEY
3025024900	Government Owned Property	ANTELOPE VALLEY
3025043901	Government Owned Property	ANTELOPE VALLEY
3025051271	Government Owned Property	ANTELOPE VALLEY
3025053271	Government Owned Property	ANTELOPE VALLEY
3025053273	Government Owned Property	ANTELOPE VALLEY
3025053278	Government Owned Property	ANTELOPE VALLEY
3025053282	Government Owned Property	ANTELOPE VALLEY
3040015042	Government Owned Property	ANTELOPE VALLEY
3040015045	Government Owned Property	ANTELOPE VALLEY
3040015046	Government Owned Property	ANTELOPE VALLEY
3049002901	Government Owned Property	ANTELOPE VALLEY
3049008900	Government Owned Property	ANTELOPE VALLEY
3049025904	Government Owned Property	ANTELOPE VALLEY
3049027903	Government Owned Property	ANTELOPE VALLEY
3049027904	Government Owned Property	ANTELOPE VALLEY
3053004903	Government Owned Property	ANTELOPE VALLEY
3061006018	Government Owned Property	ANTELOPE VALLEY
3102001903	Government Owned Property	ANTELOPE VALLEY
3102001909	Government Owned Property	ANTELOPE VALLEY
3102017901	Government Owned Property	ANTELOPE VALLEY
3102026800	Government Owned Property	ANTELOPE VALLEY
3103006900	Government Owned Property	ANTELOPE VALLEY
3103006901	Government Owned Property	ANTELOPE VALLEY
3110003903	Government Owned Property	ANTELOPE VALLEY
3145030900	Government Owned Property	ANTELOPE VALLEY
3204012902	Government Owned Property	ANTELOPE VALLEY
3208014900	Government Owned Property	ANTELOPE VALLEY
3208018901	Government Owned Property	ANTELOPE VALLEY
3208019900	Government Owned Property	ANTELOPE VALLEY
3208019901	Government Owned Property	ANTELOPE VALLEY
3227025900	Government Owned Property	ANTELOPE VALLEY
3243025901	Government Owned Property	ANTELOPE VALLEY
3388011284	Government Owned Property	ANTELOPE VALLEY
3022007287	Industrial - Heavy Manufacturing	ANTELOPE VALLEY
3022022901	Industrial - Industrial	ANTELOPE VALLEY
3025009287	Industrial - Industrial	ANTELOPE VALLEY
3038004009	Industrial - Industrial	ANTELOPE VALLEY
3042020011	Industrial - Industrial	ANTELOPE VALLEY
3042020012	Industrial - Industrial	ANTELOPE VALLEY
3050011030	Industrial - Industrial	ANTELOPE VALLEY
3102017017	Industrial - Industrial	ANTELOPE VALLEY
3137005009	Industrial - Industrial	ANTELOPE VALLEY
3137005015	Industrial - Industrial	ANTELOPE VALLEY
3137005020	Industrial - Industrial	ANTELOPE VALLEY
3137005030	Industrial - Industrial	ANTELOPE VALLEY
3227029801	Industrial - Industrial	ANTELOPE VALLEY
3242025003	Industrial - Industrial	ANTELOPE VALLEY
3242025013	Industrial - Industrial	ANTELOPE VALLEY
3302021025	Industrial - Industrial	ANTELOPE VALLEY
3307017902	Industrial - Industrial	ANTELOPE VALLEY
3022006273	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	ANTELOPE VALLEY
3022012270	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	ANTELOPE VALLEY
3022012271	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	ANTELOPE VALLEY
3049022037	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	ANTELOPE VALLEY
3049024008	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	ANTELOPE VALLEY
3137003014	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	ANTELOPE VALLEY
3264010027	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	ANTELOPE VALLEY
3137005019	Industrial - Lumber Yard	ANTELOPE VALLEY
3049021012	Industrial - Motion Picture, Radio and Television Industry	ANTELOPE VALLEY
3049029001	Industrial - Open Storage	ANTELOPE VALLEY
3056024068	Industrial - Warehousing, Distribution, Storage	ANTELOPE VALLEY
3056024069	Industrial - Warehousing, Distribution, Storage	ANTELOPE VALLEY
3056024070	Industrial - Warehousing, Distribution, Storage	ANTELOPE VALLEY
3027010027	Institutional - Cemetery, Mausoleum, Mortuary	ANTELOPE VALLEY
3042019014	Institutional - Church	ANTELOPE VALLEY
3049022007	Institutional - Church	ANTELOPE VALLEY
3102021020	Institutional - Church	ANTELOPE VALLEY
3175018016	Institutional - Church	ANTELOPE VALLEY
3208022018	Institutional - Church	ANTELOPE VALLEY
3027013028	Institutional - Homes for Aged & Others	ANTELOPE VALLEY
3027017020	Institutional - Homes for Aged & Others	ANTELOPE VALLEY
3204005018	Institutional - Homes for Aged & Others	ANTELOPE VALLEY
3204005022	Institutional - Homes for Aged & Others	ANTELOPE VALLEY
3204016067	Institutional - Homes for Aged & Others	ANTELOPE VALLEY
3079003012	Institutional - School (Private)	ANTELOPE VALLEY

APN	Assessor Use Code - Type	Community Name
3101022903	Institutional - School (Private)	ANTELOPE VALLEY
3220017005	Irrigated Farm	ANTELOPE VALLEY
3220017017	Irrigated Farm	ANTELOPE VALLEY
3260010109	Irrigated Farm	ANTELOPE VALLEY
3374003006	Irrigated Farm	ANTELOPE VALLEY
3382023001	Irrigated Farm	ANTELOPE VALLEY
3382023024	Irrigated Farm	ANTELOPE VALLEY
3382023033	Irrigated Farm	ANTELOPE VALLEY
3382023034	Irrigated Farm	ANTELOPE VALLEY
3384001001	Irrigated Farm	ANTELOPE VALLEY
3384001004	Irrigated Farm	ANTELOPE VALLEY
3307014019	Irrigated Farm - Dairy	ANTELOPE VALLEY
3260010108	Irrigated Farm - Field Crops	ANTELOPE VALLEY
3260027005	Irrigated Farm - Field Crops	ANTELOPE VALLEY
3268006024	Irrigated Farm - Field Crops	ANTELOPE VALLEY
3376022016	Irrigated Farm - Field Crops	ANTELOPE VALLEY
3382001001	Irrigated Farm - Field Crops	ANTELOPE VALLEY
3382023027	Irrigated Farm - Field Crops	ANTELOPE VALLEY
3384001002	Irrigated Farm - Field Crops	ANTELOPE VALLEY
3049006005	Irrigated Farm - Fruits and Nuts	ANTELOPE VALLEY
3049006006	Irrigated Farm - Fruits and Nuts	ANTELOPE VALLEY
3049011018	Irrigated Farm - Fruits and Nuts	ANTELOPE VALLEY
3049027043	Irrigated Farm - Fruits and Nuts	ANTELOPE VALLEY
3058006015	Irrigated Farm - Fruits and Nuts	ANTELOPE VALLEY
3205012020	Irrigated Farm - Fruits and Nuts	ANTELOPE VALLEY
3219006023	Irrigated Farm - Fruits and Nuts	ANTELOPE VALLEY
3242001011	Irrigated Farm - Fruits and Nuts	ANTELOPE VALLEY
3264011022	Irrigated Farm - Fruits and Nuts	ANTELOPE VALLEY
3279001028	Irrigated Farm - Fruits and Nuts	ANTELOPE VALLEY
3279016013	Irrigated Farm - Fruits and Nuts	ANTELOPE VALLEY
3279018021	Irrigated Farm - Fruits and Nuts	ANTELOPE VALLEY
3049008036	Irrigated Farm - Pasture	ANTELOPE VALLEY
3049009027	Irrigated Farm - Pasture	ANTELOPE VALLEY
3266013028	Irrigated Farm - Poultry	ANTELOPE VALLEY
3275013904	Irrigated Farm - Poultry	ANTELOPE VALLEY
3275013905	Irrigated Farm - Poultry	ANTELOPE VALLEY
3038002009	Irrigated Farm - Private Rural Pumping Plant	ANTELOPE VALLEY
3256007002	Irrigated Farm - Private Rural Pumping Plant	ANTELOPE VALLEY
3258010901	Irrigated Farm - Private Rural Pumping Plant	ANTELOPE VALLEY
3258010902	Irrigated Farm - Private Rural Pumping Plant	ANTELOPE VALLEY
3275003001	Irrigated Farm - Private Rural Pumping Plant	ANTELOPE VALLEY
3275003011	Irrigated Farm - Private Rural Pumping Plant	ANTELOPE VALLEY
3252006900	Miscellaneous - Pipeline, Canal	ANTELOPE VALLEY
3252006901	Miscellaneous - Pipeline, Canal	ANTELOPE VALLEY
3253001900	Miscellaneous - Pipeline, Canal	ANTELOPE VALLEY
3224003021	Miscellaneous - Privately owned	ANTELOPE VALLEY
3264011800	Miscellaneous - Rights of Way	ANTELOPE VALLEY
3022006906	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	ANTELOPE VALLEY
3022006907	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	ANTELOPE VALLEY
3022008900	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	ANTELOPE VALLEY
3044028807	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	ANTELOPE VALLEY
3205012006	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	ANTELOPE VALLEY
3205012007	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	ANTELOPE VALLEY
3209017805	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	ANTELOPE VALLEY
3220018008	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	ANTELOPE VALLEY
3260008025	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	ANTELOPE VALLEY
3260008026	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	ANTELOPE VALLEY
3264009021	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	ANTELOPE VALLEY
3307003800	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	ANTELOPE VALLEY
3220018009	Recreational - Athletic and Amusement Facility	ANTELOPE VALLEY
3063012007	Recreational - Camp	ANTELOPE VALLEY
3063012008	Recreational - Camp	ANTELOPE VALLEY
3066021018	Recreational - Camp	ANTELOPE VALLEY
3066021019	Recreational - Camp	ANTELOPE VALLEY
3209017023	Recreational - Camp	ANTELOPE VALLEY
3235005030	Recreational - Camp	ANTELOPE VALLEY
3025025291	Recreational - Club, Lodge Hall, Fraternal Organization	ANTELOPE VALLEY
3027013039	Recreational - Club, Lodge Hall, Fraternal Organization	ANTELOPE VALLEY
3038008011	Recreational - Club, Lodge Hall, Fraternal Organization	ANTELOPE VALLEY
3049009017	Recreational - Club, Lodge Hall, Fraternal Organization	ANTELOPE VALLEY
3066021002	Recreational - Club, Lodge Hall, Fraternal Organization	ANTELOPE VALLEY
3103023003	Recreational - Club, Lodge Hall, Fraternal Organization	ANTELOPE VALLEY
3242024001	Recreational - Club, Lodge Hall, Fraternal Organization	ANTELOPE VALLEY
3022008272	Recreational - Golf Courses	ANTELOPE VALLEY
3218032002	Residential - (open)	ANTELOPE VALLEY
3275004005	Residential - (open)	ANTELOPE VALLEY
3025007292	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3027011008	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3038011026	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY

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3038030024	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3042017002	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3042019020	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3042025063	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3044028001	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3046001011	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3046001029	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3046003028	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3046012029	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3046012037	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3048016009	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3049003002	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3049006020	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3049008028	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3049020048	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3049029020	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3079004015	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3101013022	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3102022018	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3103007004	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3103022035	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3103023036	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3103024004	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3110008026	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3113001003	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3113002010	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3115005006	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3137001031	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3137001032	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3137003008	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3145023007	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3152012022	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3152013023	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3152014012	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3152016013	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3175018010	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3175018019	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3204014011	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3204015002	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3208019026	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3208021022	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3209003053	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3209014012	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3209020063	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3220017021	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3220018005	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3227015024	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3227031047	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3228016038	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3228023042	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3242006007	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3242013002	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3242013003	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3242031006	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3260023001	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3267003052	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3306006043	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3306008002	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3306008006	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3310003007	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3358012012	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3374007017	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3376013003	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3376013005	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3376014004	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3376018007	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3376018026	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3376023022	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3382002028	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3382005019	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3382006015	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3044029018	Residential - Five or more Apartments or units	ANTELOPE VALLEY
3051007012	Residential - Five or more Apartments or units	ANTELOPE VALLEY
3102016900	Residential - Five or more Apartments or units	ANTELOPE VALLEY
3102017011	Residential - Five or more Apartments or units	ANTELOPE VALLEY
3102018016	Residential - Five or more Apartments or units	ANTELOPE VALLEY
3102018021	Residential - Five or more Apartments or units	ANTELOPE VALLEY
3102021003	Residential - Five or more Apartments or units	ANTELOPE VALLEY
3102021005	Residential - Five or more Apartments or units	ANTELOPE VALLEY

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3102022029	Residential - Five or more Apartments or units	ANTELOPE VALLEY
3103005053	Residential - Five or more Apartments or units	ANTELOPE VALLEY
3103006003	Residential - Five or more Apartments or units	ANTELOPE VALLEY
3103009031	Residential - Five or more Apartments or units	ANTELOPE VALLEY
3103023010	Residential - Five or more Apartments or units	ANTELOPE VALLEY
3103023020	Residential - Five or more Apartments or units	ANTELOPE VALLEY
3103023046	Residential - Five or more Apartments or units	ANTELOPE VALLEY
3103023048	Residential - Five or more Apartments or units	ANTELOPE VALLEY
3103023050	Residential - Five or more Apartments or units	ANTELOPE VALLEY
3242015009	Residential - Five or more Apartments or units	ANTELOPE VALLEY
3374016004	Residential - Five or more Apartments or units	ANTELOPE VALLEY
3049023012	Residential - Four Units (any combination)	ANTELOPE VALLEY
3170013009	Residential - Four Units (any combination)	ANTELOPE VALLEY
3219010001	Residential - Four Units (any combination)	ANTELOPE VALLEY
3374006015	Residential - Four Units (any combination)	ANTELOPE VALLEY
3027010013	Residential - Manufactured Home Park	ANTELOPE VALLEY
3038002030	Residential - Manufactured Home Park	ANTELOPE VALLEY
3038014012	Residential - Manufactured Home Park	ANTELOPE VALLEY
3137001030	Residential - Manufactured Home Park	ANTELOPE VALLEY
3137006034	Residential - Manufactured Home Park	ANTELOPE VALLEY
3145009015	Residential - Manufactured Home Park	ANTELOPE VALLEY
3205011012	Residential - Manufactured Home Park	ANTELOPE VALLEY
3027016017	Residential - Manufactured Homes	ANTELOPE VALLEY
3027018013	Residential - Manufactured Homes	ANTELOPE VALLEY
3027019032	Residential - Manufactured Homes	ANTELOPE VALLEY
3027027023	Residential - Manufactured Homes	ANTELOPE VALLEY
3036013016	Residential - Manufactured Homes	ANTELOPE VALLEY
3036014012	Residential - Manufactured Homes	ANTELOPE VALLEY
3036014013	Residential - Manufactured Homes	ANTELOPE VALLEY
3037012003	Residential - Manufactured Homes	ANTELOPE VALLEY
3037012009	Residential - Manufactured Homes	ANTELOPE VALLEY
3038009005	Residential - Manufactured Homes	ANTELOPE VALLEY
3038011016	Residential - Manufactured Homes	ANTELOPE VALLEY
3038013016	Residential - Manufactured Homes	ANTELOPE VALLEY
3038030049	Residential - Manufactured Homes	ANTELOPE VALLEY
3038030051	Residential - Manufactured Homes	ANTELOPE VALLEY
3040001045	Residential - Manufactured Homes	ANTELOPE VALLEY
3041003014	Residential - Manufactured Homes	ANTELOPE VALLEY
3041003042	Residential - Manufactured Homes	ANTELOPE VALLEY
3041004018	Residential - Manufactured Homes	ANTELOPE VALLEY
3041004022	Residential - Manufactured Homes	ANTELOPE VALLEY
3041004040	Residential - Manufactured Homes	ANTELOPE VALLEY
3041007023	Residential - Manufactured Homes	ANTELOPE VALLEY
3042001030	Residential - Manufactured Homes	ANTELOPE VALLEY
3042008017	Residential - Manufactured Homes	ANTELOPE VALLEY
3042009001	Residential - Manufactured Homes	ANTELOPE VALLEY
3042010006	Residential - Manufactured Homes	ANTELOPE VALLEY
3042010014	Residential - Manufactured Homes	ANTELOPE VALLEY
3042011005	Residential - Manufactured Homes	ANTELOPE VALLEY
3042012019	Residential - Manufactured Homes	ANTELOPE VALLEY
3042014013	Residential - Manufactured Homes	ANTELOPE VALLEY
3042015017	Residential - Manufactured Homes	ANTELOPE VALLEY
3042018016	Residential - Manufactured Homes	ANTELOPE VALLEY
3042018017	Residential - Manufactured Homes	ANTELOPE VALLEY
3044004027	Residential - Manufactured Homes	ANTELOPE VALLEY
3044007019	Residential - Manufactured Homes	ANTELOPE VALLEY
3044007020	Residential - Manufactured Homes	ANTELOPE VALLEY
3046001018	Residential - Manufactured Homes	ANTELOPE VALLEY
3046001019	Residential - Manufactured Homes	ANTELOPE VALLEY
3046001023	Residential - Manufactured Homes	ANTELOPE VALLEY
3046008039	Residential - Manufactured Homes	ANTELOPE VALLEY
3046011003	Residential - Manufactured Homes	ANTELOPE VALLEY
3046011015	Residential - Manufactured Homes	ANTELOPE VALLEY
3046013040	Residential - Manufactured Homes	ANTELOPE VALLEY
3046013041	Residential - Manufactured Homes	ANTELOPE VALLEY
3047019065	Residential - Manufactured Homes	ANTELOPE VALLEY
3049001002	Residential - Manufactured Homes	ANTELOPE VALLEY
3049002052	Residential - Manufactured Homes	ANTELOPE VALLEY
3049009028	Residential - Manufactured Homes	ANTELOPE VALLEY
3049029043	Residential - Manufactured Homes	ANTELOPE VALLEY
3051001005	Residential - Manufactured Homes	ANTELOPE VALLEY
3056015020	Residential - Manufactured Homes	ANTELOPE VALLEY
3056015021	Residential - Manufactured Homes	ANTELOPE VALLEY
3056015022	Residential - Manufactured Homes	ANTELOPE VALLEY
3056024039	Residential - Manufactured Homes	ANTELOPE VALLEY
3056024044	Residential - Manufactured Homes	ANTELOPE VALLEY
3056024048	Residential - Manufactured Homes	ANTELOPE VALLEY
3056027031	Residential - Manufactured Homes	ANTELOPE VALLEY
3058003027	Residential - Manufactured Homes	ANTELOPE VALLEY

APN	Assessor Use Code - Type	Community Name
3102018018	Residential - Manufactured Homes	ANTELOPE VALLEY
3103022024	Residential - Manufactured Homes	ANTELOPE VALLEY
3103027036	Residential - Manufactured Homes	ANTELOPE VALLEY
3110008001	Residential - Manufactured Homes	ANTELOPE VALLEY
3110011012	Residential - Manufactured Homes	ANTELOPE VALLEY
3145021018	Residential - Manufactured Homes	ANTELOPE VALLEY
3175018021	Residential - Manufactured Homes	ANTELOPE VALLEY
3204011006	Residential - Manufactured Homes	ANTELOPE VALLEY
3204012008	Residential - Manufactured Homes	ANTELOPE VALLEY
3208018023	Residential - Manufactured Homes	ANTELOPE VALLEY
3208018053	Residential - Manufactured Homes	ANTELOPE VALLEY
3208024020	Residential - Manufactured Homes	ANTELOPE VALLEY
3209001017	Residential - Manufactured Homes	ANTELOPE VALLEY
3220011008	Residential - Manufactured Homes	ANTELOPE VALLEY
3220011032	Residential - Manufactured Homes	ANTELOPE VALLEY
3220011036	Residential - Manufactured Homes	ANTELOPE VALLEY
3220011037	Residential - Manufactured Homes	ANTELOPE VALLEY
3220011041	Residential - Manufactured Homes	ANTELOPE VALLEY
3220011042	Residential - Manufactured Homes	ANTELOPE VALLEY
3220012050	Residential - Manufactured Homes	ANTELOPE VALLEY
3220013033	Residential - Manufactured Homes	ANTELOPE VALLEY
3220013038	Residential - Manufactured Homes	ANTELOPE VALLEY
3220013039	Residential - Manufactured Homes	ANTELOPE VALLEY
3220015014	Residential - Manufactured Homes	ANTELOPE VALLEY
3220015043	Residential - Manufactured Homes	ANTELOPE VALLEY
3220015047	Residential - Manufactured Homes	ANTELOPE VALLEY
3220016001	Residential - Manufactured Homes	ANTELOPE VALLEY
3220017007	Residential - Manufactured Homes	ANTELOPE VALLEY
3220018036	Residential - Manufactured Homes	ANTELOPE VALLEY
3220019002	Residential - Manufactured Homes	ANTELOPE VALLEY
3220019035	Residential - Manufactured Homes	ANTELOPE VALLEY
3223004015	Residential - Manufactured Homes	ANTELOPE VALLEY
3227015010	Residential - Manufactured Homes	ANTELOPE VALLEY
3227022035	Residential - Manufactured Homes	ANTELOPE VALLEY
3228002003	Residential - Manufactured Homes	ANTELOPE VALLEY
3228019014	Residential - Manufactured Homes	ANTELOPE VALLEY
3228026024	Residential - Manufactured Homes	ANTELOPE VALLEY
3228028024	Residential - Manufactured Homes	ANTELOPE VALLEY
3233005028	Residential - Manufactured Homes	ANTELOPE VALLEY
3233006020	Residential - Manufactured Homes	ANTELOPE VALLEY
3234011004	Residential - Manufactured Homes	ANTELOPE VALLEY
3234015003	Residential - Manufactured Homes	ANTELOPE VALLEY
3234024015	Residential - Manufactured Homes	ANTELOPE VALLEY
3234024017	Residential - Manufactured Homes	ANTELOPE VALLEY
3234028027	Residential - Manufactured Homes	ANTELOPE VALLEY
3242001024	Residential - Manufactured Homes	ANTELOPE VALLEY
3256006012	Residential - Manufactured Homes	ANTELOPE VALLEY
3264009029	Residential - Manufactured Homes	ANTELOPE VALLEY
3264012002	Residential - Manufactured Homes	ANTELOPE VALLEY
3267025006	Residential - Manufactured Homes	ANTELOPE VALLEY
3268001003	Residential - Manufactured Homes	ANTELOPE VALLEY
3268006013	Residential - Manufactured Homes	ANTELOPE VALLEY
3268019042	Residential - Manufactured Homes	ANTELOPE VALLEY
3268021021	Residential - Manufactured Homes	ANTELOPE VALLEY
3275004022	Residential - Manufactured Homes	ANTELOPE VALLEY
3277001015	Residential - Manufactured Homes	ANTELOPE VALLEY
3277004001	Residential - Manufactured Homes	ANTELOPE VALLEY
3277004003	Residential - Manufactured Homes	ANTELOPE VALLEY
3277004004	Residential - Manufactured Homes	ANTELOPE VALLEY
3277004008	Residential - Manufactured Homes	ANTELOPE VALLEY
3277004010	Residential - Manufactured Homes	ANTELOPE VALLEY
3277005002	Residential - Manufactured Homes	ANTELOPE VALLEY
3277005005	Residential - Manufactured Homes	ANTELOPE VALLEY
3277005006	Residential - Manufactured Homes	ANTELOPE VALLEY
3277005008	Residential - Manufactured Homes	ANTELOPE VALLEY
3277005010	Residential - Manufactured Homes	ANTELOPE VALLEY
3277009005	Residential - Manufactured Homes	ANTELOPE VALLEY
3277009007	Residential - Manufactured Homes	ANTELOPE VALLEY
3277009012	Residential - Manufactured Homes	ANTELOPE VALLEY
3277009015	Residential - Manufactured Homes	ANTELOPE VALLEY
3277009020	Residential - Manufactured Homes	ANTELOPE VALLEY
3277009021	Residential - Manufactured Homes	ANTELOPE VALLEY
3277023009	Residential - Manufactured Homes	ANTELOPE VALLEY
3277023011	Residential - Manufactured Homes	ANTELOPE VALLEY
3277023015	Residential - Manufactured Homes	ANTELOPE VALLEY
3277024001	Residential - Manufactured Homes	ANTELOPE VALLEY
3277024010	Residential - Manufactured Homes	ANTELOPE VALLEY
3277024012	Residential - Manufactured Homes	ANTELOPE VALLEY
3277028040	Residential - Manufactured Homes	ANTELOPE VALLEY

APN	Assessor Use Code - Type	Community Name
3277029032	Residential - Manufactured Homes	ANTELOPE VALLEY
3278020028	Residential - Manufactured Homes	ANTELOPE VALLEY
3278020029	Residential - Manufactured Homes	ANTELOPE VALLEY
3278025035	Residential - Manufactured Homes	ANTELOPE VALLEY
3278027012	Residential - Manufactured Homes	ANTELOPE VALLEY
3278027015	Residential - Manufactured Homes	ANTELOPE VALLEY
3278027016	Residential - Manufactured Homes	ANTELOPE VALLEY
3279015024	Residential - Manufactured Homes	ANTELOPE VALLEY
3306006135	Residential - Manufactured Homes	ANTELOPE VALLEY
3306009270	Residential - Manufactured Homes	ANTELOPE VALLEY
3374005021	Residential - Manufactured Homes	ANTELOPE VALLEY
3046002006	Residential - Three Units (any combination)	ANTELOPE VALLEY
3046002049	Residential - Three Units (any combination)	ANTELOPE VALLEY
3049024002	Residential - Three Units (any combination)	ANTELOPE VALLEY
3049024003	Residential - Three Units (any combination)	ANTELOPE VALLEY
3101017012	Residential - Three Units (any combination)	ANTELOPE VALLEY
3103006002	Residential - Three Units (any combination)	ANTELOPE VALLEY
3137004007	Residential - Three Units (any combination)	ANTELOPE VALLEY
3152012020	Residential - Three Units (any combination)	ANTELOPE VALLEY
3228022023	Residential - Three Units (any combination)	ANTELOPE VALLEY
3234005022	Residential - Three Units (any combination)	ANTELOPE VALLEY
3279015030	Residential - Three Units (any combination)	ANTELOPE VALLEY
3306006016	Residential - Three Units (any combination)	ANTELOPE VALLEY
3306006018	Residential - Three Units (any combination)	ANTELOPE VALLEY
3307010067	Residential - Three Units (any combination)	ANTELOPE VALLEY
3038030904		ANTELOPE VALLEY
3038030905		ANTELOPE VALLEY
3063012300		ANTELOPE VALLEY
3228002302		ANTELOPE VALLEY
3242002300		ANTELOPE VALLEY
3242026303		ANTELOPE VALLEY
3243027300		ANTELOPE VALLEY
3250013306		ANTELOPE VALLEY
3250018301		ANTELOPE VALLEY
3250018302		ANTELOPE VALLEY
3307017281		ANTELOPE VALLEY
3307017282		ANTELOPE VALLEY
3307017283		ANTELOPE VALLEY
3061014005		ANTELOPE VALLEY
3061014006		ANTELOPE VALLEY
3061014007		ANTELOPE VALLEY
3061014008		ANTELOPE VALLEY
3061014009		ANTELOPE VALLEY
3061014010		ANTELOPE VALLEY
3061014011		ANTELOPE VALLEY
3061014012		ANTELOPE VALLEY
3061014013		ANTELOPE VALLEY
3061014014		ANTELOPE VALLEY
3061014015		ANTELOPE VALLEY
3061014016		ANTELOPE VALLEY
3061014300		ANTELOPE VALLEY
7057002922	Government Owned Property	CERRITOS ISLANDS
7057032902	Government Owned Property	CERRITOS ISLANDS
7016014064	Residential - Double, Duplex or Two Units	CERRITOS ISLANDS
6180004026	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	EAST RANCHO DOMINGUEZ
6180004027	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	EAST RANCHO DOMINGUEZ
6180005009	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	EAST RANCHO DOMINGUEZ
6180022050	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	EAST RANCHO DOMINGUEZ
6181029032	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	EAST RANCHO DOMINGUEZ
6185006037	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	EAST RANCHO DOMINGUEZ
6185010012	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	EAST RANCHO DOMINGUEZ
6180002016	Commercial - Commercial	EAST RANCHO DOMINGUEZ
6180002018	Commercial - Commercial	EAST RANCHO DOMINGUEZ
6180002024	Commercial - Commercial	EAST RANCHO DOMINGUEZ
6180002025	Commercial - Commercial	EAST RANCHO DOMINGUEZ
6180003003	Commercial - Commercial	EAST RANCHO DOMINGUEZ
6180003015	Commercial - Commercial	EAST RANCHO DOMINGUEZ
6180004029	Commercial - Commercial	EAST RANCHO DOMINGUEZ
6180005007	Commercial - Commercial	EAST RANCHO DOMINGUEZ
6180005023	Commercial - Commercial	EAST RANCHO DOMINGUEZ
6180010005	Commercial - Commercial	EAST RANCHO DOMINGUEZ
6180010026	Commercial - Commercial	EAST RANCHO DOMINGUEZ
6180021002	Commercial - Commercial	EAST RANCHO DOMINGUEZ
6181026030	Commercial - Commercial	EAST RANCHO DOMINGUEZ
6185010011	Commercial - Commercial	EAST RANCHO DOMINGUEZ
6185015016	Commercial - Commercial	EAST RANCHO DOMINGUEZ
6185006034	Commercial - Hotel and Motel	EAST RANCHO DOMINGUEZ
6181029044	Commercial - Nursery or Greenhouse	EAST RANCHO DOMINGUEZ
6180002020	Commercial - Office Building	EAST RANCHO DOMINGUEZ

APN	Assessor Use Code - Type	Community Name
6180002026	Commercial - Office Building	EAST RANCHO DOMINGUEZ
6180005006	Commercial - Office Building	EAST RANCHO DOMINGUEZ
6180005017	Commercial - Office Building	EAST RANCHO DOMINGUEZ
6181029042	Commercial - Office Building	EAST RANCHO DOMINGUEZ
6181029043	Commercial - Office Building	EAST RANCHO DOMINGUEZ
6195019028	Commercial - Office Building	EAST RANCHO DOMINGUEZ
6195019029	Commercial - Office Building	EAST RANCHO DOMINGUEZ
6195019033	Commercial - Office Building	EAST RANCHO DOMINGUEZ
6180003001	Commercial - Parking Lot	EAST RANCHO DOMINGUEZ
6180018004	Commercial - Parking Lot	EAST RANCHO DOMINGUEZ
6181028027	Commercial - Parking Lot	EAST RANCHO DOMINGUEZ
6181028038	Commercial - Parking Lot	EAST RANCHO DOMINGUEZ
6184001060	Commercial - Parking Lot	EAST RANCHO DOMINGUEZ
6195019031	Commercial - Parking Lot	EAST RANCHO DOMINGUEZ
6180003007	Commercial - Professional Building	EAST RANCHO DOMINGUEZ
6180009013	Commercial - Professional Building	EAST RANCHO DOMINGUEZ
6180015901	Commercial - Professional Building	EAST RANCHO DOMINGUEZ
6185010020	Commercial - Restaurant, Cocktail Lounge	EAST RANCHO DOMINGUEZ
6180001024	Commercial - Service Shop Radio & Television Repair, Refrigeration Service, *	EAST RANCHO DOMINGUEZ
6180010001	Commercial - Service Station	EAST RANCHO DOMINGUEZ
6185009026	Commercial - Service Station	EAST RANCHO DOMINGUEZ
6195003036	Commercial - Service Station	EAST RANCHO DOMINGUEZ
6180002013	Commercial - Store	EAST RANCHO DOMINGUEZ
6180002014	Commercial - Store	EAST RANCHO DOMINGUEZ
6180002021	Commercial - Store	EAST RANCHO DOMINGUEZ
6180002027	Commercial - Store	EAST RANCHO DOMINGUEZ
6180003006	Commercial - Store	EAST RANCHO DOMINGUEZ
6180003012	Commercial - Store	EAST RANCHO DOMINGUEZ
6180003017	Commercial - Store	EAST RANCHO DOMINGUEZ
6180003020	Commercial - Store	EAST RANCHO DOMINGUEZ
6180003023	Commercial - Store	EAST RANCHO DOMINGUEZ
6180004018	Commercial - Store	EAST RANCHO DOMINGUEZ
6180004020	Commercial - Store	EAST RANCHO DOMINGUEZ
6180004024	Commercial - Store	EAST RANCHO DOMINGUEZ
6180004028	Commercial - Store	EAST RANCHO DOMINGUEZ
6180005019	Commercial - Store	EAST RANCHO DOMINGUEZ
6180015019	Commercial - Store	EAST RANCHO DOMINGUEZ
6180015024	Commercial - Store	EAST RANCHO DOMINGUEZ
6180016028	Commercial - Store	EAST RANCHO DOMINGUEZ
6180018003	Commercial - Store	EAST RANCHO DOMINGUEZ
6180022006	Commercial - Store	EAST RANCHO DOMINGUEZ
6181026023	Commercial - Store	EAST RANCHO DOMINGUEZ
6181028039	Commercial - Store	EAST RANCHO DOMINGUEZ
6185010005	Commercial - Store	EAST RANCHO DOMINGUEZ
6185010006	Commercial - Store	EAST RANCHO DOMINGUEZ
6185010057	Commercial - Store	EAST RANCHO DOMINGUEZ
6195019027	Commercial - Store	EAST RANCHO DOMINGUEZ
6195019030	Commercial - Store	EAST RANCHO DOMINGUEZ
6180001002	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
6180002015	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
6180002023	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
6180004013	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
6180004017	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
6180004019	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
6180004023	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
6180005020	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
6180015023	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
6180015025	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
6180018001	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
6181026006	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
6181029001	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
6181029020	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
6185006031	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
6185006032	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
6185006033	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
6185010010	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
6185010047	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
6195009001	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
6195019026	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
6195019032	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
6195019034	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
7301014006	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
7301014025	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
7302001023	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
6180017922	Government Owned Property	EAST RANCHO DOMINGUEZ
6180017923	Government Owned Property	EAST RANCHO DOMINGUEZ
6180017924	Government Owned Property	EAST RANCHO DOMINGUEZ
6185017900	Government Owned Property	EAST RANCHO DOMINGUEZ
6195005901	Government Owned Property	EAST RANCHO DOMINGUEZ

APN	Assessor Use Code - Type	Community Name
6180015022	Industrial - Industrial	EAST RANCHO DOMINGUEZ
6180004022	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	EAST RANCHO DOMINGUEZ
6185010007	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	EAST RANCHO DOMINGUEZ
6181026031	Industrial - Warehousing, Distribution, Storage	EAST RANCHO DOMINGUEZ
6180003014	Institutional - Church	EAST RANCHO DOMINGUEZ
6180008025	Institutional - Church	EAST RANCHO DOMINGUEZ
6180010003	Institutional - Church	EAST RANCHO DOMINGUEZ
6180010021	Institutional - Church	EAST RANCHO DOMINGUEZ
6181023030	Institutional - Church	EAST RANCHO DOMINGUEZ
6185010013	Institutional - Church	EAST RANCHO DOMINGUEZ
6185011037	Institutional - Church	EAST RANCHO DOMINGUEZ
6185011039	Institutional - Church	EAST RANCHO DOMINGUEZ
6195003034	Institutional - Church	EAST RANCHO DOMINGUEZ
6180009015	Institutional - Hospital	EAST RANCHO DOMINGUEZ
6180010022	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	EAST RANCHO DOMINGUEZ
6185012028	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	EAST RANCHO DOMINGUEZ
6180003002	Recreational - Club, Lodge Hall, Fraternal Organization	EAST RANCHO DOMINGUEZ
6180002001	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180002006	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180002007	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180002009	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180002028	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180003013	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180004002	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180004003	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180004004	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180004006	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180004007	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180004009	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180004010	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180004011	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180004012	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180005013	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180008020	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180009014	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180009018	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180011002	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180011003	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180011006	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180011015	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180011018	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180012003	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180012008	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180012011	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180012018	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180012023	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180012024	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180012025	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180012027	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180012030	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180013020	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180013028	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180015001	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180015004	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180015010	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180015011	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180015015	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180018012	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180018017	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180019011	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180019013	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180019014	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180019015	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180020003	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180020004	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180020009	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180021011	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180022001	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180022035	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180022037	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180022038	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180023060	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181022006	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181022016	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181022030	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181022033	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181022034	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181023002	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181023005	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ

APN	Assessor Use Code - Type	Community Name
6181023006	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181023017	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181024002	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181024014	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181025001	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181025014	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181025018	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181025021	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181025027	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181030018	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181030901	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181031005	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181031021	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181031040	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181031041	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181032005	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181033003	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181033017	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181034076	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6184001040	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6184001048	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6184001066	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6185001035	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6185001041	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6185001042	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6185001045	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6185002069	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6185003078	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6185006042	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6185007034	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6185007037	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6185008023	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6185009022	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6185009028	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6185010051	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6185012020	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6185012034	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6185014009	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6185016044	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6185016062	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6185018038	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6185018062	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195003003	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195003013	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195003020	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195004003	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195004010	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195004011	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195004013	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195004026	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195005019	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195007022	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195008010	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195008012	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195008013	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195008014	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195008051	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195008052	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195009015	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195009022	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195010013	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195010016	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195010024	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195011005	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195011009	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195011022	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195011027	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195011041	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195012044	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195013046	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195014013	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195014014	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195015012	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195015013	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195015018	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195016007	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195016016	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195017003	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195017019	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ

APN	Assessor Use Code - Type	Community Name
6195017025	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195018018	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195018021	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195018023	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195018027	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195019002	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195019004	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195019005	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195019006	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195019008	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195019009	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195019014	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195019015	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195019017	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
7301013017	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
7301014019	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
7301015002	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
7301017019	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
7301017022	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
7301018012	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
7302003009	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
7302003032	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
7302003033	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
7302005016	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
7302006016	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
7302007006	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
7302007007	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
7302008008	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
7302015015	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
7302015016	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
7302017002	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
7302024006	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
7302024023	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
7302027015	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
7302028022	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180001009	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6180002019	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6180004015	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6180008024	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6180010004	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6180010015	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6180011014	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6180011017	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6180016008	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6180016009	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6181022004	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6181022008	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6181022023	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6181022024	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6181022025	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6181022026	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6181022027	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6181022028	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6181023020	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6181023022	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6181023024	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6181025006	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6181025010	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6181026007	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6181026022	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6185008020	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6195017022	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6195018031	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
7301014005	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
7302005003	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6180003010	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ
6180003011	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ
6180004016	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ
6180004021	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ
6180012012	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ
6180013015	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ
6180016007	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ
6180021003	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ
6181022001	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ
6181022035	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ
6181023009	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ
6181024006	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ
6181029041	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ
6185006036	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ

APN	Assessor Use Code - Type	Community Name
6185006054	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ
6185007035	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ
6185009023	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ
6195008002	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ
6195011042	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ
6195017032	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ
6195018026	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ
7301014004	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ
7301014024	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ
7302005006	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ
7302005007	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ
6195003027	Residential - Rooming / Boarding House	EAST RANCHO DOMINGUEZ
6180003009	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6180010007	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6180010011	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6180011001	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6180011008	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6180013025	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6180021001	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6180022051	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6181022022	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6181023010	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6181023021	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6181024003	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6181024007	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6181025020	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6181026005	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6185009025	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6185011006	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6195001009	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6195003033	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6195003035	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6195004025	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6195004027	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6195004028	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6195006011	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6195008004	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6195008006	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6195010025	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6195018032	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
7302001013	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
7302005001	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
7302005002	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6180019008		EAST RANCHO DOMINGUEZ
6180023007		EAST RANCHO DOMINGUEZ
6181028040		EAST RANCHO DOMINGUEZ
6188026024		EAST RANCHO DOMINGUEZ
6195018033		EAST RANCHO DOMINGUEZ
2526018009	Residential - Double, Duplex or Two Units	KAGEL CANYON
2846002012	Commercial - Animal Kennel	LOPEZ CANYON
2581006008	Dry Farm - Desert	LOPEZ CANYON
2526003036	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	LOPEZ CANYON
2846002018	Institutional - School (Private)	LOPEZ CANYON
6234012900	Government Owned Property	LYNWOOD ISLAND
6234013271	Industrial - Industrial	LYNWOOD ISLAND
4440028006	Commercial - Commercial	MALIBU COASTAL ZONE
4445007019	Commercial - Commercial	MALIBU COASTAL ZONE
4438012004	Commercial - Office Building	MALIBU COASTAL ZONE
4448002901	Commercial - Restaurant, Cocktail Lounge	MALIBU COASTAL ZONE
4445006028	Commercial - Store	MALIBU COASTAL ZONE
4445008015	Commercial - Store Combination (w/ Office or Residential)	MALIBU COASTAL ZONE
4440014900	Government Owned Property	MALIBU COASTAL ZONE
4443001900	Government Owned Property	MALIBU COASTAL ZONE
4445004902	Government Owned Property	MALIBU COASTAL ZONE
4445004903	Government Owned Property	MALIBU COASTAL ZONE
4448001900	Government Owned Property	MALIBU COASTAL ZONE
4462031900	Government Owned Property	MALIBU COASTAL ZONE
4462032901	Government Owned Property	MALIBU COASTAL ZONE
4440028005	Industrial - Industrial	MALIBU COASTAL ZONE
4445028014	Industrial - Lumber Yard	MALIBU COASTAL ZONE
4455033912	Institutional - School (Private)	MALIBU COASTAL ZONE
4445008803	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	MALIBU COASTAL ZONE
4438031009	Residential - Double, Duplex or Two Units	MALIBU COASTAL ZONE
4445024023	Residential - Double, Duplex or Two Units	MALIBU COASTAL ZONE
4438003015	Residential - Five or more Apartments or units	MALIBU COASTAL ZONE
4438012002	Residential - Three Units (any combination)	MALIBU COASTAL ZONE
4445006033		MALIBU COASTAL ZONE
4445006034		MALIBU COASTAL ZONE
4445006035		MALIBU COASTAL ZONE

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4224004900	Government Owned Property	MARINA DEL REY
4224004901	Government Owned Property	MARINA DEL REY
4224004902	Government Owned Property	MARINA DEL REY
4224005900	Government Owned Property	MARINA DEL REY
4224006901	Government Owned Property	MARINA DEL REY
4224006909	Government Owned Property	MARINA DEL REY
4224008900	Government Owned Property	MARINA DEL REY
4224010900	Government Owned Property	MARINA DEL REY
4224011901	Government Owned Property	MARINA DEL REY
4224012900	Government Owned Property	MARINA DEL REY
4224012901	Government Owned Property	MARINA DEL REY
4224001904	Residential - Five or more Apartments or units	MARINA DEL REY
7306018042	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	RANCHO DOMINGUEZ
7306002034	Commercial - Office Building	RANCHO DOMINGUEZ
7306013006	Commercial - Office Building	RANCHO DOMINGUEZ
7318011080	Commercial - Office Building	RANCHO DOMINGUEZ
7318011081	Commercial - Office Building	RANCHO DOMINGUEZ
7306001902	Government Owned Property	RANCHO DOMINGUEZ
7306015900	Government Owned Property	RANCHO DOMINGUEZ
7306015901	Government Owned Property	RANCHO DOMINGUEZ
7306015903	Government Owned Property	RANCHO DOMINGUEZ
7306019901	Government Owned Property	RANCHO DOMINGUEZ
7306019902	Government Owned Property	RANCHO DOMINGUEZ
7306019909	Government Owned Property	RANCHO DOMINGUEZ
7306004026	Industrial - Food Processing Plant	RANCHO DOMINGUEZ
7306004027	Industrial - Food Processing Plant	RANCHO DOMINGUEZ
7306013038	Industrial - Food Processing Plant	RANCHO DOMINGUEZ
7306004032	Industrial - Heavy Manufacturing	RANCHO DOMINGUEZ
7306006032	Industrial - Heavy Manufacturing	RANCHO DOMINGUEZ
7306006046	Industrial - Heavy Manufacturing	RANCHO DOMINGUEZ
7306012005	Industrial - Heavy Manufacturing	RANCHO DOMINGUEZ
7306012009	Industrial - Heavy Manufacturing	RANCHO DOMINGUEZ
7306012091	Industrial - Heavy Manufacturing	RANCHO DOMINGUEZ
7306013012	Industrial - Heavy Manufacturing	RANCHO DOMINGUEZ
7306020002	Industrial - Heavy Manufacturing	RANCHO DOMINGUEZ
7306001904	Industrial - Industrial	RANCHO DOMINGUEZ
7306002056	Industrial - Industrial	RANCHO DOMINGUEZ
7306003045	Industrial - Industrial	RANCHO DOMINGUEZ
7306004037	Industrial - Industrial	RANCHO DOMINGUEZ
7306012097	Industrial - Industrial	RANCHO DOMINGUEZ
7306013900	Industrial - Industrial	RANCHO DOMINGUEZ
7306014052	Industrial - Industrial	RANCHO DOMINGUEZ
7306014059	Industrial - Industrial	RANCHO DOMINGUEZ
7306015907	Industrial - Industrial	RANCHO DOMINGUEZ
7306017016	Industrial - Industrial	RANCHO DOMINGUEZ
7306019080	Industrial - Industrial	RANCHO DOMINGUEZ
7306021005	Industrial - Industrial	RANCHO DOMINGUEZ
7306022039	Industrial - Industrial	RANCHO DOMINGUEZ
7318011800	Industrial - Industrial	RANCHO DOMINGUEZ
7306002049	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306001022	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306001037	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306002037	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306002043	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306002046	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306002057	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306003029	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306003036	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306003041	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306003042	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306003055	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306003059	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306003060	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306003061	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306004022	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306004029	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306004035	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306006034	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306006041	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306006042	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306012014	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306012015	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306012076	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306012077	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306012084	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306012090	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306012094	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306013013	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306013040	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ

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7306013042	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306013043	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306014045	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306014049	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306014050	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306014051	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306015011	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306015016	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306015018	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306015019	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306017007	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306017015	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306019034	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306019057	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306019059	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306019089	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306019092	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306020034	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306020035	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306020042	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306020043	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306021008	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306021020	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7318007064	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7318011098	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306017009	Industrial - Lumber Yard	RANCHO DOMINGUEZ
7306020038	Industrial - Open Storage	RANCHO DOMINGUEZ
7306003050	Industrial - Parking Lot (Industrial Use Property)	RANCHO DOMINGUEZ
7306003053	Industrial - Parking Lot (Industrial Use Property)	RANCHO DOMINGUEZ
7306012072	Industrial - Parking Lot (Industrial Use Property)	RANCHO DOMINGUEZ
7306012089	Industrial - Parking Lot (Industrial Use Property)	RANCHO DOMINGUEZ
7306018044	Industrial - Parking Lot (Industrial Use Property)	RANCHO DOMINGUEZ
7306019087	Industrial - Parking Lot (Industrial Use Property)	RANCHO DOMINGUEZ
7306020009	Industrial - Parking Lot (Industrial Use Property)	RANCHO DOMINGUEZ
7306020037	Industrial - Parking Lot (Industrial Use Property)	RANCHO DOMINGUEZ
7306020040	Industrial - Parking Lot (Industrial Use Property)	RANCHO DOMINGUEZ
7306021011	Industrial - Parking Lot (Industrial Use Property)	RANCHO DOMINGUEZ
7318007022	Industrial - Parking Lot (Industrial Use Property)	RANCHO DOMINGUEZ
7306001021	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306001025	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306001036	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306002042	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306002047	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306002048	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306002050	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306002051	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306002052	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306002058	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306002059	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306002060	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306002061	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306002062	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306002063	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306002065	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306003033	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306003035	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306003037	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306003038	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306003044	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306003046	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306003047	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306003051	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306003052	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306003056	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306003057	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306004030	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306004033	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306004036	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306006028	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306006030	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306006033	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306006035	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306006040	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306006044	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306006045	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306012013	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306012074	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306012075	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306012078	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ

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7306012079	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306012080	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306012081	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306012082	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306012083	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306012088	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306012092	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306012093	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306012095	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306013022	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306013039	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306013041	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306013044	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306013045	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306014053	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306014054	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306014060	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306015013	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306015015	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306015020	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306015021	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306017011	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306017013	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306018030	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306019018	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306019055	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306019084	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306019096	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306020018	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306020019	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306020021	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306020032	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306020033	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306020039	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306020041	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306021012	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306021015	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306021016	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306021018	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306021021	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306021028	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306021029	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306021030	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306022040	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7318007036	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7318007043	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7318007058	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7318007071	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7318007072	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7318011069	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7318011097	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306001806	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	RANCHO DOMINGUEZ
7306003800	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	RANCHO DOMINGUEZ
7306003801	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	RANCHO DOMINGUEZ
7306012801	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	RANCHO DOMINGUEZ
7306013800	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	RANCHO DOMINGUEZ
7306013801	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	RANCHO DOMINGUEZ
7306014803	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	RANCHO DOMINGUEZ
7306015809	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	RANCHO DOMINGUEZ
7306020800	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	RANCHO DOMINGUEZ
7306020803	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	RANCHO DOMINGUEZ
7306020804	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	RANCHO DOMINGUEZ
7306021802	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	RANCHO DOMINGUEZ
7306022800	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	RANCHO DOMINGUEZ
7318007802		RANCHO DOMINGUEZ
2826023023	Commercial - Animal Kennel	SANTA CLARITA VALLEY
3231008040	Commercial - Animal Kennel	SANTA CLARITA VALLEY
2853002009	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	SANTA CLARITA VALLEY
2865017017	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	SANTA CLARITA VALLEY
3231007054	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	SANTA CLARITA VALLEY
3231013005	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	SANTA CLARITA VALLEY
3231018007	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	SANTA CLARITA VALLEY
3231018038	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	SANTA CLARITA VALLEY
3231025031	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	SANTA CLARITA VALLEY
2813024003	Commercial - Commercial	SANTA CLARITA VALLEY
2853001005	Commercial - Commercial	SANTA CLARITA VALLEY
2853001010	Commercial - Commercial	SANTA CLARITA VALLEY
3231012004	Commercial - Commercial	SANTA CLARITA VALLEY
3231012012	Commercial - Commercial	SANTA CLARITA VALLEY

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3231013021	Commercial - Commercial	SANTA CLARITA VALLEY
3231013024	Commercial - Commercial	SANTA CLARITA VALLEY
3231013026	Commercial - Commercial	SANTA CLARITA VALLEY
3231023005	Commercial - Commercial	SANTA CLARITA VALLEY
3231024024	Commercial - Commercial	SANTA CLARITA VALLEY
3231024027	Commercial - Commercial	SANTA CLARITA VALLEY
3231024034	Commercial - Commercial	SANTA CLARITA VALLEY
3231025021	Commercial - Commercial	SANTA CLARITA VALLEY
3231025026	Commercial - Commercial	SANTA CLARITA VALLEY
3231025027	Commercial - Commercial	SANTA CLARITA VALLEY
3231026017	Commercial - Commercial	SANTA CLARITA VALLEY
3270002045	Commercial - Commercial	SANTA CLARITA VALLEY
3270002048	Commercial - Commercial	SANTA CLARITA VALLEY
3270008902	Commercial - Commercial	SANTA CLARITA VALLEY
3270013009	Commercial - Commercial	SANTA CLARITA VALLEY
3270013011	Commercial - Commercial	SANTA CLARITA VALLEY
3270016055	Commercial - Commercial	SANTA CLARITA VALLEY
3270016056	Commercial - Commercial	SANTA CLARITA VALLEY
3270020902	Commercial - Commercial	SANTA CLARITA VALLEY
3270022018	Commercial - Commercial	SANTA CLARITA VALLEY
3214020060	Commercial - Hotel and Motel	SANTA CLARITA VALLEY
2812005016	Commercial - Nursery or Greenhouse	SANTA CLARITA VALLEY
2826025906	Commercial - Office Building	SANTA CLARITA VALLEY
2865008032	Commercial - Restaurant, Cocktail Lounge	SANTA CLARITA VALLEY
3231018006	Commercial - Restaurant, Cocktail Lounge	SANTA CLARITA VALLEY
3231008036	Commercial - Service Shop Radio & Television Repair, Refrigeration Service, *	SANTA CLARITA VALLEY
3231008037	Commercial - Service Shop Radio & Television Repair, Refrigeration Service, *	SANTA CLARITA VALLEY
3231018008	Commercial - Service Shop Radio & Television Repair, Refrigeration Service, *	SANTA CLARITA VALLEY
3231025024	Commercial - Service Shop Radio & Television Repair, Refrigeration Service, *	SANTA CLARITA VALLEY
3231025032	Commercial - Service Shop Radio & Television Repair, Refrigeration Service, *	SANTA CLARITA VALLEY
3231026019	Commercial - Service Shop Radio & Television Repair, Refrigeration Service, *	SANTA CLARITA VALLEY
3231026020	Commercial - Service Shop Radio & Television Repair, Refrigeration Service, *	SANTA CLARITA VALLEY
3231013023	Commercial - Service Station	SANTA CLARITA VALLEY
2865008037	Commercial - Store	SANTA CLARITA VALLEY
2865003028	Commercial - Store	SANTA CLARITA VALLEY
3231024021	Commercial - Store	SANTA CLARITA VALLEY
3231026018	Commercial - Store	SANTA CLARITA VALLEY
2865002002	Commercial - Store Combination (w/ Office or Residential)	SANTA CLARITA VALLEY
3212010038	Commercial - Store Combination (w/ Office or Residential)	SANTA CLARITA VALLEY
3214003003	Commercial - Store Combination (w/ Office or Residential)	SANTA CLARITA VALLEY
3214039014	Commercial - Store Combination (w/ Office or Residential)	SANTA CLARITA VALLEY
3231012001	Commercial - Store Combination (w/ Office or Residential)	SANTA CLARITA VALLEY
3231013010	Commercial - Store Combination (w/ Office or Residential)	SANTA CLARITA VALLEY
3231025028	Commercial - Store Combination (w/ Office or Residential)	SANTA CLARITA VALLEY
3231026022	Commercial - Store Combination (w/ Office or Residential)	SANTA CLARITA VALLEY
2813013021	Commercial - Wholesale and Manufacturing Outlet	SANTA CLARITA VALLEY
2813013013	Dry Farm - Desert	SANTA CLARITA VALLEY
2826123001	Dry Farm - Desert	SANTA CLARITA VALLEY
2826123002	Dry Farm - Desert	SANTA CLARITA VALLEY
2840004009	Dry Farm - Desert	SANTA CLARITA VALLEY
2848012042	Dry Farm - Desert	SANTA CLARITA VALLEY
3209008006	Dry Farm - Desert	SANTA CLARITA VALLEY
3209010007	Dry Farm - Desert	SANTA CLARITA VALLEY
3209010011	Dry Farm - Desert	SANTA CLARITA VALLEY
3209010022	Dry Farm - Desert	SANTA CLARITA VALLEY
3210002005	Dry Farm - Desert	SANTA CLARITA VALLEY
3210017065	Dry Farm - Desert	SANTA CLARITA VALLEY
3213006017	Dry Farm - Desert	SANTA CLARITA VALLEY
3213013003	Dry Farm - Desert	SANTA CLARITA VALLEY
3214018007	Dry Farm - Desert	SANTA CLARITA VALLEY
3231004014	Dry Farm - Desert	SANTA CLARITA VALLEY
3244025051	Dry Farm - Desert	SANTA CLARITA VALLEY
3244026038	Dry Farm - Desert	SANTA CLARITA VALLEY
3244031274	Dry Farm - Desert	SANTA CLARITA VALLEY
3247044005	Dry Farm - Desert	SANTA CLARITA VALLEY
2826009053	Dry Farm - Desert	SANTA CLARITA VALLEY
2812008900	Government Owned Property	SANTA CLARITA VALLEY
2840002901	Government Owned Property	SANTA CLARITA VALLEY
2865003903	Government Owned Property	SANTA CLARITA VALLEY
2865012912	Government Owned Property	SANTA CLARITA VALLEY
2866004900	Government Owned Property	SANTA CLARITA VALLEY
2866004901	Government Owned Property	SANTA CLARITA VALLEY
3244011902	Government Owned Property	SANTA CLARITA VALLEY
3244015904	Government Owned Property	SANTA CLARITA VALLEY
3247004904	Government Owned Property	SANTA CLARITA VALLEY
3270016044	Government Owned Property	SANTA CLARITA VALLEY
3270017906	Government Owned Property	SANTA CLARITA VALLEY
2865008903	Industrial - Industrial	SANTA CLARITA VALLEY
3231008033	Industrial - Industrial	SANTA CLARITA VALLEY

APN	Assessor Use Code - Type	Community Name
3231008034	Industrial - Industrial	SANTA CLARITA VALLEY
3231008038	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	SANTA CLARITA VALLEY
3231012013	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	SANTA CLARITA VALLEY
2866060056	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	SANTA CLARITA VALLEY
2866060068	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	SANTA CLARITA VALLEY
2866060062	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	SANTA CLARITA VALLEY
2866060063	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	SANTA CLARITA VALLEY
2866060064	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	SANTA CLARITA VALLEY
2866060066	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	SANTA CLARITA VALLEY
2866060067	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	SANTA CLARITA VALLEY
2866060069	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	SANTA CLARITA VALLEY
2866060070	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	SANTA CLARITA VALLEY
2865008007	Industrial - Motion Picture, Radio and Television Industry	SANTA CLARITA VALLEY
2826025907	Industrial - Warehousing, Distribution, Storage	SANTA CLARITA VALLEY
2865009015	Industrial - Warehousing, Distribution, Storage	SANTA CLARITA VALLEY
3231012011	Industrial - Warehousing, Distribution, Storage	SANTA CLARITA VALLEY
3271029086	Industrial - Warehousing, Distribution, Storage	SANTA CLARITA VALLEY
2813008019	Institutional - Church	SANTA CLARITA VALLEY
3271020070	Institutional - Church	SANTA CLARITA VALLEY
3272025008	Irrigated Farm - Pasture	SANTA CLARITA VALLEY
2813013014	Irrigated Farm - Poultry	SANTA CLARITA VALLEY
2848019011	Irrigated Farm - Private Rural Pumping Plant	SANTA CLARITA VALLEY
3214020024	Irrigated Farm - Private Rural Pumping Plant	SANTA CLARITA VALLEY
2848017012	Miscellaneous - Petroleum & Gas	SANTA CLARITA VALLEY
2866004801	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	SANTA CLARITA VALLEY
3209008906	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	SANTA CLARITA VALLEY
3210013903	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	SANTA CLARITA VALLEY
3210015900	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	SANTA CLARITA VALLEY
3210015901	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	SANTA CLARITA VALLEY
3210015902	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	SANTA CLARITA VALLEY
3243004270	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	SANTA CLARITA VALLEY
3209008012	Recreational - Athletic and Amusement Facility	SANTA CLARITA VALLEY
3209008016	Recreational - Athletic and Amusement Facility	SANTA CLARITA VALLEY
3212008054	Recreational - Athletic and Amusement Facility	SANTA CLARITA VALLEY
3210009013	Recreational - Camp	SANTA CLARITA VALLEY
3231026015	Recreational - Club, Lodge Hall, Fraternal Organization	SANTA CLARITA VALLEY
3209008013	Recreational - Skating Rink	SANTA CLARITA VALLEY
3213013027	Residential - (open)	SANTA CLARITA VALLEY
2813008030	Residential - Double, Duplex or Two Units	SANTA CLARITA VALLEY
2848019013	Residential - Double, Duplex or Two Units	SANTA CLARITA VALLEY
2865014003	Residential - Double, Duplex or Two Units	SANTA CLARITA VALLEY
2865014004	Residential - Double, Duplex or Two Units	SANTA CLARITA VALLEY
2865014017	Residential - Double, Duplex or Two Units	SANTA CLARITA VALLEY
2865015015	Residential - Double, Duplex or Two Units	SANTA CLARITA VALLEY
2865016043	Residential - Double, Duplex or Two Units	SANTA CLARITA VALLEY
3210002010	Residential - Double, Duplex or Two Units	SANTA CLARITA VALLEY
3212010025	Residential - Double, Duplex or Two Units	SANTA CLARITA VALLEY
3212010026	Residential - Double, Duplex or Two Units	SANTA CLARITA VALLEY
3212010029	Residential - Double, Duplex or Two Units	SANTA CLARITA VALLEY
3212010036	Residential - Double, Duplex or Two Units	SANTA CLARITA VALLEY
3231004044	Residential - Double, Duplex or Two Units	SANTA CLARITA VALLEY
3231007027	Residential - Double, Duplex or Two Units	SANTA CLARITA VALLEY
3231007072	Residential - Double, Duplex or Two Units	SANTA CLARITA VALLEY
3231013030	Residential - Double, Duplex or Two Units	SANTA CLARITA VALLEY
3231018029	Residential - Double, Duplex or Two Units	SANTA CLARITA VALLEY
3231018030	Residential - Double, Duplex or Two Units	SANTA CLARITA VALLEY
3231024017	Residential - Double, Duplex or Two Units	SANTA CLARITA VALLEY
3231026028	Residential - Double, Duplex or Two Units	SANTA CLARITA VALLEY
3270021010	Residential - Double, Duplex or Two Units	SANTA CLARITA VALLEY
2844022016	Residential - Five or more Apartments or units	SANTA CLARITA VALLEY
2844022017	Residential - Five or more Apartments or units	SANTA CLARITA VALLEY
2844022030	Residential - Five or more Apartments or units	SANTA CLARITA VALLEY
2865008008	Residential - Five or more Apartments or units	SANTA CLARITA VALLEY
2865008031	Residential - Five or more Apartments or units	SANTA CLARITA VALLEY
2865008043	Residential - Five or more Apartments or units	SANTA CLARITA VALLEY
3231018045	Residential - Five or more Apartments or units	SANTA CLARITA VALLEY
2853002010	Residential - Manufactured Home Park	SANTA CLARITA VALLEY
2865013014	Residential - Manufactured Home Park	SANTA CLARITA VALLEY
3214039004	Residential - Manufactured Home Park	SANTA CLARITA VALLEY
3214043015	Residential - Manufactured Home Park	SANTA CLARITA VALLEY
3231007070	Residential - Manufactured Home Park	SANTA CLARITA VALLEY
2813007016	Residential - Manufactured Homes	SANTA CLARITA VALLEY
2813021009	Residential - Manufactured Homes	SANTA CLARITA VALLEY
2853001024	Residential - Manufactured Homes	SANTA CLARITA VALLEY
2865013005	Residential - Manufactured Homes	SANTA CLARITA VALLEY
2865015002	Residential - Manufactured Homes	SANTA CLARITA VALLEY
3213010022	Residential - Manufactured Homes	SANTA CLARITA VALLEY
3231013004	Residential - Manufactured Homes	SANTA CLARITA VALLEY
3231013008	Residential - Manufactured Homes	SANTA CLARITA VALLEY

APN	Assessor Use Code - Type	Community Name
3231023010	Residential - Manufactured Homes	SANTA CLARITA VALLEY
3247030053	Residential - Manufactured Homes	SANTA CLARITA VALLEY
3270013014	Residential - Manufactured Homes	SANTA CLARITA VALLEY
3270015051	Residential - Manufactured Homes	SANTA CLARITA VALLEY
3270016045	Residential - Manufactured Homes	SANTA CLARITA VALLEY
3270016049	Residential - Manufactured Homes	SANTA CLARITA VALLEY
3270016051	Residential - Manufactured Homes	SANTA CLARITA VALLEY
3270016057	Residential - Manufactured Homes	SANTA CLARITA VALLEY
3272028019	Residential - Manufactured Homes	SANTA CLARITA VALLEY
3210013039	Residential - Three Units (any combination)	SANTA CLARITA VALLEY
3231003048	Residential - Three Units (any combination)	SANTA CLARITA VALLEY
3231013012	Residential - Three Units (any combination)	SANTA CLARITA VALLEY
3270022019	Residential - Three Units (any combination)	SANTA CLARITA VALLEY
2813003302		SANTA CLARITA VALLEY
2826023903		SANTA CLARITA VALLEY
2866032079		SANTA CLARITA VALLEY
3243001311		SANTA CLARITA VALLEY
3243001312		SANTA CLARITA VALLEY
3244026300		SANTA CLARITA VALLEY
4436004010	Commercial - Store Combination (w/ Office or Residential)	SANTA MONICA MOUNTAINS NORTH AREA
2063020902	Government Owned Property	SANTA MONICA MOUNTAINS NORTH AREA
2058005015	Residential - Double, Duplex or Two Units	SANTA MONICA MOUNTAINS NORTH AREA
2063003029	Residential - Double, Duplex or Two Units	SANTA MONICA MOUNTAINS NORTH AREA
2058009008	Residential - Manufactured Home Park	SANTA MONICA MOUNTAINS NORTH AREA
4436008010	Residential - Three Units (any combination)	SANTA MONICA MOUNTAINS NORTH AREA
4440006017	Residential - Three Units (any combination)	SANTA MONICA MOUNTAINS NORTH AREA
8714028270	Government Owned Property	SOUTH DIAMOND BAR
8489019035	Institutional - Church	VALINDA
7350001018	Commercial - Shopping Center (Regional)	WEST CARSON
7348006900	Government Owned Property	WEST CARSON
7350001027		WEST CARSON
7350001029		WEST CARSON
8174019035	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	WEST WHITTIER - LOS NIETOS
8169026033	Commercial - Bank, Savings & Loan	WEST WHITTIER - LOS NIETOS
8174019056	Commercial - Commercial	WEST WHITTIER - LOS NIETOS
8178004065	Commercial - Commercial	WEST WHITTIER - LOS NIETOS
8130016026	Commercial - Hotel and Motel	WEST WHITTIER - LOS NIETOS
8130016031	Commercial - Hotel and Motel	WEST WHITTIER - LOS NIETOS
8171001020	Commercial - Hotel and Motel	WEST WHITTIER - LOS NIETOS
8177024009	Commercial - Hotel and Motel	WEST WHITTIER - LOS NIETOS
8169026031	Commercial - Office Building	WEST WHITTIER - LOS NIETOS
8173023004	Commercial - Office Building	WEST WHITTIER - LOS NIETOS
8177018027	Commercial - Office Building	WEST WHITTIER - LOS NIETOS
8171001019	Commercial - Professional Building	WEST WHITTIER - LOS NIETOS
8130016062	Commercial - Restaurant, Cocktail Lounge	WEST WHITTIER - LOS NIETOS
8169021016	Commercial - Restaurant, Cocktail Lounge	WEST WHITTIER - LOS NIETOS
8171001027	Commercial - Restaurant, Cocktail Lounge	WEST WHITTIER - LOS NIETOS
8173023015	Commercial - Restaurant, Cocktail Lounge	WEST WHITTIER - LOS NIETOS
8173023018	Commercial - Restaurant, Cocktail Lounge	WEST WHITTIER - LOS NIETOS
8173024014	Commercial - Restaurant, Cocktail Lounge	WEST WHITTIER - LOS NIETOS
8177024007	Commercial - Restaurant, Cocktail Lounge	WEST WHITTIER - LOS NIETOS
8174017037	Commercial - Service Station	WEST WHITTIER - LOS NIETOS
8177024008	Commercial - Service Station	WEST WHITTIER - LOS NIETOS
8169021028	Commercial - Store	WEST WHITTIER - LOS NIETOS
8171001023	Commercial - Store	WEST WHITTIER - LOS NIETOS
8171002027	Commercial - Store	WEST WHITTIER - LOS NIETOS
8174017039	Commercial - Store	WEST WHITTIER - LOS NIETOS
8174019001	Commercial - Store	WEST WHITTIER - LOS NIETOS
8174019002	Commercial - Store	WEST WHITTIER - LOS NIETOS
8174019003	Commercial - Store	WEST WHITTIER - LOS NIETOS
8174019004	Commercial - Store	WEST WHITTIER - LOS NIETOS
8177024003	Commercial - Store	WEST WHITTIER - LOS NIETOS
8177024006	Commercial - Store	WEST WHITTIER - LOS NIETOS
8171001021	Commercial - Store Combination (w/ Office or Residential)	WEST WHITTIER - LOS NIETOS
8171001022	Commercial - Store Combination (w/ Office or Residential)	WEST WHITTIER - LOS NIETOS
8174019005	Commercial - Store Combination (w/ Office or Residential)	WEST WHITTIER - LOS NIETOS
8174019036	Commercial - Store Combination (w/ Office or Residential)	WEST WHITTIER - LOS NIETOS
8130024908	Government Owned Property	WEST WHITTIER - LOS NIETOS
8130028085	Government Owned Property	WEST WHITTIER - LOS NIETOS
8169008900	Government Owned Property	WEST WHITTIER - LOS NIETOS
8169008901	Government Owned Property	WEST WHITTIER - LOS NIETOS
8169008902	Government Owned Property	WEST WHITTIER - LOS NIETOS
8169013900	Government Owned Property	WEST WHITTIER - LOS NIETOS
8169020900	Government Owned Property	WEST WHITTIER - LOS NIETOS
8169020901	Government Owned Property	WEST WHITTIER - LOS NIETOS
8169020902	Government Owned Property	WEST WHITTIER - LOS NIETOS
8173022900	Government Owned Property	WEST WHITTIER - LOS NIETOS
8176002271	Government Owned Property	WEST WHITTIER - LOS NIETOS
8176002905	Government Owned Property	WEST WHITTIER - LOS NIETOS

APN	Assessor Use Code - Type	Community Name
8176028900	Government Owned Property	WEST WHITTIER - LOS NIETOS
8177019904	Government Owned Property	WEST WHITTIER - LOS NIETOS
8178003900	Government Owned Property	WEST WHITTIER - LOS NIETOS
8178025902	Government Owned Property	WEST WHITTIER - LOS NIETOS
8169026029	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	WEST WHITTIER - LOS NIETOS
8130028079	Industrial - Open Storage	WEST WHITTIER - LOS NIETOS
8169026030	Industrial - Warehousing, Distribution, Storage	WEST WHITTIER - LOS NIETOS
8169026022	Institutional - Church	WEST WHITTIER - LOS NIETOS
8176007026	Institutional - Church	WEST WHITTIER - LOS NIETOS
8176007027	Institutional - Church	WEST WHITTIER - LOS NIETOS
8178005028	Institutional - Church	WEST WHITTIER - LOS NIETOS
8178005029	Institutional - Church	WEST WHITTIER - LOS NIETOS
8130028067	Institutional - School (Private)	WEST WHITTIER - LOS NIETOS
8178023900	Institutional - School (Private)	WEST WHITTIER - LOS NIETOS
8178025901	Institutional - School (Private)	WEST WHITTIER - LOS NIETOS
8174006062	Irrigated Farm - Private Rural Pumping Plant	WEST WHITTIER - LOS NIETOS
8174013800	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	WEST WHITTIER - LOS NIETOS
8174013802	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	WEST WHITTIER - LOS NIETOS
8174019800	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	WEST WHITTIER - LOS NIETOS
8176001802	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	WEST WHITTIER - LOS NIETOS
8176001803	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	WEST WHITTIER - LOS NIETOS
8176001805	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	WEST WHITTIER - LOS NIETOS
8176001806	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	WEST WHITTIER - LOS NIETOS
8177001802	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	WEST WHITTIER - LOS NIETOS
8177001803	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	WEST WHITTIER - LOS NIETOS
8177001804	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	WEST WHITTIER - LOS NIETOS
8177001806	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	WEST WHITTIER - LOS NIETOS
8177003802	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	WEST WHITTIER - LOS NIETOS
8177003807	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	WEST WHITTIER - LOS NIETOS
8130028021	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8169018027	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8169018028	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8169020005	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8169020009	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8169027044	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8173024008	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8174015008	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8174015010	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8174015014	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8174015017	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8174015023	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8174015027	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8174017016	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8174017017	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8174017026	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8174017027	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8174017038	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8174017040	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8174017045	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8174017046	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8174017047	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8174017048	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8174017050	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8174028037	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8174028038	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8176003011	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8176003021	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8176004062	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8176004071	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8176004073	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8176004078	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8177006016	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8178003026	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8178031010	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8178031031	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8178031032	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8178031033	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8178031041	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8178031044	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8178031048	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8178031050	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8178033041	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8169013088	Residential - Five or more Apartments or units	WEST WHITTIER - LOS NIETOS
8169013089	Residential - Five or more Apartments or units	WEST WHITTIER - LOS NIETOS
8169013090	Residential - Five or more Apartments or units	WEST WHITTIER - LOS NIETOS
8169013091	Residential - Five or more Apartments or units	WEST WHITTIER - LOS NIETOS
8169013092	Residential - Five or more Apartments or units	WEST WHITTIER - LOS NIETOS
8176001012	Residential - Five or more Apartments or units	WEST WHITTIER - LOS NIETOS
8176003034	Residential - Five or more Apartments or units	WEST WHITTIER - LOS NIETOS

APN	Assessor Use Code - Type	Community Name
8176007021	Residential - Five or more Apartments or units	WEST WHITTIER - LOS NIETOS
8176007028	Residential - Five or more Apartments or units	WEST WHITTIER - LOS NIETOS
8176007029	Residential - Five or more Apartments or units	WEST WHITTIER - LOS NIETOS
8176007031	Residential - Five or more Apartments or units	WEST WHITTIER - LOS NIETOS
8176007032	Residential - Five or more Apartments or units	WEST WHITTIER - LOS NIETOS
8176007034	Residential - Five or more Apartments or units	WEST WHITTIER - LOS NIETOS
8176007036	Residential - Five or more Apartments or units	WEST WHITTIER - LOS NIETOS
8178005025	Residential - Five or more Apartments or units	WEST WHITTIER - LOS NIETOS
8169018019	Residential - Four Units (any combination)	WEST WHITTIER - LOS NIETOS
8169018033	Residential - Four Units (any combination)	WEST WHITTIER - LOS NIETOS
8174006061	Residential - Four Units (any combination)	WEST WHITTIER - LOS NIETOS
8174015009	Residential - Four Units (any combination)	WEST WHITTIER - LOS NIETOS
8176002015	Residential - Manufactured Home Park	WEST WHITTIER - LOS NIETOS
8176002016	Residential - Manufactured Home Park	WEST WHITTIER - LOS NIETOS
8176002270	Residential - Manufactured Home Park	WEST WHITTIER - LOS NIETOS
8130028017	Residential - Three Units (any combination)	WEST WHITTIER - LOS NIETOS
8169018016	Residential - Three Units (any combination)	WEST WHITTIER - LOS NIETOS
8169018017	Residential - Three Units (any combination)	WEST WHITTIER - LOS NIETOS
8169020012	Residential - Three Units (any combination)	WEST WHITTIER - LOS NIETOS
8174006060	Residential - Three Units (any combination)	WEST WHITTIER - LOS NIETOS
8174017042	Residential - Three Units (any combination)	WEST WHITTIER - LOS NIETOS
8174017043	Residential - Three Units (any combination)	WEST WHITTIER - LOS NIETOS
8174017049	Residential - Three Units (any combination)	WEST WHITTIER - LOS NIETOS
8176003026	Residential - Three Units (any combination)	WEST WHITTIER - LOS NIETOS
8176003029	Residential - Three Units (any combination)	WEST WHITTIER - LOS NIETOS
8176003030	Residential - Three Units (any combination)	WEST WHITTIER - LOS NIETOS
5271009902	Government Owned Property	WHITTIER NARROWS
5271011902	Government Owned Property	WHITTIER NARROWS
8119010906	Government Owned Property	WHITTIER NARROWS
5272001048	Residential - Manufactured Home Park	WHITTIER NARROWS
6154020018	Commercial - Hotel and Motel	WILLOWBROOK
6154018002	Commercial - Restaurant, Cocktail Lounge	WILLOWBROOK
6154016003	Commercial - Store	WILLOWBROOK
6154018029	Commercial - Store	WILLOWBROOK
6154018027	Commercial - Store Combination (w/ Office or Residential)	WILLOWBROOK
6154018914	Government Owned Property	WILLOWBROOK
6154017001	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	WILLOWBROOK
6154017002	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	WILLOWBROOK
6154018026	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	WILLOWBROOK
6154020002	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	WILLOWBROOK
6154021028	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	WILLOWBROOK
6154024022	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	WILLOWBROOK
6154025001	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	WILLOWBROOK
6154024025	Industrial - Warehousing, Distribution, Storage	WILLOWBROOK
6154024026	Industrial - Warehousing, Distribution, Storage	WILLOWBROOK
6154019030	Institutional - Church	WILLOWBROOK
6154012014	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154012023	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154012039	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154013006	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154013011	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154013017	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154014004	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154014016	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154014024	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154015019	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154016005	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154016009	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154016010	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154016011	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154016024	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154016034	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154016041	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154017007	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154017042	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154018023	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154019004	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154019018	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154019028	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154020024	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154021015	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154022027	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154024005	Residential - Double, Duplex or Two Units	WILLOWBROOK
6155033009	Residential - Double, Duplex or Two Units	WILLOWBROOK

Table H.5: Existing Single Family Homes in Flood Hazard Zones, by Community and APN

Altadena								
5830002001	5830002004	5830002007	5830002010	5830002014	5830002017	5830002020	5830002016	5830002009
5830002002	5830002005	5830002008	5830002012	5830002015	5830002018	5830002019	5830002013	5830002006
5830002003								
Antelope Valley								
3227004019	3041008033	3044026008	3049008035	3102025063	3103032068	3204014018	3227020006	3234025028
3228008008	3041009001	3044026009	3049008038	3102025064	3103032069	3204014019	3227020007	3234025029
3228015030	3041009002	3044026010	3049008039	3102025065	3103032070	3204014021	3227020008	3234025031
3234015038	3041009003	3044026012	3049008040	3102025066	3103032071	3204014023	3227020016	3234025033
2846009014	3041009004	3044026013	3049008901	3102025067	3103032072	3204014024	3227020029	3234025034
2846009015	3041009015	3044026014	3049009004	3102025068	3103032073	3204014025	3227020030	3234026034
2846009017	3041009016	3044026015	3049009005	3102025073	3103032074	3204014026	3227020033	3234026040
2846009018	3041009017	3044026016	3049009006	3102025074	3103032075	3204014027	3227020034	3234026041
2846009055	3041009018	3044026017	3049009012	3102025080	3103032076	3204015001	3227020036	3234026042
2846015014	3041009019	3044026018	3049009014	3102025081	3103032077	3204015003	3227020037	3234026043
2846015015	3041009020	3044026019	3049009020	3102025082	3103032078	3204015004	3227021006	3234026044
2846015018	3041009021	3044026020	3049009022	3102025083	3103032079	3204015006	3227021020	3234027003
2846015023	3041009022	3044026021	3049011004	3102025085	3103032080	3204015007	3227021022	3234027009
2846016014	3041009023	3044026022	3049011005	3102025086	3103032081	3204015008	3227021025	3234027010
2846019012	3041009024	3044026023	3049011015	3102025088	3103032082	3204015010	3227021032	3234027013
2846019013	3041009025	3044026024	3049011017	3102025091	3103032083	3204015011	3227021035	3234027015
2846019014	3041009026	3044026025	3049012007	3102025092	3103032084	3204015016	3227021036	3234027016
2846019015	3041009027	3044026026	3049012020	3102025093	3103032085	3204015017	3227022006	3234027023
3001010002	3041009032	3044026027	3049012022	3102025095	3103032086	3204015021	3227022030	3234027024
3027010017	3041009033	3044026028	3049013002	3102025096	3103032087	3204015024	3227022032	3234027026
3027010020	3041009034	3044026029	3049013003	3102026012	3103032088	3204029038	3227022034	3234028026
3027010023	3041009036	3044026030	3049013004	3102026018	3103032089	3204029039	3227022036	3242001003
3027010028	3041009037	3044026031	3049013005	3102026019	3103032090	3204029045	3227023001	3242001005
3027010031	3041009038	3044026032	3049013007	3102026020	3103032091	3204029046	3227023014	3242001006
3027010032	3041009041	3044026033	3049013020	3102026021	3103032092	3204029056	3227023024	3242002003
3027010034	3041009042	3044026034	3049013028	3102026022	3103032093	3204029057	3227023035	3242002005
3027010038	3041010039	3044026035	3049014012	3102026036	3103032094	3204029058	3227023036	3242002008
3027011006	3041010040	3044026036	3049014017	3102026038	3103032095	3204029059	3227023037	3242002011
3027011007	3042003009	3044026037	3049014018	3102026039	3103032096	3204029060	3227023038	3242003004
3027011009	3042003016	3044026038	3049014022	3102026041	3110001032	3204029061	3227024011	3242004001
3027011010	3042003017	3044026039	3049014026	3102026042	3110001033	3204029062	3227024012	3242004003
3027011011	3042003018	3044026040	3049014029	3102026044	3110003010	3204029063	3227024021	3242004004
3027011022	3042004004	3044027001	3049019008	3102026903	3110003015	3204029064	3227024025	3242004005
3027011023	3042004005	3044027002	3049019018	3102030001	3110003016	3204032001	3227024031	3242004008
3027011026	3042004006	3044027003	3049019024	3102030002	3110003017	3204032002	3227024032	3242004010
3027011027	3042004008	3044027004	3049020013	3102030003	3110003018	3204032003	3227024035	3242004013
3027011028	3042004012	3044027005	3049020015	3102030004	3110003019	3204032004	3227025002	3242004016
3027011029	3042004013	3044027006	3049020017	3102030005	3110003020	3204032005	3227025008	3242004019
3027011030	3042004014	3044027007	3049020037	3102030006	3110003024	3204032006	3227025020	3242004022
3027013029	3042004015	3044027009	3049020044	3102030007	3110003027	3204032007	3227025021	3242004023
3027013046	3042004017	3044027010	3049020051	3102030008	3110003036	3204032008	3227025029	3242004024
3027013047	3042005001	3044027011	3049021013	3102030009	3110003040	3204032009	3227025031	3242004027
3027015002	3042005003	3044027012	3049022020	3102030010	3110003041	3204032010	3227025032	3242004029
3027015016	3042005004	3044027013	3049022021	3102030011	3110003042	3204032011	3227025033	3242004030

3027015028	3042005006	3044027014	3049022032	3102030012	3110003043	3204032012	3227025034	3242004031
3027015029	3042005008	3044027015	3049022036	3102030013	3110003046	3204032013	3227025035	3242004032
3027015037	3042005010	3044027016	3049023004	3102030014	3110003056	3204032014	3227026045	3242005001
3027015040	3042005011	3044027017	3049023005	3102030015	3110003057	3204032015	3227026047	3242005006
3027016004	3042005012	3044027018	3049023009	3102030016	3110003058	3204032016	3227026048	3242005007
3027016005	3042006007	3044027019	3049023014	3102030017	3110003059	3204032017	3227026049	3242005011
3027016006	3042006008	3044027020	3049029006	3102030018	3110003904	3204032018	3227026053	3242005012
3027016007	3042007002	3044027021	3049029019	3102030019	3110005016	3204032019	3227026054	3242005013
3027016008	3042007004	3044027022	3049029037	3102030020	3110005017	3204032020	3227026055	3242005014
3027016009	3042007005	3044027023	3049029039	3102030021	3110005033	3204032021	3227026058	3242005015
3027016010	3042007009	3044027027	3049029040	3102030022	3110005035	3204032022	3227027010	3242005016
3027016011	3042007010	3044027028	3049029041	3102030023	3110005041	3204032023	3227027011	3242005020
3027016012	3042007013	3044027029	3049029042	3102030024	3110007004	3204032024	3227027018	3242005022
3027016013	3042008001	3044027031	3049033006	3102030026	3110008003	3204032025	3227027019	3242005025
3027016014	3042008002	3044028002	3049033007	3102030027	3110008004	3204032026	3227027021	3242005026
3027016015	3042008003	3044028003	3049033008	3102030028	3110008007	3204032027	3227027022	3242005027
3027016016	3042008004	3044028004	3049033009	3102030029	3110008010	3204032028	3227028001	3242006004
3027016019	3042008006	3044028005	3051001015	3102030032	3110008012	3204032029	3227028008	3242012002
3027016020	3042008009	3044031002	3051001023	3102030033	3110008014	3204032030	3227028021	3242012003
3027016021	3042008010	3044031009	3051001024	3102030034	3110008024	3204032031	3227028032	3242012005
3027016022	3042008011	3044031015	3051003015	3102030035	3110008028	3204032032	3227028033	3242012006
3027016023	3042008012	3044031016	3051003017	3102030036	3110008029	3204032033	3227028038	3242012007
3027016024	3042008013	3044031022	3051007002	3102030037	3110008030	3204032034	3227028039	3242012008
3027016025	3042008015	3044031023	3056014022	3102031001	3110008031	3204032035	3227028041	3242012009
3027016026	3042008016	3044031024	3056014042	3102031002	3110008032	3204032036	3227028046	3242012010
3027016027	3042008018	3044031025	3056015019	3102031003	3110008033	3204032037	3227029009	3242012011
3027016028	3042009002	3044031026	3056017022	3102031004	3110008034	3204032038	3227029032	3242013009
3027016029	3042009008	3044032008	3056023035	3102031005	3110008041	3204032039	3227029036	3242013010
3027017017	3042009009	3044034003	3056023038	3102031006	3110008042	3204032040	3227029037	3242013011
3027017018	3042009015	3046001003	3056023059	3102031007	3110008043	3204032041	3227029042	3242014008
3027017019	3042010001	3046001004	3056023061	3102031008	3110008044	3204032044	3227030003	3242014013
3027017021	3042010003	3046001005	3056023062	3102031009	3110008045	3204032045	3227030005	3242014014
3027017022	3042010005	3046001006	3056024030	3102031010	3110008046	3204032046	3227030006	3242014015
3027017023	3042010009	3046001007	3056024038	3102031011	3110008047	3204032049	3227030008	3242014016
3027017024	3042010011	3046001008	3056024040	3102031012	3110008048	3204032050	3227030010	3242014018
3027017025	3042010012	3046001009	3056024043	3102031013	3110010002	3204032051	3227030013	3242014019
3027017026	3042010013	3046001010	3056024045	3102031014	3110010003	3204032052	3227030014	3242014021
3027017027	3042010015	3046001012	3056024046	3102031015	3110010004	3204032053	3227030015	3242015006
3027017028	3042011001	3046001013	3056024049	3102031016	3110010005	3204032054	3227030016	3242016001
3027017029	3042011002	3046001014	3056024054	3102031017	3110010013	3204032055	3227030017	3242016002
3027017030	3042011011	3046001015	3057017020	3102031018	3110010014	3204032056	3227030020	3242016008
3027017031	3042011012	3046001016	3057017021	3102031019	3110010015	3204032057	3227030022	3242016014
3027017032	3042011018	3046001020	3057017022	3102031020	3110010027	3204032058	3227030027	3242016015
3027017033	3042011020	3046001022	3057017023	3102031021	3110010028	3204032059	3227030031	3242016017
3027017036	3042011021	3046001024	3058003020	3102031022	3110011006	3204032060	3227030038	3242016021
3027017038	3042011022	3046001027	3058004003	3102031023	3110011008	3204032061	3227030041	3242016030
3027017039	3042012005	3046001028	3058007010	3102031024	3110011009	3204032062	3227030044	3242016031
3027017040	3042012006	3046001030	3058027010	3102031025	3110011025	3204032079	3227030045	3242017008
3027017041	3042012007	3046001031	3060003004	3102031026	3110011026	3204033057	3227031014	3242017011
3027017042	3042012013	3046001034	3061004009	3102031027	3110011027	3204033058	3227031016	3242017016
3027017043	3042012015	3046001036	3061006017	3102031028	3110011028	3204033059	3227031020	3242017024

3027017044	3042012016	3046001037	3061038003	3102031029	3110011029	3204033060	3227031022	3242017026
3027017045	3042012017	3046002001	3064009030	3102031030	3110011030	3204033061	3227031023	3242017031
3027017047	3042012018	3046002002	3066021021	3102031031	3110011039	3204033062	3227031026	3242018003
3027018001	3042013002	3046002003	3069021009	3102031032	3110011041	3204034126	3227031039	3242018007
3027018002	3042013004	3046002007	3070009008	3102031033	3110011042	3205002033	3227031040	3242018010
3027018003	3042013005	3046002008	3070009009	3102031034	3110011043	3205002047	3227031042	3242018011
3027018004	3042013006	3046002009	3070009010	3102031035	3113001001	3205002087	3227031044	3242018013
3027018007	3042013007	3046002010	3070014009	3102031036	3113001042	3205007006	3227032010	3242019010
3027018008	3042013008	3046002013	3070014010	3102031037	3113001052	3205007007	3227032012	3242019013
3027018010	3042013009	3046002014	3070014011	3102031038	3113002005	3205007018	3227032046	3242020026
3027018012	3042013010	3046002015	3070014012	3102031039	3113002011	3205007022	3227032050	3242021009
3027018014	3042013020	3046002017	3070014013	3102031040	3113002023	3205007024	3227032052	3242021010
3027018015	3042013021	3046002018	3070014014	3102031041	3113003002	3205008027	3227032054	3242021012
3027018016	3042013022	3046002019	3070014017	3102031042	3113003054	3205008028	3228003002	3242021018
3027018018	3042013023	3046002020	3070015001	3102031043	3113004013	3205008035	3228003007	3242021022
3027018019	3042013026	3046002022	3070015002	3102031044	3113006015	3205008037	3228003009	3242021023
3027018035	3042014014	3046002023	3070015003	3102031045	3113006041	3205011007	3228003010	3242025004
3027018036	3042014015	3046002024	3070015004	3103005026	3113006077	3205013014	3228003015	3242025012
3027018037	3042014016	3046002025	3070015005	3103006004	3113006081	3206007061	3228004005	3242025014
3027018038	3042014017	3046002026	3070015006	3103007006	3113006087	3208003018	3228004008	3242028006
3027018039	3042014018	3046002027	3070015007	3103009015	3113006088	3208004042	3228004011	3242030016
3027018041	3042014019	3046002028	3070015008	3103009016	3113010021	3208004046	3228004020	3251012900
3027018042	3042014020	3046002029	3070015009	3103020001	3113014019	3208005041	3228004027	3251013034
3027018043	3042014021	3046002030	3070015010	3103020002	3115001016	3208007022	3228004033	3251014049
3027018044	3042014022	3046002031	3070015011	3103020004	3115002014	3208007031	3228004035	3253001025
3027018046	3042014024	3046002032	3070015012	3103020005	3115009002	3208008025	3228004036	3258003009
3027018048	3042014025	3046002033	3070016023	3103020006	3115009009	3208008029	3228004037	3258003010
3027018050	3042014027	3046002034	3070016024	3103020007	3115010007	3208008030	3228004039	3260007009
3027019021	3042014028	3046002041	3070020006	3103020008	3115010026	3208008041	3228004040	3260007025
3027019022	3042014030	3046002042	3070020008	3103020009	3137002012	3208011060	3228004041	3260007026
3027019024	3042014031	3046002043	3070020011	3103020010	3137002013	3208011061	3228005032	3260008008
3027019026	3042014032	3046002044	3070020012	3103020011	3137003007	3208011062	3228005036	3260008009
3027019027	3042014033	3046002045	3070020013	3103020012	3137003031	3208011063	3228005040	3260008010
3027019028	3042014034	3046002046	3070020014	3103020013	3137003040	3208011065	3228005041	3260008020
3027019029	3042014035	3046002047	3070020015	3103020014	3137003041	3208017020	3228005042	3260008024
3027019030	3042014036	3046002048	3070020017	3103020015	3137004001	3208017030	3228006003	3260009012
3027019034	3042014037	3046002050	3070020018	3103020016	3137004003	3208017037	3228007001	3260009022
3027019036	3042014038	3046002051	3070020019	3103020017	3137004004	3208017038	3228007005	3260009025
3027019037	3042015007	3046002052	3070026012	3103020018	3137004006	3208017039	3228007023	3260009033
3027019038	3042015008	3046002053	3070026014	3103020020	3137004037	3208017042	3228007024	3260013014
3027019039	3042015009	3046002055	3070026015	3103020021	3137005001	3208017044	3228007025	3260014006
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Ladera Heights / Viewpark - Windsor Hills								
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Marina Del Rey								
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South San Jose Hills								
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South Whittier - Sunshine Acres								

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Valinda								
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Walnut Islands								
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West Carson								
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West Puente								
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West Whitier - Los Nietos								
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8169021014	8174013028	8176010043	8176018039	8176029002	8177011043	8177026035	8178011036	
Willowbrook								
6153021001	6154012005	6154013004	6154013030	6154014012	6154014037	6154015021	6154016018	6154017029
6153021002	6154012006	6154013007	6154013031	6154014017	6154014040	6154015022	6154016019	6154017031
6153021003	6154012007	6154013008	6154013033	6154014018	6154015002	6154015023	6154016025	6154017032
6153021004	6154012009	6154013009	6154013034	6154014019	6154015003	6154015024	6154016026	6154017033
6153021005	6154012010	6154013010	6154013036	6154014020	6154015004	6154015025	6154016030	6154017034
6153021006	6154012017	6154013012	6154013037	6154014021	6154015005	6154015026	6154016031	6154017040
6153021007	6154012020	6154013013	6154013038	6154014022	6154015006	6154015027	6154016032	6154017041
6153021008	6154012021	6154013014	6154013040	6154014023	6154015007	6154015028	6154016033	6154017044
6153021009	6154012022	6154013015	6154014001	6154014025	6154015008	6154015029	6154016039	6154017045
6153021010	6154012040	6154013018	6154014002	6154014026	6154015009	6154015030	6154016040	6154017046
6153021011	6154012041	6154013020	6154014003	6154014027	6154015010	6154016004	6154016042	6154017047
6153021014	6154012042	6154013021	6154014005	6154014028	6154015011	6154016006	6154016043	6154017911
6153021035	6154012044	6154013023	6154014006	6154014029	6154015013	6154016007	6154017003	6154018024
6154008005	6154012046	6154013024	6154014007	6154014030	6154015014	6154016008	6154017004	6154018025
6154008006	6154012047	6154013026	6154014008	6154014031	6154015015	6154016014	6154017005	6154018030
6154008007	6154012049	6154013027	6154014009	6154014032	6154015016	6154016015	6154017006	6154018031
6154012002	6154012050	6154013028	6154014010	6154014033	6154015018	6154016016	6154017008	6154018032
6154012003	6154012051	6154013029	6154014011	6154014036	6154015020	6154016017	6154017028	6154019001

6154019002	6154019021	6154020009	6154021013	6154022001	6154024017	6155022011	6155033001	6155033020
6154019003	6154019022	6154020010	6154021014	6154022023	6154024018	6155022012	6155033002	6155033021
6154019010	6154019023	6154020011	6154021017	6154022024	6154024019	6155022013	6155033003	6155033022
6154019011	6154019024	6154020015	6154021018	6154022025	6154024020	6155022014	6155033004	6155033023
6154019012	6154019025	6154020016	6154021019	6154022026	6154024021	6155022015	6155033010	6154021029
6154019013	6154019026	6154021004	6154021020	6154022028	6155022002	6155032023	6155033012	6154021030
6154019015	6154019027	6154021005	6154021026	6154024015	6155022003	6155032024	6155033015	6154021031
6154019016	6154019032	6154021006	6154021027	6154024016	6155022010	6155032025	6155033019	6154021009
6154019020	6154021008	6154021007						

Table H.6: Roadways Located in Flood Hazard Zones, by Community and Street Name

Altadena			
CANYON DELL DR			
Antelope Valley			
002ND ST	43RD ST E	E AVENUE E-4	MICHIGAN ST
003RD ST	43RD ST W	E AVENUE E-6	MOCCASIN PL
100TH ST E	45TH ST E	E AVENUE E-8	MONROE AV
100TH ST W	45TH ST W	E AVENUE F	MONTALLEGRO ST
101ST ST E	46TH ST E	E AVENUE F-10	MOODY CANYON TKTR
102ND ST E	47TH ST E	E AVENUE F-12	MOSSDALE AV
104TH ST E	47TH ST W	E AVENUE F-4	MOUNT EMMA RD
105TH ST E	48TH ST W	E AVENUE F-8	MUIR DR
105TH ST W	4TH ST W	E AVENUE G	MUNZ RANCH RD
106TH ST E	50TH ST E	E AVENUE G-10	MYRICK CANYON RD
106TH ST W	50TH ST W	E AVENUE G-12	N BOUQUET CANYON RD
107TH ST E	51ST ST E	E AVENUE G-14	NETHERDALE DR
107TH ST W	51ST ST W	E AVENUE G-4	NETTIE RD
108TH ST E	52ND ST E	E AVENUE G-8	NEWVALE DR
10TH ST E	52ND ST W	E AVENUE H	NICKELS AV
10TH ST W	53RD ST W	E AVENUE H-10	NORTH TR
110TH ST E	55TH ST E	E AVENUE H-12	NORVAL AV
110TH ST W	55TH ST W	E AVENUE H-14	OHIO ST
111TH ST E	56TH ST W	E AVENUE H-3	OLD SAN GABRIEL CANYON RD
111TH ST W	57TH ST E	E AVENUE H-4	OLIVERA PL
112TH ST E	57TH ST W	E AVENUE H-5	OLVERA PL
112TH ST W	5TH ST E	E AVENUE H-8	OLYMPIA WY
113TH ST W	5TH ST W	E AVENUE I	ORWIN
114TH ST E	60TH ST E	E AVENUE I-12	PALMDALE-LLANO RD
115TH ST W	60TH ST W	E AVENUE J	PANORAMA MTWY
116TH ST E	61ST ST E	E AVENUE J-12	PARADISE DR
116TH ST W	62ND ST E	E AVENUE J-13	PASTEL WK
117TH ST E	62ND ST W	E AVENUE J-14	PEACE VALLEY RD
117TH ST W	65TH ST E	E AVENUE J-4	PEARBLOSSOM HWY
118TH ST W	65TH ST W	E AVENUE J-8	PEARL CT
119TH ST W	67TH ST W	E AVENUE K	PEBBLE ST
11TH PL W	70TH ST E	E AVENUE K-10	PINE CANYON RD
11TH ST W	70TH ST W	E AVENUE K-11	PIONEER TR
120TH ST E	71ST ST W	E AVENUE K-12	PLATZ RD
120TH ST W	72ND ST W	E AVENUE K-13	PORTLAND LN
121ST ST E	73RD ST W	E AVENUE K-14	POWERLINE RD
121ST ST W	75TH ST E	E AVENUE K-3	PRETTY-O-RANCH RD
122ND ST E	75TH ST W	E AVENUE K-4	PUGET WY
122ND ST W	77TH ST W	E AVENUE K-5	PUZZLE CANYON RD
123RD ST E	80TH ST E	E AVENUE K-6	PVT DR
123RD ST W	80TH ST W	E AVENUE K-8	PVT RD
124TH ST E	81ST ST E	E AVENUE L	PYRAMID LAKE RD
124TH ST W	82ND ST E	E AVENUE L-12	QUARTZ HILL RD
125TH ST E	82ND ST W	E AVENUE L-4	QUICK SILVER LN
125TH ST W	85TH ST E	E AVENUE L-8	RANCH CLUB RD
126TH ST E	85TH ST W	E AVENUE M	RANCHO WY
126TH ST W	86TH ST E	E AVENUE M-12	RANIER PL
127TH ST E	86TH ST W	E AVENUE M-4	RED GULCH RD
127TH ST W	87TH ST E	E AVENUE M-6	RED ROVER MINE RD
128TH ST E	87TH ST W	E AVENUE M-8	RINGSTEM AV
128TH ST W	88TH ST E	E AVENUE N	ROBERTS RD
129TH ST E	89TH ST E	E AVENUE N-12	ROCKYFORD RD
129TH ST W	8TH ST W	E AVENUE N-4	ROGER RD
12TH PL W	90TH ST E	E AVENUE N-8	ROMANO DR
12TH ST E	90TH ST W	E AVENUE O	RUBY CT
130TH ST	91ST ST E	E AVENUE O-8	S PORTAL RD
130TH ST E	91ST ST W	E AVENUE P	SACRAMENTO AV
130TH ST W	92ND ST E	E AVENUE P-12	SAMOS ST
131TH ST E	92ND ST W	E AVENUE P-8	SAN FRANCISQUITO CANYON RD
132ND ST E	93RD ST E	E AVENUE Q	SAN YSIDRO LN
133RD ST E	93RD ST W	E AVENUE Q-10	SANTIAGO RD
135TH ST E	94TH ST E	E AVENUE Q-12	SEARCHLIGHT RANCH RD
135TH ST W	95TH ST E	E AVENUE Q-14	SECLUSION PL
136TH ST E	95TH ST W	E AVENUE Q-4	SERENE AV
137TH ST E	96TH PL W	E AVENUE Q-6	SERVICE RD
138TH ST E	96TH ST E	E AVENUE R	SHANNONDALE RD
13TH ST E	97TH ST E	E AVENUE R 14	SHORELINE DR
140TH ST E	97TH ST W	E AVENUE R-02	SIERRA HWY
140TH ST W	98TH PL W	E AVENUE R-10	SMITH AV
141ST ST E	98TH ST E	E AVENUE R-11	SMOKEY BEAR
142ND ST E	98TH ST W	E AVENUE R-12	SNOWSHOE THOMPSON RD

143RD ST E	99TH ST W	E AVENUE R-14	SOLEDAD CANYON RD
145TH ST E	ACCORD PL	E AVENUE R-2	SOLEDAD PASS RD
145TH ST W	ALBYN CT	E AVENUE R4	SOUTH SHORE DR
146TH ST E	ALCOY CT	E AVENUE R-4	SPUNKY CANYON RD
147TH ST E	ALDERWOOD RD	E AVENUE R-6	SYLVAN DR
150TH ST E	ALISO CANYON RD	E AVENUE R-8	SYRACUSE AV
150TH ST W	ALISO ST	E AVENUE S	TANEY ST
151ST ST W	ALMOND VALLEY WY	E AVENUE S-10	THREE POINTS RD
152ND ST E	AN/W AVE M	E AVENUE S-11	TINDALL AV
152ND ST W	ANGELES FOREST HWY	E AVENUE S-12	TOMAHAWK PL
153RD ST E	ANGLIA ST	E AVENUE S-14	TORTUGA ST
155TH ST E	ANTELOPE HWY	E AVENUE S-2	TRADEPOST RD
155TH ST W	ANTELOPE VALLEY FRWY	E AVENUE S-4	TRAIL 12
156TH ST W	ANTELOPE WOODS RD	E AVENUE S-6	TRAIL 3
157TH ST E	ARNAUD ST	E AVENUE S-8	TRAIL A
157TH ST W	ARRASTRE CANYON RD	E AVENUE T	TRAIL B
15TH ST E	AS/W AVE M	E AVENUE T-10	TRAIL F
15TH ST W	AVENUE 105TH ST E	E AVENUE T-12	TRAIL G
160TH ST E	AVENUE B-8	E AVENUE T-14	TRAIL H
160TH ST W	AVENUE H-2	E AVENUE T-2	TRAIL K
163RD ST E	AVENUE I-10	E AVENUE T-4	TRAIL L
165TH ST E	AVENUE I-11	E AVENUE T-6	TRAIL N
165TH ST W	AVENUE I-12	E AVENUE T-7	TRENMAR DR
168TH ST E	AVENUE I-13	E AVENUE T-8	TUMBLEWEED RD
16TH ST E	AVENUE I-14	E AVENUE U	UP RR
16TH ST W	AVENUE I-15	E AVENUE U-10	VALLEY SAGE RD
170TH ST E	AVENUE I-9	E AVENUE U-12	VALYERMO RD
170TH ST W	AVENUE S-12 AV E	E AVENUE U-4	VANCOUVER LN
171ST ST E	AVENUE T-8	E AVENUE U-5	VIA DE CABALLEROS
171ST ST W	AVENUE U	E AVENUE U-8	VICTORIA LN
172ND ST E	AZALEA DR	E AVENUE V	VIENTOS DR
172ND ST W	BACK ACRES RD	E AVENUE V-10	W *****
173RD ST W	BAHIA ST	E AVENUE V-12	W ADDA DR
175TH ST E	BARREL SPRINGS RD	E AVENUE V-14	W AVENUE A
175TH ST W	BATRIS LN	E AVENUE V-2	W AVENUE A-10
176TH ST E	BIG PINE HWY	E AVENUE V-4	W AVENUE A-12
177TH ST E	BIG ROCK CREEK RD	E AVENUE V-6	W AVENUE A-14
178TH ST E	BINEFAR WY	E AVENUE V-8	W AVENUE A-2
17TH ST E	BLUE SAGE DR	E AVENUE V-9	W AVENUE A-4
17TH ST W	BOBS GAP RD	E AVENUE W	W AVENUE A-6
180TH ST E	BOOTLEGGER CANYON RD	E AVENUE W-10	W AVENUE A-8
180TH ST W	BOUQUET CANYON RESERVOIR RD	E AVENUE W-11	W AVENUE B
181ST ST E	BOUQUET RESERVOIR RD	E AVENUE W-12	W AVENUE B 6
185TH ST E	BP & L RD	E AVENUE W-14	W AVENUE B-10
185TH ST W	BP AND L RD	E AVENUE W-2	W AVENUE B-12
186TH ST E	CALIFORNIA AQUEDUCT RD	E AVENUE W-4	W AVENUE B-14
18TH ST E	CALLE AGUA FELIZ	E AVENUE W-6	W AVENUE B-2
18TH ST W	CALLE AQUADUCTO	E AVENUE W-8	W AVENUE B-4
190TH ST E	CALLE ARROYO	E AVENUE X	W AVENUE B-6
190TH ST W	CALLE BERRO	E AVENUE Y	W AVENUE B-8
191ST ST W	CALLE BONITA	E AVENUE Y-8	W AVENUE C
192ND ST W	CALLE CARONA	E AVENUE Z	W AVENUE C 6
193RD ST W	CALLE CASCADA	E AVENUE Z-8	W AVENUE C-10
195TH ST E	CALLE CASCARRON	E DEVERE CT	W AVENUE C-12
195TH ST W	CALLE CASITAS	E ELLSTREE DR	W AVENUE C-13
196TH ST E	CALLE CERRITOS	E KETTERING ST	W AVENUE C-14
200TH ST E	CALLE CHEVAL	E LAKESHORE DR	W AVENUE C-15
200TH ST W	CALLE CHIQUITO	E LANCASTER BLVD	W AVENUE C-2
205TH ST E	CALLE DAGGETT	E LUMBER ST	W AVENUE C-3
207TH ST E	CALLE DE SOTA	E NEWGROVE ST	W AVENUE C-4
20TH ST E	CALLE DEL NORTE	E NUGENT ST	W AVENUE C-5
20TH ST W	CALLE DEL ROJA	E PALMDALE BLVD	W AVENUE C-6
210TH ST W	CALLE DEL SUR	E PILLSBURY ST	W AVENUE C-8
212TH ST E	CALLE DESCONOCIDO	EL DARA AV	W AVENUE D
213TH ST E	CALLE EL BARANCO	EL MERRIE DEL DR	W AVENUE D-12
215TH ST E	CALLE EL BOSQUE	EL SASTRE RD	W AVENUE D-8
220TH ST E	CALLE EL CAPITAN	ELENA PL	W AVENUE E
220TH ST W	CALLE EL CLAVELITO	ELIZABETH LAKE RD	W AVENUE E 4
221ST ST W	CALLE EL FUENTE	ELLSTREE DR	W AVENUE E 8
222ND ST W	CALLE EL JARDIN	ENCANTO WY	W AVENUE E-1
223RD ST W	CALLE EL JORNADO	ENSENADA RD	W AVENUE E-1 PL
225TH ST W	CALLE EL MONTE	EQUESTRIAN WY	W AVENUE E10
22ND ST E	CALLE EL PARADO	ESCONDIDO CANYON RD	W AVENUE E-11
22ND ST W	CALLE ESCONDIDO	EWEN AV	W AVENUE E12
230TH ST E	CALLE ESSENCIAL	FAIRMONT NEENACH RD	W AVENUE E-12
230TH ST W	CALLE HERMOSA	FINCASTLE ST	W AVENUE E-13

233RD ST W	CALLE LA PASTURA	FORESTON DR	W AVENUE E14
235TH ST W	CALLE LAGUNA	FORT TEJON RD	W AVENUE E-2
237TH ST W	CALLE LAS DOS HUERFANAS	GEYER WY	W AVENUE E-3
238TH ST W	CALLE LLANO	GHOST MINE RD	W AVENUE E-4
239TH ST W	CALLE LOMA	GILLESPIE AV	W AVENUE E-5
240TH ST E	CALLE LOMITA	GILLESPIE ST	W AVENUE E-6
240TH ST W	CALLE LOS ELEGANTES	GLACIER PL	W AVENUE E-7
243RD ST E	CALLE LOS HIDALGOS	GLENREST RD	W AVENUE E-7 PL
243RD ST W	CALLE MALEZA	GOLDEN STATE FRWY	W AVENUE E-8
244TH ST W	CALLE MANZANITA	GOLDEN STATE HWY	W AVENUE F
245TH ST E	CALLE MONTANA	GORMAN POST RD	W AVENUE F-12
245TH ST W	CALLE NARANJO	GORMAN SCHOOL RD	W AVENUE F-4
248TH ST E	CALLE OLIVERA	GRAPHIC AV	W AVENUE F-6
250TH ST W	CALLE PLANA	GREYDALE AV	W AVENUE F-7
252ND ST W	CALLE POZO VERDE	GURRIER AV	W AVENUE F-8
255TH ST W	CALLE PRIMAVERA	HAMPEL AV	W AVENUE G-12
258TH ST W	CALLE ROSALITO	HARBAT RD	W AVENUE H
259TH ST W	CALLE SAN LUIS POTOSI	HEFFNER RD	W AVENUE I-12
25TH ST E	CALLE SIEMERIO	HIGHROCK DR	W AVENUE J
25TH ST W	CALLE SONRISO	HILLSIDE DR	W AVENUE K
260TH ST E	CALLE VERDAD	HUNGRY VALLEY RD	W AVENUE K 4
261ST ST W	CAMELLIA DR	ILLINOIS ST	W AVENUE K 8
263RD ST W	CAMINO RD	IMPULSE DR	W AVENUE K10
265TH ST W	CATTLE CREEK RD	INDIANA ST	W AVENUE K12
266TH ST W	CHALLENGER WY	JACKSON AV	W AVENUE K-14
267TH ST W	CHALLENGER WY E	JESUS CANYON RD	W AVENUE L
268TH ST W	CHANTADA AV	JUNIPER VALLEY RD	W AVENUE L 2
26TH ST E	CHERRY TREE LN	KAGEL CANYON RD	W AVENUE L-10
270TH ST W	CHESEBORO RD	KELLOGG VALLEY RD	W AVENUE L-12
27TH ST E	CLANFIELD ST	KENTUCKY SPRINGS RD	W AVENUE L-13
27TH ST W	CLIFFEDGE DR	KETTERING ST	W AVENUE L-14
280TH ST W	COLCORD AV	KLAMATH LN	W AVENUE L-3
28TH ST E	COLUMBIA CT	LA PETITE	W AVENUE L-4
28TH ST W	CONESTOGA DR	LADERA WY	W AVENUE L-6
290TH ST W	COPCO AV	LAKE HUGHES RD	W AVENUE L-8
2ND ST	CORRADI TER	LAKEMEADOW DR	W AVENUE M
300TH ST W	CORVALLIS PL	LANCASTER BLVD	W AVENUE M-10
30TH ST E	CORY AV	LANCASTER RD	W AVENUE M-12
30TH ST W	COTTONWOOD AV	LARGO VISTA RD	W AVENUE M-2
31ST ST E	COUNTRY WY	LINCOLN AV	W AVENUE M-4
32ND ST E	CROWN VALLEY RD	LITTLE CEDAR WY	W AVENUE M-6
32ND ST W	DEESWOOD DR	LITTLE ROCK RD	W AVENUE M-8
33RD ST E	DEVERE CT	LITTLE ROCK WASH RD	W AVENUE N
33RD ST W	DEVILS CHAIR TR	LITTLEROCK RANCHOS RD	W AVENUE NEWGROVE ST
35TH ST E	DIVISION ST	LONE OAK RD	W AVENUE V
35TH ST W	DRYLAKE DR	LONGVIEW RD	W CARSON MESA RD
36TH ST E	DUNFORD AV	LORI CT	W JACKMAN ST
37TH ST E	E 127TH ST E	LOVEJOY AV	W JUNIPER RIDGE LN
38TH ST E	E AVENUE D	MADISON AV	W KETTERING ST
3RD ST	E AVENUE D-12	MAJORCA DR	W KILDARE ST
3RD ST E	E AVENUE D-14	MAMERS RD	W LAKESHORE DR
3RD ST W	E AVENUE D-2	MANGAF ST	W LANCASTER BLVD
40TH ST E	E AVENUE D-4	MARBELLA ST	W LANCASTER RD
40TH ST W	E AVENUE D-8	MARYFIELD AV	W WOOD AV
41ST ST E	E AVENUE E	MAXWELL RD	WATERFORD WY
42ND ST E	E AVENUE E-10	MAYTERN AV	WHITE SPUR LN
42ND ST W	E AVENUE E-12	MESCAL CANYON MTWY	WILLETA AV
			WISCONSIN ST
Ballona Wetlands			
CULVER BLVD	LINCOLN BLVD		
Cerritos Islands			
167TH ST	ERIC AV	HARVEST AV	OPAL AV
ALORA AV	FONTAINBLEAU AV	JADE AV	PEARL CIR
CENTRALIA ST	GARNET AV	LONGWORTH AV	
ELMCROFT AV	GRAYSTONE AV	MAPES AV	
Charter Oak			
W CIENEGA AV			
East Azusa			
E SIERRA MADRE AV	HICREST RD	W SIERRA MADRE AV	
FOXGLOVE CT	OLD SAN GABRIEL CANYON RD	YUCCA RIDGE RD	
East Irwindale			
E ELGENIA ST	N NORA AV	W GROVECENTER ST	
E GROVECENTER ST	W BADILLO ST		
East Rancho Dominguez			
AE/BULLIS RD	E LINSLEY ST	E SAN RAFAEL ST	S ESSEY AV

AN/COMPTON BL	E MARCELLE ST	E SAN VINCENTE ST	S FRAILEY AV
AN/ROSECRANS AV	E MYRRH ST	E SAUNDERS ST	S GIBSON AV
AS/LINSLEY ST	E PALMERSTONE ST	E WILBARN ST	S HARRIS AV
AS/ROSECRANS AV	E PAULINE ST	E WYMORE ST	S LIME AV
E ADDINGTON ST	E PIXLEY ST	N HARRIS AV	S MANETTE PL
E ALONDRA BLVD	E QUEENSDALE ST	S ATLANTIC AV	S MURIEL AV
E BALES ST	E ROSE ST	S BRADFIELD AV	S PANNES AV
E BENNETT ST	E ROSECRANS AV	S BULLIS RD	S STONEACRE AV
E COMPTON BLVD	E SAN CARLOS ST	S BUTLER AV	S STONEACRE ST
E DUMA ST	E SAN JUAN ST	S CARESS AV	S THORSON AV
E ELIZABETH ST	E SAN LUIS ST	S CASTLEGATE AV	S WALDORF DR
E IVA ST	E SAN MARCUS ST	S COOKACRE AV	S WASHINGTON AV
E JOSEPHINE CT	E SAN MATEO ST	S COOKACRE ST	S WHITE AV
E LAUREL ST	E SAN MIGUEL ST	S CUZCO AV	S WILLIAMS AV
Florence - Firestone			
HOOPER AV			
Kagel Canyon			
CREEK TR	LITTLE TUJUNGA CANYON RD	SHORT TR	VINEYARD TR
EAST TR	NORTH TR	SPRING TR	
IDLEWHILE TER	PARK TR	SUMMIT TR	
Ladera Heights / View Park - Windsor Hills			
S LA CIENEGA BLVD			
Long Beach Island			
AW/SENASAC AV	CONQUISTA AV	FANWOOD AV	MCNAB AV
CANEHILL AV	E HARCO ST	FAUST AV	SENASAC AV
CARFAX AV	E PARKCREST ST	GONDAR AV	SNOWDEN AV
			WOODRUFF AV
Lopez Canyon			
BAILEY RD	LOPEZ CANYON RD	N LOPEZ RD	
Lynwood Island			
E IMPERIAL HWY	LONG BEACH FRWY	MONROE AV	
Malibu Coastal Zone			
AIRCRAFT TR	ESCONDIDO DR	MONTE VISTA DR	SONAR LN
AZIMUTH LN	ESCONDIDO TR	MULHOLLAND HWY	STOKES CANYON RD
BAYNES RD	GLEN DR	N CREEK TR	STONEWALL TER
BONNELL DR	GORGE RD	N MALIBU CANYON RD	THORNHILL RD
BROOKSIDE DR	GRASSLANDS TR	N TOPANGA CANYON BLVD	TOPANGA BEACH RD
BUCKHORN DR	GREENLEAF CANYON RD	OAKWOOD DR	TOPANGA CANYON LN
CAMINO COLIBRI	HIGHVALE TR	OLD CHURCH RD	TOPANGA SCHOOL RD
CANON VIEW TR	HONDO CANYON RD	OLD TOPANGA CANYON RD	TOPANGA SKYLINE DR
CENTURY MTWY	HUCKLEBERRY DR	PACIFIC COAST HWY	VALLEY DR
CIRCLE TR	KEELSON DR	PALM CANYON LN	VAN VELSIR DR
COLD CANYON RD	LAS FLORES CANYON RD	PIUMA RD	WAYCROSS DR
CORAY WY	LAS VIRGENES RD	QUANTICO LN	WICKLAND RD
CRAGS DR	MAGUIRE DR	RANKIN DR	WILD ROSE DR
CRATER CAMP DR	MALIBU CANYON RD	RETREAT CT	WILDWOOD DR
CROSS CREEK RD	MALIBU MEADOWS DR	RIDING LN	YELLOW HILL RD
DARK CREEK RD	MEADOWS END DR	RODEO GROUNDS	YEOMAN LN
DOROTHY DR	MELLUS DR	S TOPANGA CANYON BLVD	YOST TR
DRY CANYON COLD CREEK RD	MERCATOR LN	SHADY LN	YULE LN
Marina Del Rey			
BORA BORA WY	FIJI WY	PALAWAN WY	VIA MARINA
CHANNEL POINTE CT	MARQUESAS WY	PROMENADE WY	VIA MARINA CT
CHANNEL WK	MINDANAO WY	TAHITI WY	VIA REGATA
DELL AL	NORTHWEST PASSAGE	VIA DOLCE	
North Whittier			
ABBEYWOOD AV	CROTON AV	MEARS PL	SAN GABRIEL RIVER FRWY
AVONCROFT ST	GILES PL	NOYES ST	TAGUS ST
BALMORAL ST	LAMPSON ST	RIDEAU ST	
Rancho Dominguez			
E ANA ST	E VICTORIA ST	RANCHO WY	S WILMINGTON AV
E DEL AMO BLVD	FORDYCE AV	REEVES AV	SUSANA RD
E HARCOURT ST	GARDENA FRWY	S ALAMEDA ST	UP RR
E LAS HERMANAS ST	HARBOR AV	S REYES AV	VIA INDUSTRIA
E MARIA ST	LAUREL PARK RD	S SANTA FE AV	VICTORIA ST
E VAL VERDE CT	METRO BLUE LINE/SPT CO RR	S SUSANA RD	W BORT ST
E VIA MONDO	PACIFIC COMMERCE DR	S SUSANNA RD	W HARCOURT ST
Santa Clarita Valley			
AGUA DULCE CANYON RD	DEL VALLE RD	LINCOLN AV	SALT CREEK RD
ALPINE AV	DELDEN RD	LINCOLN WY	SAN FRANCISQUITO CANYON RD
ANTELOPE VALLEY FRWY	DELWOOD ST	LISA ST	SAN MARTINEZ GRANDE CYN RD
ANTHONY RD	DIVER ST	LIVE OAK RD	SAN MARTINEZ RD
ANVIK ST	DOEBAY DR	LONEOAK CT	SAND CANYON RD
APAM AV	DRIGGS CT	LORJEN RD	SANDY DR
APARRI AV	DRY CANYON RD	LOS ANGELES CITY W&P RD	SANTA CLARA RIVER TR
APPLEWOOD LN	DRY WELL CIR	LOST CANYON RD	SAUGUS VENTURA

ARLINE ST	DUMP RD	LOST CREEK RD	SCHAEFER RD
ARLINGTON ST	E CANYON MTWY	LOUIS AV	SHADOW VALLEY LN
ARROW POINT DR	EASTERN AV	LUZON DR	SHARP RD
ARROYO OAK LN	ECHILMAN AL	LYONS RANCH RD	SHERIDAN RD
ATHERTON CANYON RD	EDISON RD	MADISON ST	SIERRA HWY
AVENIDA RANCHO TESORO	ELM LN	MADISON WY	SIERRA VALLEJO RD
AVENUE A	ELSMERE CANYON MTWY	MADLOY ST	SILVER CANYON AV
AVENUE B	ELVIRA RD	MAGIC VIEW PL	SLEEPY CREEK LN
BAKER CANYON RD	ENGINEERS ST	MARVIN AV	SLOAN CANYON RD
BANJO CIR	ESCONDIDO CANYON RD	MAXIMUM RD	SOLEDAD CANYON RD
BARINGER RD	ESGUERRA RD	MCKEON CT	SPRING CANYON RD
BEDWORTH RD	EUCLID AV	MCKINLEY CT	STATOR RD
BISCAILUZ DR	EVANS CT	MEADSTONE RD	STEELE AV
BLUESKY WY	EVENINGSIDE DR	MINT CANYON RD	STEVENSON RANCH PKWY
BOBCAT WY	FAHREN LN	MONROE ST	STEWART RD
BORTON ST	FANTASTIC LN	MORNINGSIDE DR	STONE CREEK RD
BOUQUET CANYON RD	FARMER JOHN LATERAL	MOTOR ST	STORAGE RD
BROOKEN AV	FERGUSON DR	MOUNTAIN PARK RD	SULTUS ST
BROOKSIDE CT	FITCH AV	N GATE RD	SUNNY BROOK LN
BUCHANAN WY	FORREST ST	NARES DR	SUNSET CREEK
BURTON WY	FOX RUN CIR	NEURASCHEL ST	TAFT CT
BYFIELD RD	GALLOPING CT	NICHOLS LN	TAPIA CANYON RD
CALGROVE BLVD	GALTON RD	NORLAND RD	TAYLOR ST
CAMINO DE VALLE	GASPE ST	OAK BLUFF RD	TELEPHONE RD
CANYON OAK RD	GILMOUR ST	OAK ST	TEXAS CANYON RD
CAPRA RD	GLADBROOK CT	OAK VALLEY RD	THE OLD DIRT RD
CAPROCK RD	GOLD HILL DR	OAKHORN AV	THE OLD RD
CARYFORD RD	GOLDEN STATE FRWY	OAKWELL RD	TOBIAH PL
CASTAIC LAKE RD	GOLDEN STATE HWY	OLD MINT CANYON RD	TOWSLEY CANYON RD
CASTAIC OAKS LN	GREENSBRIERS DR	ORCHARD ST	TRIUMPH AV
CASTLEHAVEN RD	HANCOCK PKWY	ORRIN RD	TROTTERS LN
CAVEHILL RD	HANKINS RD	PARADISE RD	UP RR
CENTER ST	HARDING AV	PARKER AV	VACA AV
CENTRAL AV	HASLEY CANYON RD	PARKER RD	VADITO PL
CHANNEL RD	HAWKSET ST	PLUM CANYON FIRE RD	VAL VERDE RD
CHARLIE CANYON RD	HAYES CT	POTRERO CANYON RD	VALLEY RANCH RD
CHERRY CANYON PIPELINE RD	HAYFORK RD	POWERHOUSE LATERAL	VASQUEZ CANYON RD
CHERRY DR	HENRY MAYO DR	QUAIL OAKS DR	VASQUEZ CANYON TKTR
CHIQUITO CANYON RD	HIERBA RD	QUAIL TR	VASQUEZ WY
CHUCKER CT	HILL ST	QUAIL VALLEY RD	VERDALE AV
CHURCH ST	HIPSHOT DR	QUINN DR	VIEW PL
CITY HIGHLINE RD	HOWARD LN	REFINERY RD	VIOLIN CANYON RD
CLEAT RD	HUNTER LN	REMINGTON RD	W PARKER RD
COARSE GOLD MTWY	ILENE RD	RIDGE ROUTE RD	WALNUT ORCHARD RD
COBBLESTONE CT	JACKSON ST	RILEY ST	WATERMAN MTWY
COLT RD	JAKES WY	RIVERVIEW RD	WATERMAN RD
COMMERCE CENTER DR	JOHNNIE DR	ROAD RUNNER RD	WAYSIDE LATERAL
CONCORSE DR	JOHNNIE RD	ROCKING HORSE RD	WESLEY WY
COPPER HILL DR	JOHNSON AV	ROGUE WY	WHITE FOX LN
COTTON ST	JOHNSON RD	ROLLING HILLS AV	WHITES CANYON RD
COUNTRY CT	KARENA AV	ROMERO CANYON RD	WILEY CANYON RD
COUNTRYSIDE LN	KENINGSTON RD	ROWHER CANYON RD	WILLOW SPRING GULCH
CRESCENT CT	LA VEDA AV	ROZICH RD	WOODFALL RD
DARLING RD	LADY LINDA LN	RUPERT LN	WRIGHT RD
DAVENPORT RD	LAKEHILLS RD	RUSH CANYON RD	WYSE RD
DAVID WY	LANDGARD RD	RYAN LN	YOUNGS CANYON RD
DECORO DR	LANG STATION RD	SAGECREST CIR	YUCCA HILLS RD
DEED AV	LAVERY CANYON RD	SAINT LAWRENCE ST	
DEL SUR RIDGE RD	LENNY ST	SALT CANYON RD	
Santa Monica Mountains North Area			
CALETA RD	IMPERIAL TR	N TOPANGA CANYON BLVD	SIMES LN
CAMINO TRANQUIL	JANDO DR	NUEZ WY	SIOUX
CHEESEBORO CANYON RD	KANAN RD	OAK DR	STOKES CANYON RD
CHEESEBRO RD	KELLER RD	OAKFIELD RD	SYCAMORE DR
CHENEY DR	LAGUNA CIRCLE DR	OLD OAK RD	TERRACE LN
CHESEBRO RD	LAKE VISTA DR	OLD TOPANGA CANYON RD	TRIUNFO CANYON RD
CORNELL RD	LAKESHORE DR	OZARK WK	TROUTDALE DR
COUNTRYSIDE DR	LIBERTY CANYON RD	PAIUTE DR	VALLEY DR
CRAGS DR	LIBERTY LN	PARAMOUNT RANCH RD	VENTURA FRWY
E LAKESHORE DR	LOBO CANYON RD	ROUND MEADOW RD	WAGON RD
ENTRADO DR	LOBO VISTA RD	S LAKESHORE DR	WARING DR
EUCALYPTUS LN	MALIBU RANCHO RD	SEMINOLE DR	WEST TR
FRENCH CT	MEDEA MESA RD	SHILOH RANCH RD	ZUNIGA RD
HAPPY TR	MOHAWK	SIERRA CREEK RD	
HURON	MULHOLLAND HWY	SILVER CREEK RD	
South Diamond Bar			

TONNER CANYON RD	TRAINING CENTER RD		
South San Gabriel			
N LINCOLN AV	SAN GABRIEL BLVD		
South San Jose Hills			
COTTONWOOD CIR	GEMINI ST	SENTOUS ST	VIA ESTRELUTA
E ELBERLAND ST	HIGHCASTLE ST	TEMPLE AV	WELLFORD DR
E LA PUENTE RD	HOLLINGWORTH ST	TRISH WY	YORBITA RD
E TEMPLE AV	S GIANO AV	VALLEY VIEW AV	
South Whittier - Sunshine Acres			
CALMADA AV	LANETT AV	PARKINSON AV	
JENKINS DR	MYSTIC ST	SCOTT AV	
Valinda			
AMAR RD	E FLORENCE AV	OLIVE GROVE LN	SUMMER PL
BURTREE ST	E FRANCISQUITO AV	S AZUSA AV	VALINDA AV
DAWLEY AV	E MAPLEGROVE ST	S FRANDALE AV	VANDERWELL AV
DORE ST	FRANCISQUITO AV	S HYACINTH AV	WALNUT AV
DUBESOR ST	GRAND VIEW LN	S PASS AND COVINA RD	WITZMAN DR
E ALWOOD ST	HOLTON ST	S VALINDA AV	
E AMAR RD	MAPLEGROVE ST	S WALNUT AV	
E DOUBLEGROVE ST	N AZUSA AV	SEASON AV	
Walnut Islands			
CAMERON AV	E GARVEY AV S	HILLSIDE DR	S GRAND AV
E ACRIDGE DR	E SUNSET HILL DR	N GRAND AV	SAN BERNARDINO FRWY
E CAMERON AV	E TONI DR	NAVARO LN	
West Carson			
ASHBRIDGE DR	S VERMONT AV	STONECLIFF LN	
HAMILTON AV	SANDHURST LN	W BARON ST	
HARBOR FRWY & TRANSIT WY	STONE COURT CIR	W TORRANCE BLVD	
West Fox Hills			
S CENTINELA AV			
West Puente Valley			
BARRYDALE ST	GLENSHAW DR	N SUNSET AV	TONOPAH AV
EVANWOOD AV	GREENBERRY DR	ORANGE AV	WILLOW AV
West Whittier - Los Nietos			
ABBOTSFORD RD	CULLY AV	LOCH AVON DR	SANGER AV
AE/DANBY AV	CYPRESS POINT DR	LOCH LOMOND DR	SARAGOSA ST
AE/GRETNA AV	DANBY AV	LOCHINVAR ST	SHADYSIDE AV
AE/NORWALK BL	DECOSTA AV	LOCKHEED AV	SHORT ST
AE/PIONEER BL	DICKY ST	MCNEES AV	SKABO AV
AEOLIAN ST	DISNEY AV	MILLERGROVE DR	SLAUSON AV
ALBURTIS AV	DONNYBROOK CIR	MILNA AV	SOUTH HILLS DR
ALDRICH ST	DORLAND PL	MINES BLVD	SUMMERFIELD AV
ALLERTON ST	DUNLAP CROSSING RD	MORRILL AV	TAMARA LN
AN/WASHINGTON BL	EDUARDO ST	NAN ST	THORNLAKE AV
AS/HOLBROOK ST	EL DORADO LN	NOBLES AV	TORREY PINES DR
AS/WHITTIER BL	ESPERANZA AV	NORWALK BLVD	TOWNLEY DR
AW/PIONEER BL	FLALLON AV	OBERON ST	UP RR
BALFOUR ST	FLAMINGO CIR	OBREGON ST	VANESSA CIR
BARTLEY AV	FLORY ST	ORCHARD AV	VERBECK ST
BEL AIRE LN	GERDA CT	PEBBLE BEACH DR	VICKI DR
BENAVON ST	GLENGARRY AV	PIONEER BLVD	WADDELL ST
BERNARDINO AV	GODOY ST	PLEASANT WY	WADELL ST
BEVERLY BLVD	GRETNA AV	POINCIANA ST	WAKEMAN ST
BEXLEY DR	GREYFORD ST	REDMAN AV	WALNUT ST
BRADHURST ST	HADLEY ST	REICHLING LN	WASHINGTON BLVD
BRADWELL AV	HAVENWOOD PL	REXALL AV	WESTMAN AV
BROADWAY	HILLCREST LN	RIDGEVIEW LN	WESTMAN ST
BROADWAY AV	HOLBROOK ST	RIVERA RD	WHEELOCK CIR
BURKE ST	INDIAN WELLS DR	RIVIERA LN	WHEELOCK ST
CANDLEWOOD LN	JUAREZ AV	ROCKNE AV	WHITTIER BLVD
CASCADE CIR	LINDENVALE RD	ROSE HEDGE DR	WINCHELL ST
CHOISSER ST	LINS AV	SAL AV	WOODHUE ST
COOLHURST DR	LOCH AVON AV	SAN GABRIEL RIVER FRWY	
Whittier Narrows			
ROSEMEAD BLVD	SAN GABRIEL BLVD		
Willowbrook			
AE/MONA BL	E 130TH ST	E ORIS ST	N WILLOWBROOK AV
AS/130TH ST	E 131ST ST	E PINE ST	S ALAMEDA ST
AS/131ST ST	E 132ND ST	E PIRU ST	S LARGO AV
AS/132ND ST	E 133RD ST	E STOCKWELL ST	S MONA BLVD
AS/133RD ST	E 134TH ST	METRO BLUE LINE & UP RR	S PENROSE AV
AS/134TH ST	E 135TH ST	N ALAMEDA ST	S WILLOWBROOK AV
AS/135TH ST	E BLISS ST	N LARGO ST	VESTA AV
AW/ALAMEDA ST W	E EL SEGUNDO BLVD	N MONA BLVD	
CULVER AV	E HATCHWAY ST	N TAMARIND AV	

Table H.3: Planned Development in Flood Hazard Zones

APN	Description of Project	Community Name
3038030029	(RA) 15 SF LOTS ON 15.5 AC	ANTELOPE VALLEY
3038030005	(RA) 15 SF LOTS ON 15.5 AC	ANTELOPE VALLEY
3038030028	(RA) 15 SF LOTS ON 15.5 AC	ANTELOPE VALLEY
3102024012	(RV) 9SF LOTS ON 2.43 AC IN R1-7.5K	ANTELOPE VALLEY
3049029044	(TN) 1 SF LOT ON 7.89 AC & 3 C LOTS ON 6.51 AC	ANTELOPE VALLEY
3366032009	(TN) 16 (5 AC) SF LOTS ON 80 AC	ANTELOPE VALLEY
3225025011	(TN) 16 SF LOTS ON 165 ACRES IN A2-2	ANTELOPE VALLEY
3338001017	(TN) 16 SF LOTS ON 80.0 AC IN A1-1	ANTELOPE VALLEY
3258025024	(TN) 160 SF LOTS ON 800 AC IN A2-5	ANTELOPE VALLEY
3038012001	(TN) 2 SF LOTS ON 0.84 AC IN RA-7.5K	ANTELOPE VALLEY
3216013022	(TN) 2 SF LOTS ON 10.0 AC IN A1-1	ANTELOPE VALLEY
3058016021	(TN) 2 SF LOTS ON 10.0 AC IN A2-5	ANTELOPE VALLEY
3220017003	(TN) 2 SF LOTS ON 4.7 AC	ANTELOPE VALLEY
3102026045	(TN) 20 SF LOTS ON 5.0 AC IN R1-7.5K	ANTELOPE VALLEY
3102026026	(TN) 20 SF LOTS ON 5.0 AC IN R1-7.5K	ANTELOPE VALLEY
3102026028	(TN) 20 SF LOTS ON 5.0 AC IN R1-7.5K	ANTELOPE VALLEY
3102026029	(TN) 20 SF LOTS ON 5.0 AC IN R1-7.5K	ANTELOPE VALLEY
3102026027	(TN) 20 SF LOTS ON 5.0 AC IN R1-7.5K	ANTELOPE VALLEY
3145033085	(TN) 23 SF LOTS ON 112.6 AC IN D2-1	ANTELOPE VALLEY
3145033086	(TN) 23 SF LOTS ON 112.6 AC IN D2-1	ANTELOPE VALLEY
3145033083	(TN) 23 SF LOTS ON 112.6 AC IN D2-1	ANTELOPE VALLEY
3049027004	(TN) 3 SF & 1 C LOTS ON 8.37 ACRES IN C3 & A2-10K	ANTELOPE VALLEY
3049027003	(TN) 3 SF & 1 C LOTS ON 8.37 ACRES IN C3 & A2-10K	ANTELOPE VALLEY
3060016016	(TN) 3 SF LOTS ON 22.5 AC	ANTELOPE VALLEY
3258026011	(TN) 30 SF LOTS ON 155.0 AC IN A2-2	ANTELOPE VALLEY
3258026012	(TN) 30 SF LOTS ON 155.0 AC IN A2-2	ANTELOPE VALLEY
3258026010	(TN) 30 SF LOTS ON 155.0 AC IN A2-2	ANTELOPE VALLEY
3038030004	(TN) 36 SF LOTS ON 40.0 AC IN RA-10K	ANTELOPE VALLEY
3208042903	(TN) 4 SF LOTS ON 144 AC IN RA-10K, RA-13K, A1-1	ANTELOPE VALLEY
3208042027	(TN) 4 SF LOTS ON 144 AC IN RA-10K, RA-13K, A1-1	ANTELOPE VALLEY
3208042023	(TN) 4 SF LOTS ON 144 AC IN RA-10K, RA-13K, A1-1	ANTELOPE VALLEY
3208042020	(TN) 4 SF LOTS ON 144 AC IN RA-10K, RA-13K, A1-1	ANTELOPE VALLEY
3058010006	(TN) 4 SF LOTS ON 28.0 AC IN A2-5	ANTELOPE VALLEY
3208018038	(TN) 4 SF LOTS ON 4.89 ACRES	ANTELOPE VALLEY
3208018040	(TN) 4 SF LOTS ON 4.89 ACRES	ANTELOPE VALLEY
3208018041	(TN) 4 SF LOTS ON 4.89 ACRES	ANTELOPE VALLEY
3208018039	(TN) 4 SF LOTS ON 4.89 ACRES	ANTELOPE VALLEY
3042024903	(TN) 4 SF LOTS ON 58.34 AC IN RA-10K	ANTELOPE VALLEY
3042024056	(TN) 4 SF LOTS ON 58.34 AC IN RA-10K	ANTELOPE VALLEY
3042024055	(TN) 4 SF LOTS ON 58.34 AC IN RA-10K	ANTELOPE VALLEY
3279001036	(TN) 5 (4 SF+1 REMAINDER) LOTS/119 AC	ANTELOPE VALLEY
3279001042	(TN) 5 (4 SF+1 REMAINDER) LOTS/119 AC	ANTELOPE VALLEY
3279001041	(TN) 5 (4 SF+1 REMAINDER) LOTS/119 AC	ANTELOPE VALLEY
3279001040	(TN) 5 (4 SF+1 REMAINDER) LOTS/119 AC	ANTELOPE VALLEY
3279001043	(TN) 5 (4 SF+1 REMAINDER) LOTS/119 AC	ANTELOPE VALLEY
3279001039	(TN) 5 (4 SF+1 REMAINDER) LOTS/119 AC	ANTELOPE VALLEY
3102025087	(TN) 5 SF LOTS ON 1.26 AC IN R1-7.5K	ANTELOPE VALLEY
3022005276	(TN) 54 INDUSTRIAL/AGRICULTURAL LOTS ON 17,470 AC	ANTELOPE VALLEY
3110012011	(TN) 59 SF LOTS + 1 RETENTION LOT ON 30 AC	ANTELOPE VALLEY
3102030025	(TN) 85 SFR ON 20 AC	ANTELOPE VALLEY
3049019007	(TN) 9 SF + 2 PF LOTS ON 9.41 ACRES	ANTELOPE VALLEY
3103031037	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031036	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031035	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031034	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031033	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031032	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031031	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031030	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031029	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031028	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031004	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031005	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031017	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031018	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031020	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031021	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031022	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031023	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031016	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031002	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031006	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031001	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031007	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031013	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031024	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY

APN	Description of Project	Community Name
3103031011	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031012	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031010	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031014	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031015	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031025	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031008	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031026	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031019	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031009	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3103031003	(TN) 96 SF LOTS/25 AC	ANTELOPE VALLEY
3102021035	1 STY MUFFLER SHOP	ANTELOPE VALLEY
3233004015	2). A 441 sq. ft. one story detached garage. Garage shall not exceed an elevation of 15ft.	ANTELOPE VALLEY
3027015030	10 PIT BULL TERRIERS ON 1.32 AC IN A1-1	ANTELOPE VALLEY
3103020046	10' REAR YD SETBACK	ANTELOPE VALLEY
3038014019	10 UNITS	ANTELOPE VALLEY
3103028026	101 single family lots	ANTELOPE VALLEY
3103006005	14 UNIT BLDG	ANTELOPE VALLEY
3103029076	16 single family lots	ANTELOPE VALLEY
3103029075	16 single family lots	ANTELOPE VALLEY
3208018018	1-STORY SINGLE FLY RESIDENCE	ANTELOPE VALLEY
3038014006	2 FREESTAND DBL & SGL FACED	ANTELOPE VALLEY
3242004021	2 MOBILE HOMES IN C3 ON .14 AC	ANTELOPE VALLEY
3103010018	2 SIGNS/REFACE AND REPLACE	ANTELOPE VALLEY
3228022022	2 UNITS & 1 EXISTING	ANTELOPE VALLEY
3102021031	2,706 SQ HALL	ANTELOPE VALLEY
3228020012	20' FRT SETBACK	ANTELOPE VALLEY
3227011009	20' FRT YD	ANTELOPE VALLEY
3227011008	20' FRT YD SETBACK	ANTELOPE VALLEY
3228019023	20' FRT YD SETBACK	ANTELOPE VALLEY
3227028043	20' SETBACK VARIANCE	ANTELOPE VALLEY
3203002007	20 YEAR CONT'.D USE OF AIRPARK FACILITY	ANTELOPE VALLEY
3227026056	2'6" FRT SETBACK	ANTELOPE VALLEY
3228024019	27' R SETBACK	ANTELOPE VALLEY
3056006008	2-CAR GARAGE & GAME ROOJ	ANTELOPE VALLEY
3243014011	2-CAR GARAGE LAUNDRY/BONUS RM	ANTELOPE VALLEY
3101027028	2-LOT LLA	ANTELOPE VALLEY
3103027035	2ND UNIT & GARAGE	ANTELOPE VALLEY
3382020008	2-STORY SFR & 2-CAR GARAGE	ANTELOPE VALLEY
3228019011	3 BD RM ADDITION	ANTELOPE VALLEY
3036017018	320 square foot two story addition to the existing rear dwelling	ANTELOPE VALLEY
3036017017	320 square foot two story addition to the existing rear dwelling	ANTELOPE VALLEY
3175001013	325' ANTENNA	ANTELOPE VALLEY
3205002096	4 sfr LOTS	ANTELOPE VALLEY
3224003017	498 SPACE RECREATONAL VEHICLE RESORT WITH EXISTING GOLF COURSE	ANTELOPE VALLEY
3224003012	498 SPACE RECREATONAL VEHICLE RESORT WITH EXISTING GOLF COURSE	ANTELOPE VALLEY
3224003013	498 SPACE RECREATONAL VEHICLE RESORT WITH EXISTING GOLF COURSE	ANTELOPE VALLEY
3224003015	498 SPACE RECREATONAL VEHICLE RESORT WITH EXISTING GOLF COURSE	ANTELOPE VALLEY
3046012038	5 DOGS ON 10.0 AC IN A1-10K	ANTELOPE VALLEY
3227010023	5' REAR SETBACK	ANTELOPE VALLEY
3103010008	6 APTS	ANTELOPE VALLEY
3038014020	6 UNITS	ANTELOPE VALLEY
3038014015	6 UNITS	ANTELOPE VALLEY
3027028001	7 DOGS	ANTELOPE VALLEY
3228025029	8' 6" FRT SETBACK	ANTELOPE VALLEY
3103029045	82 SFH ON TRACTS 45068 & 52394	ANTELOPE VALLEY
3251012024	OAKS).	ANTELOPE VALLEY
3251012025	OAKS).	ANTELOPE VALLEY
3102025062	A/C IN S YD	ANTELOPE VALLEY
3150018011	ADD 1,200 SQ. FT. MANUFACTURED HOME AS GRANNY	ANTELOPE VALLEY
3103027026	ADD EXTRA BATHROOM	ANTELOPE VALLEY
3220018010	ADD OFFICE TO EXIST WATER CO SERVICE YARD	ANTELOPE VALLEY
3102018900	ADD TO DISTRICT OFFICE BLDG	ANTELOPE VALLEY
3102021034	ADD TO EXISTING BLDG	ANTELOPE VALLEY
3102017021	ADD TO FIRE STA	ANTELOPE VALLEY
3101021002	ADD TO GAS STATION	ANTELOPE VALLEY
3103010900	ADD TO OFF BLDG & ROOF SIGN	ANTELOPE VALLEY
3209001015	ADD TO SINGLE FAMILY RESIDENC	ANTELOPE VALLEY
3101020032	ADD TO SINGLE FAMILY RESIDENCE	ANTELOPE VALLEY
3058027012	ADD TO SINGLE FLY RES	ANTELOPE VALLEY
3251014031	ADD TO USED CAR LOT	ANTELOPE VALLEY
3205007008	ADDITION	ANTELOPE VALLEY
3137006003	ADDITION	ANTELOPE VALLEY
3264012038	ADDITION TO EXISTING CHURCH	ANTELOPE VALLEY
3264012037	ADDITION TO EXISTING CHURCH	ANTELOPE VALLEY
3209003031	ADMINISTRATIVE OAK TREE PERMIT - one encroachment	ANTELOPE VALLEY
3102021036	ADV SIGN	ANTELOPE VALLEY
3039019064	AGRI ONLY	ANTELOPE VALLEY

APN	Description of Project	Community Name
3025054275	AGRI USE	ANTELOPE VALLEY
3310006040	AGRI USE	ANTELOPE VALLEY
3217020032	AGRICULTURAL BARN & POWER	ANTELOPE VALLEY
3036014040	AGRICULTURAL USE	ANTELOPE VALLEY
3275004025	AGRICULTURE BUILDING	ANTELOPE VALLEY
3310012017	AGRICULTURE USE	ANTELOPE VALLEY
3056024037	ALLOW USE OF MOBILEHOME AS CARETAKER'S RESIDENCE	ANTELOPE VALLEY
3103010045	AMBULANCE SERVICE	ANTELOPE VALLEY
3111012011	AN ADDITION TO A SINGLE FAMILY HOME	ANTELOPE VALLEY
3268002011	Annual Fiesta within the Our Lady of Solitude Church grounds.	ANTELOPE VALLEY
3049020029	APPRVL OF FISHING TACKLE SHOP	ANTELOPE VALLEY
3103023049	APT BLDG	ANTELOPE VALLEY
3103001003	Automoblie maintence shop, carwash and retail.	ANTELOPE VALLEY
3208007043	BARN	ANTELOPE VALLEY
3208012108	BARN/STORAGE FACILITY	ANTELOPE VALLEY
3038007006	BILLBOARD	ANTELOPE VALLEY
3102018012	BILLBOARD	ANTELOPE VALLEY
3208018014	BUILD NEW 576 SQ.FT. GARAGE	ANTELOPE VALLEY
3251014043	C.U.P. TO INSTALL AN 80' CELLULAR MONOPOLE	ANTELOPE VALLEY
3242030012	CAMP	ANTELOPE VALLEY
3235005029	CAMPGROUND SERVING CHRONICALLY ILL CHILDREN	ANTELOPE VALLEY
3235005031	CAMPGROUND SERVING CHRONICALLY ILL CHILDREN	ANTELOPE VALLEY
3235005032	CAMPGROUND SERVING CHRONICALLY ILL CHILDREN	ANTELOPE VALLEY
3242034004	CAMPGROUND SERVING CHRONICALLY ILL CHILDREN	ANTELOPE VALLEY
3242034003	CAMPGROUND SERVING CHRONICALLY ILL CHILDREN	ANTELOPE VALLEY
3242034001	CAMPGROUND SERVING CHRONICALLY ILL CHILDREN	ANTELOPE VALLEY
3049007030	CARETAKER'S MOBILEHOME ON 1.0 AC IN C3	ANTELOPE VALLEY
3307009084	CARETAKERS RESIDENCE IN A2-1	ANTELOPE VALLEY
3307009086	CARETAKERS RESIDENCE IN A2-1	ANTELOPE VALLEY
3307009085	CARETAKERS RESIDENCE IN A2-1	ANTELOPE VALLEY
3307009083	CARETAKERS RESIDENCE IN A2-1	ANTELOPE VALLEY
3251013020	CHANNEL LTRS WALL SIGNS	ANTELOPE VALLEY
3042003013	CHURCH & EDUCATION WING ON 2.5 AC	ANTELOPE VALLEY
3049021011	CHURCH AND SCHOOL ON 3.7 AC IN A2-10K	ANTELOPE VALLEY
3102017019	CHURCH CONST. & RENOVATION	ANTELOPE VALLEY
3042001022	CHURCH EXPANSION	ANTELOPE VALLEY
3216017019	CHURCH FACILITY ON 6.0173 AC IN A1-1	ANTELOPE VALLEY
3042001043	CHURCH, SCHOOL, SENIOR APARTMENTS	ANTELOPE VALLEY
3251013055	CNVRT SERVICE AREA TO MINIMART	ANTELOPE VALLEY
3102016019	COMM LOT	ANTELOPE VALLEY
3102016020	COMM LOT	ANTELOPE VALLEY
3037006025	COMMERCIAL BLDG	ANTELOPE VALLEY
3228033001	COMMERCIAL DEV	ANTELOPE VALLEY
3250015903	CONSTRUCT A 100' TALL WIRELESS TELECOMMUNICATIONS	ANTELOPE VALLEY
3205008036	CONSTRUCTION OF UNMANNED WIRELESS FACILITY	ANTELOPE VALLEY
3302020019	CONT GOLF COURSE IN RA-10K	ANTELOPE VALLEY
3064016010	CONT HORSE RANCH WITH CARETAKERS' RESIDENCE ON 240	ANTELOPE VALLEY
3209016019	CONT REC VEHICLE PARK ON 223.0 AC IN RR-1 & A2-1	ANTELOPE VALLEY
3209018057	CONT REC VEHICLE PARK ON 223.0 AC IN RR-1 & A2-1	ANTELOPE VALLEY
3209016025	CONT REC VEHICLE PARK ON 223.0 AC IN RR-1 & A2-1	ANTELOPE VALLEY
3209011013	CONT. KEEPING WILD ANIMALS & CARETAKER RESIDENCES	ANTELOPE VALLEY
3048015012	CONT'D. USE OF WILD ANIMAL MENAGERIE	ANTELOPE VALLEY
3048015270	CONT'D. USE OF WILD ANIMAL MENAGERIE	ANTELOPE VALLEY
3027010037	CONTINUE EXISTING MOBILEHOME PARK	ANTELOPE VALLEY
3036015022	CONTINUE OPERATION OF SPECIAL-USE AIRPORT	ANTELOPE VALLEY
3175021015	CONTINUE USE OF EXISTING LEGALLY NONCONFORMING AUTO DISMANTLING YARD	ANTELOPE VALLEY
3175021028	CONTINUE USE OF EXISTING LEGALLY NONCONFORMING AUTO DISMANTLING YARD	ANTELOPE VALLEY
3145029030	CONVERT GARAGE TO WORK SHOP	ANTELOPE VALLEY
3251014023	CONVERT PATIO TO DININGROOM	ANTELOPE VALLEY
3049002044	COVER SHADE FOR MOTORHOME	ANTELOPE VALLEY
3044029005	DENSITY CONTROLLED DEVELOPMENT/SEWAGE TREATMENT PL	ANTELOPE VALLEY
3044028016	DENSITY CONTROLLED DEVELOPMENT/SEWAGE TREATMENT PL	ANTELOPE VALLEY
3044006079	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006059	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006070	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006071	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006014	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006025	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006036	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006047	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006057	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006058	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006015	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006037	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006046	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006072	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006073	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006016	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY

APN	Description of Project	Community Name
3044006023	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006038	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006045	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006017	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006022	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006039	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006044	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006018	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006043	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006019	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006020	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006042	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035900	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035001	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035020	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035021	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035040	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035041	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035059	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035060	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035068	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035002	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035019	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035042	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035058	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035061	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035067	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035022	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035070	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035066	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035003	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035043	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035057	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035071	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035062	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035023	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035038	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035065	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035072	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035004	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035044	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035056	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035063	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035024	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035037	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035064	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035073	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035005	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035016	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035025	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035036	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035074	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035055	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035054	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035075	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035006	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035015	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035026	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035046	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035082	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035076	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035007	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035014	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035027	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035047	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035077	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035078	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035008	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035028	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035033	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035048	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035009	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035012	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035029	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035032	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035049	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035080	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035051	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY

APN	Description of Project	Community Name
3044035011	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035030	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035031	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035050	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035081	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006009	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006030	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006084	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006031	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006052	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006053	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006065	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006083	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006029	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006066	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006032	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006051	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006054	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006063	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006082	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006067	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006011	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006028	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006033	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006055	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006062	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006081	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006068	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006027	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006034	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006049	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006080	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006060	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006069	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006026	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006035	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006048	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006041	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035039	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035035	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035053	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006050	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035018	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035034	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006056	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035069	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035052	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035079	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035017	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035045	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006024	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044035013	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006064	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006010	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006012	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006013	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006040	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006085	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006021	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3044006061	DENSITY-CONTROLLED DEVELOPMENT	ANTELOPE VALLEY
3242023031	DETACHED GARAGE	ANTELOPE VALLEY
3027014025	DINER	ANTELOPE VALLEY
3041009035	DWELLING & APT TO CHURCH	ANTELOPE VALLEY
3046026006	ELECTRIC USE FOR AGRICULTURE	ANTELOPE VALLEY
3102022024	EXCESSIVE DOMESTIC ANIMAL PERMIT	ANTELOPE VALLEY
3219014056	parking provided.	ANTELOPE VALLEY
3145011906	EXPAND SEWAGE PLANT	ANTELOPE VALLEY
3145040913	EXPAND SEWAGE PLANT	ANTELOPE VALLEY
3145040909	EXPAND SEWAGE PLANT	ANTELOPE VALLEY
3145040921	EXPAND SEWAGE PLANT	ANTELOPE VALLEY
3145040901	EXPAND SEWAGE PLANT	ANTELOPE VALLEY
3145040911	EXPAND SEWAGE PLANT	ANTELOPE VALLEY
3145040903	EXPAND SEWAGE PLANT	ANTELOPE VALLEY
3145040904	EXPAND SEWAGE PLANT	ANTELOPE VALLEY
3145040914	EXPAND SEWAGE PLANT	ANTELOPE VALLEY
3145040912	EXPAND SEWAGE PLANT	ANTELOPE VALLEY
3145040910	EXPAND SEWAGE PLANT	ANTELOPE VALLEY
3145040908	EXPAND SEWAGE PLANT	ANTELOPE VALLEY

APN	Description of Project	Community Name
3145040920	EXPAND SEWAGE PLANT	ANTELOPE VALLEY
3145040906	EXPAND SEWAGE PLANT	ANTELOPE VALLEY
3145040916	EXPAND SEWAGE PLANT	ANTELOPE VALLEY
3145040907	EXPAND SEWAGE PLANT	ANTELOPE VALLEY
3145040919	EXPAND SEWAGE PLANT	ANTELOPE VALLEY
3145040905	EXPAND SEWAGE PLANT	ANTELOPE VALLEY
3145040917	EXPAND SEWAGE PLANT	ANTELOPE VALLEY
3145040918	EXPAND SEWAGE PLANT	ANTELOPE VALLEY
3145040915	EXPAND SEWAGE PLANT	ANTELOPE VALLEY
3116007900	EXPAND SEWAGE PLANT	ANTELOPE VALLEY
3102001060	EXPANSION OF CHURCH (CLASSROOMS, PARKING, ETC.)	ANTELOPE VALLEY
3101016039	EXPANSION OF STORAGE UNIT	ANTELOPE VALLEY
3208019005	FOX FEED STORE	ANTELOPE VALLEY
3102022051	FREESTANDING DBL FACED SIGN	ANTELOPE VALLEY
3103006042	FREESTANDING DBL FACED SIGN	ANTELOPE VALLEY
3103023015	FREESTANDING SINGLE FACES SIGN	ANTELOPE VALLEY
3227031021	FRONT YARD SETBACKS	ANTELOPE VALLEY
3227016034	FRONT YD SETBACKS	ANTELOPE VALLEY
3227030007	FRT SETBACK MODIFICATION	ANTELOPE VALLEY
3103009033	FUELING FACILITY WITH FOOD MAR	ANTELOPE VALLEY
3227017026	GARAGE	ANTELOPE VALLEY
3242021025	GARAGE	ANTELOPE VALLEY
3279018014	GARAGE & UPPER FLR STORAGE	ANTELOPE VALLEY
3110005032	GARAGE CONVERSION	ANTELOPE VALLEY
3153040024	GARAGE FOR PKG PERSONAL AUTOS	ANTELOPE VALLEY
3227029038	GARAGE/HOBBY ROOM	ANTELOPE VALLEY
3049029049	GAS STATION AND LIQUOR STORE	ANTELOPE VALLEY
3049029048	GAS STATION AND LIQUOR STORE	ANTELOPE VALLEY
3208020014	GAZEBO, PATIO COVER & ADDITION	ANTELOPE VALLEY
3056004052	GRADING	ANTELOPE VALLEY
3175003009	GRADING PLAN	ANTELOPE VALLEY
3046001025	GRANNY HOUSE ON 1.0 AC IN A1-10K	ANTELOPE VALLEY
3102025084	GRANNY HOUSE ON 1.25 AC IN R1-7.5K	ANTELOPE VALLEY
3278020025	GRANNY HOUSING	ANTELOPE VALLEY
3046012046	GRANNY UNIT	ANTELOPE VALLEY
3103023028	GUEST HOUSE	ANTELOPE VALLEY
3049002040	GUEST HOUSE & 3-CAR GARAGE	ANTELOPE VALLEY
3209003064	GUEST HOUSE/BED/BATH/LIV RMS	ANTELOPE VALLEY
3027013902	GYM WITH PARKING SHORTFALL	ANTELOPE VALLEY
3027013901	GYM WITH PARKING SHORTFALL	ANTELOPE VALLEY
3027013900	GYM WITH PARKING SHORTFALL	ANTELOPE VALLEY
3217022003	HARDWARE STORE, ETC IN PROPOSED C3-DP	ANTELOPE VALLEY
3217022002	HARDWARE STORE, ETC IN PROPOSED C3-DP	ANTELOPE VALLEY
3056032053	HILLSIDE	ANTELOPE VALLEY
3056033087	HILLSIDE	ANTELOPE VALLEY
3056011040	HILLSIDE	ANTELOPE VALLEY
3056011038	HILLSIDE	ANTELOPE VALLEY
3056011039	HILLSIDE	ANTELOPE VALLEY
3208012109	HILLSIDE MANAGEMENT	ANTELOPE VALLEY
3208008046	HILLSIDE MANAGEMENT FOR TR 46205	ANTELOPE VALLEY
3215003001	HORSE TRAINING CTR	ANTELOPE VALLEY
3080022006	INTERIM MANAGEMENT PLAN (IMP95064)	ANTELOPE VALLEY
3080022002	INTERIM MANAGEMENT PLAN (IMP95064)	ANTELOPE VALLEY
3080021001	INTERIM MANAGEMENT PLAN (IMP95064)	ANTELOPE VALLEY
3220014031		ANTELOPE VALLEY
3209020900	LITTLE LEAGUE FACILITIES ON 7.1 AC IN A2-1	ANTELOPE VALLEY
3102017014	LIVE ENTERTAINMENT	ANTELOPE VALLEY
3086013015	LOG HOUSE	ANTELOPE VALLEY
3228009030	LOT COMBINATION	ANTELOPE VALLEY
3234015036	LOT COMBINATION; SANITATION	ANTELOPE VALLEY
3227010034	LOT CONBINATION	ANTELOPE VALLEY
3227021027	LOT CONBINATION	ANTELOPE VALLEY
3204010075	M/H	ANTELOPE VALLEY
3056014045	MAF HOME & GARAGE	ANTELOPE VALLEY
3061005016	MAINTAIN & EXPAND EXISTING MONASTERY&YOUTH CAMP	ANTELOPE VALLEY
3061005015	MAINTAIN & EXPAND EXISTING MONASTERY&YOUTH CAMP	ANTELOPE VALLEY
3061025010	MAINTAIN & EXPAND EXISTING MONASTERY&YOUTH CAMP	ANTELOPE VALLEY
3061006019	MAINTAIN & EXPAND EXISTING MONASTERY&YOUTH CAMP	ANTELOPE VALLEY
3061024001	MAINTAIN & EXPAND EXISTING MONASTERY&YOUTH CAMP	ANTELOPE VALLEY
3061025017	MAINTAIN & EXPAND EXISTING MONASTERY&YOUTH CAMP	ANTELOPE VALLEY
3060016002	MAINTAIN & EXPAND EXISTING MONASTERY&YOUTH CAMP	ANTELOPE VALLEY
3275019021	MANFG HOME	ANTELOPE VALLEY
3056014044	MANUF HOME W/TWO CAR GARAGE	ANTELOPE VALLEY
3056014048	MANUFACTURED HOME WITH GARAGE	ANTELOPE VALLEY
3227028045	MANUFACTURED HOME/GARAGE	ANTELOPE VALLEY
3227028044	MANUFACTURED HOME/GARAGE	ANTELOPE VALLEY
3234024035	Market, gas station and sale of a full line of alcoholic beverages for off-site consumption in C-2-DP Zone.	ANTELOPE VALLEY
3208011064	MENAGERIE CARETAKER MH IN A2-1 FOR 10 YRS	ANTELOPE VALLEY

APN	Description of Project	Community Name
3102016023	METAL CONTAINERS FOR STORAGE	ANTELOPE VALLEY
3042006009	METAL GAR	ANTELOPE VALLEY
3208004039	MFG HOME	ANTELOPE VALLEY
3242015003	MFG HOME	ANTELOPE VALLEY
3022018022	MFG OF SANDSTONE PRODUCTS	ANTELOPE VALLEY
3233005021	MINOR CP, ADD WIND GENERATOR	ANTELOPE VALLEY
3115002013	MINOR CUP - WIND TURBINE	ANTELOPE VALLEY
3376007014	MINOR WECS'N - 80' TOWER	ANTELOPE VALLEY
3216018038	MOBIL HOME	ANTELOPE VALLEY
3027027051	MOBILE FOOD PREPARATION	ANTELOPE VALLEY
3243027001	MOBILE HOME & CHAPEL	ANTELOPE VALLEY
3216018034	MOBILE HOME DURING CONSTRUCT	ANTELOPE VALLEY
3049014019	MOBILE HOME FOR CARETAKER RESIDENCE	ANTELOPE VALLEY
3056017032	MOBILEHOME DURING CONSTRUCTION	ANTELOPE VALLEY
3056017014	MOBILEHOME DURING CONSTRUCTION	ANTELOPE VALLEY
3037026013	MOBILEHOME DURING CONSTRUCTION	ANTELOPE VALLEY
3036013036	MOBILEHOME DURING CONSTRUCTION	ANTELOPE VALLEY
3036014015	MOBILEHOME DURING CONSTRUCTION	ANTELOPE VALLEY
3152013007	MOBILEHOME DURING CONSTRUCTION	ANTELOPE VALLEY
3038013017	MOBILEHOME DURING CONSTRUCTION	ANTELOPE VALLEY
3366029001	MOBILEHOMES (2) AND RESIDENCES (3) FOR CARETAKERS	ANTELOPE VALLEY
3101017016	NEW SIGNAGE AT GAS STATION	ANTELOPE VALLEY
3027013048	NEW 3500 SQ FT CHURCH BLDG IN A2-1	ANTELOPE VALLEY
3233010016		ANTELOPE VALLEY
3302019017	New fence in and light posts.	ANTELOPE VALLEY
3056031011	NEW HOME	ANTELOPE VALLEY
3056024066	NEW RESIDENCE	ANTELOPE VALLEY
3056024053	NEW RESIDENCE	ANTELOPE VALLEY
3056024067	NEW RESIDENCE	ANTELOPE VALLEY
3027011025	new single family residence with attached two car garage	ANTELOPE VALLEY
3278001017	the new addition shall exceed 23 feet in height	ANTELOPE VALLEY
3219009006	New two story duplex w/ an attached four car carport	ANTELOPE VALLEY
3216012025	NFG HIME & GARAGE	ANTELOPE VALLEY
3227020017	OAK TREE PERMIT TO ENCROACH ON 8 TREES	ANTELOPE VALLEY
3038006001	OFF-SITE DBL-FACED FREESTAND	ANTELOPE VALLEY
3102018009	OFF-SITE FREESTAND DBL-FACED	ANTELOPE VALLEY
3264011023	OFF-SITE SALE OF ALCOHOL FOR MINI-MARKET	ANTELOPE VALLEY
3302021092	ON-SALE BEER TO EXISTING CLUB HOUSE (GOLF COURSE)	ANTELOPE VALLEY
3103007001	ON-SITE ALCOHOL AT RESTAURANT (LICENSE CHANGE)	ANTELOPE VALLEY
3223003027	ORCHARCD & HORSE FARM	ANTELOPE VALLEY
3101016035	PAINT AND BODY REPAIR SHOP	ANTELOPE VALLEY
3278027014	PERMIT FOR EIGHT DOGS IN 6 KENNELS	ANTELOPE VALLEY
3208024033	PLANT NURSERY	ANTELOPE VALLEY
3036014035	OF 16 TREES AND 2 OAK TREES RESPECTIVELY.	ANTELOPE VALLEY
3101017006	POLE	ANTELOPE VALLEY
3101017007	POLE	ANTELOPE VALLEY
3233004025	PRIVATE AIRPORT	ANTELOPE VALLEY
3233004027	PRIVATE AIRPORT	ANTELOPE VALLEY
3103006045	Proposal for two removals (none heritage) and one encroachment (none heritage).	ANTELOPE VALLEY
3175016020	Proposed 415sq. ft. single story addition.	ANTELOPE VALLEY
3145011120	Proposed 449sq. ft single story addition.	ANTELOPE VALLEY
3103010038	Proposing a 188 sq.ft. single story addition	ANTELOPE VALLEY
3042018015	PROPOSING A 464 SQUARE FOOT SINGLE STORY ADDITOIN TO AN EXISTING DUPLEX	ANTELOPE VALLEY
3220014045	Proposing a 728 square foot single story addition to the existing dwelling	ANTELOPE VALLEY
3046028026	Proposing a new single family dwelilng with an attached two car garage and two car carport	ANTELOPE VALLEY
3042005002	Proposing to build a detached dwelling with four car garage underneath	ANTELOPE VALLEY
3208012110	RANCH HOUSE & PATIO	ANTELOPE VALLEY
3227020032	REMDL ESTATE OFF/TAKEOUT PIZZA	ANTELOPE VALLEY
3027015027	REMODEL	ANTELOPE VALLEY
3233017006	fence on the western property line.	ANTELOPE VALLEY
3384001800	REMOVE & REPLACE HVAC UNITS	ANTELOPE VALLEY
2846004010	REMOVE 2 DEAD OAK TREES	ANTELOPE VALLEY
2846016017	REMOVE 3 OAKS	ANTELOPE VALLEY
3227026052	REMOVE 4 OAKS	ANTELOPE VALLEY
3306002940	REQUEST FOR PLOT PLAN APPRVL	ANTELOPE VALLEY
3102018024	RESTAURANT	ANTELOPE VALLEY
3208024021	RESTAURANT	ANTELOPE VALLEY
3027013034	RESTAURANT	ANTELOPE VALLEY
3242005004	RESTAURANT	ANTELOPE VALLEY
3208014102	RETAIL GAME ARCADE & BILLIARDS IN EXISTING RETAIL	ANTELOPE VALLEY
3228017017	RETAIN WALL	ANTELOPE VALLEY
3228006005	RETROACTIVE - THREE REMOVALS	ANTELOPE VALLEY
3227024036	RV STORAGE SHED	ANTELOPE VALLEY
3027015033	SALE OF BEER & WINE FOR OFF-SITE CONSUMPTION	ANTELOPE VALLEY
3027015025	SALE OF BEER & WINE FOR OFF-SITE CONSUMPTION	ANTELOPE VALLEY
3046001040	SALE OF BEER & WINE FOR OFF-SITE CONSUMPTION	ANTELOPE VALLEY
3042019010	SALE OF FULL LIQUOR FOR MINI-MARKET	ANTELOPE VALLEY
3175003001	SANITARY LANDFILL,RECYCLING & HAULING	ANTELOPE VALLEY

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3056028108	SEA	ANTELOPE VALLEY
3056028107	SEA	ANTELOPE VALLEY
3056018079	SEA	ANTELOPE VALLEY
3056018081	SEA	ANTELOPE VALLEY
3046008042	SECOND DWELLING UNIT FOR SF RESIDENTIAL	ANTELOPE VALLEY
3044027030	SECOND SFR ON LOT	ANTELOPE VALLEY
3101016037	SECOND UNIT	ANTELOPE VALLEY
3220013050	SENIOR CITIZEN RES ON 2.5 AC IN A1-1	ANTELOPE VALLEY
3042026008	SENIOR CITIZEN RESIDENCE MOBILEHOME	ANTELOPE VALLEY
3110008009	SENIOR CITIZEN RESIDENCE ON 1.25 AC	ANTELOPE VALLEY
3220015009	SENIOR CITIZEN'S RESIDENCE	ANTELOPE VALLEY
3101020019	SENIOR CITIZEN'S RESIDENCE	ANTELOPE VALLEY
3260024048	SENIOR CITIZENS' RESIDENCE	ANTELOPE VALLEY
3260024049	SENIOR CITIZENS' RESIDENCE	ANTELOPE VALLEY
3264010033	SERV STA WITH ALCOHOL SALES ON 1.25 AC IN C3	ANTELOPE VALLEY
3227023010	SETBACK	ANTELOPE VALLEY
3234023024	SETBACK	ANTELOPE VALLEY
3227031043	SETBACK	ANTELOPE VALLEY
3227015028	SETBACK AVERAGING	ANTELOPE VALLEY
3102018014	SETBACKS	ANTELOPE VALLEY
3103010026	SETBACKS	ANTELOPE VALLEY
3227009023	SETBACKS	ANTELOPE VALLEY
3227026057	SETBACKS	ANTELOPE VALLEY
3042024018	SEWAGE TREATMENT PLANT	ANTELOPE VALLEY
3042024021	SEWAGE TREATMENT PLANT	ANTELOPE VALLEY
3042024020	SEWAGE TREATMENT PLANT	ANTELOPE VALLEY
3153040013	SF DETACHED POOL HOUSE	ANTELOPE VALLEY
3046011033	SFR	ANTELOPE VALLEY
3027018011	SFR	ANTELOPE VALLEY
3223003025	SFR	ANTELOPE VALLEY
3056024063	SFR	ANTELOPE VALLEY
3208022001	SFR	ANTELOPE VALLEY
3208012096	SFR & GARAGE	ANTELOPE VALLEY
3374011004	SFR AND GUEST HOUSE	ANTELOPE VALLEY
3056005054	SFR- CONVERT TO PERMANENT	ANTELOPE VALLEY
3252012020	SIGN	ANTELOPE VALLEY
3205008006	SINGLE FAMILY RESIDENCE	ANTELOPE VALLEY
3057017055	SINGLE FAMILY HOME	ANTELOPE VALLEY
3056025009	SINGLE FAMILY RES & GARAGE	ANTELOPE VALLEY
3101027029	SINGLE FAMILY RESIDENCE	ANTELOPE VALLEY
3205013033	SINGLE FAMILY RESIDENCE	ANTELOPE VALLEY
3208017032	SINGLE FAMILY RESIDENCE	ANTELOPE VALLEY
3056027064	SINGLE FLY RESIDENCE	ANTELOPE VALLEY
3208012121	SINGLE FLY RESIDENCE	ANTELOPE VALLEY
3216015031	SINGLE FLY RESIDENCE	ANTELOPE VALLEY
3056031023	SINGLE FLY RESIDENCE	ANTELOPE VALLEY
3056006007	SINGLE FLY RESIDENCE	ANTELOPE VALLEY
3216018039	SINGLE FLY RESIDENCE	ANTELOPE VALLEY
3056024032	Single Story Dwelling with a detached 2 car garage on a hillside	ANTELOPE VALLEY
3251013056	SIZZLER RESTAURANT	ANTELOPE VALLEY
3366020003	SRF & HORSE TRAINING FACILITY	ANTELOPE VALLEY
3038002025	STEEL BLDG FOR AUTO REKPAIRS	ANTELOPE VALLEY
3208033083	STEEL BUILDING FOR STORAGE	ANTELOPE VALLEY
3042026002	STORAGE AREA FOR VEHICLES	ANTELOPE VALLEY
3227010035	STORAGE BARN	ANTELOPE VALLEY
3042025020	STORAGE RM & SWIMMING POOL	ANTELOPE VALLEY
3233016021	TEMP MOBILE HOME	ANTELOPE VALLEY
3208004041	TEMP MOBILE HOME F/BLDG CONST	ANTELOPE VALLEY
3047020036	TEMP RESIDENCE	ANTELOPE VALLEY
3042004001	TEMPORARY MOBILE HOME	ANTELOPE VALLEY
3049010021	TEMPORARY PARISH HALL & CLASSROOMS	ANTELOPE VALLEY
2846014015	Temporary use permit for June 4, 2005 and July 24, 2005	ANTELOPE VALLEY
3227010031	THREE O.T. ENCROACHMENTS	ANTELOPE VALLEY
3228004038	THREE OAK TREE ENCROACHMENTS	ANTELOPE VALLEY
3047009015	TO BUILD 50 SFR ON 100.1 AC	ANTELOPE VALLEY
3209001019	TO BUILD SENIOR CITIZEN RESIDENCE	ANTELOPE VALLEY
3227029043	To legalize an existing dog kennel	ANTELOPE VALLEY
3275007002	To legalize an existing dog kennel	ANTELOPE VALLEY
3275007001	To legalize an existing dog kennel	ANTELOPE VALLEY
3042026010	TRAILER	ANTELOPE VALLEY
3042026011	TRAILER	ANTELOPE VALLEY
3204014022	TRAILER DURING CONSTRUCTION	ANTELOPE VALLEY
3279019005	TRAILER DURING CONSTRUCTION	ANTELOPE VALLEY
3228015034	TRAVEL TRAILER DURING CONSTR	ANTELOPE VALLEY
3242006008	TREE FARM	ANTELOPE VALLEY
3102018023	TSIRE STORE	ANTELOPE VALLEY
3101016036	UNMANNED TELECOMMUNICATION FACILITY	ANTELOPE VALLEY
3209001012	WATER FAC & CARETAKER TRAILER ON 3.9 AC IN A2-1	ANTELOPE VALLEY

APN	Description of Project	Community Name
3209003058	WATER STORAGE AND DIST SYSTEMS	ANTELOPE VALLEY
3209003059	WATER STORAGE AND DISTRIBUTION FACILITY	ANTELOPE VALLEY
3209003061	WATER STORAGE AND DISTRIBUTION FACILITY	ANTELOPE VALLEY
3209003060	WATER STORAGE AND DISTRIBUTION FACILITY	ANTELOPE VALLEY
3208007005	WELL	ANTELOPE VALLEY
3310003014	WIND ENERGY CONVERSION SYSTEM - NON COMMERCIAL	ANTELOPE VALLEY
3038004800	WIRELESS COMMUNICATIONS FACILITY	ANTELOPE VALLEY
3150018021	WIRELESS FACILITY	ANTELOPE VALLEY
3275013004	WIRELESS TELECOM FACILITY W/TRANSMISSION EQUIPMEN	ANTELOPE VALLEY
3115010025	WIRELESS TELECOM FACILITY	ANTELOPE VALLEY
3115010024	WIRELESS TELECOM FACILITY	ANTELOPE VALLEY
3102017016	WIRELESS TELECOMMUNICATION FACILITY	ANTELOPE VALLEY
3251014045	WIRELESS TELECOMMUNICATION FACILITY	ANTELOPE VALLEY
3209020064	WORKSHOP	ANTELOPE VALLEY
3061025013	XMAS TREE FARM	ANTELOPE VALLEY
3102023025	YARD MOD & GARAGE	ANTELOPE VALLEY
3103031027	YARD MODIFICATION	ANTELOPE VALLEY
3205011008	ENCROACHMENT OF EXISTING BARN BEING CONVERTED TO SFR	ANTELOPE VALLEY
3227030029	YM TO ACCOMADATE SANITATION	ANTELOPE VALLEY
3049007025	ZC	ANTELOPE VALLEY
7016016013	2-STORY SFR & 2-CAR GARAGE	CERRITOS ISLANDS
7016016061	2-STORY SFR W/ATTACHED GARAGE	CERRITOS ISLANDS
7016016059	2-STORY SFR W/ATTACHED GARAGE	CERRITOS ISLANDS
7016016060	2-STORY SFR W/ATTACHED GARAGE	CERRITOS ISLANDS
7016016045	BUILD 2 STORY HOME	CERRITOS ISLANDS
7016015083	CHURCH & PRESCHOOL IN R2	CERRITOS ISLANDS
7016016053	ONE OAK TREE IN THE RIGHT OF WAY, CONDO CONVERSION	CERRITOS ISLANDS
7016015086	Proposing a single story addition of 351 sq.ft. to the existing dwelling	CERRITOS ISLANDS
7016015120	Proposing a single story addition of 351 sq.ft. to the existing dwelling	CERRITOS ISLANDS
6180018006	1-STORY SFR W/2-CAR GARAGE	EAST RANCHO DOMINGUEZ
6184001044	ADD TO SFR	EAST RANCHO DOMINGUEZ
7302013006	ADD TO SFR & 2-CAR GARAGE	EAST RANCHO DOMINGUEZ
6195018015	ADDITION OF S.F.R.	EAST RANCHO DOMINGUEZ
6181027910	BONUS WITH 10 PERCENT (22 UNITS) SET ASIDE FOR LOWER INCOME HOUSEHOLDS.	EAST RANCHO DOMINGUEZ
6195019037	ADULT DAY CARE FACILITY	EAST RANCHO DOMINGUEZ
6180013001	BILLBOARD	EAST RANCHO DOMINGUEZ
6185010049	BILLBOARD SIGN	EAST RANCHO DOMINGUEZ
6180015018	CAR REPAIR SHOP,OFF & R/ROOM	EAST RANCHO DOMINGUEZ
6181023023	CNVERT 2 APTS TO 4 APTS	EAST RANCHO DOMINGUEZ
6180018002	CNVERT CHURCH TO RETAIL STORE	EAST RANCHO DOMINGUEZ
6185010045	COMMERCIAL BLDG	EAST RANCHO DOMINGUEZ
6195018022	CONDO CONVERSION OF 11 UNITS IN 5 BUILDINGS ON 0.38 GROSS ACRES.	EAST RANCHO DOMINGUEZ
6180010006	CONSTRUCT A DUPLEX IN A C-3 ZONE (RESIDENTIAL)	EAST RANCHO DOMINGUEZ
6185010063	CONTINUE EXISTING DUPLEXES IN COMMERCIAL ZONE	EAST RANCHO DOMINGUEZ
6180024007	DEV PROG	EAST RANCHO DOMINGUEZ
6180024013	DEV PROG	EAST RANCHO DOMINGUEZ
6180024012	DEV PROG	EAST RANCHO DOMINGUEZ
6180014002	ILUMINATED CHANNEL LETTER SIGN	EAST RANCHO DOMINGUEZ
6180014001	ILUMINATED CHANNEL LETTER SIGN	EAST RANCHO DOMINGUEZ
6181026024	LIVE POULTRY DEALER	EAST RANCHO DOMINGUEZ
6180005024	MINIMALL W/2 FD	EAST RANCHO DOMINGUEZ
6180004025	New 3,300 square foot two story dwelling	EAST RANCHO DOMINGUEZ
6181032029	New SFR with attached two car carport	EAST RANCHO DOMINGUEZ
6180004014	OFC SPACE	EAST RANCHO DOMINGUEZ
6180016010	OFFICE BLDG	EAST RANCHO DOMINGUEZ
6181027909	OFFICE BLDG IN M1 ON 2.6 AC	EAST RANCHO DOMINGUEZ
6181025019	one story sfr with 2-car garage	EAST RANCHO DOMINGUEZ
6181023003	PARKING PERMIT FOR REDUCED/TANDEM PARKING	EAST RANCHO DOMINGUEZ
6181022003	GROSS ACRES.	EAST RANCHO DOMINGUEZ
6181022002	GROSS ACRES.	EAST RANCHO DOMINGUEZ
6181027906	PROPOSED 58,000 SQ.FT. LIGHT INDUSTRIAL BLDG.	EAST RANCHO DOMINGUEZ
6181027907	PROPOSED 58,000 SQ.FT. LIGHT INDUSTRIAL BLDG.	EAST RANCHO DOMINGUEZ
6181027911	PROPOSED 58,000 SQ.FT. LIGHT INDUSTRIAL BLDG.	EAST RANCHO DOMINGUEZ
6185006035	Proposed 772 sq. ft. single story addition.	EAST RANCHO DOMINGUEZ
6195001016	Proposed 87.5 sq. ft single story addition (to be legalize).	EAST RANCHO DOMINGUEZ
6181026015	Proposed tenant improvement of an existing retail space 3600 into two 1800 square foot spaces.	EAST RANCHO DOMINGUEZ
6180022044	yard setback along the North side and 3'-6" along the South side (lot width is 32'; side setbacks are 10% of the	EAST RANCHO DOMINGUEZ
6185010054	RENEWING RCUP 96025, Renewal of Existing WTF	EAST RANCHO DOMINGUEZ
6181023034	RESIDENTIAL IN C2 ZONE/UNCOVERED PARKING	EAST RANCHO DOMINGUEZ
6180016005	RETAIL STORE	EAST RANCHO DOMINGUEZ
7302005015	ROOMS & BATHROOM ADDITION	EAST RANCHO DOMINGUEZ
7301019016	SECOND UNIT ADDT. + 4 CAR CP	EAST RANCHO DOMINGUEZ
6180005008	SIGN REVIEW	EAST RANCHO DOMINGUEZ
6185015015	TO OPEN A TIRE SHOP	EAST RANCHO DOMINGUEZ
6185015025	TO OPEN A TIRE SHOP	EAST RANCHO DOMINGUEZ
6180001031	2.3 TO RD 3.1	EAST RANCHO DOMINGUEZ
6180001032	2.3 TO RD 3.1	EAST RANCHO DOMINGUEZ
6180001035	2.3 TO RD 3.1	EAST RANCHO DOMINGUEZ

APN	Description of Project	Community Name
6180001037	2.3 TO RD 3.1	EAST RANCHO DOMINGUEZ
6180001039	2.3 TO RD 3.1	EAST RANCHO DOMINGUEZ
6180001038	2.3 TO RD 3.1	EAST RANCHO DOMINGUEZ
6180001036	2.3 TO RD 3.1	EAST RANCHO DOMINGUEZ
6180001040	2.3 TO RD 3.1	EAST RANCHO DOMINGUEZ
6180001033	2.3 TO RD 3.1	EAST RANCHO DOMINGUEZ
6180001034	2.3 TO RD 3.1	EAST RANCHO DOMINGUEZ
6180003019	WIRELESS TELECOMMUNICATIONS FACILITY	EAST RANCHO DOMINGUEZ
2526017014	10 FT FRONT YARD SETBACKS	KAGEL CANYON
2526001077	1-STORY SFR	KAGEL CANYON
2526025012	ADD CLUBHOUSE FOR COMM KITCHEN	KAGEL CANYON
2526020022	SETBACK	KAGEL CANYON
2526014044	Single Story Dwelling with a detached 2 car garage on a hillside	KAGEL CANYON
4201003902	[illegible]	LADERA HEIGHTS / VIEWPARK - WINDSOR HILLS
5009005903	[illegible]	LADERA HEIGHTS / VIEWPARK - WINDSOR HILLS
5009006009	[illegible]	LADERA HEIGHTS / VIEWPARK - WINDSOR HILLS
5009006271	[illegible]	LADERA HEIGHTS / VIEWPARK - WINDSOR HILLS
7185019020	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019036	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019037	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019038	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019039	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019040	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019041	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019042	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019044	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019045	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019046	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019047	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019048	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019049	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019050	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019051	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019052	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019053	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019054	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019055	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019056	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019057	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019058	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019059	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019060	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019061	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019062	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019063	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019064	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019065	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019066	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019067	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019068	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019069	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019070	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019071	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019072	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019073	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019074	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019075	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019076	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019077	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019078	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019079	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019080	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019081	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019082	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019083	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019084	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019043	CELLULAR TELEPHONE FACILITY	LONG BEACH ISLAND
7185019017	MULTIFAMILY RESIDENTIAL USE IN C-1 ZONE	LONG BEACH ISLAND
2846002014	PAINT BOOTH	LOPEZ CANYON
4456010022	(TN) 10 SF & 1 OS LOTS ON 85.0 AC	MALIBU COASTAL ZONE
4455016902	(TN) 47 SF & 3 OS LOTS ON 272 AC IN A1-1	MALIBU COASTAL ZONE
4445006032	2 STORY ADDITION	MALIBU COASTAL ZONE
4455019016	2 STORY SFR / W 4 CAR GARAGE	MALIBU COASTAL ZONE
4452027011	2ND FLR ADDITION	MALIBU COASTAL ZONE
4456039007	2-STORY SINGLE FLY RESIDENCE	MALIBU COASTAL ZONE
4445008802	above ground storage tank-4,000 gallons	MALIBU COASTAL ZONE
4455042007	ADD OF MASTER BEDROOM	MALIBU COASTAL ZONE
4438020048	ADDITION & REMODEL	MALIBU COASTAL ZONE

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4438029010	ADDITION TO EXISTING SFR	MALIBU COASTAL ZONE
4455039004	ADDITION TO SFR	MALIBU COASTAL ZONE
4440006004	ALLOW ENCROACHMENT OF 18 OAK TREES	MALIBU COASTAL ZONE
4438027009	BRIDGE	MALIBU COASTAL ZONE
4445024007	CONT RES,CAMP,CABINS & OFF/MKT I4	MALIBU COASTAL ZONE
4440006005	CONTINUE EXISTING OUTDOOR THEATRE	MALIBU COASTAL ZONE
4440013026	CONVT GRGE LIV RM & STAIRCASE	MALIBU COASTAL ZONE
4440028008	FIRE REPAIR	MALIBU COASTAL ZONE
4455028044	FOR PRIVATE EQUESTRIAN USE	MALIBU COASTAL ZONE
4438008036	FRONT SETBACKS	MALIBU COASTAL ZONE
4456005003	FRONT YD SETBACK	MALIBU COASTAL ZONE
4438025037	GROUTED RIP-RAP, FENCE, ETC	MALIBU COASTAL ZONE
4456004004	HORSE STABLE	MALIBU COASTAL ZONE
4456005004	HORSE STABLE	MALIBU COASTAL ZONE
4456021016	IMPRV FOUNDATION STORAGE AREA	MALIBU COASTAL ZONE
4438008032	INSTAL SWIMMING POOL & SPA	MALIBU COASTAL ZONE
4444025023	LOT TIE	MALIBU COASTAL ZONE
4444026026	LOT TIE	MALIBU COASTAL ZONE
4452027023	MEDIA ROOM ADDITION	MALIBU COASTAL ZONE
4448002900	MOTEL IN C2 ON 47.5 AC	MALIBU COASTAL ZONE
4456039006	NEW 2-STORY RESIDENCE	MALIBU COASTAL ZONE
4456031035	NEW SFR	MALIBU COASTAL ZONE
4445030005	new three car garage, single car carport and a laundry room.	MALIBU COASTAL ZONE
4461031026	OAK TREE PERMIT TO ENCROACH ON FOUR OAK TREES	MALIBU COASTAL ZONE
4445028015	ON SITE SALE OF ALCOHOLIC BEVERAGES	MALIBU COASTAL ZONE
4448029020	ONE OAK REMOVED; THREE ENCROACHMENTS	MALIBU COASTAL ZONE
4438031021	POWER POLE	MALIBU COASTAL ZONE
4443001002	REMODEL EXISTING RESTAURANT	MALIBU COASTAL ZONE
4438002029	REMOVE 1 TREE AND 2 ENCROACHMENTS	MALIBU COASTAL ZONE
4462031007	REMOVE 5+ OAK TREES IN A1-1	MALIBU COASTAL ZONE
4438009044	RENEWAL OF EXPIRED RCUP 96136 (PROJECT 96136) AND ADDING 1 NEW CABINET	MALIBU COASTAL ZONE
4438007010	REPAIRS TO STORM DAMAGED BLDG	MALIBU COASTAL ZONE
4438023008	RESIDENTIAL CONSISTENCY	MALIBU COASTAL ZONE
4445006023	REVIEW FOR PARKING	MALIBU COASTAL ZONE
4440028007	SALE OF BEER & WINE IN RESTAURANT	MALIBU COASTAL ZONE
4438031022	SECOND RES UNIT ON 8.4 AC IN A1-1	MALIBU COASTAL ZONE
4456012022	SEVERAL ENCROACHMENTS; NO REMOVALS	MALIBU COASTAL ZONE
4440017028	SFR	MALIBU COASTAL ZONE
4440017029	SFR	MALIBU COASTAL ZONE
4438012007	SFR	MALIBU COASTAL ZONE
4461015038	SFR	MALIBU COASTAL ZONE
4461015009	SFR	MALIBU COASTAL ZONE
4461015026	SFR	MALIBU COASTAL ZONE
4461015032	SFR	MALIBU COASTAL ZONE
4461015030	SFR	MALIBU COASTAL ZONE
4438023004	SFR	MALIBU COASTAL ZONE
4462004019	SURFACE MINING PERMIT	MALIBU COASTAL ZONE
4456015007	swimming pool addition	MALIBU COASTAL ZONE
4452012028	TALL WALL	MALIBU COASTAL ZONE
4455028093	THREE CARETAKERS' MOBILEHOMES	MALIBU COASTAL ZONE
4445028013	TO ENCROACH WITHIN THE PROTECTED ZONE OF TWO OAK TREES.	MALIBU COASTAL ZONE
4445008900	TWO OAK TREE REMOVALS - NEW PUBLIC LIBRARY	MALIBU COASTAL ZONE
4452027019	WALL	MALIBU COASTAL ZONE
4473001900	wireless	MALIBU COASTAL ZONE
4444023901	WIRELESS "MICROCELL" FACILITY	MALIBU COASTAL ZONE
4224005910	ADD LIVE ENTERTAINMENT TO EXIST COCKTAIL LOUNGE	MARINA DEL REY
4224003901	BONUS WITH 10 PERCENT (22 UNITS) SET ASIDE FOR LOWER INCOME HOUSEHOLDS.	MARINA DEL REY
4224006900	CDP TO INSTALL NEW SLUICE GATES & REPAIR FLAP GATE	MARINA DEL REY
4224006904	CHARTER SERVICE FOR BOATS	MARINA DEL REY
4224006913	CHARTER SERVICE FOR BOATS	MARINA DEL REY
4224006905	CHARTER SERVICE FOR BOATS	MARINA DEL REY
4224005906	DEMOLISH/REBUILD 2 ONE-STORY COMMERCIAL STRUCTURES	MARINA DEL REY
4224003900	LESS THAN REQUIRED PARKING	MARINA DEL REY
4224006915	ON-SITE SALE OF ALCOHOLIC BEVERAGES IN RESTAURANT	MARINA DEL REY
4224002900	Prposed a new two story dwelling attached to the existing dwelling	MARINA DEL REY
4224006911	FOR ON-SITE CONSUMPTION AT 4215 ADMIRALTY WAY, MARINA DEL REY	MARINA DEL REY
4224006907	Temporary use permit for June 4, 2005 and July 24, 2005	MARINA DEL REY
4224005903	del Rey Specific Plan area, in the Playa del Rey Zoned District. (Neg Dec)	MARINA DEL REY
8124030016	RM ADD	NORTH WHITTIER
7306014007	2 ABOVE GROUND DIESEL TANKS	RANCHO DOMINGUEZ
7306019100	4 Industrial Lots/3.85 Acres	RANCHO DOMINGUEZ
7306019098	4 Industrial Lots/3.85 Acres	RANCHO DOMINGUEZ
7306019099	4 Industrial Lots/3.85 Acres	RANCHO DOMINGUEZ
7306019097	4 Industrial Lots/3.85 Acres	RANCHO DOMINGUEZ
7306002064	60 FOOT MONOPOLE DESIGNED AS A LIGHT STANDARD	RANCHO DOMINGUEZ
7306019086	ADD OF EMPLOYEES LUNCH ROOM	RANCHO DOMINGUEZ
7318007065	ALLOW OPERATION OF PAPER RECYCLING FACILITY IN M-2	RANCHO DOMINGUEZ
7306017001	CELLULAR TELEPHONE FACILITY	RANCHO DOMINGUEZ

APN	Description of Project	Community Name
7306019095	CONSTRUCTION & OPERATION/UNMANNED COMMNCTNS FAC.	RANCHO DOMINGUEZ
7306021033	CONTINUED OPERATION OF WIRELESS TELECOMM. FACILITY	RANCHO DOMINGUEZ
7306019056	EXP CARDBOARD BOX PLANT/OFFICE	RANCHO DOMINGUEZ
7306004024	FREESTANDING SIGN	RANCHO DOMINGUEZ
7306014046	LESS THAN REQD PKG FOR IND/WAREHSE ON 2.7 AC IN M2	RANCHO DOMINGUEZ
7306019910	LESS THAN REQUIRED PARKING	RANCHO DOMINGUEZ
7306014057	METAL RECYCLING PLANT IN PROPOSED M2-DP	RANCHO DOMINGUEZ
7306014056	METAL RECYCLING PLANT IN PROPOSED M2-DP	RANCHO DOMINGUEZ
7306018045	NEW RAISED CONC. DOCK	RANCHO DOMINGUEZ
7306013027	Non-illuminated sign of 120 SQ FT	RANCHO DOMINGUEZ
7306018031	OFC	RANCHO DOMINGUEZ
7306003054	OFF SITE PARKING	RANCHO DOMINGUEZ
7306017012	OIL STORAGE & SHIPPING FACILITY IN M-2	RANCHO DOMINGUEZ
7306018032	PARKING PERMIT	RANCHO DOMINGUEZ
7318008023	Proposing a 195 square foot single story addition	RANCHO DOMINGUEZ
7318007063	RECONFIGURATION OF PARKING LOT	RANCHO DOMINGUEZ
7306004031	REDUCE LANDSCAPING	RANCHO DOMINGUEZ
7306014061	SIGN	RANCHO DOMINGUEZ
7306018039	UNMANNED TELECOMMUNICATIONS FACILITY	RANCHO DOMINGUEZ
7318011810	UNMANNED WIRELESS FACILITY/50 FOOT TALL MONOPALM	RANCHO DOMINGUEZ
7306013037	WALL OPENINGS & LOADING PITS	RANCHO DOMINGUEZ
7318023041	WAREHOUSE	RANCHO DOMINGUEZ
7318023020	WAREHOUSE	RANCHO DOMINGUEZ
7306014009	WAREHOUSE	RANCHO DOMINGUEZ
2812005032	(RA) 38 SF LOTS ON 41.42 AC IN A2-1	SANTA CLARITA VALLEY
2812005033	(RA) 38 SF LOTS ON 41.42 AC IN A2-1	SANTA CLARITA VALLEY
2813013017	(RA) 55 SF LOTS ON 80 ACRES	SANTA CLARITA VALLEY
2813014001	(RA) 55 SF LOTS ON 80 ACRES	SANTA CLARITA VALLEY
2813027036	(RA) 55 SF LOTS ON 80 ACRES	SANTA CLARITA VALLEY
2813027035	(RA) 55 SF LOTS ON 80 ACRES	SANTA CLARITA VALLEY
2866022013	(RV) 158 SF LOTS ON 30.25 AC 1 OS & 2 PF LOTS	SANTA CLARITA VALLEY
2866022034	(RV) 158 SF LOTS ON 30.25 AC 1 OS & 2 PF LOTS	SANTA CLARITA VALLEY
2866022035	(RV) 158 SF LOTS ON 30.25 AC 1 OS & 2 PF LOTS	SANTA CLARITA VALLEY
2866022049	(RV) 158 SF LOTS ON 30.25 AC 1 OS & 2 PF LOTS	SANTA CLARITA VALLEY
2826038042	(RV) 240 SF 10 OS & 3 C LOTS ON 213 AC IN RPD1-1.4	SANTA CLARITA VALLEY
2826038043	(RV) 240 SF 10 OS & 3 C LOTS ON 213 AC IN RPD1-1.4	SANTA CLARITA VALLEY
2865036033	(TN) 2 C LOTS ON 14.4 AC - MAJOR LAND	SANTA CLARITA VALLEY
3231022003	(TN) 2 SF LOTS ON 0.49 ACRE IN A1-10K	SANTA CLARITA VALLEY
3244022034	(TN) 2 SF LOTS ON 11.87 AC	SANTA CLARITA VALLEY
3247042032	(TN) 2 SF LOTS ON 12.55 AC IN A2-2	SANTA CLARITA VALLEY
2865018900	(TN) 2 SF LOTS ON 2 ACRES	SANTA CLARITA VALLEY
3244083007	(TN) 2 SF LOTS ON 20.7 AC	SANTA CLARITA VALLEY
3244083002	(TN) 2 SF LOTS ON 20.7 AC	SANTA CLARITA VALLEY
3244083015	(TN) 2 SF LOTS ON 20.7 AC	SANTA CLARITA VALLEY
3244083005	(TN) 2 SF LOTS ON 20.7 AC	SANTA CLARITA VALLEY
3244083004	(TN) 2 SF LOTS ON 20.7 AC	SANTA CLARITA VALLEY
3231004034	(TN) 2 SF LOTS ON 6.22 ACRES IN A1-1	SANTA CLARITA VALLEY
3231004033	(TN) 2 SF LOTS ON 6.22 ACRES IN A1-1	SANTA CLARITA VALLEY
3247032048	(TN) 209SF, 1GOLF, 2 OS, 2 ST) LOTS/432 ACRES	SANTA CLARITA VALLEY
3247032047	(TN) 209SF, 1GOLF, 2 OS, 2 ST) LOTS/432 ACRES	SANTA CLARITA VALLEY
3247032035	(TN) 209SF, 1GOLF, 2 OS, 2 ST) LOTS/432 ACRES	SANTA CLARITA VALLEY
2826020032	(TN) 280 SF, 1 PARK ON 262.78 AC (ACTIVE FILE)	SANTA CLARITA VALLEY
2826020020	(TN) 280 SF, 1 PARK ON 262.78 AC (ACTIVE FILE)	SANTA CLARITA VALLEY
3247048006	(TN) 4 SF LOTS ON 10.0 AC	SANTA CLARITA VALLEY
3247048005	(TN) 4 SF LOTS ON 10.0 AC	SANTA CLARITA VALLEY
2865015007	(TN) 4 SF LOTS/1.1 AC	SANTA CLARITA VALLEY
3210009008	(WECS-N) WIND TOWER	SANTA CLARITA VALLEY
3231004043	`SETBACKS NORTH & SOUTH P/LINE	SANTA CLARITA VALLEY
2865015047	RD AND FERGUSON RD	SANTA CLARITA VALLEY
2865015048	RD AND FERGUSON RD	SANTA CLARITA VALLEY
2865015049	RD AND FERGUSON RD	SANTA CLARITA VALLEY
2865015050	RD AND FERGUSON RD	SANTA CLARITA VALLEY
2865015051	RD AND FERGUSON RD	SANTA CLARITA VALLEY
2865015052	RD AND FERGUSON RD	SANTA CLARITA VALLEY
2865015053	RD AND FERGUSON RD	SANTA CLARITA VALLEY
2865015054	RD AND FERGUSON RD	SANTA CLARITA VALLEY
2865015055	RD AND FERGUSON RD	SANTA CLARITA VALLEY
2865015056	RD AND FERGUSON RD	SANTA CLARITA VALLEY
2865015057	RD AND FERGUSON RD	SANTA CLARITA VALLEY
2865015058	RD AND FERGUSON RD	SANTA CLARITA VALLEY
2865015059	RD AND FERGUSON RD	SANTA CLARITA VALLEY
2865015060	RD AND FERGUSON RD	SANTA CLARITA VALLEY
2865015061	RD AND FERGUSON RD	SANTA CLARITA VALLEY
2865015062	RD AND FERGUSON RD	SANTA CLARITA VALLEY
2865015063	RD AND FERGUSON RD	SANTA CLARITA VALLEY
2865015064	RD AND FERGUSON RD	SANTA CLARITA VALLEY
2813024014	1 SF LOT ON 17.65 AC IN RR, C3 & A1-1	SANTA CLARITA VALLEY
2813012005	2). A 441 sq. ft. one story detached garage. Garage shall not exceed an elevation of 15ft.	SANTA CLARITA VALLEY

APN	Description of Project	Community Name
2813017024	CYN RD APPROXIMATELY ONE MILE WEST OF SIERRA HIGHWAY	SANTA CLARITA VALLEY
2813013028	100-BED GRP HOME/DEVELOPMENTALLY DISABLED	SANTA CLARITA VALLEY
2865093005	114 DETACHED SFR CONDOMINIUMS	SANTA CLARITA VALLEY
2840004021	1225# OFFICE	SANTA CLARITA VALLEY
2865036034	150 SENIOR APARTMENTS IN C-3-DP ZONE	SANTA CLARITA VALLEY
3210011017	151 SITES	SANTA CLARITA VALLEY
3247049011	1-STORY SFR W/ATTACHED GARAGE	SANTA CLARITA VALLEY
3247026061	2 CAR GARAGE WITH BATH	SANTA CLARITA VALLEY
3231006003	2 RACCOONS 2 OPOSSUMS & 2 DEER	SANTA CLARITA VALLEY
3270013067	20' FRT SETBACK	SANTA CLARITA VALLEY
3244019007	applicant is requesting a zone change, cup density bonus, plan amendment, and condos	SANTA CLARITA VALLEY
2812010002	2500 DU (1298 SFR, 1202 MFR IN HM, RPD)	SANTA CLARITA VALLEY
2812010001	2500 DU (1298 SFR, 1202 MFR IN HM, RPD)	SANTA CLARITA VALLEY
3244030005	2-LOT LLA	SANTA CLARITA VALLEY
2866004910	3,000,000 SQ FT INDUSTRIAL ON 238 NET AC IN MPD	SANTA CLARITA VALLEY
2866004905	3,000,000 SQ FT INDUSTRIAL ON 238 NET AC IN MPD	SANTA CLARITA VALLEY
2866004906	3,000,000 SQ FT INDUSTRIAL ON 238 NET AC IN MPD	SANTA CLARITA VALLEY
2866004909	3,000,000 SQ FT INDUSTRIAL ON 238 NET AC IN MPD	SANTA CLARITA VALLEY
2865021902	3,000,000 SQ FT INDUSTRIAL ON 238 NET AC IN MPD	SANTA CLARITA VALLEY
3270016050	4-BED ROOM SINGLE FAMILY RES	SANTA CLARITA VALLEY
3247033036	6 FT HIGH WALL IN FRONT YARD	SANTA CLARITA VALLEY
2813024004	7 SF LOTS/139.7 ac & 1 remainder parcel (8.23 ac)	SANTA CLARITA VALLEY
2813024007	7 SF LOTS/139.7 ac & 1 remainder parcel (8.23 ac)	SANTA CLARITA VALLEY
2853002001	7 SF LOTS/139.7 ac & 1 remainder parcel (8.23 ac)	SANTA CLARITA VALLEY
2853001007	7 SF LOTS/139.7 ac & 1 remainder parcel (8.23 ac)	SANTA CLARITA VALLEY
2853006006	7 SF LOTS/139.7 ac & 1 remainder parcel (8.23 ac)	SANTA CLARITA VALLEY
2853001007	84 total l ots; 75 single family lots	SANTA CLARITA VALLEY
2853002001	84 total l ots; 75 single family lots	SANTA CLARITA VALLEY
2865008044	ADD TO COMMERCIAL BLDG	SANTA CLARITA VALLEY
3213009053	ADD OF 2ND FLOOR TO SFR	SANTA CLARITA VALLEY
2865008048	ADD TO DRIVE THRU RESTAURANT	SANTA CLARITA VALLEY
3213007034	ADD TO SFR & SERVANT QTRS	SANTA CLARITA VALLEY
3247030100	ADDITIONS TO RESIDENCE	SANTA CLARITA VALLEY
3247050013	ADDL OF GUEST HOUSE	SANTA CLARITA VALLEY
2853002003	ADULT RESID FAC FOR 15 ON 4.5 AC IN C3	SANTA CLARITA VALLEY
2841015010	1). A 592 sq. ft. one story addition to the existing single family residence. 2). Conver the existing 440 sq. ft. attached garage into living area. 3). New 360 sq. ft. attached carport. 4). Setbacks: Interior Siide Yard is 5.5ft., St	SANTA CLARITA VALLEY
2865012010	AUTO SERVICE/SALES OF NEW CARS, REST & COMM RETAIL	SANTA CLARITA VALLEY
2865012007	AUTO SERVICE/SALES OF NEW CARS, REST & COMM RETAIL	SANTA CLARITA VALLEY
2865012011	AUTO SERVICE/SALES OF NEW CARS, REST & COMM RETAIL	SANTA CLARITA VALLEY
2865012008	AUTO SERVICE/SALES OF NEW CARS, REST & COMM RETAIL	SANTA CLARITA VALLEY
2812005040	BARN	SANTA CLARITA VALLEY
3247037049	BARN	SANTA CLARITA VALLEY
3231018002	BEER & WINE TO EXISTING RESTAURANT	SANTA CLARITA VALLEY
2865036029	BEER AND WINE SALE	SANTA CLARITA VALLEY
2853002008	BEER/WINE AT EXISTING RESTAURANT	SANTA CLARITA VALLEY
3231012003	BLDG SITE, WHOLESALE ROOFING	SANTA CLARITA VALLEY
2865014053	BUILD 750' GARAGE	SANTA CLARITA VALLEY
2865021019	C.U.P. TO INSTALL A 40' MONOPOLE & CELLULAR SITE	SANTA CLARITA VALLEY
3213006016	CARETAKER TRAILER RESIDENCE	SANTA CLARITA VALLEY
3212017040	CARETAKERS RESIDENCE ON 23.42 AC IN RR-1	SANTA CLARITA VALLEY
2866002050	CHILDREN FACILITY & RETAILSTOR	SANTA CLARITA VALLEY
2866005806	CHILDREN FACILITY & RETAILSTOR	SANTA CLARITA VALLEY
2866002053	CHILDREN FACILITY & RETAILSTOR	SANTA CLARITA VALLEY
2865018040	CHURCH FACILITY INCLUDING DAY CARE	SANTA CLARITA VALLEY
2813008012	CHURCH W/RELATED FACILITIES	SANTA CLARITA VALLEY
3270008038	CLASS ROOM PROJECT	SANTA CLARITA VALLEY
3270008042	CLINIC	SANTA CLARITA VALLEY
3270002057	COMM BLDG	SANTA CLARITA VALLEY
3270020004	COMM BLDG- EXPRESSO BAR	SANTA CLARITA VALLEY
2812006900	COMMERCIAL COACH CLASSROOM	SANTA CLARITA VALLEY
2865016041	COMMERCIAL SERVICE/RETAIL BUSINESS	SANTA CLARITA VALLEY
2865016031	COMMERCIAL SERVICE/RETAIL BUSINESS	SANTA CLARITA VALLEY
2865016028	COMMERCIAL SERVICE/RETAIL BUSINESS	SANTA CLARITA VALLEY
2865016030	COMMERCIAL SERVICE/RETAIL BUSINESS	SANTA CLARITA VALLEY
2865016026	COMMERCIAL SERVICE/RETAIL BUSINESS	SANTA CLARITA VALLEY
3271030081	CONCEPTUAL PLAN IND PARK IN M1.5-DP & C3-DP & GRAD	SANTA CLARITA VALLEY
3271030076	CONCEPTUAL PLAN IND PARK IN M1.5-DP & C3-DP & GRAD	SANTA CLARITA VALLEY
3271030072	CONCEPTUAL PLAN IND PARK IN M1.5-DP & C3-DP & GRAD	SANTA CLARITA VALLEY
3271030074	CONCEPTUAL PLAN IND PARK IN M1.5-DP & C3-DP & GRAD	SANTA CLARITA VALLEY
3271030088	CONCEPTUAL PLAN IND PARK IN M1.5-DP & C3-DP & GRAD	SANTA CLARITA VALLEY
3271030073	CONCEPTUAL PLAN IND PARK IN M1.5-DP & C3-DP & GRAD	SANTA CLARITA VALLEY
3271030075	CONCEPTUAL PLAN IND PARK IN M1.5-DP & C3-DP & GRAD	SANTA CLARITA VALLEY
3271030077	CONCEPTUAL PLAN IND PARK IN M1.5-DP & C3-DP & GRAD	SANTA CLARITA VALLEY
3271030078	CONCEPTUAL PLAN IND PARK IN M1.5-DP & C3-DP & GRAD	SANTA CLARITA VALLEY
3271030079	CONCEPTUAL PLAN IND PARK IN M1.5-DP & C3-DP & GRAD	SANTA CLARITA VALLEY
3271030080	CONCEPTUAL PLAN IND PARK IN M1.5-DP & C3-DP & GRAD	SANTA CLARITA VALLEY

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3271030083	CONCEPTUAL PLAN IND PARK IN M1.5-DP & C3-DP & GRAD	SANTA CLARITA VALLEY
3271030090	CONCEPTUAL PLAN IND PARK IN M1.5-DP & C3-DP & GRAD	SANTA CLARITA VALLEY
3271030082	CONCEPTUAL PLAN IND PARK IN M1.5-DP & C3-DP & GRAD	SANTA CLARITA VALLEY
3271030089	CONCEPTUAL PLAN IND PARK IN M1.5-DP & C3-DP & GRAD	SANTA CLARITA VALLEY
3271030087	CONCEPTUAL PLAN IND PARK IN M1.5-DP & C3-DP & GRAD	SANTA CLARITA VALLEY
2866002060	CONCEPTUAL PLAN IND PARK IN M1.5-DP & C3-DP & GRAD	SANTA CLARITA VALLEY
2865012916	CONST OF CASTIC SPORTS COMPLEX	SANTA CLARITA VALLEY
3213021017	CONST. OF HANGAR BUILDING TO EXISTING AIRPARK	SANTA CLARITA VALLEY
2813013022	CONT EXIST CARETAKER'S MOBILEHOME IN C3	SANTA CLARITA VALLEY
2848011013	CONT EXPLOSIVE MANUFACTURING	SANTA CLARITA VALLEY
3210017040	CONTINUE EXISTING TRAILER & RV PARK	SANTA CLARITA VALLEY
3214022012	CONTINUE THEATER	SANTA CLARITA VALLEY
3210011019	CONTINUED OPERATION OF RECREATIONAL TRAILER PARK	SANTA CLARITA VALLEY
3247030073	CONVERT EXIST RESIDENCE TO SECOND UNIT	SANTA CLARITA VALLEY
2826022035	PROGRAM ZONING, RESIDENTIAL USE IN A COMMERCIAL ZONE, AND ONSITE PROJECT GRADING	SANTA CLARITA VALLEY
2826023014	PROGRAM ZONING, RESIDENTIAL USE IN A COMMERCIAL ZONE, AND ONSITE PROJECT GRADING	SANTA CLARITA VALLEY
2826022026	PROGRAM ZONING, RESIDENTIAL USE IN A COMMERCIAL ZONE, AND ONSITE PROJECT GRADING	SANTA CLARITA VALLEY
2826022027	PROGRAM ZONING, RESIDENTIAL USE IN A COMMERCIAL ZONE, AND ONSITE PROJECT GRADING	SANTA CLARITA VALLEY
3231011002	CONTROLLED DEVELOPMENT AND RPD ZONE.	SANTA CLARITA VALLEY
3271007051	DECREASE 20' TO 10'	SANTA CLARITA VALLEY
3214017032	demolishing a garage and adding on to the existing sfr	SANTA CLARITA VALLEY
3214017031	demolishing a garage and adding on to the existing sfr	SANTA CLARITA VALLEY
3214017030	demolishing a garage and adding on to the existing sfr	SANTA CLARITA VALLEY
3214017033	demolishing a garage and adding on to the existing sfr	SANTA CLARITA VALLEY
3270021900	DEPARTMENT OF PUBLIC WORK	SANTA CLARITA VALLEY
2844037009	DEVELOPMENT PROGRAM	SANTA CLARITA VALLEY
3247037054	ELECTRIC METER	SANTA CLARITA VALLEY
2840004037	ELEVEN TREES FOR ENCROACHMENT	SANTA CLARITA VALLEY
3272028017	ENCROACH & TRIM ONE OAK	SANTA CLARITA VALLEY
2848013018	ENCROACH 4 OAKS	SANTA CLARITA VALLEY
3209010034	EXPAND EXISTING RV PARK IN A2-5, RR & C3	SANTA CLARITA VALLEY
2826003015	EXPAND TENT CAMPGRND/CONTINUE TRAVEL TRAILER/MRKT/	SANTA CLARITA VALLEY
3247033016	EXSITING 113-SPACE IMOBILEHOME PARK	SANTA CLARITA VALLEY
3213010900	FIRE STATION	SANTA CLARITA VALLEY
3231006009	For Hillside Management and Density-Controlled Development.	SANTA CLARITA VALLEY
3271014025	FRONT YD MOD	SANTA CLARITA VALLEY
3271014023	FRT YD MOD	SANTA CLARITA VALLEY
3271009016	FRT YD SETBACK	SANTA CLARITA VALLEY
3247054006	GARAGE TO STORE TRAVEL TRAILER	SANTA CLARITA VALLEY
2813007009	GRANNY UNIT IN A1-1	SANTA CLARITA VALLEY
3270012024	GUEST HOUSE & NEW SFR	SANTA CLARITA VALLEY
3247033037	GUEST HOUSE	SANTA CLARITA VALLEY
3244083001	HILLSIDE DEVELOPMENT	SANTA CLARITA VALLEY
3247042035	HILLSIDE MANAGEMENT	SANTA CLARITA VALLEY
3247042034	HILLSIDE MANAGEMENT	SANTA CLARITA VALLEY
3247042038	HILLSIDE MANAGEMENT	SANTA CLARITA VALLEY
2865023011	HILLSIDE MANAGEMENT	SANTA CLARITA VALLEY
3247030076	HILLSIDE MANAGEMENT	SANTA CLARITA VALLEY
3247042036	HILLSIDE MANAGEMENT	SANTA CLARITA VALLEY
3247042037	HILLSIDE MANAGEMENT	SANTA CLARITA VALLEY
3247030102	HORSE BARN	SANTA CLARITA VALLEY
2826007021	HOTEL & COMMERCIAL BLDGS IN PROPOSED C3-DP	SANTA CLARITA VALLEY
2865014025	IND BLDG JOBBY/WOOD/METAL/SHOP	SANTA CLARITA VALLEY
2865008019	INDUSTRIAL & OFFICE BLDGS	SANTA CLARITA VALLEY
2865008035	INDUSTRIAL & OFFICE BLDGS	SANTA CLARITA VALLEY
2812012006	SITE GRADING OVER 100,000 CUBIC YARDS	SANTA CLARITA VALLEY
2802002003	SITE GRADING OVER 100,000 CUBIC YARDS	SANTA CLARITA VALLEY
2802002005	SITE GRADING OVER 100,000 CUBIC YARDS	SANTA CLARITA VALLEY
2802002002	SITE GRADING OVER 100,000 CUBIC YARDS	SANTA CLARITA VALLEY
2839001017	SITE GRADING OVER 100,000 CUBIC YARDS	SANTA CLARITA VALLEY
2802003005	PUBLIC PARK, 9 NEIGHBORHOOD PARKS, 25 OPEN SPACE LOTS, 13 DEBRIS BASIN LOTS, 4 WATER	SANTA CLARITA VALLEY
3210015017	INTERIM MANAGEMENT PLAN	SANTA CLARITA VALLEY
3213013026	KEEP HORSES ON PROPERTY	SANTA CLARITA VALLEY
3214022022	LIVE ENTERTAINMENT, RESTAURANT, BAR & 3 SF RES IN	SANTA CLARITA VALLEY
3270016047	LOT TIE AND Y/M	SANTA CLARITA VALLEY
2865002003	METAL BLDG	SANTA CLARITA VALLEY
2865002017	METAL BLDG	SANTA CLARITA VALLEY
3231004039	METAL STORAGE BARN	SANTA CLARITA VALLEY
3213025016	MFG HOME & GARAGE	SANTA CLARITA VALLEY
3214020044	MOBILE HOME	SANTA CLARITA VALLEY
3214003009	MOBILE HOME	SANTA CLARITA VALLEY
3247033032	MOBILE TRAILER DURING CONST	SANTA CLARITA VALLEY
3213006030	MOBILEHOME	SANTA CLARITA VALLEY
2841023056	MOBILEHOME DURING COURSE OF CO	SANTA CLARITA VALLEY
3212017033	MOBILEHOME PARK, 57 MH SPACES & 8 RV SPACES	SANTA CLARITA VALLEY
2865015025	MODEL HOME	SANTA CLARITA VALLEY
2866001001	MODEL HOMES AND TRACT OFFICE	SANTA CLARITA VALLEY
2865010030	MOTEL ON 2.07 AC IN C3	SANTA CLARITA VALLEY

APN	Description of Project	Community Name
2865010031	MOTEL ON 2.07 AC IN C3	SANTA CLARITA VALLEY
2848013014	MOTION PICTURE SETS	SANTA CLARITA VALLEY
2865009022	MULTI F R	SANTA CLARITA VALLEY
3247032015	New 417 square foot single story addition to the existing dwelling	SANTA CLARITA VALLEY
2865002001	NEW SELF-SRVC STORAGE FACILITY	SANTA CLARITA VALLEY
2826127008	New two story additon to the existing front unit and two separate detached two car carports	SANTA CLARITA VALLEY
2865018034	New two story duplex with an attached four car garage	SANTA CLARITA VALLEY
2865018033	New two story duplex with an attached four car garage	SANTA CLARITA VALLEY
2865023006	New two story duplex with an attached four car garage	SANTA CLARITA VALLEY
2848012066	OFFICE BLDG	SANTA CLARITA VALLEY
2865096002	OIL WELLS IN A1-20K	SANTA CLARITA VALLEY
2865096003	OIL WELLS IN A1-20K	SANTA CLARITA VALLEY
2865096004	OIL WELLS IN A1-20K	SANTA CLARITA VALLEY
2865096005	OIL WELLS IN A1-20K	SANTA CLARITA VALLEY
2865096006	OIL WELLS IN A1-20K	SANTA CLARITA VALLEY
2865096015	OIL WELLS IN A1-20K	SANTA CLARITA VALLEY
2865096016	OIL WELLS IN A1-20K	SANTA CLARITA VALLEY
2865096017	OIL WELLS IN A1-20K	SANTA CLARITA VALLEY
2865096029	OIL WELLS IN A1-20K	SANTA CLARITA VALLEY
2865096031	OIL WELLS IN A1-20K	SANTA CLARITA VALLEY
2865096032	OIL WELLS IN A1-20K	SANTA CLARITA VALLEY
2865096033	OIL WELLS IN A1-20K	SANTA CLARITA VALLEY
2865096034	OIL WELLS IN A1-20K	SANTA CLARITA VALLEY
2865096030	OIL WELLS IN A1-20K	SANTA CLARITA VALLEY
2865096001	OIL WELLS IN A1-20K	SANTA CLARITA VALLEY
2865096014	OIL WELLS IN A1-20K	SANTA CLARITA VALLEY
2865014048	AND PARKER ROAD IN CASTAIC	SANTA CLARITA VALLEY
2865014047	AND PARKER ROAD IN CASTAIC	SANTA CLARITA VALLEY
2865014073	AND PARKER ROAD IN CASTAIC	SANTA CLARITA VALLEY
2865014074	AND PARKER ROAD IN CASTAIC	SANTA CLARITA VALLEY
2865014075	AND PARKER ROAD IN CASTAIC	SANTA CLARITA VALLEY
2865014076	AND PARKER ROAD IN CASTAIC	SANTA CLARITA VALLEY
2865014077	AND PARKER ROAD IN CASTAIC	SANTA CLARITA VALLEY
2865014078	AND PARKER ROAD IN CASTAIC	SANTA CLARITA VALLEY
2865014079	AND PARKER ROAD IN CASTAIC	SANTA CLARITA VALLEY
2865014080	AND PARKER ROAD IN CASTAIC	SANTA CLARITA VALLEY
2865014081	AND PARKER ROAD IN CASTAIC	SANTA CLARITA VALLEY
2865014061	AND PARKER ROAD IN CASTAIC	SANTA CLARITA VALLEY
2865014062	AND PARKER ROAD IN CASTAIC	SANTA CLARITA VALLEY
2865014063	AND PARKER ROAD IN CASTAIC	SANTA CLARITA VALLEY
2865014064	AND PARKER ROAD IN CASTAIC	SANTA CLARITA VALLEY
2865014065	AND PARKER ROAD IN CASTAIC	SANTA CLARITA VALLEY
2865014066	AND PARKER ROAD IN CASTAIC	SANTA CLARITA VALLEY
2865014067	AND PARKER ROAD IN CASTAIC	SANTA CLARITA VALLEY
2865014068	AND PARKER ROAD IN CASTAIC	SANTA CLARITA VALLEY
2865014069	AND PARKER ROAD IN CASTAIC	SANTA CLARITA VALLEY
2865014070	AND PARKER ROAD IN CASTAIC	SANTA CLARITA VALLEY
2865014071	AND PARKER ROAD IN CASTAIC	SANTA CLARITA VALLEY
2865014072	AND PARKER ROAD IN CASTAIC	SANTA CLARITA VALLEY
3272028070	ONE OAK TREE REMOVAL	SANTA CLARITA VALLEY
3231007041	ON-SITE SALES ALCOHOL	SANTA CLARITA VALLEY
3210007020	PERMIT FOR BEER & WINE & RENEWAL OF CARETAKER'S RE	SANTA CLARITA VALLEY
2848010312	OF 16 TREES AND 2 OAK TREES RESPECTIVELY.	SANTA CLARITA VALLEY
2840004033	PORTABLE GARAGES FOR STORAGE	SANTA CLARITA VALLEY
3272028075	POWER FOR WELLS	SANTA CLARITA VALLEY
2865009025	PREFAB OFFICE & TOOL SHED	SANTA CLARITA VALLEY
3247030105	PRIVATE SCHOOL USE	SANTA CLARITA VALLEY
2812005042	PROPOSED WATER WELL FOR HORSES	SANTA CLARITA VALLEY
3270012055	Proposing a new patio and new swimming pool	SANTA CLARITA VALLEY
2853002006	RADIO STATION & 3 ANTENNA TOWERS	SANTA CLARITA VALLEY
3214039013	SITE	SANTA CLARITA VALLEY
3244083011	RECREATIN RM ADD TO SFR	SANTA CLARITA VALLEY
3271007031	REDUCE SETBACK ON EAST SIDE	SANTA CLARITA VALLEY
3271010007	REDUCED FRT YD	SANTA CLARITA VALLEY
2865015011	RELOCATION PERMIT/EXSTNG HOME	SANTA CLARITA VALLEY
3270007027	REMODEL FLOOR PLAN	SANTA CLARITA VALLEY
2826005902	REMOVE 1 OAK AND TRIM 1 OAK	SANTA CLARITA VALLEY
2826006900	REMOVE 1 OAK AND TRIM 1 OAK	SANTA CLARITA VALLEY
2848009020	OAK TREE REMOVALS AND 5 ENCROACHMENTS TO RELOCATE DRIVEWAY PER DPW	SANTA CLARITA VALLEY
2848010020	OAK TREE REMOVALS AND 5 ENCROACHMENTS TO RELOCATE DRIVEWAY PER DPW	SANTA CLARITA VALLEY
2812009133	re-new wireless telecommunications facility	SANTA CLARITA VALLEY
3214025028	REOPEN CHURCH	SANTA CLARITA VALLEY
2865036046	REQUEST FOR WALL SIGN	SANTA CLARITA VALLEY
3247032040	REQUEST TO CHANGE ZONING FROM R-1 TO RPD-5000-10U.	SANTA CLARITA VALLEY
3231013031	RESIDENCE	SANTA CLARITA VALLEY
3214039033	RESTAURANT	SANTA CLARITA VALLEY
3270021017	RESTAURANT	SANTA CLARITA VALLEY
3270021018	RESTAURANT	SANTA CLARITA VALLEY

APN	Description of Project	Community Name
2865030013	RETAIL, RESTAURANT AND DAY CARE FACILITY	SANTA CLARITA VALLEY
2865030012	RETAIL, RESTAURANT AND DAY CARE FACILITY	SANTA CLARITA VALLEY
3214016016	equestrian related events and community events (i.e. barbeques etc.)	SANTA CLARITA VALLEY
2865016044	RM ADDITION	SANTA CLARITA VALLEY
3244083019	SEA NO. 19; RESIDENTIAL IN AN SEA; PM19899	SANTA CLARITA VALLEY
3244083010	SEA NO. 19; RESIDENTIAL IN AN SEA; PM19899	SANTA CLARITA VALLEY
3244083009	SEA NO. 19; RESIDENTIAL IN AN SEA; PM19899	SANTA CLARITA VALLEY
3213020057	SENIOR CITIZEN RESIDENCE	SANTA CLARITA VALLEY
3213025041	SENIOR CITIZEN RESIDENCE - 1,000 SQ. FT.	SANTA CLARITA VALLEY
2865016038	SETBACK	SANTA CLARITA VALLEY
3213025013	SF MODULAR HOME & GARAGE	SANTA CLARITA VALLEY
3244021011	SFR	SANTA CLARITA VALLEY
3270016036	SFR	SANTA CLARITA VALLEY
3270016020	SFR	SANTA CLARITA VALLEY
3270016016	SFR	SANTA CLARITA VALLEY
3270016053	SFR	SANTA CLARITA VALLEY
3270020009	SFR	SANTA CLARITA VALLEY
3271015044	SFR	SANTA CLARITA VALLEY
3270017047	SFR	SANTA CLARITA VALLEY
2841015048	SFR	SANTA CLARITA VALLEY
3271020056	SFR	SANTA CLARITA VALLEY
3244025025	SFR	SANTA CLARITA VALLEY
3270020002	SFR & YARD MODIFICATION	SANTA CLARITA VALLEY
2813006008	SFR IN RR-1	SANTA CLARITA VALLEY
3247042021	SFR, GARAGE & BARN	SANTA CLARITA VALLEY
2865013097	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013098	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013099	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013100	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013101	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013102	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013103	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013104	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013105	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013119	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013120	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013121	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013122	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013124	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013125	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013126	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013127	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013128	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013129	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013130	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013131	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013132	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013133	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013134	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013135	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013136	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013137	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013138	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013139	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013140	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013152	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013096	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013123	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
2865013153	SHOPPING CENTER IN DP ZONES	SANTA CLARITA VALLEY
3213024017	SINGLE FAMILY RESIDENCE	SANTA CLARITA VALLEY
3270017036	SINGLE FAMILY RESIDENCE	SANTA CLARITA VALLEY
3214016022	SINGLE FAMILY RESIDENCE	SANTA CLARITA VALLEY
3247026038	SINGLE FAMILY RESIDENCE	SANTA CLARITA VALLEY
3247054004	SINGLE FAMILY RESIDENCE	SANTA CLARITA VALLEY
3247042022	SINGLE FAMILY RESIDENCE	SANTA CLARITA VALLEY
2812005044	SINGLE FLY DWELLING	SANTA CLARITA VALLEY
2865015039	STORAGE BLDG	SANTA CLARITA VALLEY
2826009052	SUBSTITUTE NC USE	SANTA CLARITA VALLEY
3210016018	SURFACE MINING	SANTA CLARITA VALLEY
2826023033	TELEPHONE EQUIPMENT STA	SANTA CLARITA VALLEY
2826007017	TELEPHONE REPEATER STATION, COM EQUIP BLDG	SANTA CLARITA VALLEY
3247033031	TEM P MOBILE HOME	SANTA CLARITA VALLEY
3247042019	TEMP 2-BED ROOM TRAILER	SANTA CLARITA VALLEY
3247042004	TEMP MBL HM DURING CNSTRCTN	SANTA CLARITA VALLEY
3231018047	Temporary use permit for June 4, 2005 and July 24, 2005	SANTA CLARITA VALLEY
2865001027	To authorize a WTF disguised as a 60-ft monopalm at an existing church and multi-purpose facility.	SANTA CLARITA VALLEY
2865001005	To authorize a WTF disguised as a 60-ft monopalm at an existing church and multi-purpose facility.	SANTA CLARITA VALLEY
2826009086	the Playa del Rey Zoned District. (Neg Dec)	SANTA CLARITA VALLEY

APN	Description of Project	Community Name
2826025015	classroom, office, and multi-purpose room facilities, and provide 101 parking spaces.	SANTA CLARITA VALLEY
2826023026	GARDENA	SANTA CLARITA VALLEY
3247051020	To create 4 SF lots on 13.17 acres located at 30740 Burlwood Drive in Castaic.	SANTA CLARITA VALLEY
2865036047	TO CREATE TWO COMMERCIAL PARCELS ON 8.79 ACRES. LEASE PROJECT ONLY MAP.	SANTA CLARITA VALLEY
2841015047	TO CREATE TWO SINGLE-FAMILY PARCELS ON 4.93 GROSS ACRES.	SANTA CLARITA VALLEY
2848010905	THE SUBJECT PROPERTY IS LOCATED AT THE NORTHWEST CORNER OF VIA PRINCESSA AND LOST	SANTA CLARITA VALLEY
2848013017	TO OPERATE AND MAINTAIN MOTION PICTURE SETS	SANTA CLARITA VALLEY
3247032041	2.3 TO RD 3.1	SANTA CLARITA VALLEY
3231006006	2.3 TO RD 3.1	SANTA CLARITA VALLEY
3247032011	2.3 TO RD 3.1	SANTA CLARITA VALLEY
3247032010	2.3 TO RD 3.1	SANTA CLARITA VALLEY
2865002016	TRUCK STORAGE & OFFICE SPACE IN M1-DP	SANTA CLARITA VALLEY
2865011016	UNMANNED TELECOMMUNICATIONS SITE	SANTA CLARITA VALLEY
3231013801	UNMANNED WIRELESS TELECOMMUNICATIONS FACILITY	SANTA CLARITA VALLEY
3212010045	VESTING MINOR LAND DIVISION, 4SF LOTS/20.15 ACRES	SANTA CLARITA VALLEY
3270013004	WIRELESS TELECOM FACILITY W/TRANSMISSION EQUIPMEN	SANTA CLARITA VALLEY
3271010074	YARD MODIFICATION	SANTA CLARITA VALLEY
3270001044	YARD MODIFICATION	SANTA CLARITA VALLEY
2063021035	(TN) 10 SF LOTS, HM	SANTA MONICA MOUNTAINS NORTH AREA
2063021043	(TN) 10 SF LOTS, HM	SANTA MONICA MOUNTAINS NORTH AREA
2063021038	(TN) 10 SF LOTS, HM	SANTA MONICA MOUNTAINS NORTH AREA
2063021041	(TN) 10 SF LOTS, HM	SANTA MONICA MOUNTAINS NORTH AREA
2063021039	(TN) 10 SF LOTS, HM	SANTA MONICA MOUNTAINS NORTH AREA
4462005018	(TN) 15 SF LOTS & 1 REC LOT ON 4.64 AC	SANTA MONICA MOUNTAINS NORTH AREA
2055010901	(TN) 4 SF LOTS ON 811 AC	SANTA MONICA MOUNTAINS NORTH AREA
2052009900	(TN) 4 SF LOTS ON 811 AC	SANTA MONICA MOUNTAINS NORTH AREA
2063016021	1 PRUNING AND 3 ENCROACHENTS	SANTA MONICA MOUNTAINS NORTH AREA
4462005008	2-CAR GARAGE/SHOP & STORAGE	SANTA MONICA MOUNTAINS NORTH AREA
2063001026	3 OT ENCROACHMENTS	SANTA MONICA MOUNTAINS NORTH AREA
2063002098	3 OT ENCROACHMENTS	SANTA MONICA MOUNTAINS NORTH AREA
4464001021	4 SINGLE FAMILY RESIDENCES IN ZONE R-R-1	SANTA MONICA MOUNTAINS NORTH AREA
4464001022	4 SINGLE FAMILY RESIDENCES IN ZONE R-R-1	SANTA MONICA MOUNTAINS NORTH AREA
4464001911	4 SINGLE FAMILY RESIDENCES IN ZONE R-R-1	SANTA MONICA MOUNTAINS NORTH AREA
4464001023	4 SINGLE FAMILY RESIDENCES IN ZONE R-R-1	SANTA MONICA MOUNTAINS NORTH AREA
2063033041	6' FENCE ON TOP OF 4' RETAININ	SANTA MONICA MOUNTAINS NORTH AREA
4464002003	6' TO 12' WALL	SANTA MONICA MOUNTAINS NORTH AREA
4440005011	9 TREES ENCROACHMENT WITHIN DRIPLINE	SANTA MONICA MOUNTAINS NORTH AREA
2063033040	ADD 3 GARAGE;POOL HOUSE	SANTA MONICA MOUNTAINS NORTH AREA
4441001026	ADD TO SFR & RECREATION ROOM	SANTA MONICA MOUNTAINS NORTH AREA
2063003036	ADD/REMODEL OF SWIMMING POOL	SANTA MONICA MOUNTAINS NORTH AREA
2058001014	ADDITION TO SFR	SANTA MONICA MOUNTAINS NORTH AREA
2063048009	CARETAKER MOBILEHOME	SANTA MONICA MOUNTAINS NORTH AREA
2063048011	CARETAKER MOBILEHOME	SANTA MONICA MOUNTAINS NORTH AREA
2063048006	CARETAKER MOBILEHOME	SANTA MONICA MOUNTAINS NORTH AREA
2063048004	CARETAKER MOBILEHOME	SANTA MONICA MOUNTAINS NORTH AREA
2063048007	CARETAKER MOBILEHOME	SANTA MONICA MOUNTAINS NORTH AREA
2063048008	CARETAKER MOBILEHOME	SANTA MONICA MOUNTAINS NORTH AREA
2063048012	CARETAKER MOBILEHOME	SANTA MONICA MOUNTAINS NORTH AREA
2063048003	CARETAKER MOBILEHOME	SANTA MONICA MOUNTAINS NORTH AREA
2063048002	CARETAKER MOBILEHOME	SANTA MONICA MOUNTAINS NORTH AREA
2063003037	CARETAKER UNIT/USE EXIST MOBILEHOME INTERIM	SANTA MONICA MOUNTAINS NORTH AREA
2063003039	CARETAKER'S RESIDENCE/MOBILEHOME	SANTA MONICA MOUNTAINS NORTH AREA
4441001039	CONST NEW HOUSE AND GARAGE	SANTA MONICA MOUNTAINS NORTH AREA
4441029033	CONT TRAILER COURT	SANTA MONICA MOUNTAINS NORTH AREA
4436005010	CONTINUE PRIVATE SCHOOL,SUMMER CAMP, PICNIC AREA	SANTA MONICA MOUNTAINS NORTH AREA
4436005004	CONTINUE PRIVATE SCHOOL,SUMMER CAMP, PICNIC AREA	SANTA MONICA MOUNTAINS NORTH AREA
4438002012	DAYCARE CENTER FOR 40 CHILDREN IN R1-10K	SANTA MONICA MOUNTAINS NORTH AREA
2063003020	DEV OF EQUESTRIAN FACILITY	SANTA MONICA MOUNTAINS NORTH AREA
2063002088	ELECT IMPROVEMENT/CAMPGROUND	SANTA MONICA MOUNTAINS NORTH AREA
2063001019	ENCROACHMENT WITHIN PROTECTED ZONES OF 9 OAK TREES	SANTA MONICA MOUNTAINS NORTH AREA
4441001038	GARAGE CONV. & NEW GARAGE	SANTA MONICA MOUNTAINS NORTH AREA
2058001007	GRADING & SFR	SANTA MONICA MOUNTAINS NORTH AREA
2063001016	GRADING 35000 CY	SANTA MONICA MOUNTAINS NORTH AREA
2063014032	HILLSIDE	SANTA MONICA MOUNTAINS NORTH AREA
2063003013	HILLSIDE MANAGEMENT	SANTA MONICA MOUNTAINS NORTH AREA
2063015017	HORSE CORRAL IN SIDEYD	SANTA MONICA MOUNTAINS NORTH AREA
2063016022	INSTALLATION OF WIRELESS TELECOMMUNICATIONS	SANTA MONICA MOUNTAINS NORTH AREA
2063019037	LAB IN RESIDENTIAL ZONE	SANTA MONICA MOUNTAINS NORTH AREA
2049019059	LESS THAN REQD PKG FOR MINI STORAGE IN M1	SANTA MONICA MOUNTAINS NORTH AREA
2063019049	New 417 square foot single story addition to the existing dwelling	SANTA MONICA MOUNTAINS NORTH AREA
2063019048	New 417 square foot single story addition to the existing dwelling	SANTA MONICA MOUNTAINS NORTH AREA
2063019045	NEW SFR	SANTA MONICA MOUNTAINS NORTH AREA
4441001054	OAK TREE PERMIT - HOUSE & GARAGE	SANTA MONICA MOUNTAINS NORTH AREA
2058007038	OFC BLDG	SANTA MONICA MOUNTAINS NORTH AREA
2058010006	ONE OAK ENCROACHMENT	SANTA MONICA MOUNTAINS NORTH AREA
4464002049	ONE OAK TREE ENCROACHMENT	SANTA MONICA MOUNTAINS NORTH AREA
2063021045	ONE OAK TREE ENCROACHMENT	SANTA MONICA MOUNTAINS NORTH AREA
4455029021	PATIO	SANTA MONICA MOUNTAINS NORTH AREA

APN	Description of Project	Community Name
2063001021	PRIVATE FAMILY MEMBERSHIP CLUB	SANTA MONICA MOUNTAINS NORTH AREA
2063001025	PRIVATE FAMILY MEMBERSHIP CLUB	SANTA MONICA MOUNTAINS NORTH AREA
2063002097	PRIVATE FAMILY MEMBERSHIP CLUB	SANTA MONICA MOUNTAINS NORTH AREA
4462004025	car carport tandem	SANTA MONICA MOUNTAINS NORTH AREA
4436006011	REMODEL & ADD TO SLR	SANTA MONICA MOUNTAINS NORTH AREA
2063002093	REMOVAL OF OAK TREE	SANTA MONICA MOUNTAINS NORTH AREA
4464023031	REMOVE 1 OAK TREE	SANTA MONICA MOUNTAINS NORTH AREA
4464023030	REMOVE 1 OAK TREE	SANTA MONICA MOUNTAINS NORTH AREA
4455028086	REMOVE FIVE (5) OAK TREES FOR S.F.R.	SANTA MONICA MOUNTAINS NORTH AREA
2063016015	RENOVATE & ADDITION TO SFR	SANTA MONICA MOUNTAINS NORTH AREA
2063001023	RETROACTIVE PERMIT FOR PRUNING OF 22 OAK TREES	SANTA MONICA MOUNTAINS NORTH AREA
4434022007	RM ADD	SANTA MONICA MOUNTAINS NORTH AREA
2058003011	S.F.R., GARAGE, PATIO, POOL	SANTA MONICA MOUNTAINS NORTH AREA
2058024006	SF RESID IN RR-1	SANTA MONICA MOUNTAINS NORTH AREA
2058024008	SF RESID IN RR-1	SANTA MONICA MOUNTAINS NORTH AREA
2058024007	SF RESID IN RR-1	SANTA MONICA MOUNTAINS NORTH AREA
2058024010	SF RESID IN RR-1	SANTA MONICA MOUNTAINS NORTH AREA
2058024011	SF RESID IN RR-1	SANTA MONICA MOUNTAINS NORTH AREA
2058002064	SFR	SANTA MONICA MOUNTAINS NORTH AREA
4434023003	SFR	SANTA MONICA MOUNTAINS NORTH AREA
4440005003	SFR & GUEST HOUSE	SANTA MONICA MOUNTAINS NORTH AREA
4464001903	SFR IN RR-1	SANTA MONICA MOUNTAINS NORTH AREA
2063003030	SINGLE FAMILY & EQUESTRIAN CARETAKER QUARTERS	SANTA MONICA MOUNTAINS NORTH AREA
2063006022	RESIDENTIAL PLANNED DEVELOPMENT AND GRADING WITHIN THE SANTA MONICA MOUNTAINS NORTH	SANTA MONICA MOUNTAINS NORTH AREA
4436006010	To legalize an existing dog kennel	SANTA MONICA MOUNTAINS NORTH AREA
2063036001	WIRELESS TELECOMMUNICATIONS INSTALLATION	SANTA MONICA MOUNTAINS NORTH AREA
8730004006	EXPAND CHURCH & SCHOOL FACILITIES	SOUTH SAN JOSE HILLS
8725005906	New two story duplex with an attached four car garage	SOUTH SAN JOSE HILLS
8730004032	TELECOMMUNICATION FACILITY WITH A 60' MONOPOLE	SOUTH SAN JOSE HILLS
8741001044	TANDEM PARKING	VALINDA
7350001131	ANTENNA ATOP 60' MONOPOLE ON 0.03 AC IN M1.5	WEST CARSON
7409003035	CARNIVAL ON 7/29-7/31/05	WEST CARSON
7348001001	SIGN	WEST CARSON
7409003036	SIGN	WEST CARSON
8178021046	(TN) 13 SF LOTS/2.13 AC	WEST WHITTIER - LOS NIETOS
8174015011	2 UNIT	WEST WHITTIER - LOS NIETOS
8174015006	ADD CAR PORT & LEGALIZE UNIT	WEST WHITTIER - LOS NIETOS
8173023007	ADD TO COMM/INDUSTRIAL DEV	WEST WHITTIER - LOS NIETOS
8174014035	ADDITION TO EXISTING SINGLE FA	WEST WHITTIER - LOS NIETOS
8130028069	AUTO CENTER POLE SIGN WITH ELECTRONIC READERBOARD	WEST WHITTIER - LOS NIETOS
8176018014	CARPORT & GARAGE MODIFICATION	WEST WHITTIER - LOS NIETOS
8130019030	CELLULAR TELE ON 0.23 AC IN C3-BE	WEST WHITTIER - LOS NIETOS
8177019905	CELLULAR TELEPHONE ON EXISTING 90' TOWER	WEST WHITTIER - LOS NIETOS
8177026049	CONSTRUCTION OF ARCO SERVICE STATION/AM-PM MARKET	WEST WHITTIER - LOS NIETOS
8178019046	DENSITY BONUS FOR LOW/MODERATE INCOME HOUSING	WEST WHITTIER - LOS NIETOS
8178019047	DENSITY BONUS FOR LOW/MODERATE INCOME HOUSING	WEST WHITTIER - LOS NIETOS
8178019048	DENSITY BONUS FOR LOW/MODERATE INCOME HOUSING	WEST WHITTIER - LOS NIETOS
8178019049	DENSITY BONUS FOR LOW/MODERATE INCOME HOUSING	WEST WHITTIER - LOS NIETOS
8178019050	DENSITY BONUS FOR LOW/MODERATE INCOME HOUSING	WEST WHITTIER - LOS NIETOS
8178019052	DENSITY BONUS FOR LOW/MODERATE INCOME HOUSING	WEST WHITTIER - LOS NIETOS
8178019053	DENSITY BONUS FOR LOW/MODERATE INCOME HOUSING	WEST WHITTIER - LOS NIETOS
8178019054	DENSITY BONUS FOR LOW/MODERATE INCOME HOUSING	WEST WHITTIER - LOS NIETOS
8178019055	DENSITY BONUS FOR LOW/MODERATE INCOME HOUSING	WEST WHITTIER - LOS NIETOS
8178019056	DENSITY BONUS FOR LOW/MODERATE INCOME HOUSING	WEST WHITTIER - LOS NIETOS
8178019059	DENSITY BONUS FOR LOW/MODERATE INCOME HOUSING	WEST WHITTIER - LOS NIETOS
8178021055	DENSITY BONUS FOR LOW/MODERATE INCOME HOUSING	WEST WHITTIER - LOS NIETOS
8178021056	DENSITY BONUS FOR LOW/MODERATE INCOME HOUSING	WEST WHITTIER - LOS NIETOS
8178021057	DENSITY BONUS FOR LOW/MODERATE INCOME HOUSING	WEST WHITTIER - LOS NIETOS
8178019058	DENSITY BONUS FOR LOW/MODERATE INCOME HOUSING	WEST WHITTIER - LOS NIETOS
8178019057	DENSITY BONUS FOR LOW/MODERATE INCOME HOUSING	WEST WHITTIER - LOS NIETOS
8178019051	DENSITY BONUS FOR LOW/MODERATE INCOME HOUSING	WEST WHITTIER - LOS NIETOS
8178021058	DENSITY BONUS FOR LOW/MODERATE INCOME HOUSING	WEST WHITTIER - LOS NIETOS
8178021026	GUEST HOUSE	WEST WHITTIER - LOS NIETOS
8176012001	IRON FENCE	WEST WHITTIER - LOS NIETOS
8177001009	PLANT NURSERY	WEST WHITTIER - LOS NIETOS
8174012018	San Gabriel Community Standards District	WEST WHITTIER - LOS NIETOS
8174027034	Proposing a new retaining wall not to excedd 6' in height	WEST WHITTIER - LOS NIETOS
8176016028	Proposing a single story addition to an existing fourplex	WEST WHITTIER - LOS NIETOS
8176016027	Proposing a single story addition to an existing fourplex	WEST WHITTIER - LOS NIETOS
8130023018	REAR YD SETBACKS	WEST WHITTIER - LOS NIETOS
8171002033	RESTAURANT	WEST WHITTIER - LOS NIETOS
8177018031	RETAIL STRIP CENTER WITH POSSIBLE FOOD USE	WEST WHITTIER - LOS NIETOS
8173023023	SELF STORAGE WITH BUS. OFFICE/CARETAKER'S APT.	WEST WHITTIER - LOS NIETOS
8176001804	WIRELESS FACILITY ON EXISTING SCE LATTICE TOWER located at the end of Choisser St.	WEST WHITTIER - LOS NIETOS
6154017037	1-STORY SFR, GARAGE & CARPORT	WILLOWBROOK
6154020023	AUTO DISMANTLING AND PARTS SALES ON 0.97 AC IN M1	WILLOWBROOK
6155033016	CONT'D. USE OF MARKET W/OFF-SITE ALCOHOL IN R-2	WILLOWBROOK
6155033017	CONT'D. USE OF MARKET W/OFF-SITE ALCOHOL IN R-2	WILLOWBROOK

APN	Description of Project	Community Name
6154017030	PROPOSED 1-STORY RES.	WILLOWBROOK
6155032030	REAR YD SETBACKS	WILLOWBROOK
6155032031	SETBACKS	WILLOWBROOK
6154012048	SFR & 2-CAR DETACHED GARAGE	WILLOWBROOK
6154013042	SINGLE FAMILY RES.	WILLOWBROOK
6154013043	SINGLE FAMILY RES.	WILLOWBROOK
6154015017	Yard Mod. SFR with 2 car garage.	WILLOWBROOK

Table H.4: Existing Development in Flood Hazard Zones

APN	Assessor Use Code - Type	Community Name
3027027060	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	ANTELOPE VALLEY
3042022020	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	ANTELOPE VALLEY
3101017005	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	ANTELOPE VALLEY
3101017013	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	ANTELOPE VALLEY
3102017008	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	ANTELOPE VALLEY
3102021026	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	ANTELOPE VALLEY
3102021033	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	ANTELOPE VALLEY
3103006001	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	ANTELOPE VALLEY
3103023006	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	ANTELOPE VALLEY
3103023044	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	ANTELOPE VALLEY
3175023001	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	ANTELOPE VALLEY
3027014016	Commercial - Commercial	ANTELOPE VALLEY
3027014021	Commercial - Commercial	ANTELOPE VALLEY
3027015034	Commercial - Commercial	ANTELOPE VALLEY
3038014011	Commercial - Commercial	ANTELOPE VALLEY
3049020016	Commercial - Commercial	ANTELOPE VALLEY
3049020053	Commercial - Commercial	ANTELOPE VALLEY
3049022006	Commercial - Commercial	ANTELOPE VALLEY
3049022008	Commercial - Commercial	ANTELOPE VALLEY
3049022033	Commercial - Commercial	ANTELOPE VALLEY
3049029004	Commercial - Commercial	ANTELOPE VALLEY
3049029007	Commercial - Commercial	ANTELOPE VALLEY
3101016006	Commercial - Commercial	ANTELOPE VALLEY
3101017010	Commercial - Commercial	ANTELOPE VALLEY
3102018904	Commercial - Commercial	ANTELOPE VALLEY
3103010019	Commercial - Commercial	ANTELOPE VALLEY
3103023005	Commercial - Commercial	ANTELOPE VALLEY
3103023042	Commercial - Commercial	ANTELOPE VALLEY
3175007028	Commercial - Commercial	ANTELOPE VALLEY
3208019006	Commercial - Commercial	ANTELOPE VALLEY
3208019022	Commercial - Commercial	ANTELOPE VALLEY
3208026002	Commercial - Commercial	ANTELOPE VALLEY
3208026008	Commercial - Commercial	ANTELOPE VALLEY
3209001023	Commercial - Commercial	ANTELOPE VALLEY
3228024026	Commercial - Commercial	ANTELOPE VALLEY
3228025031	Commercial - Commercial	ANTELOPE VALLEY
3228033025	Commercial - Commercial	ANTELOPE VALLEY
3242004002	Commercial - Commercial	ANTELOPE VALLEY
3242015007	Commercial - Commercial	ANTELOPE VALLEY
3307014053	Commercial - Commercial	ANTELOPE VALLEY
3037008024	Commercial - Hotel and Motel	ANTELOPE VALLEY
3049003010	Commercial - Nursery or Greenhouse	ANTELOPE VALLEY
3049004006	Commercial - Nursery or Greenhouse	ANTELOPE VALLEY
3049025024	Commercial - Office Building	ANTELOPE VALLEY
3102017018	Commercial - Office Building	ANTELOPE VALLEY
3102026037	Commercial - Office Building	ANTELOPE VALLEY
3103005028	Commercial - Office Building	ANTELOPE VALLEY
3224003020	Commercial - Office Building	ANTELOPE VALLEY
3242003005	Commercial - Office Building	ANTELOPE VALLEY
3102022016	Commercial - Parking Lot	ANTELOPE VALLEY
3251013035	Commercial - Parking Lot	ANTELOPE VALLEY
3251013036	Commercial - Parking Lot	ANTELOPE VALLEY
3049020046	Commercial - Professional Building	ANTELOPE VALLEY
3049022038	Commercial - Professional Building	ANTELOPE VALLEY
3103010035	Commercial - Professional Building	ANTELOPE VALLEY
3049025012	Commercial - Restaurant, Cocktail Lounge	ANTELOPE VALLEY
3102018010	Commercial - Restaurant, Cocktail Lounge	ANTELOPE VALLEY
3102018022	Commercial - Restaurant, Cocktail Lounge	ANTELOPE VALLEY
3103007002	Commercial - Restaurant, Cocktail Lounge	ANTELOPE VALLEY
3103010037	Commercial - Restaurant, Cocktail Lounge	ANTELOPE VALLEY
3103010046	Commercial - Restaurant, Cocktail Lounge	ANTELOPE VALLEY
3103023009	Commercial - Restaurant, Cocktail Lounge	ANTELOPE VALLEY
3049029050	Commercial - Service Shop Radio & Television Repair, Refrigeration Service, *	ANTELOPE VALLEY
3103005051	Commercial - Service Station	ANTELOPE VALLEY
3103005052	Commercial - Service Station	ANTELOPE VALLEY
3103023041	Commercial - Service Station	ANTELOPE VALLEY
3103009027	Commercial - Store	ANTELOPE VALLEY
3101017014	Commercial - Store	ANTELOPE VALLEY
3038002024	Commercial - Store	ANTELOPE VALLEY
3038007001	Commercial - Store	ANTELOPE VALLEY
3038007003	Commercial - Store	ANTELOPE VALLEY
3049007028	Commercial - Store	ANTELOPE VALLEY
3049022031	Commercial - Store	ANTELOPE VALLEY
3101016007	Commercial - Store	ANTELOPE VALLEY
3101016040	Commercial - Store	ANTELOPE VALLEY
3102017022	Commercial - Store	ANTELOPE VALLEY
3102018011	Commercial - Store	ANTELOPE VALLEY

APN	Assessor Use Code - Type	Community Name
3102021029	Commercial - Store	ANTELOPE VALLEY
3102022017	Commercial - Store	ANTELOPE VALLEY
3103009029	Commercial - Store	ANTELOPE VALLEY
3103009030	Commercial - Store	ANTELOPE VALLEY
3103010015	Commercial - Store	ANTELOPE VALLEY
3205013010	Commercial - Store	ANTELOPE VALLEY
3208014086	Commercial - Store	ANTELOPE VALLEY
3228012022	Commercial - Store	ANTELOPE VALLEY
3228034021	Commercial - Store	ANTELOPE VALLEY
3242003002	Commercial - Store	ANTELOPE VALLEY
3242005005	Commercial - Store	ANTELOPE VALLEY
3306008005	Commercial - Store	ANTELOPE VALLEY
3027011002	Commercial - Store Combination (w/ Office or Residential)	ANTELOPE VALLEY
3027011005	Commercial - Store Combination (w/ Office or Residential)	ANTELOPE VALLEY
3038014013	Commercial - Store Combination (w/ Office or Residential)	ANTELOPE VALLEY
3049020014	Commercial - Store Combination (w/ Office or Residential)	ANTELOPE VALLEY
3049020018	Commercial - Store Combination (w/ Office or Residential)	ANTELOPE VALLEY
3049020047	Commercial - Store Combination (w/ Office or Residential)	ANTELOPE VALLEY
3049029033	Commercial - Store Combination (w/ Office or Residential)	ANTELOPE VALLEY
3101017001	Commercial - Store Combination (w/ Office or Residential)	ANTELOPE VALLEY
3102021011	Commercial - Store Combination (w/ Office or Residential)	ANTELOPE VALLEY
3102022054	Commercial - Store Combination (w/ Office or Residential)	ANTELOPE VALLEY
3145013029	Commercial - Store Combination (w/ Office or Residential)	ANTELOPE VALLEY
3153040029	Commercial - Store Combination (w/ Office or Residential)	ANTELOPE VALLEY
3203003005	Commercial - Store Combination (w/ Office or Residential)	ANTELOPE VALLEY
3205012019	Commercial - Store Combination (w/ Office or Residential)	ANTELOPE VALLEY
3220018004	Commercial - Store Combination (w/ Office or Residential)	ANTELOPE VALLEY
3242006006	Commercial - Store Combination (w/ Office or Residential)	ANTELOPE VALLEY
3242015011	Commercial - Store Combination (w/ Office or Residential)	ANTELOPE VALLEY
3049027025	Commercial - Supermarket	ANTELOPE VALLEY
3049027027	Commercial - Supermarket	ANTELOPE VALLEY
3275021030	Dry Farm	ANTELOPE VALLEY
3029010009	Dry Farm - Desert	ANTELOPE VALLEY
3038002011	Dry Farm - Desert	ANTELOPE VALLEY
3038002012	Dry Farm - Desert	ANTELOPE VALLEY
3038003008	Dry Farm - Desert	ANTELOPE VALLEY
3038004010	Dry Farm - Desert	ANTELOPE VALLEY
3039003038	Dry Farm - Desert	ANTELOPE VALLEY
3039020032	Dry Farm - Desert	ANTELOPE VALLEY
3044018002	Dry Farm - Desert	ANTELOPE VALLEY
3048027301	Dry Farm - Desert	ANTELOPE VALLEY
3057013023	Dry Farm - Desert	ANTELOPE VALLEY
3059027312	Dry Farm - Desert	ANTELOPE VALLEY
3064012083	Dry Farm - Desert	ANTELOPE VALLEY
3064016022	Dry Farm - Desert	ANTELOPE VALLEY
3064020044	Dry Farm - Desert	ANTELOPE VALLEY
3078021010	Dry Farm - Desert	ANTELOPE VALLEY
3079004008	Dry Farm - Desert	ANTELOPE VALLEY
3080018017	Dry Farm - Desert	ANTELOPE VALLEY
3085010006	Dry Farm - Desert	ANTELOPE VALLEY
3113002019	Dry Farm - Desert	ANTELOPE VALLEY
3115007053	Dry Farm - Desert	ANTELOPE VALLEY
3145001008	Dry Farm - Desert	ANTELOPE VALLEY
3145017041	Dry Farm - Desert	ANTELOPE VALLEY
3145020011	Dry Farm - Desert	ANTELOPE VALLEY
3145020012	Dry Farm - Desert	ANTELOPE VALLEY
3145020107	Dry Farm - Desert	ANTELOPE VALLEY
3145021111	Dry Farm - Desert	ANTELOPE VALLEY
3145023055	Dry Farm - Desert	ANTELOPE VALLEY
3152004004	Dry Farm - Desert	ANTELOPE VALLEY
3152009038	Dry Farm - Desert	ANTELOPE VALLEY
3152016017	Dry Farm - Desert	ANTELOPE VALLEY
3154013002	Dry Farm - Desert	ANTELOPE VALLEY
3154016026	Dry Farm - Desert	ANTELOPE VALLEY
3154017004	Dry Farm - Desert	ANTELOPE VALLEY
3162009028	Dry Farm - Desert	ANTELOPE VALLEY
3205002030	Dry Farm - Desert	ANTELOPE VALLEY
3208003038	Dry Farm - Desert	ANTELOPE VALLEY
3208004040	Dry Farm - Desert	ANTELOPE VALLEY
3208006025	Dry Farm - Desert	ANTELOPE VALLEY
3208012089	Dry Farm - Desert	ANTELOPE VALLEY
3208022014	Dry Farm - Desert	ANTELOPE VALLEY
3209003034	Dry Farm - Desert	ANTELOPE VALLEY
3209011010	Dry Farm - Desert	ANTELOPE VALLEY
3216015022	Dry Farm - Desert	ANTELOPE VALLEY
3218007006	Dry Farm - Desert	ANTELOPE VALLEY
3218007008	Dry Farm - Desert	ANTELOPE VALLEY
3219009003	Dry Farm - Desert	ANTELOPE VALLEY
3220008008	Dry Farm - Desert	ANTELOPE VALLEY

APN	Assessor Use Code - Type	Community Name
3220017027	Dry Farm - Desert	ANTELOPE VALLEY
3220018023	Dry Farm - Desert	ANTELOPE VALLEY
3220019032	Dry Farm - Desert	ANTELOPE VALLEY
3220019041	Dry Farm - Desert	ANTELOPE VALLEY
3225024008	Dry Farm - Desert	ANTELOPE VALLEY
3225025015	Dry Farm - Desert	ANTELOPE VALLEY
3233016010	Dry Farm - Desert	ANTELOPE VALLEY
3238010017	Dry Farm - Desert	ANTELOPE VALLEY
3242001009	Dry Farm - Desert	ANTELOPE VALLEY
3242002001	Dry Farm - Desert	ANTELOPE VALLEY
3242006001	Dry Farm - Desert	ANTELOPE VALLEY
3256006008	Dry Farm - Desert	ANTELOPE VALLEY
3260023016	Dry Farm - Desert	ANTELOPE VALLEY
3264009043	Dry Farm - Desert	ANTELOPE VALLEY
3264010006	Dry Farm - Desert	ANTELOPE VALLEY
3264010007	Dry Farm - Desert	ANTELOPE VALLEY
3264011001	Dry Farm - Desert	ANTELOPE VALLEY
3264012036	Dry Farm - Desert	ANTELOPE VALLEY
3264016009	Dry Farm - Desert	ANTELOPE VALLEY
3275007014	Dry Farm - Desert	ANTELOPE VALLEY
3275013009	Dry Farm - Desert	ANTELOPE VALLEY
3278003007	Dry Farm - Desert	ANTELOPE VALLEY
3278005015	Dry Farm - Desert	ANTELOPE VALLEY
3278005024	Dry Farm - Desert	ANTELOPE VALLEY
3278005025	Dry Farm - Desert	ANTELOPE VALLEY
3278007022	Dry Farm - Desert	ANTELOPE VALLEY
3278009015	Dry Farm - Desert	ANTELOPE VALLEY
3278009025	Dry Farm - Desert	ANTELOPE VALLEY
3278009026	Dry Farm - Desert	ANTELOPE VALLEY
3278010021	Dry Farm - Desert	ANTELOPE VALLEY
3278010022	Dry Farm - Desert	ANTELOPE VALLEY
3278010027	Dry Farm - Desert	ANTELOPE VALLEY
3278010028	Dry Farm - Desert	ANTELOPE VALLEY
3278010029	Dry Farm - Desert	ANTELOPE VALLEY
3278018013	Dry Farm - Desert	ANTELOPE VALLEY
3278018022	Dry Farm - Desert	ANTELOPE VALLEY
3278022002	Dry Farm - Desert	ANTELOPE VALLEY
3278026009	Dry Farm - Desert	ANTELOPE VALLEY
3278026011	Dry Farm - Desert	ANTELOPE VALLEY
3278026012	Dry Farm - Desert	ANTELOPE VALLEY
3278027006	Dry Farm - Desert	ANTELOPE VALLEY
3278027007	Dry Farm - Desert	ANTELOPE VALLEY
3278027009	Dry Farm - Desert	ANTELOPE VALLEY
3279016024	Dry Farm - Desert	ANTELOPE VALLEY
3302019027	Dry Farm - Desert	ANTELOPE VALLEY
3302019079	Dry Farm - Desert	ANTELOPE VALLEY
3302020008	Dry Farm - Desert	ANTELOPE VALLEY
3306006019	Dry Farm - Desert	ANTELOPE VALLEY
3306007030	Dry Farm - Desert	ANTELOPE VALLEY
3306008012	Dry Farm - Desert	ANTELOPE VALLEY
3307008024	Dry Farm - Desert	ANTELOPE VALLEY
3307008033	Dry Farm - Desert	ANTELOPE VALLEY
3307008034	Dry Farm - Desert	ANTELOPE VALLEY
3307009096	Dry Farm - Desert	ANTELOPE VALLEY
3307010019	Dry Farm - Desert	ANTELOPE VALLEY
3307010024	Dry Farm - Desert	ANTELOPE VALLEY
3307010049	Dry Farm - Desert	ANTELOPE VALLEY
3307010050	Dry Farm - Desert	ANTELOPE VALLEY
3307010057	Dry Farm - Desert	ANTELOPE VALLEY
3307010065	Dry Farm - Desert	ANTELOPE VALLEY
3310003008	Dry Farm - Desert	ANTELOPE VALLEY
3310004045	Dry Farm - Desert	ANTELOPE VALLEY
3310005032	Dry Farm - Desert	ANTELOPE VALLEY
3338017023	Dry Farm - Desert	ANTELOPE VALLEY
3342020030	Dry Farm - Desert	ANTELOPE VALLEY
3346003030	Dry Farm - Desert	ANTELOPE VALLEY
3374017015	Dry Farm - Desert	ANTELOPE VALLEY
3374023005	Dry Farm - Desert	ANTELOPE VALLEY
3376012002	Dry Farm - Desert	ANTELOPE VALLEY
3376012020	Dry Farm - Desert	ANTELOPE VALLEY
3376013004	Dry Farm - Desert	ANTELOPE VALLEY
3376013018	Dry Farm - Desert	ANTELOPE VALLEY
3382006001	Dry Farm - Desert	ANTELOPE VALLEY
3382006014	Dry Farm - Desert	ANTELOPE VALLEY
3382020017	Dry Farm - Desert	ANTELOPE VALLEY
3203003011	Dry Farm - Pasture	ANTELOPE VALLEY
3228002002	Dry Farm - Pasture	ANTELOPE VALLEY
3366017005	Dry Farm - Pasture	ANTELOPE VALLEY
3022005900	Government Owned Property	ANTELOPE VALLEY

APN	Assessor Use Code - Type	Community Name
3022006270	Government Owned Property	ANTELOPE VALLEY
3022006274	Government Owned Property	ANTELOPE VALLEY
3022007900	Government Owned Property	ANTELOPE VALLEY
3022012919	Government Owned Property	ANTELOPE VALLEY
3025024900	Government Owned Property	ANTELOPE VALLEY
3025043901	Government Owned Property	ANTELOPE VALLEY
3025051271	Government Owned Property	ANTELOPE VALLEY
3025053271	Government Owned Property	ANTELOPE VALLEY
3025053273	Government Owned Property	ANTELOPE VALLEY
3025053278	Government Owned Property	ANTELOPE VALLEY
3025053282	Government Owned Property	ANTELOPE VALLEY
3040015042	Government Owned Property	ANTELOPE VALLEY
3040015045	Government Owned Property	ANTELOPE VALLEY
3040015046	Government Owned Property	ANTELOPE VALLEY
3049002901	Government Owned Property	ANTELOPE VALLEY
3049008900	Government Owned Property	ANTELOPE VALLEY
3049025904	Government Owned Property	ANTELOPE VALLEY
3049027903	Government Owned Property	ANTELOPE VALLEY
3049027904	Government Owned Property	ANTELOPE VALLEY
3053004903	Government Owned Property	ANTELOPE VALLEY
3061006018	Government Owned Property	ANTELOPE VALLEY
3102001903	Government Owned Property	ANTELOPE VALLEY
3102001909	Government Owned Property	ANTELOPE VALLEY
3102017901	Government Owned Property	ANTELOPE VALLEY
3102026800	Government Owned Property	ANTELOPE VALLEY
3103006900	Government Owned Property	ANTELOPE VALLEY
3103006901	Government Owned Property	ANTELOPE VALLEY
3110003903	Government Owned Property	ANTELOPE VALLEY
3145030900	Government Owned Property	ANTELOPE VALLEY
3204012902	Government Owned Property	ANTELOPE VALLEY
3208014900	Government Owned Property	ANTELOPE VALLEY
3208018901	Government Owned Property	ANTELOPE VALLEY
3208019900	Government Owned Property	ANTELOPE VALLEY
3208019901	Government Owned Property	ANTELOPE VALLEY
3227025900	Government Owned Property	ANTELOPE VALLEY
3243025901	Government Owned Property	ANTELOPE VALLEY
3388011284	Government Owned Property	ANTELOPE VALLEY
3022007287	Industrial - Heavy Manufacturing	ANTELOPE VALLEY
3022022901	Industrial - Industrial	ANTELOPE VALLEY
3025009287	Industrial - Industrial	ANTELOPE VALLEY
3038004009	Industrial - Industrial	ANTELOPE VALLEY
3042020011	Industrial - Industrial	ANTELOPE VALLEY
3042020012	Industrial - Industrial	ANTELOPE VALLEY
3050011030	Industrial - Industrial	ANTELOPE VALLEY
3102017017	Industrial - Industrial	ANTELOPE VALLEY
3137005009	Industrial - Industrial	ANTELOPE VALLEY
3137005015	Industrial - Industrial	ANTELOPE VALLEY
3137005020	Industrial - Industrial	ANTELOPE VALLEY
3137005030	Industrial - Industrial	ANTELOPE VALLEY
3227029801	Industrial - Industrial	ANTELOPE VALLEY
3242025003	Industrial - Industrial	ANTELOPE VALLEY
3242025013	Industrial - Industrial	ANTELOPE VALLEY
3302021025	Industrial - Industrial	ANTELOPE VALLEY
3307017902	Industrial - Industrial	ANTELOPE VALLEY
3022006273	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	ANTELOPE VALLEY
3022012270	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	ANTELOPE VALLEY
3022012271	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	ANTELOPE VALLEY
3049022037	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	ANTELOPE VALLEY
3049024008	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	ANTELOPE VALLEY
3137003014	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	ANTELOPE VALLEY
3264010027	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	ANTELOPE VALLEY
3137005019	Industrial - Lumber Yard	ANTELOPE VALLEY
3049021012	Industrial - Motion Picture, Radio and Television Industry	ANTELOPE VALLEY
3049029001	Industrial - Open Storage	ANTELOPE VALLEY
3056024068	Industrial - Warehousing, Distribution, Storage	ANTELOPE VALLEY
3056024069	Industrial - Warehousing, Distribution, Storage	ANTELOPE VALLEY
3056024070	Industrial - Warehousing, Distribution, Storage	ANTELOPE VALLEY
3027010027	Institutional - Cemetery, Mausoleum, Mortuary	ANTELOPE VALLEY
3042019014	Institutional - Church	ANTELOPE VALLEY
3049022007	Institutional - Church	ANTELOPE VALLEY
3102021020	Institutional - Church	ANTELOPE VALLEY
3175018016	Institutional - Church	ANTELOPE VALLEY
3208022018	Institutional - Church	ANTELOPE VALLEY
3027013028	Institutional - Homes for Aged & Others	ANTELOPE VALLEY
3027017020	Institutional - Homes for Aged & Others	ANTELOPE VALLEY
3204005018	Institutional - Homes for Aged & Others	ANTELOPE VALLEY
3204005022	Institutional - Homes for Aged & Others	ANTELOPE VALLEY
3204016067	Institutional - Homes for Aged & Others	ANTELOPE VALLEY
3079003012	Institutional - School (Private)	ANTELOPE VALLEY

APN	Assessor Use Code - Type	Community Name
3101022903	Institutional - School (Private)	ANTELOPE VALLEY
3220017005	Irrigated Farm	ANTELOPE VALLEY
3220017017	Irrigated Farm	ANTELOPE VALLEY
3260010109	Irrigated Farm	ANTELOPE VALLEY
3374003006	Irrigated Farm	ANTELOPE VALLEY
3382023001	Irrigated Farm	ANTELOPE VALLEY
3382023024	Irrigated Farm	ANTELOPE VALLEY
3382023033	Irrigated Farm	ANTELOPE VALLEY
3382023034	Irrigated Farm	ANTELOPE VALLEY
3384001001	Irrigated Farm	ANTELOPE VALLEY
3384001004	Irrigated Farm	ANTELOPE VALLEY
3307014019	Irrigated Farm - Dairy	ANTELOPE VALLEY
3260010108	Irrigated Farm - Field Crops	ANTELOPE VALLEY
3260027005	Irrigated Farm - Field Crops	ANTELOPE VALLEY
3268006024	Irrigated Farm - Field Crops	ANTELOPE VALLEY
3376022016	Irrigated Farm - Field Crops	ANTELOPE VALLEY
3382001001	Irrigated Farm - Field Crops	ANTELOPE VALLEY
3382023027	Irrigated Farm - Field Crops	ANTELOPE VALLEY
3384001002	Irrigated Farm - Field Crops	ANTELOPE VALLEY
3049006005	Irrigated Farm - Fruits and Nuts	ANTELOPE VALLEY
3049006006	Irrigated Farm - Fruits and Nuts	ANTELOPE VALLEY
3049011018	Irrigated Farm - Fruits and Nuts	ANTELOPE VALLEY
3049027043	Irrigated Farm - Fruits and Nuts	ANTELOPE VALLEY
3058006015	Irrigated Farm - Fruits and Nuts	ANTELOPE VALLEY
3205012020	Irrigated Farm - Fruits and Nuts	ANTELOPE VALLEY
3219006023	Irrigated Farm - Fruits and Nuts	ANTELOPE VALLEY
3242001011	Irrigated Farm - Fruits and Nuts	ANTELOPE VALLEY
3264011022	Irrigated Farm - Fruits and Nuts	ANTELOPE VALLEY
3279001028	Irrigated Farm - Fruits and Nuts	ANTELOPE VALLEY
3279016013	Irrigated Farm - Fruits and Nuts	ANTELOPE VALLEY
3279018021	Irrigated Farm - Fruits and Nuts	ANTELOPE VALLEY
3049008036	Irrigated Farm - Pasture	ANTELOPE VALLEY
3049009027	Irrigated Farm - Pasture	ANTELOPE VALLEY
3266013028	Irrigated Farm - Poultry	ANTELOPE VALLEY
3275013904	Irrigated Farm - Poultry	ANTELOPE VALLEY
3275013905	Irrigated Farm - Poultry	ANTELOPE VALLEY
3038002009	Irrigated Farm - Private Rural Pumping Plant	ANTELOPE VALLEY
3256007002	Irrigated Farm - Private Rural Pumping Plant	ANTELOPE VALLEY
3258010901	Irrigated Farm - Private Rural Pumping Plant	ANTELOPE VALLEY
3258010902	Irrigated Farm - Private Rural Pumping Plant	ANTELOPE VALLEY
3275003001	Irrigated Farm - Private Rural Pumping Plant	ANTELOPE VALLEY
3275003011	Irrigated Farm - Private Rural Pumping Plant	ANTELOPE VALLEY
3252006900	Miscellaneous - Pipeline, Canal	ANTELOPE VALLEY
3252006901	Miscellaneous - Pipeline, Canal	ANTELOPE VALLEY
3253001900	Miscellaneous - Pipeline, Canal	ANTELOPE VALLEY
3224003021	Miscellaneous - Privately owned	ANTELOPE VALLEY
3264011800	Miscellaneous - Rights of Way	ANTELOPE VALLEY
3022006906	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	ANTELOPE VALLEY
3022006907	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	ANTELOPE VALLEY
3022008900	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	ANTELOPE VALLEY
3044028807	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	ANTELOPE VALLEY
3205012006	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	ANTELOPE VALLEY
3205012007	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	ANTELOPE VALLEY
3209017805	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	ANTELOPE VALLEY
3220018008	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	ANTELOPE VALLEY
3260008025	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	ANTELOPE VALLEY
3260008026	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	ANTELOPE VALLEY
3264009021	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	ANTELOPE VALLEY
3307003800	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	ANTELOPE VALLEY
3220018009	Recreational - Athletic and Amusement Facility	ANTELOPE VALLEY
3063012007	Recreational - Camp	ANTELOPE VALLEY
3063012008	Recreational - Camp	ANTELOPE VALLEY
3066021018	Recreational - Camp	ANTELOPE VALLEY
3066021019	Recreational - Camp	ANTELOPE VALLEY
3209017023	Recreational - Camp	ANTELOPE VALLEY
3235005030	Recreational - Camp	ANTELOPE VALLEY
3025025291	Recreational - Club, Lodge Hall, Fraternal Organization	ANTELOPE VALLEY
3027013039	Recreational - Club, Lodge Hall, Fraternal Organization	ANTELOPE VALLEY
3038008011	Recreational - Club, Lodge Hall, Fraternal Organization	ANTELOPE VALLEY
3049009017	Recreational - Club, Lodge Hall, Fraternal Organization	ANTELOPE VALLEY
3066021002	Recreational - Club, Lodge Hall, Fraternal Organization	ANTELOPE VALLEY
3103023003	Recreational - Club, Lodge Hall, Fraternal Organization	ANTELOPE VALLEY
3242024001	Recreational - Club, Lodge Hall, Fraternal Organization	ANTELOPE VALLEY
3022008272	Recreational - Golf Courses	ANTELOPE VALLEY
3218032002	Residential - (open)	ANTELOPE VALLEY
3275004005	Residential - (open)	ANTELOPE VALLEY
3025007292	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3027011008	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3038011026	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY

APN	Assessor Use Code - Type	Community Name
3038030024	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3042017002	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3042019020	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3042025063	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3044028001	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3046001011	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3046001029	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3046003028	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3046012029	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3046012037	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3048016009	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3049003002	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3049006020	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3049008028	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3049020048	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3049029020	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3079004015	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3101013022	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3102022018	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3103007004	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3103022035	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3103023036	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3103024004	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3110008026	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3113001003	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3113002010	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3115005006	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3137001031	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3137001032	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3137003008	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3145023007	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3152012022	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3152013023	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3152014012	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3152016013	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3175018010	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3175018019	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3204014011	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3204015002	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3208019026	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3208021022	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3209003053	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3209014012	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3209020063	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3220017021	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3220018005	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3227015024	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3227031047	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3228016038	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3228023042	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3242006007	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3242013002	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3242013003	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3242031006	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3260023001	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3267003052	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3306006043	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3306008002	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3306008006	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3310003007	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3358012012	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3374007017	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3376013003	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3376013005	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3376014004	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3376018007	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3376018026	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3376023022	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3382002028	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3382005019	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3382006015	Residential - Double, Duplex or Two Units	ANTELOPE VALLEY
3044029018	Residential - Five or more Apartments or units	ANTELOPE VALLEY
3051007012	Residential - Five or more Apartments or units	ANTELOPE VALLEY
3102016900	Residential - Five or more Apartments or units	ANTELOPE VALLEY
3102017011	Residential - Five or more Apartments or units	ANTELOPE VALLEY
3102018016	Residential - Five or more Apartments or units	ANTELOPE VALLEY
3102018021	Residential - Five or more Apartments or units	ANTELOPE VALLEY
3102021003	Residential - Five or more Apartments or units	ANTELOPE VALLEY
3102021005	Residential - Five or more Apartments or units	ANTELOPE VALLEY

APN	Assessor Use Code - Type	Community Name
3102022029	Residential - Five or more Apartments or units	ANTELOPE VALLEY
3103005053	Residential - Five or more Apartments or units	ANTELOPE VALLEY
3103006003	Residential - Five or more Apartments or units	ANTELOPE VALLEY
3103009031	Residential - Five or more Apartments or units	ANTELOPE VALLEY
3103023010	Residential - Five or more Apartments or units	ANTELOPE VALLEY
3103023020	Residential - Five or more Apartments or units	ANTELOPE VALLEY
3103023046	Residential - Five or more Apartments or units	ANTELOPE VALLEY
3103023048	Residential - Five or more Apartments or units	ANTELOPE VALLEY
3103023050	Residential - Five or more Apartments or units	ANTELOPE VALLEY
3242015009	Residential - Five or more Apartments or units	ANTELOPE VALLEY
3374016004	Residential - Five or more Apartments or units	ANTELOPE VALLEY
3049023012	Residential - Four Units (any combination)	ANTELOPE VALLEY
3170013009	Residential - Four Units (any combination)	ANTELOPE VALLEY
3219010001	Residential - Four Units (any combination)	ANTELOPE VALLEY
3374006015	Residential - Four Units (any combination)	ANTELOPE VALLEY
3027010013	Residential - Manufactured Home Park	ANTELOPE VALLEY
3038002030	Residential - Manufactured Home Park	ANTELOPE VALLEY
3038014012	Residential - Manufactured Home Park	ANTELOPE VALLEY
3137001030	Residential - Manufactured Home Park	ANTELOPE VALLEY
3137006034	Residential - Manufactured Home Park	ANTELOPE VALLEY
3145009015	Residential - Manufactured Home Park	ANTELOPE VALLEY
3205011012	Residential - Manufactured Home Park	ANTELOPE VALLEY
3027016017	Residential - Manufactured Homes	ANTELOPE VALLEY
3027018013	Residential - Manufactured Homes	ANTELOPE VALLEY
3027019032	Residential - Manufactured Homes	ANTELOPE VALLEY
3027027023	Residential - Manufactured Homes	ANTELOPE VALLEY
3036013016	Residential - Manufactured Homes	ANTELOPE VALLEY
3036014012	Residential - Manufactured Homes	ANTELOPE VALLEY
3036014013	Residential - Manufactured Homes	ANTELOPE VALLEY
3037012003	Residential - Manufactured Homes	ANTELOPE VALLEY
3037012009	Residential - Manufactured Homes	ANTELOPE VALLEY
3038009005	Residential - Manufactured Homes	ANTELOPE VALLEY
3038011016	Residential - Manufactured Homes	ANTELOPE VALLEY
3038013016	Residential - Manufactured Homes	ANTELOPE VALLEY
3038030049	Residential - Manufactured Homes	ANTELOPE VALLEY
3038030051	Residential - Manufactured Homes	ANTELOPE VALLEY
3040001045	Residential - Manufactured Homes	ANTELOPE VALLEY
3041003014	Residential - Manufactured Homes	ANTELOPE VALLEY
3041003042	Residential - Manufactured Homes	ANTELOPE VALLEY
3041004018	Residential - Manufactured Homes	ANTELOPE VALLEY
3041004022	Residential - Manufactured Homes	ANTELOPE VALLEY
3041004040	Residential - Manufactured Homes	ANTELOPE VALLEY
3041007023	Residential - Manufactured Homes	ANTELOPE VALLEY
3042001030	Residential - Manufactured Homes	ANTELOPE VALLEY
3042008017	Residential - Manufactured Homes	ANTELOPE VALLEY
3042009001	Residential - Manufactured Homes	ANTELOPE VALLEY
3042010006	Residential - Manufactured Homes	ANTELOPE VALLEY
3042010014	Residential - Manufactured Homes	ANTELOPE VALLEY
3042011005	Residential - Manufactured Homes	ANTELOPE VALLEY
3042012019	Residential - Manufactured Homes	ANTELOPE VALLEY
3042014013	Residential - Manufactured Homes	ANTELOPE VALLEY
3042015017	Residential - Manufactured Homes	ANTELOPE VALLEY
3042018016	Residential - Manufactured Homes	ANTELOPE VALLEY
3042018017	Residential - Manufactured Homes	ANTELOPE VALLEY
3044004027	Residential - Manufactured Homes	ANTELOPE VALLEY
3044007019	Residential - Manufactured Homes	ANTELOPE VALLEY
3044007020	Residential - Manufactured Homes	ANTELOPE VALLEY
3046001018	Residential - Manufactured Homes	ANTELOPE VALLEY
3046001019	Residential - Manufactured Homes	ANTELOPE VALLEY
3046001023	Residential - Manufactured Homes	ANTELOPE VALLEY
3046008039	Residential - Manufactured Homes	ANTELOPE VALLEY
3046011003	Residential - Manufactured Homes	ANTELOPE VALLEY
3046011015	Residential - Manufactured Homes	ANTELOPE VALLEY
3046013040	Residential - Manufactured Homes	ANTELOPE VALLEY
3046013041	Residential - Manufactured Homes	ANTELOPE VALLEY
3047019065	Residential - Manufactured Homes	ANTELOPE VALLEY
3049001002	Residential - Manufactured Homes	ANTELOPE VALLEY
3049002052	Residential - Manufactured Homes	ANTELOPE VALLEY
3049009028	Residential - Manufactured Homes	ANTELOPE VALLEY
3049029043	Residential - Manufactured Homes	ANTELOPE VALLEY
3051001005	Residential - Manufactured Homes	ANTELOPE VALLEY
3056015020	Residential - Manufactured Homes	ANTELOPE VALLEY
3056015021	Residential - Manufactured Homes	ANTELOPE VALLEY
3056015022	Residential - Manufactured Homes	ANTELOPE VALLEY
3056024039	Residential - Manufactured Homes	ANTELOPE VALLEY
3056024044	Residential - Manufactured Homes	ANTELOPE VALLEY
3056024048	Residential - Manufactured Homes	ANTELOPE VALLEY
3056027031	Residential - Manufactured Homes	ANTELOPE VALLEY
3058003027	Residential - Manufactured Homes	ANTELOPE VALLEY

APN	Assessor Use Code - Type	Community Name
3102018018	Residential - Manufactured Homes	ANTELOPE VALLEY
3103022024	Residential - Manufactured Homes	ANTELOPE VALLEY
3103027036	Residential - Manufactured Homes	ANTELOPE VALLEY
3110008001	Residential - Manufactured Homes	ANTELOPE VALLEY
3110011012	Residential - Manufactured Homes	ANTELOPE VALLEY
3145021018	Residential - Manufactured Homes	ANTELOPE VALLEY
3175018021	Residential - Manufactured Homes	ANTELOPE VALLEY
3204011006	Residential - Manufactured Homes	ANTELOPE VALLEY
3204012008	Residential - Manufactured Homes	ANTELOPE VALLEY
3208018023	Residential - Manufactured Homes	ANTELOPE VALLEY
3208018053	Residential - Manufactured Homes	ANTELOPE VALLEY
3208024020	Residential - Manufactured Homes	ANTELOPE VALLEY
3209001017	Residential - Manufactured Homes	ANTELOPE VALLEY
3220011008	Residential - Manufactured Homes	ANTELOPE VALLEY
3220011032	Residential - Manufactured Homes	ANTELOPE VALLEY
3220011036	Residential - Manufactured Homes	ANTELOPE VALLEY
3220011037	Residential - Manufactured Homes	ANTELOPE VALLEY
3220011041	Residential - Manufactured Homes	ANTELOPE VALLEY
3220011042	Residential - Manufactured Homes	ANTELOPE VALLEY
3220012050	Residential - Manufactured Homes	ANTELOPE VALLEY
3220013033	Residential - Manufactured Homes	ANTELOPE VALLEY
3220013038	Residential - Manufactured Homes	ANTELOPE VALLEY
3220013039	Residential - Manufactured Homes	ANTELOPE VALLEY
3220015014	Residential - Manufactured Homes	ANTELOPE VALLEY
3220015043	Residential - Manufactured Homes	ANTELOPE VALLEY
3220015047	Residential - Manufactured Homes	ANTELOPE VALLEY
3220016001	Residential - Manufactured Homes	ANTELOPE VALLEY
3220017007	Residential - Manufactured Homes	ANTELOPE VALLEY
3220018036	Residential - Manufactured Homes	ANTELOPE VALLEY
3220019002	Residential - Manufactured Homes	ANTELOPE VALLEY
3220019035	Residential - Manufactured Homes	ANTELOPE VALLEY
3223004015	Residential - Manufactured Homes	ANTELOPE VALLEY
3227015010	Residential - Manufactured Homes	ANTELOPE VALLEY
3227022035	Residential - Manufactured Homes	ANTELOPE VALLEY
3228002003	Residential - Manufactured Homes	ANTELOPE VALLEY
3228019014	Residential - Manufactured Homes	ANTELOPE VALLEY
3228026024	Residential - Manufactured Homes	ANTELOPE VALLEY
3228028024	Residential - Manufactured Homes	ANTELOPE VALLEY
3233005028	Residential - Manufactured Homes	ANTELOPE VALLEY
3233006020	Residential - Manufactured Homes	ANTELOPE VALLEY
3234011004	Residential - Manufactured Homes	ANTELOPE VALLEY
3234015003	Residential - Manufactured Homes	ANTELOPE VALLEY
3234024015	Residential - Manufactured Homes	ANTELOPE VALLEY
3234024017	Residential - Manufactured Homes	ANTELOPE VALLEY
3234028027	Residential - Manufactured Homes	ANTELOPE VALLEY
3242001024	Residential - Manufactured Homes	ANTELOPE VALLEY
3256006012	Residential - Manufactured Homes	ANTELOPE VALLEY
3264009029	Residential - Manufactured Homes	ANTELOPE VALLEY
3264012002	Residential - Manufactured Homes	ANTELOPE VALLEY
3267025006	Residential - Manufactured Homes	ANTELOPE VALLEY
3268001003	Residential - Manufactured Homes	ANTELOPE VALLEY
3268006013	Residential - Manufactured Homes	ANTELOPE VALLEY
3268019042	Residential - Manufactured Homes	ANTELOPE VALLEY
3268021021	Residential - Manufactured Homes	ANTELOPE VALLEY
3275004022	Residential - Manufactured Homes	ANTELOPE VALLEY
3277001015	Residential - Manufactured Homes	ANTELOPE VALLEY
3277004001	Residential - Manufactured Homes	ANTELOPE VALLEY
3277004003	Residential - Manufactured Homes	ANTELOPE VALLEY
3277004004	Residential - Manufactured Homes	ANTELOPE VALLEY
3277004008	Residential - Manufactured Homes	ANTELOPE VALLEY
3277004010	Residential - Manufactured Homes	ANTELOPE VALLEY
3277005002	Residential - Manufactured Homes	ANTELOPE VALLEY
3277005005	Residential - Manufactured Homes	ANTELOPE VALLEY
3277005006	Residential - Manufactured Homes	ANTELOPE VALLEY
3277005008	Residential - Manufactured Homes	ANTELOPE VALLEY
3277005010	Residential - Manufactured Homes	ANTELOPE VALLEY
3277009005	Residential - Manufactured Homes	ANTELOPE VALLEY
3277009007	Residential - Manufactured Homes	ANTELOPE VALLEY
3277009012	Residential - Manufactured Homes	ANTELOPE VALLEY
3277009015	Residential - Manufactured Homes	ANTELOPE VALLEY
3277009020	Residential - Manufactured Homes	ANTELOPE VALLEY
3277009021	Residential - Manufactured Homes	ANTELOPE VALLEY
3277023009	Residential - Manufactured Homes	ANTELOPE VALLEY
3277023011	Residential - Manufactured Homes	ANTELOPE VALLEY
3277023015	Residential - Manufactured Homes	ANTELOPE VALLEY
3277024001	Residential - Manufactured Homes	ANTELOPE VALLEY
3277024010	Residential - Manufactured Homes	ANTELOPE VALLEY
3277024012	Residential - Manufactured Homes	ANTELOPE VALLEY
3277028040	Residential - Manufactured Homes	ANTELOPE VALLEY

APN	Assessor Use Code - Type	Community Name
3277029032	Residential - Manufactured Homes	ANTELOPE VALLEY
3278020028	Residential - Manufactured Homes	ANTELOPE VALLEY
3278020029	Residential - Manufactured Homes	ANTELOPE VALLEY
3278025035	Residential - Manufactured Homes	ANTELOPE VALLEY
3278027012	Residential - Manufactured Homes	ANTELOPE VALLEY
3278027015	Residential - Manufactured Homes	ANTELOPE VALLEY
3278027016	Residential - Manufactured Homes	ANTELOPE VALLEY
3279015024	Residential - Manufactured Homes	ANTELOPE VALLEY
3306006135	Residential - Manufactured Homes	ANTELOPE VALLEY
3306009270	Residential - Manufactured Homes	ANTELOPE VALLEY
3374005021	Residential - Manufactured Homes	ANTELOPE VALLEY
3046002006	Residential - Three Units (any combination)	ANTELOPE VALLEY
3046002049	Residential - Three Units (any combination)	ANTELOPE VALLEY
3049024002	Residential - Three Units (any combination)	ANTELOPE VALLEY
3049024003	Residential - Three Units (any combination)	ANTELOPE VALLEY
3101017012	Residential - Three Units (any combination)	ANTELOPE VALLEY
3103006002	Residential - Three Units (any combination)	ANTELOPE VALLEY
3137004007	Residential - Three Units (any combination)	ANTELOPE VALLEY
3152012020	Residential - Three Units (any combination)	ANTELOPE VALLEY
3228022023	Residential - Three Units (any combination)	ANTELOPE VALLEY
3234005022	Residential - Three Units (any combination)	ANTELOPE VALLEY
3279015030	Residential - Three Units (any combination)	ANTELOPE VALLEY
3306006016	Residential - Three Units (any combination)	ANTELOPE VALLEY
3306006018	Residential - Three Units (any combination)	ANTELOPE VALLEY
3307010067	Residential - Three Units (any combination)	ANTELOPE VALLEY
3038030904		ANTELOPE VALLEY
3038030905		ANTELOPE VALLEY
3063012300		ANTELOPE VALLEY
3228002302		ANTELOPE VALLEY
3242002300		ANTELOPE VALLEY
3242026303		ANTELOPE VALLEY
3243027300		ANTELOPE VALLEY
3250013306		ANTELOPE VALLEY
3250018301		ANTELOPE VALLEY
3250018302		ANTELOPE VALLEY
3307017281		ANTELOPE VALLEY
3307017282		ANTELOPE VALLEY
3307017283		ANTELOPE VALLEY
3061014005		ANTELOPE VALLEY
3061014006		ANTELOPE VALLEY
3061014007		ANTELOPE VALLEY
3061014008		ANTELOPE VALLEY
3061014009		ANTELOPE VALLEY
3061014010		ANTELOPE VALLEY
3061014011		ANTELOPE VALLEY
3061014012		ANTELOPE VALLEY
3061014013		ANTELOPE VALLEY
3061014014		ANTELOPE VALLEY
3061014015		ANTELOPE VALLEY
3061014016		ANTELOPE VALLEY
3061014300		ANTELOPE VALLEY
7057002922	Government Owned Property	CERRITOS ISLANDS
7057032902	Government Owned Property	CERRITOS ISLANDS
7016014064	Residential - Double, Duplex or Two Units	CERRITOS ISLANDS
6180004026	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	EAST RANCHO DOMINGUEZ
6180004027	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	EAST RANCHO DOMINGUEZ
6180005009	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	EAST RANCHO DOMINGUEZ
6180022050	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	EAST RANCHO DOMINGUEZ
6181029032	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	EAST RANCHO DOMINGUEZ
6185006037	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	EAST RANCHO DOMINGUEZ
6185010012	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	EAST RANCHO DOMINGUEZ
6180002016	Commercial - Commercial	EAST RANCHO DOMINGUEZ
6180002018	Commercial - Commercial	EAST RANCHO DOMINGUEZ
6180002024	Commercial - Commercial	EAST RANCHO DOMINGUEZ
6180002025	Commercial - Commercial	EAST RANCHO DOMINGUEZ
6180003003	Commercial - Commercial	EAST RANCHO DOMINGUEZ
6180003015	Commercial - Commercial	EAST RANCHO DOMINGUEZ
6180004029	Commercial - Commercial	EAST RANCHO DOMINGUEZ
6180005007	Commercial - Commercial	EAST RANCHO DOMINGUEZ
6180005023	Commercial - Commercial	EAST RANCHO DOMINGUEZ
6180010005	Commercial - Commercial	EAST RANCHO DOMINGUEZ
6180010026	Commercial - Commercial	EAST RANCHO DOMINGUEZ
6180021002	Commercial - Commercial	EAST RANCHO DOMINGUEZ
6181026030	Commercial - Commercial	EAST RANCHO DOMINGUEZ
6185010011	Commercial - Commercial	EAST RANCHO DOMINGUEZ
6185015016	Commercial - Commercial	EAST RANCHO DOMINGUEZ
6185006034	Commercial - Hotel and Motel	EAST RANCHO DOMINGUEZ
6181029044	Commercial - Nursery or Greenhouse	EAST RANCHO DOMINGUEZ
6180002020	Commercial - Office Building	EAST RANCHO DOMINGUEZ

APN	Assessor Use Code - Type	Community Name
6180002026	Commercial - Office Building	EAST RANCHO DOMINGUEZ
6180005006	Commercial - Office Building	EAST RANCHO DOMINGUEZ
6180005017	Commercial - Office Building	EAST RANCHO DOMINGUEZ
6181029042	Commercial - Office Building	EAST RANCHO DOMINGUEZ
6181029043	Commercial - Office Building	EAST RANCHO DOMINGUEZ
6195019028	Commercial - Office Building	EAST RANCHO DOMINGUEZ
6195019029	Commercial - Office Building	EAST RANCHO DOMINGUEZ
6195019033	Commercial - Office Building	EAST RANCHO DOMINGUEZ
6180003001	Commercial - Parking Lot	EAST RANCHO DOMINGUEZ
6180018004	Commercial - Parking Lot	EAST RANCHO DOMINGUEZ
6181028027	Commercial - Parking Lot	EAST RANCHO DOMINGUEZ
6181028038	Commercial - Parking Lot	EAST RANCHO DOMINGUEZ
6184001060	Commercial - Parking Lot	EAST RANCHO DOMINGUEZ
6195019031	Commercial - Parking Lot	EAST RANCHO DOMINGUEZ
6180003007	Commercial - Professional Building	EAST RANCHO DOMINGUEZ
6180009013	Commercial - Professional Building	EAST RANCHO DOMINGUEZ
6180015901	Commercial - Professional Building	EAST RANCHO DOMINGUEZ
6185010020	Commercial - Restaurant, Cocktail Lounge	EAST RANCHO DOMINGUEZ
6180001024	Commercial - Service Shop Radio & Television Repair, Refrigeration Service, *	EAST RANCHO DOMINGUEZ
6180010001	Commercial - Service Station	EAST RANCHO DOMINGUEZ
6185009026	Commercial - Service Station	EAST RANCHO DOMINGUEZ
6195003036	Commercial - Service Station	EAST RANCHO DOMINGUEZ
6180002013	Commercial - Store	EAST RANCHO DOMINGUEZ
6180002014	Commercial - Store	EAST RANCHO DOMINGUEZ
6180002021	Commercial - Store	EAST RANCHO DOMINGUEZ
6180002027	Commercial - Store	EAST RANCHO DOMINGUEZ
6180003006	Commercial - Store	EAST RANCHO DOMINGUEZ
6180003012	Commercial - Store	EAST RANCHO DOMINGUEZ
6180003017	Commercial - Store	EAST RANCHO DOMINGUEZ
6180003020	Commercial - Store	EAST RANCHO DOMINGUEZ
6180003023	Commercial - Store	EAST RANCHO DOMINGUEZ
6180004018	Commercial - Store	EAST RANCHO DOMINGUEZ
6180004020	Commercial - Store	EAST RANCHO DOMINGUEZ
6180004024	Commercial - Store	EAST RANCHO DOMINGUEZ
6180004028	Commercial - Store	EAST RANCHO DOMINGUEZ
6180005019	Commercial - Store	EAST RANCHO DOMINGUEZ
6180015019	Commercial - Store	EAST RANCHO DOMINGUEZ
6180015024	Commercial - Store	EAST RANCHO DOMINGUEZ
6180016028	Commercial - Store	EAST RANCHO DOMINGUEZ
6180018003	Commercial - Store	EAST RANCHO DOMINGUEZ
6180022006	Commercial - Store	EAST RANCHO DOMINGUEZ
6181026023	Commercial - Store	EAST RANCHO DOMINGUEZ
6181028039	Commercial - Store	EAST RANCHO DOMINGUEZ
6185010005	Commercial - Store	EAST RANCHO DOMINGUEZ
6185010006	Commercial - Store	EAST RANCHO DOMINGUEZ
6185010057	Commercial - Store	EAST RANCHO DOMINGUEZ
6195019027	Commercial - Store	EAST RANCHO DOMINGUEZ
6195019030	Commercial - Store	EAST RANCHO DOMINGUEZ
6180001002	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
6180002015	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
6180002023	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
6180004013	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
6180004017	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
6180004019	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
6180004023	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
6180005020	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
6180015023	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
6180015025	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
6180018001	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
6181026006	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
6181029001	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
6181029020	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
6185006031	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
6185006032	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
6185006033	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
6185010010	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
6185010047	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
6195009001	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
6195019026	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
6195019032	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
6195019034	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
7301014006	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
7301014025	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
7302001023	Commercial - Store Combination (w/ Office or Residential)	EAST RANCHO DOMINGUEZ
6180017922	Government Owned Property	EAST RANCHO DOMINGUEZ
6180017923	Government Owned Property	EAST RANCHO DOMINGUEZ
6180017924	Government Owned Property	EAST RANCHO DOMINGUEZ
6185017900	Government Owned Property	EAST RANCHO DOMINGUEZ
6195005901	Government Owned Property	EAST RANCHO DOMINGUEZ

APN	Assessor Use Code - Type	Community Name
6180015022	Industrial - Industrial	EAST RANCHO DOMINGUEZ
6180004022	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	EAST RANCHO DOMINGUEZ
6185010007	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	EAST RANCHO DOMINGUEZ
6181026031	Industrial - Warehousing, Distribution, Storage	EAST RANCHO DOMINGUEZ
6180003014	Institutional - Church	EAST RANCHO DOMINGUEZ
6180008025	Institutional - Church	EAST RANCHO DOMINGUEZ
6180010003	Institutional - Church	EAST RANCHO DOMINGUEZ
6180010021	Institutional - Church	EAST RANCHO DOMINGUEZ
6181023030	Institutional - Church	EAST RANCHO DOMINGUEZ
6185010013	Institutional - Church	EAST RANCHO DOMINGUEZ
6185011037	Institutional - Church	EAST RANCHO DOMINGUEZ
6185011039	Institutional - Church	EAST RANCHO DOMINGUEZ
6195003034	Institutional - Church	EAST RANCHO DOMINGUEZ
6180009015	Institutional - Hospital	EAST RANCHO DOMINGUEZ
6180010022	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	EAST RANCHO DOMINGUEZ
6185012028	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	EAST RANCHO DOMINGUEZ
6180003002	Recreational - Club, Lodge Hall, Fraternal Organization	EAST RANCHO DOMINGUEZ
6180002001	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180002006	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180002007	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180002009	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180002028	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180003013	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180004002	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180004003	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180004004	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180004006	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180004007	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180004009	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180004010	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180004011	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180004012	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180005013	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180008020	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180009014	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180009018	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180011002	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180011003	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180011006	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180011015	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180011018	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180012003	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180012008	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180012011	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180012018	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180012023	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180012024	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180012025	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180012027	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180012030	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180013020	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180013028	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180015001	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180015004	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180015010	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180015011	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180015015	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180018012	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180018017	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180019011	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180019013	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180019014	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180019015	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180020003	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180020004	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180020009	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180021011	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180022001	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180022035	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180022037	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180022038	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180023060	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181022006	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181022016	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181022030	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181022033	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181022034	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181023002	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181023005	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ

APN	Assessor Use Code - Type	Community Name
6181023006	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181023017	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181024002	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181024014	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181025001	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181025014	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181025018	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181025021	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181025027	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181030018	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181030901	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181031005	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181031021	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181031040	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181031041	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181032005	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181033003	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181033017	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6181034076	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6184001040	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6184001048	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6184001066	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6185001035	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6185001041	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6185001042	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6185001045	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6185002069	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6185003078	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6185006042	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6185007034	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6185007037	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6185008023	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6185009022	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6185009028	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6185010051	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6185012020	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6185012034	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6185014009	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6185016044	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6185016062	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6185018038	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6185018062	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195003003	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195003013	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195003020	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195004003	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195004010	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195004011	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195004013	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195004026	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195005019	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195007022	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195008010	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195008012	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195008013	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195008014	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195008051	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195008052	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195009015	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195009022	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195010013	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195010016	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195010024	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195011005	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195011009	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195011022	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195011027	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195011041	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195012044	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195013046	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195014013	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195014014	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195015012	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195015013	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195015018	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195016007	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195016016	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195017003	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195017019	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ

APN	Assessor Use Code - Type	Community Name
6195017025	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195018018	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195018021	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195018023	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195018027	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195019002	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195019004	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195019005	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195019006	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195019008	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195019009	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195019014	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195019015	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6195019017	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
7301013017	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
7301014019	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
7301015002	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
7301017019	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
7301017022	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
7301018012	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
7302003009	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
7302003032	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
7302003033	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
7302005016	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
7302006016	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
7302007006	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
7302007007	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
7302008008	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
7302015015	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
7302015016	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
7302017002	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
7302024006	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
7302024023	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
7302027015	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
7302028022	Residential - Double, Duplex or Two Units	EAST RANCHO DOMINGUEZ
6180001009	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6180002019	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6180004015	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6180008024	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6180010004	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6180010015	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6180011014	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6180011017	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6180016008	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6180016009	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6181022004	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6181022008	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6181022023	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6181022024	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6181022025	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6181022026	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6181022027	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6181022028	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6181023020	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6181023022	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6181023024	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6181025006	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6181025010	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6181026007	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6181026022	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6185008020	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6195017022	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6195018031	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
7301014005	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
7302005003	Residential - Five or more Apartments or units	EAST RANCHO DOMINGUEZ
6180003010	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ
6180003011	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ
6180004016	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ
6180004021	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ
6180012012	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ
6180013015	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ
6180016007	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ
6180021003	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ
6181022001	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ
6181022035	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ
6181023009	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ
6181024006	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ
6181029041	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ
6185006036	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ

APN	Assessor Use Code - Type	Community Name
6185006054	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ
6185007035	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ
6185009023	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ
6195008002	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ
6195011042	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ
6195017032	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ
6195018026	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ
7301014004	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ
7301014024	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ
7302005006	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ
7302005007	Residential - Four Units (any combination)	EAST RANCHO DOMINGUEZ
6195003027	Residential - Rooming / Boarding House	EAST RANCHO DOMINGUEZ
6180003009	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6180010007	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6180010011	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6180011001	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6180011008	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6180013025	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6180021001	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6180022051	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6181022022	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6181023010	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6181023021	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6181024003	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6181024007	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6181025020	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6181026005	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6185009025	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6185011006	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6195001009	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6195003033	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6195003035	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6195004025	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6195004027	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6195004028	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6195006011	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6195008004	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6195008006	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6195010025	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6195018032	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
7302001013	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
7302005001	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
7302005002	Residential - Three Units (any combination)	EAST RANCHO DOMINGUEZ
6180019008		EAST RANCHO DOMINGUEZ
6180023007		EAST RANCHO DOMINGUEZ
6181028040		EAST RANCHO DOMINGUEZ
6188026024		EAST RANCHO DOMINGUEZ
6195018033		EAST RANCHO DOMINGUEZ
2526018009	Residential - Double, Duplex or Two Units	KAGEL CANYON
2846002012	Commercial - Animal Kennel	LOPEZ CANYON
2581006008	Dry Farm - Desert	LOPEZ CANYON
2526003036	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	LOPEZ CANYON
2846002018	Institutional - School (Private)	LOPEZ CANYON
6234012900	Government Owned Property	LYNWOOD ISLAND
6234013271	Industrial - Industrial	LYNWOOD ISLAND
4440028006	Commercial - Commercial	MALIBU COASTAL ZONE
4445007019	Commercial - Commercial	MALIBU COASTAL ZONE
4438012004	Commercial - Office Building	MALIBU COASTAL ZONE
4448002901	Commercial - Restaurant, Cocktail Lounge	MALIBU COASTAL ZONE
4445006028	Commercial - Store	MALIBU COASTAL ZONE
4445008015	Commercial - Store Combination (w/ Office or Residential)	MALIBU COASTAL ZONE
4440014900	Government Owned Property	MALIBU COASTAL ZONE
4443001900	Government Owned Property	MALIBU COASTAL ZONE
4445004902	Government Owned Property	MALIBU COASTAL ZONE
4445004903	Government Owned Property	MALIBU COASTAL ZONE
4448001900	Government Owned Property	MALIBU COASTAL ZONE
4462031900	Government Owned Property	MALIBU COASTAL ZONE
4462032901	Government Owned Property	MALIBU COASTAL ZONE
4440028005	Industrial - Industrial	MALIBU COASTAL ZONE
4445028014	Industrial - Lumber Yard	MALIBU COASTAL ZONE
4455033912	Institutional - School (Private)	MALIBU COASTAL ZONE
4445008803	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	MALIBU COASTAL ZONE
4438031009	Residential - Double, Duplex or Two Units	MALIBU COASTAL ZONE
4445024023	Residential - Double, Duplex or Two Units	MALIBU COASTAL ZONE
4438003015	Residential - Five or more Apartments or units	MALIBU COASTAL ZONE
4438012002	Residential - Three Units (any combination)	MALIBU COASTAL ZONE
4445006033		MALIBU COASTAL ZONE
4445006034		MALIBU COASTAL ZONE
4445006035		MALIBU COASTAL ZONE

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4224004900	Government Owned Property	MARINA DEL REY
4224004901	Government Owned Property	MARINA DEL REY
4224004902	Government Owned Property	MARINA DEL REY
4224005900	Government Owned Property	MARINA DEL REY
4224006901	Government Owned Property	MARINA DEL REY
4224006909	Government Owned Property	MARINA DEL REY
4224008900	Government Owned Property	MARINA DEL REY
4224010900	Government Owned Property	MARINA DEL REY
4224011901	Government Owned Property	MARINA DEL REY
4224012900	Government Owned Property	MARINA DEL REY
4224012901	Government Owned Property	MARINA DEL REY
4224001904	Residential - Five or more Apartments or units	MARINA DEL REY
7306018042	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	RANCHO DOMINGUEZ
7306002034	Commercial - Office Building	RANCHO DOMINGUEZ
7306013006	Commercial - Office Building	RANCHO DOMINGUEZ
7318011080	Commercial - Office Building	RANCHO DOMINGUEZ
7318011081	Commercial - Office Building	RANCHO DOMINGUEZ
7306001902	Government Owned Property	RANCHO DOMINGUEZ
7306015900	Government Owned Property	RANCHO DOMINGUEZ
7306015901	Government Owned Property	RANCHO DOMINGUEZ
7306015903	Government Owned Property	RANCHO DOMINGUEZ
7306019901	Government Owned Property	RANCHO DOMINGUEZ
7306019902	Government Owned Property	RANCHO DOMINGUEZ
7306019909	Government Owned Property	RANCHO DOMINGUEZ
7306004026	Industrial - Food Processing Plant	RANCHO DOMINGUEZ
7306004027	Industrial - Food Processing Plant	RANCHO DOMINGUEZ
7306013038	Industrial - Food Processing Plant	RANCHO DOMINGUEZ
7306004032	Industrial - Heavy Manufacturing	RANCHO DOMINGUEZ
7306006032	Industrial - Heavy Manufacturing	RANCHO DOMINGUEZ
7306006046	Industrial - Heavy Manufacturing	RANCHO DOMINGUEZ
7306012005	Industrial - Heavy Manufacturing	RANCHO DOMINGUEZ
7306012009	Industrial - Heavy Manufacturing	RANCHO DOMINGUEZ
7306012091	Industrial - Heavy Manufacturing	RANCHO DOMINGUEZ
7306013012	Industrial - Heavy Manufacturing	RANCHO DOMINGUEZ
7306020002	Industrial - Heavy Manufacturing	RANCHO DOMINGUEZ
7306001904	Industrial - Industrial	RANCHO DOMINGUEZ
7306002056	Industrial - Industrial	RANCHO DOMINGUEZ
7306003045	Industrial - Industrial	RANCHO DOMINGUEZ
7306004037	Industrial - Industrial	RANCHO DOMINGUEZ
7306012097	Industrial - Industrial	RANCHO DOMINGUEZ
7306013900	Industrial - Industrial	RANCHO DOMINGUEZ
7306014052	Industrial - Industrial	RANCHO DOMINGUEZ
7306014059	Industrial - Industrial	RANCHO DOMINGUEZ
7306015907	Industrial - Industrial	RANCHO DOMINGUEZ
7306017016	Industrial - Industrial	RANCHO DOMINGUEZ
7306019080	Industrial - Industrial	RANCHO DOMINGUEZ
7306021005	Industrial - Industrial	RANCHO DOMINGUEZ
7306022039	Industrial - Industrial	RANCHO DOMINGUEZ
7318011800	Industrial - Industrial	RANCHO DOMINGUEZ
7306002049	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306001022	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306001037	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306002037	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306002043	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306002046	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306002057	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306003029	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306003036	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306003041	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306003042	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306003055	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306003059	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306003060	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306003061	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306004022	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306004029	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306004035	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306006034	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306006041	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306006042	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306012014	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306012015	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306012076	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306012077	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306012084	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306012090	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306012094	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306013013	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306013040	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ

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7306013042	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306013043	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306014045	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306014049	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306014050	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306014051	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306015011	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306015016	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306015018	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306015019	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306017007	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306017015	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306019034	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306019057	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306019059	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306019089	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306019092	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306020034	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306020035	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306020042	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306020043	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306021008	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306021020	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7318007064	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7318011098	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	RANCHO DOMINGUEZ
7306017009	Industrial - Lumber Yard	RANCHO DOMINGUEZ
7306020038	Industrial - Open Storage	RANCHO DOMINGUEZ
7306003050	Industrial - Parking Lot (Industrial Use Property)	RANCHO DOMINGUEZ
7306003053	Industrial - Parking Lot (Industrial Use Property)	RANCHO DOMINGUEZ
7306012072	Industrial - Parking Lot (Industrial Use Property)	RANCHO DOMINGUEZ
7306012089	Industrial - Parking Lot (Industrial Use Property)	RANCHO DOMINGUEZ
7306018044	Industrial - Parking Lot (Industrial Use Property)	RANCHO DOMINGUEZ
7306019087	Industrial - Parking Lot (Industrial Use Property)	RANCHO DOMINGUEZ
7306020009	Industrial - Parking Lot (Industrial Use Property)	RANCHO DOMINGUEZ
7306020037	Industrial - Parking Lot (Industrial Use Property)	RANCHO DOMINGUEZ
7306020040	Industrial - Parking Lot (Industrial Use Property)	RANCHO DOMINGUEZ
7306021011	Industrial - Parking Lot (Industrial Use Property)	RANCHO DOMINGUEZ
7318007022	Industrial - Parking Lot (Industrial Use Property)	RANCHO DOMINGUEZ
7306001021	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306001025	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306001036	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306002042	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306002047	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306002048	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306002050	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306002051	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306002052	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306002058	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306002059	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306002060	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306002061	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306002062	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306002063	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306002065	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306003033	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306003035	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306003037	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306003038	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306003044	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306003046	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306003047	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306003051	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306003052	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306003056	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306003057	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306004030	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306004033	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306004036	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306006028	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306006030	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306006033	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306006035	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306006040	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306006044	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306006045	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306012013	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306012074	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306012075	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306012078	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ

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7306012079	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306012080	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306012081	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306012082	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306012083	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306012088	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306012092	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306012093	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306012095	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306013022	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306013039	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306013041	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306013044	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306013045	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306014053	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306014054	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306014060	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306015013	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306015015	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306015020	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306015021	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306017011	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306017013	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306018030	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306019018	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306019055	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306019084	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306019096	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306020018	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306020019	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306020021	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306020032	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306020033	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306020039	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306020041	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306021012	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306021015	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306021016	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306021018	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306021021	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306021028	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306021029	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306021030	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306022040	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7318007036	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7318007043	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7318007058	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7318007071	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7318007072	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7318011069	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7318011097	Industrial - Warehousing, Distribution, Storage	RANCHO DOMINGUEZ
7306001806	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	RANCHO DOMINGUEZ
7306003800	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	RANCHO DOMINGUEZ
7306003801	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	RANCHO DOMINGUEZ
7306012801	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	RANCHO DOMINGUEZ
7306013800	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	RANCHO DOMINGUEZ
7306013801	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	RANCHO DOMINGUEZ
7306014803	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	RANCHO DOMINGUEZ
7306015809	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	RANCHO DOMINGUEZ
7306020800	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	RANCHO DOMINGUEZ
7306020803	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	RANCHO DOMINGUEZ
7306020804	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	RANCHO DOMINGUEZ
7306021802	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	RANCHO DOMINGUEZ
7306022800	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	RANCHO DOMINGUEZ
7318007802		RANCHO DOMINGUEZ
2826023023	Commercial - Animal Kennel	SANTA CLARITA VALLEY
3231008040	Commercial - Animal Kennel	SANTA CLARITA VALLEY
2853002009	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	SANTA CLARITA VALLEY
2865017017	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	SANTA CLARITA VALLEY
3231007054	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	SANTA CLARITA VALLEY
3231013005	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	SANTA CLARITA VALLEY
3231018007	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	SANTA CLARITA VALLEY
3231018038	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	SANTA CLARITA VALLEY
3231025031	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	SANTA CLARITA VALLEY
2813024003	Commercial - Commercial	SANTA CLARITA VALLEY
2853001005	Commercial - Commercial	SANTA CLARITA VALLEY
2853001010	Commercial - Commercial	SANTA CLARITA VALLEY
3231012004	Commercial - Commercial	SANTA CLARITA VALLEY
3231012012	Commercial - Commercial	SANTA CLARITA VALLEY

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3231013021	Commercial - Commercial	SANTA CLARITA VALLEY
3231013024	Commercial - Commercial	SANTA CLARITA VALLEY
3231013026	Commercial - Commercial	SANTA CLARITA VALLEY
3231023005	Commercial - Commercial	SANTA CLARITA VALLEY
3231024024	Commercial - Commercial	SANTA CLARITA VALLEY
3231024027	Commercial - Commercial	SANTA CLARITA VALLEY
3231024034	Commercial - Commercial	SANTA CLARITA VALLEY
3231025021	Commercial - Commercial	SANTA CLARITA VALLEY
3231025026	Commercial - Commercial	SANTA CLARITA VALLEY
3231025027	Commercial - Commercial	SANTA CLARITA VALLEY
3231026017	Commercial - Commercial	SANTA CLARITA VALLEY
3270002045	Commercial - Commercial	SANTA CLARITA VALLEY
3270002048	Commercial - Commercial	SANTA CLARITA VALLEY
3270008902	Commercial - Commercial	SANTA CLARITA VALLEY
3270013009	Commercial - Commercial	SANTA CLARITA VALLEY
3270013011	Commercial - Commercial	SANTA CLARITA VALLEY
3270016055	Commercial - Commercial	SANTA CLARITA VALLEY
3270016056	Commercial - Commercial	SANTA CLARITA VALLEY
3270020902	Commercial - Commercial	SANTA CLARITA VALLEY
3270022018	Commercial - Commercial	SANTA CLARITA VALLEY
3214020060	Commercial - Hotel and Motel	SANTA CLARITA VALLEY
2812005016	Commercial - Nursery or Greenhouse	SANTA CLARITA VALLEY
2826025906	Commercial - Office Building	SANTA CLARITA VALLEY
2865008032	Commercial - Restaurant, Cocktail Lounge	SANTA CLARITA VALLEY
3231018006	Commercial - Restaurant, Cocktail Lounge	SANTA CLARITA VALLEY
3231008036	Commercial - Service Shop Radio & Television Repair, Refrigeration Service, *	SANTA CLARITA VALLEY
3231008037	Commercial - Service Shop Radio & Television Repair, Refrigeration Service, *	SANTA CLARITA VALLEY
3231018008	Commercial - Service Shop Radio & Television Repair, Refrigeration Service, *	SANTA CLARITA VALLEY
3231025024	Commercial - Service Shop Radio & Television Repair, Refrigeration Service, *	SANTA CLARITA VALLEY
3231025032	Commercial - Service Shop Radio & Television Repair, Refrigeration Service, *	SANTA CLARITA VALLEY
3231026019	Commercial - Service Shop Radio & Television Repair, Refrigeration Service, *	SANTA CLARITA VALLEY
3231026020	Commercial - Service Shop Radio & Television Repair, Refrigeration Service, *	SANTA CLARITA VALLEY
3231013023	Commercial - Service Station	SANTA CLARITA VALLEY
2865008037	Commercial - Store	SANTA CLARITA VALLEY
2865003028	Commercial - Store	SANTA CLARITA VALLEY
3231024021	Commercial - Store	SANTA CLARITA VALLEY
3231026018	Commercial - Store	SANTA CLARITA VALLEY
2865002002	Commercial - Store Combination (w/ Office or Residential)	SANTA CLARITA VALLEY
3212010038	Commercial - Store Combination (w/ Office or Residential)	SANTA CLARITA VALLEY
3214003003	Commercial - Store Combination (w/ Office or Residential)	SANTA CLARITA VALLEY
3214039014	Commercial - Store Combination (w/ Office or Residential)	SANTA CLARITA VALLEY
3231012001	Commercial - Store Combination (w/ Office or Residential)	SANTA CLARITA VALLEY
3231013010	Commercial - Store Combination (w/ Office or Residential)	SANTA CLARITA VALLEY
3231025028	Commercial - Store Combination (w/ Office or Residential)	SANTA CLARITA VALLEY
3231026022	Commercial - Store Combination (w/ Office or Residential)	SANTA CLARITA VALLEY
2813013021	Commercial - Wholesale and Manufacturing Outlet	SANTA CLARITA VALLEY
2813013013	Dry Farm - Desert	SANTA CLARITA VALLEY
2826123001	Dry Farm - Desert	SANTA CLARITA VALLEY
2826123002	Dry Farm - Desert	SANTA CLARITA VALLEY
2840004009	Dry Farm - Desert	SANTA CLARITA VALLEY
2848012042	Dry Farm - Desert	SANTA CLARITA VALLEY
3209008006	Dry Farm - Desert	SANTA CLARITA VALLEY
3209010007	Dry Farm - Desert	SANTA CLARITA VALLEY
3209010011	Dry Farm - Desert	SANTA CLARITA VALLEY
3209010022	Dry Farm - Desert	SANTA CLARITA VALLEY
3210002005	Dry Farm - Desert	SANTA CLARITA VALLEY
3210017065	Dry Farm - Desert	SANTA CLARITA VALLEY
3213006017	Dry Farm - Desert	SANTA CLARITA VALLEY
3213013003	Dry Farm - Desert	SANTA CLARITA VALLEY
3214018007	Dry Farm - Desert	SANTA CLARITA VALLEY
3231004014	Dry Farm - Desert	SANTA CLARITA VALLEY
3244025051	Dry Farm - Desert	SANTA CLARITA VALLEY
3244026038	Dry Farm - Desert	SANTA CLARITA VALLEY
3244031274	Dry Farm - Desert	SANTA CLARITA VALLEY
3247044005	Dry Farm - Desert	SANTA CLARITA VALLEY
2826009053	Dry Farm - Desert	SANTA CLARITA VALLEY
2812008900	Government Owned Property	SANTA CLARITA VALLEY
2840002901	Government Owned Property	SANTA CLARITA VALLEY
2865003903	Government Owned Property	SANTA CLARITA VALLEY
2865012912	Government Owned Property	SANTA CLARITA VALLEY
2866004900	Government Owned Property	SANTA CLARITA VALLEY
2866004901	Government Owned Property	SANTA CLARITA VALLEY
3244011902	Government Owned Property	SANTA CLARITA VALLEY
3244015904	Government Owned Property	SANTA CLARITA VALLEY
3247004904	Government Owned Property	SANTA CLARITA VALLEY
3270016044	Government Owned Property	SANTA CLARITA VALLEY
3270017906	Government Owned Property	SANTA CLARITA VALLEY
2865008903	Industrial - Industrial	SANTA CLARITA VALLEY
3231008033	Industrial - Industrial	SANTA CLARITA VALLEY

APN	Assessor Use Code - Type	Community Name
3231008034	Industrial - Industrial	SANTA CLARITA VALLEY
3231008038	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	SANTA CLARITA VALLEY
3231012013	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	SANTA CLARITA VALLEY
2866060056	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	SANTA CLARITA VALLEY
2866060068	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	SANTA CLARITA VALLEY
2866060062	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	SANTA CLARITA VALLEY
2866060063	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	SANTA CLARITA VALLEY
2866060064	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	SANTA CLARITA VALLEY
2866060066	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	SANTA CLARITA VALLEY
2866060067	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	SANTA CLARITA VALLEY
2866060069	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	SANTA CLARITA VALLEY
2866060070	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	SANTA CLARITA VALLEY
2865008007	Industrial - Motion Picture, Radio and Television Industry	SANTA CLARITA VALLEY
2826025907	Industrial - Warehousing, Distribution, Storage	SANTA CLARITA VALLEY
2865009015	Industrial - Warehousing, Distribution, Storage	SANTA CLARITA VALLEY
3231012011	Industrial - Warehousing, Distribution, Storage	SANTA CLARITA VALLEY
3271029086	Industrial - Warehousing, Distribution, Storage	SANTA CLARITA VALLEY
2813008019	Institutional - Church	SANTA CLARITA VALLEY
3271020070	Institutional - Church	SANTA CLARITA VALLEY
3272025008	Irrigated Farm - Pasture	SANTA CLARITA VALLEY
2813013014	Irrigated Farm - Poultry	SANTA CLARITA VALLEY
2848019011	Irrigated Farm - Private Rural Pumping Plant	SANTA CLARITA VALLEY
3214020024	Irrigated Farm - Private Rural Pumping Plant	SANTA CLARITA VALLEY
2848017012	Miscellaneous - Petroleum & Gas	SANTA CLARITA VALLEY
2866004801	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	SANTA CLARITA VALLEY
3209008906	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	SANTA CLARITA VALLEY
3210013903	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	SANTA CLARITA VALLEY
3210015900	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	SANTA CLARITA VALLEY
3210015901	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	SANTA CLARITA VALLEY
3210015902	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	SANTA CLARITA VALLEY
3243004270	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	SANTA CLARITA VALLEY
3209008012	Recreational - Athletic and Amusement Facility	SANTA CLARITA VALLEY
3209008016	Recreational - Athletic and Amusement Facility	SANTA CLARITA VALLEY
3212008054	Recreational - Athletic and Amusement Facility	SANTA CLARITA VALLEY
3210009013	Recreational - Camp	SANTA CLARITA VALLEY
3231026015	Recreational - Club, Lodge Hall, Fraternal Organization	SANTA CLARITA VALLEY
3209008013	Recreational - Skating Rink	SANTA CLARITA VALLEY
3213013027	Residential - (open)	SANTA CLARITA VALLEY
2813008030	Residential - Double, Duplex or Two Units	SANTA CLARITA VALLEY
2848019013	Residential - Double, Duplex or Two Units	SANTA CLARITA VALLEY
2865014003	Residential - Double, Duplex or Two Units	SANTA CLARITA VALLEY
2865014004	Residential - Double, Duplex or Two Units	SANTA CLARITA VALLEY
2865014017	Residential - Double, Duplex or Two Units	SANTA CLARITA VALLEY
2865015015	Residential - Double, Duplex or Two Units	SANTA CLARITA VALLEY
2865016043	Residential - Double, Duplex or Two Units	SANTA CLARITA VALLEY
3210002010	Residential - Double, Duplex or Two Units	SANTA CLARITA VALLEY
3212010025	Residential - Double, Duplex or Two Units	SANTA CLARITA VALLEY
3212010026	Residential - Double, Duplex or Two Units	SANTA CLARITA VALLEY
3212010029	Residential - Double, Duplex or Two Units	SANTA CLARITA VALLEY
3212010036	Residential - Double, Duplex or Two Units	SANTA CLARITA VALLEY
3231004044	Residential - Double, Duplex or Two Units	SANTA CLARITA VALLEY
3231007027	Residential - Double, Duplex or Two Units	SANTA CLARITA VALLEY
3231007072	Residential - Double, Duplex or Two Units	SANTA CLARITA VALLEY
3231013030	Residential - Double, Duplex or Two Units	SANTA CLARITA VALLEY
3231018029	Residential - Double, Duplex or Two Units	SANTA CLARITA VALLEY
3231018030	Residential - Double, Duplex or Two Units	SANTA CLARITA VALLEY
3231024017	Residential - Double, Duplex or Two Units	SANTA CLARITA VALLEY
3231026028	Residential - Double, Duplex or Two Units	SANTA CLARITA VALLEY
3270021010	Residential - Double, Duplex or Two Units	SANTA CLARITA VALLEY
2844022016	Residential - Five or more Apartments or units	SANTA CLARITA VALLEY
2844022017	Residential - Five or more Apartments or units	SANTA CLARITA VALLEY
2844022030	Residential - Five or more Apartments or units	SANTA CLARITA VALLEY
2865008008	Residential - Five or more Apartments or units	SANTA CLARITA VALLEY
2865008031	Residential - Five or more Apartments or units	SANTA CLARITA VALLEY
2865008043	Residential - Five or more Apartments or units	SANTA CLARITA VALLEY
3231018045	Residential - Five or more Apartments or units	SANTA CLARITA VALLEY
2853002010	Residential - Manufactured Home Park	SANTA CLARITA VALLEY
2865013014	Residential - Manufactured Home Park	SANTA CLARITA VALLEY
3214039004	Residential - Manufactured Home Park	SANTA CLARITA VALLEY
3214043015	Residential - Manufactured Home Park	SANTA CLARITA VALLEY
3231007070	Residential - Manufactured Home Park	SANTA CLARITA VALLEY
2813007016	Residential - Manufactured Homes	SANTA CLARITA VALLEY
2813021009	Residential - Manufactured Homes	SANTA CLARITA VALLEY
2853001024	Residential - Manufactured Homes	SANTA CLARITA VALLEY
2865013005	Residential - Manufactured Homes	SANTA CLARITA VALLEY
2865015002	Residential - Manufactured Homes	SANTA CLARITA VALLEY
3213010022	Residential - Manufactured Homes	SANTA CLARITA VALLEY
3231013004	Residential - Manufactured Homes	SANTA CLARITA VALLEY
3231013008	Residential - Manufactured Homes	SANTA CLARITA VALLEY

APN	Assessor Use Code - Type	Community Name
3231023010	Residential - Manufactured Homes	SANTA CLARITA VALLEY
3247030053	Residential - Manufactured Homes	SANTA CLARITA VALLEY
3270013014	Residential - Manufactured Homes	SANTA CLARITA VALLEY
3270015051	Residential - Manufactured Homes	SANTA CLARITA VALLEY
3270016045	Residential - Manufactured Homes	SANTA CLARITA VALLEY
3270016049	Residential - Manufactured Homes	SANTA CLARITA VALLEY
3270016051	Residential - Manufactured Homes	SANTA CLARITA VALLEY
3270016057	Residential - Manufactured Homes	SANTA CLARITA VALLEY
3272028019	Residential - Manufactured Homes	SANTA CLARITA VALLEY
3210013039	Residential - Three Units (any combination)	SANTA CLARITA VALLEY
3231003048	Residential - Three Units (any combination)	SANTA CLARITA VALLEY
3231013012	Residential - Three Units (any combination)	SANTA CLARITA VALLEY
3270022019	Residential - Three Units (any combination)	SANTA CLARITA VALLEY
2813003302		SANTA CLARITA VALLEY
2826023903		SANTA CLARITA VALLEY
2866032079		SANTA CLARITA VALLEY
3243001311		SANTA CLARITA VALLEY
3243001312		SANTA CLARITA VALLEY
3244026300		SANTA CLARITA VALLEY
4436004010	Commercial - Store Combination (w/ Office or Residential)	SANTA MONICA MOUNTAINS NORTH AREA
2063020902	Government Owned Property	SANTA MONICA MOUNTAINS NORTH AREA
2058005015	Residential - Double, Duplex or Two Units	SANTA MONICA MOUNTAINS NORTH AREA
2063003029	Residential - Double, Duplex or Two Units	SANTA MONICA MOUNTAINS NORTH AREA
2058009008	Residential - Manufactured Home Park	SANTA MONICA MOUNTAINS NORTH AREA
4436008010	Residential - Three Units (any combination)	SANTA MONICA MOUNTAINS NORTH AREA
4440006017	Residential - Three Units (any combination)	SANTA MONICA MOUNTAINS NORTH AREA
8714028270	Government Owned Property	SOUTH DIAMOND BAR
8489019035	Institutional - Church	VALINDA
7350001018	Commercial - Shopping Center (Regional)	WEST CARSON
7348006900	Government Owned Property	WEST CARSON
7350001027		WEST CARSON
7350001029		WEST CARSON
8174019035	Commercial - Auto, Recreation Equipment, Construction Equipment Sales and Ser	WEST WHITTIER - LOS NIETOS
8169026033	Commercial - Bank, Savings & Loan	WEST WHITTIER - LOS NIETOS
8174019056	Commercial - Commercial	WEST WHITTIER - LOS NIETOS
8178004065	Commercial - Commercial	WEST WHITTIER - LOS NIETOS
8130016026	Commercial - Hotel and Motel	WEST WHITTIER - LOS NIETOS
8130016031	Commercial - Hotel and Motel	WEST WHITTIER - LOS NIETOS
8171001020	Commercial - Hotel and Motel	WEST WHITTIER - LOS NIETOS
8177024009	Commercial - Hotel and Motel	WEST WHITTIER - LOS NIETOS
8169026031	Commercial - Office Building	WEST WHITTIER - LOS NIETOS
8173023004	Commercial - Office Building	WEST WHITTIER - LOS NIETOS
8177018027	Commercial - Office Building	WEST WHITTIER - LOS NIETOS
8171001019	Commercial - Professional Building	WEST WHITTIER - LOS NIETOS
8130016062	Commercial - Restaurant, Cocktail Lounge	WEST WHITTIER - LOS NIETOS
8169021016	Commercial - Restaurant, Cocktail Lounge	WEST WHITTIER - LOS NIETOS
8171001027	Commercial - Restaurant, Cocktail Lounge	WEST WHITTIER - LOS NIETOS
8173023015	Commercial - Restaurant, Cocktail Lounge	WEST WHITTIER - LOS NIETOS
8173023018	Commercial - Restaurant, Cocktail Lounge	WEST WHITTIER - LOS NIETOS
8173024014	Commercial - Restaurant, Cocktail Lounge	WEST WHITTIER - LOS NIETOS
8177024007	Commercial - Restaurant, Cocktail Lounge	WEST WHITTIER - LOS NIETOS
8174017037	Commercial - Service Station	WEST WHITTIER - LOS NIETOS
8177024008	Commercial - Service Station	WEST WHITTIER - LOS NIETOS
8169021028	Commercial - Store	WEST WHITTIER - LOS NIETOS
8171001023	Commercial - Store	WEST WHITTIER - LOS NIETOS
8171002027	Commercial - Store	WEST WHITTIER - LOS NIETOS
8174017039	Commercial - Store	WEST WHITTIER - LOS NIETOS
8174019001	Commercial - Store	WEST WHITTIER - LOS NIETOS
8174019002	Commercial - Store	WEST WHITTIER - LOS NIETOS
8174019003	Commercial - Store	WEST WHITTIER - LOS NIETOS
8174019004	Commercial - Store	WEST WHITTIER - LOS NIETOS
8177024003	Commercial - Store	WEST WHITTIER - LOS NIETOS
8177024006	Commercial - Store	WEST WHITTIER - LOS NIETOS
8171001021	Commercial - Store Combination (w/ Office or Residential)	WEST WHITTIER - LOS NIETOS
8171001022	Commercial - Store Combination (w/ Office or Residential)	WEST WHITTIER - LOS NIETOS
8174019005	Commercial - Store Combination (w/ Office or Residential)	WEST WHITTIER - LOS NIETOS
8174019036	Commercial - Store Combination (w/ Office or Residential)	WEST WHITTIER - LOS NIETOS
8130024908	Government Owned Property	WEST WHITTIER - LOS NIETOS
8130028085	Government Owned Property	WEST WHITTIER - LOS NIETOS
8169008900	Government Owned Property	WEST WHITTIER - LOS NIETOS
8169008901	Government Owned Property	WEST WHITTIER - LOS NIETOS
8169008902	Government Owned Property	WEST WHITTIER - LOS NIETOS
8169013900	Government Owned Property	WEST WHITTIER - LOS NIETOS
8169020900	Government Owned Property	WEST WHITTIER - LOS NIETOS
8169020901	Government Owned Property	WEST WHITTIER - LOS NIETOS
8169020902	Government Owned Property	WEST WHITTIER - LOS NIETOS
8173022900	Government Owned Property	WEST WHITTIER - LOS NIETOS
8176002271	Government Owned Property	WEST WHITTIER - LOS NIETOS
8176002905	Government Owned Property	WEST WHITTIER - LOS NIETOS

APN	Assessor Use Code - Type	Community Name
8176028900	Government Owned Property	WEST WHITTIER - LOS NIETOS
8177019904	Government Owned Property	WEST WHITTIER - LOS NIETOS
8178003900	Government Owned Property	WEST WHITTIER - LOS NIETOS
8178025902	Government Owned Property	WEST WHITTIER - LOS NIETOS
8169026029	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	WEST WHITTIER - LOS NIETOS
8130028079	Industrial - Open Storage	WEST WHITTIER - LOS NIETOS
8169026030	Industrial - Warehousing, Distribution, Storage	WEST WHITTIER - LOS NIETOS
8169026022	Institutional - Church	WEST WHITTIER - LOS NIETOS
8176007026	Institutional - Church	WEST WHITTIER - LOS NIETOS
8176007027	Institutional - Church	WEST WHITTIER - LOS NIETOS
8178005028	Institutional - Church	WEST WHITTIER - LOS NIETOS
8178005029	Institutional - Church	WEST WHITTIER - LOS NIETOS
8130028067	Institutional - School (Private)	WEST WHITTIER - LOS NIETOS
8178023900	Institutional - School (Private)	WEST WHITTIER - LOS NIETOS
8178025901	Institutional - School (Private)	WEST WHITTIER - LOS NIETOS
8174006062	Irrigated Farm - Private Rural Pumping Plant	WEST WHITTIER - LOS NIETOS
8174013800	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	WEST WHITTIER - LOS NIETOS
8174013802	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	WEST WHITTIER - LOS NIETOS
8174019800	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	WEST WHITTIER - LOS NIETOS
8176001802	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	WEST WHITTIER - LOS NIETOS
8176001803	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	WEST WHITTIER - LOS NIETOS
8176001805	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	WEST WHITTIER - LOS NIETOS
8176001806	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	WEST WHITTIER - LOS NIETOS
8177001802	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	WEST WHITTIER - LOS NIETOS
8177001803	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	WEST WHITTIER - LOS NIETOS
8177001804	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	WEST WHITTIER - LOS NIETOS
8177001806	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	WEST WHITTIER - LOS NIETOS
8177003802	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	WEST WHITTIER - LOS NIETOS
8177003807	Miscellaneous - Utility - Commercial & Mutual: Pumping Plant, State Assessed	WEST WHITTIER - LOS NIETOS
8130028021	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8169018027	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8169018028	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8169020005	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8169020009	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8169027044	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8173024008	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8174015008	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8174015010	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8174015014	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8174015017	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8174015023	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8174015027	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8174017016	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8174017017	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8174017026	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8174017027	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8174017038	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8174017040	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8174017045	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8174017046	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8174017047	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8174017048	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8174017050	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8174028037	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8174028038	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8176003011	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8176003021	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8176004062	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8176004071	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8176004073	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8176004078	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8177006016	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8178003026	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8178031010	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8178031031	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8178031032	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8178031033	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8178031041	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8178031044	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8178031048	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8178031050	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8178033041	Residential - Double, Duplex or Two Units	WEST WHITTIER - LOS NIETOS
8169013088	Residential - Five or more Apartments or units	WEST WHITTIER - LOS NIETOS
8169013089	Residential - Five or more Apartments or units	WEST WHITTIER - LOS NIETOS
8169013090	Residential - Five or more Apartments or units	WEST WHITTIER - LOS NIETOS
8169013091	Residential - Five or more Apartments or units	WEST WHITTIER - LOS NIETOS
8169013092	Residential - Five or more Apartments or units	WEST WHITTIER - LOS NIETOS
8176001012	Residential - Five or more Apartments or units	WEST WHITTIER - LOS NIETOS
8176003034	Residential - Five or more Apartments or units	WEST WHITTIER - LOS NIETOS

APN	Assessor Use Code - Type	Community Name
8176007021	Residential - Five or more Apartments or units	WEST WHITTIER - LOS NIETOS
8176007028	Residential - Five or more Apartments or units	WEST WHITTIER - LOS NIETOS
8176007029	Residential - Five or more Apartments or units	WEST WHITTIER - LOS NIETOS
8176007031	Residential - Five or more Apartments or units	WEST WHITTIER - LOS NIETOS
8176007032	Residential - Five or more Apartments or units	WEST WHITTIER - LOS NIETOS
8176007034	Residential - Five or more Apartments or units	WEST WHITTIER - LOS NIETOS
8176007036	Residential - Five or more Apartments or units	WEST WHITTIER - LOS NIETOS
8178005025	Residential - Five or more Apartments or units	WEST WHITTIER - LOS NIETOS
8169018019	Residential - Four Units (any combination)	WEST WHITTIER - LOS NIETOS
8169018033	Residential - Four Units (any combination)	WEST WHITTIER - LOS NIETOS
8174006061	Residential - Four Units (any combination)	WEST WHITTIER - LOS NIETOS
8174015009	Residential - Four Units (any combination)	WEST WHITTIER - LOS NIETOS
8176002015	Residential - Manufactured Home Park	WEST WHITTIER - LOS NIETOS
8176002016	Residential - Manufactured Home Park	WEST WHITTIER - LOS NIETOS
8176002270	Residential - Manufactured Home Park	WEST WHITTIER - LOS NIETOS
8130028017	Residential - Three Units (any combination)	WEST WHITTIER - LOS NIETOS
8169018016	Residential - Three Units (any combination)	WEST WHITTIER - LOS NIETOS
8169018017	Residential - Three Units (any combination)	WEST WHITTIER - LOS NIETOS
8169020012	Residential - Three Units (any combination)	WEST WHITTIER - LOS NIETOS
8174006060	Residential - Three Units (any combination)	WEST WHITTIER - LOS NIETOS
8174017042	Residential - Three Units (any combination)	WEST WHITTIER - LOS NIETOS
8174017043	Residential - Three Units (any combination)	WEST WHITTIER - LOS NIETOS
8174017049	Residential - Three Units (any combination)	WEST WHITTIER - LOS NIETOS
8176003026	Residential - Three Units (any combination)	WEST WHITTIER - LOS NIETOS
8176003029	Residential - Three Units (any combination)	WEST WHITTIER - LOS NIETOS
8176003030	Residential - Three Units (any combination)	WEST WHITTIER - LOS NIETOS
5271009902	Government Owned Property	WHITTIER NARROWS
5271011902	Government Owned Property	WHITTIER NARROWS
8119010906	Government Owned Property	WHITTIER NARROWS
5272001048	Residential - Manufactured Home Park	WHITTIER NARROWS
6154020018	Commercial - Hotel and Motel	WILLOWBROOK
6154018002	Commercial - Restaurant, Cocktail Lounge	WILLOWBROOK
6154016003	Commercial - Store	WILLOWBROOK
6154018029	Commercial - Store	WILLOWBROOK
6154018027	Commercial - Store Combination (w/ Office or Residential)	WILLOWBROOK
6154018914	Government Owned Property	WILLOWBROOK
6154017001	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	WILLOWBROOK
6154017002	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	WILLOWBROOK
6154018026	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	WILLOWBROOK
6154020002	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	WILLOWBROOK
6154021028	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	WILLOWBROOK
6154024022	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	WILLOWBROOK
6154025001	Industrial - Light Manufacturing, small machine shop, printing plant, etc.	WILLOWBROOK
6154024025	Industrial - Warehousing, Distribution, Storage	WILLOWBROOK
6154024026	Industrial - Warehousing, Distribution, Storage	WILLOWBROOK
6154019030	Institutional - Church	WILLOWBROOK
6154012014	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154012023	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154012039	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154013006	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154013011	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154013017	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154014004	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154014016	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154014024	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154015019	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154016005	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154016009	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154016010	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154016011	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154016024	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154016034	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154016041	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154017007	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154017042	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154018023	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154019004	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154019018	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154019028	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154020024	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154021015	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154022027	Residential - Double, Duplex or Two Units	WILLOWBROOK
6154024005	Residential - Double, Duplex or Two Units	WILLOWBROOK
6155033009	Residential - Double, Duplex or Two Units	WILLOWBROOK

Table H.5: Existing Single Family Homes in Flood Hazard Zones, by Community and APN

Altadena								
5830002001	5830002004	5830002007	5830002010	5830002014	5830002017	5830002020	5830002016	5830002009
5830002002	5830002005	5830002008	5830002012	5830002015	5830002018	5830002019	5830002013	5830002006
5830002003								
Antelope Valley								
3227004019	3041008033	3044026008	3049008035	3102025063	3103032068	3204014018	3227020006	3234025028
3228008008	3041009001	3044026009	3049008038	3102025064	3103032069	3204014019	3227020007	3234025029
3228015030	3041009002	3044026010	3049008039	3102025065	3103032070	3204014021	3227020008	3234025031
3234015038	3041009003	3044026012	3049008040	3102025066	3103032071	3204014023	3227020016	3234025033
2846009014	3041009004	3044026013	3049008901	3102025067	3103032072	3204014024	3227020029	3234025034
2846009015	3041009015	3044026014	3049009004	3102025068	3103032073	3204014025	3227020030	3234026034
2846009017	3041009016	3044026015	3049009005	3102025073	3103032074	3204014026	3227020033	3234026040
2846009018	3041009017	3044026016	3049009006	3102025074	3103032075	3204014027	3227020034	3234026041
2846009055	3041009018	3044026017	3049009012	3102025080	3103032076	3204015001	3227020036	3234026042
2846015014	3041009019	3044026018	3049009014	3102025081	3103032077	3204015003	3227020037	3234026043
2846015015	3041009020	3044026019	3049009020	3102025082	3103032078	3204015004	3227021006	3234026044
2846015018	3041009021	3044026020	3049009022	3102025083	3103032079	3204015006	3227021020	3234027003
2846015023	3041009022	3044026021	3049011004	3102025085	3103032080	3204015007	3227021022	3234027009
2846016014	3041009023	3044026022	3049011005	3102025086	3103032081	3204015008	3227021025	3234027010
2846019012	3041009024	3044026023	3049011015	3102025088	3103032082	3204015010	3227021032	3234027013
2846019013	3041009025	3044026024	3049011017	3102025091	3103032083	3204015011	3227021035	3234027015
2846019014	3041009026	3044026025	3049012007	3102025092	3103032084	3204015016	3227021036	3234027016
2846019015	3041009027	3044026026	3049012020	3102025093	3103032085	3204015017	3227022006	3234027023
3001010002	3041009032	3044026027	3049012022	3102025095	3103032086	3204015021	3227022030	3234027024
3027010017	3041009033	3044026028	3049013002	3102025096	3103032087	3204015024	3227022032	3234027026
3027010020	3041009034	3044026029	3049013003	3102026012	3103032088	3204029038	3227022034	3234028026
3027010023	3041009036	3044026030	3049013004	3102026018	3103032089	3204029039	3227022036	3242001003
3027010028	3041009037	3044026031	3049013005	3102026019	3103032090	3204029045	3227023001	3242001005
3027010031	3041009038	3044026032	3049013007	3102026020	3103032091	3204029046	3227023014	3242001006
3027010032	3041009041	3044026033	3049013020	3102026021	3103032092	3204029056	3227023024	3242002003
3027010034	3041009042	3044026034	3049013028	3102026022	3103032093	3204029057	3227023035	3242002005
3027010038	3041010039	3044026035	3049014012	3102026036	3103032094	3204029058	3227023036	3242002008
3027011006	3041010040	3044026036	3049014017	3102026038	3103032095	3204029059	3227023037	3242002011
3027011007	3042003009	3044026037	3049014018	3102026039	3103032096	3204029060	3227023038	3242003004
3027011009	3042003016	3044026038	3049014022	3102026041	3110001032	3204029061	3227024011	3242004001
3027011010	3042003017	3044026039	3049014026	3102026042	3110001033	3204029062	3227024012	3242004003
3027011011	3042003018	3044026040	3049014029	3102026044	3110003010	3204029063	3227024021	3242004004
3027011022	3042004004	3044027001	3049019008	3102026903	3110003015	3204029064	3227024025	3242004005
3027011023	3042004005	3044027002	3049019018	3102030001	3110003016	3204032001	3227024031	3242004008
3027011026	3042004006	3044027003	3049019024	3102030002	3110003017	3204032002	3227024032	3242004010
3027011027	3042004008	3044027004	3049020013	3102030003	3110003018	3204032003	3227024035	3242004013
3027011028	3042004012	3044027005	3049020015	3102030004	3110003019	3204032004	3227025002	3242004016
3027011029	3042004013	3044027006	3049020017	3102030005	3110003020	3204032005	3227025008	3242004019
3027011030	3042004014	3044027007	3049020037	3102030006	3110003024	3204032006	3227025020	3242004022
3027013029	3042004015	3044027009	3049020044	3102030007	3110003027	3204032007	3227025021	3242004023
3027013046	3042004017	3044027010	3049020051	3102030008	3110003036	3204032008	3227025029	3242004024
3027013047	3042005001	3044027011	3049021013	3102030009	3110003040	3204032009	3227025031	3242004027
3027015002	3042005003	3044027012	3049022020	3102030010	3110003041	3204032010	3227025032	3242004029
3027015016	3042005004	3044027013	3049022021	3102030011	3110003042	3204032011	3227025033	3242004030

3027015028	3042005006	3044027014	3049022032	3102030012	3110003043	3204032012	3227025034	3242004031
3027015029	3042005008	3044027015	3049022036	3102030013	3110003046	3204032013	3227025035	3242004032
3027015037	3042005010	3044027016	3049023004	3102030014	3110003056	3204032014	3227026045	3242005001
3027015040	3042005011	3044027017	3049023005	3102030015	3110003057	3204032015	3227026047	3242005006
3027016004	3042005012	3044027018	3049023009	3102030016	3110003058	3204032016	3227026048	3242005007
3027016005	3042006007	3044027019	3049023014	3102030017	3110003059	3204032017	3227026049	3242005011
3027016006	3042006008	3044027020	3049029006	3102030018	3110003904	3204032018	3227026053	3242005012
3027016007	3042007002	3044027021	3049029019	3102030019	3110005016	3204032019	3227026054	3242005013
3027016008	3042007004	3044027022	3049029037	3102030020	3110005017	3204032020	3227026055	3242005014
3027016009	3042007005	3044027023	3049029039	3102030021	3110005033	3204032021	3227026058	3242005015
3027016010	3042007009	3044027027	3049029040	3102030022	3110005035	3204032022	3227027010	3242005016
3027016011	3042007010	3044027028	3049029041	3102030023	3110005041	3204032023	3227027011	3242005020
3027016012	3042007013	3044027029	3049029042	3102030024	3110007004	3204032024	3227027018	3242005022
3027016013	3042008001	3044027031	3049033006	3102030026	3110008003	3204032025	3227027019	3242005025
3027016014	3042008002	3044028002	3049033007	3102030027	3110008004	3204032026	3227027021	3242005026
3027016015	3042008003	3044028003	3049033008	3102030028	3110008007	3204032027	3227027022	3242005027
3027016016	3042008004	3044028004	3049033009	3102030029	3110008010	3204032028	3227028001	3242006004
3027016019	3042008006	3044028005	3051001015	3102030032	3110008012	3204032029	3227028008	3242012002
3027016020	3042008009	3044031002	3051001023	3102030033	3110008014	3204032030	3227028021	3242012003
3027016021	3042008010	3044031009	3051001024	3102030034	3110008024	3204032031	3227028032	3242012005
3027016022	3042008011	3044031015	3051003015	3102030035	3110008028	3204032032	3227028033	3242012006
3027016023	3042008012	3044031016	3051003017	3102030036	3110008029	3204032033	3227028038	3242012007
3027016024	3042008013	3044031022	3051007002	3102030037	3110008030	3204032034	3227028039	3242012008
3027016025	3042008015	3044031023	3056014022	3102031001	3110008031	3204032035	3227028041	3242012009
3027016026	3042008016	3044031024	3056014042	3102031002	3110008032	3204032036	3227028046	3242012010
3027016027	3042008018	3044031025	3056015019	3102031003	3110008033	3204032037	3227029009	3242012011
3027016028	3042009002	3044031026	3056017022	3102031004	3110008034	3204032038	3227029032	3242013009
3027016029	3042009008	3044032008	3056023035	3102031005	3110008041	3204032039	3227029036	3242013010
3027017017	3042009009	3044034003	3056023038	3102031006	3110008042	3204032040	3227029037	3242013011
3027017018	3042009015	3046001003	3056023059	3102031007	3110008043	3204032041	3227029042	3242014008
3027017019	3042010001	3046001004	3056023061	3102031008	3110008044	3204032044	3227030003	3242014013
3027017021	3042010003	3046001005	3056023062	3102031009	3110008045	3204032045	3227030005	3242014014
3027017022	3042010005	3046001006	3056024030	3102031010	3110008046	3204032046	3227030006	3242014015
3027017023	3042010009	3046001007	3056024038	3102031011	3110008047	3204032049	3227030008	3242014016
3027017024	3042010011	3046001008	3056024040	3102031012	3110008048	3204032050	3227030010	3242014018
3027017025	3042010012	3046001009	3056024043	3102031013	3110010002	3204032051	3227030013	3242014019
3027017026	3042010013	3046001010	3056024045	3102031014	3110010003	3204032052	3227030014	3242014021
3027017027	3042010015	3046001012	3056024046	3102031015	3110010004	3204032053	3227030015	3242015006
3027017028	3042011001	3046001013	3056024049	3102031016	3110010005	3204032054	3227030016	3242016001
3027017029	3042011002	3046001014	3056024054	3102031017	3110010013	3204032055	3227030017	3242016002
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3027017031	3042011012	3046001016	3057017021	3102031019	3110010015	3204032057	3227030022	3242016014
3027017032	3042011018	3046001020	3057017022	3102031020	3110010027	3204032058	3227030027	3242016015
3027017033	3042011020	3046001022	3057017023	3102031021	3110010028	3204032059	3227030031	3242016017
3027017036	3042011021	3046001024	3058003020	3102031022	3110011006	3204032060	3227030038	3242016021
3027017038	3042011022	3046001027	3058004003	3102031023	3110011008	3204032061	3227030041	3242016030
3027017039	3042012005	3046001028	3058007010	3102031024	3110011009	3204032062	3227030044	3242016031
3027017040	3042012006	3046001030	3058027010	3102031025	3110011025	3204032079	3227030045	3242017008
3027017041	3042012007	3046001031	3060003004	3102031026	3110011026	3204033057	3227031014	3242017011
3027017042	3042012013	3046001034	3061004009	3102031027	3110011027	3204033058	3227031016	3242017016
3027017043	3042012015	3046001036	3061006017	3102031028	3110011028	3204033059	3227031020	3242017024

3027017044	3042012016	3046001037	3061038003	3102031029	3110011029	3204033060	3227031022	3242017026
3027017045	3042012017	3046002001	3064009030	3102031030	3110011030	3204033061	3227031023	3242017031
3027017047	3042012018	3046002002	3066021021	3102031031	3110011039	3204033062	3227031026	3242018003
3027018001	3042013002	3046002003	3069021009	3102031032	3110011041	3204034126	3227031039	3242018007
3027018002	3042013004	3046002007	3070009008	3102031033	3110011042	3205002033	3227031040	3242018010
3027018003	3042013005	3046002008	3070009009	3102031034	3110011043	3205002047	3227031042	3242018011
3027018004	3042013006	3046002009	3070009010	3102031035	3113001001	3205002087	3227031044	3242018013
3027018007	3042013007	3046002010	3070014009	3102031036	3113001042	3205007006	3227032010	3242019010
3027018008	3042013008	3046002013	3070014010	3102031037	3113001052	3205007007	3227032012	3242019013
3027018010	3042013009	3046002014	3070014011	3102031038	3113002005	3205007018	3227032046	3242020026
3027018012	3042013010	3046002015	3070014012	3102031039	3113002011	3205007022	3227032050	3242021009
3027018014	3042013020	3046002017	3070014013	3102031040	3113002023	3205007024	3227032052	3242021010
3027018015	3042013021	3046002018	3070014014	3102031041	3113003002	3205008027	3227032054	3242021012
3027018016	3042013022	3046002019	3070014017	3102031042	3113003054	3205008028	3228003002	3242021018
3027018018	3042013023	3046002020	3070015001	3102031043	3113004013	3205008035	3228003007	3242021022
3027018019	3042013026	3046002022	3070015002	3102031044	3113006015	3205008037	3228003009	3242021023
3027018035	3042014014	3046002023	3070015003	3102031045	3113006041	3205011007	3228003010	3242025004
3027018036	3042014015	3046002024	3070015004	3103005026	3113006077	3205013014	3228003015	3242025012
3027018037	3042014016	3046002025	3070015005	3103006004	3113006081	3206007061	3228004005	3242025014
3027018038	3042014017	3046002026	3070015006	3103007006	3113006087	3208003018	3228004008	3242028006
3027018039	3042014018	3046002027	3070015007	3103009015	3113006088	3208004042	3228004011	3242030016
3027018041	3042014019	3046002028	3070015008	3103009016	3113010021	3208004046	3228004020	3251012900
3027018042	3042014020	3046002029	3070015009	3103020001	3113014019	3208005041	3228004027	3251013034
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3027018044	3042014022	3046002031	3070015011	3103020004	3115002014	3208007031	3228004035	3253001025
3027018046	3042014024	3046002032	3070015012	3103020005	3115009002	3208008025	3228004036	3258003009
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3027019028	3042014034	3046002046	3070020014	3103020013	3137003040	3208011065	3228005041	3260008020
3027019029	3042014035	3046002047	3070020015	3103020014	3137003041	3208017020	3228005042	3260008024
3027019030	3042014036	3046002048	3070020017	3103020015	3137004001	3208017030	3228006003	3260009012
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3027019036	3042014038	3046002051	3070020019	3103020017	3137004004	3208017038	3228007005	3260009025
3027019037	3042015007	3046002052	3070026012	3103020018	3137004006	3208017039	3228007023	3260009033
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3027027021	3042015013	3046002062	3073004012	3103020026	3145013006	3208018022	3228008011	3260019026
3027027030	3042015014	3046003001	3073004013	3103020031	3145013007	3208018027	3228008012	3260019029
3027027031	3042015015	3046003002	3073010004	3103020032	3145013009	3208018042	3228008017	3260019030
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Santa Monica Mountains North Area								
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South San Jose Hills								
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8728018052								
South Whittier - Sunshine Acres								

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Valinda								
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Walnut Islands								
8277033020	8277033021	8277033022	8277033023	8482032001				
West Carson								
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7350001109	7350001113	7350001117	7350001118	7350001114	7350001110			
West Puente								
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West Whitier - Los Nietos								
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8169013030	8174007011	8174022025	8176013046	8176023042	8177004062	8177016029	8178007008	8178021020
8169013031	8174007012	8174022026	8176013047	8176023043	8177004063	8177016030	8178007009	8178021021
8169013032	8174007013	8174022027	8176013048	8176023044	8177004064	8177016031	8178007010	8178021022
8169013033	8174007014	8174022028	8176013049	8176023045	8177006001	8177016032	8178007011	8178021023
8169013034	8174007015	8174022032	8176013050	8176023046	8177006002	8177016033	8178007013	8178021024
8169013035	8174007016	8174022033	8176013051	8176023047	8177006003	8177016034	8178007015	8178021025
8169013036	8174007025	8174022035	8176013052	8176023048	8177006004	8177016035	8178007016	8178021027

8169013037	8174007026	8174022036	8176013053	8176023049	8177006005	8177016036	8178007018	8178021028
8169013038	8174007027	8174024017	8176014001	8176023050	8177006006	8177016037	8178007020	8178021029
8169013041	8174007028	8174024022	8176014002	8176023051	8177006007	8177016039	8178007022	8178021030
8169013042	8174007029	8174024023	8176014003	8176023052	8177006008	8177016040	8178007024	8178021031
8169013043	8174007030	8174024025	8176014004	8176023053	8177006009	8177016041	8178007026	8178021032
8169013044	8174007031	8174024032	8176014005	8176023054	8177006010	8177018019	8178007028	8178021033
8169013045	8174007032	8174024033	8176014006	8176023055	8177006011	8177018020	8178007030	8178021034
8169013046	8174007033	8174025018	8176014007	8176023056	8177006012	8177018021	8178007032	8178021035
8169013047	8174007034	8174025025	8176014008	8176023057	8177006013	8177018022	8178007033	8178021036
8169013048	8174007035	8174025034	8176014009	8176023058	8177006014	8177018023	8178007034	8178021037
8169013049	8174007036	8174025040	8176014010	8176023059	8177006015	8177018024	8178007035	8178021038
8169013050	8174007037	8174025042	8176014011	8176023060	8177006017	8177018025	8178007036	8178021039
8169013051	8174007038	8174027020	8176014012	8176023061	8177006018	8177018026	8178007037	8178021040
8169013052	8174007039	8174027021	8176014013	8176023062	8177006019	8177018028	8178007038	8178021041
8169013053	8174007040	8174027033	8176014014	8176023063	8177006020	8177020001	8178007039	8178021042
8169013054	8174007041	8174027038	8176014015	8176023064	8177006021	8177020002	8178007040	8178021043
8169013055	8174007042	8174027039	8176014016	8176024001	8177006022	8177020003	8178007041	8178021044
8169013056	8174007043	8174027040	8176014017	8176024002	8177006023	8177020004	8178007042	8178021045
8169013057	8174008001	8174027041	8176014018	8176024003	8177006024	8177020005	8178007043	8178021047
8169013058	8174008002	8174027042	8176014019	8176024004	8177006025	8177020006	8178007044	8178021048
8169013059	8174008003	8174027043	8176014020	8176024005	8177006026	8177020007	8178007045	8178021049
8169013060	8174008004	8174027044	8176014021	8176024006	8177006027	8177020008	8178007046	8178021050
8169013061	8174008005	8174027045	8176014022	8176024007	8177006028	8177020009	8178007047	8178021051
8169013062	8174008006	8174027046	8176014023	8176024008	8177006029	8177020010	8178007048	8178021052
8169013063	8174008007	8174028001	8176014024	8176024009	8177006030	8177020011	8178007049	8178021053
8169013064	8174008008	8174028002	8176014025	8176024010	8177006031	8177020012	8178007050	8178023001
8169013065	8174008009	8174028005	8176014026	8176024011	8177006032	8177020013	8178007051	8178023002
8169013066	8174008010	8174028006	8176014027	8176024012	8177006033	8177020014	8178007052	8178023003
8169013067	8174008011	8174028007	8176014028	8176024013	8177006034	8177020015	8178007053	8178023004
8169013068	8174008012	8174028008	8176014029	8176024014	8177006035	8177020016	8178009001	8178023005
8169013069	8174008013	8174028012	8176014030	8176024015	8177006036	8177020017	8178009002	8178023006
8169013070	8174008014	8174028013	8176014031	8176024016	8177006037	8177020018	8178009003	8178023007
8169013071	8174008015	8174028014	8176014032	8176024017	8177006038	8177020019	8178009004	8178023008
8169013072	8174008016	8174028015	8176014033	8176024018	8177006039	8177020020	8178009005	8178023009
8169013073	8174008017	8174028016	8176014034	8176024019	8177006040	8177020021	8178009006	8178023011
8169013074	8174008018	8174028017	8176015003	8176024020	8177006041	8177020022	8178009007	8178023012
8169013075	8174008019	8174028018	8176015004	8176024021	8177006042	8177020023	8178009008	8178023013
8169013076	8174008020	8174028019	8176015005	8176024022	8177006043	8177020024	8178009009	8178023014
8169013077	8174008021	8174028022	8176015006	8176024023	8177006044	8177020025	8178009010	8178023015
8169013078	8174008022	8174028023	8176015007	8176024024	8177006045	8177020026	8178009011	8178023016
8169013079	8174008023	8174028024	8176015008	8176024025	8177006046	8177020027	8178009012	8178023018
8169013080	8174008024	8174028025	8176015009	8176024026	8177006047	8177020028	8178009013	8178023019
8169013081	8174008025	8174028026	8176015010	8176024027	8177006048	8177020029	8178009014	8178023020
8169013082	8174008026	8174028027	8176015011	8176024028	8177006049	8177020030	8178009015	8178023021
8169013083	8174008027	8174028028	8176015012	8176024029	8177006050	8177020031	8178009016	8178023022
8169013084	8174008028	8174028029	8176015013	8176024030	8177006051	8177020032	8178009017	8178023023
8169013085	8174008029	8174028030	8176015014	8176024031	8177006052	8177020033	8178009018	8178023024
8169013093	8174008030	8174028032	8176015015	8176025001	8177006053	8177020034	8178009019	8178023025
8169013094	8174008031	8174028033	8176015016	8176025002	8177006054	8177020035	8178009020	8178023026
8169013095	8174008032	8174028034	8176015017	8176025003	8177008001	8177020036	8178009021	8178023027
8169013096	8174008033	8174028035	8176015018	8176025004	8177008002	8177020037	8178009022	8178023028

8169013097	8174008034	8174028036	8176015019	8176025005	8177008003	8177020038	8178009023	8178023029
8169013098	8174008035	8174028039	8176015020	8176025006	8177008004	8177020039	8178009024	8178023030
8169013099	8174008036	8174028040	8176015021	8176025007	8177008005	8177020040	8178009025	8178023031
8169013100	8174008037	8174031042	8176015022	8176025008	8177008006	8177020041	8178009026	8178023032
8169013101	8174008038	8174031043	8176015023	8176025009	8177008007	8177020042	8178009027	8178023033
8169013102	8174008039	8174031044	8176015024	8176025010	8177008008	8177020043	8178009028	8178023034
8169013103	8174008040	8174031045	8176015025	8176025011	8177008009	8177020044	8178009029	8178023035
8169013104	8174008041	8174031046	8176015026	8176025012	8177008010	8177020045	8178009030	8178023036
8169013105	8174008042	8176001011	8176015027	8176025013	8177008011	8177020046	8178009031	8178023037
8169013106	8174008043	8176001013	8176015028	8176025014	8177008012	8177020047	8178009032	8178023038
8169013107	8174008044	8176002011	8176015029	8176025015	8177008013	8177020048	8178009033	8178023039
8169013108	8174008045	8176002012	8176015030	8176025016	8177008014	8177020049	8178009034	8178023040
8169013109	8174008046	8176003009	8176015031	8176025017	8177008015	8177020050	8178009035	8178023041
8169013110	8174008047	8176003025	8176015032	8176025018	8177008016	8177025001	8178009036	8178023042
8169013111	8174008048	8176003032	8176015034	8176025019	8177008017	8177025002	8178009037	8178023043
8169013113	8174012001	8176003033	8176015035	8176025020	8177008018	8177025003	8178009038	8178023044
8169013114	8174012002	8176004001	8176015036	8176025021	8177008019	8177025004	8178009039	8178023045
8169013115	8174012003	8176004004	8176015037	8176025022	8177008020	8177025005	8178009040	8178023046
8169018001	8174012004	8176004005	8176015038	8176025023	8177008022	8177025006	8178009041	8178023047
8169018002	8174012005	8176004006	8176016001	8176025024	8177008023	8177025007	8178009042	8178023048
8169018003	8174012006	8176004007	8176016002	8176025025	8177008024	8177025008	8178009043	8178023049
8169018004	8174012007	8176004008	8176016003	8176025026	8177008025	8177025009	8178009044	8178023050
8169018005	8174012008	8176004009	8176016004	8176025027	8177008026	8177025010	8178009045	8178023051
8169018006	8174012009	8176004010	8176016005	8176025028	8177008027	8177025011	8178009046	8178023052
8169018007	8174012010	8176004011	8176016006	8176025029	8177008028	8177025012	8178009047	8178031008
8169018008	8174012011	8176004012	8176016007	8176025030	8177008029	8177025013	8178009048	8178031009
8169018009	8174012012	8176004013	8176016008	8176027001	8177008030	8177025014	8178009049	8178031011
8169018010	8174012013	8176004014	8176016009	8176027002	8177008032	8177025015	8178009050	8178031012
8169018011	8174012014	8176004015	8176016010	8176027003	8177008035	8177025016	8178009051	8178031013
8169018012	8174012015	8176004016	8176016011	8176027004	8177008036	8177025017	8178009052	8178031014
8169018013	8174012016	8176004017	8176016012	8176027005	8177008037	8177025018	8178009053	8178031015
8169018014	8174012017	8176004027	8176016013	8176027006	8177008038	8177025019	8178009054	8178031016
8169018015	8174012019	8176004028	8176016014	8176027007	8177008039	8177025020	8178009055	8178031017
8169018020	8174012020	8176004029	8176016015	8176027008	8177008040	8177025021	8178009056	8178031018
8169018022	8174012021	8176004030	8176016016	8176027009	8177008041	8177025022	8178009057	8178031021
8169018023	8174012022	8176004031	8176016017	8176027010	8177008042	8177025023	8178009058	8178031023
8169018024	8174012023	8176004032	8176016018	8176027011	8177008043	8177025024	8178009059	8178031042
8169018025	8174012024	8176004033	8176016019	8176027012	8177008044	8177025025	8178009060	8178031043
8169018026	8174012025	8176004034	8176016020	8176027013	8177008045	8177025026	8178009061	8178031045
8169018029	8174012026	8176004039	8176016021	8176027014	8177008046	8177025027	8178009062	8178031046
8169018030	8174012027	8176004040	8176016022	8176027015	8177011001	8177025029	8178009063	8178031047
8169018031	8174012028	8176004041	8176016023	8176027016	8177011002	8177025030	8178009064	8178031049
8169018032	8174012029	8176004042	8176016024	8176027017	8177011003	8177025031	8178009065	8178031051
8169018034	8174012030	8176004043	8176016025	8176027018	8177011004	8177025032	8178009066	8178031052
8169018035	8174012031	8176004044	8176016026	8176027019	8177011005	8177025033	8178009067	8178031053
8169018036	8174012032	8176004049	8176018001	8176027020	8177011006	8177025034	8178009068	8178031054
8169018037	8174012033	8176004053	8176018002	8176027021	8177011007	8177025035	8178009069	8178031055
8169018038	8174012034	8176004055	8176018003	8176027022	8177011008	8177025036	8178011001	8178031056
8169018039	8174012035	8176004056	8176018004	8176027025	8177011009	8177025037	8178011002	8178033042
8169018040	8174012036	8176004057	8176018005	8176027026	8177011010	8177025038	8178011003	8178036006
8169018042	8174012037	8176004061	8176018006	8176027027	8177011011	8177025039	8178011004	8178036008

8169018043	8174012038	8176004064	8176018007	8176027028	8177011012	8177025040	8178011005	8178036012
8169018045	8174012039	8176004067	8176018008	8176027029	8177011013	8177025041	8178011006	8178036013
8169018046	8174012040	8176004068	8176018009	8176027030	8177011014	8177026001	8178011007	8178036014
8169018047	8174012041	8176004069	8176018010	8176027031	8177011015	8177026002	8178011008	8178036016
8169018049	8174013001	8176004070	8176018011	8176027032	8177011016	8177026003	8178011009	8178036018
8169018050	8174013002	8176004072	8176018012	8176027033	8177011017	8177026004	8178011010	8178036020
8169018051	8174013003	8176004074	8176018013	8176027034	8177011018	8177026005	8178011011	8178036021
8169020001	8174013004	8176004075	8176018015	8176027035	8177011019	8177026006	8178011012	8178036022
8169020002	8174013005	8176004076	8176018016	8176027036	8177011020	8177026007	8178011013	8178036023
8169020003	8174013006	8176004077	8176018017	8176027037	8177011021	8177026008	8178011014	8178036024
8169020004	8174013007	8176007008	8176018018	8176027038	8177011022	8177026009	8178011015	8178036025
8169020006	8174013008	8176007009	8176018019	8176027039	8177011023	8177026010	8178011016	8173024046
8169020007	8174013009	8176007010	8176018020	8176027040	8177011024	8177026011	8178011017	8173024047
8169020008	8174013010	8176007012	8176018021	8176027041	8177011025	8177026013	8178011018	8173024048
8169020013	8174013011	8176007013	8176018022	8176027042	8177011026	8177026014	8178011019	8173024049
8169020018	8174013012	8176007014	8176018023	8176027043	8177011027	8177026015	8178011020	8173024050
8169020019	8174013013	8176007015	8176018024	8176027044	8177011028	8177026016	8178011021	8173024051
8169020020	8174013014	8176007017	8176018025	8176027045	8177011029	8177026017	8178011022	8173024052
8169020021	8174013015	8176007018	8176018026	8176027046	8177011030	8177026018	8178011023	8173024053
8169020025	8174013016	8176007019	8176018027	8176027047	8177011031	8177026019	8178011024	8173024054
8169020026	8174013017	8176007030	8176018028	8176027048	8177011032	8177026020	8178011025	8173024077
8169020035	8174013018	8176007035	8176018029	8176028001	8177011033	8177026021	8178011026	8173024078
8169020036	8174013019	8176007037	8176018030	8176028002	8177011034	8177026022	8178011027	8173024079
8169021006	8174013020	8176010001	8176018031	8176028003	8177011035	8177026025	8178011028	8173024080
8169021007	8174013021	8176010002	8176018032	8176028004	8177011036	8177026026	8178011029	8173024081
8169021008	8174013022	8176010003	8176018033	8176028005	8177011037	8177026027	8178011030	8173024082
8169021009	8174013023	8176010004	8176018034	8176028006	8177011038	8177026029	8178011031	8173024083
8169021010	8174013024	8176010005	8176018035	8176028007	8177011039	8177026030	8178011032	8173024084
8169021011	8174013025	8176010006	8176018036	8176028008	8177011040	8177026032	8178011033	8173024085
8169021012	8174013026	8176010040	8176018037	8176028009	8177011041	8177026033	8178011034	8173024086
8169021013	8174013027	8176010042	8176018038	8176029001	8177011042	8177026034	8178011035	8173024087
8169021014	8174013028	8176010043	8176018039	8176029002	8177011043	8177026035	8178011036	
Willowbrook								
6153021001	6154012005	6154013004	6154013030	6154014012	6154014037	6154015021	6154016018	6154017029
6153021002	6154012006	6154013007	6154013031	6154014017	6154014040	6154015022	6154016019	6154017031
6153021003	6154012007	6154013008	6154013033	6154014018	6154015002	6154015023	6154016025	6154017032
6153021004	6154012009	6154013009	6154013034	6154014019	6154015003	6154015024	6154016026	6154017033
6153021005	6154012010	6154013010	6154013036	6154014020	6154015004	6154015025	6154016030	6154017034
6153021006	6154012017	6154013012	6154013037	6154014021	6154015005	6154015026	6154016031	6154017040
6153021007	6154012020	6154013013	6154013038	6154014022	6154015006	6154015027	6154016032	6154017041
6153021008	6154012021	6154013014	6154013040	6154014023	6154015007	6154015028	6154016033	6154017044
6153021009	6154012022	6154013015	6154014001	6154014025	6154015008	6154015029	6154016039	6154017045
6153021010	6154012040	6154013018	6154014002	6154014026	6154015009	6154015030	6154016040	6154017046
6153021011	6154012041	6154013020	6154014003	6154014027	6154015010	6154016004	6154016042	6154017047
6153021014	6154012042	6154013021	6154014005	6154014028	6154015011	6154016006	6154016043	6154017911
6153021035	6154012044	6154013023	6154014006	6154014029	6154015013	6154016007	6154017003	6154018024
6154008005	6154012046	6154013024	6154014007	6154014030	6154015014	6154016008	6154017004	6154018025
6154008006	6154012047	6154013026	6154014008	6154014031	6154015015	6154016014	6154017005	6154018030
6154008007	6154012049	6154013027	6154014009	6154014032	6154015016	6154016015	6154017006	6154018031
6154012002	6154012050	6154013028	6154014010	6154014033	6154015018	6154016016	6154017008	6154018032
6154012003	6154012051	6154013029	6154014011	6154014036	6154015020	6154016017	6154017028	6154019001

6154019002	6154019021	6154020009	6154021013	6154022001	6154024017	6155022011	6155033001	6155033020
6154019003	6154019022	6154020010	6154021014	6154022023	6154024018	6155022012	6155033002	6155033021
6154019010	6154019023	6154020011	6154021017	6154022024	6154024019	6155022013	6155033003	6155033022
6154019011	6154019024	6154020015	6154021018	6154022025	6154024020	6155022014	6155033004	6155033023
6154019012	6154019025	6154020016	6154021019	6154022026	6154024021	6155022015	6155033010	6154021029
6154019013	6154019026	6154021004	6154021020	6154022028	6155022002	6155032023	6155033012	6154021030
6154019015	6154019027	6154021005	6154021026	6154024015	6155022003	6155032024	6155033015	6154021031
6154019016	6154019032	6154021006	6154021027	6154024016	6155022010	6155032025	6155033019	6154021009
6154019020	6154021008	6154021007						

Table H.6: Roadways Located in Flood Hazard Zones, by Community and Street Name

Altadena			
CANYON DELL DR			
Antelope Valley			
002ND ST	43RD ST E	E AVENUE E-4	MICHIGAN ST
003RD ST	43RD ST W	E AVENUE E-6	MOCCASIN PL
100TH ST E	45TH ST E	E AVENUE E-8	MONROE AV
100TH ST W	45TH ST W	E AVENUE F	MONTALLEGRO ST
101ST ST E	46TH ST E	E AVENUE F-10	MOODY CANYON TKTR
102ND ST E	47TH ST E	E AVENUE F-12	MOSSDALE AV
104TH ST E	47TH ST W	E AVENUE F-4	MOUNT EMMA RD
105TH ST E	48TH ST W	E AVENUE F-8	MUIR DR
105TH ST W	4TH ST W	E AVENUE G	MUNZ RANCH RD
106TH ST E	50TH ST E	E AVENUE G-10	MYRICK CANYON RD
106TH ST W	50TH ST W	E AVENUE G-12	N BOUQUET CANYON RD
107TH ST E	51ST ST E	E AVENUE G-14	NETHERDALE DR
107TH ST W	51ST ST W	E AVENUE G-4	NETTIE RD
108TH ST E	52ND ST E	E AVENUE G-8	NEWVALE DR
10TH ST E	52ND ST W	E AVENUE H	NICKELS AV
10TH ST W	53RD ST W	E AVENUE H-10	NORTH TR
110TH ST E	55TH ST E	E AVENUE H-12	NORVAL AV
110TH ST W	55TH ST W	E AVENUE H-14	OHIO ST
111TH ST E	56TH ST W	E AVENUE H-3	OLD SAN GABRIEL CANYON RD
111TH ST W	57TH ST E	E AVENUE H-4	OLIVERA PL
112TH ST E	57TH ST W	E AVENUE H-5	OLVERA PL
112TH ST W	5TH ST E	E AVENUE H-8	OLYMPIA WY
113TH ST W	5TH ST W	E AVENUE I	ORWIN
114TH ST E	60TH ST E	E AVENUE I-12	PALMDALE-LLANO RD
115TH ST W	60TH ST W	E AVENUE J	PANORAMA MTWY
116TH ST E	61ST ST E	E AVENUE J-12	PARADISE DR
116TH ST W	62ND ST E	E AVENUE J-13	PASTEL WK
117TH ST E	62ND ST W	E AVENUE J-14	PEACE VALLEY RD
117TH ST W	65TH ST E	E AVENUE J-4	PEARBLOSSOM HWY
118TH ST W	65TH ST W	E AVENUE J-8	PEARL CT
119TH ST W	67TH ST W	E AVENUE K	PEBBLE ST
11TH PL W	70TH ST E	E AVENUE K-10	PINE CANYON RD
11TH ST W	70TH ST W	E AVENUE K-11	PIONEER TR
120TH ST E	71ST ST W	E AVENUE K-12	PLATZ RD
120TH ST W	72ND ST W	E AVENUE K-13	PORTLAND LN
121ST ST E	73RD ST W	E AVENUE K-14	POWERLINE RD
121ST ST W	75TH ST E	E AVENUE K-3	PRETTY-O-RANCH RD
122ND ST E	75TH ST W	E AVENUE K-4	PUGET WY
122ND ST W	77TH ST W	E AVENUE K-5	PUZZLE CANYON RD
123RD ST E	80TH ST E	E AVENUE K-6	PVT DR
123RD ST W	80TH ST W	E AVENUE K-8	PVT RD
124TH ST E	81ST ST E	E AVENUE L	PYRAMID LAKE RD
124TH ST W	82ND ST E	E AVENUE L-12	QUARTZ HILL RD
125TH ST E	82ND ST W	E AVENUE L-4	QUICK SILVER LN
125TH ST W	85TH ST E	E AVENUE L-8	RANCH CLUB RD
126TH ST E	85TH ST W	E AVENUE M	RANCHO WY
126TH ST W	86TH ST E	E AVENUE M-12	RANIER PL
127TH ST E	86TH ST W	E AVENUE M-4	RED GULCH RD
127TH ST W	87TH ST E	E AVENUE M-6	RED ROVER MINE RD
128TH ST E	87TH ST W	E AVENUE M-8	RINGSTEM AV
128TH ST W	88TH ST E	E AVENUE N	ROBERTS RD
129TH ST E	89TH ST E	E AVENUE N-12	ROCKYFORD RD
129TH ST W	8TH ST W	E AVENUE N-4	ROGER RD
12TH PL W	90TH ST E	E AVENUE N-8	ROMANO DR
12TH ST E	90TH ST W	E AVENUE O	RUBY CT
130TH ST	91ST ST E	E AVENUE O-8	S PORTAL RD
130TH ST E	91ST ST W	E AVENUE P	SACRAMENTO AV
130TH ST W	92ND ST E	E AVENUE P-12	SAMOS ST
131TH ST E	92ND ST W	E AVENUE P-8	SAN FRANCISQUITO CANYON RD
132ND ST E	93RD ST E	E AVENUE Q	SAN YSIDRO LN
133RD ST E	93RD ST W	E AVENUE Q-10	SANTIAGO RD
135TH ST E	94TH ST E	E AVENUE Q-12	SEARCHLIGHT RANCH RD
135TH ST W	95TH ST E	E AVENUE Q-14	SECLUSION PL
136TH ST E	95TH ST W	E AVENUE Q-4	SERENE AV
137TH ST E	96TH PL W	E AVENUE Q-6	SERVICE RD
138TH ST E	96TH ST E	E AVENUE R	SHANNONDALE RD
13TH ST E	97TH ST E	E AVENUE R 14	SHORELINE DR
140TH ST E	97TH ST W	E AVENUE R-02	SIERRA HWY
140TH ST W	98TH PL W	E AVENUE R-10	SMITH AV
141ST ST E	98TH ST E	E AVENUE R-11	SMOKEY BEAR
142ND ST E	98TH ST W	E AVENUE R-12	SNOWSHOE THOMPSON RD

143RD ST E	99TH ST W	E AVENUE R-14	SOLEDAD CANYON RD
145TH ST E	ACCORD PL	E AVENUE R-2	SOLEDAD PASS RD
145TH ST W	ALBYN CT	E AVENUE R4	SOUTH SHORE DR
146TH ST E	ALCOY CT	E AVENUE R-4	SPUNKY CANYON RD
147TH ST E	ALDERWOOD RD	E AVENUE R-6	SYLVAN DR
150TH ST E	ALISO CANYON RD	E AVENUE R-8	SYRACUSE AV
150TH ST W	ALISO ST	E AVENUE S	TANEY ST
151ST ST W	ALMOND VALLEY WY	E AVENUE S-10	THREE POINTS RD
152ND ST E	AN/W AVE M	E AVENUE S-11	TINDALL AV
152ND ST W	ANGELES FOREST HWY	E AVENUE S-12	TOMAHAWK PL
153RD ST E	ANGLIA ST	E AVENUE S-14	TORTUGA ST
155TH ST E	ANTELOPE HWY	E AVENUE S-2	TRADEPOST RD
155TH ST W	ANTELOPE VALLEY FRWY	E AVENUE S-4	TRAIL 12
156TH ST W	ANTELOPE WOODS RD	E AVENUE S-6	TRAIL 3
157TH ST E	ARNAUD ST	E AVENUE S-8	TRAIL A
157TH ST W	ARRASTRE CANYON RD	E AVENUE T	TRAIL B
15TH ST E	AS/W AVE M	E AVENUE T-10	TRAIL F
15TH ST W	AVENUE 105TH ST E	E AVENUE T-12	TRAIL G
160TH ST E	AVENUE B-8	E AVENUE T-14	TRAIL H
160TH ST W	AVENUE H-2	E AVENUE T-2	TRAIL K
163RD ST E	AVENUE I-10	E AVENUE T-4	TRAIL L
165TH ST E	AVENUE I-11	E AVENUE T-6	TRAIL N
165TH ST W	AVENUE I-12	E AVENUE T-7	TRENMAR DR
168TH ST E	AVENUE I-13	E AVENUE T-8	TUMBLEWEED RD
16TH ST E	AVENUE I-14	E AVENUE U	UP RR
16TH ST W	AVENUE I-15	E AVENUE U-10	VALLEY SAGE RD
170TH ST E	AVENUE I-9	E AVENUE U-12	VALYERMO RD
170TH ST W	AVENUE S-12 AV E	E AVENUE U-4	VANCOUVER LN
171ST ST E	AVENUE T-8	E AVENUE U-5	VIA DE CABALLEROS
171ST ST W	AVENUE U	E AVENUE U-8	VICTORIA LN
172ND ST E	AZALEA DR	E AVENUE V	VIENTOS DR
172ND ST W	BACK ACRES RD	E AVENUE V-10	W *****
173RD ST W	BAHIA ST	E AVENUE V-12	W ADDA DR
175TH ST E	BARREL SPRINGS RD	E AVENUE V-14	W AVENUE A
175TH ST W	BATRIS LN	E AVENUE V-2	W AVENUE A-10
176TH ST E	BIG PINE HWY	E AVENUE V-4	W AVENUE A-12
177TH ST E	BIG ROCK CREEK RD	E AVENUE V-6	W AVENUE A-14
178TH ST E	BINEFAR WY	E AVENUE V-8	W AVENUE A-2
17TH ST E	BLUE SAGE DR	E AVENUE V-9	W AVENUE A-4
17TH ST W	BOBS GAP RD	E AVENUE W	W AVENUE A-6
180TH ST E	BOOTLEGGER CANYON RD	E AVENUE W-10	W AVENUE A-8
180TH ST W	BOUQUET CANYON RESERVOIR RD	E AVENUE W-11	W AVENUE B
181ST ST E	BOUQUET RESERVOIR RD	E AVENUE W-12	W AVENUE B 6
185TH ST E	BP & L RD	E AVENUE W-14	W AVENUE B-10
185TH ST W	BP AND L RD	E AVENUE W-2	W AVENUE B-12
186TH ST E	CALIFORNIA AQUEDUCT RD	E AVENUE W-4	W AVENUE B-14
18TH ST E	CALLE AGUA FELIZ	E AVENUE W-6	W AVENUE B-2
18TH ST W	CALLE AQUADUCTO	E AVENUE W-8	W AVENUE B-4
190TH ST E	CALLE ARROYO	E AVENUE X	W AVENUE B-6
190TH ST W	CALLE BERRO	E AVENUE Y	W AVENUE B-8
191ST ST W	CALLE BONITA	E AVENUE Y-8	W AVENUE C
192ND ST W	CALLE CARONA	E AVENUE Z	W AVENUE C 6
193RD ST W	CALLE CASCADA	E AVENUE Z-8	W AVENUE C-10
195TH ST E	CALLE CASCARRON	E DEVERE CT	W AVENUE C-12
195TH ST W	CALLE CASITAS	E ELLSTREE DR	W AVENUE C-13
196TH ST E	CALLE CERRITOS	E KETTERING ST	W AVENUE C-14
200TH ST E	CALLE CHEVAL	E LAKESHORE DR	W AVENUE C-15
200TH ST W	CALLE CHIQUITO	E LANCASTER BLVD	W AVENUE C-2
205TH ST E	CALLE DAGGETT	E LUMBER ST	W AVENUE C-3
207TH ST E	CALLE DE SOTA	E NEWGROVE ST	W AVENUE C-4
20TH ST E	CALLE DEL NORTE	E NUGENT ST	W AVENUE C-5
20TH ST W	CALLE DEL ROJA	E PALMDALE BLVD	W AVENUE C-6
210TH ST W	CALLE DEL SUR	E PILLSBURY ST	W AVENUE C-8
212TH ST E	CALLE DESCONOCIDO	EL DARA AV	W AVENUE D
213TH ST E	CALLE EL BARANCO	EL MERRIE DEL DR	W AVENUE D-12
215TH ST E	CALLE EL BOSQUE	EL SASTRE RD	W AVENUE D-8
220TH ST E	CALLE EL CAPITAN	ELENA PL	W AVENUE E
220TH ST W	CALLE EL CLAVELITO	ELIZABETH LAKE RD	W AVENUE E 4
221ST ST W	CALLE EL FUENTE	ELLSTREE DR	W AVENUE E 8
222ND ST W	CALLE EL JARDIN	ENCANTO WY	W AVENUE E-1
223RD ST W	CALLE EL JORNADO	ENSENADA RD	W AVENUE E-1 PL
225TH ST W	CALLE EL MONTE	EQUESTRIAN WY	W AVENUE E10
22ND ST E	CALLE EL PARADO	ESCONDIDO CANYON RD	W AVENUE E-11
22ND ST W	CALLE ESCONDIDO	EWEN AV	W AVENUE E12
230TH ST E	CALLE ESSENCIAL	FAIRMONT NEENACH RD	W AVENUE E-12
230TH ST W	CALLE HERMOSA	FINCASTLE ST	W AVENUE E-13

233RD ST W	CALLE LA PASTURA	FORESTON DR	W AVENUE E14
235TH ST W	CALLE LAGUNA	FORT TEJON RD	W AVENUE E-2
237TH ST W	CALLE LAS DOS HUERFANAS	GEYER WY	W AVENUE E-3
238TH ST W	CALLE LLANO	GHOST MINE RD	W AVENUE E-4
239TH ST W	CALLE LOMA	GILLESPIE AV	W AVENUE E-5
240TH ST E	CALLE LOMITA	GILLESPIE ST	W AVENUE E-6
240TH ST W	CALLE LOS ELEGANTES	GLACIER PL	W AVENUE E-7
243RD ST E	CALLE LOS HIDALGOS	GLENREST RD	W AVENUE E-7 PL
243RD ST W	CALLE MALEZA	GOLDEN STATE FRWY	W AVENUE E-8
244TH ST W	CALLE MANZANITA	GOLDEN STATE HWY	W AVENUE F
245TH ST E	CALLE MONTANA	GORMAN POST RD	W AVENUE F-12
245TH ST W	CALLE NARANJO	GORMAN SCHOOL RD	W AVENUE F-4
248TH ST E	CALLE OLIVERA	GRAPHIC AV	W AVENUE F-6
250TH ST W	CALLE PLANA	GREYDALE AV	W AVENUE F-7
252ND ST W	CALLE POZO VERDE	GURRIER AV	W AVENUE F-8
255TH ST W	CALLE PRIMAVERA	HAMPEL AV	W AVENUE G-12
258TH ST W	CALLE ROSALITO	HARBAT RD	W AVENUE H
259TH ST W	CALLE SAN LUIS POTOSI	HEFFNER RD	W AVENUE I-12
25TH ST E	CALLE SIEMERIO	HIGHROCK DR	W AVENUE J
25TH ST W	CALLE SONRISO	HILLSIDE DR	W AVENUE K
260TH ST E	CALLE VERDAD	HUNGRY VALLEY RD	W AVENUE K 4
261ST ST W	CAMELLIA DR	ILLINOIS ST	W AVENUE K 8
263RD ST W	CAMINO RD	IMPULSE DR	W AVENUE K10
265TH ST W	CATTLE CREEK RD	INDIANA ST	W AVENUE K12
266TH ST W	CHALLENGER WY	JACKSON AV	W AVENUE K-14
267TH ST W	CHALLENGER WY E	JESUS CANYON RD	W AVENUE L
268TH ST W	CHANTADA AV	JUNIPER VALLEY RD	W AVENUE L 2
26TH ST E	CHERRY TREE LN	KAGEL CANYON RD	W AVENUE L-10
270TH ST W	CHESEBORO RD	KELLOGG VALLEY RD	W AVENUE L-12
27TH ST E	CLANFIELD ST	KENTUCKY SPRINGS RD	W AVENUE L-13
27TH ST W	CLIFFEDGE DR	KETTERING ST	W AVENUE L-14
280TH ST W	COLCORD AV	KLAMATH LN	W AVENUE L-3
28TH ST E	COLUMBIA CT	LA PETITE	W AVENUE L-4
28TH ST W	CONESTOGA DR	LADERA WY	W AVENUE L-6
290TH ST W	COPCO AV	LAKE HUGHES RD	W AVENUE L-8
2ND ST	CORRADI TER	LAKEMEADOW DR	W AVENUE M
300TH ST W	CORVALLIS PL	LANCASTER BLVD	W AVENUE M-10
30TH ST E	CORY AV	LANCASTER RD	W AVENUE M-12
30TH ST W	COTTONWOOD AV	LARGO VISTA RD	W AVENUE M-2
31ST ST E	COUNTRY WY	LINCOLN AV	W AVENUE M-4
32ND ST E	CROWN VALLEY RD	LITTLE CEDAR WY	W AVENUE M-6
32ND ST W	DEESWOOD DR	LITTLE ROCK RD	W AVENUE M-8
33RD ST E	DEVERE CT	LITTLE ROCK WASH RD	W AVENUE N
33RD ST W	DEVILS CHAIR TR	LITTLEROCK RANCHOS RD	W AVENUE NEWGROVE ST
35TH ST E	DIVISION ST	LONE OAK RD	W AVENUE V
35TH ST W	DRYLAKE DR	LONGVIEW RD	W CARSON MESA RD
36TH ST E	DUNFORD AV	LORI CT	W JACKMAN ST
37TH ST E	E 127TH ST E	LOVEJOY AV	W JUNIPER RIDGE LN
38TH ST E	E AVENUE D	MADISON AV	W KETTERING ST
3RD ST	E AVENUE D-12	MAJORCA DR	W KILDARE ST
3RD ST E	E AVENUE D-14	MAMERS RD	W LAKESHORE DR
3RD ST W	E AVENUE D-2	MANGAF ST	W LANCASTER BLVD
40TH ST E	E AVENUE D-4	MARBELLA ST	W LANCASTER RD
40TH ST W	E AVENUE D-8	MARYFIELD AV	W WOOD AV
41ST ST E	E AVENUE E	MAXWELL RD	WATERFORD WY
42ND ST E	E AVENUE E-10	MAYTERN AV	WHITE SPUR LN
42ND ST W	E AVENUE E-12	MESCAL CANYON MTWY	WILLETA AV
			WISCONSIN ST
Ballona Wetlands			
CULVER BLVD	LINCOLN BLVD		
Cerritos Islands			
167TH ST	ERIC AV	HARVEST AV	OPAL AV
ALORA AV	FONTAINBLEAU AV	JADE AV	PEARL CIR
CENTRALIA ST	GARNET AV	LONGWORTH AV	
ELMCROFT AV	GRAYSTONE AV	MAPES AV	
Charter Oak			
W CIENEGA AV			
East Azusa			
E SIERRA MADRE AV	HICREST RD	W SIERRA MADRE AV	
FOXGLOVE CT	OLD SAN GABRIEL CANYON RD	YUCCA RIDGE RD	
East Irwindale			
E ELGENIA ST	N NORA AV	W GROVECENTER ST	
E GROVECENTER ST	W BADILLO ST		
East Rancho Dominguez			
AE/BULLIS RD	E LINSLEY ST	E SAN RAFAEL ST	S ESSEY AV

AN/COMPTON BL	E MARCELLE ST	E SAN VINCENTE ST	S FRAILEY AV
AN/ROSECRANS AV	E MYRRH ST	E SAUNDERS ST	S GIBSON AV
AS/LINSLEY ST	E PALMERSTONE ST	E WILBARN ST	S HARRIS AV
AS/ROSECRANS AV	E PAULINE ST	E WYMORE ST	S LIME AV
E ADDINGTON ST	E PIXLEY ST	N HARRIS AV	S MANETTE PL
E ALONDRA BLVD	E QUEENSDALE ST	S ATLANTIC AV	S MURIEL AV
E BALES ST	E ROSE ST	S BRADFIELD AV	S PANNES AV
E BENNETT ST	E ROSECRANS AV	S BULLIS RD	S STONEACRE AV
E COMPTON BLVD	E SAN CARLOS ST	S BUTLER AV	S STONEACRE ST
E DUMA ST	E SAN JUAN ST	S CARESS AV	S THORSON AV
E ELIZABETH ST	E SAN LUIS ST	S CASTLEGATE AV	S WALDORF DR
E IVA ST	E SAN MARCUS ST	S COOKACRE AV	S WASHINGTON AV
E JOSEPHINE CT	E SAN MATEO ST	S COOKACRE ST	S WHITE AV
E LAUREL ST	E SAN MIGUEL ST	S CUZCO AV	S WILLIAMS AV
Florence - Firestone			
HOOPER AV			
Kagel Canyon			
CREEK TR	LITTLE TUJUNGA CANYON RD	SHORT TR	VINEYARD TR
EAST TR	NORTH TR	SPRING TR	
IDLEWHILE TER	PARK TR	SUMMIT TR	
Ladera Heights / View Park - Windsor Hills			
S LA CIENEGA BLVD			
Long Beach Island			
AW/SENASAC AV	CONQUISTA AV	FANWOOD AV	MCNAB AV
CANEHILL AV	E HARCO ST	FAUST AV	SENASAC AV
CARFAX AV	E PARKCREST ST	GONDAR AV	SNOWDEN AV
			WOODRUFF AV
Lopez Canyon			
BAILEY RD	LOPEZ CANYON RD	N LOPEZ RD	
Lynwood Island			
E IMPERIAL HWY	LONG BEACH FRWY	MONROE AV	
Malibu Coastal Zone			
AIRCRAFT TR	ESCONDIDO DR	MONTE VISTA DR	SONAR LN
AZIMUTH LN	ESCONDIDO TR	MULHOLLAND HWY	STOKES CANYON RD
BAYNES RD	GLEN DR	N CREEK TR	STONEWALL TER
BONNELL DR	GORGE RD	N MALIBU CANYON RD	THORNHILL RD
BROOKSIDE DR	GRASSLANDS TR	N TOPANGA CANYON BLVD	TOPANGA BEACH RD
BUCKHORN DR	GREENLEAF CANYON RD	OAKWOOD DR	TOPANGA CANYON LN
CAMINO COLIBRI	HIGHVALE TR	OLD CHURCH RD	TOPANGA SCHOOL RD
CANON VIEW TR	HONDO CANYON RD	OLD TOPANGA CANYON RD	TOPANGA SKYLINE DR
CENTURY MTWY	HUCKLEBERRY DR	PACIFIC COAST HWY	VALLEY DR
CIRCLE TR	KEELSON DR	PALM CANYON LN	VAN VELSIR DR
COLD CANYON RD	LAS FLORES CANYON RD	PIUMA RD	WAYCROSS DR
CORAY WY	LAS VIRGENES RD	QUANTICO LN	WICKLAND RD
CRAGS DR	MAGUIRE DR	RANKIN DR	WILD ROSE DR
CRATER CAMP DR	MALIBU CANYON RD	RETREAT CT	WILDWOOD DR
CROSS CREEK RD	MALIBU MEADOWS DR	RIDING LN	YELLOW HILL RD
DARK CREEK RD	MEADOWS END DR	RODEO GROUNDS	YEOMAN LN
DOROTHY DR	MELLUS DR	S TOPANGA CANYON BLVD	YOST TR
DRY CANYON COLD CREEK RD	MERCATOR LN	SHADY LN	YULE LN
Marina Del Rey			
BORA BORA WY	FIJI WY	PALAWAN WY	VIA MARINA
CHANNEL POINTE CT	MARQUESAS WY	PROMENADE WY	VIA MARINA CT
CHANNEL WK	MINDANAO WY	TAHITI WY	VIA REGATA
DELL AL	NORTHWEST PASSAGE	VIA DOLCE	
North Whittier			
ABBEYWOOD AV	CROTON AV	MEARS PL	SAN GABRIEL RIVER FRWY
AVONCROFT ST	GILES PL	NOYES ST	TAGUS ST
BALMORAL ST	LAMPSON ST	RIDEAU ST	
Rancho Dominguez			
E ANA ST	E VICTORIA ST	RANCHO WY	S WILMINGTON AV
E DEL AMO BLVD	FORDYCE AV	REEVES AV	SUSANA RD
E HARCOURT ST	GARDENA FRWY	S ALAMEDA ST	UP RR
E LAS HERMANAS ST	HARBOR AV	S REYES AV	VIA INDUSTRIA
E MARIA ST	LAUREL PARK RD	S SANTA FE AV	VICTORIA ST
E VAL VERDE CT	METRO BLUE LINE/SPT CO RR	S SUSANA RD	W BORT ST
E VIA MONDO	PACIFIC COMMERCE DR	S SUSANNA RD	W HARCOURT ST
Santa Clarita Valley			
AGUA DULCE CANYON RD	DEL VALLE RD	LINCOLN AV	SALT CREEK RD
ALPINE AV	DELDEN RD	LINCOLN WY	SAN FRANCISQUITO CANYON RD
ANTELOPE VALLEY FRWY	DELWOOD ST	LISA ST	SAN MARTINEZ GRANDE CYN RD
ANTHONY RD	DIVER ST	LIVE OAK RD	SAN MARTINEZ RD
ANVIK ST	DOEBAY DR	LONEOAK CT	SAND CANYON RD
APAM AV	DRIGGS CT	LORJEN RD	SANDY DR
APARRI AV	DRY CANYON RD	LOS ANGELES CITY W&P RD	SANTA CLARA RIVER TR
APPLEWOOD LN	DRY WELL CIR	LOST CANYON RD	SAUGUS VENTURA

ARLINE ST	DUMP RD	LOST CREEK RD	SCHAEFER RD
ARLINGTON ST	E CANYON MTWY	LOUIS AV	SHADOW VALLEY LN
ARROW POINT DR	EASTERN AV	LUZON DR	SHARP RD
ARROYO OAK LN	ECHILMAN AL	LYONS RANCH RD	SHERIDAN RD
ATHERTON CANYON RD	EDISON RD	MADISON ST	SIERRA HWY
AVENIDA RANCHO TESORO	ELM LN	MADISON WY	SIERRA VALLEJO RD
AVENUE A	ELSMERE CANYON MTWY	MADLOY ST	SILVER CANYON AV
AVENUE B	ELVIRA RD	MAGIC VIEW PL	SLEEPY CREEK LN
BAKER CANYON RD	ENGINEERS ST	MARVIN AV	SLOAN CANYON RD
BANJO CIR	ESCONDIDO CANYON RD	MAXIMUM RD	SOLEDAD CANYON RD
BARINGER RD	ESGUERRA RD	MCKEON CT	SPRING CANYON RD
BEDWORTH RD	EUCLID AV	MCKINLEY CT	STATOR RD
BISCAILUZ DR	EVANS CT	MEADSTONE RD	STEELE AV
BLUESKY WY	EVENINGSIDE DR	MINT CANYON RD	STEVENSON RANCH PKWY
BOBCAT WY	FAHREN LN	MONROE ST	STEWART RD
BORTON ST	FANTASTIC LN	MORNINGSIDE DR	STONE CREEK RD
BOUQUET CANYON RD	FARMER JOHN LATERAL	MOTOR ST	STORAGE RD
BROOKEN AV	FERGUSON DR	MOUNTAIN PARK RD	SULTUS ST
BROOKSIDE CT	FITCH AV	N GATE RD	SUNNY BROOK LN
BUCHANAN WY	FORREST ST	NARES DR	SUNSET CREEK
BURTON WY	FOX RUN CIR	NEURASCHEL ST	TAFT CT
BYFIELD RD	GALLOPING CT	NICHOLS LN	TAPIA CANYON RD
CALGROVE BLVD	GALTON RD	NORLAND RD	TAYLOR ST
CAMINO DE VALLE	GASPE ST	OAK BLUFF RD	TELEPHONE RD
CANYON OAK RD	GILMOUR ST	OAK ST	TEXAS CANYON RD
CAPRA RD	GLADBROOK CT	OAK VALLEY RD	THE OLD DIRT RD
CAPROCK RD	GOLD HILL DR	OAKHORN AV	THE OLD RD
CARYFORD RD	GOLDEN STATE FRWY	OAKWELL RD	TOBIAH PL
CASTAIC LAKE RD	GOLDEN STATE HWY	OLD MINT CANYON RD	TOWSLEY CANYON RD
CASTAIC OAKS LN	GREENSBRIERS DR	ORCHARD ST	TRIUMPH AV
CASTLEHAVEN RD	HANCOCK PKWY	ORRIN RD	TROTTERS LN
CAVEHILL RD	HANKINS RD	PARADISE RD	UP RR
CENTER ST	HARDING AV	PARKER AV	VACA AV
CENTRAL AV	HASLEY CANYON RD	PARKER RD	VADITO PL
CHANNEL RD	HAWKSET ST	PLUM CANYON FIRE RD	VAL VERDE RD
CHARLIE CANYON RD	HAYES CT	POTRERO CANYON RD	VALLEY RANCH RD
CHERRY CANYON PIPELINE RD	HAYFORK RD	POWERHOUSE LATERAL	VASQUEZ CANYON RD
CHERRY DR	HENRY MAYO DR	QUAIL OAKS DR	VASQUEZ CANYON TKTR
CHIQUITO CANYON RD	HIERBA RD	QUAIL TR	VASQUEZ WY
CHUCKER CT	HILL ST	QUAIL VALLEY RD	VERDALE AV
CHURCH ST	HIPSHOT DR	QUINN DR	VIEW PL
CITY HIGHLINE RD	HOWARD LN	REFINERY RD	VIOLIN CANYON RD
CLEAT RD	HUNTER LN	REMINGTON RD	W PARKER RD
COARSE GOLD MTWY	ILENE RD	RIDGE ROUTE RD	WALNUT ORCHARD RD
COBBLESTONE CT	JACKSON ST	RILEY ST	WATERMAN MTWY
COLT RD	JAKES WY	RIVERVIEW RD	WATERMAN RD
COMMERCE CENTER DR	JOHNNIE DR	ROAD RUNNER RD	WAYSIDE LATERAL
CONCORSE DR	JOHNNIE RD	ROCKING HORSE RD	WESLEY WY
COPPER HILL DR	JOHNSON AV	ROGUE WY	WHITE FOX LN
COTTON ST	JOHNSON RD	ROLLING HILLS AV	WHITES CANYON RD
COUNTRY CT	KARENA AV	ROMERO CANYON RD	WILEY CANYON RD
COUNTRYSIDE LN	KENINGSTON RD	ROWHER CANYON RD	WILLOW SPRING GULCH
CRESCENT CT	LA VEDA AV	ROZICH RD	WOODFALL RD
DARLING RD	LADY LINDA LN	RUPERT LN	WRIGHT RD
DAVENPORT RD	LAKEHILLS RD	RUSH CANYON RD	WYSE RD
DAVID WY	LANDGARD RD	RYAN LN	YOUNGS CANYON RD
DECORO DR	LANG STATION RD	SAGECREST CIR	YUCCA HILLS RD
DEED AV	LAVERY CANYON RD	SAINT LAWRENCE ST	
DEL SUR RIDGE RD	LENNY ST	SALT CANYON RD	
Santa Monica Mountains North Area			
CALETA RD	IMPERIAL TR	N TOPANGA CANYON BLVD	SIMES LN
CAMINO TRANQUIL	JANDO DR	NUEZ WY	SIOUX
CHEESEBORO CANYON RD	KANAN RD	OAK DR	STOKES CANYON RD
CHEESEBRO RD	KELLER RD	OAKFIELD RD	SYCAMORE DR
CHENEY DR	LAGUNA CIRCLE DR	OLD OAK RD	TERRACE LN
CHESEBRO RD	LAKE VISTA DR	OLD TOPANGA CANYON RD	TRIUNFO CANYON RD
CORNELL RD	LAKESHORE DR	OZARK WK	TROUTDALE DR
COUNTRYSIDE DR	LIBERTY CANYON RD	PAIUTE DR	VALLEY DR
CRAGS DR	LIBERTY LN	PARAMOUNT RANCH RD	VENTURA FRWY
E LAKESHORE DR	LOBO CANYON RD	ROUND MEADOW RD	WAGON RD
ENTRADO DR	LOBO VISTA RD	S LAKESHORE DR	WARING DR
EUCALYPTUS LN	MALIBU RANCHO RD	SEMINOLE DR	WEST TR
FRENCH CT	MEDEA MESA RD	SHILOH RANCH RD	ZUNIGA RD
HAPPY TR	MOHAWK	SIERRA CREEK RD	
HURON	MULHOLLAND HWY	SILVER CREEK RD	
South Diamond Bar			

TONNER CANYON RD	TRAINING CENTER RD		
South San Gabriel			
N LINCOLN AV	SAN GABRIEL BLVD		
South San Jose Hills			
COTTONWOOD CIR	GEMINI ST	SENTOUS ST	VIA ESTRELUTA
E ELBERLAND ST	HIGHCASTLE ST	TEMPLE AV	WELLFORD DR
E LA PUENTE RD	HOLLINGWORTH ST	TRISH WY	YORBITA RD
E TEMPLE AV	S GIANO AV	VALLEY VIEW AV	
South Whittier - Sunshine Acres			
CALMADA AV	LANETT AV	PARKINSON AV	
JENKINS DR	MYSTIC ST	SCOTT AV	
Valinda			
AMAR RD	E FLORENCE AV	OLIVE GROVE LN	SUMMER PL
BURTREE ST	E FRANCISQUITO AV	S AZUSA AV	VALINDA AV
DAWLEY AV	E MAPLEGROVE ST	S FRANDALE AV	VANDERWELL AV
DORE ST	FRANCISQUITO AV	S HYACINTH AV	WALNUT AV
DUBESOR ST	GRAND VIEW LN	S PASS AND COVINA RD	WITZMAN DR
E ALWOOD ST	HOLTON ST	S VALINDA AV	
E AMAR RD	MAPLEGROVE ST	S WALNUT AV	
E DOUBLEGROVE ST	N AZUSA AV	SEASON AV	
Walnut Islands			
CAMERON AV	E GARVEY AV S	HILLSIDE DR	S GRAND AV
E ACRIDGE DR	E SUNSET HILL DR	N GRAND AV	SAN BERNARDINO FRWY
E CAMERON AV	E TONI DR	NAVARO LN	
West Carson			
ASHBRIDGE DR	S VERMONT AV	STONECLIFF LN	
HAMILTON AV	SANDHURST LN	W BARON ST	
HARBOR FRWY & TRANSIT WY	STONE COURT CIR	W TORRANCE BLVD	
West Fox Hills			
S CENTINELA AV			
West Puente Valley			
BARRYDALE ST	GLENSHAW DR	N SUNSET AV	TONOPAH AV
EVANWOOD AV	GREENBERRY DR	ORANGE AV	WILLOW AV
West Whittier - Los Nietos			
ABBOTSFORD RD	CULLY AV	LOCH AVON DR	SANGER AV
AE/DANBY AV	CYPRESS POINT DR	LOCH LOMOND DR	SARAGOSA ST
AE/GRETNA AV	DANBY AV	LOCHINVAR ST	SHADYSIDE AV
AE/NORWALK BL	DECOSTA AV	LOCKHEED AV	SHORT ST
AE/PIONEER BL	DICKY ST	MCNEES AV	SKABO AV
AEOLIAN ST	DISNEY AV	MILLERGROVE DR	SLAUSON AV
ALBURTIS AV	DONNYBROOK CIR	MILNA AV	SOUTH HILLS DR
ALDRICH ST	DORLAND PL	MINES BLVD	SUMMERFIELD AV
ALLERTON ST	DUNLAP CROSSING RD	MORRILL AV	TAMARA LN
AN/WASHINGTON BL	EDUARDO ST	NAN ST	THORNLAKE AV
AS/HOLBROOK ST	EL DORADO LN	NOBLES AV	TORREY PINES DR
AS/WHITTIER BL	ESPERANZA AV	NORWALK BLVD	TOWNLEY DR
AW/PIONEER BL	FLALLON AV	OBERON ST	UP RR
BALFOUR ST	FLAMINGO CIR	OBREGON ST	VANESSA CIR
BARTLEY AV	FLORY ST	ORCHARD AV	VERBECK ST
BEL AIRE LN	GERDA CT	PEBBLE BEACH DR	VICKI DR
BENAVON ST	GLENGARRY AV	PIONEER BLVD	WADDELL ST
BERNARDINO AV	GODOY ST	PLEASANT WY	WADELL ST
BEVERLY BLVD	GRETNA AV	POINCIANA ST	WAKEMAN ST
BEXLEY DR	GREYFORD ST	REDMAN AV	WALNUT ST
BRADHURST ST	HADLEY ST	REICHLING LN	WASHINGTON BLVD
BRADWELL AV	HAVENWOOD PL	REXALL AV	WESTMAN AV
BROADWAY	HILLCREST LN	RIDGEVIEW LN	WESTMAN ST
BROADWAY AV	HOLBROOK ST	RIVERA RD	WHEELOCK CIR
BURKE ST	INDIAN WELLS DR	RIVIERA LN	WHEELOCK ST
CANDLEWOOD LN	JUAREZ AV	ROCKNE AV	WHITTIER BLVD
CASCADE CIR	LINDENVALE RD	ROSE HEDGE DR	WINCHELL ST
CHOISSER ST	LINS AV	SAL AV	WOODHUE ST
COOLHURST DR	LOCH AVON AV	SAN GABRIEL RIVER FRWY	
Whittier Narrows			
ROSEMEAD BLVD	SAN GABRIEL BLVD		
Willowbrook			
AE/MONA BL	E 130TH ST	E ORIS ST	N WILLOWBROOK AV
AS/130TH ST	E 131ST ST	E PINE ST	S ALAMEDA ST
AS/131ST ST	E 132ND ST	E PIRU ST	S LARGO AV
AS/132ND ST	E 133RD ST	E STOCKWELL ST	S MONA BLVD
AS/133RD ST	E 134TH ST	METRO BLUE LINE & UP RR	S PENROSE AV
AS/134TH ST	E 135TH ST	N ALAMEDA ST	S WILLOWBROOK AV
AS/135TH ST	E BLISS ST	N LARGO ST	VESTA AV
AW/ALAMEDA ST W	E EL SEGUNDO BLVD	N MONA BLVD	
CULVER AV	E HATCHWAY ST	N TAMARIND AV	

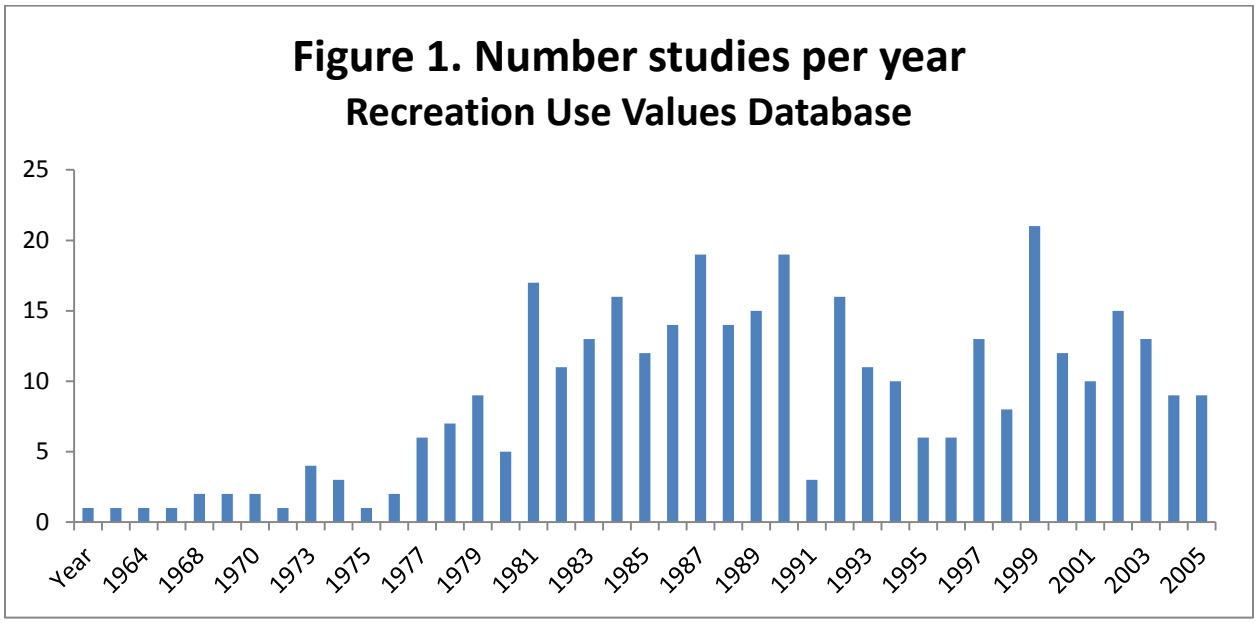
RECREATION USE VALUES DATABASE

Welcome to the Recreation Use Values Database for North America. What you will find here are links to the database, bibliography, and background information. If you have questions, comments and/or suggestions about the database, would like assistance in using this database for benefit transfer, or would like to submit documentation on North American studies not currently in the database, please contact Dr. Randall Rosenberger (R.Rosenberger@oregonstate.edu). We also are interested in how you apply benefit transfer for recreation valuation, so please submit documentation about your applications.

The database currently contains 352 documents of economic valuation studies that estimated the use value of recreation activities in the U.S. and Canada from 1958 to 2006, totaling 2,703 estimates in per person per activity day, adjusted to 2010 USD. Twenty-one primary activity types are provided, with several more available if segregated by activity mode, resource type, primary species sought, or little studied activities (i.e., 'other recreation' has an additional 22 activities identified). These recreation use value estimates are measures of net willingness-to-pay or consumer surplus for recreational access to specific sites, or for certain activities at broader geographic scales (e.g., state or province, national) in per person per activity day units—this database does not contain information on marginal values for changes in site quality or condition. The database is currently offered as an Excel workbook containing the database and coding protocols. It is currently sorted by primary activity by region—of course, you may download and sort it however you wish. The bibliography cross-references the database via the document code.

An overview of the database is provided below, including distributions of estimates and studies, and mean values by activity type by region.

Figures 1 and 2 display the distribution of the number of studies and number of estimates per year, respectively. The spikes in the number of estimates correspond with the estimates provided from U.S. Fish and Wildlife's National Surveys on fishing, hunting and wildlife viewing.



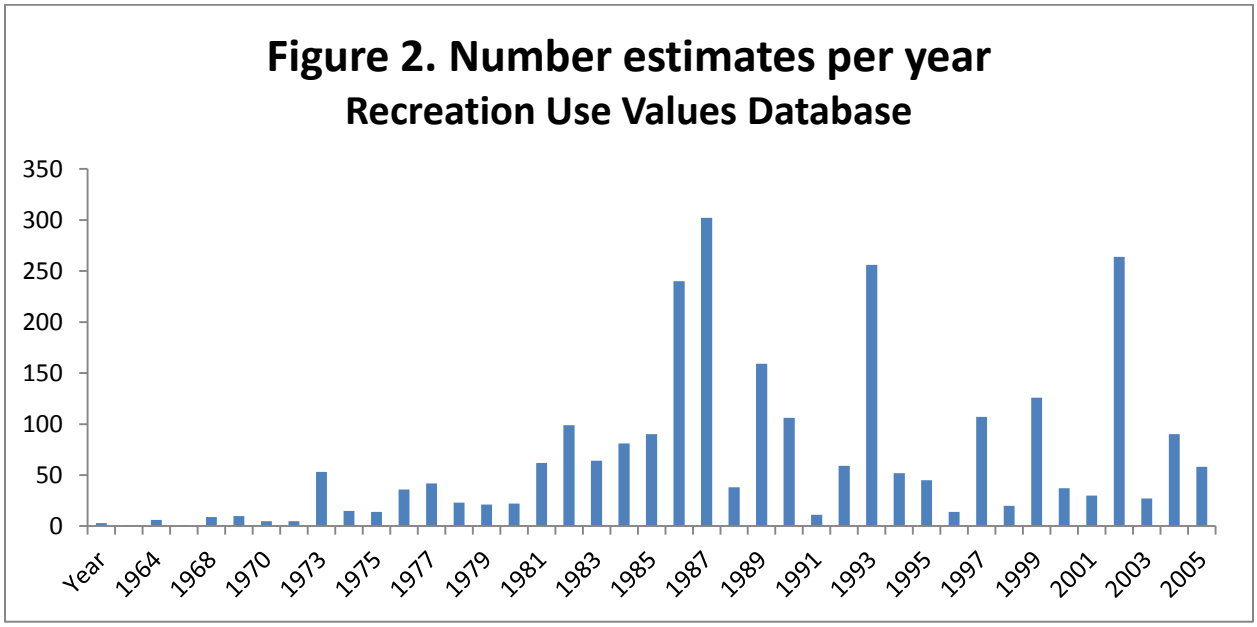


Figure 3 segregates the number of estimates by primary activity type. The spikes in number of estimates for freshwater fishing, big game hunting, and wildlife viewing coincide with the U.S. Fish and Wildlife's National Survey.

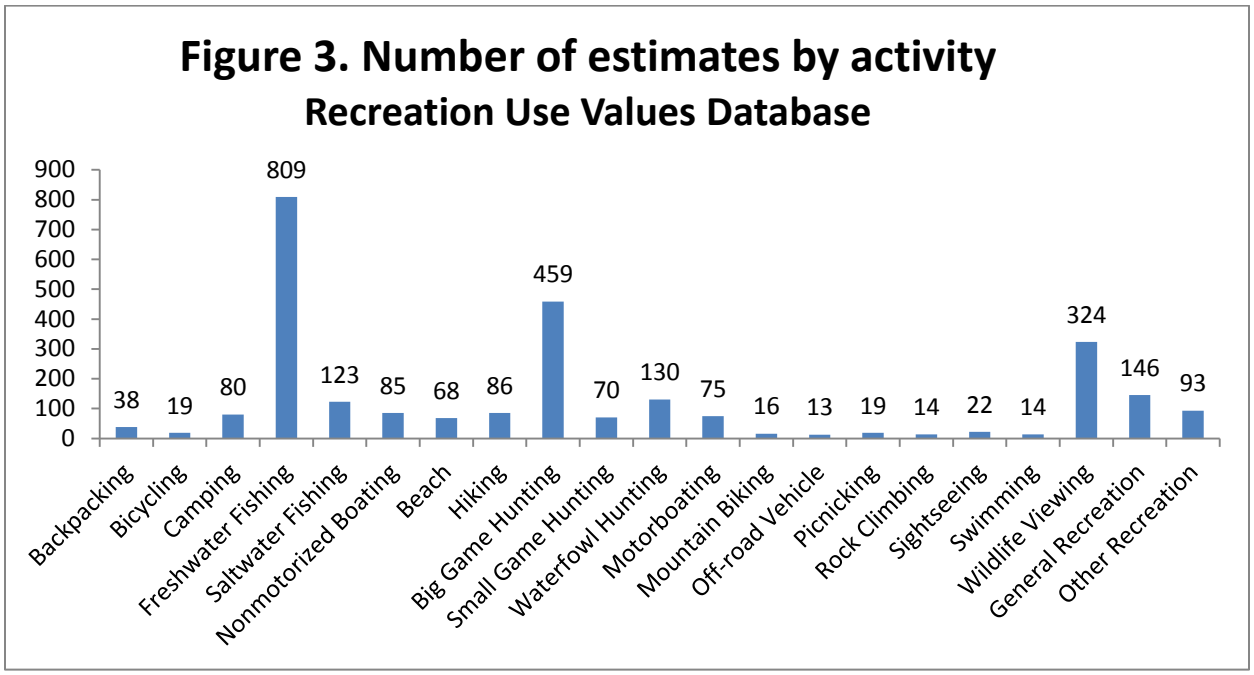


Figure 4 shows the distribution of consumer surplus estimates ($CS per person per activity day in 2010 USD) (mean = $59.60 per person per day; se = 1.3; n = 2703).

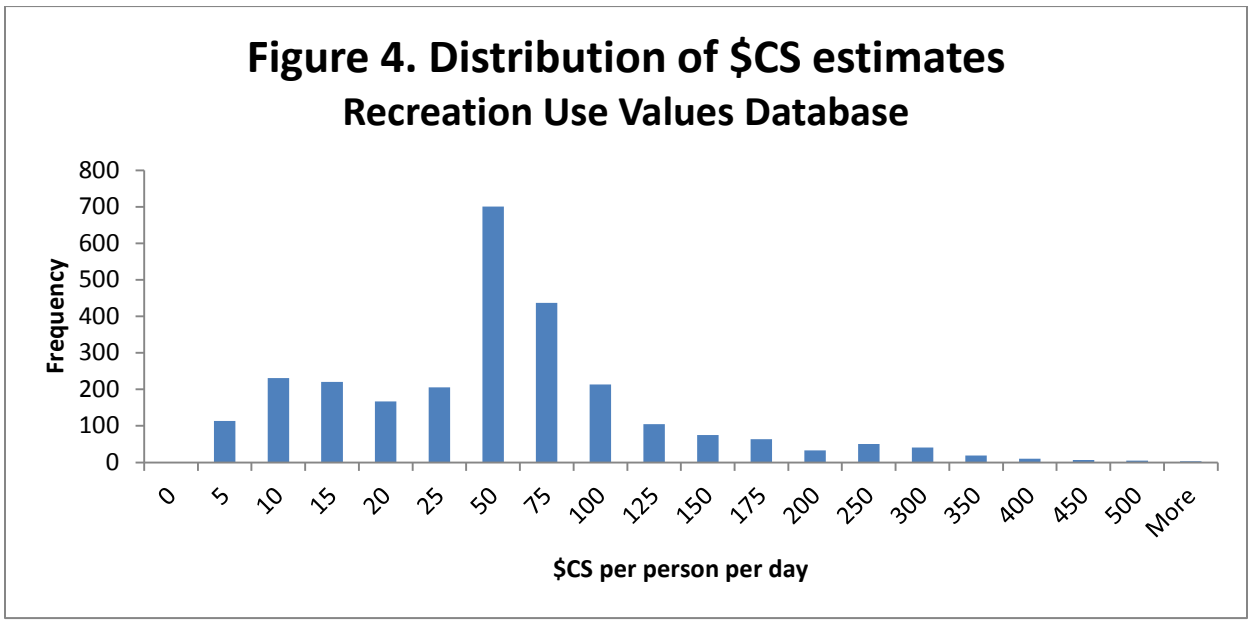


Figure 5 shows the mean consumer surplus ($CS) per person per day by primary activity type (aggregate mean = $59.60 per person per day, 2010 USD). The high mean value for mountain biking may be due to limited research on high profile mountain biking sites, along with the largest standard error among activity types reported (see Table 1). Saltwater fishing and nonmotorized boating have higher mean estimates than other activities; although with relatively larger standard errors (see Table 1). Backpacking and camping have lower mean estimates per person per day, but are similar when aggregated up to multiple day trips typical of overnight recreation activities.

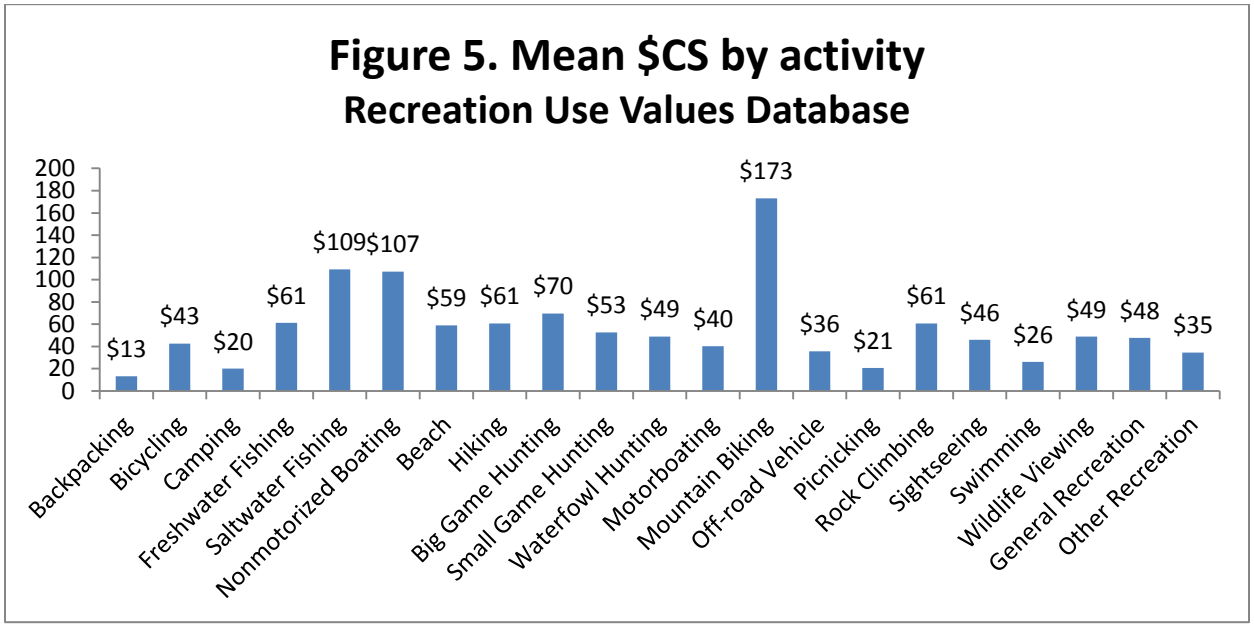


Table 1 reports mean consumer surplus ($CS) per person per day by primary activity type and region. Reported are the number of estimates, mean $CS, and standard error by cell. The bottom row aggregates by region whereas the last column aggregates by activity type. The overall aggregation for the database is reported in the lower right cell.

We hope you find this database useful in your work on recreation valuation in North America.

Sincerely,

Randall S. Rosenberger
Department of Forest Ecosystems & Society
Oregon State University
15 August, 2011

TABLE 1. Recreation Use Values per Person per Day by Activity and Region, in 2010 USD[a].

Activity	Northeastern U.S.[b]			Midwestern U.S.[b]			Southern U.S.[b]			Western U.S.[b]			Multiple Regions, U.S.[b]			Canada			Total		
	n	Mean	se[c]	n	Mean	se	n	Mean	se	n	Mean	se	n	Mean	se	n	Mean	se	n	Mean	se
Backpacking	31	$8.07	0.5	---	---	---	4	$31.70	9.1	2	$39.85	15.1	1	$49.67	---	---	---	---	**38**	**13.33**	**2.2**
Bicycling	---	---	---	6	$36.64	5.5	12	47.12	8.4	---	---	---	1	25.53	---	---	---	---	**19**	**42.67**	**5.6**
Camping	7	25.17	8.7	3	9.85	3.6	10	10.19	1.5	58	21.68	3.0	2	16.69	0.9	---	---	---	**80**	**19.98**	**2.4**
Freshwater Fishing[d]	126	61.59	3.8	188	39.30	4.0	152	54.07	4.0	302	81.81	4.4	20	55.10	10.2	21	$16.36	5.1	**809**	**61.21**	**2.2**
Saltwater Fishing[d]	19	62.75	13.0	---	---	---	54	106.63	16.7	40	143.46	18.4	10	76.62	26.0	---	---	---	**123**	**109.39**	**10.2**
Nonmotorized Boating[e]	4	39.55	3.4	4	18.09	7.1	26	134.84	26.0	45	112.12	18.0	3	41.08	8.6	3	73.42	0.5	**85**	**107.36**	**12.8**
Beach	12	52.22	13.8	10	13.08	4.4	26	80.66	15.0	20	57.81	15.7	---	---	---	---	---	---	**68**	**58.98**	**8.1**
Hiking	2	66.25	51.2	2	33.26	27.2	11	100.35	37.0	70	55.54	7.5	1	23.63	---	---	---	---	**86**	**60.63**	**7.9**
Big Game Hunting[f]	57	73.11	7.4	90	55.81	3.5	77	66.47	5.2	171	78.91	5.0	7	184.98	42.3	57	50.70	8.4	**459**	**69.69**	**2.8**
Small Game Hunting[f]	9	31.09	10.5	3	48.71	27.2	1	179.39	---	34	72.94	14.8	6	74.08	11.1	17	8.58	0.9	**70**	**52.51**	**8.3**
Waterfowl Hunting[f]	17	39.45	6.0	26	31.76	3.3	30	60.95	8.8	31	58.10	10.4	7	131.20	6.6	19	16.33	0.8	**130**	**48.88**	**4.0**
Motorized Boating	7	95.20	19.5	32	30.84	6.3	15	24.3	4.6	20	48.55	20.3	1	31.32	---	---	---	---	**75**	**40.27**	**6.7**
Mountain Biking	---	---	---	---	---	---	1	57.05	---	15	180.67	36.2	---	---	---	---	---	---	**16**	**172.95**	**34.7**
Off-road Vehicle	---	---	---	---	---	---	6	30.39	6.0	6	42.02	5.7	1	28.91	---	---	---	---	**13**	**35.64**	**4.0**
Picnicking	5	5.79	0.9	1	10.86	---	4	44.55	12.6	8	19.06	1.9	1	22.74	---	---	---	---	**19**	**20.70**	**4.1**
Rock Climbing	1	60.36	---	---	---	---	3	177.70	33.8	6	34.63	4.0	4	11.50	0.8	---	---	---	**14**	**60.52**	**18.5**
Sightseeing	---	---	---	2	30.88	9.3	6	61.94	27.6	12	44.28	11.9	2	22.92	4.4	---	---	---	**22**	**45.94**	**9.8**
Swimming	2	30.16	17.9	1	20.09	---	2	13.75	3.4	8	28.88	7.2	1	28.45	---	---	---	---	**14**	**26.24**	**4.7**

Activity	Northeastern U.S.[b]			Midwestern U.S.[b]			Southern U.S.[b]			Western U.S.[b]			Multiple Regions, U.S.[b]			Canada			Total		
	n	Mean	se[c]	n	Mean	se	n	Mean	se	n	Mean	se	n	Mean	se	n	Mean	se	n	Mean	se
Wildlife Viewing[g]	47	54.12	6.4	50	39.06	2.6	80	55.26	6.4	91	63.99	6.3	14	38.30	8.1	42	12.15	2.4	**324**	**48.72**	**2.8**
General Recreation[h]	---	---	---	14	154.26	25.7	36	56.96	12.6	83	31.97	4.2	---	---	---	13	8.05	0.5	**146**	**47.73**	**5.5**
Other Recreation[i]	4	34.62	10.8	4	25.85	5.0	8	59.73	19.2	64	33.25	6.5	13	27.82	4.3	---	---	---	**93**	**34.51**	**4.9**
Total	**350**	**54.04**	**2.5**	**436**	**44.03**	**2.4**	**564**	**66.08**	**3.1**	**1086**	**69.34**	**2.3**	**95**	**61.92**	**6.6**	**172**	**26.30**	**3.2**	**2703**	**59.60**	**1.3**

[a]Use value estimates are standardized to per person per day and adjusted to 2010 USD using U.S. consumer price index; Canadian estimates are adjusted to U.S. dollars using the current exchange rate at time of study. Use estimates measure access value and not marginal changes in site quality or condition. Estimates >$500 per person per day or identified as bad estimates by the authors of primary studies were removed from the database.

[b]Regions are defined as U.S. Census regions. Multiple regions or U.S. are studies with scope of multiple Census regions or national.

[c]Standard errors may be used to calculate 95% confidence intervals about the mean values as approximately: mean +/- 2* se.

[d]Freshwater and saltwater fishing values are not distinguished by resource type or primary species. See the database and study documents for more details regarding freshwater and saltwater fishing studies and values. See the database and study documents for more details regarding nonmotorized boating.

[e]Nonmotorized boating includes whitewater rafting/kayaking, canoeing, and rowing.

[f]Hunting values are not distinguished by resource type or primary species. See the database and study documents for more details regarding hunting values.

[g]Wildlife viewing values are not distinguished by resource type or primary species. See the database and study documents for more details regarding wildlife viewing values.

[h]General recreation is defined as primary studies that do not identify a primary activity.

[i]Other recreation is defined as activities with few primary studies, including cross-country skiing, downhill skiing, snowmobiling, snowboarding, shellfishing, jet skiing, scuba diving, snorkeling, water skiing, windsurfing, family gathering, horseback riding, jogging/running, walking, nature study, photography, gathering forest products, visiting nature centers, visiting arboretums, visiting historic sites, visiting prehistoric sites, and visiting aquariums. See the database and study documents for more details regarding other recreation values.

Prepared for:

Greater Los Angeles County
Integrated Regional Water Management Plan

The Greater Los Angeles County Open Space for Habitat and Recreation Plan

(Integrated Regional Water Management Plan Update – 2012)

Prepared by:

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Geosyntec consultants

2M

Dr. Richard Ambrose

GreenInfo Network

Solution Strategies International

& Aubrey Dugger

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LIST OF ACRONYMS AND ABBREVATIONS

AF	acre-feet
AF/yr	acre-feet/year
ASBS	Areas of Special Biological Significance
BMP	best management practices
CDFG	California Department of Fish and Game
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CRAM	California Rapid Assessment Methodology
CWA	Clean Water Act
EPA	United States Environmental Protection Agency
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
GHG	greenhouse gas
GLAC	Greater Los Angeles County
Hazus	a geographic information system-based natural hazard loss estimation software package developed and freely distributed by FEMA.
HCP	Habitat Conservation Plan
HEP	Habitat Evaluation Procedures
HGM	Hydrogeomorphic Wetland Assessment Model
IBI	Index of Biological Integrity
IPCC	Intergovernmental Panel on Climate Change
IRWMP	Integrated Regional Water Management Plan
LSGLA	Lower San Gabriel and Los Angeles River Subregion
MPA	Marine Protected Area
NCCP	Natural Communities Conservation Planning
NEPA	National Environmental Protection Act
NOAA	National Oceanic and Atmospheric Administration's National Marine Fisheries Service
NPDES	National Pollutant Discharge Elimination System

LIST OF ACRONYMS AND ABBREVATIONS (CONTINUED)

NSMB	North Santa Monica Bay Subregion
NWI	National Wetlands Inventory
OSHARP	Open Space for Habitat and Recreation Plan
PDM	Post-Delisting Monitoring
Region	Greater Los Angeles County Region
RWQCB	Regional Water Quality Control Board
SAMP	Special Area Management Plans
SEA	Significant Ecological Area
SEATAC	Significant Ecological Area Technical Advisory Committee
SSMB	South Santa Monica Bay Subregion
TAR	Treatment Area Ratio
ULAR	Upper Los Angeles River Subregion
USACE	United States Army Corp of Engineers
USFWS	United States Fish and Wildlife Service
USGRH	Upper San Gabriel and Rio Hondo Subregion
WET	Wetlands Evaluation Technique

EXECUTIVE SUMMARY

The Greater Los Angeles County (GLAC) region is 2,058 square miles and is one of the most densely populated, highly urbanized, and biologically diverse areas of the United States. Natural open space systems provide habitat and recreation opportunities, as well as other important functions related to water supply, water quality, and other services including flood management and climate adaptation. As the region has grown, much of these natural systems have been lost or fragmented.

The goal of the Open Space for Habitat and Recreation Plan (OSHARP) planning process was to provide direction to reverse this trend to 1) include open space as a consideration in the development of water management projects, and 2) to inform water management project developers of certain aspects to enhance open space. The objective is to provide a comprehensive regional framework for incorporating open space, both habitat and recreation, into project design features.

The OSHARP builds on information provided in the 2006 Greater Los Angeles County Integrated Regional Management Plan (IRWMP) and other significant regional planning efforts. It was developed through collaboration with key agency stakeholders throughout the GLAC Region, including the Los Angeles County Flood Control District, the Council for Watershed Health, the Santa Monica Bay Restoration Commission, and various City, County, and State agencies that serve on the IRWMP Habitat and Open Space Subcommittee.

This planning effort continued to recognize the five subregional IRWMP watershed planning areas established by the 2006 IRWMP. The subregions are as follows:

- North Santa Monica Bay Watershed (NSMB)
- Upper Los Angeles River Watershed (ULAR)
- Upper San Gabriel River and Rio Hondo Watersheds (USGRH)
- Lower San Gabriel River and Los Angeles River Watersheds (LSGLA)
- South Santa Monica Bay Watershed (SSMB)

<u>Open Space Continuum</u>

Open space encompasses a continuum of uses from natural resource lands to urban parks. The habitat continuum extends from upland areas to riparian and freshwater wetland areas to

coastal tidal wetlands, while the recreation continuum extends from natural open space areas to greenways to park and recreation areas.

By viewing open space habitat and recreation as a continuum that changes with the needs of the region, multiple options can be considered in determining how these elements can work together and complement each other in meeting the other IRWMP objectives for water supply, water quality, and flood management. To develop targets, criteria, and methodologies, the Open Space Team first looked at the interconnectivity of open space throughout the region as a whole and then looked at each of the subregions.

In the foothill cities, open space is differentiated from developed urban parklands and focuses on natural, undeveloped lands that have been designated as environmentally and ecologically significant. On the other hand, for the more urbanized areas of Los Angeles County or cities that are built out and contain little or no undeveloped or undisturbed lands, open space emphasizes urban lands used for recreation. These lands include neighborhood and community parks, sports fields, school facilities, greenways, bikeways, green streets, medians, utility easements, etc.

Open Space and Habitat

Southern California, along with the entire GLAC Region is an area rich in natural resources. Due the scale of the threat to its biodiversity, many scientists, including noted biologist E.O. Wilson, have designated it as a "biological hotspot." The objectives and targets for habitat seek to protect and restore these valuable natural resources in the context of water supply and management.

The objectives of the Open Space and Habitat section of the Plan are to increase the number of viable wetlands within the region, to provide adequate buffers along aquatic systems, and to create wildlife linkages using riparian corridors and less densely populated hillsides. In addition, the establishment of wildlife linkages, allowing species to migrate as conditions change, will help address the effects of climate change.

Wetlands

To simplify the presentation of wetland planning targets, wetlands, as defined ecologically based on the National Wetlands Inventory, were classified into three general categories: (1) tidal wetlands, (2) freshwater wetlands, and (3) riverine (or riparian) wetlands. Three distinct types of wetland habitat targets were developed: (1) protection of existing wetland habitat, (2) enhancement of existing wetland habitat, and (3) restoration or creation of

wetland habitat. For the GLAC Region, the total wetland area to be benefited by protection, enhancement, restoration or creation is 12,000 acres.

Uplands

Protection of water-dependent or wetland resources depends not only on managing the systems themselves, but also providing buffers to these systems and linkages through the landscape. Therefore, the provision of upland buffers and habitat linkages is important to maintaining habitat diversity. The targets for upland habitat acquisition and/or restoration were developed using Buffers and Buffer Zones (50 to 300-foot wide areas adjoining a wetland) and Wildlife Linkages or Corridors (wide areas of native vegetation that connects two or more large blocks of habitat). Targets are based on the acquisition and/or restoration of these two features. Targets for total potential linkage and buffer areas within the GLAC Region are 54,000 acres.

Open Space and Recreation

Over 9,000,000 people who live within the GLAC Region have access to more than 2,000 park and open space areas totaling 101,000 acres. In addition, there are almost 300,000 acres of public multi-use lands in the Angeles National Forest.

While there are many opportunities for recreation in the region, the recreation demand exceeds the supply. Recreation ranges from highly structured parks and recreation sites within communities, to regional parks that may offer developed active and undeveloped passive uses, to natural habitat and wildlands that contain trail-related hiking, biking, and equestrian uses, as well as outdoor/environment education opportunities. Three general recreation objectives were established to guide targets:

- Assist in providing urban neighborhood and community park areas that are accessible to underserved populations (and disadvantaged communities) based on average of 4 acres per thousand population.
- Enhance existing and planned greenways and regional trails within open space areas with outdoor recreation and environmental educational opportunities.
- Create or assure the preservation of 6 acres of open space lands per 1000 population that are available for passive public outdoor recreation and education purposes. These lands may incorporate: all or a portion of greenways; county, state, or national parks; US Forest Service lands; regional trails routes; and/or dedicated open space areas or any jurisdiction.

Based on existing standards, there is a need for approximately 16,500 acres of additional urban parkland (neighborhood and community parks). In addition, there is a need for approximately 30,000 to 45,000 acres of additional regional park and open space lands for recreation.

Open Space and Ecosystem Services

The benefits of open space lands within the region are extensive. In addition to water related management practices, there is a full range of societal and economic benefits attributable to open space. Ecosystem services provide one approach for framing the values and benefits of open space.

Ecosystem services within the GLAC Region include, but are not limited to, the following benefits:

- Providing Fresh Water
- Infiltration and Groundwater Recharge
- Water Conservation
- Improving Water Quality
- Flood Management
- Preserving Biodiversity
- Providing Carbon Management
- Providing Aesthetics
- Cultural Values

Open space from a habitat perspective allows people to fulfill their desire to be connected to nature. This connection contributes to a greater sense of community. Recreation occurring in open space areas, whether it is passive or active, improves physical health, mental health, social function and youth development and provides environmental and economic benefits to people and communities.

Surface and Groundwater Resources Management Benefits

There are benefits to both surface and groundwater resource management that can be quantified using project-specific methodology. This methodology has been applied at the regional level using the assumption that the targets for habitat and recreation will be

achieved. For example, there is an estimated potential to recharge an additional 28,000 acre feet of water per year on average and create 21,000 acre feet of storage for stormwater quality purposes throughout the GLAC Region if target habitat and recreation lands in areas with high recharge potential and/or poor water quality are developed or enhanced with stormwater Best Management Practices (BMPs).

Climate Benefits

The effects of climate change are wide-reaching and must be incorporated into long-term planning efforts. There are a number of strategies that can be implemented within the OSHARP that will mitigate the effects of climate change. Climate benefits include carbon storage and sequestration by natural habitats; providing additional local recreation areas and green travel routes to encourage walking and cycling; and, creating habitat connectivity through wildlife linkages, corridors, and buffers.

Evaluating Open Space Projects

An important component of the IRWMP is the application of scoring metrics to determine the suitability of proposed projects in meeting overall goals and objectives. Recommended criteria to evaluate proposed uplands, wetlands and recreation projects are included in the appendices and are based on the expertise of the Open Space Team, although the GLAC IRWMP Steering Committees will be guiding the scoring process as the final IRWMP is developed.

Opportunities and Challenges

One of the main benefits to including open space for habitat and recreation metrics in the IRWMP is the opportunity it creates for a more connected region. The OSHARP provides a mechanism for the County, cities, water resource agencies, conservancies, and stakeholders to work together to set region-wide goals and objectives. These goals and objectives can then be implemented at the subregional level through the IRWMP project grant program process.

The ability to form partnerships and collaborate to develop multi-purpose project and programs provides even greater opportunity to ensure the long-range success of the program. The 2006 IRWMP is considered a living document that will be reviewed and updated on a regular basis, which creates further opportunities to refine the criteria and targets developed during this planning effort as new information becomes available.

As with any undertaking that attempts to comprehensively address open spaces needs in a region the size of the GLAC there are challenges to be overcome. These include gaps in information, insufficient research, high levels of urbanization, and high land values. The OSHARP addresses these challenges by providing a series of recommendations, which if implemented over time will aid in achieving the targets.

Overall, one should be optimistic as challenges create opportunities. Judging from the level of participation throughout the development of the OSHARP, the support for open space and water resource management is comprised of a strong and vibrant network of committed public and private sector stakeholders.

Building Blocks for Solutions

The building blocks necessary to create solutions to the GLAC Region's open space habitat and recreation needs exist today.

Major topographic features in the region include the San Gabriel Mountains, Santa Monica Mountains, Verdugo Hills, San Jose Hills, Puente-Chino Hills, and Palos Verdes Peninsula. These mountains, hills, and peninsula define the San Fernando and San Gabriel Valleys.

The two largest watersheds of the region together drain 1,500 square miles and formed the Los Angeles basin. The Rio Hondo River hydrologically connects the two rivers. Other major watersheds in the region include Malibu Creek, Topanga Creek, Ballona Creek, and the Dominguez Channel. These rivers, watersheds and dozens of smaller rivers drain directly into Santa Monica or San Pedro Bay.

The diverse landscape, differences in climate, soils, and geology set the stage for a wide array of vegetation and wildlife. These regions' lagoons and freshwater marshes are especially important to over-wintering and migratory song birds and waterfowl in the Pacific Flyway in addition to providing year round habitat to resident species.

Existing outdoor recreation opportunities total approximately 101,000 acres. In addition, there are almost 300,000 acres of public, multiple use lands in the Angeles National Forest.

This is just a summary of the natural capital available in the GLAC Region. The social capital available is as extensive and diverse as the natural capital and is reflected in the existing studies, plans, and reports consulted in the Technical Memorandum for the Integrated Regional Water Management Plan for the Greater Los Angeles County Region as well as the participation in the development of the OSHARP as described previously. Overall, there are thousands of dedicated individuals working to develop projects that

protect and increase the regions open space opportunities. The OSHARP provides a framework to realize many of these opportunities and provides solutions to the GLAC Region's water supply and management needs.

1. INTRODUCTION

1.1 Background/Purpose

1.1.1 Overview of Integrated Regional Water Management Plan for the Greater Los Angeles County

The purpose of the 2006 Integrated Regional Water Management Plan (IRWMP) is to define a clear vision and direction for the sustainable management of water resources in the Greater Los Angeles County (GLAC). The plan provides a framework for the development of solutions that meet regional planning targets while integrating projects into other important issues that make up the urban context of the GLAC Region, including transportation, public education, land use, economic development, and quality of life. It also identifies the costs and benefits of those solutions to aid the GLAC in securing funding for the projects, both locally and with partners outside the region.

The IRWMP incorporates the following objectives to identify water resource management issues, increase the region's ecosystem services, and meet future water supply needs:

- Improve water supply
- Improve water quality
- Enhance open space for habitat and wildlands
- Enhance open space for recreation and greenways
- Sustain flood management

1.2 IRWMP Planning Areas

1.2.1 The Region

Given the size and complexity of the GLAC Region and the number of stakeholders and agencies, five subregional planning areas were established generally based on the watershed approach (Greater Los Angeles County Integrated Water Management Plan Region Acceptance Process Application, April 28 2009). Shown in Figure 1, the subregions are as follows:

1. North Santa Monica Bay Watersheds
2. Upper Los Angeles River Watersheds

3. Upper San Gabriel River and Rio Hondo Watersheds
4. Lower San Gabriel and Los Angeles Rivers Watersheds
5. South Santa Monica Bay Watersheds

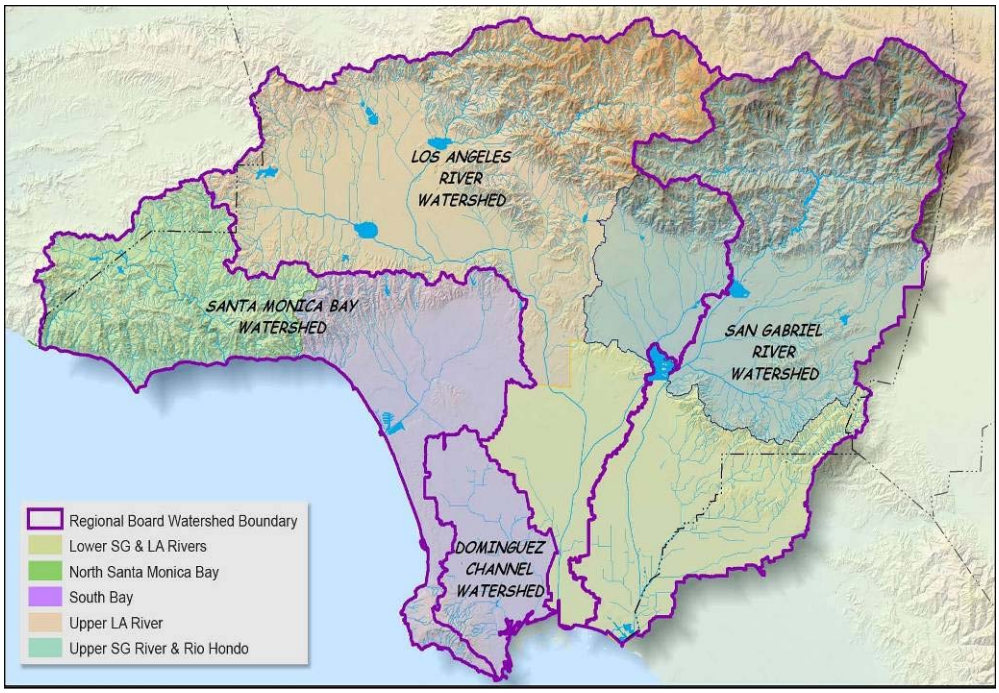

Figure 1. GLAC Subregional and Watershed Boundaries

1.3 2012 IRWMP Update

1.3.1 Living Document

The IRWMP is a living document. It is not intended to be filed away on a shelf, but rather to serve as the catalyst for solutions that can be implemented throughout the GLAC subregions.

The document is also intended to be reviewed regularly and updated as new information, technologies, and data become available.

1.3.2 IRWMP Planning Grant

The California Department of Water Resources (DWR) IRWM Program was created to encourage integrated regional strategies for managing water resources and to provide funding for both planning and implementation of projects that support management of water supply, water quality, environmental interests, drought protection, flood protections, and reduction of dependence on imported water. The current GLAC IRWM Plan was adopted in 2006.

In September 2010, the GLAC Region applied for $1,000,000 in Proposition 84 Planning Grant funds from DWR and on April 11, 2011, was awarded this sum. Funds from this grant are being used to update and expand the 2006 IRWMP.

1.3.3 Open Space Planning

One of the principal goals of the grant application was to develop a long-term open space vision for the GLAC Region that is supported by a clear rationale and based on available science.

The GLAC IRWMP Planning Grant Application stated that previous open space planning in the region had not been comprehensive. Instead it had focused on a geographic perspective and was often limited to specific areas or resources (e.g. the National Forest or coastal wetlands). The IRWMP open space planning effort is more comprehensive and addresses habitat conservation and restoration, human recreation, and water management in and around the urbanized areas at the scale of the GLAC IRWMP Region.

1.3.4 Landscape Scale Approach

To address the need to provide a comprehensive strategy for open space planning in the context of water resource management, the GLAC Open Space for Habitat and Recreation Plan (OSHARP) uses a landscape-scale approach to identifying opportunities to enhance aquatic and upland resources, improve planning for recreational opportunities, and facilitate the continuation of valuable ecosystem and cultural services across the region.

1.3.5 Open Space for Habitat and Recreation Plan (OSHARP) Component to the IRWMP

As stated earlier, developing the OSHARP is part of the 2011-2013 IRWMP revision process. As mentioned in the GLAC IRWMP grant application, previous open space

planning has not been comprehensive. The OSHARP provides an opportunity to integrate open space resource management into the regional water management solutions.

To integrate habitat and recreation and other recognized ecosystem services into a comprehensive framework, the current OSHARP builds on information provided in the 2006 IRWMP and other significant regional planning efforts.

By understanding how habitat and recreation support water quality and water supply and developing opportunities to incorporate the targets into the design of projects, the habitat and recreation objectives of the IRWMP can be realized. This will aid individual agencies, cities, and subregions in effectively implementing projects and programs that address more than one of the identified water management strategies.

1.4 Significant Regional Planning Efforts

In preparation for OSHARP, many regional Los Angeles County planning efforts were examined. Appendix A, Planning Documents Reviewed, details the projects, studies, and reports that were reviewed for references to watershed issues and habitat linkages.

The OSHARP report was developed through collaboration with key agency stakeholders throughout the GLAC Region, including the Council for Watershed Health, Santa Monica Bay Restoration Commission (see Table 1) and various city and county agencies, who comprised the IRWMP Habitat and Open Space Subcommittee. This collaboration occurred primarily through monthly subregional meetings, as well as four Habitat and Open Space Subcommittee meetings that were held at the Los Angeles River Center on the following dates: September 27, 2011; November 14, 2011; December 21, 2011; and April 23, 2011. During these meetings, OSHARP targets were developed through an iterative process, with targets presented and subsequent meetings used to further refine target methodology based on input from previous meetings. Subcommittee involvement also included additional in-person or phone meetings as requested by individual stakeholders, as well as email correspondence, to discuss methodology details. The OSHARP draft was released on April 6, 2012 to the subcommittee for comment. Comments were received from multiple stakeholders throughout the GLAC Region, which were incorporated into the final version of the report.

Table 1. List of Participating Agencies/Groups and Representative(s)

Organization	Representative
Army Corps of Engineers	Erin Jones
Arroyo Seco Foundation	Meredith McKenzie Tim Brick
Cities of Agoura Hills and Westlake Village	Joe Bellomo
City of Los Angeles Planning	Claire Bowin
City of Malibu	Barbara Cameron
Council for Watershed Health	Blake Whittington Nancy Steele
Los Angeles County	Timothy Pershing
Los Angeles County Flood Control	Phil Doudar Russ Bryden Rochelle Paras
Los Angeles County Parks and Recreation	Camille Johnson Norma Garcia
Las Virgenes Municipal Water District	Jan Dougall Randal Orton
Mountains Recreation and Conservation Authority	Dash Stolarz
Mountains Restoration Trust	Jo Kitz
Palos Verdes Peninsula Land Conservancy	Andrea Vona
Resource Conservation District of the Santa Monica Mountains	Clark Stevens Melina Watts
Rivers and Mountains Conservancy	Belinda Faustinos Mark Stanley Marybeth Vergara
Regional Water Quality Control Board	Shirley Birosik
Santa Monica Bay Restoration Commission	Shelley Luce
State Water Resources Control Board	Guangyu Wang
Tree People	Rebecca Drayse

2. THE OPEN SPACE CONTINUUM (NATURAL RESOURCE LANDS TO URBAN PARKS)

For general planning purposes, the definition of open space is "any parcel or area of land or water that is essentially unimproved and devoted to an open space use for the purposes of (1) the preservation of natural resources, (2) the managed production of resources, (3) outdoor recreation, or (4) public health and safety."[1] See Figure 2 for a visual description of the environmental Open Space Continuum from the region's mountains to the coast.

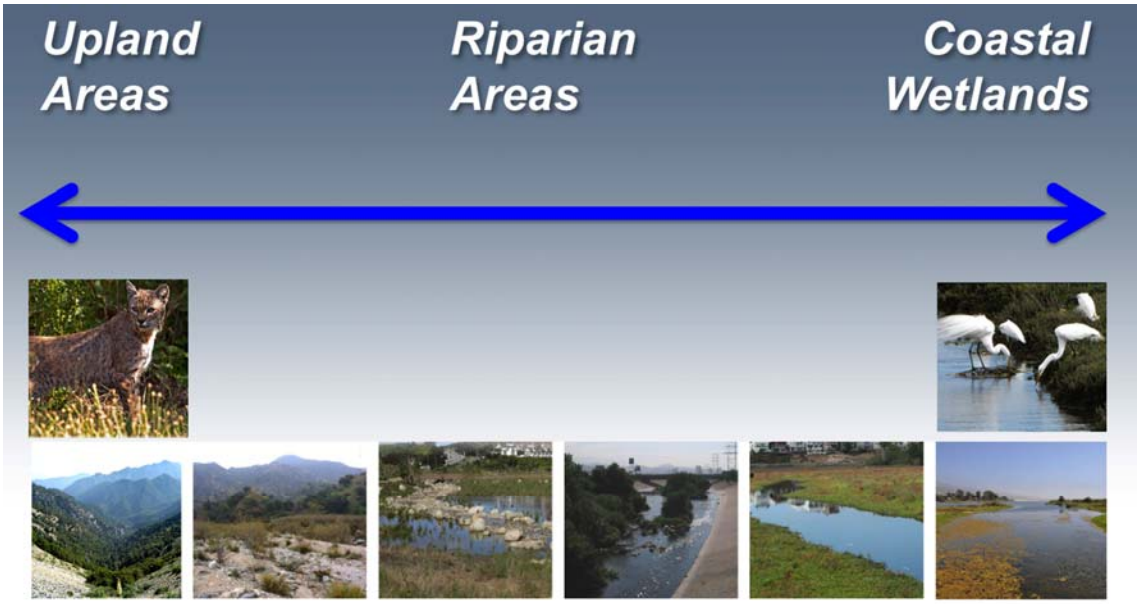

Figure 2. The Open Space Continuum – From Uplands to the Coast

From a planning perspective, open space conservation is typically addressed through state-required open space and conservation elements of General Plans. As a practical matter, the definition of open space is defined based on the community values of the individual jurisdiction and is therefore interpreted fairly widely by Los Angeles County and the 90 cities within the GLAC Region. The variations between jurisdictions are generally due to the

[1] State of California, Governor's Office of Planning and Research. *State of California General Plan Guidelines*. 2003.

interpretation of the phrase "essentially undeveloped," a relative term. See Figure 3 below for a visual description of the recreational Open Space Continuum.

Figure 3. The Open Space Continuum – From Regional Lands to Urban Parks

For the foothill cities, open space is differentiated from developed urban parklands and focuses on natural undeveloped lands that have been designated as environmentally and ecologically significant as wildlife habitat areas and corridors, or areas that provide a visual backdrop and amenity. These lands often include substantial hillside areas and canyons and may include rural and agricultural lands. Open space in these instances applies to land that is typically publicly owned, though not always, and in some instances public access may be restricted.

The definition of open space as used by the State of California for the preparation of General Plans provides a broad framework that includes many public benefits. Some open space benefits include:

- Habitat preservation and opportunities for restoration:
  - Ecosystem diversity and services
  - Wildlife corridor connectivity
  - Endangered species habitat
- Outdoor recreation opportunities:
  - Passive uses
  - Active uses
- Water supply:
  - Surface
  - Groundwater
- Water quality maintenance
- Air quality maintenance
- Historic and cultural resource protection
- Agricultural opportunity
- Forest management
- Scenic quality preservation
- Control of urban sprawl and associated benefits:
  - Community image / rural character
  - Ambient healthful living conditions
  - Reduced greenhouse gas emissions (air quality)
  - Quality of life

On the other hand, for the more urbanized areas of Los Angeles County or cities that are essentially built out and contain little or no undeveloped or undisturbed landscapes, such as Burbank, Gardena, or Compton, the expression of open space contained in their General Plans emphasizes urban lands used for recreation purposes. These lands include neighborhood and community parks and sports fields. Urban open spaces may even include public school facilities, greenways, bikeways, green streets and landscaped medians, open areas occupied by utilities such as flood control channels and utility easements, and private recreational facilities.

3. OPEN SPACE AND HABITAT

The GLAC Region is approximately 2,000 square miles located in coastal Southern California. The IRWMP project area is one of the most densely populated, highly urbanized, and biologically diverse areas of the United States. It is located within the Californian Floristic Province, which is a biodiversity hotspot. Designated a hotspot in 1996, it shares this distinction with 33 other places in the world.[2] Noted biologist E.O Wilson designated southern California as one of the world's eighteen "hotspots" – the only one in North America – because of the scale of the threat to its biodiversity. Climatically only two percent of the earth's surface has the Mediterranean-type climate found in southern California.

The study area is part of a complex landscape where the geomorphic provinces of the Transverse Ranges and Peninsular Ranges come together. Major topographic features in the region include the San Gabriel Mountains, Santa Monica Mountains, Verdugo Hills, San Jose Hills, Puente-Chino Hills, and Palos Verdes Peninsula. The mountains, hills, and peninsula define the San Fernando and San Gabriel Valleys and other portions of the Los Angeles basin and coastal plain.

The San Jose and Puente-Chino Hills contain relatively low density urban development as compared to the Los Angeles Basin and still retain areas with significant open space. Areas in the southern San Gabriel foothills are also developed at a lower density than the highly urbanized areas in the valleys and coastal plains. These foothills function as the urban/wildland interface and provide wildlife connections to river and stream corridors.

The two largest watersheds of the region are the San Gabriel River Watershed and the Los Angeles River Watershed. The San Gabriel River watershed drains 660 square miles and has its headwaters in the San Gabriel Mountains. The river reaches the Pacific Ocean at Los Alamitos Bay. The Los Angeles River watershed drains 830 square miles of land from the Santa Monica Mountains, the San Gabriel Mountains, and the Los Angeles basin, reaching the Pacific Ocean in Long Beach. These two rivers formed the Los Angeles basin, a large floodplain and alluvial fan. The Rio Hondo River hydrologically connects the Los Angeles River and San Gabriel River watersheds at the Whittier Narrows Reservoir. Other major watersheds in the region include Malibu Creek, Topanga Creek, Ballona Creek (which drain to Santa Monica Bay), and the Dominguez Channel (which drains to San Pedro Bay). Dozens of smaller watersheds drain directly to Santa Monica or San Pedro Bays.

[2] www.calacademy.org/exhibits/California_hotspot/overview.htm

In the mountains and foothills, including many of the coastal watersheds, the streams have seasonal flows and high-quality habitat. Downstream, the river systems have been engineered to protect homes and businesses from flooding and to provide for water conservation. In Los Angeles County, wetland losses exceed 95 percent. Despite their altered state, these urbanized channels still serve as habitat for wildlife.

The diverse landscape of the study area contains examples from most of the vegetation types and wildlife that are found in Southern California today. From the high peaks of the San Gabriel Mountains to the low coastal plain south of the Puente-Chino Hills, differences in climate, soils, and geology set the stage for a wide array of plant communities. Common plant communities include coastal strands and bluffs, lagoons, coastal sage scrub, chaparral, foothill woodlands, and coniferous forests in the mountains. Chaparral is the dominant native plant community in the study area.

Many of the region's native plant communities have been displaced due to grazing, agriculture, and urban development. Almost all of the native plant communities that remain contain sensitive, rare, or endangered flora and fauna. The GLAC Region is also home to 51 species that hold federal endangered, threatened, candidate for listing, or subject for post delisting monitoring (PDM) status. Table 2 below provides a list of federal endangered and threatened species found in the project area.[3]

Table 2. Federally Listed Species Occurring within the GLAC Region

Scientific Name	Common Name	Federal Status
PLANTS		
Acmispon (Lotus) dendroideus var. *traskiae*	San Clemente Island lotus	Endangered
Arenaria paludicola	marsh sandwort	Endangered
Astragalus brauntonii	Braunton's milk-vetch	Endangered
Astragalus pycnostachyus var. *lanosissimus*	Ventura marsh milk-vetch	Endangered
Astragalus tener var. *titi*	coastal dunes milk-vetch	Endangered

[3] http://www.fws.gov/carlsbad/TEspecies/CFWO_Species_List.htm

Scientific Name	Common Name	Federal Status
Berberis nevinii	Nevin's barberry	Endangered
Brodiaea filifolia	thread-leaved brodiaea	Threatened
Castilleja grisea	San Clemente Island Indian paintbrush	Endangered
Cercocarpus traskiae	Catalina Island mountain mahogany	Endangered
Cordylanthus maritimus (subsp.*maritimus)*	salt marsh bird's beak	Endangered
Chorizanthe parryi var. *Fernandina*	San Fernando Valley spineflower	Candidate
Delphinium variegatum subsp. *kinkiense*	San Clemente Island larkspur	Endangered
Dodecahema (Centrostegia) leptoceras	slender-horned spineflower	Endangered
Dudleya cymosa subsp. *Ovatifolia*	Santa Monica Mountains dudleya	Threatened
Helianthemum greenei	Island rush-rose	Threatened
Lithophragma maximum	San Clemente Island woodland star	Endangered
Malacothamnus clementinus	San Clemente Island bush mallow	Endangered
Navarretia fossalis	spreading navarretia	Threatened
Orcuttia californica	California Orcutt grass	Endangered
Pentachaeta lyonii	Lyon's pentachaeta	Endangered
Phacelia stellaris	Brand's phacelia	Candidate
Rorippa gambellii	Gambel's watercress	Endangered
Sibara filifolia	Santa Cruz Island rock-cress	Endangered
INVERTEBRATES		
Euphilotes battoides allyni	El Segundo blue butterfly	Endangered
Glaucopsyche lygdamus palosverdesensis	Palos Verdes blue butterfly	Endangered
Streptocephalus woottoni	Riverside fairy shrimp	Endangered
FISH		
Catostomus santaanae	Santa Ana sucker	Threatened
Gasterosteus aculeatus williamsoni	unarmored threespine stickleback	Endangered
Oncorhynchus mykiss	southern steelhead (So Cal DPS)	Endangered
AMPHIBIANS		
Anaxyrus californicus (Bufo microscaphus c.)	arroyo toad (a. southwestern t.)	Endangered
Rana draytonii	California red-legged frog	Threatened
Rana muscosa	mountain yellow-legged frog (So Cal	Endangered

Scientific Name	Common Name	Federal Status
	DPS)	
REPTILES		
Xantusia riversiana	island night lizard	Threatened
BIRDS		
Amphispiza belli clementeae	San Clemente sage sparrow	Threatened
Brachyramphus marmoratus	marbled murrelet	Threatened
Charadrius alexandrinus nivosus	western snowy plover	Threatened
Coccyzus americanus	yellow-billed cuckoo	Candidate
Empidonax traillii extimus	southwestern willow flycatcher	Endangered
Gymnogyps californianus	California condor	Endangered
Haliaeetus leucocephalus	bald eagle	PDM
Lanius ludovicianus mearnsi	San Clemente loggerhead shrike	Endangered
Pelecanus occidentalis	brown pelican	PDM
Phoebastria albatrus	short-tailed albatross	Endangered
Polioptila californica californica	coastal California gnatcatcher	Threatened
Rallus longirostris levipes	light-footed clapper rail	Endangered
Sternula (Sterna) antillarum browni	California least tern	Endangered
Vireo bellii pusillus	least Bell's vireo	Endangered
MAMMALS		
Dipodomys merriami parvus	San Bernardino kangaroo rat	Endangered
Enhydra lutris nereis	southern sea otter	Threatened
Perognathus longimembris pacificus	Pacific pocket mouse	Endangered
Urocyon littoralis catalinae	Santa Catalina Island fox	Endangered

The region's lagoons and freshwater marshes are especially important to over wintering and migratory songbirds and waterfowl on the Pacific Flyway in addition to providing year round habitat and critical resources for resident species.

Within all five subregions, there are special designated areas called "critical habitat" that protect listed plant and animal species. The United States Fish and Wildlife Service (USFWS) through the Endangered Species Act (ESA) defines critical habitat as "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." A critical habitat designation typically has no impact on property or developments that do not involve a Federal agency, such as a private landowner developing a property that involves no Federal funding or permit. However, when such funding or permit is needed, the impacts to critical habitat are considered during the consultation with the USFWS. Each of the five subregions contain areas designated as critical habitat. Table 3 shows the designated critical habitat for each species across the subregions by acreage.

Table 3. Designated Critical Habitat for Federally Listed Species

Critical Habitat Acreage by Subregion					
Species	**Lower San Gabriel and Lower Los Angeles Rivers**	**North Santa Monica Bay**	**South Bay**	**Upper Los Angeles River**	**Upper San Gabriel and Rio Hondo Rivers**
Arroyo toad	0	0	0	1,190.0	0
Brauton's milk-vetch	0	710	510	270	280
California red-legged frog	0	4,950	0	4	0
Coast California gnatcatcher	9,350	0	5,040	9,920	4.580
Lyon's pentachaeta	0	1,970	0	0	0
Mountain yellow-legged frog	0	0	0	0	3,240
Palos Verdes blue butterfly	0	0	90	0	0

The location of the designated critical habitat is provided in Figure 4.

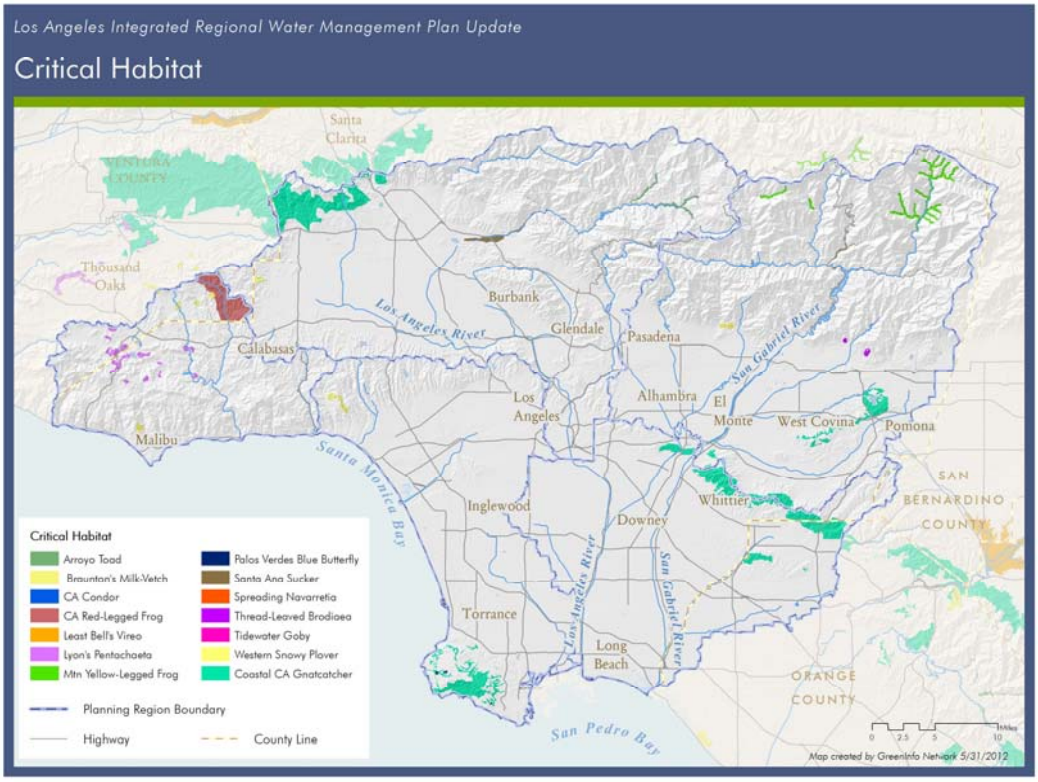

Figure 4. USFWS Designated Critical Habitat Areas

3.1 Regulatory Context

3.1.1 National Environmental Protection Act (NEPA)

NEPA, adopted in 1969 (42 U.S.C. Section 4321 et seq.), establishes a framework for protecting the national environment. "NEPA's basic policy is to assure that all branches of government give proper consideration to the environment prior to undertaking any major federal action that significantly affects the environment."[4] All projects and activities that involve federal activities or property must comply with NEPA.

[4] epa.gov/lawsregs/laws/nepa.html

3.1.2 California Environmental Quality Act (CEQA)

CEQA, adopted in 1970 (Public Resource Code Section 21000 et seq.), is California's broadest environmental law. It guides local and state agencies in protecting the environment through the issuance of permits and approval of projects. "CEQA applies to all discretionary projects proposed to be conducted or approved by a California public agency, including private projects requiring discretionary government approval."[5] Any proposed project or activity by an individual or state governmental entity that impacts the environment are subject to CEQA regulations.

3.1.3 United States Army Corps of Engineers (USACE)

Regulatory Program

The USACE has regulatory permit authority from Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act of 1899. Section 404 gives the USACE jurisdiction over all water of the United States including wetlands, perennial and intermittent streams, ponds, and lakes. The USACE is responsible for the day-to-day administration and permit review and the United States Environmental Protection Agency (EPA) provides program oversight. Any person or public agency proposing to discharge dredged or fill material into waters of the United States is required to obtain a permit. Any work in traditionally navigable waters also requires a permit. "Permit review and issuance follows a sequence process that encourages avoidance of impacts, followed by minimizing impacts and, finally, requiring mitigation for unavoidable impacts to the aquatic environment."[6]

Special Area Management Program (SAMP)

Special Area Management Plans (SAMPs) provide a comprehensive review of aquatic resources in an entire watershed rather than the USACE's traditional project-by-project review pursuant to its regulatory program. Potential watershed impacts are analyzed over time in order to identify priority areas for preservation, identify potential restoration areas, determine the least environmentally damaging locations for proposed projects, and establish alternative permitting processes appropriate for the SAMP area.

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[5] http://dfg.ca.gov/habcon/ceqa/ceqapolicy/html
[6] http://www.fws.gov/habitatconservation/cwa.html

The goal of a SAMP is to achieve a balance between aquatic resource protection and reasonable economic and infrastructure development. Geographic areas of special sensitivity under intense development pressure are well-suited for this planning process. These comprehensive and complex efforts require the participation of multiple local, state, and federal agencies, as well as public and stakeholder involvement.

Mitigation Banking

The regulatory program provides a preference for the use of mitigation banking to offset unavoidable impacts to jurisdictional areas (33 CFR 332 et seq.). A mitigation bank is created when a government agency, corporation, nonprofit organization, or other entity undertakes providing mitigation for itself or others under a formal agreement with a resource or regulatory agency. Mitigation banks are a form of "third-party" compensatory mitigation, in which the responsibility for compensatory mitigation implementation and success is assumed by the bank operator rather than by the project developer. The bank operator is responsible for the design, construction, monitoring, ecological success, and long-term protection of the bank site (Mitigation Banking Factsheet, US EPA). To offset impacts to wetlands, streams, lakes, and other aquatic sites, mitigation banks must be approved by the USACE. This and other mitigation requirements are discussed in the USACE rule regarding mitigation for the loss of aquatic resources (33 CFR 332 et seq.).

3.1.4 United States Fish and Wildlife Services

Endangered Species Act (ESA)

USFWS and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA) administer the ESA. "The ESA provides a program for the conservation of threatened and endangered plants and animals and the habitats in which they are found."[7] The law requires consultation with federal agencies (e.g. USFWS and/or NOAA) to ensure that actions they authorize, fund, or carry out are not likely to impact the continued existence of any listed species or result in the destruction or adverse modification of designated critical habitat of such species. ESA prohibits any action that causes a "taking" of any listed species of fish or wildlife.[8]

[7] http://www.epa.gov/lawsregs/laws/esa.html
[8] http://www.epa.gov/lawsregs/laws/esa.html

Habitat Conservation Plans

The ESA, under section 10(a)(1)(B), also outlines a habitat conservation planning process that subsequently allows for USFWS and NOAA to issue incidental take permits for otherwise lawful activities. Projects impacting listed species and/or their habitat that do not have a federal project nexus (i.e. do not partner with a federal agency or use federal funds) are required to go through the 10(a)(1)(B) process and prepare a Habitat Conservation Plan (HCP). The HCP process ensures that a project, when finally approved by the agencies, adequately minimizes and mitigates impacts to listed species to the maximum extent possible. The size and scope of HCPs vary depending on the project proponent (i.e. HCPs can be developed for a single project or can be large-scale and multijurisdictional in nature and cover a variety of project types) (USFWS, 1996).

Conservation Banking

A conservation bank is similar to a mitigation bank. It too is a form of "third-party" compensatory mitigation created when an entity undertakes providing mitigation for itself or others under a formal agreement with a resource or regulatory agency. The conservation bank operator then becomes responsible for the design, construction, monitoring, ecological success, and long-term protection of the bank site. To offset impacts to wetlands, streams, lakes, and other aquatic sites, mitigation banks must be approved by the USACE. The difference is that the conservation bank is to offset impacts to listed species and their habitat.

3.1.5 Regional Water Quality Control Board (RWQCB)

California's Porter-Cologne Act

Under this Act adopted in 1969, the RWQCB has the authority over California water rights and water quality policy. It has jurisdiction over all of California's aquatic resources. The Act established the nine RWQCBs throughout the State of California to oversee water quality at the local and regional level. Each regional board prepares and updates Basin Plans, issues permits to control pollution and regulate all pollutant or nuisance discharges impacting surface water or groundwater.[9]

[9] Ceres.ca.gov/wetlands/permitting/ porter_summary.html

Section 401 of the Clean Water Act Certification

If a project requires a Section 404 permit, a Section 401 certification from the RWQCB is also needed. The federal CWA, in Section 401(a)(1), specifies that states must certify that any activity subject to a permit issued by a federal agency meets all state water quality standards:

> *"This program protects all waters in its regulatory scope, but has special responsibility for wetlands, riparian areas, and headwaters because these water bodies have high resource value, are vulnerable to filling, and are not systematically protected by other programs. The Program encourages basin-level analysis and protection, because some functions of wetlands, riparian areas, and headwater streams - including pollutant removal, flood water retention, and habitat connectivity - are expressed at the basin or landscape level"*[10]

Depending on the location of the project or activity, a Section 401 certification is obtained by applying to the applicable RWQCB region in which the project is located. The RWQCB also requires that the project file all other required permits and showing of compliance with NEPA and CEQA.

National Pollutant Discharge Elimination System (NPDES) Permits

Under the U.S. Environmental Protection Agency, each of the nine RWQCBs has the responsibility of granting CWA NPDES permits, for certain point-source discharges. NPDES permits set specific requirements managing the characteristics of the discharged water based on national technology-based effluent limitations and water quality standards. The permits establish the level of performance the permittee or discharger is required to maintain and specify monitoring, inspection, reporting requirements and additional actions necessary to achieve compliance with NPDES regulations. "Point source" is defined as any discernible, confined and discrete conveyance, such as a pipe, ditch, channel, tunnel, conduit, discrete fissure, or container."[11] Each Regional Boards has different waste discharge requirements and other regulatory actions.[12]

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[10] http://www.waterboards.ca.gov/water_issues/programs/cwa401/
[11] http://www.campuserc.org/virtualtour/grounds/drains/Pages/NPDES-Overview.aspx
[12] Ceres.ca.gov/wetlands/permitting porter_summary.html

Areas of Special Biological Significance (ASBS)

In the mid-1970s, thirty-four areas on the coast of California were designated as areas requiring protection by the State Water Resources Control Board and were called Areas of Special Biological Significance (ASBS). The Public Resources Code states that point source waste and thermal discharges into ASBS are prohibited or limited by special conditions, and nonpoint sources discharging into ASBSs must be controlled to the extent practicable. There is one ASBS, the Mugu Lagoon to Latigo Point ASBS, within the study region.

3.1.6 California Department of Fish and Game

Streambed Alteration Agreements (Section 1600 of the Fish and Game Code)

The CDFG Code (Sections 1600-1616) regulates activities that would alter the flow, bed, banks, channel, or associated riparian areas of a river, stream, or lake. The law requires any person, state or local governmental agency, or public utility to notify CDFG before beginning an activity that will substantially modify a river, stream, or lake. These activities also must be consistent with any other applicable environmental laws such as Section 404 and 401 of the Clean Water Act and CEQA.[13]

California Endangered Species Act (CESA)

CESA, adopted in 1970, "expresses the state's concern over California's threatened wildlife, defined rare and endangered wildlife," and gave authority to CDFG to "identify, conserve, protect, restore, and enhance any endangered species or any threatened species and its habitat in California."[14] This Act (Fish and Game Code Section 2050, et. seq.) prohibits the "taking" of California listed species unless a permit is obtained from the CDFG.[15] Many of the endangered and/or threatened species are similar to those listed under the federal ESA.

Natural Communities Conservation Planning (NCCP) Program

In 1991, the Natural Community Conservation Planning (NCCP) Act was added to CESA (Fish and Game Code Section 2800-2840). The State of California is the only state to enact a law that closely complements the habitat conservation planning process of ESA. The NCCP

[13] http://ceres.ca.gov/wetlands/permitting/DFG_ summary.html
[14] http://www.energy.ca.gov/glossary/glossary-c.html
[15] http://ceres.ca.gov/wetlands/permitting

Act encourages the development of multi-species, ecosystem-based plans that provide for the conservation and recovery of both listed and unlisted species within the plan area. The NCCP Act requires a plan to provide for the conservation of covered species, and includes independent scientific input and significant public participation. When applied together, the ESA and NCCP Act bring their complementary strengths to conservation planning to provide greater conservation benefits than either Act alone.

Marine Protected Areas

On December 15, 2010, the California Fish and Game Commission adopted regulations to create a suite of marine protected areas (MPAs) in southern California (Point Conception to the California/Mexico border). This network of 50 MPAs and two special closures (including 13 MPAs and two special closures previously established at the northern Channel Islands) covers approximately 354 square miles of state waters and represents approximately 15 percent of the region. There are four designated MPAs in the study region:

- Point Dume State Marine Conservation Area
- Point Dume State Marine Reserve
- Point Vicente State Marine Conservation Area
- Abalone Cove State Marine Conservation Area.

All take is prohibited in the Point Dume State Marine Reserve and the Point Vicente State Marine Conservation Area, except for remediation activities associated with the Palos Verdes Shelf Operable Unit of the Montrose Chemical Superfund Site in Point Vicente. Take is restricted in the other State Marine Conservation Areas, although some fishing for pelagic finfish and coastal pelagic species is allowed.

3.1.7 County of Los Angeles

Significant Ecological Areas

The concept of a 'significant ecological area' (SEA) is unique to Los Angeles County. Los Angeles County developed the concept in the 1970s in conjunction with adopting the original General Plan for the County.

The Significant Ecological Area (SEA) Program is a component of the Los Angeles County Conservation/Open Space Element in their General Plan. This program is a resource

identification tool that indicates the existence of important biological resources. SEAs are not preserves, but are areas where the County deems it important to facilitate a balance between limited development and resource conservation. Limited development activities are reviewed closely in these areas where site design is a key element in conserving fragile resources such as streams, oak woodlands, and threatened or endangered species and their habitat.

Proposed development is governed by SEA regulations. The regulations, currently under review, do not to preclude development, but to allow limited, controlled development that does not jeopardize the unique biotic diversity within the County. The SEA conditional use permit requires development activities be reviewed by the Significant Ecological Area Technical Advisory Committee (SEATAC). Additional information about regulatory requirements is available on the Los Angeles County website.[16]

[16] http://planning.lacounty.gov/sea/faqs

4. OBJECTIVES AND PLANNING TARGETS FOR HABITAT

The following sections describe the 20-year planning targets that were developed for the habitat section of the OSHARP through the collaborative process described in Section 1.4. These targets are intended to serve as a quantitative measure of progress towards the overall IRWMP habitat goals, as well as to guide project proponents in effectively incorporating habitat into proposed IRWMP projects.

4.1 Objectives

Natural open space systems provide habitat and recreation opportunities, as well as other important functions related to water supply and water quality. California and the GLAC Region have lost a great amount of its natural systems and for wetlands systems more than any other state (Dahl 1990). In Los Angeles County, wetland system losses exceed 95 percent.

The objective in this planning process is to help reverse this trend and to have open space for habitat and recreation considered in the planning of water supply and water quality projects. While opportunities for coastal wetland restoration are limited by extensive development, as well as by geologic and topographic constraints, opportunities to preserve and restore stream corridors and riparian habitat are numerous. Upland habitat blocks, buffers, and linkages also are in need of preservation and restoration.

The objective is to increase the number of viable wetlands within the region, to provide adequate buffers along aquatic systems, and to create wildlife linkages using riparian corridors and less densely populated hillsides. In addition, the establishment of wildlife linkages, allowing species to migrate northward as conditions change, will help address the effects of climate change.

4.2 Habitat Planning Targets – Wetlands

4.2.1 Wetlands

Although southern California is a relatively dry region, the greater Los Angeles area historically contained abundant and diverse wetland resources (Rairdan, 1998; Stein et al., 2007; Dark et al., 2011). Much of the original wetland habitat in the region has been destroyed or converted to other habitat (including concrete-lined rivers), and much of the remaining wetlands have been degraded by poor water quality or other human activities.

The goals of the wetland habitat targets are to protect, restore (re-establish or rehabilitate), and/or enhance existing wetland habitat and to create new wetland habitat in the region.

4.2.1.1 Terminology

There are many different ways to categorize or define wetlands, including approaches based on various ecological or regulatory perspectives. For this project, a wetland is considered to be land transitional between terrestrial and aquatic systems where the water table is usually at or near ground surface or the land is covered by shallow water. For purposes of this classification, wetlands must have one or more of the following three attributes: (1) at least periodically, the land supports predominantly hydrophytes; (2) the substrate is predominantly undrained hydric soil; and (3) the substrate is nonsoil and is saturated with water or covered by shallow water at some time during the growing season of each year.

This is an ecological definition of wetland, not the regulatory one. Therefore, an area identified as a wetland in this report is not necessarily considered a wetland for regulatory purposes. This may cause some confusion. For example, for the purposes of this report, man-made habitats are considered to be wetlands. However, the wetland regulatory definition considers some man-made habitats developed as stormwater Best Management Practices as a separate category. Man-made detention basins, swales, and depressional areas are generally not considered wetlands for regulatory purposes even though they may provide ecosystem benefits.

To simplify the presentation of wetland planning targets, wetlands were categorized into three general categories: (1) tidal wetlands, (2) freshwater wetlands, and (3) riverine (or riparian) wetlands based on categories defined by the National Wetlands Inventory (NWI). Although incomplete, the NWI is a very important source of information for the present wetland conditions with the GLAC. Larger, regional areas that function as off-system detention and storage would be considered freshwater wetlands. While it is recognized that rivers and stream beds are not always considered wetlands, for the purposes of these categories they are considered to be riverine wetlands. The definition for each of these categories is as follows:

- *Tidal wetlands* include wetland habitats that are inundated by tides, either seasonally or year-round. Marine harbors, a man-made habitat, are also considered tidal wetlands. In the NWI mapping system, the three categories included in tidal wetlands are estuarine and marine deepwater, estuarine and marine wetland, and tidal wetlands.

- *Freshwater wetlands* include wetlands such as depressional marshes, lakes, and ponds. The NWI category "freshwater wetlands" include freshwater emergent wetland, freshwater forested/shrub wetland, freshwater ponds and lakes, and also considers man-made habitats such as flood control basins and ponds which may include areas of freshwater wetlands. It is an important distinction that although spreading grounds and some stormwater Best Management Practices, such as detention basins, swales, and depressional areas, also provide ecosystem benefits, they belong under a separate category and should not be subject to the same protection criteria.
- *Riverine wetlands* include the streambed and wetlands associated with rivers and streams, including upper and lower riverine habitats and dry washes. Man-made habitats considered riverine wetlands include concrete-lined channels and soft-bottomed channels. Note that "riparian" is sometimes used to mean riverine wetlands. Because of its common usage, the terms are used interchangeably here. However, strictly speaking, riparian refers to the vegetated habitat adjacent to streams, rivers, lakes, reservoirs and other inland aquatic systems.

Three distinct types of wetland habitat targets were also developed.

1. Protection of existing wetland habitat
2. Enhancement of existing wetland habitat
3. Restoration or creation of wetland habitat

These activities could occur on public or private lands and include some of the following activities:

- *Protection* entails acquiring existing wetland habitat not previously protected from destruction or degradation or otherwise adding protection measures to prevent an existing wetland from destruction or degradation.
- In *enhancement,* management actions are taken to improve the functions or values of an existing wetland. Enhancement actions could include improving the timing or amount of water source to a wetland, planting native wetland plants, controlling invasive species, and so forth. Improving the quality of water entering a wetland alone would generally not be considered enhancement.

- *Restoration and creation* involve activities of either restoring or creating a wetland in an area that does not currently contain a wetland. The distinction is that if the activity occurs in an area that once contained that type of wetland it is considered to be restoration or re-establishment, whereas creation occurs in an upland area, converting it to a wetland. In both restoration and creation, the focus should be on reintroducing the physical processes and geomorphic form necessary to support a self-sustaining wetland ecosystem.

4.2.1.2 Methodology

Protection, enhancement, and restoration/creation targets were calculated for each wetland type (tidal, freshwater, riverine). Figure 5 summarizes the general approach to calculating wetland habitat targets, with more details about the methodology in Appendix B, Wetland Habitat Methodologies.

For each category, the percentage used to establish numeric targets was chosen after discussion with the Habitat and Open Space Plan Committee. The goal was to develop a numeric target that balanced the benefits of protecting, enhancing or restoring wetland habitats against the practical constraints of undertaking these projects. The general philosophy used to develop these targets was to establish targets that were challenging, yet reasonably attainable, for each subregion.

The restoration/creation habitat targets are based on the area of wetlands lost in each subregion. The historical extent of wetlands in the region (derived from Rairdan 1998; more detail about this data source is provided in Appendix A) is shown in Figure 6 (see Appendices G-K for subregional maps).

Protection and enhancement targets are based on the current extent of wetlands (derived from the National Wetlands Inventory (NWI); more detail about this data source is provided in Appendix A), shown in Figure 7 (Appendices G-K provide information for the subregions).

Protection Target	=	Privately held existing habitat	x	20%
Enhancement Target	=	Existing habitat	x	25%
Restoration/Creation Target	=	[Lost habitat x 10%]	+	[Converted habitat x 10%]

Figure 5. Summary of Approach to Calculating Wetland Habitat Targets

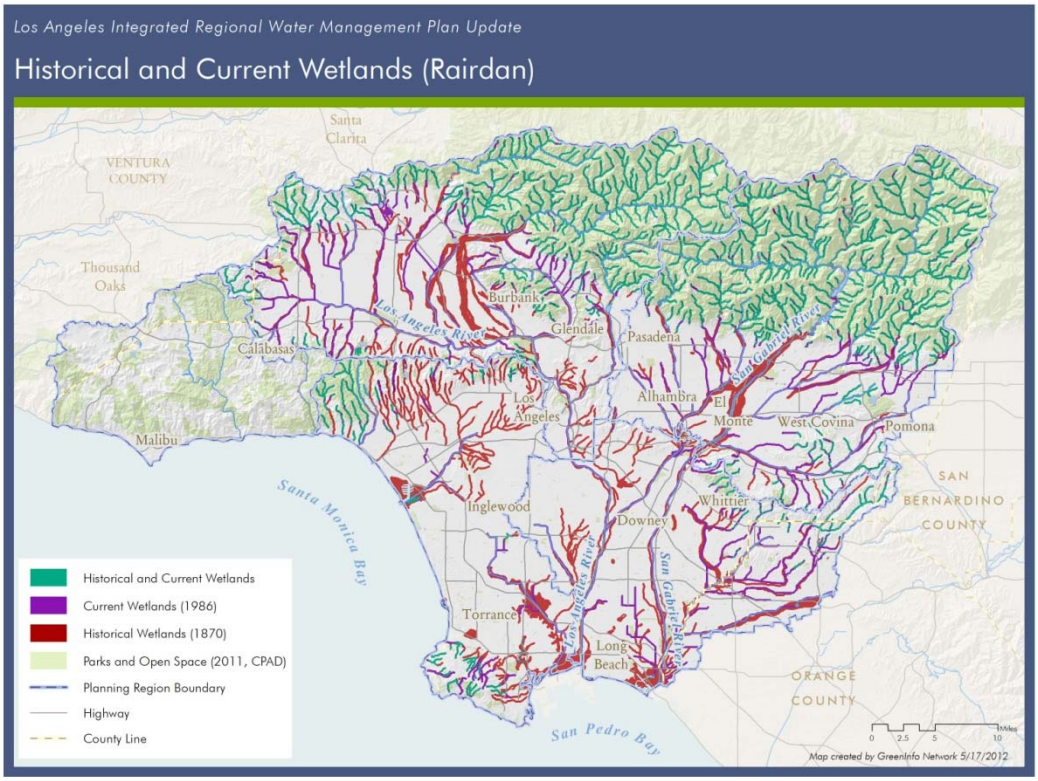

Figure 6. Historical and Current Wetlands (Rairdan) (GLAC Region, except NSMB Subregion)

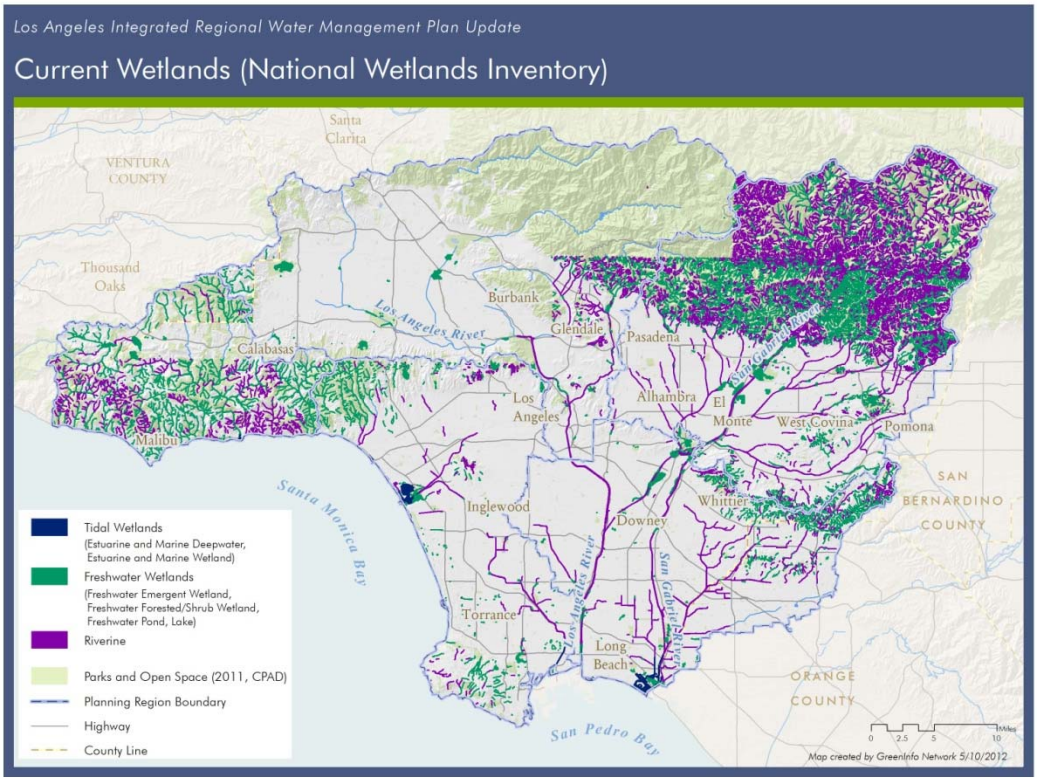

Figure 7. Current Wetlands (NWI) (GLAC Region)

4.2.1.3 Habitat Targets

Table 4 below provides a breakdown of the subregional wetland targets.

Table 4. New Wetland Habitat Targets

	Tidal Wetland	Freshwater Wetland	Riparian (Riverine)	Subtotal for Subregion
Target for Protection or Preservation				
North Santa Monica Bay	0	170	50	**220**
Upper Los Angeles River	0	110	70	**180**
Upper San Gabriel and Rio Hondo Rivers	0	420	280	**700**
Lower San Gabriel and Los Angeles Rivers	110	240	340	**690**
South Santa Monica Bay	100	60	60	**220**
Greater Los Angeles County	210	1,000	800	**2,000**
			Subtotal for Region	**4,000**
Targets for Enhancement				
North Santa Monica Bay	10	290	150	**450**
Upper Los Angeles River	0	820	700	**1,500**
Upper San Gabriel and Rio Hondo Rivers	0	1,300	1,200	**2,400**
Lower San Gabriel and Los Angeles Rivers	160	430	470	**1,100**
South Santa Monica Bay	160	260	140	**560**
Greater Los Angeles County	330	3,000	2,700	**6,000**
			Subtotal for Region	**12,000**
Targets for Restoration or Creation				
North Santa Monica Bay	30	40	20	**90**
Upper Los Angeles River	0	250	830	**1,100**
Upper San Gabriel and Rio Hondo Rivers	0	200	880	**1,000**
Lower San Gabriel and Los Angeles Rivers	330	290	330	**950**
South Santa Monica Bay	400	280	150	**830**
Greater Los Angeles County	760	1,100	2,200	**4,000**
			Subtotal for Region	**8,000**
			TOTAL WETLAND BENEFITS	**24,000**

For the GLAC Region, total wetlands to be benefited by protection, enhancement, restoration, or creation is 12,061 acres.

- The total target acreage for the protection of wetlands is 2,000 acres (200 acres of tidal wetlands, 1,000 acres of freshwater wetlands, and 800 acres of riverine wetlands).
- The total target acreage for enhancement of wetlands is 6,000 acres (300 acres of tidal wetlands, 3,000 acres of freshwater wetlands, and 2,700 acres of riverine wetlands).
- The total target acreage for restoration or creation of wetlands is 4,000 acres (800 acres of tidal wetlands, 1,000 acres of freshwater wetlands, and 2,200 acres of riverine wetlands).

The subregional targets vary across the region due to the differences in the extent of current wetlands and wetland losses. The target for protection was highest for Upper San Gabriel and Rio Hondo Rivers, although the Lower San Gabriel and Los Angeles Rivers target was nearly the same. Both of these subregional targets are around three times higher than targets for the other subregions.

For enhancement, Upper San Gabriel and Rio Hondo Rivers again had the highest target, followed by the Upper Los Angeles River and the Lower San Gabriel and Los Angeles Rivers, with South Bay and North Santa Monica Bay much lower.

For the restoration/creation targets, the Upper San Gabriel and Rio Hondo Rivers, Upper Los Angeles River, Lower San Gabriel and Los Angeles Rivers, and South Bay all have targets of about 1,000 acres. North Santa Monica Bay is dramatically lower, with a target of only 83 acres. The lower target for North Santa Monica Bay could be partially due to the fact that wetland loss for this subregion was not based on the same type of historical analysis as the other subregions, but more likely the lower target is because the region never had extensive tidal wetlands, such as the South Bay or Lower San Gabriel and Los Angeles Rivers, and the mountains are relatively undeveloped.

4.3 Habitiat Planning Targets – Uplands

Urbanization of the Greater Los Angeles County area has caused the loss of wetland and upland communities and the fragmentation of the remaining habitat blocks. The disruption of animal movement by habitat fragmentation presents problems for the region's wildlife ranging from direct mortality on roadways to the genetic isolation of fragmented populations. Protection of water-dependent or wetland resources depends not only on

managing the systems themselves, but also providing buffers to these systems and linkages through the landscape. Therefore, the provision of upland buffers and habitat linkages is important to maintaining habitat diversity.

An abundance of scientific research published since the 1970s documents the value of establishing, maintaining, and enhancing vegetated buffers along wetlands. Wetland buffers provide important benefits including water quality improvement, streambank stabilization, flood control, wildlife habitat, and groundwater recharge (USDA, 2003; Castelle et al., 1992; EOR, 2001; Wenger, 2000; Correll, 1996). Wetland buffers also provide significant social and economic benefits by improving aesthetics and increasing property values (Lovell and Sullivan, 2005; Qui et al., 2006). The effects of habitat fragmentation and mitigation by identifying and protecting areas that wildlife use for movement (i.e. the protection of wildlife linkages or wildlife corridors) has been identified more recently (Beier and Noss, 1998; Bennett, 1999; Haddad et al., 2003; Eggers et al., 2009; Gilbert-Norton, 2010).

A wetland buffer is the vegetated transition zone between an upland area and the aquatic ecosystem, and depending on the definition, the buffer may include portions of both riparian and upland zones. This unique position in the landscape enables buffers to mitigate certain impacts of upland land use on adjacent wetlands. In the absence of wetland buffers, these impacts are typically magnified and become more damaging.

Wetland buffers can vary in size based on factors such as adjacent land use, land ownership, topography, wetland area, and ecological functions. Generally speaking, buffers that are wider, longer, and more densely vegetated with herbaceous, shrub, and tree layers will provide more benefits than buffers that are narrower, shorter, and sparsely vegetated with only herbaceous species. Likewise, wildlife corridors can vary in size. Generally, however, they are larger or wider than buffer zones and provide essential life-support functions for the wildlife using the area.

Ridgelines, canyons, riparian areas, cliffs, swaths of forest or grassland, and other landscape or vegetation features can serve as wildlife linkages. Animals may also move across a relatively broad area rather than through a well-defined corridor, a type of wildlife linkage known as a diffuse movement area. Wildlife linkages are most effective when they connect (or are located within) relatively large and unfragmented areas referred to as habitat blocks (also called wildland blocks).

Areas adjacent to active stream channels can serve as buffers or corridors depending on their design. They can protect the stream and provide lateral connectivity between the streams and adjacent floodplains and uplands, as well as longitudinal connectivity up and down

stream. It is the goal of this plan to provide for the acquisition and/or restoration of these vitally important components of the landscape.

Recommendations on buffer width are provided in Table 5 (Center for Watershed Protection, 2005). Recommendations regarding a minimum width of 1,000 feet for wildlife linkages (corridors) are based on Principles of Wildlife Corridor Design (Bond, 2003). However, it is realized that achieving this recommended width may not be possible and pinch-points and breaks in a linkage may occur.

Table 5. Recommended Habitat Buffers

Function	Special Features	Recommended Minimum Width (feet)
Sediment reduction	Steep slopes (5-15%) and/or functionally valuable wetland	100
	Shallow slopes (<5%) or low quality wetland	50
	Slopes over 15%	Consider buffer width additions with each 1% increase of slope (e.g., 10 feet for each 1% of slope greater than 15%)
Phosphorus reduction	Steep slope	100
	Shallow slope	50
Nitrogen (nitrate) reduction	Focus on shallow groundwater flow	100
Biological contaminant and pesticide reduction	N/A	50
Wildlife habitat and corridor protection	Unthreatened species	100
	Rare, threatened, and endangered species	200-300
	Maintenance of species diversity	50 in rural area 100 in urban area
Flood control	N/A	Variable, depending on elevation of flood waters and potential damages

4.3.1.1 Methodology

For purposes of this plan, the targets for upland habitat acquisition and/or restoration were developed using the following definitions of upland areas:

- *Buffers and Buffer Zones* are 50- to 300-foot wide areas adjoining a wetland, channel, or upland linkage or wildlife corridor that is in a natural or semi-natural state. For wetland and riparian systems, a buffer is to provide a variety of other functions including maintaining or improving water quality by trapping and removing various non-point source pollutants from both overland and shallow subsurface flows, providing erosion control and water temperature control, reducing flood peaks, and serving as groundwater recharge points and habitat. Buffer zones occur in a variety of forms, including herbaceous or grassy areas, grassed waterways, or forested riparian buffer strips. They also may provide for limited passive recreation.
- *Wildlife Linkages or corridors* are wide areas of native vegetation that connect, or have the potential to connect, two or more large patches of habitat on a landscape or regional scale through which a species will likely move over time. The move may be multi-generational; therefore, a linkage should provide both wildlife connectivity and biological diversity. A Wildlife Linkage should be a minimum of 1,000 feet in width, vegetated with native vegetation, and have little or no human intrusion. The goal is to ensure north-south and east-west linkages to mitigate for climate change.

Because of the largely linear nature of buffers and linkages and the major difference being their width, these two areas were combined for the development of the upland target. The target is based on the acquisition and/or restoration of these two features. For the development of upland linkage and corridor targets, regional linkages that have been previously identified or potential linkages between identified habitat blocks (i.e., the County's Significant Ecological Areas and habitat designated as critical by the U.S. Fish and Wildlife Service) were proposed.

Figure 8 shows the general location of the identifies linkages along streams as red arrows and identified and potential upland linkages with black arrows.[17] The red arrows also locate areas where buffers are needed.

Figure 8. Habitat Linkages

For the purpose of developing the upland targets, polygons were drawn along the continuous length of the drainages and upland areas with a width of 1,000 feet. Acreage associated with these polygons was determined. This information is provided in Table 6 below. Existing open space and public and private land ownership was then mapped (Figure 9 and Figure 10)

[17] figure adapted from http://criticalhabitat.fws.gov/crithab

Table 6. Measurement of Potential Linkage Areas within the GLAC Region

Subregion	Linear Feet	Acres
North Santa Monica Bay	31,000	710
Lower San Gabriel and Lower Los Angeles Rivers	330,000	7,500
Upper San Gabriel and Rio Hondo Rivers	580,000	13,000
Upper Los Angeles River	520,000	12,000
South Bay	124,000	2,800
Greater Los Angeles County	**1,585,000**	**36,010**

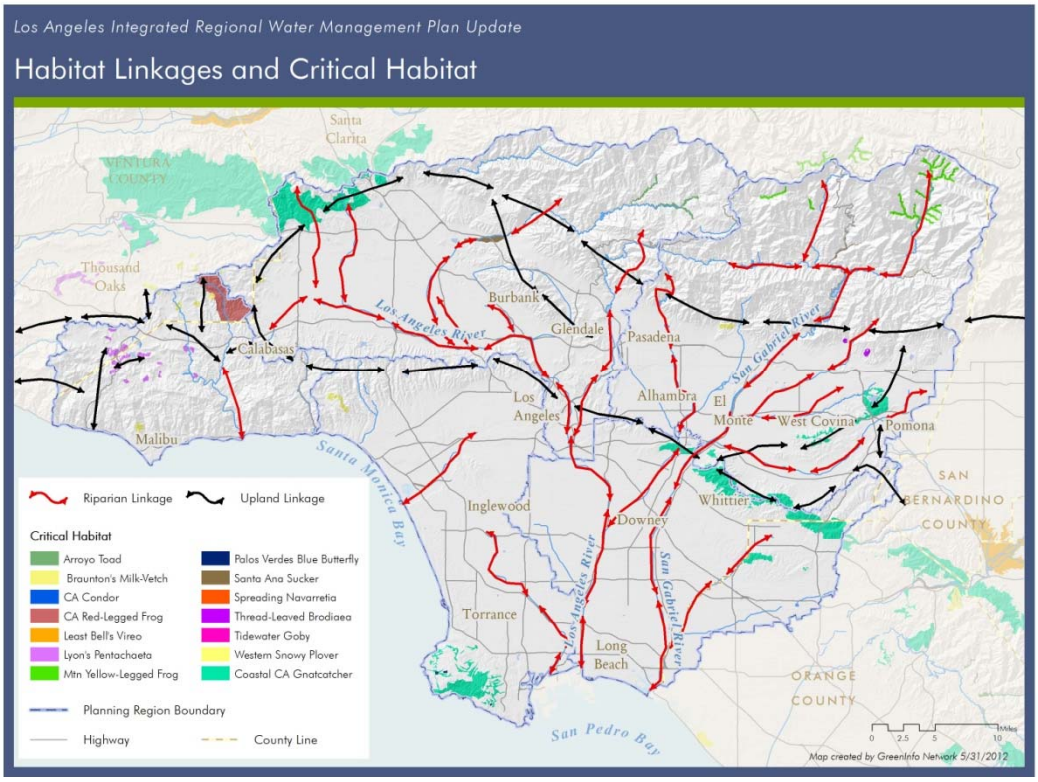

Figure 9. Habitat Linkages with USFWS Designated Critical Habitat Areas

Figure 10. Habitat Linkages with Land Ownership

4.3.1.2 Upland Targets

The target for the acquisition and/or restoration of uplands was then calculated by taking the calculated acreage value from Table 6 and multiplying it by 1.5. This simple formula recognizes that 1,000 feet is a minimum width for a linkage and some of the targeted lands within open space or public ownership. While it is recognized that this may not provide for an accurate measurement of habitat needs, it is a starting point for providing protection to the region's wetland systems.

The subregional targets for Upland Buffers are provided in Table 7. The provision of acquisition and/or restoration of these targets includes the provision of buffer zones.

Table 7. Subregional Upland Targets

Region	Upland Target (acres)
North Santa Monica Bay	1,000
Upper Los Angeles River	18,000
Upper San Gabriel and Rio Hondo Rivers	20,000
Lower San Gabriel and Lower Los Angeles Rivers	11,000
South Bay	4,000
Greater Los Angeles County	**54,000**

5. OPEN SPACE AND RECREATION

The over 9,000,000 people who live within the GLAC Region have access to more than 2,000 park and open space land parcels that offer a variety of public outdoor recreation opportunities. These lands, totaling approximately 101,000 acres, are owned and managed by a myriad of agencies and organizations. In addition, there are almost 300,000 acres of public multiple-use lands of the Angeles National Forest and the 2,249 school district sites that may also have playgrounds and other outdoor recreation amenities.

5.1 Recreation Overview

Recreation occurring in open space areas, whether it is passive or active or a combination of the two, improves physical health, mental health, social function, and youth development and provides environmental and economic benefits to people and communities.

The physical health benefits of open space projects that provide for outdoor recreation are well documented and include:

- Making the individual less prone to obesity
- Improving cardiovascular condition
- Diminishing the risk of chronic diseases
- Boosting the immune system
- Increasing life expectancy

The mental health benefits of outdoor recreation include:

- Alleviating depression
- Increasing positive moods by reducing stress and anxiety
- Increasing productivity
- Improving quality of life through elevated self-esteem, personal and spiritual growth, and overall life satisfaction

While more and more people are migrating to cities, the desire to still feel connected to the natural environment remains strong. From a sociological perspective, when people are connected to nature, it contributes to feeling less isolated and less focused on themselves. As a result, they may become more eager to form connections with their neighbors. A greater

sense of community and social ties emerge, as do increases in generosity, volunteerism, trust, and civic-mindedness. Loneliness, aggression, and crime may consequently decrease.

Recreational activities that include physical activity also help the aging population lead independent and satisfied lives, helping them remain mobile, flexible, and able to maintain their cognitive abilities.

Recreation assists in overall youth development. Recreation activities help develop decision-making skills, cooperative behaviors, positive relationships and empowerment. Young people explore strategies for resolving conflicts while recreating and playing. They learn to act fairly, plan proactively, and develop a moral code of behavior. This play also helps enhance their cognitive and motor skills. Individuals with more highly developed motor skills tend to be more active, popular, calm, resourceful, attentive and cooperative.

The open space resources of the GLAC Region provide exceptional learning opportunities for students. Case studies of educational facilities that adopted environment-based education as the central focus of their academic programs showed: 1) improvement in reading and mathematics scores; 2) better performance in science and social studies; 3) declines in classroom discipline problems; and 4) high level learning opportunities equalized among students.

Conserving resource lands is an investment in future economic development. Community image is enhanced. Businesses frequently relocate where their top talent wants to live, and that is most often in places of natural beauty. New homebuyers value trails and natural areas above any other amenity. When resource land is protected, the adjacent land often increases in value, with homes selling at a faster rate and for 10 to 20 percent return more than comparable homes without access to parks and open areas.

The California Legislature has summarized the need for parks and open space areas that provide outdoor recreation benefits, as presented in the box below:

Summary on the Need for Parks and Open Space Areas

The California Legislature has nicely summarized the need for parks and open space areas that provide outdoor recreation benefits by declaring:

- The demand for parks, beaches, recreation areas and recreational facilities, and historical resources preservation projects in California is far greater than what is presently available, with the number of people who cannot be accommodated at the area of their choice or any comparable area increasing rapidly. Further, the development of parks, beaches, recreation areas and recreational facilities, and historical resources preservation projects has not proceeded rapidly enough to provide for their full utilization by the public.
- The demand for parks, beaches, recreation areas and recreational facilities, and historical resources preservation projects in the urban areas of our state is even greater since over 90 percent of the present population of California reside in urban areas; there continues to be a serious deficiency in open space and recreation areas in the metropolitan areas of the state; less urban land is available, costs are escalating, and competition for land is increasing.
- There is a high concentration of urban social problems in California's major metropolitan areas which can be partially alleviated by increased recreational opportunities.
- California's coast provides a great variety of recreational opportunities not found at inland sites; it is heavily used because the state's major urban areas lie, and 85 percent of the state's population lives, within 30 miles of the Pacific Ocean; a shortage of facilities for almost every popular coastal recreational activity exists; and there will be a continuing high demand for popular coastal activities such as fishing, swimming, sightseeing, general beach use, camping, and day use. Funding for the acquisition of a number of key coastal sites is critical at this time, particularly in metropolitan areas where both the demand for and the deficiency of recreational facilities is greatest. Development pressures in urbanized areas threaten to preclude public acquisition of these key remaining undeveloped coastal parcels unless these sites are acquired in the near future.
- Increasing and often conflicting pressures on limited coastal land and water areas, escalating costs for coastal land, and growing coastal recreational demand require, as soon as possible, funding for, and the acquisition of, land and water areas needed to meet demands for coastal recreational opportunities.
- Cities, counties, and districts must exercise constant vigilance to see that the parks, beaches, recreation areas and recreational facilities, and historical resources they now have are not lost to other uses; they should acquire additional lands as such lands become available; they should take steps to improve the facilities they now have.

Source: CA Public Resource Code 5096.142

The parks and open spaces of the GLAC Region are well used, operating at capacity, and in some cases the recreation demand simply outstrips the supply.

The landscape character of these recreation lands ranges from highly structured parks and recreation sites within urban areas, to regional parks that may offer a combination of developed active and undeveloped passive recreation use, to relatively natural habitat areas and wildlands that contain trail-related recreation with minimal development.

Figure 11 illustrates the following for the GLAC Region:

- Existing developed urban park and recreation areas
- Habitat areas and wildlands
- School sites
- Existing greenways and those subject to sea-level rise
- Planned greenway concepts
- Existing and planned County trail routes
- Existing urban park and recreation areas

Appendices G-K provide this information for the subregions.

Trail routes are illustrated on Figure 11 and were identified in the draft Los Angeles County 2035 General Plan. Most of the identified urban greenways include multiple-use trails that also serve transportation functions. Most of these are inter-city proposals, and thus could be considered regionally significant. In addition, many of the 90 cities within the GLAC Region, such as the cities of Malibu, Monrovia, and Pasadena, have proposed or adopted local trail plans for recreation and transportation access within their jurisdictions. In many cases, these trails tie into and complement the county-wide trail network. As an ongoing process, once adopted, some or all of these local trail routes should be added to the IRWMP data base. Those trail routes that branch from the regional trail system and create loop opportunities for recreation, or local trails that directly connect urban areas with the regional trail system should be specifically identified and included in the regional recreation targets.

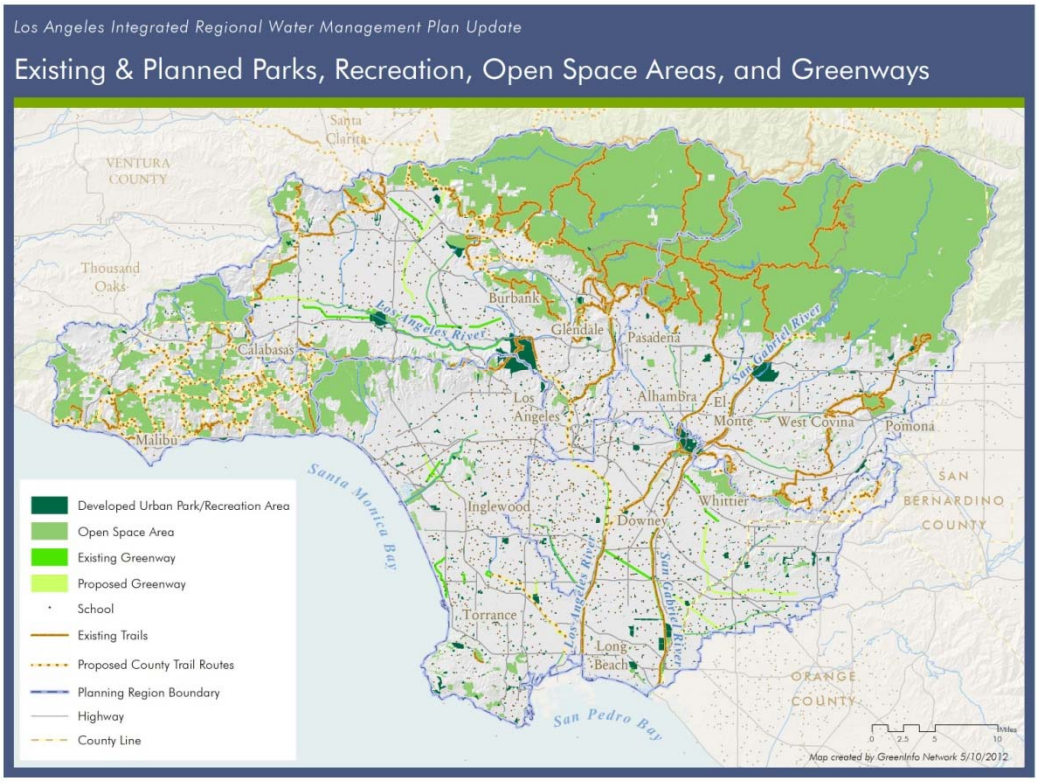

Figure 11. Existing and Planned Parks, Recreation Areas, Open Spaces Areas, and Greenways

Appendix E lists individual parcels, by subregion, that are accessible to the public for outdoor recreation and environmental education purposes and categorizes them by developed park and recreation areas, open space lands (including National Forest Lands), greenways, and other public lands such as historic sites, cemeteries, botanic gardens, and other similar spaces. While such inventories of existing local and regional park and recreation lands exist, there is no complementary information for land areas at school sites used for outdoor recreation and environmental education.

Table 8 summarizes the existing acreages of these available recreation lands for each of the five GLAC Subregions. Also provided are existing (2010) and projected (2035) populations within each subregion.

Table 8. Existing Recreation Lands

Subregion	Developed Urban Park and Recreation Area (acres)	Open Space Lands			Greenway (acres)	Other / Misc (acres)	Existing <u>Population</u> Projected Population
		Riparian / Upland / Wetland (acres)	Beach / Estuary (acres)	National Forest (acres)			
North Santa Monica Bay	250	57,000	370	0	0	0	<u>107,000</u> 122,000
Upper Los Angeles River	4,600	29,000	0	120,000	430	560	<u>2,270,000</u> 2,590,000
Upper San Gabriel River and Rio Hondo	3,100	14,000	0	178,000	2,100	1,400	<u>1,520,000</u> 1,740,000
Lower San Gabriel and Lower Los Angeles Rivers	7,000	4,700	390	0	550	50	<u>3,030,000</u> 3,460,000
South Santa Monica Bay	3,900	19,000	1,100	0	70	240	<u>2,690,000</u> 3,080,000
Total Acres in Region	**19,000**	**124,000**	**1,800**	**298,000**	**3,200**	**2,300**	**<u>9,630,000</u> 10,990,000**

(1) Existing populations based on 2010 census data. Population projections based on SCAG data indicating that for cities within the GLAC area an average population increase of 5.9% between 2008 and 2020, or approximately 5% when scaled from 2010, then 8.7% between 2020 and 2035 could be anticipated.

5.1.1 Types of Open Space and Recreation and Environmental Education Opportunities

A wide range of outdoor recreational and environmental educational opportunities exist. No two park or recreation areas are the same. There is no simple system to classify the variability of development that exists. Open space areas, depending on their proximity to urban populations and their physical characteristics, may be used for a number of active or passive recreational purposes. The following describes some of the major types of recreational open space areas found in the GLAC Region.

Developed Park and Recreation Areas: Developed lands may consist of neighborhood parks, community parks, and sports complexes that are generally less than 20 acres in size. Typically, these parks provide for a combination of active and passive recreation. Golf courses are another type of developed urban recreation area that may range in size from 60 acres to 120 acres with professional courses up to about 250 acres. Though highly developed, golf courses can also include islands of undisturbed open space lands that provide some habitat value as part of their setting.

Greenways: These are linear areas that are generally located around rivers and creeks but sometimes along countywide trail routes, major utility corridors (such as transmission lines), or abandoned rail routes to provide for a wide variety of trail-related recreation.

Table 9 identifies those major rivers, creeks, and channels and other areas within the GLAC Region that have been identified by local communities. These linear recreation lands would typically connect a series of urban park and recreation areas. They also may connect natural landscape components, including wetland, riparian, and upland associations. Countywide trail routes could also be considered in this category as they may connect major parks or open space areas such as the Santa Monica Mountains with the San Gabriel Mountains. Greenways provide opportunities for passive recreation. There are no specific park standards related to greenways, as these are generally opportunities afforded by the landscape setting.

Table 9. Existing and Planned Linear Urban Greenways / Parkways / Bikeways with Class 1 Multiple-use Trails

	Linear Urban Greenways / Parkways / Bikeways	North Santa Monica Bay	Upper Los Angeles River	Upper San Gabriel River and Rio Hondo	Lower San Gabriel and Los Angeles Rivers	South Santa Monica Bay
1	Los Angeles River					
2	Arroyo Seco					
3	Bell Creek Greenway					
4	Tujunga Wash					
6	Burbank Western Channel					
8	San Gabriel River					
9	Compton Creek Regional Garden Park					
10	Rio Hondo and San Gabriel (Emerald Necklace)					
11	Santa Anita Wash					
12	Eaton Wash					
13	Rubio Wash					
14	Alhambra Wash					
15	Coyote Creek					
16	Carbon Creek					
17	Brae Creek					
19	La Canada Verde Creek					
20	Fullerton Creek					
21	Whittier Greenway Trail					
22	Walnut Creek					
23	San Jose Creek					
25	Ballona Creek					
26	Sepulveda Channel					
27	Arroyo la Cienaga					
28	Dominguez Channel					
29	Long Beach Greenbelt					
30	Santa Monica Beach and South Bay Bike Path					
31	Shoreline Pedestrian Bikeway					
32	Duarte Bike Trail					
33	Metro Orange Line Bike Path					
34	Chandler Bikeway					
35	Mission City Bike Trail					

Habitat Areas or Wildlands: The majority of these resource lands are managed by cities, the County, special districts, and joint powers authorities for their natural qualities. Developed facilities generally are limited and focus on safe public access (staging areas, trails, limited visitor support facilities, wildlife sanctuaries, nature centers, and natural areas) for outdoor passive recreation and environmental education. In some cases open space recreation lands may be a component of a city-wide or regional park, a golf course, or greenway.

Schools: Most secondary or primary schools or institutions of higher learning are designed as a park-like setting. Many have playgrounds and athletic fields associated with them. These sites are sometimes not included in park and recreation inventories. School grounds typically provide opportunities for active recreation, such as playgrounds and sports fields.

Angeles National Forest: The mission of the United States Department of Agriculture, Forest Service, the agency that administers the Angeles National Forest, is to achieve quality land management under the sustainable multiple-use management concept to meet the diverse needs of people. To the millions of Los Angeles-area residents within the GLAC Region and to visitors from all over the world, the Angeles National Forest provides a variety of outdoor recreation opportunities.

5.1.2 Open Space, Park, and Recreation Agencies

There are over 140 agencies that provide public outdoor recreation and environmental education opportunities within the region, not including schools. These include federal, state, regional, county, city park departments, special recreation and park districts, open space districts, joint power authorities, water agencies, and land conservation organizations.

5.1.2.1 Regional Agencies

A list of federal, state, private, and special districts and associations that provide regional recreation within the region is found in Table 10.

Table 10. Federal, State, County, Special District, and Private Organizations Providing Public Recreation Opportunities within the Region

Federal Agencies
United States Army Corps of Engineers
United States Bureau of Land Management
United States Coast Guard
United States Forest Service
United States National Park Service
State Agencies
California Department of Fish and Game
California Department of Parks and Recreation
California State Coastal Conservancy
California State Lands Commission
Santa Monica Mountains Conservancy
University of California
Counties
Los Angeles
Orange
Ventura
Special Districts
Conejo Open Space Conservation Agency
Conejo Recreation and Park District
Hawthorne School District
Kinneloa Irrigation District
Las Virgenes Municipal Water District
Los Angeles County Flood Control District
Metropolitan Transportation Authority
Metropolitan Water District of Southern California
Miraleste Recreation and Park District
Mountains Recreation and Conservation Authority
Native Habitat Preservation Authority
Puente Hills Habitat Authority
Rancho Simi Open Space Conservation Agency
Rancho Simi Recreation and Park District
Ridgecrest Ranchos Recreation and Park District
Rose Hills Memorial Park Association

Rossmore Community Services District
San Dimas-La Verne Recreational Facilities Authority
San Gabriel County Water District
San Gabriel River Water Committee
Sanitation Districts of Los Angeles County
South Bay Cities Sanitation District
Watershed Conservation Authority
Westfield Recreation and Park District
Wilmington Public Cemetery District
Other
El Monte Cemetery Association
Fond Land Preservation Foundation
Glendora Community Conservancy
Huntington Library and Botanical Gardens
Mountains Restoration Trust
Palos Verdes Peninsula Land Conservancy
Pasadena Cemetery Association
Roosevelt Memorial Park Association
San Gabriel Cemetery Association
Sierra Madre Cemetery Association
Trust for Public Land
Amerige Heights Community Association

5.1.2.2 Municipal Park and Recreation Departments / Districts

A list of municipal agencies that provide neighborhood and community parks within the region is found in Table 11.

Table 11. Cities Providing Public Recreation Opportunities within the Region

Cities			
Agoura Hills	Cypress	Lawndale	Rolling Hills
Alhambra	Diamond Bar	Lomita	Rosemead
Anaheim	Downey	Long Beach	San Dimas
Arcadia	Duarte	Los Alamitos	San Fernando
Artesia	El Monte	Los Angeles	San Gabriel

Cities			
Azusa	El Segundo	Lynwood	San Marino
Baldwin Park	Fullerton	Malibu	Santa Fe Springs
Bell Gardens	Gardena	Manhattan Beach	Santa Monica
Bell	Glendale	Maywood	Seal Beach
Bellflower	Hawaiian Gardens	Monrovia	Sierra Madre
Beverly Hills	Hawthorne	Montebello	Signal Hill
Brea	Hermosa Beach	Monterey Park	South El Monte
Buena Park	Huntington Park	Norwalk	South Gate
Burbank	Inglewood	Palos Verdes Estates	South Pasadena
Calabasas	Irwindale	Paramount	Temple City
Carson	La Canada Flintridge	Pasadena	Thousand Oaks
Cerritos	La Habra Heights	Pico Rivera	Torrance
Chino Hills	La Habra	Placentia	Walnut
Claremont	La Mirada	Pomona	West Covina
Commerce	La Palma	Rancho Palos Verdes	West Hollywood
Compton	La Puente	Redondo Beach	Westlake Village
Covina	La Verne	Rolling Hills Estates	Whittier
Culver City	Lakewood		

6. OBJECTIVES AND PLANNING TARGETS FOR RECREATION

The following sections describe the 20-year planning targets that were developed for the recreation section of the OSHARP through the collaborative process described in Section 1.4. These targets are intended to serve as a quantitative measure of progress towards the overall IRWMP recreation goals, as well as to guide project proponents in effectively incorporating recreation into proposed IRWMP projects.

6.1 Objectives

General recreation objectives are to:

- Assist in providing urban neighborhood and community park areas that are accessible to underserved populations (and DAC communities) based on average of 4 acres per 1,000 population.
- Enhance existing and planned greenways as shown in Table 11 and regional trails within open space areas with outdoor recreation and environmental educational opportunities.
- Create or assure the preservation of 6 acres of open space lands per 1,000 population that are available for passive public outdoor recreation and education purposes. These lands may incorporate: all or a portion of greenways; county, state, or national parks; US Forest Service lands; regional trails routes; and/or dedicated open space areas or any jurisdiction.

6.2 Recreation Planning Targets

6.2.1 Methodology

The methodology used for establishing recreation targets focuses on defining and identifying underserved communities where the supply of recreation opportunities does not meet demand based on community standards. This methodology is described in detail in Appendix D.

6.2.2 Recreation Targets

Figure 12 presents targets for development of new urban park and recreation areas developed using the methodology described in Appendix D. Included in these targets is

acreage for greenways that, if developed for recreation purposes, provides equivalent recreation benefits to some aspects of neighborhood and community parks. (Appendix F lists existing school sites and developed park and recreation areas).

A number of additional factors need to be considered during the process to implement these targets. These factors are largely based on the type of facility being developed. For neighborhood or community parks that provide active and/or passive recreation, the order of priority should be as follows:

- High Priority: projects within urban areas with less than 1 acre of available park and recreation area per 1,000 population.
- Moderate Priority: projects within urban areas with between 1 to 3.9 acres of available park and recreation area per 1,000 population.
- Low Priority: projects within urban areas with greater than 4 acres of available park and recreation area per 1,000 population.

Recreation targets are for year 2035.

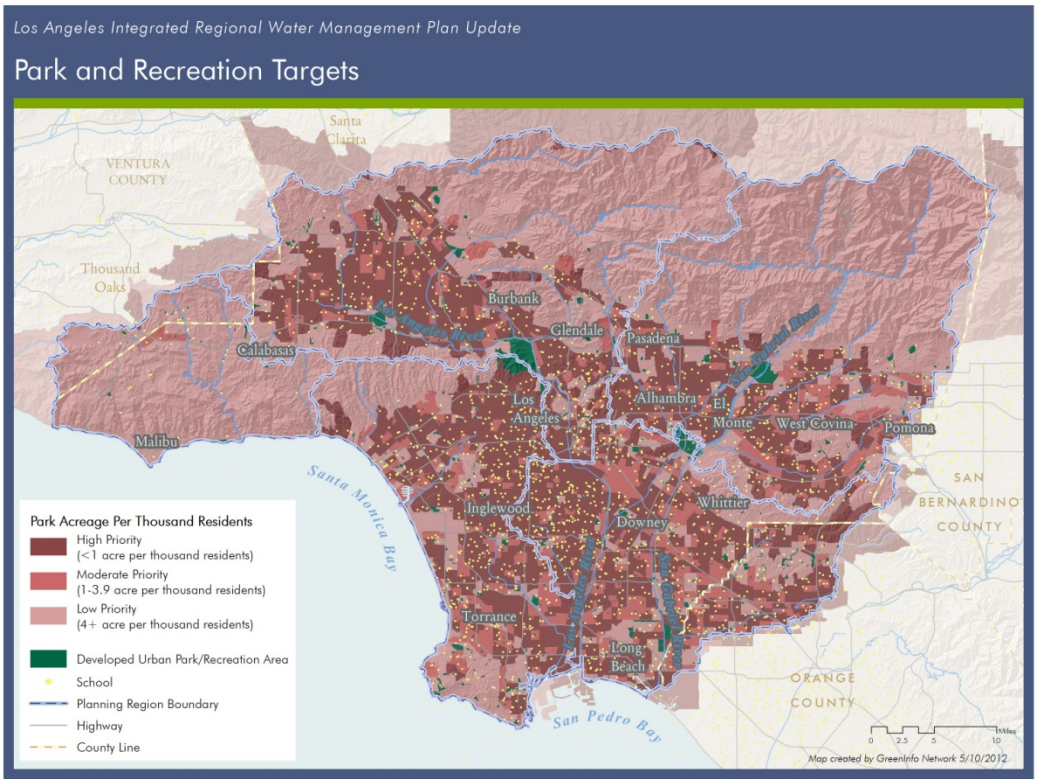

Figure 12. Park and Recreation Targets (GLAC Region)

Table 12 presents targets for the GLAC Region for protecting and developing open space areas for public recreation. These targets provided needed open space areas for public recreation. These targets are based on current and projected (2035) populations.

Table 12. New Recreation Targets for Open Space Areas for Existing Populations

GLAC Region	Existing Open Space Lands Available for Recreation (1) (acres)	Existing Population / Projected Population(2)	Standards (3) (acres)	Targets (acres)
Excluding Angeles National Forest Lands	13,000	**9,630,000** **10,990,000**	58,000 65,926	45,000 53,000
Including Angeles National Forest Lands	27,000	**9,630,000** **10,990,000**	58,000 66,000	30,000 38,000

(1) Open space lands indicated assume that approximately 5% of the total open space land acreage is accessible and developed for recreation access and/or outdoor recreation purposes. This would include staging areas, trailhead enhancements, trails, and associated visitor serving facilities for recreation and outdoor education.

(2) Existing populations based on 2010 census data. Population projections based on SCAG data indicating that for cities within the GLAC area an average population increase of 5.9% between 2008 and 2020, or approximately 5% when scaled from 2010, then 8.7% between 2020 and 2035 could be anticipated.

(3) Based on 6 acres / 1000 population. Open Space is a regional amenity and is not defined by sub-region.

Based on existing standards there is a need for approximately 16,000 acres of additional urban parkland (neighborhood and community parks) within the region. In addition, there is a need for approximately 30,000 to 45,000 acres of additional regional park and open space lands available for recreation. Based on current population projections for the region, this need will rise by the year 2035 to approximately 22,000 acres of urban parkland and between 38,000 and 53,000 acres of regional park and open space lands.

Figure 13 illustrates on the following areas on a regional basis:

- Existing Open Space Areas
- Existing River and Creek Greenways

- Other Greenways
- Greenways planned but not completed
- Planned County trail routes

Figures in Appendices G-K illustrate these areas on a subregional basis.

For resource recreation areas that provide passive recreation or environmental education opportunities, the order of priority should be as follows:

- High Priority: projects more than a 3 miles from an existing open space area or greenway or projects that help complete the County trail system
- Moderate Priority: projects between 1 and 3 miles from an existing open space area or greenway
- Low Priority: projects from between 0 and 1 mile from an existing open space area or greenway

Lands within the County trail system should also be considered as a high priority. This system provides for passive recreation opportunities for both near-to-home recreation and for visitors to southern California from throughout the world. An important justification, from a recreation perspective, for additional open space land acquisition and conservation that will serve the recreation interests of both residents within the GLAC Region and visitors from outside the region is tied to the planned Los Angeles County regional trail system. Completion of this system will require significant land and/or easement acquisition; therefore, the County trail system is also identified as high priority.

There also are other opportunities to accommodate local and area-wide recreation demand for resource lands. These opportunities are found in undeveloped but privately held parcels that, if in public ownership, would provide a direct link between the region's urban populations to existing regional resource lands, including those within the Santa Monica Mountains, the Angeles National Forest, and other regional-serving open space areas such as the Puente or San Jose Hills. No priority is proposed for these resource areas.

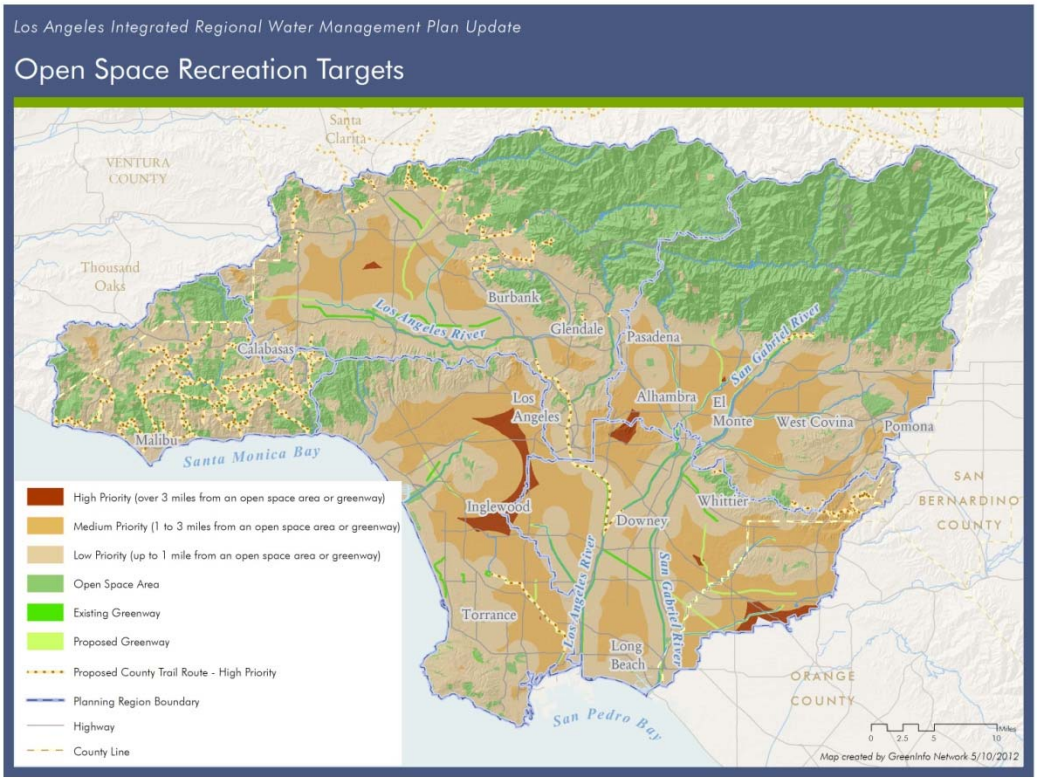

Figure 13. Open Space and Recreation Targets (GLAC Region)

7. OPEN SPACE AND ECOSYSTEM SERVICES

The benefits of open space lands within the region, whether in public or private ownership, are numerous. Evaluation of habitat and recreation benefits only as they are related to water management practices results in an isolated perspective that does not nearly demonstrate the full integration of societal benefits attributable to open space. Additionally, the physical benefits of open space are complemented with economic benefits that open space provides to those who live near open space lands and to entire communities. There are numerous models and studies that have demonstrated the economic values of open space preservation. The justification for the preservation and maintenance of open space lands therefore cannot be solely related to any single benefit but should be viewed as the cumulative effect of many benefits, the management of water resources being only one of them.

Ecosystem services provide one approach for framing the values and benefits of open space. Ecosystem services are the benefits people obtain from ecosystems. The Millennium Ecosystems Assessment (2005) has presented a scheme for classifying ecosystem services using four general categories:

- *Provisioning services* such as food, water, timber, and fiber
- *Regulating services* that affect climate, floods, disease, wastes, and water quality
- *Cultural services* that provide recreational, aesthetic, and spiritual benefits
- *Supporting services* such as soil formation, photosynthesis, and nutrient cycling

Wetlands provide services in all four categories, as is shown in Table 13 (Vymazal, 2011). Wetland ecosystems reduce flood damage to human communities, sequester carbon, and reduce pollutants in runoff entering streams (Brauman et al., 2007). Wetlands support consumptive uses such as hunting and fishing as well as non-consumptive uses such as bird watching. Zedler and Kersher (2008) consider four of the many functions performed by wetlands to have global significance and value as ecosystem services: biodiversity support, water quality improvement, flood abatement, and carbon management.

Table 13. Examples of Services Provided by Wetlands, Organized According to the Millennium Ecosystem Assessment Framework.

Provisioning Services

Food	Production of fish, wild game, fruits, grains
Fresh water	Storage and retention of water for domestic, industrial and agricultural use
Fiber and fuel	Production of logs, fuel-wood, peat, fodder
Biochemical	Extraction of medicines and other materials from biota
Genetic materials	Genes for resistance to plant pathogens, ornamental species, and so on
Regulating Services	
Climate regulation	Source of and sink for greenhouse gases; influence local and regional temperature, precipitation, and other climate processes
Water regulation (hydrological flows)	Groundwater recharge/discharge; flow attenuation
Water purification and waste treatment	Retention, recovery, and removal of excess nutrients and other pollutants
Erosion regulation	Retention of soils and sediments
Natural hazard regulation	Food control; storm protection
Pollination	Habitat for pollination
Cultural Services	
Spiritual and inspirational	Source of inspiration; many religions attach spiritual and religion values to aspects of wetland ecosystems
Recreational	Opportunities for recreational activities
Aesthetic	Many people find beauty or aesthetic value in aspects of wetland ecosystems
Educational	Opportunities for formal and informal education and training
Supporting Services	
Soil formation	Sediment retention and accumulation of organic matter
Nutrient cycling	Storage, recycling, processing, and acquisition of nutrients

Upland habitats also provide a wide range of ecosystem services. As with wetlands, uplands provide biodiversity support and support consumptive uses such as hunting as well as non-consumptive uses such as recreation and education.

The following sections discuss some of the ecosystem services provided by open space lands.

7.1 Providing Fresh Water

The GLAC Region is diverse in its hydrology and geology. As shown in Figure 14, the general flow of water is from north to south; however, geologic conditions can force flows

in an east-west direction and in some areas allow for aquifer recharge. When overlaying existing and future open space projects and programs with the Region's hydrologic and geologic characteristics, some generalized conclusions can be made. For the purposes of the GLAC IRWMP planning process, these conclusions focus on the facts that open space projects, if appropriately designed and sited, have the ability to influence groundwater levels, improve surface water quality, and improve flood management by either attenuating storm flows or by being developed where unmet drainage needs exist, possibly removing the need altogether.

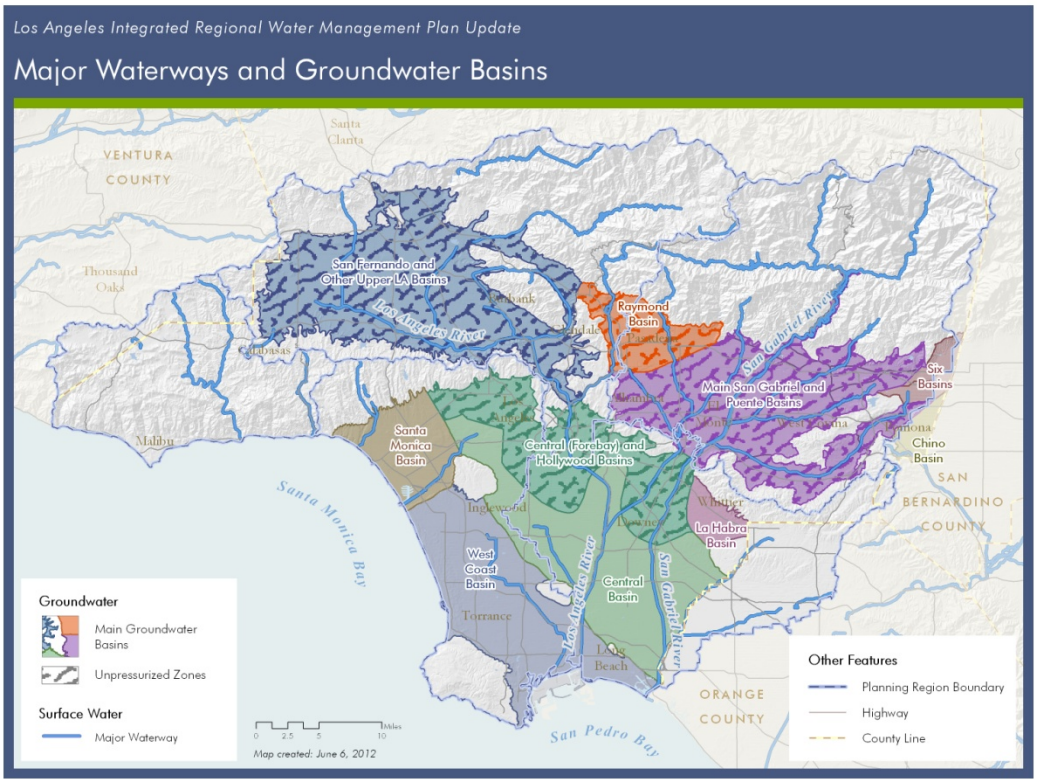

Figure 14. Major Waterways and Groundwater Basins (GLAC Region)

Infiltration and Potential Groundwater Recharge: Preserving or enhancing infiltration for potential groundwater recharge improves water supply reliability and overall water quality. When open space projects are treated as multiple-use, best management practices (BMP) can be incorporated to achieve multiple water management objectives.

Quantifying the water supply benefit that could be achieved by a proposed project will be a necessary component of project prioritization and meeting water supply targets. To assist planners in this effort, a spreadsheet tool was developed that provides an estimate of annual

average infiltration potential of projects using regional climatic data and a generalized hydraulic model. A background for this tool is presented in Appendix L, and the spreadsheet will be made available to planners via the GLAC IRWMP website.

While this tool can provide a rough estimate for planners, it should be understood that it is for planning purposes only. To ensure that the estimated water supply and water quality benefits are realized, professional design assistance should be employed.

Water Conservation: Designing open space projects with water conservation practices, such as appropriate plant palettes, efficient irrigation design, and use of recycled water, can help reduce demands on the region's potable water supplies. Water conservation practices should apply to all designed landscapes within the GLAC Region. For any developed park or outdoor recreation area, demands on water supply are directly affected by planting and irrigation design practices. New parks could be expected to use BMPs to minimize water demand. Additionally, all developed park and recreation areas, like any capital improvement, have a life cycle. Therefore, there remains great opportunity with many older sites that, with rehabilitation and BMPs, further reduction in demands on water supply is possible.

7.2 Improving Water Quality

Natural habitats can improve water quality by capturing and removing pollutants, including nutrients and pathogens. Wetlands are particularly renowned for improving water quality. Some pollutants, particularly metals and many organic compounds, are removed when the suspended particles to which they are adsorbed settle out in wetlands. Some pollutants are transformed by processes occurring within wetlands, such as denitrification for the removal of excess nitrogen. Other pollutants, including bacteria, are deactivated by solar radiation while being retained in wetlands. The water quality improvement services of natural wetlands are often exploited when wetlands are constructed specifically to treat wastewater (including stormwater)

In addition to water quality improvement by natural habitats, designed habitats can also improve water quality. Requiring BMPs to capture wet and dry weather flows from on-site and potentially off-site improves stormwater management and helps to keep pollutants out of receiving water bodies. This would be applicable to both stormwater and irrigation water runoff. BMPs could include use of rain gardens, water quality swales, and/or stormwater retention/detention basins to enhance capture rates, filter and improve water quality and, when appropriately sited, enhance groundwater levels.

These BMPs will contribute to meeting water quality targets for the region. Water quality targets are expressed as an overall capacity (volume) of these systems throughout the region. This capacity is based on systems designed to capture the ¾-inch storm. While additional volume could be provided and may achieve additional water quality benefits, only the volume needed to capture the ¾-inch storm can be counted towards water quality targets. The spreadsheet tool described in Section 7.1 (with additional background provided in Appendix L) also has the capacity to estimate potential to contribute to water quality targets for a proposed BMP. As stated above, this tool is to be used for planning purposes only, and a design professional should be employed to ensure the estimated benefits are achieved.

Also important to note is the consequences to water quality should open spaces be lost to development. While building codes require some level of treatment of the increased pollution generated due to the development, developers are not required to treat existing pollution from tributary areas. When open spaces are maintained with a multiple benefit approach, they not only generate less pollution than developed lands, but are capable of improving water quality from off-site. Thus, increased development on previously open space lands leads to an overall degradation in water quality.

7.3 Flood Risk Reduction

Managing storm events by retaining significant volumes of rainfall before it becomes runoff can assist in reducing demands on the storm drain network. As well, developing open space projects that are able to flood, and potentially placing them in areas that are repeatedly inundated, has the potential to reduce the GLAC Region's overall risk to flooding.

7.4 Preserving Biodiversity

Open space projects provide a wide variety of ecological benefits, including the conservation benefits of providing habitat to native species and the protection and enhancement of biodiversity.

Virtually all developed urban park and recreation areas include some form of green space. Depending on the percentage of vegetated area, vegetative species present, overstory canopy, cover density, and forage opportunity, each of these areas could enhance urban wildlife habitat values and species diversity. The larger the urban park, recreation area, or golf course, the greater the opportunity for hosting a variety of resident species.

The most obvious habitat conservation benefits of open space projects accrue to aquatic and upland habitats and species. Although the Los Angeles area today, especially its urban areas, seems largely devoid of aquatic ecosystems, historically the region supported an abundance

of diverse aquatic habitats (Rairdan 1998, Stein et al. 2007, Dark et al. 2011). From an ecological perspective, riparian areas are critically important in the semi-arid and arid southwest United States, where they provide rare, mesic habitat corridors and contribute disproportionately to regional biodiversity (Knopf et al. 1988). For example, although riparian habitats comprise only one percent of the land area of the Santa Monica Mountains, they are the primary habitat for nearly 20 percent of the native plant flora (Rundel and Sturmer 1998). Management of these vital habitats is especially critical because 95-97 percent of the original riparian habitat in southern California has been lost (Faber et al. 1989).

The conservation value of aquatic ecosystems has increased as the region developed and aquatic habitats were lost and/or degraded. Habitat modification, weedy exotic species introductions, stream channel modification, and heavy recreational use all appear to lead to sharp reductions in plant species diversity (Rundel and Sturmer 1998). These ecosystems provide habitat for a large number of sensitive species including the southwestern willow flycatcher (*Empidonax traillii extimus*), least Bell's vireo (*Vireo bellii pusillus*), arroyo toad (*Bufo californicus*), California red-legged frog (*Rana draytonii*), and western pond turtle (*Emys [Actinemys] marmorata*) among others (Abell 1989, Jennings and Hayes 1994, Thomson et al. 2012).

Besides the obvious effects of habitat destruction and modification, aquatic ecosystems in the region have been influenced by many anthropogenic factors. Hydromodification through changes in the impervious surface of watersheds (Hawley and Bledsoe 2011) or stream bank alteration can have significant ecological effects (White and Greer 2006), often called the "urban stream syndrome" (Walsh et al. 2005). Altered stream flow can influence many taxa, including fish, macroinvertebrates, and amphibians (Poff and Zimmerman 2010). Changes in water quality can also have negative effects on aquatic communities (Paul and Meyer 2001).

7.5 Providing Carbon Management

Wetlands are particularly important in carbon management because they can sequester significant amounts of carbon (Chmura et al. 2003, Bridgham et al. 2006). This is particularly true in saltwater wetlands, whose high productivity results in some of the highest carbon sequestration rates of all habitats. Moreover, salt marshes do not emit methane, which is emitted at relatively high rates by some freshwater wetlands. Because methane is a potent greenhouse gas, the greenhouse gas mitigation potential for salt marshes

is generally higher than for freshwater wetlands. Nonetheless, riparian forests sequester substantial amounts of carbon in their aboveground biomass.

7.6 Providing Aesthetic and Cultural Values

Wetlands provide a variety of aesthetic and cultural values. Wetlands are important tourism destinations because of their aesthetic values and high biodiversity (Millenium Ecosystem Assessment 2005b). The many unique plants and animals, including a disproportionate number of endangered species, make wetlands valued places for viewing birds and other wildlife and plants. Wetlands are also popular for a number of recreational activities, including fishing and boating, although in GLAC these activities are largely restricted to estuaries and lakes or reservoirs. Wetlands provide opportunities for education and scientific research. Wetlands provide aesthetic values to people who appreciate natural features. This value is particularly important in urbanized settings such as much of GLAC, where wetlands provide views and open space that provide a relief from urban environments. Similarly, wetlands provide spiritual and inspirational services, where personal feelings and well-being can be supported (Millenium Ecosystem Assessment 2005b).

Many of these same services are provided by non-wetland habitats. Transitional and upland habitats provide many recreational activities, including hiking and biking. Transitional and upland habitats also provide important aesthetic values and spiritual and inspirational services. Many people value the "sense of place" associated with recognized features of their environment, including aspects of the ecosystem (Millenium Ecosystem Assessment 2005a).

As discussed earlier, open space includes a continuum from natural habitats valued largely for habitat to man-made habitats valued largely for recreation. The aesthetic and cultural services vary similarly along a continuum, spiritual/inspirational and aesthetic services predominating at the natural end of the continuum, and recreational services predominating at the other.

8. POTENTIAL SURFACE WATER AND GROUNDWATER RESOURCES MANAGEMENT BENEFITS OF OPEN SPACE PROJECTS

As described above, the benefits of open space for habitat and recreation are many and include ecosystem and cultural services such as biodiversity and public health, yet these are difficult to accurately quantify. A method was developed for quantifying water quantity and water quality benefits for individual projects; however, applying this to the entire region without specific proposed projects presents obvious challenges. Regardless, estimating and quantifying these benefits on a regional scale have been attempted in recently completed and currently ongoing studies. The methodology is described in detail in Appendix M, and the results a presented below.

8.1 Stormwater Infiltration and Potential Groundwater Recharge Benefits

Results from the methodology described in Appendix M show that there is a potential to recharge 47,000 AF/yr throughout the GLAC Region if the target habitat and recreation lands in areas with high recharge potential are developed and/or enhanced with BMPs (Table 14). Figures 15 and 16 show recreation and habitat targets with potential recharge benefits.

Table 14. Infiltration and Potential Groundwater Recharge Benefits from Open Space Projects

	Potential Groundwater Recharge Capacity (AF/yr)		
	Habitat	**Recreation**	**Total**
North Santa Monica Bay	-	-	-
Upper Los Angeles River	2,000	19,000	21,000
Upper San Gabriel and Rio Hondo	3,000	15,000	18,000
Lower San Gabriel and Los Angeles River	1,000	5,000	6,000
South Santa Monica Bay	-	2,000	2,000
Greater Los Angeles County	**6,000**	**41,000**	**47,000**

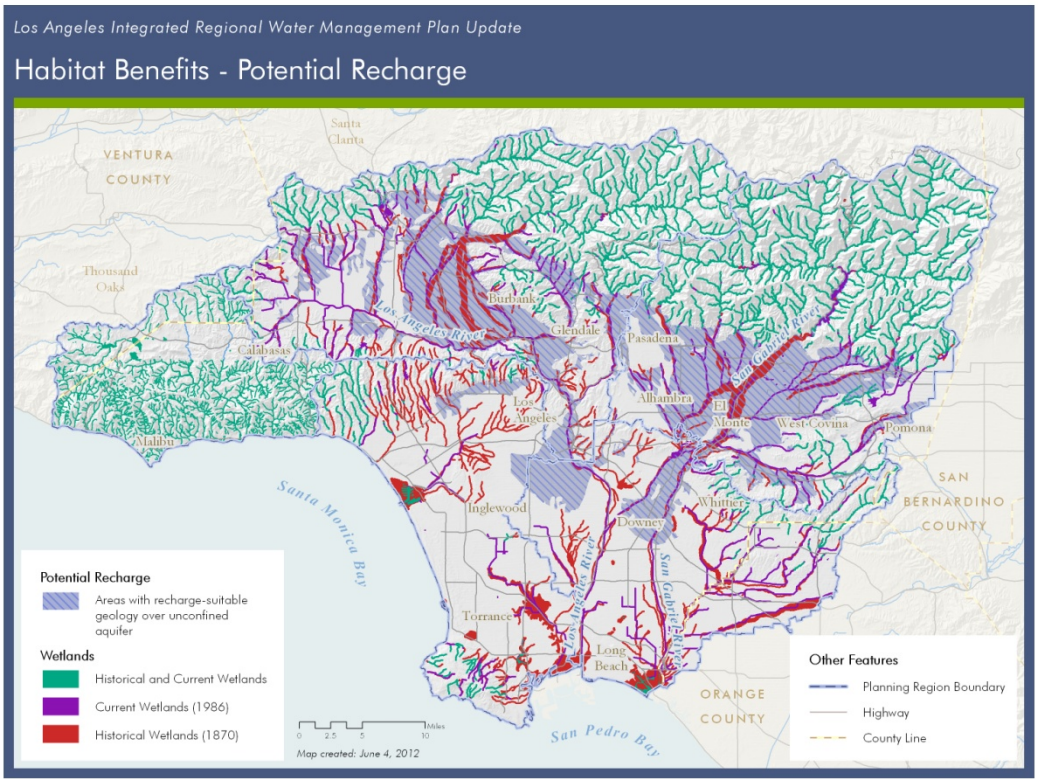

Figure 15. Habitat Targets and Potential Recharge Benefits (GLAC Region)

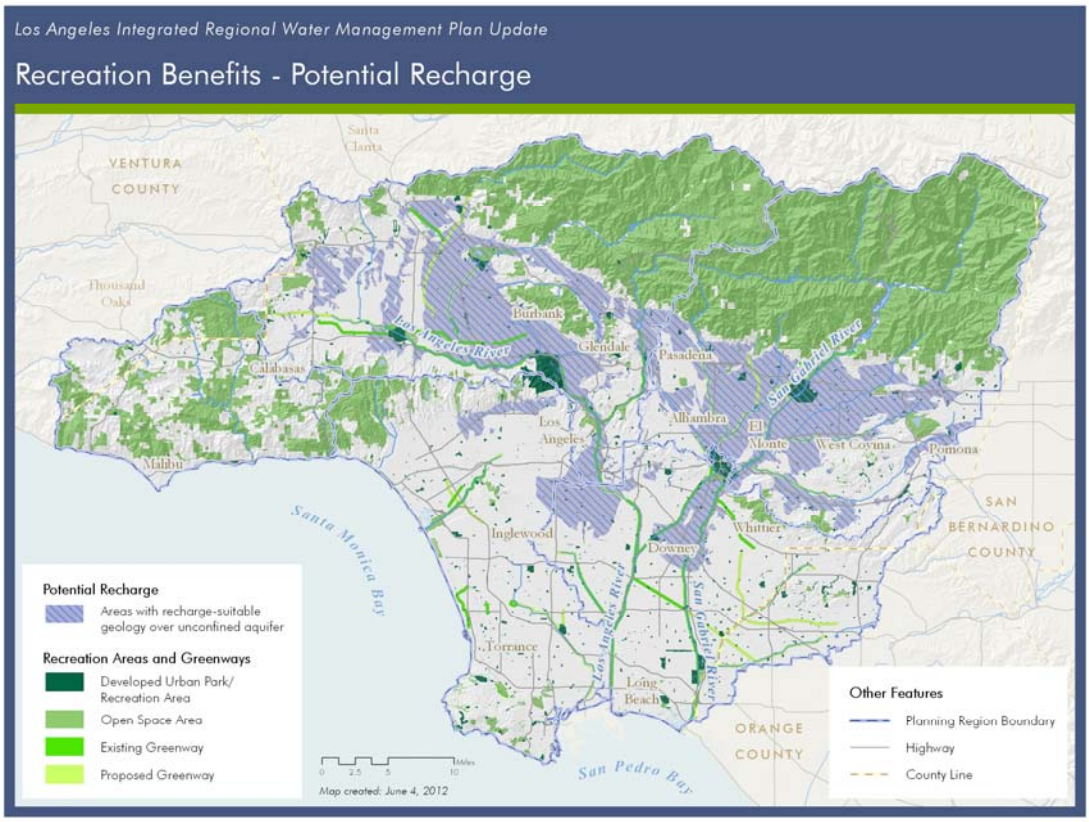

Figure 16. Recreations Targets and Potential Recharge Benefits (GLAC Region)

8.2 Stormwater Quality

Results show that there is a potential to create 21,000 AF of storage for water quality purposes, out of a target of 57,000 AF of storage throughout the GLAC Region if the target habitat and recreation lands are developed and/or enhanced with BMPs (Table 15).

Table 15. Potential Stormwater Quality Benefits from Open Space Projects

	Potential Capture Capacity (AF/yr)		
	Habitat	**Recreation**	**Total**
North Santa Monica Bay	200	200	400
Upper Los Angeles River	600	3,900	4,500
Upper San Gabriel and Rio Hondo	900	2,600	3,500
Lower San Gabriel and Los Angeles River	1,100	4,400	5,500
South Santa Monica Bay	800	6,400	7,200
Greater Los Angeles County	**3,600**	**17,000**	**21,000**

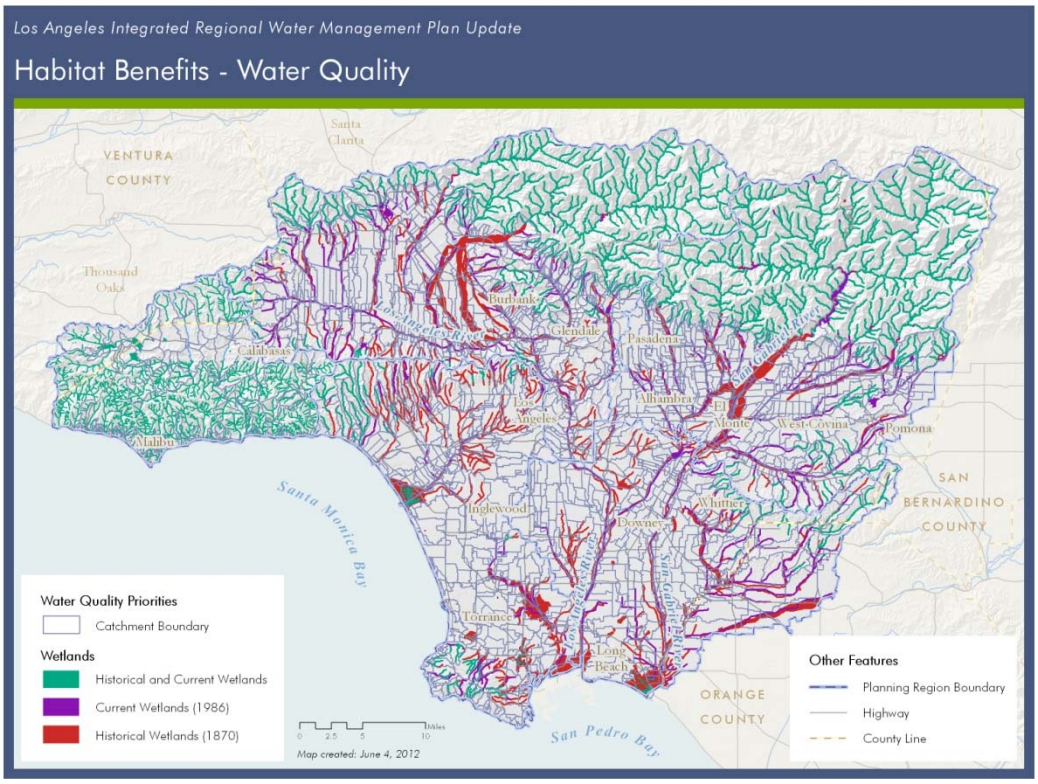

Figure 17. Habitat Targets and Stormwater Quality Benefits (GLAC Region)

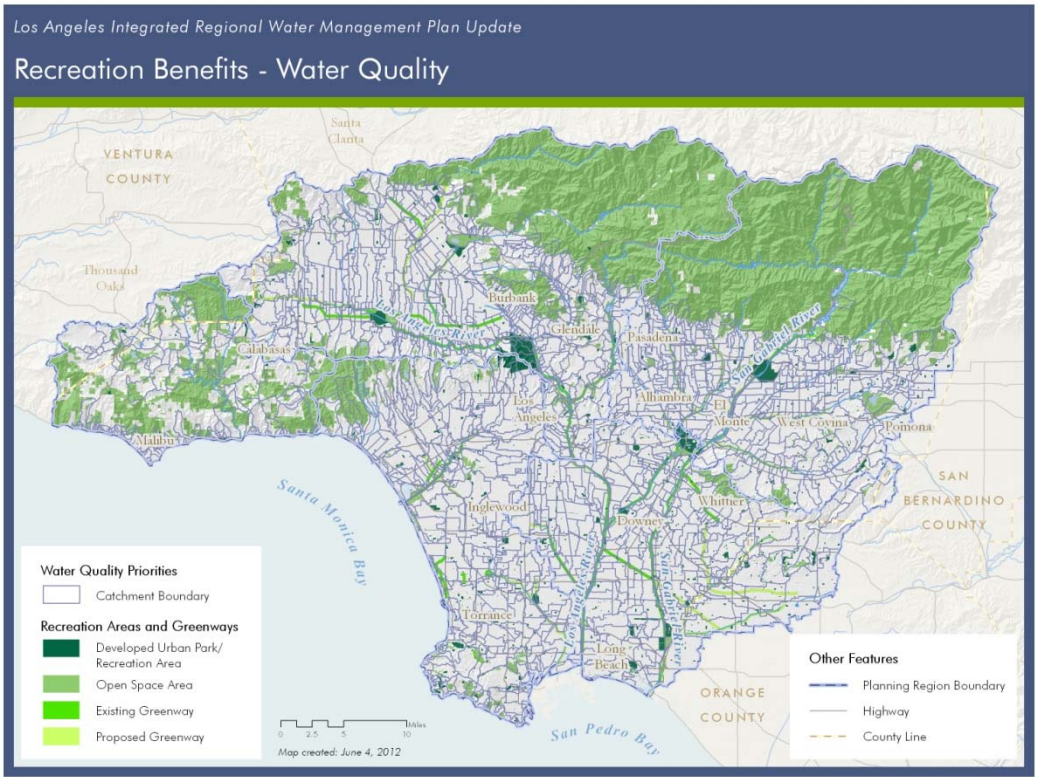

Figure 18. Recreation Targets and Stormwater Quality Benefits (GLAC Region)

9. POTENTIAL CLIMATE BENEFITS OF OPEN SPACE PROJECTS

9.1 Projected Impacts of Climate Change

The effects of climate change are wide-reaching and must be incorporated into long-term planning efforts. According to California Climate Change Center's 2006 Summary Report on California's Changing Climate (Luers et al. 2006) temperatures are expected to rise substantially over the next century. Scientific models, based on the level of greenhouse gas (GHG) emissions, project three different climatic scenarios for California. Under the lower GHG emission scenario, temperature is anticipated to rise between 3 and 5.5°F. The medium GHG emission scenario anticipates a rise in temperature between 5.5 and 8°F. The high GHG emission scenario predicts that temperature may rise between 8 and 10.5°F (Luers et al. 2006).

Unlike temperature projections, there is less of a consensus on the effects that climate change will have on the amount of precipitation in California. Some models predict that there will be little change in the total annual precipitation, while others do not show any consistent trend over the next century. The Mediterranean seasonal precipitation pattern, with most precipitation falling during the winter months and from north pacific storms, is expected to continue. However, some models predict wetter winters while others project a 10 to 20 percent decrease in precipitation (Luers et al 2006). One of the many anticipated effects of climate change is that more precipitation will fall as rain rather than snow. This could lead to a drastic reduction in the annual snow pack (70 to 90 percent), which will pose challenges for water resource managers, winter recreational activities, and the environment.

Another effect of climate change is increased oceanic temperatures and sea level rise. The California Department of Boating and Waterways commissioned an analysis on the economic costs to sea-level rise to California beach communities. The report, released in September 2011, cites various studies projecting the amount California sea-levels may rise. These studies predict that mean sea level in California could rise between 3 feet and 6 feet by 2100 (King et al. 2011). While a rise in sea level of more than 6 feet could mean the inundation of coastal infrastructure and facilities, the most significant coastal damages will most likely occur from extreme storms and episodic events, which are projected to occur more frequently under a changing climate. Coastal erosion is also projected to accelerate in the coming century and will threaten ecosystem services, including shoreline storm buffering capacities and recreational opportunities (King et al. 2011).

Climate change will also have dramatic effects on species and their habitats over the next century. Already, research has linked climate change with observed changes in species

behaviors and species habitat (Parmesan 2006). For example, the migration cycles of migratory songbirds are shifting as birds begin to migrate north earlier in the year. The change in migration cycle has resulted in a decoupling between the birds arrival date at their breeding ground and the availability of food they need for successful reproduction (The birds are arriving prior to the emergence of their food supply.) (USFWS 2010).

The latitudinal and elevational ranges of species will shift as the climate warms (Tingley et al. 2009). Species (both plant and animal) are expected to move to higher elevational gradients as lower elevations become too warm or dry to be habitable (Kelly and Goulden 2008). Warmer temperatures will also increase the risk and size of wildfires, insect outbreaks, pathogens, disease outbreaks, and tree mortality. The IPCC's Fourth Assessment Report estimates that approximately 20 to 30 percent of the world's plant and animal species will have an increased risk for extinction (IPCC 2007).

In aquatic ecosystems, increased water temperatures will negatively impact cold and cool-water fish. Rising sea levels will also inundate critical coastal habitats that serve as nurseries for fish populations as well as other wildlife (USFWS 2010).

Overall climate change is likely to cause abrupt ecosystem changes and species extinctions (Beliard et al. 2012). It will reduce our natural systems' ability to provide valuable ecosystem services—including reducing the availability of clean water—and impact our local and regional economy.

A benefit of greenways with multi-use bicycle paths is that they will be used for transportation purposes and will incrementally slow the pace of global warming. Nationally, the development of trails is seen as one avenue to reduce the nation's obesity epidemic, its dependency on oil, and its contribution to global warming. Fewer autos on the regional highway network means less carbon emissions that are driving global warming. Expanding use of bicycles further reduces emissions and, though marginal, increases the time available for society to respond to major climatic changes.

Within the region, the direct impact of climate change on physical recreation resources is principally related to the potential effects of sea level rise. It could be argued that the greatest open space resource of the GLAC Region is the Pacific Ocean, its public beaches, estuaries, and the public parks and trails along the shoreline. The economic benefits of these fabled southern California resources are significant. The impacts of sea level rise may be nothing short of cataclysmic to some of these beach and coastal estuary resources. These at-risk lands account for approximately 1,600 acres of Developed Urban Parks and Recreation Areas or Open Space Resource Areas. Although climate change adaptation techniques such

as managed retreat have already been adopted at some southern California locations, the ability to clear urbanized lands to accommodate sea level rise is challenging at best, if simply not feasible economically. The ability to manage inland flooding from sea level rise is likely possible with multiple-use design solutions that incorporate levees, sea walls, or other engineered containment facilities with public access to trails and linear habitat corridors. These facilities may be designed to include provisions for particular recreation features such as the coastal trail or retention of piers, but other recreation resources will only be replaced with the acquisition of sufficient existing upland areas that are essentially now fully developed.

9.2 Recommended Criteria and Planning Strategies to Address Climate Change

9.2.1 Climate Change Adaptation

The Intergovernmental Panel on Climate Change (IPCC) defines adaptation as "an adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities" (USFWS 2010, 14). Climate change adaptation seeks to reduce or ameliorate the effects of climate change that may occur.

Historically, California's Mediterranean climate has been known for its naturally variable temperatures and periodically recurring droughts. As a result, many species and ecosystems developed mechanisms to adapt to naturally occurring variations in temperature and water availability. However, with the accelerated warming trends predicted by climate change scientists, there is a high-level of uncertainty as to whether species and ecosystems will be able to adapt adequately enough to survive.

There are a number of adaptation strategies that could be adopted to conserve biodiversity and targeted species. Conservation planning, especially in the design of nature reserves, can be undertaken with a view towards future climate change (Bernazzani et al. 2012). This could include establishing reserves with high diversity of microhabitats (to accommodate on-site shifting of species distributions in response to climate change) to adopting a flexible-boundary approach, perhaps in conjunction with buffers or conservation zoning around a reserve.

The principal adaptation approach being used by the USFWS is the application of landscape-scale approach to conservation. Landscape-scale conservation includes the strategic conservation of terrestrial, freshwater, and marine habitats within sustainable landscapes. With the conservation of strategic habitat areas, it is also equally important to

restore linkages and corridors between large habitat areas to facilitate the movement of fish and wildlife species responding to climate change. The fundamental goal of the USFWS program is to conserve target populations of species, or suites of species, and the ecological functions that sustain them (USFWS 2010).

Although landscape-scale conservation planning, including strategic placement of reserves and corridors, is an essential element of climate change adaptation, in many cases species will not be able to migrate fast enough to keep up with climate change. A more active adaptation strategy is "assisted migration" (or assisted colonization) where target species are actively moved to a new location outside of their current distribution to anticipate the loss of suitable habitat where they currently occur (Vitt et al. 2010). Although there is some evidence of limited success with assisted migration, this strategy is controversial because of the many conservation issues it creates.

One of the most serious threats to coastal communities, both ecological and human, is sea level rise (Herberger et al 2011). To improve the GLAC Region's understanding of the threat of climate change, a multi-sectoral, multi-jurisdictional assessment of shoreline vulnerability and risk is needed. This assessment of the shoreline and estuarine areas would be conducted on a subregion basis. Local community and stakeholder interest and capacity for participation, the diversity of shoreline features, and presence of regionally significant infrastructure and resources would be considered.

The vulnerability and risk of asset categories would include, but not be limited to: river estuaries, community land use including parks and recreation resources, shoreline protection, and stormwater and wastewater infrastructure. To address assessment frames, a social vulnerability analysis, a broad socio-economic analysis using FEMA's HAZUS methodology, and an analysis of environmental and economic costs due to potential disruption and loss of services could be completed. The goal would be to identify regional and local adaptation strategies to improve resilience features that address the vulnerabilities present. The assessment should also consider the social inequities likely to be reinforced or increased with future climate change (Shonkoff et al. 2011).

Because of the uncertainties associated with predicting future climate change, it is critical that adaptive management strategies be built into long-term planning initiatives. The US Department of Interior defines adaptive management as:

> *A decision process that promotes flexible decision making that can be adjusted in the face of uncertainties as outcomes from management actions and other events become better understood. Careful monitoring of these outcomes both advances scientific*

> *understanding and helps adjust policies or operations as part of an iterative learning process. Adaptive management also recognizes the importance of natural variability in contribution to ecological resilience and productivity. It is not a 'trial and error' process, but rather emphasizes learning while doing. Adaptive management does not represent and end in itself, but rather a means to more effective decisions and enhanced benefits. Its true measure is in how well it helps meet environmental, social, and economic goals, increases scientific knowledge, and reduces tensions among stakeholders.* (US DOI 2009)

Implementation of effective adaptive management strategies provides resource managers, recreation planners, and site planners with a mechanism to address the uncertainties of our changing climate.

9.2.2 Climate Change Mitigation

Climate change mitigation refers to reducing GHG concentrations by either reducing the source of GHG emissions or increasing GHG sinks. Mitigation measures include carbon storage and sequestration, fossil fuel and material substitution, food production, and providing additional local recreation areas and green travel routes to encourage walking and cycling.[18] Reducing the production of greenhouse gases will result in immediate improvements to the regional environment while contributing to better health and economic efficiencies in households and businesses.[19]

The most obvious mitigation measure is to reduce GHG emissions by reducing fossil fuel combustion, since that is the largest source of GHGs. Alternative energy sources and energy conservation are often mentioned as obvious means of reducing fossil fuel consumption. More fuel-efficient transportation, including bicycling and walking, can contribute to that goal. There are important opportunities to encourage these activities in GLAC.

One important class of GHG mitigation strategies is geoengineering. Geoengineering encompasses a wide range of activities, from reducing the level of solar radiation by introducing chemicals or objects in the atmosphere or into space, to sequestering carbon by industrial activities, enhancing ocean productivity, or enhancing carbon sequestration in natural habitats by reforestation (Scheilnhuber 2011). Many of these activities are extremely

[18] http://www.opengreenspace.com/
[19] http://ccir.ciesin.columbia.edu/nyc/ccir-ny_q4a.html

controversial, partially because of doubts about their effectiveness and partially because of concerns about potentially large unintended and undesirable consequences.

Besides strategies to reduce fossil fuel consumption, there are a number of climate mitigation strategies that would be implemented in GLAC. One of the most effective would be carbon sequestration by natural habitats. Wetlands can be excellent habitats for carbon sequestration, especially coastal wetlands (Chmura et al. 2003, Vymazal 2011), so the GLAC wetlands could be managed to maximize carbon sequestration whenever feasible; this would include both wetland protection, which would preserve existing carbon stores, and wetland creation, which could increase carbon sequestration.

10. INTEGRATING HABITAT AND RECREATION TARGETS

As discussed earlier, open space encompasses a continuum of uses from natural resource lands to urban parks. Although habitat and recreation targets were calculated separately using different methodological approaches, in fact they are related. However, they are not additive.

A particular project may be useful for both habitat and recreation, in which case the uses would be completely complementary, or on the other extreme it could be useful for one or the other only (i.e., exclusive). Projects that focus on habitat or recreation, even to the exclusion of the other use, are valuable, but of course it is ideal if a project can accommodate both uses.

The total Open Space target for the region will be some combination of the habitat targets and the recreation targets. If habitat and recreation were exclusive, then the total Open Space target would be the sum of the habitat and recreation targets.

While it is recognized there is a potential that at least some of the habitat and recreation targets may overlap because of the open space continuum, for the purpose of this plan, the total Open Space target is the sum of the habitat and recreation target values. No analysis has been done to determine if the total target number can be reduced because of the continuum.

Table 16. Summary of Target Tables – Wetlands, Uplands, and Recreation

North Santa Monica Bay	Upper Los Angeles River	Upper San Gabriel and Rio Hondo Rivers	Lower San Gabriel and Los Angeles Rivers	South Santa Monica Bay	Greater Los Angeles County
Targets for Wetland Protection or Preservation (Tidal Wetland, Freshwater Wetland, and Riparian) (in acres)					
220	180	700	690	220	2,000
Targets for Wetland Enhancement (Tidal Wetland, Freshwater Wetland, and Riparian (in acres)					
440	1,500	2,400	1,100	560	6,000
Targets for Wetland Restoration or Creation (Tidal Wetland, Freshwater Wetland, and Riparian (in acres)					
90	1,100	1,000	950	830	4,000
Targets for Upland Habitat (Buffers and Linkages) (in acres)					
1,100	18,000	20,000	11,000	4,000	54,000
Target for Recreational Park Lands (in acres)					
170	4,500	3,000	5,100	6,900	20,000
Target for Natural Recreational Lands (in acres, range for entire region)					
					30,000 - 53,000
Total Open Space Target (in acres)					
2,000	**25,000**	**27,000**	**19,000**	**13,000**	**115,000 – 138,000**

11. EVALUATING OPEN SPACE PROJECTS

An important component of the IRWMP is the application of scoring metrics to determine the suitability of proposed projects in meeting overall goals and objectives. Recommended criteria to evaluate proposed uplands, wetlands and recreation projects are included in the appendices and are based on the expertise of the Open Space Team, although the GLAC IRWMP Steering Committees will be guiding the scoring process as the final IRWMP is developed.

Because proposed open space project proponents will be required to describe specific project benefits, methods for transparently and scientifically evaluating those benefits for comparison is vital to ensuring the best projects are recognized.

11.1 Habitat Project Evaluation

Numerous methodologies for measuring biological or ecological integrity/ecosystem services were evaluated as part of the process for developing evaluation criteria for open space projects as they relate to habitat. The methodologies reviewed included, but were not limited to, the following: Wetlands Evaluation Technique (WET), Rosgen (for stream hydrology), USACE's Functional – Based Performance Standards for Evaluating the Success of Riparian and Depressional/Emergent Marsh Restoration Sites, Habitat Evaluation Procedures (HEP), California Rapid Assessment Methodology (CRAM), Index of Biological Integrity (IBI), Instream Flow Models (for animals and biological communities), Wetland Replacement Evaluation Procedures, Hydrogeomorphic Wetland Assessment Model (HGM), and the Synoptic Approach.

After analyzing these methods for their applicability to IRWMP, design evaluation criteria for the creation, enhancement, and/or restoration of riverine, palustrine, and estuarine systems were developed using the USACE Functional – Based Performance Standards for Evaluating the Success of Riparian and Depressional/Emergent Marsh Restoration Sites and California's CRAM standards to score for habitat benefits provided by open space projects (See Appendix N).

Although CRAM is generally applied to wetland areas, it was adapted with the USACE method to include uplands also as part of the GLAC IRWMP project evaluation methodology. CRAM is preferred because it provides consistent and comparable assessments of wetland conditions for all wetlands and regions in California, yet accommodates special characteristics of different regions and wetland types. While it assesses the overall condition of wetlands, the results of a CRAM condition assessment can

be used to infer a wetland's ability to provide various functions or services for which it is most suited. CRAM assessments have four attributes: landscape context, hydrology, physical structure, and biotic structure. It also identifies key stressors that may be affecting wetland condition.

However, CRAM, and all other assessment methodologies reviewed, only deals with evaluating the condition and/or function of a project area; CRAM does not evaluate the proposed design of a wetland habitat creation, restoration, and/or enhancement project. The proposed IRWMP project evaluation criteria was developed using criteria from CRAM and other assessment methodologies that described the physical characteristics of the systems with the highest value. At this time, the suggested scoring numbers provide an indication of relative importance (note: the scoring system for this and other functions is currently under development).

11.2 Recreation Project Evaluation

Recreation criteria may be applied on an individual project design basis, or on a broader general planning basis for land acquisition or comparative project evaluations.

The methodology for determining recreation benefits and differentiating between projects is essentially one of measured need for recreation opportunities. The evaluation procedures used to characterize recreation need are based on three variables:

- Supply and demand: the availability of existing developed parks and recreation areas, greenways, or open space areas based on accepted community standards
- Accessibility: the usability of developed parks and recreation areas, greenways, or open space areas in terms of their distance from population centers, particularly underserved populations
- Planning Consistency: whether or not linear features such as greenways or regional trails are actively being planned and/or have been adopted in County and City General Plans.

The proposed IRWMP project evaluation criteria directly correlates to these variables. A supply ratio of 4 acres per 1,000 population serves as a baseline to consider the need for new recreation areas. Distance zones were used to identify priority areas vis-a-vis accessibility. Subregion maps (see Appendices G-K) were produced to illustrate these variables.

In some cases, the challenge for providing outdoor recreation and educational opportunities is land acquisition. The methodology for identifying these areas was limited to:

- Regional trail routes identified in the Draft Los Angeles County General Plan.
- An internet survey of greenway opportunities that have been identified and or formally adopted within the GLAC Region.

It should be noted that with 90 cities within the GLAC Region, and Los Angeles County, the identification of those trails and greenways called is a dynamic process, could be amended as new information is presented (such as City trail plans), and should be updated as necessary over time. (See also Appendix O).

Supply and demand criteria were based on the availability of parklands per thousand residents. Thresholds identified include:

- Less than 1 acre
- 1 to 3.9 acres
- Over 4 acres

Accessibility criteria focus on distances between residents and an open space or trail opportunity. These are:

- More than 3 miles from a greenway or trail
- Between 1 and 3 miles away from a greenway or trail
- Less than 1 mile away from a greenway or trail that is extremely accessible from both pedestrians and bicyclists

Criteria identified for the acquisition of new parklands and trail routes included:

- Consistency with the appropriated governing agency plans
- The opportunity to expand an existing public park, open space area, greenway, or trail
- The size of the parcel relative to its intended recreation use
- Immediacy in terms of the threat of development and a lost opportunity
- Consistency with resource conservation priorities

12. IMPLEMENTING THE OPEN SPACE FOR HABITAT AND RECREATION PLAN

The IRWMP serves as a blueprint that guides a regional approach to developing, protecting, and preserving water resources within the GLAC region. The blueprint seeks to integrate targets, methodologies, and criteria for assessing water resource projects. One goal of this integration is to generate well-designed water resource projects that meet multiple water resource management needs and objectives, including the provision of open space for habitat and recreation. Another goal is to optimize successful grant-funding opportunities within the state's IRWMP program.

12.1 Opportunities and Challenges

Opportunities

The benefits of considering habitat and open space in the IRWMP are numerous. Investing in the preservation, enhancement, and restoration/creation of open space features creates a vision for a more connected region, protecting biodiversity from the uncertain effects of climate change, and maintaining the region's recreational opportunities. The wildlife buffers, linkages, corridors and ample recreation opportunities recommended by the plan will help ensure that people, plants, and animals can move across the landscape to adapt to warming temperatures. It also will allow people to understand the connection between open space and improved environmental management.

The protection, enhancement, and restoration/creation of wetlands systems and their associated buffer zones throughout the region will protect valuable watershed functions. These activities will provide not only critical habitat to species as they move across the landscape, but will also help preserve water quality and quantity. In coastal areas, the preservation, enhancement, and/or restoration/creation of tidal wetlands will help mitigate the effects of rising sea levels.

The IRWMP serves as roadmap for the region's cities, water resource agencies, and other stakeholders to use as they work together. The establishment of subregional goals and objectives, as well as collective regional goals and objectives, allows for these entities to build upon each other's visions and projects. In addition, the mandated process for plan updates provides a means for goals and objectives to be measured and adjusted as progress is made.

In addition to meeting the goals and objectives of the state's IRWMP program, criteria developed in the OSHARP were developed in a manner that is consistent with current regulatory standards of other state and federal permitting agencies. This was done to ensure efficient use of project funds by agencies competing for grant funding.

Challenges

There are many challenges in developing and implementing the goals, objectives, and targets of the OSHARP. Some issues to consider in the future include the following:

- There is currently insufficient research on evaluating and assigning value to ecosystem services. Evaluation of ecosystem services is a relatively new area of study that has yet to achieve consensus on assessment methodologies. As research in this area advances, the OSHARP will be able to more precisely assess the benefits of open space.
- Inequitable access to existing open space resources for outdoor recreation and environmental education purposes needs to be addressed. Access is chiefly dependent on proximity and transportation factors that are outside the scope of the IRWMP. While there may be ways of transporting people to open space, there are limited opportunities to bring open space to people within many urban areas of the GLAC Region. The urban areas are essentially built out and the opportunities for land acquisitions and redevelopment and/or restoration are considered to be limited. The cost of land also may be considered too prohibitive if the justification for acquisition is only related to recreation values. Multipurpose projects may aid in addressing this issue.
- The high level of urbanization and land values within the GLAC Region presents a significant challenge in implementing open space conservation. Open space conservation is needed for the region to protect its biodiversity and mitigate the effects of climate change. By implementing environmental solutions that address water resource management needs such as flood attenuation and water quality improvement, society will receive multiple benefits. It is recognized that these solutions tend to be more complex than "traditional" engineered approaches and should be encouraged.
- There is a concern that project proponents fail to consult property owners, including public agency landowners, prior to developing project concepts and adding these projects into the IRWMP project database. The project addresses this criticism by providing a framework for partnering and collaboration throughout the GLAC region.

- Oftentimes the development of open space decreases local government revenue by taking properties "off the tax rolls", while increasing costs through increased enforcement/oversight for recreational users and/or requiring funds for natural resource management and maintenance. Such funding is typically not readily available. New resource management tools need to be assessed to address this issue. For example, public agency mitigation or conservation banking could not only provide compensatory mitigation for important public infrastructure projects, but also protect/restore habitat and provide adequate funding for the long-term management.
- The acquisition of open space or creation/enhancement/restoration of habitat adjacent to existing neighborhoods may increase potential of fire or flood hazards. These environmental activities also may negate the benefits of existing infrastructure, impact water rights, and/or significantly alter long-established operations and maintenance procedures. If any of these are identified as an issue during the project review process, they should be addressed at that time.
- Implementation of the IRWMP relies, to some extent, on political decision-making. Political consensus, participation by key public organizations, program staffing, and available funding are important for full implementing the IRWMP.

Strategies to Work with Agencies to Ensure Consistency with the IRWMP

The development of the IRWMP has served as a mechanism for discussions between agencies and other stakeholders regarding ways to increase integrated water resource management planning within the GLAC Region. Some of these discussions led to the identification of issues and needs that must be further explored. This exploration should take place during future revisions of this IRWMP. This 2012 IRWMP should serve as a catalyst for further evaluation of regional issues and the means to resolve those issues through a collaborative process. Case studies on the Santa Barabara County and the Santa Ana Watershed approach may be useful in further refining a collaborative process.

Stakeholder and agency partnerships have been created during the development of the IRWMP. By establishing these relationships, these entities can effectively coordinate planning with each other, exchange innovative ideas and methods, and increase coordination to undertake studies and projects. Agencies and non-governmental organizations might even collaborate to work on issues of common interest and identify consensus on broad goals, as exemplified by the working arrangement between the Los Angeles Department of Water and

Power and TreePeople. By partnering, both the individual strengths of each organization, and the benefits from implemented projects, will expand.

Given the large number of agencies with jurisdiction in the GLAC Region, there are a broad range of interests and issues. Many of the interests and issues extend beyond water resource management. Ongoing planning between agencies should increase opportunities to focus on common themes to protect water supply and water quality as well as to address other environmental issues and to provide more parks and open space. Through ongoing planning, agencies can work together to plan and develop multi-purpose projects and programs that fulfill their mandates and meet larger regional needs while also helping to enhance water supplies and improve water supply reliability (GLAC IRWMP Acceptance Process Application, April 28 2009).

12.2 Gaps in Knowledge

The revised IRWMP is based on the best available science to date. However, information updates (i.e., research, science, and public policies) is needed and these updates must be disseminated. Obtaining, assessing, and disseminating high-quality data often is difficult. Without an agreement as to the basic information, it can be difficult to determine accurate baselines, make projections, and set targets in implementing water-related projects (Bliss and Bowe 2011). The effectiveness of the knowledge itself may pose another gap because it often takes several years of implementation, practice, and monitoring to determine an outcome.

While regional inventories of park and recreation lands exist, the complementary information for outdoor areas at school sites used for outdoor recreation and environmental education throughout the entire region does not. Many elementary, middle, and high schools in the urban areas of Los Angeles County are not park-like; instead, they have minimal recreational amenities and contain asphalt rather than vegetated surfaces. Information that should be inventoried includes: condition of outdoor recreation / physical education areas, accessibility to neighborhood areas (open or closed to public use after school hours), and existence of joint use agreements with public recreation providers.

Trail routes illustrated on the recreation and open space target maps are proposed regional trails as identified in the draft Los Angeles General Plan 2035, as well greenways identified by stakeholders during the outreach efforts for the development of the OSHARP. Many of the 90 cities within the GLAC region, such as the Cities of Malibu, Monrovia, and Pasadena, as well as other agencies and joint power authorities that provide outdoor recreation opportunities have adopted or proposed local trail plans that complement the county-wide

trail network. As an ongoing process, once adopted, these trail routes may be added, as appropriate, to the IRWMP database. Those trail routes that create loops stemming from the regional trail system, connect regional trail routes within lands that are outside of existing public lands, or directly connect urban areas with the regional trail system should be specifically identified.

Inventories are also needed to characterize and evaluate the region's wildlands. Besides potential buffer and identified linkage areas, additional habitat core areas may be identified.

Standardized statistics about the use, appeal, and value of the open spaces of the GLAC Region, and the passive recreation that take places in them, do not exist. The GLAC Region hosts industries, climate, and landscapes that are known locally, statewide, nationally, and internationally. However, the open spaces of the region are not all the same. Beaches, river greenways, and a variety of mountain settings offer a myriad of open space opportunities. Added to that variety, there is a great disparity in the way the different agencies that own or manage open space areas maintain statistics about visitors and use within those resources. Conducting a comprehensive open space inventory and use analysis that employs a standardized approach applied evenly over the region, and that identifies the economic value of open space to the region would greatly benefit the OSHARP because of the sensitivity of the metrics applied to open space.

12.3 Recommendations

The IRWMP is a living document. It is not intended to be filed away on a shelf, but rather to serve as the catalyst for solutions that can be implemented throughout the GLAC subregions. The OSHARP is also intended to be reviewed regularly and updated as new information, technologies, and data become available. The following recommendations for the OSHARP will assist in:

- Incorporating new open space data and information in the IRWMP
- Identifying and prioritizing important habitat and recreation needs
- Refining targets, methodologies and project evaluation
- Fostering regional partnerships.

It is recommended that stakeholders conduct an inventory of planned or existing projects within the GLAC region that meet the intent of the IRWMP. The information sources currently available are disjointed and in many different formats, including specific plans, periodicals, newsletters, and occasionally contained within usable GIS databases.

While in the process of finalizing the updated Significant Ecological Area Program, Los Angeles County could amend it to identify linkages and give them the same priority as protection of large habitat blocks.

The wetland habitat targets are based on data about historical and current extent of wetlands and ownership of parcels with wetlands. The best available data were used for calculating the targets, but additional work could be done to improve all of these databases. Recommendations include:

- **Wetland loss**. Rairdan (1998) was used to determine the loss of wetlands in the region. Rairdan's historical wetland analysis has been supplanted by historical ecology studies in two sections of GLAC (Stein et al. 2007 for the San Gabriel River and Dark et al. 2011 for the Ballona Creek watershed). The recent historical ecology studies use more modern, detailed methods than Rairdan used, but their limited geographic scope precluded their use for establishing GLAC targets. The creation/restoration targets would be improved if a historical ecology study was completed for the entire GLAC region.
- **Current wetland extent**. The National Wetlands Inventory (NWI) was used to indicate the current extent of wetlands in GLAC. Unfortunately, the current NWI maps do not cover the entire GLAC region. The protection and enhancement targets would be improved if there were NWI maps for the entire region. Moreover, the NWI mapping should be done at a level that includes as many local wetland types as possible, including ephemeral wetlands and streams.
- **Ownership**. Wetland ownership was determined using the California Protected Area Database (CPAD). However, not all publicly owned lands are included in the CPAD. It would be possible to develop a more accurate estimate of private ownership by searching ownership on a parcel-by-parcel basis; however, an effort such as this was beyond the scope of this project. The protection targets could be refined by determining ownership using a parcel-by-parcel analysis.

The habitat targets could be improved by considering ecosystem services as well as wetland extent. It was originally planned to incorporate ecosystem services more thoroughly into the

targets. However, there is no readily applicable method for quantifying ecosystem services at present, and there is an almost complete lack of information on the ecosystem services being provided by existing wetlands. The importance of assessing ecosystem services has only recently been recognized, and this is an area of active research. The development of methods to assess ecosystem services should be monitored and applied to GLAC wetlands when a suitable method has been developed. A detailed understanding of the ecosystem services provided by existing wetlands is critical for developing improved wetland targets.

As an ongoing process, once adopted, some or all of these local trail routes should be added to the IRWMP data base. Those trail routes that branch from the regional trail system and create loop opportunities for recreation, or local trails that directly connect urban areas with the regional trail system should be specifically identified and included in the regional recreation targets.

And finally, essential to any truly integrated effort, as part of the IRWMP, the GLAC Region should develop and publicize its strategic focus and willingness to invest in feasible, multi-beneficial, collaboratively developed projects.

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Measuring the Economic Value *of a* City Park System

THE TRUST *for* PUBLIC LAND

CONSERVING LAND FOR PEOPLE

Cover Photos: Scott Parker (left), Nita Winter (right)

Measuring the Economic Value *of a* City Park System

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Introduction

Cities are economic entities. They are made up of structures entwined with open space.

Successful communities have a sufficient number of private homes and commercial and retail establishments to house their inhabitants and give them places to produce and consume goods. Cities also have public buildings—libraries, hospitals, arenas, city halls—for culture, health, and public discourse. They have linear corridors—streets and sidewalks—for transportation. And they have a range of other public spaces—parks, plazas, trails, sometimes natural, sometimes almost fully paved—for recreation, health provision, tourism, sunlight, rainwater retention, air pollution removal, natural beauty, and views.

In successful cities the equation works. Private and public spaces animate each other with the sum greatly surpassing the parts. In unsuccessful communities some aspect of the relationship is awry: production, retail, or transportation may be inadequate; housing may be insufficient; or the public realm might be too small or too uninspiring.

In 2003, The Trust for Public Land's Center for City Park Excellence gathered two dozen park experts and economists in Philadelphia for a colloquium to analyze how park systems economically benefit cities. Based on this conversation and subsequent consultation with other leading economists and academics, the center identified seven attributes of city park systems that provide economic value and are measurable.

Not every aspect of a park system can be quantified. For instance, the mental health value of a walk in the woods is not known, and there is no agreed-upon methodology for valuing the carbon sequestration value of a city park. But seven major factors—*property value, tourism, direct use, health, community cohesion, clean water, and clean air*—have been enumerated. While the science of city park economics is still in its infancy, TPL has worked to carefully consider and analyze these values. Our report sets forth a summary of this methodology.

Two of the factors provide a city with ***direct income*** to its treasury. The first factor is increased property tax from the increase in property value because of proximity to parks. (This is also called "hedonic value" by economists.) The second is increased sales tax on spending by tourists who visit primarily because of the city's parks. (Beyond the tax receipts, these factors also bolster the ***collective wealth*** of residents through property appreciation and tourism revenue.)

Three other factors provide city residents with ***direct savings.*** By far the largest amount stems from residents' use of the city's free parkland and free (or low-cost) recreation opportunities, which saves them from having to purchase these items in the marketplace. The second is the health benefit—savings in medical costs—due to the beneficial aspects of exercise in the parks. And the third is the community cohesion benefit of people banding together to save and improve their neighborhood parks. This "know-your-neighbor" social capital helps ward off antisocial problems that would otherwise cost the city more in police and fire protection, prisons, counseling, and rehabilitation.

The last two factors provide ***environmental savings.*** The larger involves water pollution reduction—the retention of rainfall by the park system's trees, bushes, and soil, thus cutting the cost of treating stormwater. The other concerns air pollution—the fact that park trees and shrubs absorb a variety of air pollutants.

In the following chapters, after describing the value factor and the rationale for calculating it, we provide a real-life example of the mathematical outcome, based on the first five test cases undertaken in this program—the cities of Washington, D.C., San Diego, Boston, Sacramento, and Philadelphia.

Peter Harnik
Director, Center for City Park Excellence
March 2009

Increasing Hedonic (Property) Value

More than 30 studies have shown that parks have a positive impact on nearby residential property values. Other things being equal, most people are willing to pay more for a home close to a nice park. Economists call this phenomenon "hedonic value." (Hedonic value also comes into play with other amenities such as schools, libraries, police stations, and transit stops. Theoretically, commercial office space also exhibits the hedonic principle; unfortunately, no study has yet been carried out to quantify it.)

Hedonic value is affected primarily by two factors: distance from the park and the quality of the park itself. While proximate value ("nearby-ness") can be measured up to 2,000 feet from a large park, most of the value is within the first 500 feet. In the interest of being conservative, we have limited our valuation to this shorter distance. Moreover, people's desire to live near a park depends on characteristics of the park. Beautiful natural resource parks with great trees, trails, meadows, and gardens are markedly valuable. Other parks with excellent recreational facilities are also desirable (although sometimes the greatest property value is a block or two away if there are issues of noise, lights, and parking). Less attractive or poorly maintained parks are only marginally valuable. And parks with frightening or dangerous aspects can reduce nearby property values.

Determining an accurate park-by-park, house-by-house property value for a city is technically feasible but prohibitively time-consuming and costly. Therefore, we formulated a methodology to arrive at a reasonable estimate. Computerized mapping technology known as Geographic Information Systems (GIS) was used to identify all residential properties within 500 feet of every significant park. ("Significant" is defined as one acre or more; "park" includes every park in the city, even if owned by a county, state, federal, or other public agency.)

Coleen Gentles

Meridian Hill Park in Washington, D.C. provides extra value to the thousands of dwelling units surrounding it, and to the city itself through higher property tax receipts.

Unfortunately, because of data and methodology problems, it is difficult to determine exactly which of a city's parks confer "strongly positive," "slightly positive," and "negative" value to surrounding residences. Research into quantifying park quality continues; in the interim we have chosen to assign the conservative value of 5 percent as the amount that parkland adds to the assessed value of all dwellings within 500 feet of parks. (The preponderance of studies has revealed that excellent parks tend to add 15 percent to the value of a proximate dwelling; on the other hand, problematic parks can subtract 5 percent of home value. Taking an average of this range yields the 5 percent value that will be used until a park quality methodology can be established.)

Once determined, the total assessed value of properties near parks is multiplied by 5 percent and then by the tax rate, yielding the increase in tax dollars attributable to park proximity.

PARK VALUE IN ACTION

Increasing Property Values in Washington, D.C.

The most famous park in Washington, D.C. may be the National Mall with its museums and government agencies, but it is the many other parks—from huge Rock Creek Park to tiny Logan Circle, the ones surrounded by homes—that provide the city with the greatest property value benefit.

The city's abundance of green has placed much of Washington's real estate either directly abutting or within a stone's throw of a park. This makes it convenient for the capital's denizens to toss a ball around, enjoy a picnic, or just get a pleasurable view. The city's coffers are also reaping the benefits.

Getting to this number is fairly straightforward. Using GIS in combination with the city's assessment data, we find that the value of all residential properties (apartments, condominiums, row houses, and detached homes) within 500 feet of a park is almost $24 billion (in 2006 dollars). Using an average park value benefit of 5 percent, we see that the total amount that parks increased property value is just under $1.2 billion. Using the effective annual tax rate of 0.58 percent, we find that Washington reaped an additional $6,953,377 in property tax because of parks in 2006.

The Hedonic (Property) Value of Washington, D.C.'s Parks	
Value of properties within 500 feet of parks	$23,977,160,000
Assumed average value of a park	5%
Value of properties attributed to parks	**$1,198,858,025**
Effective annual residential tax rate	0.58%
Annual property tax capture from value of property due to parks	**$6,953,377**
Property values were obtained from the District of Columbia	

Income from Out-of-Town Park Visitor Spending (Tourists)

Though not always recognized, parks play a major role in a city's tourism economy. Some such as Independence National Historic Park in Philadelphia, Central Park in New York, Millennium Park in Chicago, or Balboa Park in San Diego are tourist attractions by themselves. Others are simply great venues for festivals, sports events, even demonstrations. Read any newspaper's travel section and you'll usually see at least one park among the "to see" picks.

Calculating parks' contribution requires knowing the number of park tourists and their spending. Unfortunately, most cities have little data on park visitation or visitor origin. (By definition, local users are not tourists—any spending they do at or near the park is money not spent locally somewhere else, such as in their immediate neighborhood.) Sometimes there are tourism numbers for one particularly significant park, but it is not possible to apply these numbers to the rest of the city's parks. To get around these missing data, visitation numbers and expenditures from other sources must be obtained and then used to make an educated guess about trips that are taken entirely or substantially because of parks or a park.

First, we estimate the number of park tourists. Then we reduce this to an estimate of the number of park tourists who came *because* of the parks. After dividing that number into day visitors (who spend less) and overnighters (who spend more), we multiply these numbers by the average spending per tourist per day (a figure that is usually well known by the local convention and visitors bureau). Finally, tax revenue to the city can be estimated by multiplying park tourism spending by the tax rate.

Jon Sullivan (www.pdphoto.org)

Beautiful Balboa Park—with its zoo, botanical gardens, numerous museums, sports fields, and public events—is the single biggest tourist attraction in San Diego.

PARK VALUE IN ACTION

Stimulating Tourism in San Diego

A visit to San Diego is not complete if it doesn't include a park—whether that's a beach, a harbor park, Old Town State Park, Mission Bay, or 1,200-acre Balboa Park. In fact, when the *New York Times* featured San Diego in its "36 Hours" travel series, it mentioned all of the above places. The role of parks in the city's tourism economy is huge.

Spending by Tourists Who Came Because of Parks, San Diego, 2006	
Overnight Visitors	
Overnight visitors to San Diego	16,050,000
Overnight visitors who visited parks (20%*)	3,210,000
Estimated 26%* who visited *because* of parks	834,600
Spending per overnight visitor per day	$107
Spending of overnight visitors because of parks	**$87,302,200**
Day Visitors	
Overnight visitors to San Diego	11,874,000
Overnight visitors who visited parks (20%)	2,374,800
Estimated 22% who visited because of parks	522,456
Spending per day visitor per day	$48
Spending of day visitors because of parks	**$25,077,888**
Total Spending (overnight and day visitors)	**$114,380,088**
Sales, meal, and hotel taxes (7.5% average) on park tourist spending	**$8,578,507**
Net profit (35% of tourist spending)	**$40,033,031**
*San Diego Convention and Visitors Bureau and California Travel and Tourism Commission, 2006.	

According to data from the San Diego Convention and Visitors Bureau (CVB), the California Travel and Tourism Commission, and a telephone survey by the Morey Group, an estimated 20 percent of tourists visited a park while in San Diego in 2007. The phone survey further revealed that 22 percent of San Diego park visitors came *because* of the parks. (Using this methodology assures that the count did not include the many tourists who came to San Diego for other reasons and happened to visit a park without planning to do so.) The conclusion was that just under 5 percent of San Diego tourism in 2007 was due to the city's parks—835,000 overnighters and 522,000 day visitors.

Knowing the average daily spending level of those tourists—$107 per overnight visitor and $48 per day visitor—we determined that total park-derived tourist spending in 2007 came to $114.3 million. With an average tax rate on tourist expenditures of 7.5 percent, tax revenue to the city was $8,579,000. In addition, since economists consider that an average of 35 percent of every tourist dollar is profit to the local economy (the rest is the pass-through cost of doing business), the citizenry's collective increase in wealth from park-based tourism was $40,033,000.

Direct Use Value

While city parks provide much indirect benefit, they also provide huge tangible value through such activities as team sports, bicycling, skateboarding, walking, picnicking, benchsitting, and visiting a flower garden. Economists call these activities "direct uses."

Most direct uses in city parks are free of charge, but economists can still calculate value by knowing the cost of a similar recreation experience in the private marketplace. This is known as "willingness to pay." In other words, if parks were not available in a city, how much would the resident (or "consumer") pay in a commercial facility? (Thus, rather than income, this value represents *savings* by residents.)

The model used to quantify the benefits received by direct users is based on the "Unit Day Value" method developed by the U.S. Army Corps of Engineers. Park visitors are counted by specific activity, with each activity assigned a dollar value by economists familiar with prices in the private martketplace. For example, playing in a playground is worth $3.50. Running, walking, or in-line skating on a park trail is worth $4, as is playing a game of tennis on a city court. For activities for which a fee is charged, like golf or ice skating, only the "extra value" (if any) is assigned; that is, if a round of golf costs $20 on a public course and $80 on a private course, the direct use value of the public course would be $60. Under the theory that the second and third repetitions of a park use in a given period are slightly less valuable than the first (i.e., the child visiting a playground gets somewhat less value the seventh time in a week than the first), we modified the model with diminishing returns for heavy park users. (For example, playground value diminishes from $3.50 for the first time in a week to $1.93 for the seventh.) We also estimated an average "season" for different park uses to take into account reduced participation rates in the off-season. (Although some people are active in parks 365 days a year, we conservatively eliminated seasons when participation rates drop to low levels.) Finally, for the few activities for which a fee is charged, such as golf, ice skating, and the use of fields for team sports, we subtracted the per-person fee from the assumed value.

The number of park visits and the activities engaged in is determined through a professionally conducted telephone survey of city residents. Residents are asked to answer for themselves; for those adults

Boston Parks and Recreation Department

The Frog Pond in the Boston Common is but one of the numerous park facilities that provide Bostonians with hundreds of millions of dollars of direct use value.

with children under the age of 18, a representative proportion are also asked to respond for one of their children. (Nonresidents are not counted in this calculation; their value is measured through out-of-town tourist spending.)

While some might claim that direct use value is not as "real" as tax or tourism revenue, it nevertheless has true meaning. Certainly, not all park activities would take place if they had to be purchased. On the other hand, city dwellers do get pleasure and satisfaction from their use of the parks. If they had to pay and if they consequently reduced some of this use, they would be materially "poorer" from not doing some of the things they enjoy.

PARK VALUE IN ACTION

Providing Direct Use Value in Boston

When Frederick Law Olmsted designed the park system of Boston, he envisioned a series of places of respite accessible to all. No need to pay for a trip out to the countryside—the park system could provide that—and more—right near home. Today that vision lives on in Boston's 5,040 acres of parks and the pastimes these parks offer: jogging down the Commonwealth Avenue median and into Boston Common, spending a morning at the playground, watching a tennis match, birdwatching across 1,765 natural acres, attending a summer festival, enjoying lunch in Post Office Square, walking the trails of 527-acre Franklin Park, admiring the flowers of the Public Garden, or taking in movie night in Jamaica Pond Park.

These and many more "direct uses" were measured in a telephone survey of Boston residents and were then multiplied by a specific dollar value for each activity. Based on the level of use and those values, it was found that in 2006 Boston's park and recreation system provided a total of $354,352,000 in direct use value.

Shared Benefits: The Economic Value of Direct Use of Parks in Boston, 2006

Facility/Activity	Person-Visits	Average Value per Visit	Value ($)
General park use (playgrounds, trails, dog walking, picnicking, sitting, etc.)	76,410,237	$1.91	$146,230,236
Sports facilities use (tennis, team sports, bicycling, swimming, running, ice skating, etc.)	48,407,572	$3.05	$147,812,453
Special uses (golfing, gardening, festivals, concerts, attractions, etc.)	6,467,113	$9.33	$60,309,713
Totals	**131,284,922**		**$354,352,402**

Data were drawn from a telephone survey of 600 Boston residents.

Health Value

Several studies have documented the economic burden of physical inactivity. Lack of exercise is shown to contribute to obesity and its many effects, and experts call for a more active lifestyle. Recent research suggests that access to parks can help people increase their level of physical activity. The Parks Health Benefits Calculator measures residents' collective economic savings through the use of parks for exercise.

After identifying the common types of medical problems that are inversely related to physical activity, such as heart disease and diabetes, we created the calculator based on studies in seven different states that show a $250 cost difference between those who exercise regularly and those who don't. For people over the age of 65, the value is $500 because seniors typically incur two or more times the medical care costs of younger adults.

The key data input is the number of park users who indulge in a sufficient amount of physical activity to make a difference. (This is defined as "at least 30 minutes of moderate to vigorous activity at least three days per week.") To determine this number, we took a telephone park use survey of activities and age and eliminated low-heart-rate uses such as picnicking, sitting, strolling, and birdwatching. We also eliminated respondents who engage in strenuous activities but do so less than three times per week because they are not active enough for health benefit.

After obtaining the number (and age) of city dwellers engaged in strenuous park activities, we applied the multipliers (by age) and added the subtotals. The calculator makes one final computation, applying a small multiplier to reflect the differences in medical care costs between the city's region and the United States as a whole.

Sacramento Department of Parks and Recreation

With or without a stroller, a regular vigorous run can cut medical costs by an average of $250 a year. McKinley Park, Sacramento.

PARK VALUE IN ACTION

Promoting Human Health in Sacramento

Sacramento has 5,141 acres of parks that provide a multitude of ways to stay healthy. The city has 43 tennis courts, 101 baseball diamonds, 116 basketball hoops, 171 playgrounds, 78 soccer fields, 7 skate parks, 12 swimming pools, over 80 miles of trails, and many more facilities.

Using the Parks Health Benefits Calculator, we determined the medical savings realized by city residents because of park exercise and found that about 78,000 Sacramentans engage actively enough in parks to improve their health—72,000 of them under the age of 65 and about 6,000 older. Using the estimated dollar value attributable to those activities, we calculated the savings in 2007, which came to $19,872,000.

Health Care Savings: Physically Active Users of Sacramento Parks, 2007

Cost Description	Residents Physically Active in Parks*	Average Medical Cost Difference Between Active and Inactive Persons	Amount
Adult users under 65 years of age	71,563	$250	$17,890,750
Adult users 65 years of age and older	6,054	$500	$3,027,000
Subtotals combined	77,617	——	$20,917,750
Regional cost multiplier (based on statewide medical costs)			0.95
Total Value			**$19,871,863**

*People engaging in moderate, vigorous, or strenuous activity at least half an hour, three days per week

Community Cohesion

Numerous studies have shown that the more webs of human relationships a neighborhood has, the stronger, safer, and more successful it is. Any institution that promotes this kind of community cohesion—whether a club, a school, a political campaign, a religious institution, a co-op—adds value to a neighborhood and, by extension, to the whole city.

This human web, which Jane Jacobs termed "social capital," is strengthened in some cities by parks. From playgrounds to sports fields to park benches to chessboards to swimming pools to ice skating rinks to flower gardens, parks offer opportunities for people of all ages to interact, communicate, compete, learn, and grow. Perhaps more significantly, the acts of improving, renewing, or even saving a park can build extraordinary levels of social capital. This is particularly true in a neighborhood suffering from alienation partially due to the lack of safe public spaces.

While the economic value of social capital cannot be measured directly, it is instructive to tally the amount of time and money that residents devote to their parks. This can serve as a proxy. In cities with a great amount of social capital, park volunteers do everything from picking up trash and pulling weeds to planting flowers, raising playgrounds, teaching about the environment, educating public officials, and contributing dollars to the cause.

To arrive at the number, all the financial contributions made to "friends of parks" groups and park-oriented community organizations and park agencies are tallied. Also added up, through contacting each organization, are the hours of volunteer time donated to park organizations. This number is then multiplied by the value assigned to volunteerism by the national organization Independent Sector. (This value varies by year and by state.)

Philadelphia Department of Parks and Recreation

With more than 100 "friends of parks" groups, Philadelphia has few peers when it comes to park-based social capital.

PARK VALUE IN ACTION

Stimulating Community Cohesion in Philadelphia

Philadelphia parks have support galore. In fact, there are more than 100 "friends of parks" organizations. Two of them, the Philadelphia Parks Alliance and Philadelphia Green, operate on a citywide basis; the rest deal with individual parks.

This impressive web of formal and informal action greatly boosts the civic life of the city, and it is measurable economically. Using the "community cohesion" methodology, we tallied the financial contributions made to all these groups in 2007. Then we added up the total volunteer hours donated to parks and converted them to a dollar figure (at $18.17 per hour, the latest figure available for the state of Pennsylvania). Combining the two yielded a 2007 community cohesion value of $8,600,000.

Community Cohesion Value: Park Supporters in Philadelphia

Organization or Activity	Volunteer Hours	Value of Volunteer Hours*	Financial Contributions	Total
Fairmount Park Volunteers (54 friends groups)	154,209	$2,894,503	$3,318,713	$6,213,216
Independence National Historical Park	10,390	$195,017	——	$195,017
Pennsylvania Horticultural Society (52 friends groups)	65,052	$1,221,026	$694,680	$1,915,706
Other support groups, combined	452	$8,485	$267,961	$276,446
Total Value		**$4,319,031**	**$4,281,354**	**$8,600,385**

*Value of one hour of volunteer labor in Pennsylvania as determined by Independent Sector, 2005: $18.77.

Reducing the Cost of Managing Urban Stormwater

Stormwater runoff is a significant problem in urban areas. When rainwater flows off roads, sidewalks, and other impervious surfaces, it picks up pollutants. In some cases (cities with sewer systems that separate household sewage from street runoff), the polluted rainwater flows directly into waterways, causing significant ecological problems. In other cases (cities with combined household and street systems), the rainwater is treated at a pollution control facility, but larger storms dump so much water that the system is designed to overflow when capacity is exceeded, resulting in spillage of both rainwater and household sewage.

Parkland reduces stormwater management costs by capturing precipitation and/or slowing its runoff. Large pervious (absorbent) surface areas in parks allow precipitation to infiltrate and recharge the groundwater. Also, vegetation in parks provides considerable surface area that intercepts and stores rainwater, allowing some to evaporate before it ever reaches the ground. Thus urban green spaces function like ministorage reservoirs.

The Western Research Station of the U.S. Forest Service in Davis, California, developed a model to estimate the value of retained stormwater runoff due to green space in parks. First, land cover data are obtained through analysis of aerial photographs. This reveals forested as well as open grassy areas and also water surface; it also reveals impervious surfaces in parks—roadways, trails, parking lots, buildings, and hard courts.

Philadelphia Department of Parks and Recreation

With a wide vegetative buffer to catch runoff, Pennypack Park helps reduce Philadelphia's stormwater management costs.

Second, the same photographs are then analyzed for the amount of perviousness of the *rest* of a city—in other words, the city without its parkland and not counting surface water. (Pervious land in the city can consist of residential front and back yards as well as private natural areas such as cemeteries, university quadrangles, and corporate campuses.)

Third, the amount and characteristics of rainfall are calculated from U.S. weather data. The model (which combines aspects of two other models developed by researchers with the U.S. Forest Service) uses hourly annual precipitation data to estimate annual runoff. By comparing the modeled runoff (with parks) and the runoff that would occur from a city the same size and level of development (i.e., with streets, rooftops, parking lots, etc. but without any parks), we can calculate the reduction in runoff due to parks.

The final step involves finding what it costs to manage each gallon of stormwater using traditional methods (i.e., "hard infrastructure" such as concrete pipes and holding tanks rather than parkland). By knowing this number and the amount of water held back by the park system, we can assign an economic value to the parks' water pollution reduction.

PARK VALUE IN ACTION

Cutting Stormwater Costs in Philadelphia

Philadelphia's 10,334-acre park system is one of the oldest in the country, and it provides more than seven acres of parkland for every 1,000 residents. About 12 percent of the city is devoted to parkland, and the water retention value of the trees, grass, riparian corridors, and plants significantly reduce the amount (and cost) of runoff entering the city's sewer system.

Philadelphia's parkland is 81.3 percent pervious. The rest of the city is 34.9 percent pervious. Philadelphia receives an average of 43.29 inches of rain per year (with the characteristic mid-Atlantic mix of drizzles, showers, and downpours). The model developed by the Forest Service shows that Philadelphia's parks reduced runoff in 2007 by 496 million cubic feet compared with a scenario in which the city had no parks. It is estimated that Philadelphia stormwater management cost is 1.2 cents ($0.012) per cubic foot.

Thus, the park system provided a stormwater retention value of $5,949,000 in 2007.

Stormwater Costs in Philadelphia per Cubic Foot	
Rainfall on impervious surface	8,667,269,456 cu. ft.
Annual expenditure on water treatment	$100,000,000
Cost per cubic foot	**$0.012**

Cost Savings Due to Runoff Reduction: Philadelphia's Parks	
Results for Typical Year – 43.29 inches of rainfall	**Cubic Feet**
Annual rainfall over Entire City of Philadelphia	1,623,928,386
Amount of actual runoff from parks (81.3% perviousness)	168,480,901
Runoff if parks didn't exist and if that acreage were of the same permeability as rest of city (34.9% perviousness)	664,198,620
Reduction in runoff due to parkland's perviousness	495,717,719
Estimated stormwater costs per cubic foot	$0.012
Total savings due to park runoff reduction	**$5,948,613**

Removal of Air Pollution by Vegetation

Air pollution is a significant and expensive urban problem, injuring health and damaging structures. The human cardiovascular and respiratory systems are affected, and there are broad consequences for health-care costs and productivity. In addition, acid deposition, smog, and ozone increase the need to clean and repair buildings and other costly infrastructure.

Trees and shrubs remove air pollutants such as nitrogen dioxide, sulfur dioxide, carbon monoxide, ozone, and some particulates. Leaves absorb gases, and particulates adhere to the plant surface, at least temporarily. Thus, vegetation in city parks plays a role in improving air quality and reducing pollution costs.

In order to quantify the contribution of park vegetation to air quality, the Northeast Research Station of the U.S. Forest Service in Syracuse, New York, designed an air pollution calculator to estimate pollution removal and value for urban trees. This calculator, which is based on the Urban Forest Effects (UFORE) model of the U.S. Forest Service, is location-specific, taking into account the air pollution characteristics of a given city. (Thus, even if two cities have similar forest characteristics, the park systems could still generate different results because of differences in ambient air quality.)

First, land cover information for all of a city's parks is obtained through analysis of aerial photography. (While every city has street trees and numerous other trees on private property, only the trees on public parkland are measured.)

Then the calculator determines the pollutant flow through an area within a given time period (known as "pollutant flux"), taking into account concentration and velocity of deposition. The calculator also takes into account characteristics of different types of trees and other vegetation and seasonal leaf variation.

National Park Service

Washington, D.C.'s Rock Creek Park has more than 1,500 acres of trees that trap and absorb pollutants from the city's air.

The calculator uses hourly pollution concentration data from the U.S. Environmental Protection Agency. The total pollutant flux is multiplied by tree-canopy coverage to estimate pollutant removal. The monetary value is estimated using the median U.S. externality value for each pollutant. (The "externality value" refers to the amount it would otherwise cost to prevent a unit of that pollutant from entering the atmosphere. For instance, the externality value of a short ton of carbon monoxide is $870; the externality value of the same amount of sulfur dioxide is $1,500.)

PARK VALUE IN ACTION

Cutting Air Pollution Costs in Washington, D.C.

The trees of Washington, D.C., are the city's lungs, inhaling and exhaling the air flowing around them.

Beyond the famous Japanese cherry trees around the Tidal Basin, the stately elms gracing the Reflecting Pool, and massive oaks of Lafayette Park, there are 4,839 acres of general tree cover in the city's 7,999 acres of parkland. Their aesthetic value is not countable, but the value of the air pollution they extract is. The Air Quality Calculator determined that they removed 244 tons of carbon dioxide, nitrogen dioxide, ozone, particulate matter, and sulfur dioxide in 2005. Based on the dollar values assigned to these pollutants, the savings was $1,130,000.

Air Pollution Removal Value of Washington D.C.'s Parks, 2005

Pollutant Type	Tons of Pollutant Removed*	Dollars Saved per Ton Removed	Total Pollutant Removal Value
Carbon dioxide	10.4	$870	$9,089
Nitrogen dioxide	43.7	$6,127	$267,572
Ozone	83.7	$6,127	$512,771
Particular matter	70.3	$4,091	$287,709
Sulfur dioxide	35.5	$1,500	$53,246
Total	**243.6**	——	**$19,871,863**

*Based on the city's 60.5% tree cover (4,839 acres) of 7,999 acres total parkland.

Conclusion

While reams of urban research have been carried out on the economics of housing, manufacturing, retail, and even the arts, there has been until now no comprehensive study of the worth of a city's park system. The Trust for Public Land believes that answering this question—"How much value does an excellent city park system bring to a city?"—can be profoundly helpful to all the nation's urban areas. For the first time, parks can be assigned the kind of numerical underpinning long associated with transportation, trade, housing, and other sectors. Urban analysts will be able to obtain a major piece of missing information about how cities work and how parks fit into the equation. Housing proponents and others may be able to find a new ally in city park advocates. And mayors, city councils, and chambers of commerce may uncover solid justification to strategically acquire parkland in balance with community development projects.

Determining the economic value of a city park system is a science still in its infancy. Much research and analysis lie ahead. And cities themselves, perhaps in conjunction with universities, can help greatly by collecting more specific data about park usership, park tourism, adjacent property transactions, water runoff and retention, and other measures. In fact, every aspect of city parks—from design to management to programming to funding to marketing—would benefit from deeper analysis. In that spirit this report is offered: for the conversation about the present and future role of parks within the life and economy of American cities.

Appendix 1
Acknowledgments

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David Nowak, Ph.D., U.S. Forest Service Northeast Research Station, Syracuse, New York

Dan Stynes, Ph.D., Department of Park, Recreation and Tourism Resources, Michigan State University, East Lansing

Appendix 2
Colloquium Participants

The following individuals took part in the colloquium "How Much Value Does a Park System Bring to a City" in Philadelphia in October 2003.

Susan Baird	Denver Department of Parks and Recreation	Denver
Kathy Blaha	The Trust for Public Land	Washington, D.C.
Blaine Bonham	Pennsylvania Horticultural Society	Philadelphia
Glenn Brill	Ernst & Young	New York
Valerie Burns	Boston Natural Areas Network	Boston
Patrice Carroll	Philadelphia Managing Director's Office	Philadelphia
Donald Colvin	Indianapolis Department of Parks and Recreation	Indianapolis
Ernest Cook	The Trust for Public Land	Boston
John Crompton	Texas A&M University	College Station, Texas
Dick Dadey	City Parks Alliance	New York
Nancy Goldenberg	Philadelphia Center City Partners	Philadelphia
Peter Harnik	The Trust for Public Land	Washington, D.C.
Nancy Kafka	The Trust for Public Land	Boston
Alastair McFarlane	U.S. Dept of Housing and Urban Development	Washington, D.C.
Ken Meter	Crossroads Resource Center	Minneapolis
Sarah Nicholls	Michigan State University	East Lansing
Joan Reilly	Pennsylvania Horticultural Society	Philadelphia
Dan Stynes	Michigan State University	East Lansing
Patrice Todisco	Boston GreenSpace Alliance	Boston
Susan Wachter	University of Pennsylvania	Philadelphia
Guijing Wang	Centers for Disease Control	Atlanta
Richard Weisskoff	Everglades Economics Group	North Miami
Wayne Weston	Mecklenburg Parks and Recreation Department	Charlotte, North Carolina
Jennifer Wolch	University of Southern California	Los Angeles
Kathleen Wolf	University of Washington	Seattle
Matt Zieper	The Trust for Public Land	Boston

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interconnection points. Metropolitan's CRA lies within Edison's control area. Resources for the load are contractually integrated with Edison's system pursuant to a Service and Interchange Agreement (Agreement), which terminates in 2017. Hoover and Parker resources provide spinning reserves and ramping capability, as well as peaking capacity and energy to Edison, thereby displacing higher cost alternative resources. Edison, in turn, provides Metropolitan with exchange energy, replacement capacity, supplemental power, dynamic control and use of Edison's transmission system.

[28] SB 672, Machado, 2001. California Water Plan: Urban Water Management Plans. (The law amended Section 10620 of, and adds Section 10013 to, the Water Code) September 2001.

[29] SEC. 2. Section 10013 to the Water Code, 10013. (a) SB 672, Machado. California Water Plan: Urban Water Management Plans. September 2001, (Emphasis added.)

[30] California Department of Water Resources, 2005. California Water Plan Update 2005. Bulletin 160-05, California Department of Water Resources, Sacramento, CA.

[31] Metropolitan Water District of Southern California, 2000. *The Regional Urban Water Management Plan for the Metropolitan Water District of Southern California*, p.A.2-3.

[32] "About 1.36 maf per year (34 percent) of the region's average supply is developed locally using groundwater basins and surface reservoirs and diversions to capture natural runoff." Metropolitan Water District of Southern California, 1996, "Integrated Resource Plan for Metropolitan's Colorado River Aqueduct Power Operations", 1996, Vol.1, p.1-2.

[33] MWD estimates that reclaimed water will ultimately produce 190,000 AF of water annually. Metropolitan Water District of Southern California, 1999, "Fact Sheet" at: http://www.mwd.dst.ca.us/docs/fctsheet.htm.

[34] Buros notes that "American government, through creation and funding of the Office of Saline Water (OSW) in the early 1960s and its successor organizations like the Office of Water Research and echnology (OWRT), made one of the most concentrated efforts to develop the desalting industry. The American government actively funded research and development for over 30 years, spending about $300 million in the process. This money helped to provide much of the basic investigation of the different technologies for desalting sea and brackish waters." Buros, O.K., 2000. *The ABCs of Desalting, International Desalination Association*, Topfield, Massachusetts, p.5. This very useful summary is available at http://www.ida.bm/PDFS/Publications/ABCs.pdf

[35] Buros, O.K., 2000. *The ABCs of Desalting, International Desalination Association*, Topfield, Massachusetts, p.5. This very useful summary is available at http://www.ida.bm/PDFS/Publications/ABCs.pdf See also; Buros et al.1980. *The USAID Desalination Manual.* Produced by CH2M HILL International for the U.S. Agency for International Development.

[36] Wangnick,Klaus.1998 *IDA Worldwide Desalting Plants Inventory Report No.15.*Produced by Wangnick Consulting for International Desalination Association; and Buros, O.K., 2000. *The ABCs of Desalting, International Desalination Association*, Topfield, Massachusetts, p.5.

[37] Desalination systems with a unit size of 100 m3/d or more. Figures in original cited as 6,000 mgd.

[38] Wangnick Consulting GMBH (http://www.wangnick.com) maintains a permanent desalting plants inventory and publishes the results biennially in co-operation with the International Desalination Association, as the IDA Worldwide Desalting Plants Inventory Report. Thus far, fifteen reports have been published, with the latest report having data through the end of 1997; and see Wangnick,Klaus.*1998 IDA Worldwide Desalting Plants Inventory Report No.15.*Produced by Wangnick Consulting for International Desalination Association. The data cited are as of December 31, 1997.

[39] Cited in original as 9,400,000 m3/d.

[40] Wangnick,Klaus.*1998 IDA Worldwide Desalting Plants Inventory Report No.15.*Produced by Wangnick Consulting for International Desalination Association. (Cited in original in m3d (13,300,000 m3/d).

[41] Wangnick,Klaus.1998 *IDA Worldwide Desalting Plants Inventory Report No.15.*Produced by Wangnick Consulting for International Desalination Association; and Buros, O.K., 2000. *The ABCs of Desalting, International Desalination Association*, Topfield, Massachusetts. The United States ranks second in over-all capacity (16 %) with most of the capacity in the RO process used to treat brackish water. The largest plant, at Yuma, Arizona, is not in use.

[42] Wangnick,Klaus.1998. *IDA Worldwide Desalting Plants Inventory Report No.15.* Produced by Wangnick Consulting for International Desalination Association; and Buros, O.K., 2000. *The ABCs of Desalting, International Desalination Association*, Topfield, Massachusetts.

[43] Salinity levels referenced in metric units.

[44] OTV. 1999. "Desalinating seawater." Memotechnique, Planete Technical Section, No. 31 (February), p.1; and Gleick, Peter H. 2000. *The World's Water: 2000-2001*, Island Press, Covelo, p.94.

[45] Gerry Filteau, Separation Processes, Inc., 2386 Faraday Ave., Suite 100, Calsbad, CA 92008, www.spi-engineering.com

Sec. 3. The City Clerk shall certify to the passage of this ordinance and have it published in accordance with Council policy, either in a daily newspaper circulated in the City of Los Angeles or by posting for ten days in three public places in the City of Los Angeles: one copy on the bulletin board located at the Main Street entrance to the Los Angeles City Hall; one copy on the bulletin board located at the Main Street entrance to the Los Angeles City Hall East; and one copy on the bulletin board located at the Temple Street entrance to the Los Angeles County Hall of Records.

I hereby certify that the foregoing ordinance was introduced at the meeting of the Council of the City of Los Angeles AUG 11 2010, and passed at it's meeting of AUG 18 2010.

JUNE LAGMAY, City Clerk

By _____ Deputy

Approved AUG 23 2010

_____ Mayor

Approved as to Form and Legality

CARMEN A. TRUTANICH, City Attorney

By Victor Sofelkanik (VSE)
VICTOR SOFELKANIK
Deputy City Attorney)

Date 8/4/10

File No. 09-0369-S9

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