

**Volume I of II**

# **Final Environmental Impact Statement/Environmental Impact Report**

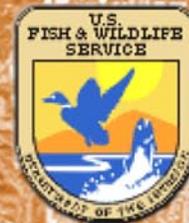
*For Threatened and Endangered Species  
Due to the Urban Growth within the  
Multiple Habitat Conservation Program Planning Area  
SCH NO. 93121073*

*Lead Agencies:*

**United States  
Fish and Wildlife Service**

*and*

**San Diego  
Association of Governments**



**March 2003**

**Volume I of II**

# **Final Environmental Impact Statement/Environmental Impact Report**

*For Threatened and Endangered Species  
Due to the Urban Growth within the  
Multiple Habitat Conservation Program Planning Area  
SCH NO. 93121073*

*Lead Agencies:*

**United States  
Fish and Wildlife Service**



*and*

**San Diego  
Association of Governments**



*Prepared by:*

**P&D Environmental**   
**RECON**  
**Onaka Planning & Economics**

**March 2003**

**FINAL ENVIRONMENTAL IMPACT STATEMENT/  
ENVIRONMENTAL IMPACT REPORT  
TABLE OF CONTENTS**

<b>Section</b>	<b>Page No.</b>
COVER PAGE	
<b><u>VOLUME I: INTRODUCTION</u></b>	
1.0 INTRODUCTION .....	F-1
2.0 PUBLIC REVIEW DRAFT EIS/EIR DISTRIBUTION LIST.....	F-5
DRAFT ENVIRONMENTAL IMPACT STATEMENT/ ENVIRONMENTAL IMPACT REPORT	
ES.0 EXECUTIVE SUMMARY .....	ES-1
1.0 PURPOSE AND NEED FOR ACTION.....	1-1
1.1 Introduction.....	1-1
1.1.1 MHCP Framework.....	1-2
1.2 Purpose and Need for the Proposed Action .....	1-10
1.2.1 Project Objectives .....	1-12
1.2.2 Purpose of the Joint EIS/EIR .....	1-13
1.3 Proposed Action.....	1-14
1.4 Decisions to be Made.....	1-15
1.4.1 U.S. Fish and Wildlife Service .....	1-15
1.4.2 California Department of Fish and Game.....	1-16
1.4.3 California Coastal Commission .....	1-17
1.4.4 San Diego Association of Governments.....	1-17
1.4.5 Participating Subarea Plan Jurisdictions.....	1-17
1.5 Scoping Process .....	1-17
1.5.1 Public Input During Formulation of the Draft MHCP.....	1-18
1.5.2 NEPA/CEQA Scoping Process.....	1-20
1.5.3 Identification of the Potentially Significant Issues .....	1-22
1.5.4 Issues Not Considered Significant and Not Selected for Detailed Analysis.....	1-23
1.6 Relevant Statutes, Regulations, and Guidelines .....	1-23
1.7 Organization of the EIS/EIR.....	1-24

---

**TABLE OF CONTENTS**

<b>Section</b>	<b>Page No.</b>
2.0 PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES .....	2-1
2.1 Proposed Action - MHCP .....	2-1
2.1.1 Overall Plan Description.....	2-2
2.1.2 Biological Preserve Assembly and Operation .....	2-15
2.1.3 MHCP Plan Implementation Policies .....	2-24
2.2 Proposed Alternatives .....	2-25
2.2.1 Alternative No. 1 – Focused Planning Area No. 1 .....	2-27
2.2.2 Alternative No. 2 – Focused Planning Area No. 2 Adding the Gnatcatcher Core and Restoration – the Preferred Project .....	2-27
2.2.3 Alternative No. 3 – Biological Core and Linkage Area.....	2-34
2.2.4 Alternative No. 4 – No Action/No Project Alternative.....	2-38
2.3 Proposed Action - Subarea Plans.....	2-40
2.3.1 Carlsbad Subarea Plan .....	2-41
2.3.2 Encinitas Subarea Plan.....	2-51
2.3.3 Escondido Subarea Plan.....	2-57
2.3.4 Oceanside Subarea Plan.....	2-62
2.3.5 San Marcos Subarea Plan.....	2-68
2.4 Alternatives Considered but Eliminated from Further Analysis.....	2-75
2.4.1 Coastal Sage Scrub Only Preservation .....	2-75
2.4.2 Listed Species Only Preservation .....	2-77
2.4.3 Public Lands Only Preservation.....	2-78
2.4.4 Hard-Line Option.....	2-79
2.4.5 Inclusion of Camp Pendleton, Fallbrook Weapons Station, and County Unincorporated Properties .....	2-80
2.4.6 No Take.....	2-81
3.0 ENVIRONMENTAL SETTING/AFFECTED ENVIRONMENT.....	3-1
3.1 Regional Environmental Setting.....	3-1
3.2 Land Use (Important Farmland and Extractive Resources).....	3-2
3.2.1 Existing and Planned Land Uses within the Multiple Habitat Conservation Program Boundary.....	3-2
3.2.2 Existing Environmental Plans for the MHCP Subareas .....	3-2
3.2.3 Important Farmland within the MHCP Boundary .....	3-10
3.2.4 Extractive Resources in the MHCP Study Area .....	3-13
3.3 Biological Resources .....	3-17
3.3.1 Vegetation Communities .....	3-18
3.3.2 Sensitive Habitats.....	3-24
3.3.3 Sensitive Species.....	3-25
3.4 Regional Transportation/Circulation .....	3-35

**TABLE OF CONTENTS**

<b>Section</b>	<b>Page No.</b>
3.5	Public Services and Utilities ..... 3-39
3.5.1	Water Distribution ..... 3-39
3.5.2	Wastewater Collection, Treatment, Reclamation, and Disposal..... 3-40
3.5.3	Solid Waste Collection, Disposal Sites (Landfills), and Recycling..... 3-40
3.5.4	Fire Protection..... 3-40
3.5.5	Police Protection..... 3-40
3.5.6	School Facilities..... 3-40
3.5.7	Park Facilities..... 3-43
3.5.8	Natural Gas ..... 3-43
3.5.9	Electricity..... 3-43
3.6	Population, Housing, and Employment ..... 3-43
3.6.1	Historical Growth..... 3-43
3.6.2	Regionwide and City/County Forecasts..... 3-49
3.6.3	Development of Residential and Employment Land Use..... 3-50
4.0	ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES.... 4-1
4.1	Approach to Analysis and Format ..... 4-1
4.2	Land Use (Includes Important Farmland and Extractive Resources) ..... 4-2
4.2.1	Criteria for Determining Significance (Generally Based Upon CEQA Appendix G)..... 4-2
4.2.2	MHCP Plan/Take Authorization/Implementing Agreement ..... 4-3
4.2.3	Subarea Plans..... 4-3
4.2.4	Level of Significance After Mitigation..... 4-41
4.2.5	Mitigation Measures ..... 4-42
4.3	Biological Resources ..... 4-42
4.3.1	Criteria for Determining Significance ..... 4-43
4.3.2	MHCP Plan/Take Authorization/Implementing Agreement ..... 4-46
4.3.3	Subarea Plans..... 4-102
4.3.4	Level of Significance with Mitigation ..... 4-128
4.3.5	Mitigation Measures ..... 4-135
4.4	Regional Transportation/Circulation ..... 4-215
4.4.1	Criteria for Determining Significance ..... 4-215
4.4.2	MHCP Plan/Take Authorization/Implementing Agreement ..... 4-215
4.4.3	Subarea Plans..... 4-215
4.4.4	Level of Significance ..... 4-218
4.4.5	Mitigation Measures ..... 4-219
4.5	Public Services and Utilities ..... 4-220
4.5.1	Criteria for Determining Significance ..... 4-220
4.5.2	MHCP Plan/Take Authorization/Implementing Agreement ..... 4-220
4.5.3	Subarea Plans..... 4-221
4.5.4	Level of Significance ..... 4-225
4.5.5	Mitigation Measures ..... 4-226

**TABLE OF CONTENTS**

<b>Section</b>	<b>Page No.</b>
4.6 Population, Housing, and Employment .....	4-227
4.6.1 Criteria for Determining Significance .....	4-227
4.6.2 MHCP Plan/Take Authorization/Implementing Agreement .....	4-230
4.6.3 Subarea Plans .....	4-238
4.6.4 Level of Significance .....	4-243
4.6.5 Mitigation Measures .....	4-244
5.0 GROWTH INDUCEMENT .....	5-1
6.0 CUMULATIVE IMPACTS .....	6-1
6.1 Requirements for the Analysis of Cumulative Impacts .....	6-1
6.2 Related Planning Documents Considered in the Cumulative Analysis ..	6-2
6.3 Cumulative Impact Analysis .....	6-5
6.3.1 Biological Resources .....	6-5
6.3.2 Land Use and Public Facilities .....	6-6
7.0 ISSUES NOT CONSIDERED SIGNIFICANT .....	7-1
8.0 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES .....	8-1
9.0 REFERENCES .....	9-1
10.0 PERSONS CONSULTED .....	10-1
11.0 LIST OF PREPARERS .....	11-1
12.0 GLOSSARY .....	12-1
12.1 Definitions .....	12-1
12.2 Acronyms and Abbreviations .....	12-7

**VOLUME II: RESPONSE TO COMMENTS** ..... (Under Separate Cover)

1. Environmental Protection Agency
2. U.S. Navy, Southwest Division
3. U.S. Geological Survey
4. California Coastal Commission 1
5. California Coastal Commission 2
6. California Coastal Commission 3
7. University of California San Diego
8. County of San Diego
9. North County Transit District
10. City of Carlsbad
11. Alliance for Habitat Conservation
12. Building Industry Association of San Diego County

---

***TABLE OF CONTENTS***

13.	California Native Plant Society et al.
14.	Cottonwood Creek Conservation
15.	Endangered Habitats League 1
15A.	Endangered Habitats League 2
16.	Friends of Daley Ranch
17.	Mountain Defense League
18.	Palomar Audubon Society
19.	Preserve Calavera
20.	Sierra Club (Clarke)
21.	Sierra Club (Delano)
22.	Leslie A. Brooks
23.	Shelley Hayes Caron
24.	Claudia and Richard Foster
25.	Gatzke Dillon & Ballance LLP
26.	Kim Hunter
27.	Klein Edwards Professional Services
28.	Jay Klopfenstein
29.	Ladwig Design Group, Inc.
30.	Luce Forward
31.	Stacy McCline
32.	Karen Merrill
33.	Dr. Jack Paxton
34.	Virginia L. Perkins
35.	Joan B. Perron
36.	Planning Systems
37.	Alan Thum
38.	J. Whalen Associates
39.	Inez Yoder
40.	Wildlife Research Institute
Attachment RS-1	Excerpt from San Elijo Ranch Development Agreement with the City of San Marcos and Specific Plan

**LIST OF FIGURES**

1-1 Habitat Conservation Planning Areas ..... 1-3

1-2 MHCP Subareas..... 1-4

2.2-1 Focused Planning Area Alternative 1 ..... 2-29

2.2-2 Focused Planning Area and Gnatcatcher Core Alternative 2 ..... 2-31

2.2-3 Biological Core and Linkage Area Alternative 3 ..... 2-35

2.3-1 City of Carlsbad Habitat Management Plan ..... 2-43

2.3-2 City of Encinitas Subarea Plan Focused Planning Area ..... 2-53

2.3-3 City of Escondido Subarea Plan Focused Planning Area (FPA) and  
Constrained Lands Outside the FPA..... 2-59

2.3-4 Preserve Planning Map and Habitat Conservation Overlay Zones..... 2-65

2.3-5 City of San Marcos Subarea Plan Focused Planning Area Subareas..... 2-71

3.2-1 Existing Land Use, MHCP Study Area ..... 3-3

3.2-2 Planned Land Use, MHCP Study Area..... 3-5

3.2-3 Important Farmland, MHCP Study Area ..... 3-11

3.2-4 Mineral Resources, MHCP Study Area ..... 3-15

3.3-1 Vegetation Communities ..... 3-19

3.4-1 San Diego County 2020 Highway Plan ..... 3-37

3.4-2 Local Circulation Network ..... 3-41

4.2-1 Planned Land Use FPA Alternatives 1 and 2..... 4-5

4.2-2 Important Farmland, MHCP Study Area FPA Alternatives 1 and 2 ..... 4-15

4.2-3 Mineral Resources, MHCP Study Area FPA Alternatives 1 and 2 ..... 4-19

4.2-4 Planned Land Use, BCLA Alternative 3..... 4-29

4.2-5 Important Farmland, MHCP Study Area BCLA Alternative 3 ..... 4-35

4.2-6 Mineral Resources, MHCP Study Area BCLA Alternative 3 ..... 4-39

4.3-1 Vegetation Communities within the MHCP Study Area..... 4-47

4.3-2 Recorded Locations of Sensitive Species, MHCP Study Area and FPA  
Alternative 1 ..... 4-53

4.3-3 Recorded Locations of California Gnatcatchers, FPA Alternative 1 ..... 4-59

4.3-4 Focused Planning Area (FPA) and Biological Core and Linkage Area  
(BCLA), MHCP Study Area..... 4-75

4.3-5 Recorded Locations of Sensitive Species, MHCP Study Area and  
BCLA Alternative 3..... 4-95

4.3-6 Recorded Locations of California Gnatcatchers, BCLA Alternative 3 ..... 4-99

**LIST OF TABLES**

ES-1	Comparison of FPA Impacts on Vacant Land Designated for Future Development.....	ES-11
ES-2	Summary of Significance of Impacts.....	ES-14
ES-3	Summary of Mitigation Measures for Significant Impacts.....	ES-17
ES-4	Summary of Biological Resources, Significance of Impacts for Each Alternative.....	ES-28
ES-5	Significance for Each Subarea Plan.....	ES-33
ES-6	Summary of Biological Resources Significance of Impacts for Each Subarea Plan.....	ES-37
1-1	Decision/Actions by Lead and Responsible Agencies.....	1-16
2.1-1	Preliminary MHCP Covered Species List .....	2-6
2.1-2	MHCP Narrow Endemic Species List .....	2-11
2.1-3	Annual Costs of Habitat Management, Monitoring, and Administration at Buildout and Required Endowment.....	2-23
2.2-1	Vegetation Community Acreage within FPA Alternative 1 .....	2-28
2.2-2	Vegetation Community Acreage within FPA Alternative 2 .....	2-33
2.2-3	Vegetation Community Acreage within BCLA Alternative 3.....	2-37
2.3-1	Biological Conservation, City of Carlsbad Focused Planning Area Alternatives .....	2-45
2.3-2	Mitigation Ratios for Impacts to HMP Habitats.....	2-47
2.3-3	City of Carlsbad HMP Species .....	2-48
2.3-4	Biological Conservation, City of Encinitas Focused Planning Area Alternatives.....	2-55
2.3-5	Biological Conservation, City of Escondido Focused Planning Area Alternatives.....	2-61
2.3-6	Biological Conservation, City of Oceanside Focused Planning Area Alternatives.....	2-64
2.3-7	City of San Marcos Hard-Line 100% Conservation Areas.....	2-70
2.3-8	City of San Marcos Areas Conserved by Standards Combined with Fixed Conservation Rates .....	2-73
2.3-9	Biological Conservation, City of San Marcos Focused Planning Area Alternatives.....	2-74
3.2-1	Existing Land Use (1998) Within the MHCP Study Area.....	3-7
3.2-2	Planned Land Use (1998) Within the MHCP Study Area .....	3-8
3.2-3	Important Farmland Categories .....	3-13
3.2-4	Important Farmland Within the MHCP Boundary .....	3-13
3.2-5	MRZ-2 Land Within the MHCP Boundary .....	3-17
3.3-1	Acreage and Proportional Distribution of Vegetation Communities Within the MHCP Study Area and Biological Core and Linkage Area (BCLA).....	3-21
3.3-2	Preliminary MHCP Covered Species List .....	3-26
3.4-1	State Highway Routes.....	3-36

**LIST OF TABLES (continued)**

3.6-1 Population By Jurisdiction..... 3-45

3.6-2 Housing Units By Jurisdiction..... 3-47

3.6-3 Civilian Employment By Jurisdiction..... 3-48

3.6-4 Developed Residential and Employment Land Use by Jurisdiction..... 3-51

4.2-1 Impact of Conservation on Planned Land Use by City: FPA Alternative 1 ..... 4-7

4.2-2 Important Farmland Conserved as Habitat Acres..... 4-13

4.2-3 Acreage of Habitat Conservation on MRZ-2 Land..... 4-21

4.2-4 Impact of Conservation on Planned Land Use by City: FPA Alternative 2 ..... 4-23

4.2-5 Impact of Conservation on Planned Land Use by City: BCLA Alternative 3... 4-28

4.3-1 Conservation of Vegetation Communities for Each Alternative ..... 4-139

4.3-2 Conservation of Sensitive Species for Each Alternative ..... 4-141

4.3-3 Summary of Endangered, Threatened, and Rare Species and Findings of  
Significance..... 4-161

4.3-4 Conservation of Vegetation Communities in Subarea Plans ..... 4-176

4.3-5 Conservation of Sensitive Species for Subarea Plans..... 4-178

4.3-6 Summary of Mitigation Measures for Significant Biological Resources  
Impacts..... 4-207

4.6-1 Impact of Conservation on Planned Land Use, Housing, and Employment  
Buildings by City: Proposed Project (FPA) and Unincorporated  
Gnatcatcher Core ..... 4-231

4.6-2 Impact of Conservation on Planned Land Use, Housing, and Employment  
Buildings by City: BCLA Alternative and Unincorporated  
Gnatcatcher Core ..... 4-232

4.6-3 Residential Land Use by Jurisdiction and Alternative..... 4-234

4.6-4 Commercial and Industrial Land Use by Jurisdiction and Alternative..... 4-235

4.6-5 Comparison of FPA Impacts on Vacant Land Designated for Future  
Development..... 4-237

## **1.0 INTRODUCTION**

This document is a Final Environmental Impact Statement/Environmental Impact Report (EIS/EIR) which provides a review and analysis of the potential environmental impacts that could result from implementation of the proposed Multiple Habitat Conservation Program (MHCP).

Under the National Environmental Protection Act (NEPA) Section 1502.1, the primary purpose of an EIS is to serve as an action-forcing device to ensure that the policies and goals of NEPA are incorporated into and considered during the ongoing programs and actions of the federal agencies. An EIS must provide a full and fair discussion of significant environmental impacts and must inform the decision makers and the public of reasonable alternatives that would avoid or minimize adverse impacts.

Similarly, in accordance with the California Environmental Quality Act (CEQA) Guideline Section 15002, an EIR is the public document used by a governmental agency to analyze the significant environmental effects of a proposed project, to identify alternatives, and to disclose possible ways to reduce or avoid the possible environmental damage. The EIS/EIR itself does not control the way in which a project can be developed or constructed; rather, the governmental agency must respond to the information contained in the EIS/EIR by one or more of the seven methods outlined in Section 15002(h) which include:

1. Changing a proposed project;
2. Imposing conditions on the approval of a project;
3. Adopting plans or ordinances to control the broader class of project to avoid the adverse changes;
4. Choosing an alternative way to meet the same need;
5. Disapproving the project;
6. Finding that changing or altering the project is not feasible; or
7. Finding that the unavoidable significant environmental damage is acceptable as provided in CEQA Guideline Section 15093.

The purpose of this joint EIS/EIR is to evaluate the potential for environmental effects from the following proposed actions:

- Adopting the Multiple Habitat Conservation Program and five Subarea Plans for the cities of Carlsbad, Encinitas, Escondido, Oceanside, and San Marcos.
- Issuing “incidental take” permits for covered species pursuant to Section 10(a)(1)(B) of the Endangered Species Act (ESA) and Section 2800 et seq. of the California Fish and Game Code.

The MHCP is a comprehensive multiple-jurisdictional planning program designed to create, manage, and monitor an ecosystem preserve in northwestern San Diego County. The MHCP preserve system is intended to protect viable populations of native plant and animal species and their habitats in perpetuity, while accommodating continued economic development and quality of life for residents of North County.

The MHCP action will consist of one the selected Focused Planning Area (FPA) Alternatives and the Subarea Plans. Additionally, the United States Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG) may issue take authorization permits for individual Subarea Plans with conditions or modifications. Although there are seven cities participating in the subregional MHCP, only five of the seven cities have prepared Subarea Plans at this time: Carlsbad, Encinitas, Escondido, Oceanside, and San Marcos. The City of Solana Beach does not anticipate the need for incidental take permits (therefore the need to prepare a Subarea Plan), because their remaining habitat areas are already protected either by previous private conservation efforts, or by public ownership of the San Elijo Lagoon and the Ecological Preserve. There is no remaining privately owned undeveloped property with natural habitat. Their participation will be in the approval and implementation of the subregional MHCP. The overall MHCP Plan will cover the City of Vista; however, the City of Vista is still in the process of preparing its Subarea Plan. Therefore, they will not receive a Section 10(a) permit from the USFWS until they have completed their plan, it has been approved by the resources agencies, and their NEPA/CEQA compliance has been met.

This EIS/EIR has been prepared in compliance with the NEPA as implemented by the Council of Environmental Quality Regulations (Title 40 Code of Federal Regulations [CFR] Parts 1500-1508) and the CEQA (California Public Resources Code Section 21000 et seq.).

Joint environmental documents are permitted and encouraged under both NEPA (Section 1506.4) and CEQA (Section 21083.5). For this joint document, both CEQA and NEPA terminology is provided. Terminology is used interchangeably throughout the document.

A final biological analysis was conducted on the October 2002 Focused Planning Area. Results of the conservation analysis (MHCP Volume II), which reflects public comment on the analysis performed for the Public Review Draft MHCP, will be used by the wildlife agencies to evaluate species coverage for the issuance of take authorizations. FPA changes result in improvements to conservation, but do not cause new significant impacts or increased magnitude of impacts related to other environmental issues. Since the preparation, distribution, and public review of the MHCP, Subarea Plans, and the EIS/EIR, the FPA has continued to evolve through policy review and negotiations with the wildlife agencies. The following is a list of tables and figures that represent changes that have occurred as a result of the final plan.

Table 2.2-1	Vegetation Community Acreage within FPA Alternative 1
Table 2.2-2	Vegetation Community Acreage within FPA Alternative 2
Table 2.2-3	Vegetation Community Acreage within BCLA Alternative 3
Table 2.3-1	Biological Conservation, City of Carlsbad Focused Planning Area Alternatives
Table 2.3-4	Biological Conservation, City of Encinitas Focused Planning Area Alternatives
Table 2.3-5	Biological Conservation, City of Escondido Focused Planning Area Alternatives
Table 2.3-6	Biological Conservation, City of Oceanside Focused Planning Area Alternatives
Table 2.3-7	City of San Marcos Hard-Line 100% Conservation Areas
Table 2.3-8	City of San Marcos Areas Conserved by Standards Combined with Fixed Conservation Rates
Table 2.3-9	Biological Conservation, City of San Marcos Focused Planning Area Alternatives
Table 3.3-1	Vegetation Communities
Table 4.3-1	Conservation of Vegetation Communities for Each Alternative
Table 4.3-2	Conservation of Sensitive Species for Each Alternative
Table 4.3-5	Conservation of Sensitive Species for Subarea Plans

- Figure 2.2-1 Focused Planning Area Alternative 1
- Figure 2.2-2 Focused Planning Area and Gnatcatcher Core Alternative 2
- Figure 2.3-1 City of Carlsbad Habitat Management Plan
- Figure 2.3-2 City of Encinitas Subarea Plan Focused Planning Area
- Figure 2.3-3 City of Escondido Subarea Plan Focused Planning Area (FPA) and Constrained Lands Outside the FPA
- Figure 2.3-4 Preserve Planning Map and Habitat Conservation Overlay Zones
- Figure 2.3-5 City of San Marcos Subarea Plan Focused Planning Area Subareas
- Figure 3.3-2 Gnatcatcher Core Conservation
- Figure 3.4-2 Local Circulation Network
- Figure 4.3-2 Recorded Locations of Sensitive Species, MHCP Study Area and FPA Alternative 1
- Figure 4.3-3 Recorded Locations of California Gnatcatchers, FPA Alternative 1
- Figure 4.3-4 Focused Planning Area (FPA) and Biological Core and Linkage Area (BCLA), MHCP Study Area
- Figure 4.3-5 Recorded Locations of Sensitive Species, MHCP Study Area and BCLA Alternative 3
- Figure 4.3-6 Recorded Locations of California Gnatcatchers, BCLA Alternative 3

In addition to updating the above tables and figures, there were minor revisions made to text found in Section 2.1.2 under the Financing Plan discussion and in Section 4.6 – Population, Housing, and Employment resulting from changes and updates made to the Final MHCP. This information did not raise any new significant impacts or introduce new information that was not previously included in the Draft EIS/EIR or the Draft MHCP. These changes are denoted in a ~~strikeout~~ and underline format.

## **2.0 PUBLIC REVIEW DRAFT EIS/EIR DISTRIBUTION LIST**

Under CEQA and NEPA, an agency must solicit and respond to comments from the public and from other agencies concerned with the project. The Draft EIS/EIR was submitted by the United States Fish and Wildlife Service and the San Diego Association of Governments (SANDAG) for public review on December 21, 2001. During the public review period, comments from regulatory agencies and the public responding to the Draft EIS/EIR were received by SANDAG. Comment letters are presented in the following order:

### **Federal Agencies**

Environmental Protection Agency  
U.S. Navy, Southwest Division  
U.S. Geological Survey

### **State Agencies**

California Coastal Commission 1  
California Coastal Commission 2  
California Coastal Commission 3  
University of California San Diego

### **Local Jurisdictions**

County of San Diego  
North County Transit District  
City of Carlsbad

### **Organizations**

Alliance for Habitat Conservation  
Building Industry Association of San Diego County  
California Native Plant Society et al.  
Cottonwood Creek Conservation  
Endangered Habitats League 1  
Endangered Habitats League 2

Friends of Daley Ranch  
Mountain Defense League  
Palomar Audubon Society  
Preserve Calavera  
Sierra Club (Clarke)  
Sierra Club (Delano)

**Individual Respondents**

Leslie A. Brooks  
Shelley Hayes Caron  
Claudia and Richard Foster  
Gatzke Dillon & Ballance LLP  
Kim Hunter  
Klein Edwards Professional Services  
Jay Klopfenstein  
Ladwig Design Group, Inc.  
Luce Forward  
Stacy McCline  
Karen Merrill  
Dr. Jack Paxton  
Virginia L. Perkins  
Joan B. Perron  
Planning Systems  
Alan Thum  
J. Whalen Associates  
Inez Yoder  
Wildlife Research Institute

Volume II (under separate cover) includes comments received during the public review process and responses to the comments. Each comment has been assigned a comment number, which corresponds to a response number and response that appears on the same page.

## **Revised Tables and Figures**

**PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES**

**Table 2.2-1  
Vegetation Community Acreage within FPA Alternative 1**

<b>Vegetation Community</b>	<b>Total MHCP Study Area</b>	<b>FPA Alternative 1</b>	<b>Percent of Total MHCP</b>
Southern Coastal Bluff Scrub	2	--	0%
Maritime Succulent Scrub	32	29	90%
Coastal Sage Scrub	8,656	5,334	62%
Chaparral	8,324	5,806	70%
Southern Maritime Chaparral	968	748	77%
Coastal Sage/Chaparral Mix	462	246	53%
Grassland	5,219	1,687	32%
Southern Coastal Salt Marsh	272	272	100%
Alkali Marsh	165	165	100%
Freshwater Marsh	518	518	100%
Riparian Forest	676	676	100%
Riparian Woodland	250	250	100%
Riparian Scrub	1,739	1,739	100%
Englemann Oak Woodland	230	188	82%
Coast Live Oak Woodland	650	511	79%
Other Oak Woodlands	1	1	100%
Freshwater	444	444	100%
Estuarine	955	955	100%
Disturbed Wetland	202	202	100%
Natural Flood Channel/Streambed	142	142	100%
Beach	48	8	16%
Saltpan/Mudflats	8	8	100%
<b><i>Subtotal Habitat</i></b>	<b>29,962</b>	<b>19,928</b>	<b>67%</b>
Eucalyptus Woodland	648	NA	NA
Agriculture	10,438	NA	NA
Disturbed	4,071	NA	NA
<b><i>Subtotal Vacant Land</i></b>	<b>15,157</b>	<b>NA</b>	<b>NA</b>
Developed	66,789	NA	NA
<b>TOTAL</b>	<b>111,908</b>	<b>NA</b>	<b>NA</b>

Note: Numbers may not sum to total as shown, due to rounding. Vernal pools were mapped as an overlay and thus their acreage is not included in this total. Approximately 5 acres of vernal pool habitat occur in the study area. An additional 46 acres of vernal pools in the City of San Marcos are considered to be possible major amendment areas and may be added to the FPA in the future.

Source: SANDAG 2002.

**PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES**

**Table 2.2-2  
Vegetation Community Acreage within FPA Alternative 2**

<b>Vegetation Community</b>	<b>Total MHCP Study Area</b>	<b>FPA Alternative 2</b>	<b>Percent of Total MHCP</b>
Southern Coastal Bluff Scrub	2	--	0%
Maritime Succulent Scrub	32	29	90%
Coastal Sage Scrub	8,656	5,834	67%
Chaparral	8,324	5,806	70%
Southern Maritime Chaparral	968	748	77%
Coastal Sage/Chaparral Mix	462	246	53%
Grassland	5,219	1,687	32%
Southern Coastal Salt Marsh	272	272	100%
Alkali Marsh	165	165	100%
Freshwater Marsh	518	518	100%
Riparian Forest	676	676	100%
Riparian Woodland	250	250	100%
Riparian Scrub	1,739	1,739	100%
Englemann Oak Woodland	230	188	82%
Coast Live Oak Woodland	650	511	79%
Other Oak Woodlands	1	1	100%
Freshwater	444	444	100%
Estuarine	955	955	100%
Disturbed Wetland	202	202	100%
Natural Flood Channel/Streambed	142	142	100%
Beach	48	8	18%
Saltpan/Mudflats	8	8	100%
<b><i>Subtotal Habitat</i></b>	<b>29,962</b>	<b>20,428</b>	<b>68%</b>
Eucalyptus Woodland	648	NA	NA
Agriculture	10,438	NA	NA
Disturbed	4,071	NA	NA
<b><i>Subtotal Vacant Land</i></b>	<b>15,157</b>	<b>NA</b>	<b>NA</b>
Developed	66,789	NA	NA
<b>TOTAL</b>	<b>111,908</b>	<b>NA</b>	<b>NA</b>

Note: Numbers may not sum to total as shown, due to rounding. Vernal pools were mapped as an overlay and thus their acreage is not included in this total. Approximately 5 acres of vernal pool habitat occur in the study area. An additional 46 acres of vernal pools in the City of San Marcos are considered to be possible major amendment areas and may be added to the FPA in the future.

Source: SANDAG 2002.

**PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES**

**Table 2.2-3  
Vegetation Community Acreage within BCLA Alternative 3**

<b>Vegetation Community</b>	<b>Total MHCP Study Area</b>	<b>BCLA Alternative 3</b>	<b>Percent of Total MHCP</b>
Southern Coastal Bluff Scrub	2	--	0%
Maritime Succulent Scrub	32	31	96%
Coastal Sage Scrub	8,656	7,169	83%
Chaparral	8,324	7,730	93%
Southern Maritime Chaparral	968	904	93%
Coastal Sage/Chaparral Mix	462	439	95%
Grassland	5,219	3,298	63%
Southern Coastal Salt Marsh	272	270	99%
Alkali Marsh	165	165	100%
Freshwater Marsh	518	442	85%
Riparian Forest	676	404	60%
Riparian Woodland	250	133	53%
Riparian Scrub	1,739	1,191	69%
Englemann Oak Woodland	230	207	90%
Coast Live Oak Woodland	650	583	90%
Other Oak Woodlands	1	1	100%
Freshwater	444	396	89%
Estuarine	955	954	100%
Disturbed Wetland	202	87	43%
Natural Flood Channel/Streambed	142	130	92%
Beach	48	23	48%
Saltpan/Mudflats	8	8	100%
<b><i>Subtotal Habitat</i></b>	<b>29,962</b>	<b>24,565</b>	<b>82%</b>
Eucalyptus Woodland	648	357	55%
Agriculture	10,438	NA	NA
Disturbed	4,071	NA	NA
<b><i>Subtotal Vacant Land</i></b>	<b>15,157</b>	<b>NA</b>	<b>NA</b>
Developed	66,789	NA	NA
<b>TOTAL</b>	<b>111,908</b>	<b>NA</b>	<b>NA</b>

Note: Numbers may not sum to total as shown, due to rounding. Vernal pools were mapped as an overlay and thus their acreage is not included in this total. Approximately 5 acres of vernal pool habitat occur in the study area. An additional 46 acres of vernal pools in the City of San Marcos are considered to be possible major amendment areas and may be added to the FPA in the future.

Source: SANDAG 2002.

**PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES**

**Table 2.3-1  
Biological Conservation  
City of Carlsbad Focused Planning Area Alternatives**

Vegetation Type	Total	FPA 1		FPA 2*		BCLA	
		Acres	Percent	Acres	Percent	Acres	Percent
Southern Coastal Bluff Scrub	-	-	--	-	--	-	--
Maritime Succulent Scrub	32	29	90%	29	90%	31	96%
Coastal Sage Scrub	1,993	1,366	69%	1,366	69%	1,821	91%
Chaparral	604	426	71%	426	71%	578	96%
Southern Maritime Chaparral	359	254	71%	254	71%	351	98%
Coastal Sage/Chaparral Mix	273	104	38%	104	38%	272	100%
Grassland	1,299	490	38%	490	38%	1,192	92%
Southern Coastal Salt Marsh**	147	147	100%	147	100%	145	99%
Alkali Marsh**	13	13	100%	13	100%	13	100%
Freshwater Marsh**	192	192	100%	192	100%	171	89%
Riparian Forest**	86	86	100%	86	100%	84	98%
Riparian Woodland**	21	21	100%	21	100%	20	97%
Riparian Scrub**	353	353	100%	353	100%	321	91%
Engelmann Oak Woodland	-	-	--	-	--	-	--
Coast Live Oak Woodland	23	18	77%	18	77%	23	100%
Other Oak Woodlands	1	1		1		1	
Freshwater**	57	57	100%	57	100%	51	89%
Estuarine**	768	768	100%	768	100%	767	100%
Disturbed Wetland**	118	118	100%	118	100%	65	55%
Natural Flood Channel/ Streambed**	-	-	--	-	--	-	--
Beach	-	-	--	-	--	-	--
Saltpan/Mudflats**	-	-	--	-	--	-	--
<b>NATURAL HABITATS</b>	<b>6,337</b>	<b>4,441</b>	<b>70%</b>	<b>4,441</b>	<b>70%</b>	<b>5,906</b>	<b>93%</b>
<i>Agriculture (type unknown)</i>	<i>1,089</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>412</i>	<i>38%</i>
<i>Orchards, Vineyards</i>	<i>-</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>-</i>	<i>--</i>
<i>Intensive Agriculture</i>	<i>140</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>40</i>	<i>28%</i>
<i>Field &amp; Pasture Agriculture</i>	<i>603</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>328</i>	<i>54%</i>
<i>AGRICULTURE</i>	<i>1,832</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>780</i>	<i>43%</i>
Eucalyptus Woodland	245	166	NA	166	NA	197	80%
Disturbed Land	1,067	NA	NA	NA	NA	479	45%
Urban/Developed	11,076	NA	NA	NA	NA	304	3%
<b>NON-NATURAL HABITATS</b>	<b>12,388</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>980</b>	<b>8%</b>
<b>TOTAL</b>	<b>20,558</b>					<b>7,666</b>	<b>37%</b>

\* FPA 2 includes an additional 400 to 500 acres of contiguous coastal sage scrub supporting California gnatcatchers within the unincorporated County of San Diego core area.

\*\* Wetland vegetation communities, conserved at 100% both inside and outside the FPA due to current no net loss regulations.

**PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES**

**Table 2.3-4  
Biological Conservation  
City of Encinitas Focused Planning Area Alternatives**

Vegetation Type	Total	FPA 1		FPA 2*		BCLA	
		Acres	Percent	Acres	Percent	Acres	Percent
Southern Coastal Bluff Scrub	-	-	--	-	--	-	--
Maritime Succulent Scrub	-	-	--	-	--	-	--
Coastal Sage Scrub	943	631	67%	631	67%	857	91%
Chaparral	210	158	75%	158	75%	209	100%
Southern Maritime Chaparral	561	479	85%	479	85%	519	93%
Coastal Sage/Chaparral Mix	-	-	--	-	--	-	--
Grassland	206	109	53%	109	53%	165	80%
Southern Coastal Salt Marsh**	119	119	100%	119	100%	119	100%
Alkali Marsh**	141	141	100%	141	100%	141	100%
Freshwater Marsh**	116	116	100%	116	100%	116	100%
Riparian Forest**	3	3	100%	3	100%	3	100%
Riparian Woodland**	48	48	100%	48	100%	48	100%
Riparian Scrub**	223	223	100%	223	100%	205	92%
Engelmann Oak Woodland	-	-	--	-	--	-	--
Coast Live Oak Woodland	-	-	--	-	--	-	--
Other Oak Woodlands	-	-		-		-	
Freshwater**	6	6	100%	6	100%	3	54%
Estuarine**	161	161	100%	161	100%	161	100%
Disturbed Wetland**	12	12	100%	12	100%	6	48%
Natural Flood Channel/ Streambed**	-	-	--	-	--	-	--
Beach	5	4	90%	4	90%	5	100%
Saltpan/Mudflats**	3	3	100%	3	100%	3	100%
<b>NATURAL HABITATS</b>	<b>2,758</b>	<b>2,214</b>	<b>80%</b>	<b>2,214</b>	<b>80%</b>	<b>2,560</b>	<b>93%</b>
<i>Agriculture (type unknown)</i>	75	NA	NA	NA	NA	27	35%
<i>Orchards, Vineyards</i>	3	NA	NA	NA	NA	-	0%
<i>Intensive Agriculture</i>	588	NA	NA	NA	NA	21	4%
<i>Field &amp; Pasture Agriculture</i>	452	NA	NA	NA	NA	132	29%
<i>AGRICULTURE</i>	<i>1,118</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>180</i>	<i>16%</i>
Eucalyptus Woodland	88	60	NA	60	NA	69	79%
Disturbed Land	83	NA	NA	NA	NA	17	20%
Urban/Developed	8,156	NA	NA	NA	NA	295	4%
<b>NON-NATURAL HABITATS</b>	<b>8,327</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>380</b>	<b>5%</b>
<b>TOTAL</b>	<b>12,203</b>					<b>3,121</b>	<b>26%</b>

\* FPA 2 includes an additional 400 to 500 acres of contiguous coastal sage scrub supporting California gnatcatchers within the unincorporated County of San Diego core area.

\*\* Wetland vegetation communities, conserved at 100% both inside and outside the FPA due to current no net loss regulations.

**PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES**

**Table 2.3-5  
Biological Conservation  
City of Escondido Focused Planning Area Alternatives**

Vegetation Type	Total	FPA 1		FPA 2*		BCLA	
		Acres	Percent	Acres	Percent	Acres	Percent
Southern Coastal Bluff Scrub	-	-	--	-	--	-	--
Maritime Succulent Scrub	-	-	--	-	--	-	--
Coastal Sage Scrub	2,252	1,533	68%	1,533	68%	1,731	77%
Chaparral	4,758	3,819	80%	3,819	80%	4,522	95%
Southern Maritime Chaparral	-	-	--	-	--	-	--
Coastal Sage/Chaparral Mix	52	43	82%	43	82%	40	77%
Grassland	597	401	67%	401	67%	447	75%
Southern Coastal Salt Marsh**	-	-	--	-	--	-	--
Alkali Marsh**	-	-	--	-	--	-	--
Freshwater Marsh**	37	37	100%	37	100%	24	65%
Riparian Forest**	268	268	100%	268	100%	72	27%
Riparian Woodland**	-	-	--	-	--	-	--
Riparian Scrub**	132	132	100%	132	100%	43	33%
Engelmann Oak Woodland	206	151	73%	151	73%	183	89%
Coast Live Oak Woodland	601	487	81%	487	81%	557	93%
Other Oak Woodlands	-	-	--	-	--	-	--
Freshwater**	239	239	100%	239	100%	227	95%
Estuarine**	-	-	--	-	--	-	--
Disturbed Wetland**	23	23	100%	23	100%	-	0%
Natural Flood Channel/ Streambed**	41	41	100%	41	100%	41	100%
Beach	-	-	--	-	--	-	--
Saltpan/Mudflats**	-	-	--	-	--	-	--
<b>NATURAL HABITATS</b>	<b>9,206</b>	<b>7,191</b>	<b>78%</b>	<b>7,191</b>	<b>78%</b>	<b>7,889</b>	<b>86%</b>
<i>Agriculture (type unknown)</i>	8	NA	NA	NA	NA	-	0%
<i>Orchards, Vineyards</i>	1,502	NA	NA	NA	NA	38	3%
<i>Intensive Agriculture</i>	75	NA	NA	NA	NA	1	1%
<i>Field &amp; Pasture Agriculture</i>	505	NA	NA	NA	NA	47	9%
<i>AGRICULTURE</i>	2,091	NA	NA	NA	NA	85	4%
Eucalyptus Woodland	94	28	NA	28	NA	34	36%
Disturbed Land	105	NA	NA	NA	NA	26	25%
Urban/Developed	13,127	NA	NA	NA	NA	17	0%
<b>NON-NATURAL HABITATS</b>	<b>13,232</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>77</b>	<b>0%</b>
<b>TOTAL</b>	<b>24,624</b>					<b>8,052</b>	<b>33%</b>

\* FPA 2 includes an additional 400 to 500 acres of contiguous coastal sage scrub supporting California gnatcatchers within the unincorporated County of San Diego core area.

\*\* Wetland vegetation communities, conserved at 100% both inside and outside the FPA due to current no net loss regulations.

**PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES**

**Table 2.3-6  
Biological Conservation  
City of Oceanside Focused Planning Area Alternatives**

Vegetation Type	Total	FPA 1		FPA 2*		BCLA	
		Acres	Percent	Acres	Percent	Acres	Percent
Southern Coastal Bluff Scrub	-	-	--	-	--	-	--
Maritime Succulent Scrub	-	-	--	-	--	-	--
Coastal Sage Scrub	1,338	692	52%	692	52%	898	67%
Chaparral	44	21	47%	21	47%	21	48%
Southern Maritime Chaparral	-	-	--	-	--	-	--
Coastal Sage/Chaparral Mix	10	-	0%	-	0%	-	0%
Grassland	1,724	570	33%	570	33%	1,185	69%
Southern Coastal Salt Marsh**	-	-	--	-	--	-	--
Alkali Marsh**	12	12	100%	12	100%	12	100%
Freshwater Marsh**	160	160	100%	160	100%	128	80%
Riparian Forest**	238	238	100%	238	100%	206	87%
Riparian Woodland**	3	3	100%	3	100%	1	40%
Riparian Scrub**	847	847	100%	847	100%	581	69%
Engelmann Oak Woodland	-	-	--	-	--	-	--
Coast Live Oak Woodland	4	4	95%	4	95%	-	0%
Other Oak Woodlands	-	-	--	-	--	-	--
Freshwater**	139	139	100%	139	100%	111	80%
Estuarine**	24	24	100%	24	100%	24	100%
Disturbed Wetland**	14	14	100%	14	100%	0	2%
Natural Flood Channel/ Streambed**	100	100	100%	100	100%	89	89%
Beach	39	4	8%	4	8%	18	43%
Saltpan/Mudflats**	4	4	100%	4	100%	4	100%
<b>NATURAL HABITATS</b>	<b>4,705</b>	<b>2,832</b>	<b>60%</b>	<b>2,832</b>	<b>60%</b>	<b>3,280</b>	<b>70%</b>
<i>Agriculture (type unknown)</i>	<i>11</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>8</i>	<i>78%</i>
<i>Orchards, Vineyards</i>	<i>1,283</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>-</i>	<i>0%</i>
<i>Intensive Agriculture</i>	<i>110</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>12</i>	<i>11%</i>
<i>Field &amp; Pasture Agriculture</i>	<i>2,486</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>115</i>	<i>5%</i>
<i>AGRICULTURE</i>	<i>3,890</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>136</i>	<i>3%</i>
Eucalyptus Woodland	67	10	NA	10	NA	34	51%
Disturbed Land	1,997	NA	NA	NA	NA	432	22%
Urban/Developed	15,466	NA	NA	NA	NA	53	0%
<b>NON-NATURAL HABITATS</b>	<b>17,530</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>518</b>	<b>3%</b>
<b>TOTAL</b>	<b>26,125</b>					<b>3,935</b>	<b>15%</b>

\* FPA 2 includes an additional 400 to 500 acres of contiguous coastal sage scrub supporting California gnatcatchers within the unincorporated County of San Diego core area.

\*\* Wetland vegetation communities, conserved at 100% both inside and outside the FPA due to current no net loss regulations.

**PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES**

**Table 2.3-7**

**City of San Marcos Hard-Line 100% Conservation Areas**

<b>Project Name</b>	<b>Acres Committed to the Preserve</b>
<b><i>Northern FPA</i></b>	
Ryan Subdivision Mitigation Lands	32.09 acres
San Marcos Highlands Open Space Area	73.39 acres
Rupe Mitigation Lands	52.33 acres
Twin Oaks Valley Ranch Golf Course Mitigation Lands	25.09 acres
Bel Esprit Open Space Area	24.22 acres
Paloma Mitigation Lands	56.00 acres
<b><i>Southern FPA</i></b>	
Meadowlark Estate Open Space Area Onsite	59.30 acres
Meadowlark Estate Offsite Mitigation Lands	83.60 acres
Rancho Santa Fe Road Widening Mitigation Lands	7.22 acres
San Elijo Hills	891.81 acres (861.8 acres ungraded)
Closed Landfill Area	110.70 acres
Kaufman and Broad Mitigation Area	76.70 acres
Village N (Rancho Coronado) Open Space Lands	40.00 acres
Huff Property <sup>1</sup>	55.95 acres
University Commons – Brookfield	138.7 onsite+137.8 offsite=276.5 acres
University Commons – Shelly	Not a part
Vista Colina Corridor	TBD
Hanson Aggregate	56.00 acres
Wilern Mitigation Lands	20.88 acres
<b>TOTAL AC. IN 100% CONSERVED OPEN SPACE</b>	<b>1,803.08 ACRES</b>

Notes: <sup>1</sup> Relying on acquisition by regional funding source of 75% of the 74.61-acre property.

TBD = To be decided.

Source: City of San Marcos, 2000.

***PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES***

**Table 2.3-8  
City of San Marcos Areas Conserved by  
Standards Combined with Fixed Conservation Rates**

Project Name	Percent Conserved	Net Acres Committed to the Preserve
<b><i>Northern FPA</i></b>		
Lands with steep slope and rural residential land use designations	75%	285.6 acres
Murai Development	50%	43.86 acres
Habitat Linkage Area	30%	20.54 acres
<b><i>Southern FPA</i></b>		
Habitat Linkage Area between SAP-2 and CSUSM Linkage Area	75%	99.9 acres
Habitat Linkage Area to CSUSM	70%	70.30 acres
Habitat Linkage Area to SAP-2	60%	86.3 acres
Misc. Undeveloped Lands South of SAP-2	50%	36.62 acres
San Elijo Hills Golf Course	25%	47.14 acres
<b><i>San Marcos Creek</i></b>	100%*	56.6 acres
<b>TOTAL ACREAGE</b>		<b>746.86 ACRES</b>

Note: \*No net loss.

Source: City of San Marcos, 2000

**PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES**

**Table 2.3-9  
Biological Conservation  
City of San Marcos Focused Planning Area Alternatives**

Vegetation Type	Total	FPA 1		FPA 2*		BCLA	
		Acres	Percent	Acres	Percent	Acres	Percent
Southern Coastal Bluff Scrub	-	-	--	-	--	-	--
Maritime Succulent Scrub	-	-	--	-	--	-	--
Coastal Sage Scrub	1,868	971	52%	971	52%	1,696	91%
Chaparral	2,392	1,193	50%	1,193	50%	2,133	89%
Southern Maritime Chaparral	-	-	--	-	--	-	--
Coastal Sage/Chaparral Mix	123	94	77%	94	77%	122	99%
Grassland	702	91	13%	91	13%	192	27%
Southern Coastal Salt Marsh**	-	-	--	-	--	-	--
Alkali Marsh**	-	-	--	-	--	-	--
Freshwater Marsh**	10	10	100%	10	100%	-	0%
Riparian Forest**	2	2	100%	2	100%	-	0%
Riparian Woodland**	77	77	100%	77	100%	35	46%
Riparian Scrub**	107	107	100%	107	100%	30	28%
Engelmann Oak Woodland	24	19	82%	19	82%	24	100%
Coast Live Oak Woodland	4	3	69%	3	69%	3	75%
Other Oak Woodlands	-	-		-		-	
Freshwater**	1	1	100%	1	100%	1	100%
Estuarine**	-	-	--	-	--	-	--
Disturbed Wetland**	28	28	100%	28	100%	16	57%
Natural Flood Channel/ Streambed**	-	-	--	-	--	-	--
Beach	-	-	--	-	--	-	--
Saltpan/Mudflats**	-	-	--	-	--	-	--
<b>NATURAL HABITATS</b>	<b>5,337</b>	<b>2,595</b>	<b>49%</b>	<b>2,595</b>	<b>49%</b>	<b>4,251</b>	<b>80%</b>
<i>Agriculture (type unknown)</i>	-	NA	NA	NA	NA	-	--
<i>Orchards, Vineyards</i>	233	NA	NA	NA	NA	49	21%
<i>Intensive Agriculture</i>	148	NA	NA	NA	NA	-	0%
<i>Field &amp; Pasture Agriculture</i>	539	NA	NA	NA	NA	11	2%
<i>AGRICULTURE</i>	920	NA	NA	NA	NA	60	7%
Eucalyptus Woodland	100	10	NA	10	NA	21	21%
Disturbed Land	701	NA	NA	NA	NA	137	20%
Urban/Developed	7,586	NA	NA	NA	NA	6	0%
<b>NON-NATURAL HABITATS</b>	<b>8,386</b>	NA	NA	NA	NA	164	2%
<b>TOTAL</b>	<b>14,643</b>					<b>4,475</b>	<b>31%</b>

\* FPA 2 includes an additional 400 to 500 acres of contiguous coastal sage scrub supporting California gnatcatchers within the unincorporated County of San Diego core area.

\*\* Wetland vegetation communities, conserved at 100% both inside and outside the FPA due to current no net loss regulations.

**ENVIRONMENTAL SETTING/AFFECTED ENVIRONMENT**

**Table 3.3-1  
Acreage and Proportional Distribution of Vegetation Communities Within  
the MHCP Study Area and Biological Core and Linkage Area (BCLA)**

Vegetation Type	Total MHCP Study Area		BCLA	
	Acres	% of Total	Acres	% of Total
Southern coastal bluff scrub	2	0.0%	-	0.0%
Maritime succulent scrub	32	0.0%	31	0.0%
Coastal sage scrub	8,656	7.7%	7,169	25.9%
Chaparral	8,324	7.4%	7,730	28.0%
Southern maritime chaparral	968	0.9%	904	3.2%
Coastal sage/chaparral mix	462	0.4%	439	1.6%
Grassland	5,219	4.4%	3,298	11.9%
Southern coastal salt marsh	272	0.2%	270	1.0%
Alkali marsh	165	0.1%	165	0.6%
Freshwater marsh	518	0.4%	442	1.6%
Riparian forest	676	0.6%	404	1.4%
Riparian woodland	250	0.2%	133	0.5%
Riparian scrub	1,739	1.6%	1,191	4.3%
Engelmann oak woodland	230	0.2%	207	0.7%
Coast live oak woodland	650	0.6%	583	2.1%
Eucalyptus woodland	648	0.6%	357	1.3%
Freshwater	444	0.4%	396	1.4%
Estuarine	955	0.9%	954	3.4%
Disturbed wetland	202	0.2%	87	0.3%
Natural flood channel/streambed	142	0.1%	130	0.5%
Beach	48	0.0%	23	0.0%
Saltpan/Mudflats	8	0.0%	8	0.0%
<b>Subtotal Habitat</b>	<b>30,610</b>	<b>27.4%</b>	<b>24,565</b>	<b>89.0%</b>
Agriculture	10,438	9.3%	1,262	4.6%
Disturbed	4,071	3.6%	1,127	4.0%
<b>Subtotal Vacant Land</b>	<b>14,509</b>	<b>13.0%</b>	<b>2,389</b>	<b>8.6%</b>
Developed	66,789	59.7%	677	2.4%
<b>Total</b>	<b>111,908</b>	<b>100%</b>	<b>27,630</b>	<b>100%</b>

Note: Numbers may not sum to total as shown due to rounding. Vernal pools were mapped as an overlay, and thus their acreage is not included in this total.

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-1  
Conservation of Vegetation Communities for Each Alternative**

Vegetation Community	Acres in Study Area	FPA Alternative 1	FPA Alternative 2	BCLA Alternative 3	No Action/ No Alternative
<i>Natural Habitats</i>					
Southern coastal bluff scrub	2	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Maritime succulent scrub	32	29 (90%)	29 (90%)	31 (96%)	10 (32%)
Coastal sage scrub	8,656	5,334 (62%)	5,834 (67%)	7,169 (83%)	1,637 (19%)
Chaparral	8,324	5,806 (70%)	5,806 (70%)	7,730 (93%)	2,604 (31%)
Southern maritime chaparral	968	748 (77%)	748 (77%)	904 (93%)	125 (13%)
Coastal sage/chaparral mix	462	246 (53%)	246 (53%)	439 (95%)	81 (18%)
Grassland	5,219	1,687 (32%)	1,687 (32%)	3,298 (63%)	1,138 (22%)
Southern coastal salt marsh	272	272 (100%)	272 (100%)	270 (99%)	238 (88%)
Alkali marsh	165	165 (100%)	165 (100%)	165 (100%)	121 (73%)
Freshwater marsh	518	518 (100%)	518 (100%)	442 (86%)	327 (63%)
Riparian forest	676	676 (100%)	676 (100%)	404 (60%)	227 (34%)
Riparian woodland	250	250 (100%)	250 (100%)	133 (53%)	58 (23%)
Riparian scrub	1,739	1,739 (100%)	1,739 (100%)	1,191 (64%)	531 (31%)
Engelmann oak woodland	230	188 (82%)	188 (82%)	207 (90%)	84 (37%)
Coast live oak woodland	650	511 (79%)	511 (79%)	583 (90%)	183 (28%)
Other oak woodlands	1	1 (100%)	1 (100%)	1 (100%)	1 (100%)
Freshwater	444	444 (100%)	444 (100%)	396 (89%)	157 (35%)
Estuarine	955	955 (100%)	955 (100%)	954 (100%)	923 (97%)
Disturbed wetland	202	202 (100%)	202 (100%)	87 (43%)	96 (47%)
Natural floodchannel/streambed	142	142 (100%)	142 (100%)	130 (92%)	107 (75%)
Beach	48	8 (16%)	8 (16%)	23 (48%)	8 (17%)
Saltpan/mudflats	8	8 (100%)	8 (100%)	8 (100%)	3 (38%)
<b>Natural Habitats Total</b>	<b>29,962</b>	<b>19,928 (67%)</b>	<b>20,428 (68%)</b>	<b>24,565 (82%)</b>	<b>8,874 (30%)</b>

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-1, Conservation of Vegetation Communities for Each Alternative (continued)**

<b>Vegetation Community</b>	<b>Acres in Study Area</b>	<b>FPA Alternative 1</b>	<b>FPA Alternative 2</b>	<b>BCLA Alternative 3</b>	<b>No Action/ No Alternative</b>
<b><i>Agriculture</i></b>					
Agriculture (type unknown)	1,183	N/A	N/A	447 (38%)	438 (37%)
Orchards, vineyards	3,132	N/A	N/A	87 (3%)	7 (0%)
Intensive agriculture	1,213	N/A	N/A	74(6%)	17 (1%)
Field & pasture agriculture	4,931	N/A	N/A	654 (13%)	64 (1%)
<b>Agriculture Total</b>	10,438	N/A	N/A	1,262 (12%)	527 (5%)
<b><i>Non-Natural Habitats</i></b>					
Eucalyptus woodland	648	N/A	N/A	357 (55%)	220 (34%)
Disturbed land	4,071	N/A	N/A	1,127(28%)	633 (16%)
Urban/developed	66,789	N/A	N/A	677 (1%)	2,320 (3%)
<b>Non-Natural Habitats Total</b>	71,507	N/A	N/A	2,160 (3%)	3,173 (4%)
<b>TOTAL FOR ALL LANDS</b>	111,908	N/A	N/A	27,987 (25%)	12,574 (11%)

Notes: 100% conservation of wetlands assumed due to MHCP's no net loss policy.  
No management is assumed for wetlands outside the preserve boundaries.

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-2  
Conservation of Sensitive Species for Each Alternative**

<b>Sensitive Species</b>	<b>Number in Study Area</b>	<b>FPA Alternative 1</b>	<b>FPA Alternative 2</b>	<b>BCLA Alternative 3</b>	<b>No Action/ No Alternative</b>
<b>Plants</b>					
<i>Acanthomintha ilicifolia</i> San Diego thorn-mint	This species will receive additional protection by the MHCP narrow endemic policy. <sup>(1)</sup> Additional conservation may occur through the critical population policy. <sup>(2)</sup>				
Known Occurrences	22	20 (92%)	20 (92%)	17 (77%)	1 (5%)
Habitat	Unable to determine	3,354 (52%)	3,354 (52%)	Unable to determine	Unable to determine
Comments		91% of major populations and critical locations conserved.			-
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Ambrosia pumila</i> San Diego ambrosia	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	4	4 (88%)	4 (88%)	2 (50%)	0 (0%)
Habitat	Unable to determine	6,768 (49%)	6,768 (49%)	Unable to determine	Unable to determine
Comments		80% of major populations and critical locations are conserved. One major population occurs outside the BCLA in Oceanside, but it is included in the BCLA.			-
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Arctostaphylos glandulosa</i> ssp. <i>crassifolia</i> Del Mar manzanita	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	145	139 (96%)	139 (96%)	136 (94%)	2 (1%)
Habitat	Unable to determine	472 (75%)	472 (75%)	Unable to determine	Unable to determine
Comments		97% of major populations and critical locations conserved.			
Finding		Adequate	Adequate	Adequate	Inadequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-2, Conservation of Sensitive Species for Each Alternative (continued)**

<b>Sensitive Species</b>	<b>Number in Study Area</b>	<b>FPA Alternative 1</b>	<b>FPA Alternative 2</b>	<b>BCLA Alternative 3</b>	<b>No Action/ No Alternative</b>
<i>Baccharis vanessae</i> Encinitas baccharis	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	21	21 (99%)	21 (99%)	21 (100%)	0 (0%)
Habitat	Unable to determine	6,258 (67%)	6,258 (67%)	Unable to determine	Unable to determine
Comments		97% of major populations and critical locations conserved.			
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Brodiaea filifolia</i> Thread-leaved brodiaea	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	70	65 (93%)	65 (93%)	52 (74%)	0 (0%)
Habitat	Unable to determine	294 (25%)	294 (25%)	Unable to determine	Unable to determine
Comments		90% of major populations and critical locations conserved.			
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Ceanothus verrucosus</i> Wart-stemmed ceanothus					
Known Occurrences	173	130 (75%)	130 (75%)	147 (85%)	0 (0%)
Habitat	Unable to determine	2,270 (63%)	2,270 (63%)	Unable to determine	Unable to determine
Comments		72% of major populations conserved.			
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Chorizanthe orcuttiana</i> Orcutt's spineflower	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	1	1 (100%)	1 (100%)	1 (100%)	0 (0%)
Habitat	Unable to determine	480 (75%)	480 (75%)	Unable to determine	Unable to determine
Comments		No known major populations in area. 100% of critical locations conserved.			
Finding		Adequate	Adequate	Adequate	Inadequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-2, Conservation of Sensitive Species for Each Alternative (continued)**

<b>Sensitive Species</b>	<b>Number in Study Area</b>	<b>FPA Alternative 1</b>	<b>FPA Alternative 2</b>	<b>BCLA Alternative 3</b>	<b>No Action/ No Alternative</b>
<i>Comarostaphylis diversifolia</i> ssp. <i>diversifolia</i> Summer-holly					
Known Occurrences	210	125 (60%)	125 (60%)	202 (96%)	4 (2%)
Habitat	Unable to determine	1,781 (60%)	1,781 (60%)	Unable to determine	Unable to determine
Comments		71% of major populations conserved. No known critical locations in area.			
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Corethrogyne filaginifolia</i> var. <i>linifolia</i> Del Mar mesa sand aster		This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.			
Known Occurrences	37	35 (95%)	35 (95%)	27 (73%)	21 (57%)
Habitat	Unable to determine	1,968 (71%)	1,968 (71%)	Unable to determine	Unable to determine
Comments		94% of major populations conserved. No critical locations in study area.			
Finding		Adequate	Adequate	Adequate	Adequate
<i>Dudleya blochmaniae</i> ssp. <i>blochmaniae</i> Blochman's dudleya					
Known Occurrences	2	2 (75%)	2 (75%)	3 (100%)	0 (0%)
Habitat	Unable to determine	310 (49%)	310 (49%)	Unable to determine	Unable to determine
Comments		50% of major populations and 75% of critical locations conserved.			
Finding		Adequate	Adequate	Adequate	Inadequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-2, Conservation of Sensitive Species for Each Alternative (continued)**

<b>Sensitive Species</b>	<b>Number in Study Area</b>	<b>FPA Alternative 1</b>	<b>FPA Alternative 2</b>	<b>BCLA Alternative 3</b>	<b>No Action/ No Alternative</b>
<i>Dudleya blochmaniae</i> ssp. <i>brevifolia</i> Short-leaved dudleya	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	-	-	-	-	-
Habitat	Unable to determine	472 (75%)	472 (75%)	Unable to determine	Unable to determine
Comments	No known major populations or critical locations in area.				
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Dudleya variegata</i> Variegated dudleya	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	-	-	-	-	-
Habitat	Unable to determine	310 (49%)	310 (49%)	Unable to determine	Unable to determine
Comments	No known major populations or critical locations in study area. Potential habitat is ineffectively conserved as small, fragmented blocks of habitat.				
Finding		Inadequate	Inadequate	Inadequate	Unable to determine conservation status; inadequate
<i>Dudleya viscida</i> Sticky dudleya					
Known Occurrences	25	19 (74%)	19 (74%)	24 (96%)	0 (0%)
Habitat	Unable to determine	4,132 (61%)	4,132 (61%)	Unable to determine	Unable to determine
Comments	74% of major populations and critical locations conserved.				
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Eryngium aristulatum</i> var. <i>parishii</i> San Diego button-celery	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	17	16 (96%)	16 (96%)	15 (88%)	0 (0%)
Habitat	Unable to determine	295 (25%)	295 (25%)	Unable to determine	Unable to determine
Comments	90% of major populations and critical locations conserved.				
Finding		Adequate	Adequate	Adequate	Inadequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-2, Conservation of Sensitive Species for Each Alternative (continued)**

<b>Sensitive Species</b>	<b>Number in Study Area</b>	<b>FPA Alternative 1</b>	<b>FPA Alternative 2</b>	<b>BCLA Alternative 3</b>	<b>No Action/ No Alternative</b>
<i>Euphorbia misera</i> Cliff spurge					
Known Occurrences	1	1 (100%)	1 (100%)	1 (100%)	0 (0%)
Habitat	Unable to determine	1,171 (69%)	1,171 (69%)	Unable to determine	Unable to determine
Comments		No known major populations or critical locations in the study area.			
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Ferocactus viridescens</i> San Diego barrel cactus					
Known Occurrences	32	28 (88%)	28 (88%)	27 (84%)	3 (9%)
Habitat	Unable to determine	2,351 (61%)	2,351 (61%)	Unable to determine	Unable to determine
Comments		86% of major populations and critical locations conserved.			
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Hazardia orcutti</i> Orcutt's hazardia					
		This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.			
Known Occurrences	6	6 (97%)	6 (97%)	5 (83%)	0 (0%)
Habitat	Unable to determine	4,620 (62%)	4,620 (62%)	Unable to determine	Unable to determine
Comments		97% of major populations and critical locations conserved.			
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Iva hayesiana</i> San Diego marsh-elder					
		This species may receive additional protection under the MHCP no net-loss of wetlands policy.			
Known Occurrences	4	3 (75%)	3 (75%)	3 (75%)	1 (25%)
Habitat	Unable to determine	7 (100%)	7 (100%)	Unable to determine	Unable to determine
Comments		50% of major populations and known occurrences conserved.			
Finding		Adequate	Adequate	Adequate	Inadequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-2, Conservation of Sensitive Species for Each Alternative (continued)**

<b>Sensitive Species</b>	<b>Number in Study Area</b>	<b>FPA Alternative 1</b>	<b>FPA Alternative 2</b>	<b>BCLA Alternative 3</b>	<b>No Action/ No Alternative</b>
<i>Lotus nuttallianus</i> Nuttall's lotus	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	8	8 (95%)	8 (95%)	7 (87%)	1 (13%)
Habitat	Unable to determine	9 (18%)	9 (18%)	Unable to determine	Unable to determine
Comments	92% of major populations and known occurrences conserved.				
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Myosurus minimus</i> spp. <i>apus</i> Little mouseltail	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	1	1 (100%)	1 (100%)	1 (100%)	0 (0%)
Habitat	Unable to determine	12 (100%)	12 (100%)	Unable to determine	Unable to determine
Comments	100% of major populations and known occurrences conserved.				
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Navarretia fossalis</i> Spreading navarretia	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	3	3 (87%)	3 (87%)	1 (33%)	0 (0%)
Habitat	Unable to determine	5 (100%)	5 (100%)	Unable to determine	Unable to determine
Comments	90% of major populations and critical locations conserved.				
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Orcuttia californica</i> California Orcutt grass	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	1	1 (100%)	1 (100%)	1 (100%)	0 (0%)
Habitat	Unable to determine	5 (100%)	5 (100%)	Unable to determine	Unable to determine
Comments	100% of major populations and critical locations conserved.				
Finding		Adequate	Adequate	Adequate	Inadequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-2, Conservation of Sensitive Species for Each Alternative (continued)**

<b>Sensitive Species</b>	<b>Number in Study Area</b>	<b>FPA Alternative 1</b>	<b>FPA Alternative 2</b>	<b>BCLA Alternative 3</b>	<b>No Action/ No Alternative</b>
<i>Pinus torreyana</i> ssp. <i>torreyana</i> Torrey pine					
Known Occurrences	27	18 (67%)	18 (67%)	21 (78%)	4 (15%)
Habitat	Unable to determine	488 (75%)	488 (75%)	Unable to determine	Unable to determine
Comments	No known major populations or critical locations in study area.				
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Quercus dumosa</i> Nuttall's scrub oak					
Known Occurrences	34	28 (82%)	28 (82%)	33 (97%)	15 (44%)
Habitat	Unable to determine	4,132 (61%)	4,132 (61%)	Unable to determine	Unable to determine
Comments	93% of major populations and critical locations conserved.				
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Quercus engelmannii</i> Engelmann oak					
Known Occurrences	79	66 (82%)	66 (82%)	74 (94%)	17 (22%)
Habitat	Unable to determine	170 (74%)	170 (74%)	Unable to determine	Unable to determine
Comments	81% of major populations and critical locations conserved.				
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Tetracoccus dioicus</i> Parry's tetracoccus					
Known Occurrences	1	0 (0%)	0 (0%)	1 (100%)	Unable to determine
Habitat	Unable to determine	782 (72%)	782 (72%)	Unable to determine	Unable to determine
Comments	No known major populations or critical locations in study area.				
Finding		Adequate	Adequate	Adequate	Unable to determine conservation status

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-2, Conservation of Sensitive Species for Each Alternative (continued)**

<b>Sensitive Species</b>	<b>Number in Study Area</b>	<b>FPA Alternative 1</b>	<b>FPA Alternative 2</b>	<b>BCLA Alternative 3</b>	<b>No Action/ No Alternative</b>
<b>Invertebrates</b>					
<i>Streptocephalus woottoni</i> Riverside fairy shrimp	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	2	2 (100%)	2 (100%)	2 (100%)	0 (0%)
Habitat	-	-	-	-	-
Comments	100% of vernal pools at Carlsbad conserved.				
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Branchinecta sandiegonensis</i> San Diego fairy shrimp	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	2	2 (100%)	2 (100%)	2 (100%)	0 (0%)
Habitat	-	-	-	-	-
Comments	100% of vernal pools at Carlsbad and San Marcos conserved.				
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Euphyes vestris harbisoni</i> Harbison's dun skipper	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	3	3 (100%)	3 (100%)	2 (67%)	0 (0%)
Habitat	3,321	3,103 (93%)*	3,103 (93%)*	2,297 (69%)*	1,083 (33%)
Comments	No known major populations in study area. Critical area habitats conserved include 100% in riparian area and 75% in oak woodlands.				
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Panoquina errans</i> Salt marsh skipper	This species may receive additional protection under the MHCP no net-loss of wetlands policy.				
Known Occurrences	1	1 (100%)	1 (100%)	1 (100%)	1 (100%)
Habitat	272	275 (100%)	275 (100%)	270 (99%)*	238 (88%)
Comments	All major populations conserved. Critical breeding habitat 100% conserved in coastal lagoons.				
Finding		Adequate	Adequate	Adequate	Adequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-2, Conservation of Sensitive Species for Each Alternative (continued)**

<b>Sensitive Species</b>	<b>Number in Study Area</b>	<b>FPA Alternative 1</b>	<b>FPA Alternative 2</b>	<b>BCLA Alternative 3</b>	<b>No Action/ No Alternative</b>
<i>Lycaena hermes</i> Hermes copper					
Known Occurrences	-	-	-	-	-
Habitat	9,032	5,404 (60%)	5,904 (65%)	7,567 (84%)	1,718 (19%)
Comments		No known major populations or critical locations in study area.			
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Euphydryas editha quino</i> Quino checkerspot					
Known Occurrences	-	-	-	-	-
Habitat	-	-	-	-	-
Comments		No known major populations or critical locations in study area. Potential habitat areas conserved in Escondido. Species may be extirpated from the study area. Conservation efforts aimed at viable populations outside the study area.			
Finding		Adequate only with sufficient mitigation to maintain viable populations outside the study area.	Adequate only with sufficient mitigation to maintain viable populations outside the study area.	Adequate only with sufficient mitigation to maintain viable populations outside the study area.	Inadequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-2, Conservation of Sensitive Species for Each Alternative (continued)**

<b>Sensitive Species</b>	<b>Number in Study Area</b>	<b>FPA Alternative 1</b>	<b>FPA Alternative 2</b>	<b>BCLA Alternative 3</b>	<b>No Action/ No Alternative</b>
<b>Amphibians and Reptiles</b>					
<i>Scaphiopus hammondi</i> Western spadefoot toad	This species may receive additional protection through the MHCP no net-loss of wetlands policy.				
Known Occurrences	4	3 (75%)	3 (75%)	3 (75%)	0 (0%)
Habitat	1,374	Aquatic 1,374 (100%)* Riparian 2,440 (100%)*	Aquatic 1,374 (100%)* Riparian 2,440 (100%)*	Aquatic 1,235 (90%)* Riparian 1,506 (62%)*	Aquatic 783 (57%) Riparian 815 (33%)
Comments	No known major populations or critical locations				
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Bufo microscaphus californicus</i> Arroyo southwestern toad	This species may receive additional protection through the MHCP no net-loss of wetlands policy which will protect this species' breeding habitat. Additional conservation may occur through application of the critical location policy.				
Known Occurrences	1	0 (0%)	0 (0%)	0 (0%)	Unable to determine
Habitat	-	-	-	-	-
Comments	No known major populations or critical locations in study area.				
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Clemmys marmorata pallida</i> Southwestern pond turtle	This species may receive additional protection through the MHCP no net-loss of wetlands policy.				
Known Occurrences	7	7 (100%)	7 (100%)	7 (100%)	0 (0%)
Habitat	Aquatic 1,374 Riparian 2,440	Aquatic 1,374 (100%)* Riparian 2,440 (100%)*	Aquatic 1,374 (100%)* Riparian 2,440 (100%)*	Aquatic 1,235 (90%)* Riparian 1,506 (62%)*	Aquatic 783 (57%) Riparian 815 (33%)
Comments	100% conservation of all major populations and critical locations including Buena Vista Lagoon, Escondido Creek, and San Luis Rey River.				
Finding		Adequate	Adequate	Adequate	Inadequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-2, Conservation of Sensitive Species for Each Alternative (continued)**

<b>Sensitive Species</b>	<b>Number in Study Area</b>	<b>FPA Alternative 1</b>	<b>FPA Alternative 2</b>	<b>BCLA Alternative 3</b>	<b>No Action/ No Alternative</b>
<i>Phrynosoma coronatum blainvillei</i> San Diego horned lizard					
Known Occurrences	34	22 (65%)	22 (65%)	32 (94%)	3 (9%)
Habitat	24,068	13,922 (57%)	14,442 (57%)	19,531 (81%)	5,991 (25%)
Comments		No known major populations or critical locations in the study area. Conservation efforts must include management of Argentine ants and edge effects.			
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Cnemidophorus hyperythrus beldingi</i> Orange-throated whiptail					
Known Occurrences	92	55 (60%)	55 (60%)	73 (79%)	6 (18%)
Habitat	9,032	5,404 (60%)	5,904 (65%)	7,567 (84%)	1,718 (19%)
Comments		No known major population or critical locations; however, substantial populations are expected throughout some of the large habitat blocks.			
Finding		Adequate	Adequate	Adequate	Inadequate
<b>Birds</b>					
<i>Pelecanus occidentalis californicus</i> California brown pelican <sup>(3)</sup>		This species may receive additional protection through the MHCP no net-loss of wetlands policy.			
Known Occurrences	5	5 (100%)	5 (100%)	5 (100%)	0 (0%)
Habitat	955	955 (100%)	955 (100%)	955 (100%)*	923 (97%)
Comments		No known major populations in study area. Critical habitat in coastal lagoons is 100% conserved.			
Finding		Adequate	Adequate	Adequate	Adequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-2, Conservation of Sensitive Species for Each Alternative (continued)**

<b>Sensitive Species</b>	<b>Number in Study Area</b>	<b>FPA Alternative 1</b>	<b>FPA Alternative 2</b>	<b>BCLA Alternative 3</b>	<b>No Action/ No Alternative</b>
<i>Plegadis chihi</i> White-faced ibis	This species may receive additional protection through the MHCP no net-loss of wetlands policy.				
Known Occurrences	18	14 (78%)	14 (78%)	14 (78%)	3 (19%)
Habitat	768	728 (95%)*	728 (95%)*	693 (90%)*	407 (53%)
Comments		Major populations at Buena Vista, Batiquitos, and San Elijo Lagoons, and Guajome Lake conserved. Critical location breeding colonies at Buena Vista Lagoon and Guajome Lake conserved.			
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Circus cyaneus</i> Northern harrier					
Known Occurrences	44	26 (58%)	26 (58%)	28 (64%)	1 (2%)
Habitat	14,749	7,739 (52%)	8,239 (56%)	11,316 (77%)	3,463 (23%)
Comments		No known major populations in study area. Critical locations in coastal lagoons 100% conserved. Insufficient conservation of grasslands.			
Finding		Inadequate	Inadequate	Adequate	Inadequate
<i>Accipiter cooperii</i> Cooper's hawk					
Known Occurrences	57	34 (60%)	34 (60%)	34 (60%)	1 (2%)
Habitat	15,046	7,807 (52%)	8,307 (55%)	11,590 (77%)	3,422 (23%)
Comments		No known major populations in study area. Critical locations in riparian areas are 100% conserved, and in oak woodlands are 75% conserved.			
Finding		Adequate	Adequate	Adequate	Inadequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-2, Conservation of Sensitive Species for Each Alternative (continued)**

<b>Sensitive Species</b>	<b>Number in Study Area</b>	<b>FPA Alternative 1</b>	<b>FPA Alternative 2</b>	<b>BCLA Alternative 3</b>	<b>No Action/ No Alternative</b>
<i>Pandion haliaetus</i> Osprey	This species may receive additional protection through the MHCP no net-loss of wetlands policy.				
Known Occurrences	10	9 (90%)	9 (90%)	9 (90%)	1 (11%)
Habitat	1,399	1,399 (100%)	1,399 (100%)	1,350 (96%)	1,080 (77%)
Comments	No known major populations in study area. Critical locations in coastal lagoons and estuaries are 100% conserved.				
Finding		Adequate	Adequate	Adequate	Adequate
<i>Aquila chrysaetos</i> Golden eagle					
Known Occurrences	17	11 (65%)	11 (65%)	12 (71%)	1 (7%)
Habitat	14,241	7,001 (49%)	7,501 (53%)	10,862 (76%)	2,857 (20%)
Comments	No known major populations. Some of the foraging habitat in critical locations is substantially conserved.				
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Falco peregrinus anatum</i> Peregrine falcon <sup>(3)</sup>					
Known Occurrences	8	6 (72%)	6 (72%)	6 (75%)	0 (0%)
Habitat	7,697	4,202 (100%)	4,202 (100%)	4,825 (63%)*	1,961 (25%)
Comments	No known major populations in study area. Some of the foraging habitat in critical locations is substantially conserved.				
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Rallus longirostris levipes</i> Light-footed clapper rail <sup>(3)</sup>	This species may receive additional protection through the MHCP no net-loss of wetlands policy.				
Known Occurrences	21	20 (95%)	20 (95%)	20 (95%)	0 (0%)
Habitat	272	274 (100%)*	274 (100%)*	270 (99%)*	238 (88%)
Comments	All major populations conserved. Critical breeding habitat in coastal lagoons 100% conserved, and no net-loss policy is expected to maintain upstream wintering habitat.				
Finding		Adequate	Adequate	Adequate	Adequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-2, Conservation of Sensitive Species for Each Alternative (continued)**

<b>Sensitive Species</b>	<b>Number in Study Area</b>	<b>FPA Alternative 1</b>	<b>FPA Alternative 2</b>	<b>BCLA Alternative 3</b>	<b>No Action/ No Alternative</b>
<i>Charadrius alexandrinus nivosus</i> Western snowy plover					
Known Occurrences	34	28 (82%)	28 (82%)	30 (88%)	15 (45%)
Habitat	51	12 (23%)	12 (23%)	26 (51%)	12 (23%)
Comments		Major populations and critical locations in San Luis Rey River mouth and the lagoon and estuarine habitats in Encinitas, Carlsbad, and Oceanside conserved.			
Finding		Adequate	Adequate	Adequate	Adequate
<i>Sterna elegans</i> Elegant tern					
This species may receive additional protection through the MHCP no net-loss of wetlands policy.					
Known Occurrences	7	6 (86%)	6 (86%)	6 (86%)	1 (14%)
Habitat	1,006	967 (96%)	967 (96%)	980 (97%)	935 (93%)
Comments		No known major populations or critical locations in study area.			
Finding		Adequate	Adequate	Adequate	Adequate
<i>Sterna antillarum browni</i> California least tern <sup>(3)</sup>					
Known Occurrences	24	23 (96%)	23 (96%)	24 (100%)	7 (29%)
Habitat	1,006	967 (96%)	967 (96%)	980 (97%)	935 (93%)
Comments		All major populations conserved. Critical breeding and foraging habitat in coastal lagoons is 100% conserved.			
Finding		Adequate	Adequate	Adequate	Adequate
<i>Athene cucularia hypugaea</i> Burrowing owl					
Known Occurrences	10	6 (60%)	6 (60%)	7 (70%)	1 (10%)
Habitat	5,209	1,597 (31%)	1,597 (31%)	3,295 (63%)	1,138 (22%)
Comments		No known major populations in study area. Some of the foraging habitat in critical locations is substantially conserved. Insufficient conservation of grasslands.			
Finding		Inadequate	Inadequate	Adequate	Inadequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-2, Conservation of Sensitive Species for Each Alternative (continued)**

<b>Sensitive Species</b>	<b>Number in Study Area</b>	<b>FPA Alternative 1</b>	<b>FPA Alternative 2</b>	<b>BCLA Alternative 3</b>	<b>No Action/ No Alternative</b>
<i>Empidonax traillii extimus</i> Southwestern willow flycatcher	This species may receive additional protection through the MHCP no net-loss of wetlands policy.				
Known Occurrences	6	6 (100%)	6 (100%)	5 (83%)	3 (50%)
Habitat	2,190	2,190 (100%)	2,190 (100%)	1,373 (63%)*	758 (35%)
Comments	All major populations and critical areas are conserved.				
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Campylorhynchus brunneicapillus cousei</i> Coastal cactus wren	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through application of the critical population policy.				
Known Occurrences	34	34 (99%)	34 (99%)	34 (100%)	0 (0%)
Habitat	9,032	5,405 (60%)	5,904 (65%)	7,567 (84%)	1,178 (19%)
Comments	One major population and critical locations conserved along San Pasqual Valley and Lake Hodges. Habitat acres are likely to be an overestimate, since the coastal cactus wren prefers cactus patches within coastal sage scrub, and the habitat acres given are of coastal sage scrub. Suitable habitat may be limited.				
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Polioptila californica californica</i> Coastal California gnatcatcher					
Known Occurrences	593	333 (62%)	333 (62%)	431 (80%)	38 (6%)
Habitat	9,032	5,434 (60%)	5,934 (60%)	7,567 (84%)	1,718 (19%)
Comments	Most major populations are substantially conserved. Substantial conservation for some critical locations. Marginal conservation of the San Marcos portion of the La Costa/University Commons area. Conservation efforts must include the unincorporated core breeding area and substantial restoration in the unincorporated core breeding area and stepping-stone areas.				

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-2, Conservation of Sensitive Species for Each Alternative (continued)**

<b>Sensitive Species</b>	<b>Number in Study Area</b>	<b>FPA Alternative 1</b>	<b>FPA Alternative 2</b>	<b>BCLA Alternative 3</b>	<b>No Action/ No Alternative</b>
Finding		Inadequate	Adequate only with substantial conservation of core gnatcatcher breeding area and substantial habitat restoration.	Adequate	Inadequate
<i>Sialia mexicana</i> Western bluebird	This species may receive additional protection through the MHCP no net-loss of wetlands policy.				
Known Occurrences	4	3 (75%)	3 (75%)	3 (75%)	1 (25%)
Habitat	1,096	937 (86%)	937 (86%)	980 (89%)	341 (31%)
Comments	No known major populations or critical locations.				
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Vireo bellii pusillus</i> Least Bell's vireo	This species may receive additional protection through the MHCP no net-loss of wetlands policy.				
Known Occurrences	181	154 (85%)	154 (85%)	138 (76%)	16 (9%)
Habitat	2,440	2,440 (100%)*	2,440 (100%)*	1,506 (62%)*	815 (33%)
Comments	All major populations and critical locations conserved.				
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Icteria virens</i> Yellow-breasted chat	This species may receive additional protection through the MHCP no net-loss of wetlands policy.				
Known Occurrences	60	54 (90%)	54 (90%)	55 (92%)	8 (13%)
Habitat	2,440	2,440 (100%)	2,440 (100%)	1,506 (62%)*	815 (33%)
Comments	All major populations and critical locations conserved.				
Finding		Adequate	Adequate	Adequate	Inadequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-2, Conservation of Sensitive Species for Each Alternative (continued)**

<b>Sensitive Species</b>	<b>Number in Study Area</b>	<b>FPA Alternative 1</b>	<b>FPA Alternative 2</b>	<b>BCLA Alternative 3</b>	<b>No Action/ No Alternative</b>
<i>Aimophila ruficeps canescens</i> Rufous-crowned sparrow					
Known Occurrences	75	51 (67%)	51 (67%)	55 (73%)	Unable to determine
Habitat	9,032	5,404 (60%)	5,904 (65%)	7,567 (84%)	1,718 (19%)
Comments		No known major populations or critical locations.			
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Passerculus sandwichensis beldingi</i> Belding's savannah sparrow		This species may receive additional protection through the MHCP no net-loss of wetlands policy.			
Known Occurrences	74	55 (74%)	55 (74%)	66 (89%)	14 (19%)
Habitat	275	275 (100%)	275 (100%)	274 (99%)*	242 (88%)
Comments		All major populations conserved. Critical breeding habitat areas in coastal lagoons are 100% conserved.			
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Passerculus sandwichensis rostratus</i> Large-billed savannah sparrow		This species may receive additional protection through the MHCP no net-loss of wetlands policy.			
Known Occurrences	-	-	-	-	-
Habitat	275	275 (100%)*	275 (100%)*	274 (99%)*	242 (88%)
Comments		No known major populations in study area. Critical breeding habitat in coastal lagoon is 100% conserved.			
Finding		Adequate	Adequate	Adequate	Adequate
<i>Amphispiza belli belli</i> Bell's sage sparrow					
Known Occurrences	10	8 (80%)	8 (80%)	8 (80%)	0 (0%)
Habitat	9,032	5,404 (60%)	5,904 (65%)	7,567 (84%)	1,718 (19%)
Comments		No known major populations or critical locations in study area.			
Finding		Adequate	Adequate	Adequate	Inadequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-2, Conservation of Sensitive Species for Each Alternative (continued)**

<b>Sensitive Species</b>	<b>Number in Study Area</b>	<b>FPA Alternative 1</b>	<b>FPA Alternative 2</b>	<b>BCLA Alternative 3</b>	<b>No Action/ No Alternative</b>
<i>Ammodramus savannarum</i> Grasshopper sparrow					
Known Occurrences	23	12 (52%)	12 (52%)	12 (52%)	3 (13%)
Habitat	5,209	1,597 (31%)	1,597 (31%)	3,295 (63%)	1,138 (22%)
Comments		No known major populations in study area. Critical areas will be partially conserved, and partially taken. Preserved grasslands will be substantially fragmented. Insufficient conservation of grasslands.			
Finding		Inadequate	Inadequate	Adequate	Inadequate
<i>Agelaius tricolor</i> Tricolored blackbird					
Known Occurrences	7	5 (71%)	5 (71%)	4 (57%)	2 (29%)
Habitat	Riparian scrub 2,974 Grasslands 5,209	Riparian scrub 2,974 (100%)* Grasslands 1,597 (31%)	Riparian scrub 2,974 (100%)* Grasslands 1,597 (31%)	Riparian scrub 1,964 (66%)* Grasslands 3,295 (63%)	Riparian scrub 1,142 (38%) Grasslands 1,138 (22%)
Comments		No known major population or critical locations in study area. Insufficient conservation of grasslands.			
Finding		Inadequate	Inadequate	Adequate	Inadequate
<b>Mammals</b>					
<i>Dipodomys stephensi</i> Stephens' kangaroo rat					
Known Occurrences	-	-	-	-	-
Habitat	-	-	-	-	-

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-2, Conservation of Sensitive Species for Each Alternative (continued)**

Sensitive Species	Number in Study Area	FPA Alternative 1	FPA Alternative 2	BCLA Alternative 3	No Action/ No Alternative
Comments		No known major populations or critical locations in study area. Conservation efforts must include maintaining potential habitats for recolonization and managing newly found occupied habitat areas.			
Finding		Adequate	Adequate	Adequate	Unable to determine conservation status
<i>Perognathus longimembris pacificus</i> Pacific little pocket mouse	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	1	1 (100%)	1 (100%)	1 (100%)	0 (0%)
Habitat	13,779	6,768 (49%)	7,268 (53%)	10,423 (76%)	2,776 (20%)
Comments		No known major populations or critical locations in study area.			
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Chaetodipus fallax fallax</i> Northwestern San Diego pocket mouse					
Known Occurrences	2	1 (50%)	1 (50%)	2 (100%)	2 (100%)
Habitat	23,553	13,288 (56%)	13,788 (59%)	19,496 (83%)	5,596 (24%)
Comments		No known major populations or critical locations in study area.			
Finding		Adequate	Adequate	Adequate	Adequate
<i>Lepus californicus bennittii</i> San Diego black-tailed jackrabbit					
Known Occurrences	12	9 (71%)	9 (71%)	10 (83%)	2 (17%)
Habitat	14,241	7,001 (49%)	7,501 (53%)	10,862 (76%)	2,857 (20%)
Comments		No known major populations or critical locations in study area.			
Finding		Adequate	Adequate	Adequate	Inadequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-2, Conservation of Sensitive Species for Each Alternative (continued)**

<b>Sensitive Species</b>	<b>Number in Study Area</b>	<b>FPA Alternative 1</b>	<b>FPA Alternative 2</b>	<b>BCLA Alternative 3</b>	<b>No Action/ No Alternative</b>
<i>Felis concolor</i> Mountain lion					
Known Occurrences	1	1 (100%)	1 (100%)	1 (100%)	1 (100%)
Habitat	26,874	16,392 (61%)	16,892 (63%)	21,793 (81%)	6,680 (25%)
Comments	No known major populations or critical locations in study area.				
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Odocoileus hemionus fuliginata</i> Southern mule deer					
Known Occurrences	12	7 (55%)	7 (55%)	10 (83%)	1 (8%)
Habitat	26,874	16,392 (61%)	16,892 (63%)	21,793 (81%)	6,680 (25%)
Comments	No known major populations or critical locations in study area.				
Finding		Adequate	Adequate	Adequate	Inadequate

Note: \* 100% conservation of wetland and riparian communities is assumed due to the MHCP no net-loss of wetlands policy, both inside and outside the preserve. Only the wetland communities inside the preserve will be managed.

- (1) This species falls under protection of the MHCP Narrow Endemic Species Policy. Both inside and outside the FPA, impacts to narrow endemic populations shall be avoided to the maximum extent practicable. Inside FPAs, mitigation for unavoidable impacts and management practices must be designed to achieve no net-loss of narrow endemic populations, occupied acreage, or population viability. In no case shall a city permit more than 5% loss of narrow endemic populations or occupied acreage within the FPA.
- (2) Critical locations are areas that must be protected for adequate conservation under the MHCP preserve design. Critical locations may coincide with major populations, but not all major populations are critical locations. Critical locations may include dispersal corridors or breeding sites, as well as areas important for maintaining connectivity with populations to the north, south, and east of the MHCP Plan area.
- (3) This is a fully protected species, and lethal take of individuals is forbidden. The MHCP Subarea Plans will only allow habitat alteration or disturbance that will not affect breeding individuals.

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5  
Conservation of Sensitive Species for Subarea Plans**

Sensitive Species	Carlsbad Subarea Plan	Encinitas Subarea Plan	Escondido Subarea Plan	Oceanside Subarea Plan	San Marcos Subarea Plan
<b>Plants</b>					
<i>Acanthomintha ilicifolia</i> San Diego thorn-mint	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.*				
Known Occurrences	5 (87%)	7 (100%)	1 (100%)	-	2 (80%)
Habitat	1,156 (74%)	524 (69%)	725 (78%)	870 (44%)	35 (15%)
Comments	88% of major populations and critical locations conserved.	100% of major populations and critical locations conserved.	100% of major populations and critical locations conserved.	No major populations or critical locations.	80% of major populations and critical locations conserved.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate
<i>Ambrosia pumila</i> San Diego ambrosia	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	-	-	-	2 (88%)	-
Habitat	1,892 (57%)	705 (68%)	1,828 (64%)	1,179 (39%)	1,019 (40%)
Comments	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate
<i>Arctostaphylos glandulosa ssp. Crassifolia</i> Del Mar Manzanita	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	46 (94%)	87 (97%)	-	-	5 (100%)
Habitat	167 (70%)	289 (84%)	-	-	-
Comments	97% of major populations and critical locations conserved.	98% of major populations and critical locations conserved.	No known major populations or critical locations. Species is unlikely to occur here.	No known major populations or critical locations.	No known major populations or critical locations.
Finding	Adequate	Adequate	Adequate**	Adequate**	Adequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

<b>Sensitive Species</b>	<b>Carlsbad Subarea Plan</b>	<b>Encinitas Subarea Plan</b>	<b>Escondido Subarea Plan</b>	<b>Oceanside Subarea Plan</b>	<b>San Marcos Subarea Plan</b>
<i>Baccharis vanessae</i> Encinitas baccharis	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	7 (100%)	12 (98%)	2 (100%)	-	-
Habitat	695 (72%)	630 (83%)	3,538 (74%)	14 (32%)	1,159 (48%)
Comments	100% of major populations and critical locations conserved.	98% of major populations and critical locations conserved.	No known major populations or critical locations conserved.	No known major populations or critical locations conserved.	No known major populations or critical locations conserved.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate
<i>Brodiaea filifolia</i> Thread-leaved brodiaea	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	7 (97%)	-	-	47 (95%)	2 (80%)
Habitat	168 (37%)	15 (28%)	-	82 (20%)	15 (9%)
Comments	93% of major populations and critical locations conserved.	No known major populations or critical locations conserved.	No known major populations or critical locations conserved.	No known major populations or critical locations conserved.	80% of major populations and critical locations conserved.
Finding	Adequate	Adequate	Adequate**	Adequate	Adequate
<i>Ceanothus verrucosus</i> Wart-stemmed ceanothus					
Known Occurrences	28 (76%)	41 (87%)	16 (56%)	-	20 (44%)
Habitat	442 (69%)	417 (82%)	434 (78%)	6 (35%)	936 (53%)
Comments	92% of major populations conserved.	78% of major populations conserved. No known critical locations.	71% of major populations conserved. No known critical locations.	No known major populations or critical locations.	31% of major populations conserved. No known critical locations.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

Sensitive Species	Carlsbad Subarea Plan	Encinitas Subarea Plan	Escondido Subarea Plan	Oceanside Subarea Plan	San Marcos Subarea Plan
<i>Chorizanthe orcuttiana</i> Orcutt's spineflower	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	-	1 (100%)	-	-	-
Habitat	167 (70%)	296 (84%)	-	-	-
Comments	No known major populations or critical locations.	No known major populations. 100% of critical locations conserved.	No known major populations or critical locations. Species is unlikely to occur here since there is no southern maritime chaparral habitat.	No known major populations or critical locations. Species is unlikely to occur here since there is no southern maritime chaparral habitat.	No known major populations or critical locations. Species is unlikely to occur here since there is no southern maritime chaparral habitat.
Finding	Adequate	Adequate	Adequate**	Adequate**	Adequate**
<i>Comarostaphylis diversifolia</i> ssp. <i>Diversifolia</i> Summer-holly					
Known Occurrences	21 (42%)	43 (99%)	15 (31%)	-	42 (66%)
Habitat	267 (68%)	121 (77%)	434 (77%)	6 (34%)	936 (53%)
Comments	60 % of major populations conserved.	82% of major populations conserved. No known critical locations.	67% of major populations conserved.	No known major populations or critical locations.	64% of major populations conserved. No known critical locations.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate
<i>Corethrogyne filaginifolia</i> var. <i>linifolia</i> Del Mar Mesa sand aster	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	8 (89%)	22 (97%)	-	1 (100%)	-
Habitat	778 (71%)	689 (81%)	-	463 (63%)	-

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

Sensitive Species	Carlsbad Subarea Plan	Encinitas Subarea Plan	Escondido Subarea Plan	Oceanside Subarea Plan	San Marcos Subarea Plan
Comments	60% of major populations conserved.	93% of major populations conserved. No known critical locations.	No known major populations or critical locations. Species is unlikely to occur here.	No known major populations or critical locations.	No known major populations or critical locations. Species is unlikely to occur here.
Finding	Adequate	Adequate	Adequate**	Adequate**	Adequate**
<i>Dudleya blochmaniae</i> ssp. <i>Blochmaniae</i> Blochman's dudleya					
Known Occurrences	1 (100%)	-	-	1 (50%)	0 (0%)
Habitat	173 (61%)	59 (57%)	7 (14%)	60 (32%)	6 (20%)
Comments	100% of critical locations conserved.	No known major populations or critical locations.	No known major populations or critical locations. Species is unlikely to occur here.	50% of major population and critical location conserved.	No known major populations or critical locations. Species is unlikely to occur here.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate
<i>Dudleya blochmaniae</i> ssp. <i>Brevifolia</i> Short-leaved dudleya	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	-	-	-	-	-
Habitat	167 (70%)	286 (84%)	-	-	-
Comments	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations. Species is unlikely to occur here.	No known major populations or critical locations. Species is unlikely to occur here.	No known major populations or critical locations. Species is unlikely to occur here.
Finding	Adequate	Adequate	Adequate**	Adequate**	Adequate**

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

<b>Sensitive Species</b>	<b>Carlsbad Subarea Plan</b>	<b>Encinitas Subarea Plan</b>	<b>Escondido Subarea Plan</b>	<b>Oceanside Subarea Plan</b>	<b>San Marcos Subarea Plan</b>
<i>Dudleya variegata</i> Variegated dudleya	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	-	-	-	-	-
Habitat	173 (61%)	59 (57%)	7 (50%)	60 (32%)	6 (19%)
Comments	No known major populations or critical locations. Potential habitat is ineffectively conserved as small, fragmented blocks of habitat.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations. Potential habitat is ineffectively conserved as small, fragmented blocks of habitat.
Finding	Adequate	Adequate	Adequate	Adequate	Inadequate
<i>Dudleya viscida</i> Sticky dudleya					
Known Occurrences	-	-	-	19 (74%)	-
Habitat	958 (67%)	643 (71%)	710 (77%)	524 (56%)	1,267 (52%)
Comments	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	74% of major populations and critical locations conserved.	No known major populations or critical locations.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate
<i>Eryngium aristulatum var. parishii</i> San Diego button-celery	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	13 (100%)	-	-	-	3 (85%)
Habitat	168 (39%)	15 (28%)	-	82 (20%)	15 (9%)

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

<b>Sensitive Species</b>	<b>Carlsbad Subarea Plan</b>	<b>Encinitas Subarea Plan</b>	<b>Escondido Subarea Plan</b>	<b>Oceanside Subarea Plan</b>	<b>San Marcos Subarea Plan</b>
Comments	100% of major populations and critical locations conserved.	No known major populations or critical locations.	No known major populations or critical locations. Species is unlikely to occur here.	No known major populations or critical locations.	80% of major populations and critical location conserved.
Finding	Adequate	Adequate	Adequate**	Adequate	Adequate
<i>Euphorbia misera</i> Cliff spurge					
Known Occurrences	1 (100%)	-	-	-	-
Habitat	420 (71%)	286 (78%)	-	518 (57%)	-
Comments	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations. Species is unlikely to occur here.	No known major populations or critical locations.	No known major populations or critical locations. Species is unlikely to occur here.
Finding	Adequate	Adequate	Not Applicable	Adequate	Not Applicable
<i>Ferocactus viridescens</i> San Diego barrel cactus					
Known Occurrences	1 (100%)	27 (87%)	-	-	-
Habitat	691 (66%)	522 (70%)	276 (77%)	518 (57%)	331 (48%)
Comments	No known major populations or critical locations.	86% of major populations and critical locations conserved.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

<b>Sensitive Species</b>	<b>Carlsbad Subarea Plan</b>	<b>Encinitas Subarea Plan</b>	<b>Escondido Subarea Plan</b>	<b>Oceanside Subarea Plan</b>	<b>San Marcos Subarea Plan</b>
<i>Hazardia orcutti</i> Orcutt's hazardia	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	-	6 (97%)	-	-	-
Habitat	1,133 (67%)	939 (75%)	710 (77%)	524 (56%)	1,267 (52%)
Comments	No known major populations or critical locations.	97% of major populations and critical locations conserved.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate
<i>Iva hayesiana</i> San Diego marsh-elder	This species may receive additional protection by the MHCP no net-loss of wetlands policy.				
Known Occurrences	-	2 (100%)	-	-	1 (50%)
Habitat	1 (100%)	5 (100%)	-	1 (100%)	-
Comments	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	50% of major populations and critical area conserved.
Finding	Adequate	Adequate	Adequate**	Adequate	Adequate
<i>Lotus nuttallianus</i> Nuttall's lotus	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	2 (100%)	5 (96%)	-	1(80%)	-
Habitat	-	5 (100%)	-	4 (10%)	-
Comments	100% of major populations and critical locations conserved.	96% of major populations and critical locations conserved.	No known major populations or critical locations. Species is unlikely to occur here.	80% of major populations and critical locations conserved.	No known major populations or critical locations. Species is unlikely to occur here.
Finding	Adequate	Adequate	Adequate**	Adequate	Adequate**

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

<b>Sensitive Species</b>	<b>Carlsbad Subarea Plan</b>	<b>Encinitas Subarea Plan</b>	<b>Escondido Subarea Plan</b>	<b>Oceanside Subarea Plan</b>	<b>San Marcos Subarea Plan</b>
<i>Myosurus minimus spp. apus</i> Little mouseltail	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	1 (100%)	-	-	-	-
Habitat	6 (100%)	5 (100%)	-	1 (100%)	-
Comments	100% of major populations and critical locations conserved.	No known major populations or critical locations.			
Finding	Adequate	Adequate	Adequate**	Adequate	Adequate**
<i>Navarretia fossalis</i> Spreading navarretia	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	1 (100%)	-	-	-	3 (85%)
Habitat	5 (100%)	-	-	-	-
Comments	100% of major populations and critical locations conserved.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	80% of major populations and critical locations conserved.
Finding	Adequate	Adequate**	Adequate**	Adequate**	Adequate
<i>Orcuttia californica</i> California Orcutt grass	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	1 (100%)	-	-	-	-
Habitat	5 (100%)	-	-	-	-
Comments	100% of major populations and critical locations conserved.	No known major populations or critical locations.			
Finding	Adequate	Adequate**	Adequate**	Adequate**	Adequate**

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

Sensitive Species	Carlsbad Subarea Plan	Encinitas Subarea Plan	Escondido Subarea Plan	Oceanside Subarea Plan	San Marcos Subarea Plan
<i>Pinus torreyana ssp. Torreyana</i> Torrey pine					
Known Occurrences	1 (50%)	14 (61%)	-	-	-
Habitat	175 (70%)	296 (84%)	-	-	-
Comments	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations. Species is unlikely to occur here.	No known major populations or critical locations. Species is unlikely to occur here.	No known major populations or critical locations. Species is unlikely to occur here.
Finding	Adequate	Adequate	Not Applicable	Not Applicable	Not Applicable
<i>Quercus dumosa</i> Nuttall's scrub oak					
Known Occurrences	20 (56%)	18 (90%)	-	-	-
Habitat	958 (67%)	643 (71%)	710 (77%)	524 (56%)	1,267 (52%)
Comments	80% of major populations and critical locations conserved.	100% major populations and critical locations conserved.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate
<i>Quercus engelmannii</i> Engelmann oak					
Known Occurrences	1 (33%)	-	64 (85%)	-	1 (100%)
Habitat	-	-	151 (73%)	-	19 (82%)
Comments	No known major populations or critical locations.	No known major populations or critical locations. Species is unlikely to occur here.	81% of major populations and critical locations conserved.	No known major populations or critical areas. Species is unlikely to occur here.	No known major populations or critical areas.
Finding	Adequate	Not Applicable	Adequate	Not Applicable	Adequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

Sensitive Species	Carlsbad Subarea Plan	Encinitas Subarea Plan	Escondido Subarea Plan	Oceanside Subarea Plan	San Marcos Subarea Plan
<i>Tetracoccus dioicus</i> Parry's tetracoccus					
Known Occurrences	-	-	-	-	-
Habitat	69 (100%)	-	700 (79%)	-	13 (42%)
Comments	No known major populations or critical locations.	No known major populations or critical locations. Species is unlikely to occur here.	No known major populations or critical locations.	No known major populations or critical locations. Species is unlikely to occur here.	No known major populations or critical locations.
Finding	Adequate	Not Applicable	Adequate	Not Applicable	Adequate
<b>Invertebrates</b>					
<i>Streptocephalus woottoni</i> Riverside fairy shrimp	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	2 (100%)	-	-	-	-
Habitat	-	-	-	-	-
Comments	100% conservation of vernal pools.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.
Finding	Adequate	Adequate**	Adequate**	Adequate**	Adequate**
<i>Branchinecta sandiegonensis</i> San Diego fairy shrimp	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	2 (100%)	-	-	-	0 (0%)
Habitat	-	-	-	-	-
Comments	100% conservation of vernal pools at Carlsbad.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	Vernal pools in San Marcos major amendment area are conserved.
Finding	Adequate	Adequate**	Adequate**	Adequate**	Adequate**

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

Sensitive Species	Carlsbad Subarea Plan	Encinitas Subarea Plan	Escondido Subarea Plan	Oceanside Subarea Plan	San Marcos Subarea Plan
<i>Euphyes vestris harbisoni</i> Harbison's dun skipper	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	-	-	3 (100%)	-	-
Habitat	482 (100%)	274 (100%)	1,106 (84%)	842 (100%)	208 (97%)
Comments	No known major populations or critical locations.	No known major populations or critical locations.	Major populations in Escondido are 100% conserved.	No known major populations or critical locations.	No known major populations or critical locations.
Finding	Adequate**	Adequate**	Adequate	Adequate**	Adequate**
<i>Panoquina errans</i> Salt marsh skipper	This species may receive additional protection under the MHCP no net-loss of wetlands policy.				
Known Occurrences	1 (100%)	-	-	-	-
Habitat	147 (100%)	123 (100%)	-	-	-
Comments	Major populations and critical areas at Agua Hedionda and Batiquitos lagoons 100% conserved.	Major populations and critical locations at San Elijo and Batiquitos lagoons 100% conserved.	No known major populations or critical locations. Species is unlikely to occur here.	No known major populations or critical locations	No known major populations or critical locations. Species is unlikely to occur here.
Finding	Adequate	Adequate	Not Applicable	Unable to determine conservation status.	Not Applicable
<i>Lycaena hermes</i> Hermes copper					
Known Occurrences	-	-	-	-	-
Habitat	1,510 (67%)	608 (71%)	1,500 (65%)	664 (49%)	1,014 (51%)
Comments	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

Sensitive Species	Carlsbad Subarea Plan	Encinitas Subarea Plan	Escondido Subarea Plan	Oceanside Subarea Plan	San Marcos Subarea Plan
<i>Euphydryas editha quino</i> Quino checkerspot	Species may be extirpated from the study area. Conservation efforts aimed at viable populations outside the study area.				
Known Occurrences	-	-	-	-	-
Habitat	-	-	-	-	-
Comments	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations. Potential habitat areas conserved.	No known major populations or critical locations.	No known major populations or critical locations.
Finding	Adequate only with sufficient mitigation to maintain viable populations outside the study area.	Adequate only with sufficient mitigation to maintain viable populations outside the study area.	Adequate	Adequate only with sufficient mitigation to maintain viable populations outside the study area.	Adequate only with sufficient mitigation to maintain viable populations outside the study area.
<b>Amphibians and Reptiles</b>					
<i>Scaphiopus hammondi</i> Western spadefoot toad	This species may receive additional protection under the MHCP no net-loss of wetlands policy.				
Known Occurrences	1 (100%)	-	2 (67%)	-	-
Habitat	Aquatic 249 (100%) Riparian 459 (100%)	Aquatic 122 (100%) Riparian 274 (100%)	Aquatic 317 (100%) Riparian 401 (100%)	Aquatic 654 (100%) Riparian 838 (100%)	Aquatic 11 (100%) Riparian 186 (100%)
Comments	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

Sensitive Species	Carlsbad Subarea Plan	Encinitas Subarea Plan	Escondido Subarea Plan	Oceanside Subarea Plan	San Marcos Subarea Plan
<i>Bufo microscaphus californicus</i> Arroyo southwestern toad	This species may receive additional protection under the MHCP no net-loss of wetlands policy which will protect this species' breeding habitat. Additional conservation may occur through application of the critical location policy.				
Known Occurrences	-	-	-	-	-
Habitat	-	-	-	-	-
Comments	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.
Finding	Adequate**	Adequate**	Adequate**	Adequate**	Adequate**
<i>Clemmys marmorata pallida</i> Southwestern pond turtle	This species may receive additional protection under the MHCP no net-loss of wetlands policy.				
Known Occurrences	1 (100%)	4 (100%)	1 (100%)	1 (100%)	-
Habitat	Aquatic 249 (100%) Riparian 459 (100%)	Aquatic 122 (100%) Riparian 274 (100%)	Aquatic 317 (100%) Riparian 401 (100%)	Aquatic 654 (100%) Riparian 838 (100%)**	Aquatic 11 (100%) Riparian 186 (100%)
Comments	No known major populations or critical locations.	No known major populations or critical locations.	Major populations and critical locations at Escondido Creek conserved at 100%.	Major populations and critical locations at San Luis Rey River and Buena Vista Lagoon conserved at 100%.	No known major populations or critical locations.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

<b>Sensitive Species</b>	<b>Carlsbad Subarea Plan</b>	<b>Encinitas Subarea Plan</b>	<b>Escondido Subarea Plan</b>	<b>Oceanside Subarea Plan</b>	<b>San Marcos Subarea Plan</b>
<i>Phrynosoma coronatum blainvillei</i> San Diego horned lizard	Conservation efforts must include management of Argentine ants and edge effects.				
Known Occurrences	4 (40%)	3 (100%)	15 (100%)	0 (0%)	0 (0%)
Habitat	2,714 (60%)	1,335 (74%)	6,024 (71%)	1,197 (38%)	2,280 (45%)
Comments	No known major populations or critical locations. Conservation efforts must include management of Argentine ants and edge effects.	No known major populations or critical locations. Conservation efforts must include management of Argentine ants and edge effects.	No known major populations or critical locations. Conservation efforts must include management of Argentine ants and edge effects.	No known major populations or critical locations. Conservation efforts must include management of Argentine ants and edge effects.	No known major populations or critical locations. Conservation efforts must include management of Argentine ants and edge effects.
Finding	Adequate	Not Applicable	Adequate	Adequate	Adequate
<i>Cnemidophorus hyperythrus beldingi</i> Orange-throated whiptail					
Known Occurrences	12 (36%)	3 (100%)	20 (76%)	3 (60%)	-
Habitat	2,234 (69%)	1,239 (77%)	5,038 (71%)	678 (49%)	2,173 (50%)
Comments	No known major populations or critical locations.				
Finding	Adequate	Adequate	Adequate	Adequate	Adequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

Sensitive Species	Carlsbad Subarea Plan	Encinitas Subarea Plan	Escondido Subarea Plan	Oceanside Subarea Plan	San Marcos Subarea Plan
<b>Birds</b>					
<i>Pelecanus occidentalis californicus</i> California brown pelican <sup>(1)</sup>	This species may receive additional protection under the MHCP no net-loss of wetlands policy.				
Known Occurrences	4 (100%)	1 (100%)	-	-	-
Habitat	768 (100%)	161 (100%)	-	24 (100%)	-
Comments	No known major populations. Critical areas at Aqua Hedionda and Batiquitos lagoons are 100% conserved.	No known major populations. Critical areas at San Elijo and Batiquitos lagoons are 100% conserved.	No known major populations or critical locations. Species is unlikely to occur here.	No known major populations. Critical areas at San Luis Rey River mouth and Buena Vista Lagoon are 100% conserved.	No known major populations or critical locations. Species is unlikely to occur here.
Finding	Adequate	Adequate	Not Applicable	Adequate	Not Applicable
<i>Plegadis chihi</i> White-faced ibis	This species may receive additional protection through the MHCP no net-loss of wetlands policy.				
Known Occurrences	4 (100%)	1 (50%)	1 (100%)	7 (70%)	-
Habitat	339 (100%)	235 (100%)	37 (100%)	106 (100%)	9 (100%)
Comments	Major populations at Batiquitos Lagoon conserved. No known critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate
<i>Circus cyaneus</i> Northern harrier					
Known Occurrences	14 (71%)	3 (83%)	1 (100%)	7 (47%)	1 (30%)
Habitat	2,243 (62%)	1,081 (76%)	1,865 (65%)	1,351 (42%)	1,029 (43%)

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

<b>Sensitive Species</b>	<b>Carlsbad Subarea Plan</b>	<b>Encinitas Subarea Plan</b>	<b>Escondido Subarea Plan</b>	<b>Oceanside Subarea Plan</b>	<b>San Marcos Subarea Plan</b>
Comments	No known major populations. Critical areas at Agua Hedionda and Batiquitos lagoons 100% conserved. Insufficient conservation of grasslands.	No major populations. Critical areas in San Elijo and Batiquitos lagoons 100% conserved. Insufficient conservation of grasslands.	No known major populations or critical locations.	No major populations. Critical areas at San Luis Rey River mouth and Buena Vista Lagoon are 100% conserved. Marsh habitat adjacent to Camp Pendleton is 100% conserved. Grasslands adjacent to Camp Pendleton are substantially conserved.	No known major populations or critical locations. Insufficient conservation of grasslands.
Finding	Inadequate	Not Applicable	Adequate	Adequate	Inadequate
<i>Accipiter cooperii</i> Cooper's hawk					
Known Occurrences	7 (45%)	4 (50%)	9 (94%)	12 (71%)	2 (40%)
Habitat	129 (99%)	51 (100%)	883 (82%)	245 (100%)	101 (95%)
Comments	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations. 75% conservation for critical oak woodland area.	No known major populations or critical locations.	No known major populations. 75% conservation for critical oak woodland area.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

Sensitive Species	Carlsbad Subarea Plan	Encinitas Subarea Plan	Escondido Subarea Plan	Oceanside Subarea Plan	San Marcos Subarea Plan
<i>Pandion haliaetus</i> Osprey	This species may receive additional protection under the MHCP no net-loss of wetlands policy.				
Known Occurrences	1 (100%)	2 (67%)	2 (100%)	3 (100%)	-
Habitat	825 (100%)	167 (100%)	239 (100%)	163 (100%)	1 (100%)
Comments	No known major populations. Critical areas at Agua Hedionda and Batiquitos lagoons 100% conserved.	No known major populations. Critical area at San Elijo and Batiquitos lagoons 100% conserved..	No known major populations or critical locations.	No known major populations. Critical area at San Luis Rey River mouth and Buena Vista Lagoon conserved at 100%.	No known major populations or critical locations.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate
<i>Aquila chrysaetos</i> Golden eagle					
Known Occurrences	2 (67%)	1 (100%)	3 (100%)	3 (100%)	-
Habitat	1,998 (56%)	705 (68%)	1,871 (64%)	1,176 (38%)	1,099 (41%)
Comments	No known major populations. Critical grassland and scrub habitats in central and southeast Carlsbad are substantially conserved.	No known major populations. Critical scrub habitat in east Encinitas is substantially conserved.	No known major populations. Critical scrub habitat in north and east Escondido is substantially conserved.	No known major populations. Critical grassland and scrub habitat adjacent to Camp Pendleton is partially conserved.	No known major populations. Critical scrub habitat in north and southwest San Marcos is partially conserved.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

Sensitive Species	Carlsbad Subarea Plan	Encinitas Subarea Plan	Escondido Subarea Plan	Oceanside Subarea Plan	San Marcos Subarea Plan
<i>Falco peregrinus anatum</i> Peregrine falcon <sup>(1)</sup>					
Known Occurrences	4 (75%)	1 (50%)	1 (100%)	-	-
Habitat	1,566 (100%)	671 (100%)	438 (100%)	1,022 (100%)	196 (100%)
Comments	No known major populations. Critical areas at Agua Hedionda and Batiquitos lagoons 100% conserved.	No known major populations. Critical foraging area at San Elijo and Batiquitos lagoons 100% conserved.	No known major populations or critical locations.	No known major populations. Critical foraging areas at San Luis Rey River mouth and Buena Vista Lagoon are 100% conserved.	No known major populations or critical locations.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate
<i>Rallus longirostris levipes</i> Light-footed clapper rail <sup>(1)</sup>	This species may receive additional protection under the MHCP no net-loss of wetlands policy.				
Known Occurrences	3 (100%)	17 (100%)	-	-	-
Habitat	148 (100%)	120 (100%)	-	-	-
Comments	Major populations and critical areas at Agua Hedionda and Batiquitos lagoons 100% conserved.	Major populations and critical locations at San Elijo and Batiquitos lagoons 100% conserved.	No known major populations or critical locations. Species is unlikely to occur here.	No known major populations or critical locations. Buena Vista Lagoon is conserved at 100%.	No known major populations or critical locations. Species is unlikely to occur here.
Finding	Adequate	Adequate	Not Applicable	Adequate	Not Applicable

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

Sensitive Species	Carlsbad Subarea Plan	Encinitas Subarea Plan	Escondido Subarea Plan	Oceanside Subarea Plan	San Marcos Subarea Plan
<i>Charadrius alexandrinus nivosus</i> Western snowy plover					
Known Occurrences	25 (83%)	3 (100%)	-	-	-
Habitat	-	-	-	-	-
Comments	Major populations at San Luis Rey River mouth and lagoon and estuarine habitats of Carlsbad conserved. Critical breeding areas at San Luis Rey River, and Agua Hedionda and Batiquitos lagoons conserved.	Major populations at San Luis Rey River mouth and lagoon and estuarine habitats of Encinitas conserved. Critical breeding areas at Batiquitos and San Elijo lagoons conserved.	No known major populations or critical locations. Species is unlikely to occur here.	Major populations at San Luis Rey River mouth and lagoon and estuarine habitats of Oceanside conserved. Critical breeding areas at San Luis Rey River and Buena Vista Lagoon conserved.	No known major populations or critical locations. Species is unlikely to occur here.
Finding	Adequate	Adequate	Not Applicable	Adequate	Not Applicable
<i>Sterna elegans</i> Elegant tern	This species may receive additional protection under the MHCP no net-loss of wetlands policy.				
Known Occurrences	3 (100%)	1 (100%)	-	2 (67%)	-
Habitat	768 (100%)	169 (100%)	-	28 (42%)	-
Comments	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations. Species is unlikely to occur here.	No known major populations or critical locations.	No known major populations or critical locations. Species is unlikely to occur here.
Finding	Adequate	Adequate	Not Applicable	Adequate	Not Applicable

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

<b>Sensitive Species</b>	<b>Carlsbad Subarea Plan</b>	<b>Encinitas Subarea Plan</b>	<b>Escondido Subarea Plan</b>	<b>Oceanside Subarea Plan</b>	<b>San Marcos Subarea Plan</b>
<i>Sterna antillarum browni</i> California least tern <sup>(1)</sup>					
Known Occurrences	15 (100%)	5 (100%)	-	1 (100%)	-
Habitat	768 (100%)	169 (100%)	-	28 (42%)	-
Comments	Breeding habitat at Batiquitos Lagoon 100% conserved. Critical areas at Aqua Hedionda and Batiquitos lagoons 100% conserved.	No known major populations. Critical area at San Elijo and Batiquitos lagoons 100% conserved.	No known major populations or critical locations. Species is unlikely to occur here.	Major populations and critical areas at the breeding habitat at the San Luis Rey River mouth is 100% conserved.	No known major populations or critical locations. Species is unlikely to occur here.
Finding	Adequate	Adequate	Not Applicable	Adequate	Not Applicable
<i>Athene cunicularia hypugaea</i> Burrowing owl					
Known Occurrences	4 (80%)	1 (100%)	-	-	1 (33%)
Habitat	448 (38%)	97 (52%)	371 (62%)	515 (30%)	85 (12%)
Comments	No known major populations. Critical area of grassland in eastern Batiquitos Lagoon and southeast Carlsbad are partially conserved. Insufficient conservation of grasslands.	No known major populations. Critical area of grassland in eastern San Elijo Lagoon is substantially conserved.	No known major populations. Critical area of grassland in north and south Escondido is substantially conserved.	No known major populations. Critical area of grassland adjacent to Camp Pendleton is substantially conserved.	No known major populations. Critical area of grassland in San Marcos is poorly conserved. Insufficient conservation of grasslands.
Finding	Inadequate	Not Applicable	Adequate	Adequate	Inadequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

Sensitive Species	Carlsbad Subarea Plan	Encinitas Subarea Plan	Escondido Subarea Plan	Oceanside Subarea Plan	San Marcos Subarea Plan
<i>Empidonax traillii extimus</i> Southwestern willow flycatcher	This species may receive additional protection through the MHCP no net-loss of wetlands habitat policy.				
Known Occurrences	2 (100%)	3 (100%)	-	1 (100%)	-
Habitat	439 (100%)	226 (100%)	401 (100%)	834 (100%)	109 (100%)
Comments	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	Major populations and critical locations at San Luis Rey River near Guajome Lake and Pilgrim Creek near Foss Lake conserved.	No known major populations or critical locations.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate
<i>Campylorhynchus brunneicapillus</i> <i>cousei</i> Coastal cactus wren	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through application of the critical population policy.				
Known Occurrences	24 (97%)	-	34 (99%)	-	-
Habitat	-	-	-	-	-
Comments	No known major populations or critical locations.	No known major populations or critical locations. Suitable habitat may be limited in this area.	Major population and critical location along San Pasqual Valley and Lake Hodges is conserved.	No known major populations or critical locations. Suitable habitat may be limited in this area.	No known major populations or critical locations. Suitable habitat may be limited in this area.
Finding	Adequate	Adequate**	Adequate	Adequate**	Adequate**

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

Sensitive Species	Carlsbad Subarea Plan	Encinitas Subarea Plan	Escondido Subarea Plan	Oceanside Subarea Plan	San Marcos Subarea Plan
<i>Polioptila californica californica</i> Coastal California gnatcatcher					
Known Occurrences	117 (67%)	58 (76%)	47 (67%)	77 (50%)	30 (54%)
Habitat	1,510 (67%)	608 (71%)	1,500 (65%)	664 (49%)	1,014 (51%)
Comments	Most major populations are substantially conserved. Major populations in central Carlsbad will be partially conserved, and will become more fragmented. Much of the Calavera Lake/Calavera Highlands location will be conserved. The critical location in the La Costa area is largely on properties already permitted for take.	No known major populations or critical locations.	Major populations at Bernardo Mountain, Kit Carson Park, and San Pasqual Valley will be substantially conserved. Major populations at Quail Hills will not be conserved. No known critical locations.	Major populations in north Oceanside will be substantially conserved. Major population in central Oceanside will be partially conserved. Critical location in north Oceanside adjacent to Camp Pendleton will be substantially conserved.	Major populations at San Marcos portion of La Costa/University Commons will be marginally conserved (on a “project level” basis). The critical location at the San Marcos portion of the La Costa/ University Commons area will be marginally conserved.
Finding	Adequate only with substantial conservation of core gnatcatcher breeding area and substantial habitat restoration.	Adequate	Adequate only with substantial conservation of core gnatcatcher breeding area and substantial habitat restoration.	Adequate only with substantial conservation of core gnatcatcher breeding area and substantial habitat restoration.	Adequate only with substantial conservation of core gnatcatcher breeding area and substantial habitat restoration.

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

Sensitive Species	Carlsbad Subarea Plan	Encinitas Subarea Plan	Escondido Subarea Plan	Oceanside Subarea Plan	San Marcos Subarea Plan
<i>Sialia mexicana</i> Western bluebird	This species may receive additional protection through the MHCP no net-loss of wetlands policy.				
Known Occurrences	1 (50%)	1 (100%)	1 (100%)	-	-
Habitat	22 (92%)	-	615 (76%)	4 (95%)	22 (80%)
Comments	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate
<i>Vireo bellii pusillus</i> Least Bell's vireo	This species may receive additional protection through the MHCP no net-loss of wetlands policy.				
Known Occurrences	9 (75%)	3 (100%)	2 (50%)	139 (86%)	-
Habitat	459 (100%)	274 (100%)	401 (100%)	838 (100%)	186 (100%)
Comments	No known major populations or critical locations.	No known major populations or critical locations.	Major population and critical location at San Luis Rey River/Pilgrim Creek conserved.	No known major populations or critical locations.	No known major populations or critical locations.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate
<i>Icteria virens</i> Yellow-breasted chat	This species may receive additional protection through the MHCP no net-loss of wetlands habitat policy.				
Known Occurrences	6 (100%)	5 (100%)	4 (100%)	39 (89%)	-
Habitat	459 (100%)	274 (100%)	401 (100%)	838 (100%)	185 (100%)
Comments	No known major populations or critical locations.	No known major populations or critical locations.	Major population and critical location at San Luis Rey River/Pilgrim Creek conserved.	No known major populations or critical locations.	No known major populations or critical locations.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

Sensitive Species	Carlsbad Subarea Plan	Encinitas Subarea Plan	Escondido Subarea Plan	Oceanside Subarea Plan	San Marcos Subarea Plan
<i>Aimophila ruficeps canescens</i> Rufous-crowned sparrow	This species may receive additional protection through the MHCP no net-loss of wetlands habitat policy.				
Known Occurrences	7 (61%)	5 (71%)	31 (74%)	4 (67%)	4 (42%)
Habitat	1,510 (67%)	608 (71%)	1,500 (65%)	664 (49%)	1,014 (51%)
Comments	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate
<i>Passerculus sandwichensis beldingi</i> Belding's savannah sparrow	This species may receive additional protection through the MHCP no net-loss of wetlands habitat policy.				
Known Occurrences	31 (67%)	20 (91%)	-	4 (67%)	-
Habitat	147 (100%)	123 (100%)	-	-	-
Comments	Major populations and critical locations at Agua Hedionda and Batiquitos lagoons 100% conserved.	Major populations and critical locations at San Elijo and Batiquitos lagoons 100% conserved.	No known major populations or critical locations. Species is unlikely to occur here.	No known major populations or critical locations.	No known major populations or critical locations. Species is unlikely to occur here.
Finding	Adequate	Adequate	Not Applicable	Adequate	Not Applicable
<i>Passerculus sandwichensis rostratus</i> Large-billed savannah sparrow	This species may receive additional protection through the MHCP no net-loss of wetlands habitat policy.				
Known Occurrences	-	-	-	-	-
Habitat	147 (100%)	123 (100%)	-	-	-
Comments	No known major populations. Critical areas at Agua Hedionda and Batiquitos lagoons 100% conserved.	No known major populations. Critical areas at San Elijo and Batiquitos lagoons 100% conserved.	No known major populations or critical locations. Species is unlikely to occur here.	No known major populations or critical locations.	No known major populations or critical locations. Species is unlikely to occur here.

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

Sensitive Species	Carlsbad Subarea Plan	Encinitas Subarea Plan	Escondido Subarea Plan	Oceanside Subarea Plan	San Marcos Subarea Plan
Finding	Adequate	Adequate	Not Applicable	Unable to determine conservation status.	Not Applicable
<i>Amphispiza belli belli</i> Bell's sage sparrow					
Known Occurrences	-	0 (0%)	5 (885%)	-	3 (92%)
Habitat	1,510 (67%)	608 (71%)	1,500 (65%)	664 (49%)	1,014 (51%)
Comments	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate
<i>Ammodramus savannarum</i> Grasshopper sparrow					
Known Occurrences	3 (100%)	3 (75%)	1 (33%)	4 (80%)	1 (13%)
Habitat	488 (38%)	97 (52%)	371 (62%)	515 (30%)	85 (12%)
Comments	No known major populations. Critical grassland areas in north, central, and southeast Carlsbad are partially conserved. Insufficient conservation of grasslands.	No known major populations. Critical grassland areas in south and east Encinitas are partially conserved.	No known major populations. Critical grassland areas in north and south Escondido are partially conserved.	No known major populations. Critical grassland area adjacent to Camp Pendleton is partially conserved. Insufficient conservation of grasslands.	No known major populations. Critical grassland area in San Marcos is poorly conserved. Insufficient conservation of grasslands.
Finding	Inadequate	Not Applicable	Adequate	Adequate	Inadequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

Sensitive Species	Carlsbad Subarea Plan	Encinitas Subarea Plan	Escondido Subarea Plan	Oceanside Subarea Plan	San Marcos Subarea Plan
<i>Agelaius tricolor</i> Tricolored blackbird					
Known Occurrences	2 (100%)	1 (100%)	1 (100%)	1 (50%)	-
Habitat	1,033 (56%)	435 (83%)	541 (71%)	1,271 (51%)	202 (25%)
Comments	No known major populations or critical locations. Insufficient conservation of grasslands.	No known major populations or critical locations. Insufficient conservation of grasslands.			
Finding	Inadequate	Not Applicable	Adequate	Adequate	Inadequate
<b>Mammals</b>					
<i>Dipodomys stephensi</i> Stephens' kangaroo rat	This species may receive additional conservation through application of the critical population policy.				
Known Occurrences	-	-	-	-	-
Habitat	-	-	-	-	-
Comments	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate
<i>Perognathus longimembris pacificus</i> Pacific little pocket mouse	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through application of the critical location policy.				
Known Occurrences	-	1 (80%)	-	-	-
Habitat	1,085 (54%)	257 (60%)	-	541 (50%)	-
Comments	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.
Finding	Adequate	Adequate	Adequate**	Adequate	Adequate**

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

Sensitive Species	Carlsbad Subarea Plan	Encinitas Subarea Plan	Escondido Subarea Plan	Oceanside Subarea Plan	San Marcos Subarea Plan
<i>Chaetodipus fallax fallax</i> Northwestern San Diego pocket mouse					
Known Occurrences	0 (0%)	1 (100%)	-	-	-
Habitat	2,360 (62%)	1,247 (77%)	6,014 (71%)	1,054 (42%)	2,257 (46%)
Comments	No known major populations or critical locations.				
Finding	Adequate	Adequate	Adequate	Adequate	Adequate
<i>Lepus californicus bennittii</i> San Diego black-tailed jackrabbit					
Known Occurrences	6 (69%)	1 (50%)	1 (100%)	1 (100%)	-
Habitat	1,998 (58%)	705 (68%)	1,739 (78%)	1,179 (38%)	1,099 (41%)
Comments	No known major populations or critical locations.				
Finding	Adequate	Adequate	Adequate	Adequate	Adequate
<i>Felis concolor</i> Mountain lion					
Known Occurrences	-	1 (100%)	-	-	-
Habitat	3,203 (64%)	1,610 (78%)	6,425 (72%)	2,035 (51%)	2,465 (47%)
Comments	No known major populations or critical locations.				
Finding	Adequate	Adequate	Adequate	Adequate	Adequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

Sensitive Species	Carlsbad Subarea Plan	Encinitas Subarea Plan	Escondido Subarea Plan	Oceanside Subarea Plan	San Marcos Subarea Plan
<i>Odocoileus hemionus fuliginata</i> Southern mule deer					
Known Occurrences	1 (25%)	2 (100%)	3 (100%)	-	1 (30%)
Habitat	3,203 (64%)	1,610 (78%)	6,425 (72%)	2,035 (51%)	2,465 (47%)
Comments	No known major populations or critical locations.				
Finding	Adequate	Adequate	Adequate	Adequate	Adequate

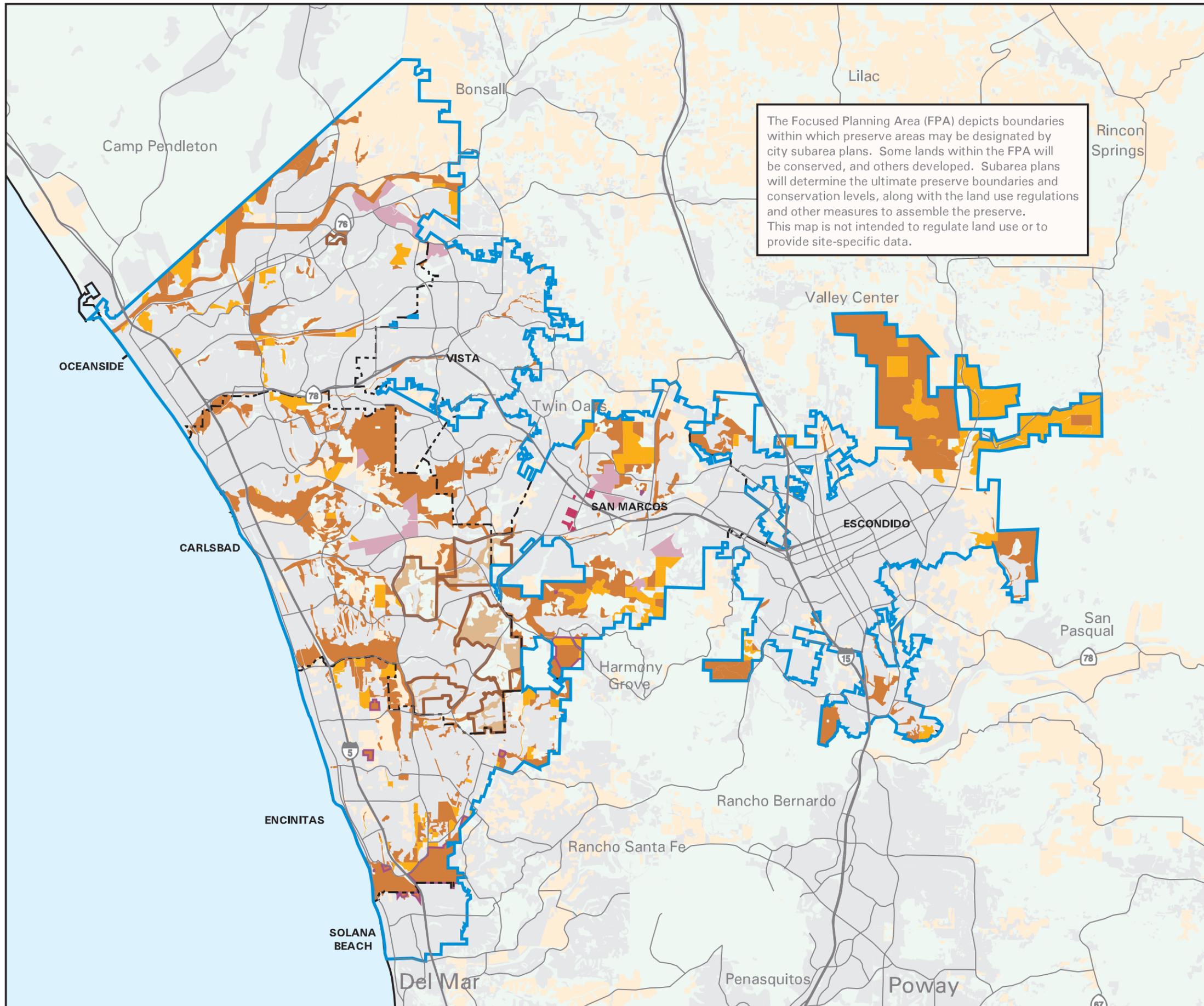
Notes \* Species that do not occur in a subarea are considered adequately conserved if they are an endemic species and will be protected by the MHCP Narrow Endemic Policy. In addition, species that do not occur in a subarea are considered adequately conserved if they are considered a wetland community obligate species and will be protected under the MHCP no net-loss of wetlands policy. Also, some species will receive additional protection under the MHCP Critical Population Policy.

\*\* 100% conservation of wetland and riparian communities is assumed due to the MHCP no net-loss of wetlands policy, both inside and outside the preserve. Only the wetland communities inside the preserve will be managed.

Information in this table based on the Public Review Draft Biological Analysis and Permitting Conditions, Volume II, Ogden 2000.

<sup>(1)</sup> This is a fully protected species, and lethal take of individuals is forbidden. The MHCP Subarea Plans will only allow habitat alteration or disturbance that will not affect breeding individuals.

# Figure 2.2-1 Focused Planning Area Alternative 1



The Focused Planning Area (FPA) depicts boundaries within which preserve areas may be designated by city subarea plans. Some lands within the FPA will be conserved, and others developed. Subarea plans will determine the ultimate preserve boundaries and conservation levels, along with the land use regulations and other measures to assemble the preserve. This map is not intended to regulate land use or to provide site-specific data.

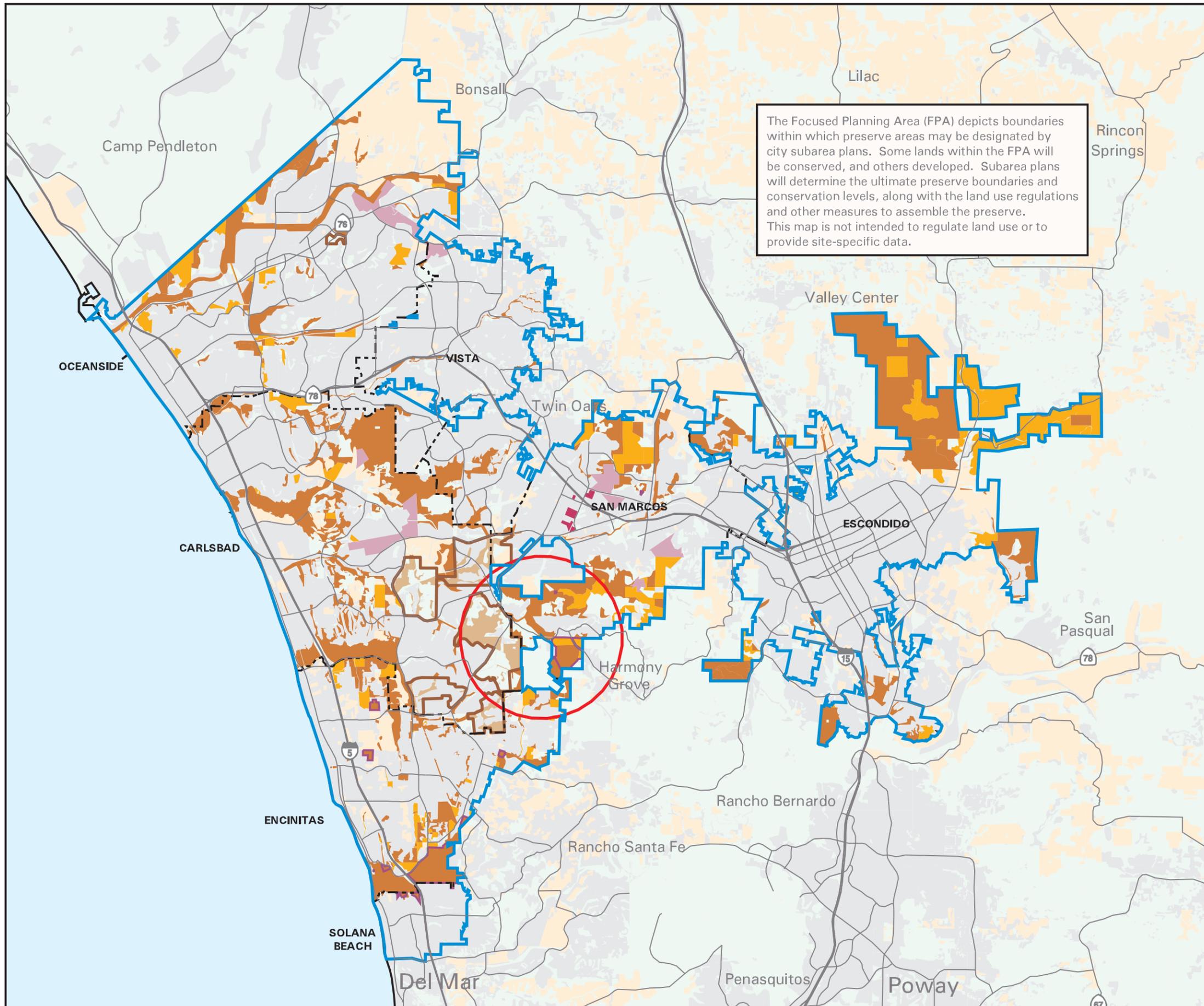
- Hardline Areas (90% to 100% Conservation)
- Softline Areas (Less than 90% Conservation)
- Hardline Preserves on Already Permitted Properties
- Not Part of Subarea Plans
- Major Amendment Areas
- Natural Habitats (Outside FPA)
- Agricultural Land
- Developed/Disturbed Land
- County-owned FPA land
- Projects Already Permitted
- Generalized Subarea Plan Boundary
- MHCP Boundary

SOURCE: Local Jurisdictions in MHCP Study Area

Feet 0 6,500 13,000  
Kilometers 1.56 3.12

**SANDAG**  
January 17, 2003

## Figure 2.2-2 Focused Planning Area and Gnatcatcher Core Alternative 2



The Focused Planning Area (FPA) depicts boundaries within which preserve areas may be designated by city subarea plans. Some lands within the FPA will be conserved, and others developed. Subarea plans will determine the ultimate preserve boundaries and conservation levels, along with the land use regulations and other measures to assemble the preserve. This map is not intended to regulate land use or to provide site-specific data.

- Hardline Areas (90% to 100% Conservation)
- Softline Areas (Less than 90% Conservation)
- Hardline Preserves on Already Permitted Properties
- Not Part of Subarea Plans
- Major Amendment Areas
- Natural Habitats (Outside FPA)
- Agricultural Land
- Developed/Disturbed Land
- General Area for Core Gnatcatcher Conservation (USFWS Circle)
- County-owned FPA land
- Projects Already Permitted
- Generalized Subarea Plan Boundary
- MHC Boundary

SOURCE: Local Jurisdictions in MHC Study Area

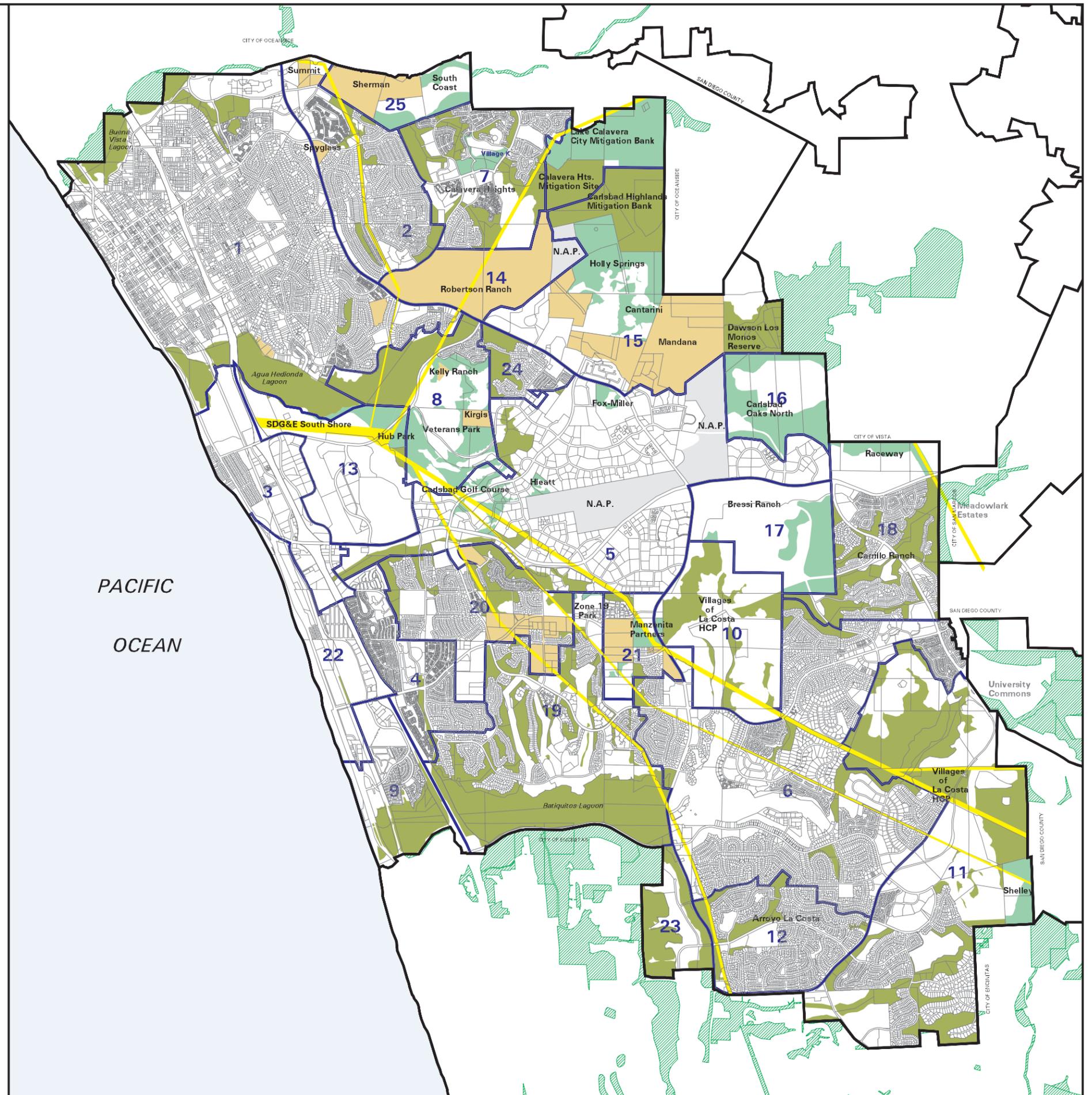
Feet 0 6,500 13,000  
Kilometers 0 1.56 3.12

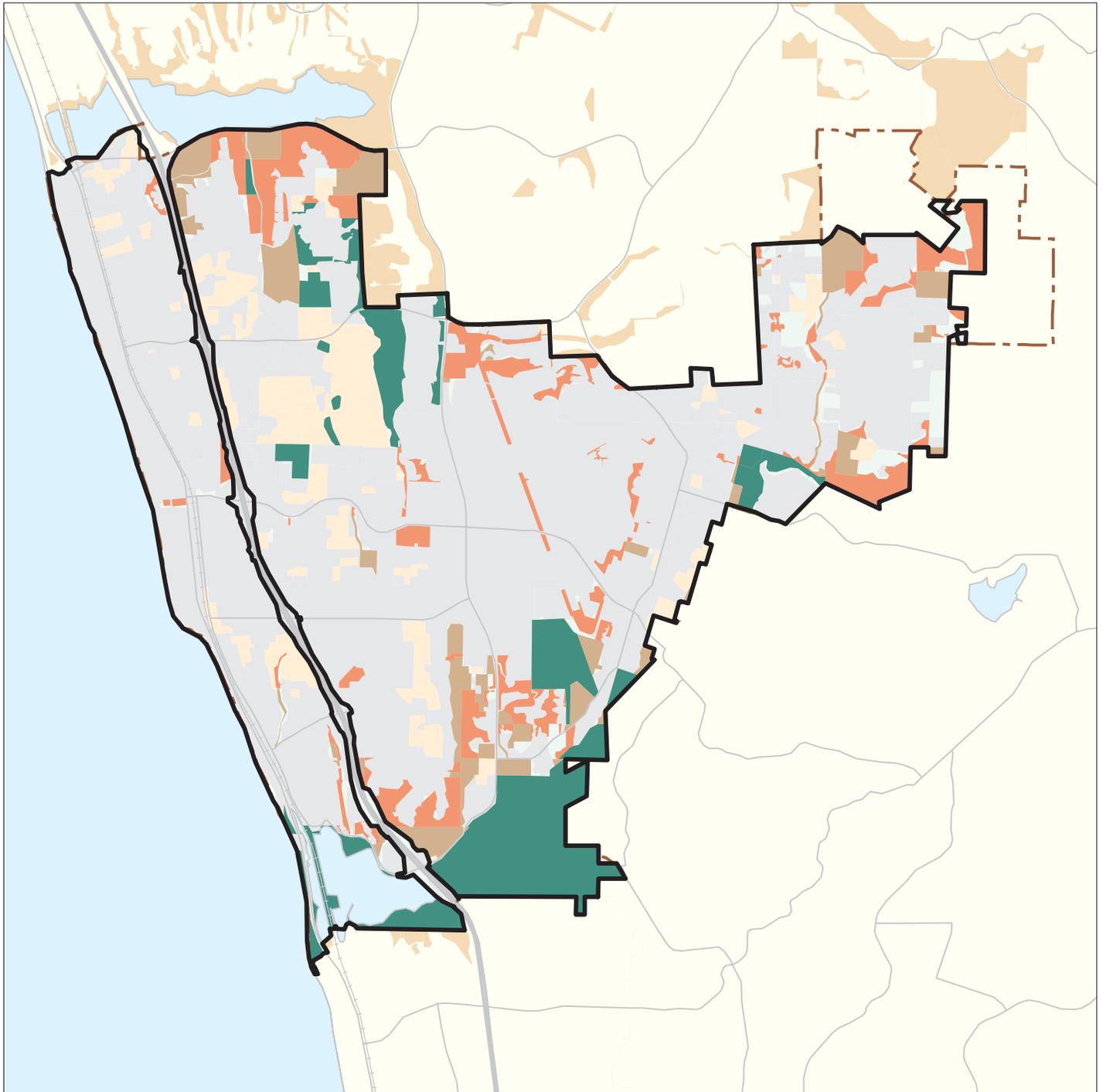
**SANDAG**  
January 17, 2003

# Figure 2.3-1 Carlsbad Subarea Plan

## For the MHCP Environmental and Biological Analysis

-  Existing Hardline Conservation Areas
-  Proposed Hardline Conservation Areas
-  Proposed Standards Areas
-  Not A Part (N.A.P.)
-  Development Areas
-  SDGE Transmission Corridors
-  Focused Planning Areas of Adjoining Jurisdictions
-  Local Facility Management Zones



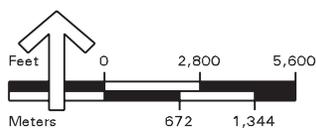


**Figure 2.3-2**  
**City of Encinitas Subarea Plan**  
**Focused Planning Area**

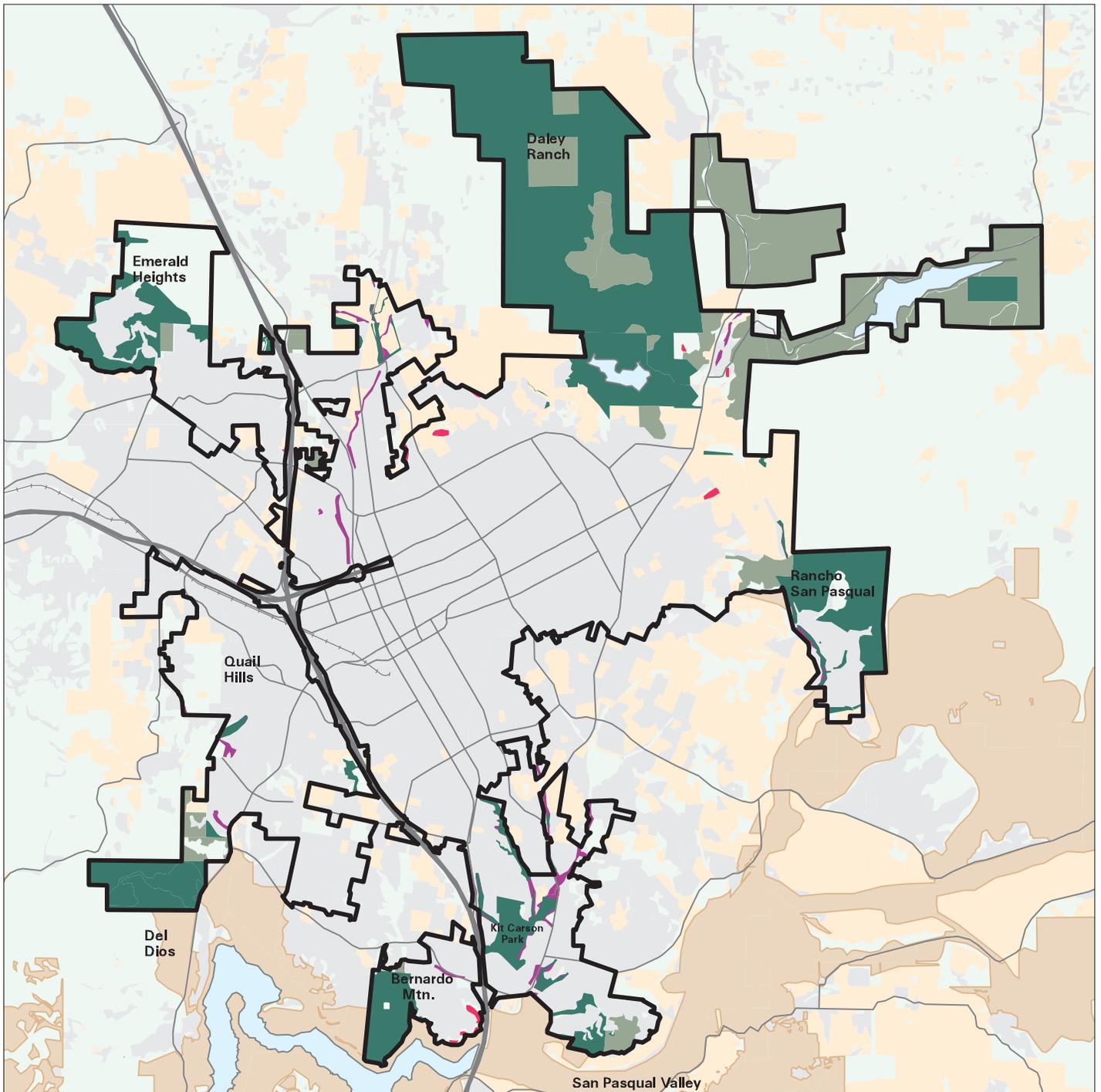
- |                              |   |                                       |
|------------------------------|---|---------------------------------------|
| Natural Habitats             | Hardline Focused Planning Area              | FPA Footprint of Adjacent MHCP Cities |
| Agricultural Land            | Existing Homeowners' Association Open Space | Sphere of Influence                   |
| Developed and Disturbed Land | Softline Focused Planning Area              |                                       |



January 24, 2003



Source: City of Encinitas, 2002

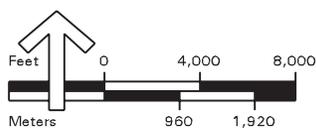


**Figure 2.3-3**  
**City of Escondido Subarea Plan**  
**Focused Planning Area (FPA) and Constrained Lands Outside the FPA**

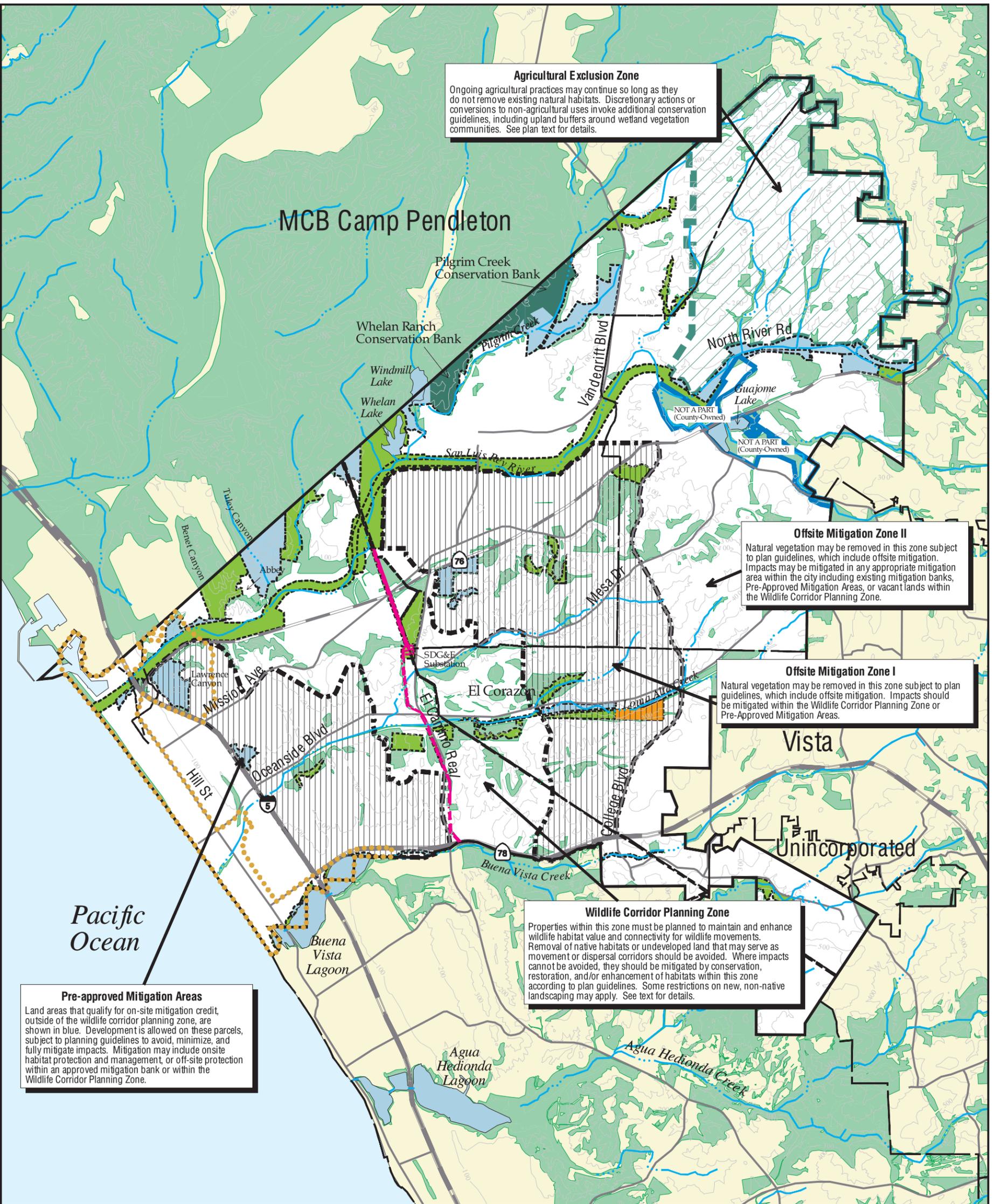
- |                              |   |   |                                     |
|------------------------------|---|---|-------------------------------------|
| Natural Habitats             | Hardline Focused Planning Area (90% and greater Conservation) | Constrained Lands (Wetlands) Outside the FPA    | MSCP Habitat Preserve Planning Area |
| Agricultural Land            | Softline Focused Planning Area (Less than 90% Conservation)   | Constrained Land (Slopes > 35%) Outside the FPA |                                     |
| Developed and Disturbed Land |   |   |                                     |



January 23, 2003



Source: City of Escondido, 2002

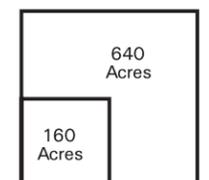


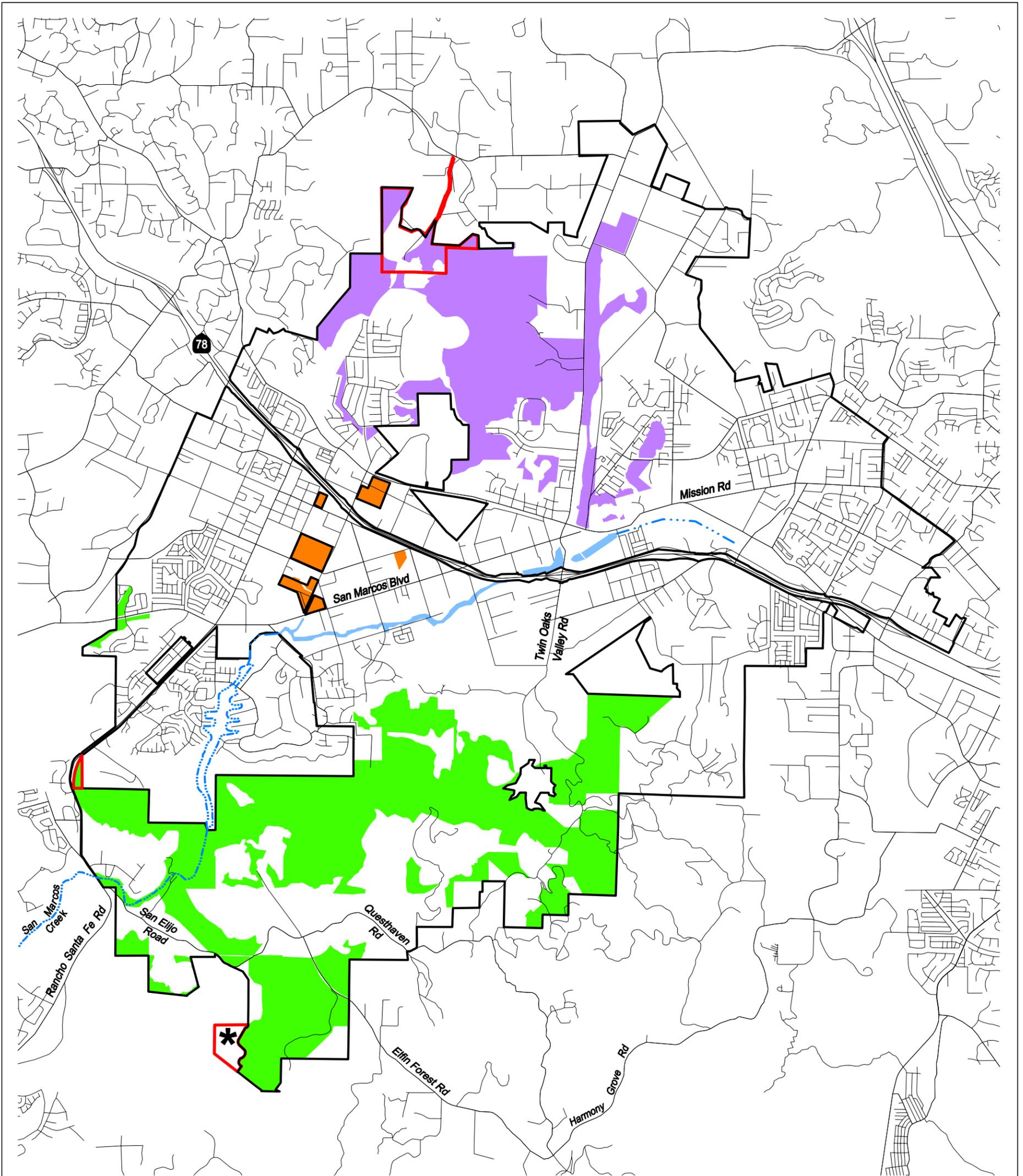
**LEGEND**

- Public/Agency Ownership Or Hardline Preserve
- Mitigation Banks
- Pre-Approved Mitigation Areas
- Corrective Action Area
- Natural Vegetation
- Agricultural Exclusion Zone
- Offsite Mitigation Zone I
- Wildlife Corridor Planning Zone
- Coastal Zone
- County-Owned Land

**Base Map Features**

- Oceanside City Boundary
- Other City Boundaries
- 100 ft. Index Contours
- SDGE Transmission Corridor
- Freeways
- Major Roads
- Streams
- Lake/Lagoon

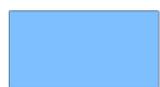




**Northern Focused Planning Area**



**Southern Focused Planning Area**



**San Marcos Creek Watercourses and Associated Wetlands**



**Vernal Pools  
Major Amendment Areas**



**Subarea Plan Boundary**



**San Marcos Creek**



**Potential Annexation Area Boundaries**

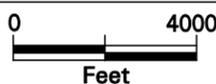
**\* For conservation actions in this area (including San Marcos project mitigation) see Figure 3.3-2.**



SOURCE: SANDAG GIS

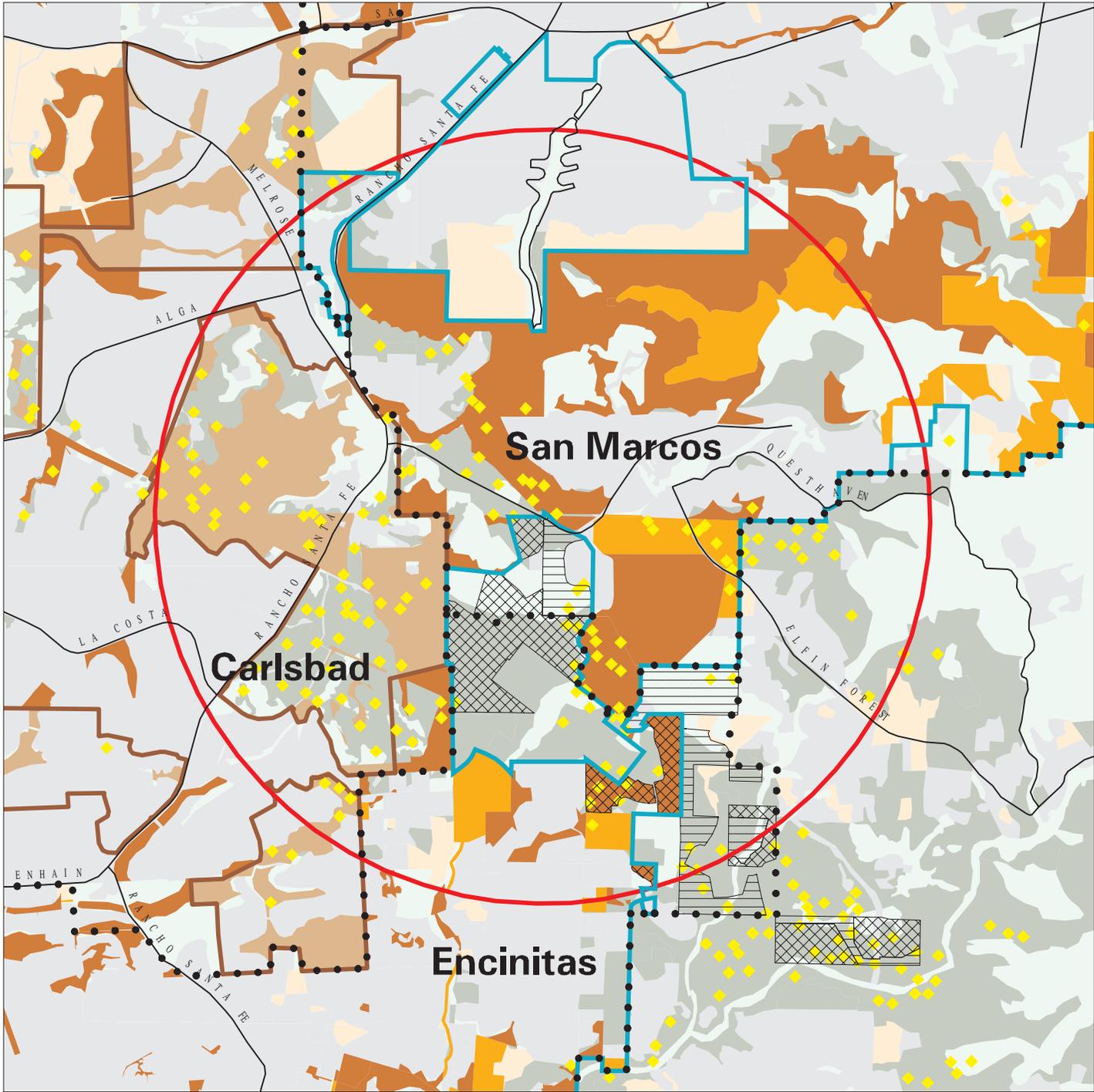


## Focused Planning Area Subareas



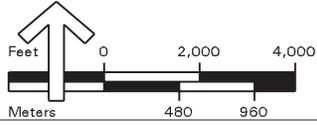
City of San Marcos Subarea Plan

FIGURE 2.3-5

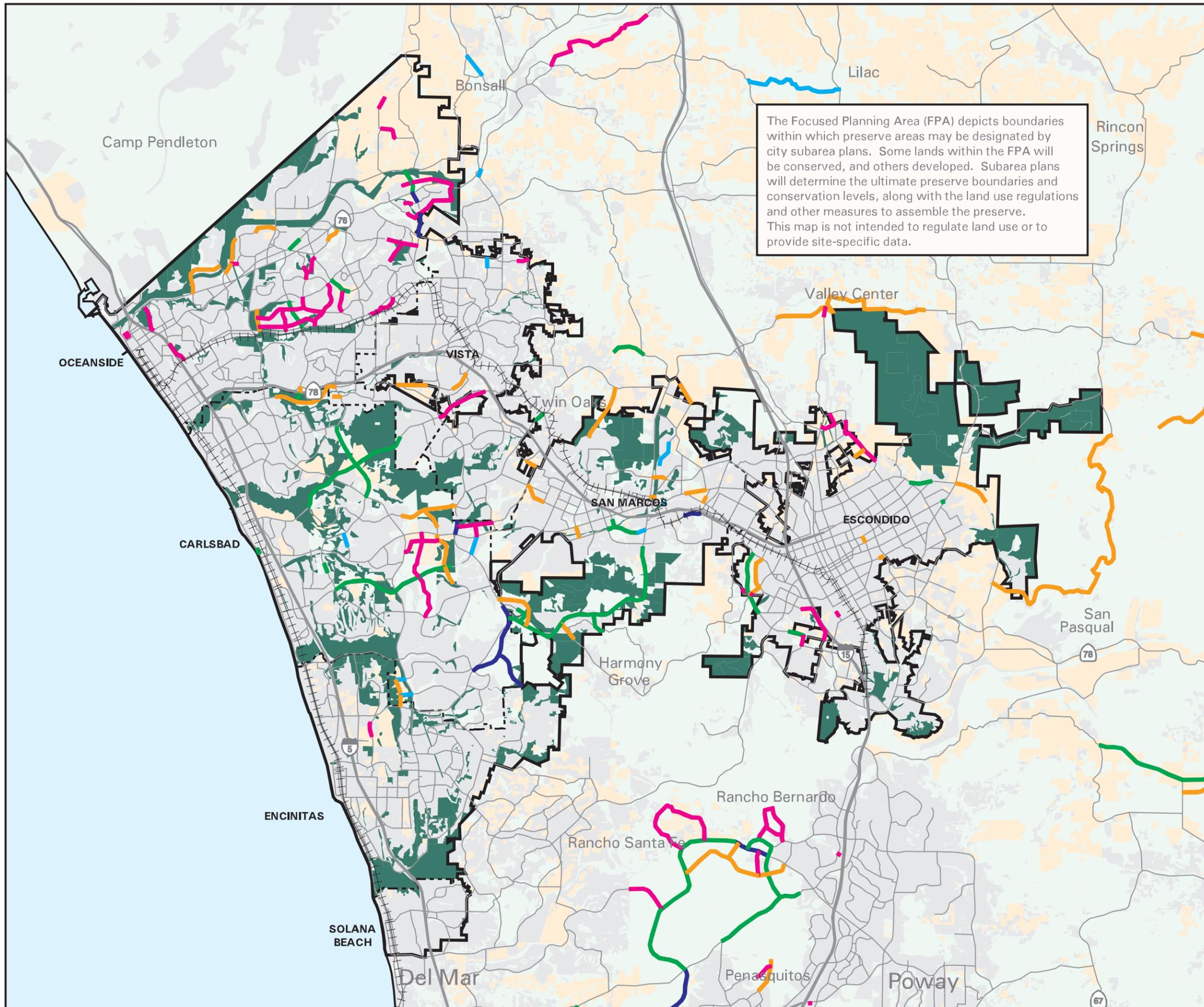


**Figure 3.3-2  
Gnatcatcher Core Conservation**

- |   |   |  |                                    |
|---|---|--|------------------------------------|
| <b>Hardline Areas (90% to 100% Conservation)</b>          | <b>Natural Habitats (Outside FPA)</b>   | <b>MHCP Conservation</b>   | <b>Projects Already Permitted</b>  |
| <b>Softline Areas (Less than 90% Conservation)</b>        | <b>Coastal Sage Scrub (Outside FPA)</b> | <b>Other Conservation</b>  | <b>Sphere of Influence</b>         |
| <b>Hardline Preserves on Already Permitted Properties</b> | <b>Agricultural Land</b>                | <b>General Area for Core Gnatcatcher Conservation (USFWS Circle)</b> | <b>MHCP Boundary</b>               |
| <b>Developed/Disturbed Land</b>                           |   |  | <b>Known Gnatcatcher Locations</b> |



# Figure 3.4-2 Local Circulation Network



- MHCP Focused Planning Area
- Natural Habitats (Outside FPA)
- Agricultural Land
- Developed/Disturbed Land
- Generalized Subarea Plan Boundary
- MHCP Boundary

## Future Roads and Road Improvements

- Prime Arterial
- Major
- Collector
- Local Collector
- Local
- Existing and Proposed NCTD Rail Lines

Existing Roads shown in gray

SOURCE: Local Jurisdiction Circulation Elements and SANDAG's Transportation Modeling Network

Feet

0 6,500 13,000

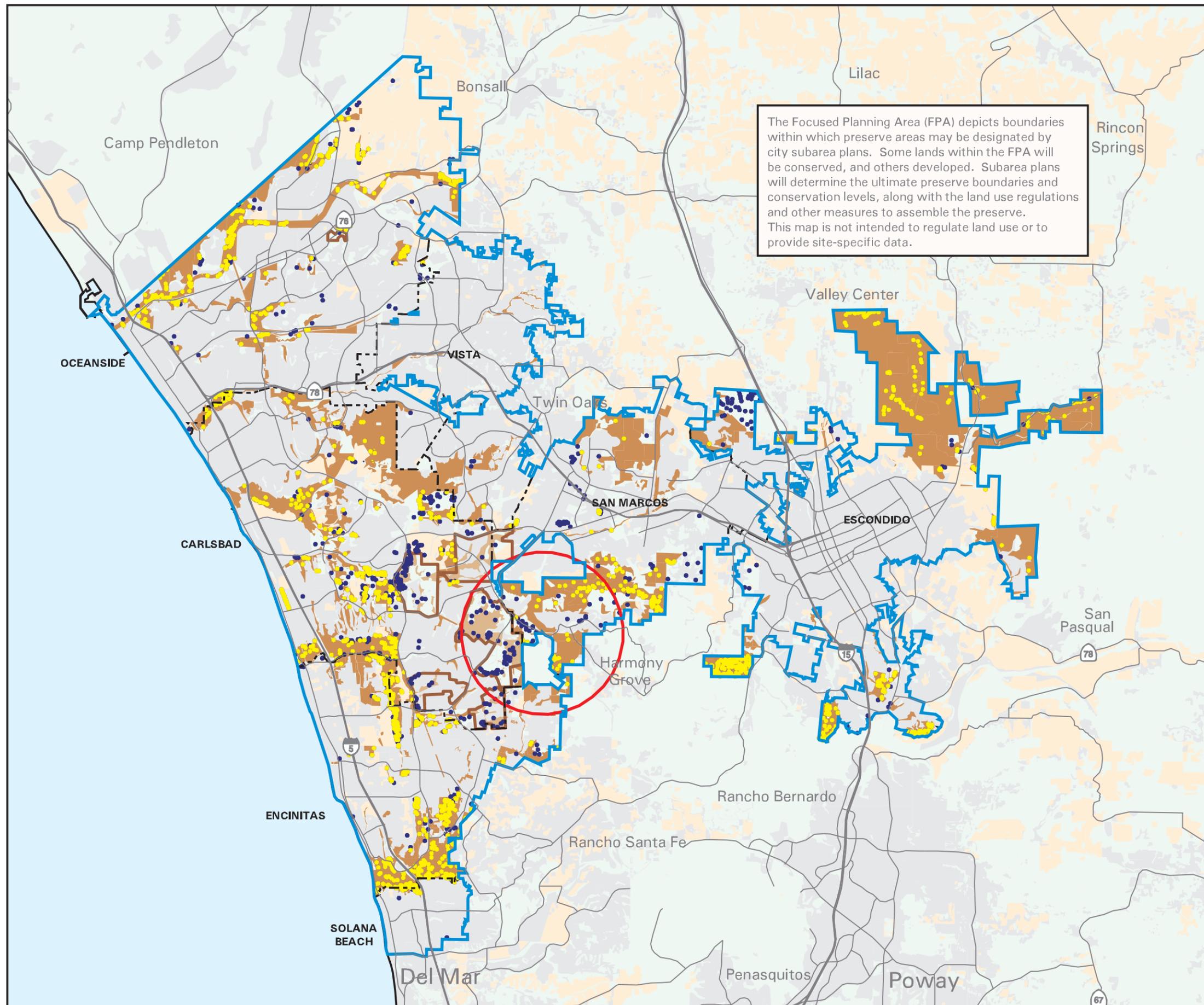
Kilometers

1.56 3.12

**SANDAG**

February 7, 2003

**Figure 4.3-2  
Recorded Locations of  
Sensitive Species\*  
MHCP Study Area and  
FPA Alternatives 1 & 2**



The Focused Planning Area (FPA) depicts boundaries within which preserve areas may be designated by city subarea plans. Some lands within the FPA will be conserved, and others developed. Subarea plans will determine the ultimate preserve boundaries and conservation levels, along with the land use regulations and other measures to assemble the preserve. This map is not intended to regulate land use or to provide site-specific data.

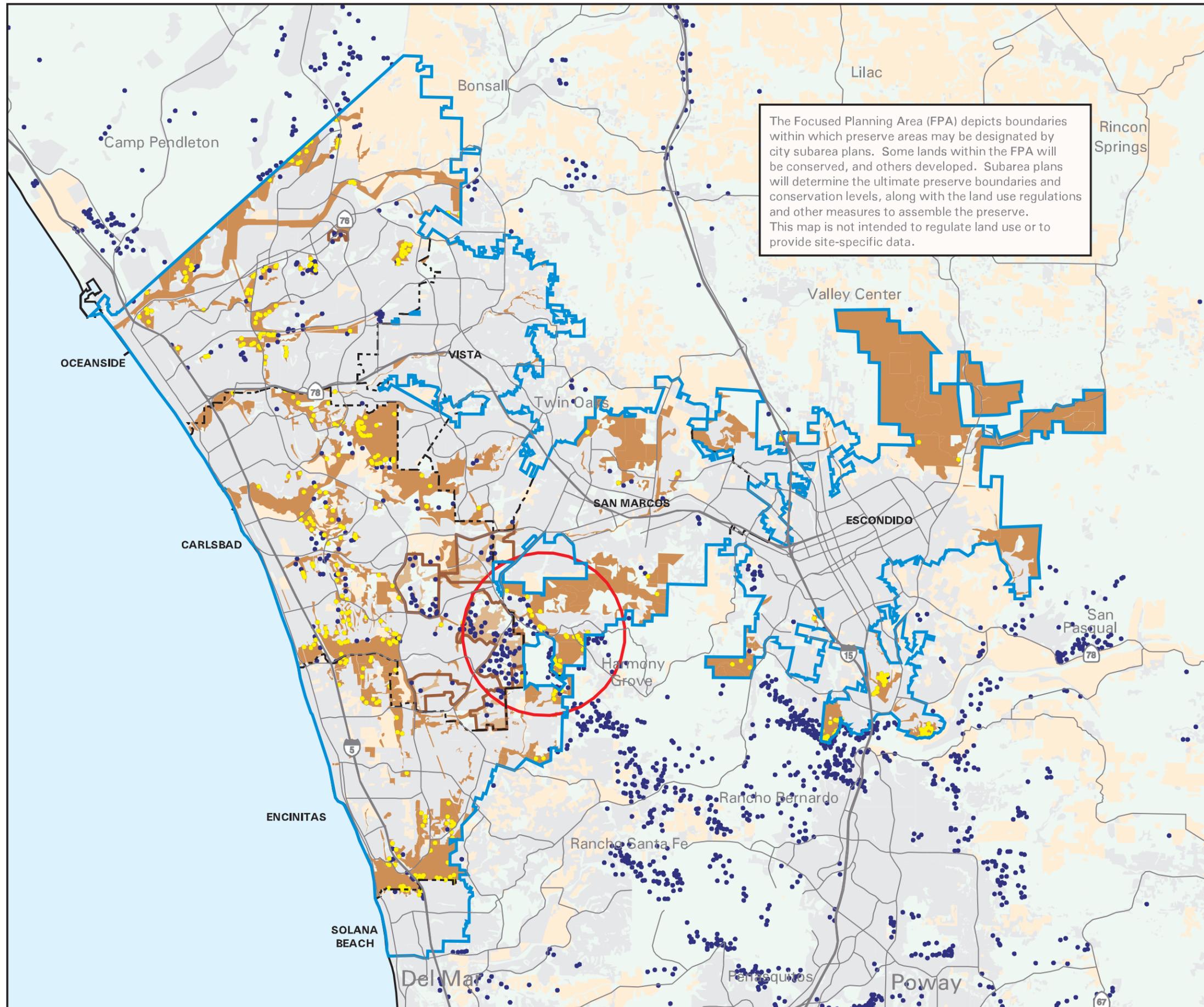
- Focused Planning Area (FPA)
- Hardline Preserves on Already Permitted Projects
- Natural Habitats (Outside FPA)
- Agricultural Land
- Developed/Disturbed Land
- Sensitive Species inside the MHCP Study Area
- Sensitive Species inside the Focused Planning Areas
- Projects Already Permitted
- General Area for Core Gnatcatcher Conservation (USFWS Circle)
- Generalized Subarea Plan Boundary
- MHCP Boundary

\* Does not include the locations of the California Gnatcatcher  
SOURCE: MHCP Species Database, 2002

Feet 0 6,500 13,000  
Kilometers 1.56 3.12

January 17, 2003

**Figure 4.3-3  
Recorded Locations of  
California Gnatcatchers  
MHCP Study Area and  
FPA Alternatives 1 & 2**

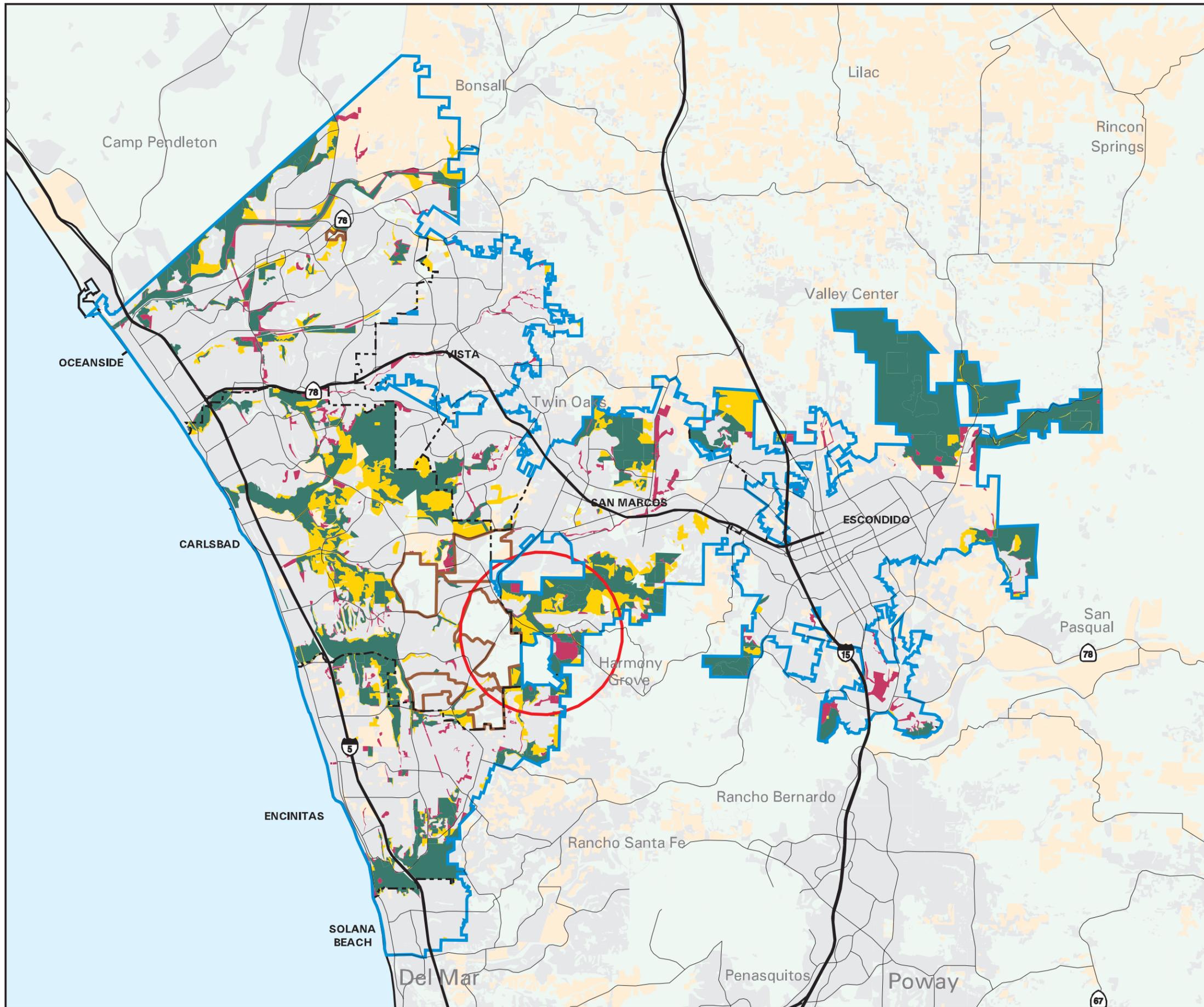


- Focused Planning Area (FPA)
- Hardline Preserves on Already Permitted Projects
- Natural Habitats (Outside FPA)
- Agricultural Land
- Developed/Disturbed Land
- Known Gnatcatcher Locations
- Gnatcatchers inside the Focused Planning Area
- Projects Already Permitted
- General Area for Core Gnatcatcher Conservation (USFWS Circle)
- Generalized Subarea Plan Boundary
- MHCP Boundary

SOURCE: MHCP Species Database, 2002

Feet 0 6,500 13,000  
Kilometers 1.56 3.12  
**SANDAG**  
January 17, 2003

**Figure 4.3-4  
 Focused Planning Area  
 (FPA) and Biological Core  
 and Linkage Area (BCLA)  
 MHCP Study Area**



-  Inside the BCLA and FPA
-  Inside the FPA and not the BCLA
-  Inside the BCLA and not the FPA
-  Natural Habitats (Outside the FPA & BCLA)
-  Agricultural Land
-  Developed/Disturbed Land
-  Projects Already Permitted
-  General Area for Core Gnatcatcher Conservation (USFWS Circle)
-  Generalized Subarea Plan Boundary
-  MHCP Boundary

SOURCE: Local Jurisdictions in MHCP Study Area and Ogden Environmental

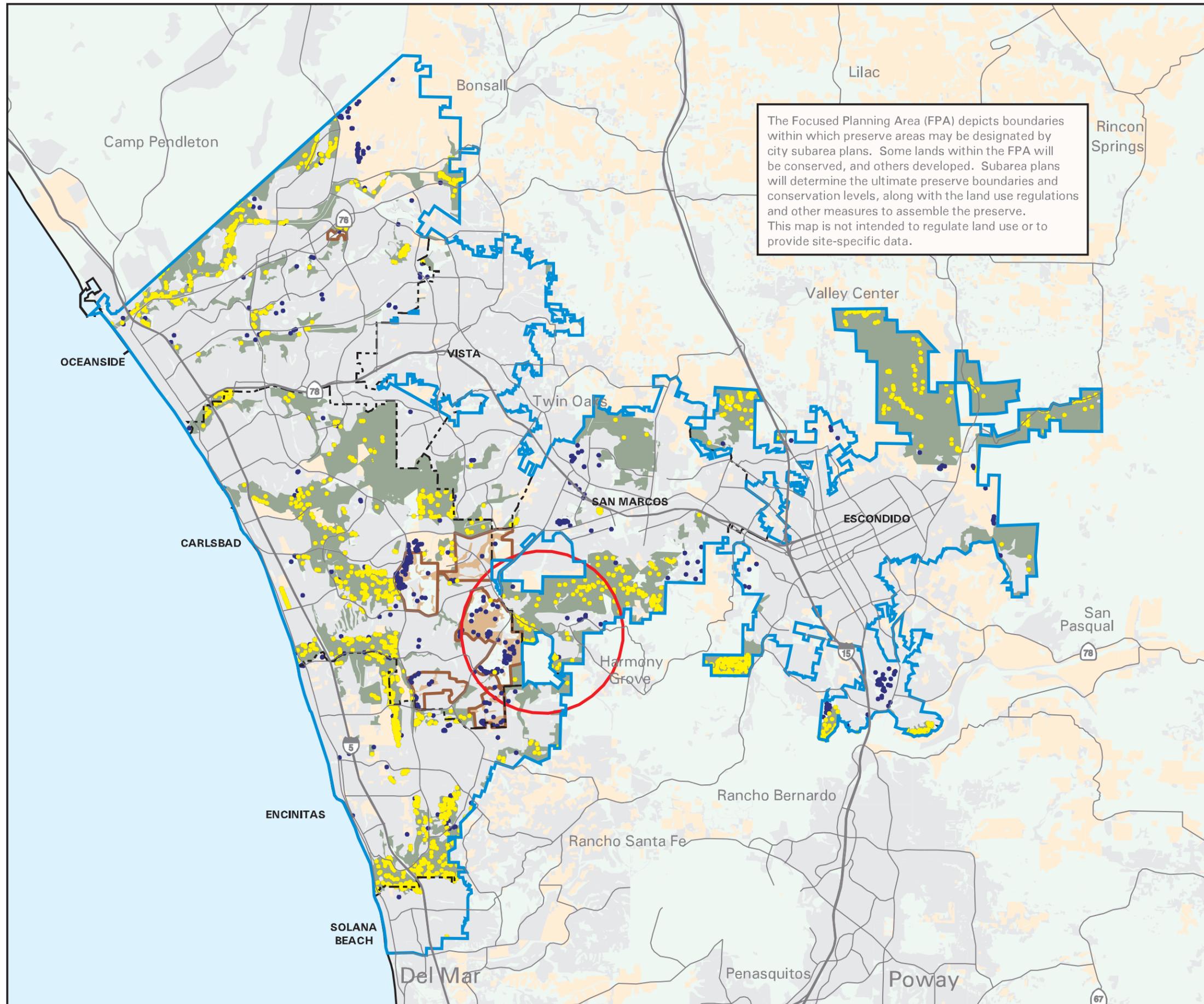


Feet 0 6,500 13,000  
 Kilometers 1.56 3.12



January 17, 2003

**Figure 4.3-5  
Recorded Locations of  
Sensitive Species\*  
MHCP Study Area and  
BCLA Alternative 3**

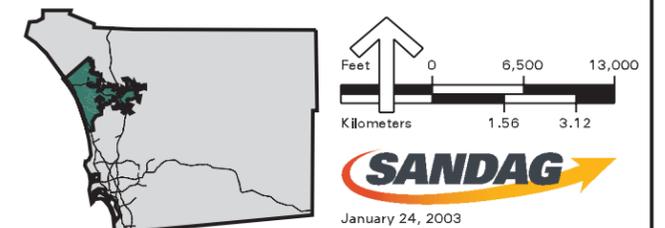


The Focused Planning Area (FPA) depicts boundaries within which preserve areas may be designated by city subarea plans. Some lands within the FPA will be conserved, and others developed. Subarea plans will determine the ultimate preserve boundaries and conservation levels, along with the land use regulations and other measures to assemble the preserve. This map is not intended to regulate land use or to provide site-specific data.

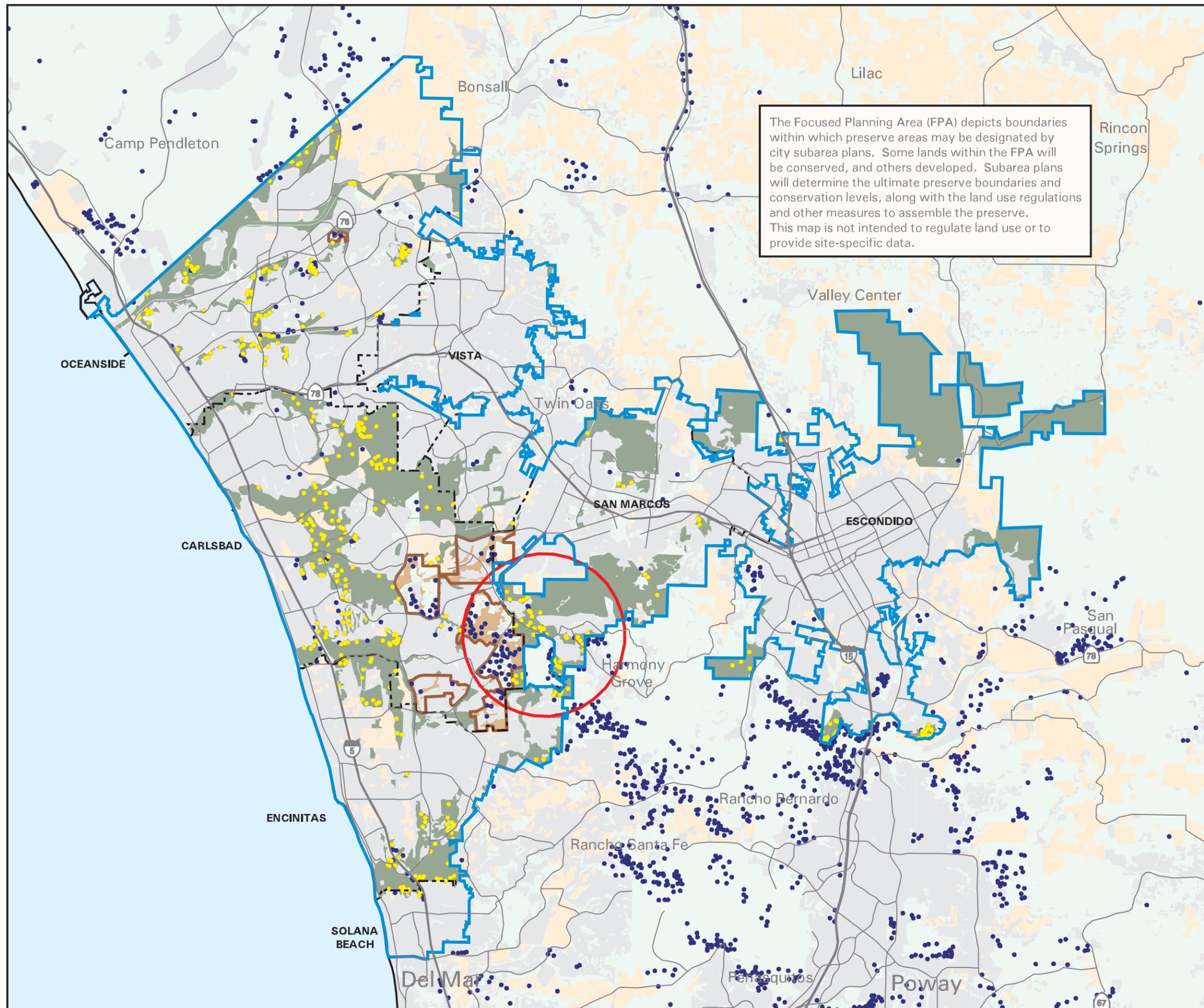
-  Biological Core and Linkage Areas (BCLA)
-  Hardline Preserves on Already Permitted Properties
-  Natural Habitats (Outside BCLA)
-  Agricultural Land
-  Developed/Disturbed Land
-  Sensitive Species inside the MHCP Study Area
-  Sensitive Species inside the Biological Core and Linkage Area
-  Projects Already Permitted
-  General Area for Core Gnatcatcher Conservation (USFWS Circle)
-  Generalized Subarea Plan Boundary
-  MHCP Boundary

\* Does not include the locations of the California Gnatcatcher

SOURCE: MHCP Species Database, 2002



**Figure 4.3-6  
Recorded Locations of  
California Gnatcatchers  
BCLA Alternative 3**



The Focused Planning Area (FPA) depicts boundaries within which preserve areas may be designated by city subarea plans. Some lands within the FPA will be conserved, and others developed. Subarea plans will determine the ultimate preserve boundaries and conservation levels, along with the land use regulations and other measures to assemble the preserve. This map is not intended to regulate land use or to provide site-specific data.

-  Biological Core and Linkage Areas (BCLA)
-  Hardline Preserves on Already Permitted Properties
-  Natural Habitats (Outside BCLA)
-  Agricultural Land
-  Developed/Disturbed Land
-  Known Gnatcatchers Locations
-  Gnatcatchers inside the Biological Core and Linkage Area
-  Projects Already Permitted
-  General Area for Core Gnatcatcher Conservation (USFWS Circle)
-  Generalized Subarea Plan Boundary
-  MHCP Boundary

SOURCE: MHCP Species Database, 2002

**Revised Text for Section 2.0 and Section 4.0**

## Financing Plan

Implementation of the MHCP will require funding for the acquisition, restoration, and management of natural habitat areas; biological monitoring; and administration, legal, and other costs associated with habitat acquisition and management. This section describes the estimated costs of program implementation and alternative sources of funds to pay for those costs.

**Deleted:** two example financing plans for the local share of

Through the MHCP Advisory Committee and the ad hoc Committee of Elected Officials, local jurisdictions participating in the MHCP have adopted policies and recommended the use of certain assumptions regarding the financing of plan implementation, as described below.

## Financing Policies

**Habitat Acquisition.** It is assumed for analysis that the federal and state governments collectively, and the local jurisdictions, collectively, will be responsible for meeting one-half of that habitat acquisition that may be needed for plan implementation. All acquisitions will be from willing sellers, on terms acceptable to both the seller and the buyer.

**Deleted:** will acquire 330 acres of habitat lands in the FPA for plan implementation

**Deleted:** acquiring 330 acres of habitat lands

**Habitat Management.** Federal, state, and local agencies will manage their respective public lands committed to habitat conservation and other lands that are conserved as mitigation for public projects. Management of mitigation lands that remain in private ownership will be funded by the owners, with the stipulation that management functions will be performed by qualified staff or organization, approved by the wildlife agencies. Other privately owned habitat proposed for inclusion in the MHCP preserve, but not currently managed or anticipated to be managed in the future for biological resources, would be managed according to MHCP guidelines, if a regional funding program is established and if access is made available.

**Deleted:** ,

**Deleted:** lands that they acquire for the preserve,

**Deleted:** M

**Deleted:** managed

**Biological Monitoring.** Federal, state, and local agencies that own habitat lands in the preserve system will participate in a coordinated biological monitoring program.

**Deleted:** for the life of the permit. It is assumed that funding for the monitoring program will be shared by those agencies in the same proportions as the amounts of habitat lands that they manage

**Regional or Subregional Funding Program.** It is assumed that the local share of costs to implement the MHCP Plan will be funded by a regional or subregional funding program, to be established cooperatively by the participating local jurisdictions and submitted to the

**PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES**

voters for approval. For purposes of this plan, a “regional funding program” may refer to a countywide funding program, established in cooperation with other subregional Habitat Conservation Programs (HCPs) or to a more limited, “subregional funding program” which is established for the MHCP study area only.

Deleted: A  
Deleted: s  
Deleted: . A  
Deleted: will be

The MHCP Advisory Committee also adopted policies regarding the use of a regional or subregional funding program to acquire and maintain the MHCP preserve system, as described in Section 7.3.1 of the MHCP Plan.

**Timing of Voter Approval.** It is assumed for analysis that the regional or subregional funding program will be in effect for 30 years. Participating jurisdictions will agree to begin a process of establishing such a program within 18 months of federal and state approval of the MHCP Plan or the first Subarea Plan in the MHCP study area and to place a measure on the ballot within an additional 18 months. This schedule may be adjusted, if the participating jurisdictions demonstrate that their good faith efforts require additional time. Even if the selected funding program does not require voter approval, the jurisdictions have expressed an intention to seek an advisory vote.

**Deficiency in Public Funds.** Implementing agreements for MHCP Subarea Plans should provide for the contingency that either federal/state or local funds may not be sufficient for full implementation of the program. If federal/state funding is not provided as committed, the MHCP Plan will be reevaluated, with possible adjustments to take authorization coverage and assurances. If adequate local funding is not provided, the wildlife agencies and local jurisdictions will develop a strategy to address the shortfall.

Deleted: Implementation of the MHCP, Subarea Plans, and the IAs by the Service is subject to the requirements of the Anti-Deficiency Act and the availability of appropriated funds.

**Additional Issues**

The MHCP Advisory Committee has previously reviewed the following issues related to financing of the MHCP Plan implementation.

Deleted: ; some are addressed in this document, while others are still under review

**Conservation of Core California Gnatcatcher Habitat.** In addition to habitat areas conserved within the jurisdictional boundaries of the MHCP cities, it is assumed that 400 to 500 acres of coastal sage scrub capable of supporting 16 to 23 pairs of gnatcatchers will be conserved in the unincorporated county area east of Carlsbad and Encinitas and south of San Marcos. This may be accomplished through a combination of methods, such as application

Deleted: the plan calls for conservation of

Deleted: core California

Deleted: habitat

Deleted: the cities of

Deleted: the City of

Deleted: Of this, about 400 acres are expected to be conserved as mitigation for public and private projects in the MHCP cities. Costs to acquire and manage 100 acres of the core gnatcatcher habitat are included in the MHCP funding program.

of land use policies and regulations, mitigation for public and private projects, acquisition using federal or state funds, and acquisition using a regional funding program.

**Long-Term Demand for Conservation or Mitigation Credits.** A number of conservation banks have been established in San Diego County, including Daley Ranch, Manchester Avenue, and Whelan Ranch conservation banks. Potential demand for conservation credits generated by future development in the study area is discussed in Section 4.4.3.

**Deleted:** , of which three active banks are located in the MHCP study area (

**Deleted:** )

**MHCP Regional Funding Program and Daley Ranch Conservation Bank in Escondido.**

The City of Escondido acquired the Daley Ranch property and established a conservation bank in 1997. Due to the size and importance of Daley Ranch to the MHCP preserve system, the management of its habitat areas is proposed to be funded by the regional funding program. However, the city will continue to be responsible for funding the management until the regional funding program is adopted.

**Deleted:** At the request of the City, the difference between the appraised value of the conservation bank land and anticipated revenues from the sale of conservation credits is considered to be the net cost of establishing the bank and is included as a regional cost of habitat acquisition for purposes of the MHCP financing plan.

**Indirect Fiscal Impacts of MHCP Implementation.** Habitat acquisition and other measures to implement the MHCP may impact the finances of local governments. Such impacts may be negative, when some of the private lands are acquired for conservation, or positive, when urban development is facilitated by the presence of a regional conservation plan. At the present time, this fiscal impact is not included in the MHCP financing plan.

**Prior Commitment of Funds for Habitat Management.** Previously approved HCPs or conservation bank agreements contain provisions for the management of protected habitat areas, including commitments of future funding for management activities. This financing plan assumes that these areas will continue to be managed by their owners. However, biological management of the Daley Ranch Conservation Bank in Escondido and San Luis Rey River Flood Control project area are proposed to be financed by a regional funding program, because of the important biological resources in these areas.

**Deleted:** and that no additional funds are needed from the MHCP funding program

**Establishing an Endowment to Fund Recurring Costs in Perpetuity.** An endowment to fund annual management and administrative costs in perpetuity, may be established by setting aside a portion of revenues generated by the regional funding program. An alternative approach is to renew or replace the regional funding program at the end of its initial term. The latter approach will reduce the required annual revenues of the regional funding program.

**Deleted:** The example financing plans (MHCP Volume I, Section 7-4) provide for establishment of a

**Deleted:** ,

**Coordination of MHCP Financing Plan with the South County MSCP Plan.** When the City of San Diego signed an implementing agreement with the federal and state wildlife agencies on July 17, 1997, it initiated a 36-month schedule for the establishment of a regional financing program for the South County MSCP. Although the MHCP and MSCP are separate programs, there are significant benefits in coordinating the local funding components of the two programs, especially in obtaining voter approval. Local jurisdictions participating in the MHCP have the option of establishing a regional funding program cooperatively with the South County MSCP jurisdictions.

Deleted: ,

Deleted: , and MHCOSP

Deleted: three

### Estimated Costs of Plan Implementation

#### Habitat Acquisition

As discussed in Section 4.1.2 of the MHCP, the MHCP cities identified two categories of priority conservation areas for potential habitat acquisition: (1) to allow the cities flexibility in achieving conservation targets on properties that are constrained by narrow endemic species, major or critical locations of MHCP species, or wildlife movement corridors; and (2) to further the goals of the MHCP while simultaneously meeting other open space objectives of the cities. Based on preliminary discussions, it is assumed in this plan that state or federal government would acquire the Priority 1 areas, totaling approximately 609 acres, if the MHCP cities would establish endowment funds to manage and monitor those lands in perpetuity. The endowment funds must be established at the time of purchase, even if a regional funding program has not been adopted. The MHCP cities would acquire, manage, and monitor the Priority 2 areas, totaling approximately 738 acres, if a regional funding program has been adopted and if funds are available. Interim financing program (see Section 7.4 below) will not include acquisition of Priority 2 conservation areas, though some areas may be acquired without a regional funding program if alternative funds become available.

Deleted: T

Deleted: three

Deleted: needs

Deleted: (1) essential acquisition needed to meet the objectives of selected Subarea Plans; (2) acquisition of additional, biologically important habitat areas where conservation goals are better served through acquisition than through private development subject to avoidance and mitigation guidelines; and (3) payment to the City of Escondido for the net cost of dedicating conservation easements on Daley Ranch. Total cost of the three categories is estimated to range between \$31.4 and \$37.2 million, or an average of \$34.3 million.

**Note on Land Values.** Since the location and type of potential acquisition areas differ widely across the study area, a single estimate of value per acre was not developed. Estimates were prepared separately by jurisdiction and for the types of lands that contain important habitats for the MHCP. The study area is largely urbanized. Costs of potential acquisition areas were estimated using prices of recent, comparable sales of vacant land, adjusted for the presence of physical constraints, such as steep slopes or floodplains, and other limitations imposed by land use policies and environmental regulations, such as

Deleted: ; e

requirements for offsite mitigation. Generally, unconstrained vacant land in the study area is valued at \$2.00 to \$5.00 per square foot, depending on location and allowable use; however, presence of physical and planning constraints can substantially reduce the average value of a parcel. Cost may also be reduced by acquiring open space easements on portions of private lands, rather than fee title. Estimates of land value used in this analysis reflect a variety of site-specific conditions that could occur in potential acquisition areas.

**Habitat Restoration**

Habitat quality has been degraded in many locations by past and present land uses and invasive species. A review of habitat quality on potential conservation areas indicated that approximately 338 acres of coastal sage scrub habitat should be enhanced or restored in areas critical to conservation of the California gnatcatcher. This recommendation became a condition for coverage of the gnatcatcher by the MHCP. Depending on site-specific criteria, such efforts can vary from limited enhancement (e.g., weeding and broadcast seeding) to intensive restoration (e.g., site grading, irrigation, planting/seeding, and site-specific maintenance and monitoring for up to 5 years). Costs of these efforts range from about \$18,000 to \$76,000 per acre. Required new funding for coastal sage scrub restoration totals approximately \$3.79 million, with restoration sites located in Carlsbad (\$1.3 million), Oceanside (\$2.43 million), and San Marcos (\$34,000).

Deleted: vary accordingly,

Deleted: 4

Deleted: the cities of

Deleted: 2

Deleted: 2

Deleted: 1

**Habitat Management, Biological Monitoring, and Program Administration**

Operation and management required for the MHCP preserve include the following activities.

- Habitat management, or field operations, such as trail and fencing maintenance, vegetation control, security, and visitor services;
- Biological monitoring, or biological field studies necessary to meet the conditions of wildlife agency permits; and
- Program administration required to preserve assembly and coordination, land acquisition, financing, legal, and administrative support.

**Habitat Management.** At buildout, the MHCP preserve will include over 20,000 acres – 19,928 acres inside the MHCP cities and 400 to 500 acres in the unincorporated gnatcatcher

core. (All acreage figures are approximate, based on current GIS data for the MHCP in 2002; see Table 2.1-3) Habitat acres to be managed by public agencies and private organizations differ from habitat acres owned by those entities. For example, some local agency lands (such as portions of San Elijo Lagoon) are managed by a state agency, and some state lands are managed by a city. Assuming no new management agreements and prior to any new acquisition, the MHCP cities would be responsible for managing 7,144 acres of conserved habitat lands; federal and state agencies, 2,447 acres; and other local agencies, 1,181 acres. Under the MHCP, 9,156 acres of privately owned habitat lands will be managed for biological resources.

Of these, 946 acres are located in existing private mitigation banks and mitigation areas approved by the wildlife agencies and managed for biological resources; 2,054 acres of future mitigation areas will be managed through private endowments or other mechanism to be required by local jurisdictions as a condition of development approval; 2,908 acres are maintained (or anticipated to be maintained in the future) as open spaces by homeowners associations; and the remainder, 3,248 acres, have no specified management or maintenance programs. When the regional funding program is established, the MHCP cities will seek to manage habitat lands currently maintained by homeowners' associations and other lands that are not actively managed, if appropriate access agreements are obtained from the landowners (see also Section 6.3.3). Subarea plans will identify a process for integrating the HOA lands and other private lands into the MHCP preserve system. When acquired, the MHCP cities would also assume management responsibility for up to 1,028 acres of priority conservation areas in the cities and up to 320 acres in the unincorporated core.

Average management cost can vary widely, depending on the size and shape of contiguous habitat area, habitat type, adjacent uses, and species-specific requirements. Data on annual expenditures were obtained for 12 habitat preserves in San Diego County currently (2002) managed by the Center for Natural Lands Management. The data show a clear correlation of average management cost per acre with preserve size and presence of wetland or riparian habitats. The negative correlation with preserve size is likely due to location – larger preserves are generally located away from urbanized areas – and to the greater significance of edge effects for smaller parcels. In addition, management of a wetland or riparian preserve

**Deleted: Habitat Management.**

Average management costs can vary widely, depending on the size and shape of contiguous habitat areas, adjacent uses, and species-specific requirements. Data on annual expenditures for preserve management were obtained for 23 open space and habitat preserves in San Diego County and other parts of California, including data for 11 habitat preserves collected by the Center for Natural Lands Management. The data show a clear negative correlation between preserve size and average management cost per acre. The correlation is presumably due partly to location – larger preserve areas generally located away from urbanized areas – and to the greater significance of edge effects for smaller parcels. A regression model fitted to the data indicates that average cost to manage a 100-acre habitat area will be around \$135 per acre per year, while cost to manage a 500-acre habitat area will be around \$85 per acre per year. While management costs for city-owned habitat lands are also expected to vary by location and size, average cost for the MHCP cities (excluding Solana Beach, which does not have city-owned natural habitat to be included in the preserve) is estimated to be \$93 per acre per year.¶

¶ At buildout, the MHCP preserve will include 6,434 acres of natural habitat currently owned by the cities and 10,274 acres owned privately – 9,774 acres inside the cities and 500 acres in the unincorporated area. Since funds for management are or will be identified for conservation banks and open space areas to be maintained by homeowners' associations, habitat lands that require new funds for management total around 10,542 acres. This assumes that up to 75% of privately conserved habitat will be dedicated to public agencies or nonprofit organizations to be managed with public funds. If cities require that an endowment be established prior to dedication, then the need for public funding of habitat management will be reduced. Management of 10,542 acres at buildout is estimated to cost \$1.29 million in Year 2000 dollars (Table 2.1-3).¶

¶ It is assumed that federal and state governments will manage and monitor habitat lands that they conserve in the MHCP preserve. Including the assumed one-half of publicly acquired habitat, total lands to be managed by those agencies will be 1,816 acres. (Most of these lands are already being managed for habitat resources.) New funding is required to manage the 330 acres of habitat lands to be acquired in the ... [1]

**PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES**

**Table 2.1-3  
Responsibility for the Management of  
Conserved Habitat (Acres)**

**Deleted:** Table 2.1-3¶ Annual Costs of Habitat Management, Monitoring, and¶ Administration at Buildout and Required Endowment¶ ... [2]

<b>Agency Responsible for Management of Conserved Habitat Acres at Buildout<sup>1</sup></b>	<b>Continuation of Existing Funding Commitments</b>	<b>Managed With Private Funds in the Future</b>	<b>Managed With Interim or Permanent Financing</b>	<b>Total</b>
<b>Inside MHCP Cities</b>				
Federal and State Agencies <sup>2</sup>	2,353	=	94 (I)	2,447
Cities <sup>3</sup>	261	=	6,883 (I)	7,144
Other Local Agencies	1,181	=	=	1,181
Private				
Mitigation Banks and Areas <sup>4</sup>	946	2,054	=	3,000
Homeowners Associations <sup>5</sup>	=	=	2,908 (P)	2,908
Other <sup>6</sup>	7	=	3,241 (P)	3,248
<b>Total Inside MHCP Cities</b>	<b>4,748</b>	<b>2,054</b>	<b>13,126</b>	<b>19,928</b>
Unincorporated Core <sup>7</sup>	118	227	320 (P)	665
<b>Total Including Unincorporated Core</b>	<b>4,866</b>	<b>2,281</b>	<b>13,446</b>	<b>20,593</b>

Notes: All figures are approximate and subject to change as subarea plans are finalized and as the MHCP is implemented over time. Figures may not add to totals as shown due to rounding.

(I) Habitat areas managed under both interim and permanent financing programs.

(P) Habitat areas managed under permanent financing program. However, if Priority 1 conservation areas are purchased by the state before a regional funding program has been established, they would be managed under the interim financing program.

- Management differs from ownership. For example, some local agency lands (such as portions of San Elijo Lagoon) are managed by CDFG, and some state lands are managed by a city.
- State agencies manage Buena Vista, Batiquitos, and San Elijo Lagoons and upland habitat areas in northeast Carlsbad. BLM lands are located in Escondido. A property acquired by the state in 2002 may be managed by the city, if Priority 1 areas are acquired by the state.
- Daley Ranch Conservation Bank and San Luis Rey River Flood Control area (total of approximately 3,518 acres) are proposed to be included among lands managed by the MHCP regional funding program.
- Includes both private mitigation banks and mitigation areas that have been approved by the cities or the wildlife agencies and that have commitments for biological management in perpetuity.
- Homeowners' association (HOA) open spaces, including those created in the past and anticipated to be created in the future.
- Privately owned habitat lands that do not or that are not anticipated to have an active management program.
- In the unincorporated core habitat for the California gnatcatcher, 118 acres have been previously purchased and currently managed for mitigation of projects in MHCP cities (including 19 acres of conservation easement on coastal sage scrub habitat purchased for mitigation), and 227 acres have been purchased under the Carlsbad's HMP and are committed to be managed for biological resources. Additional 320 acres represent Priority 1 and 2 conservation areas and may be purchased and managed under the MHCP regional funding program.

**Deleted:** Notes: 1. Costs in thousands of Year 2000 dollars, except where noted.¶  
 2. City-owned habitat lands to be included in the preserve system. Acres to be managed with new public funds exclude existing conservation banks.¶  
 3. Privately owned habitat lands in the MHCP cities to be included in the preserve system; includes lands to be acquired with public funds. Acres to be managed with new public funds exclude conservation banks and other approved mitigation areas and 25% of habitat lands assumed to be maintained privately.¶  
 4. Of 500 acres of core California gnatcatcher habitat, 300 acres will be managed by the City of Carlsbad, and 68 acres are assumed to be acquired and subsequently managed by federal and/or state government.¶  
 5. Included in annual habitat management cost.¶  
 6. Assumed cost escalation of 3% per year.¶  
 ¶ Source: MHCP Cities; Onaka Planning & Economics.¶  
 ¶

**PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES**

---

costs substantially more than that of an upland preserve of comparable size. A regression model fitted to the data indicates that average cost to manage a 100-acre upland habitat area will be around \$111 per acre per year, while cost to manage a 500-acre upland habitat area will be around \$53 per acre per year. Management of a wetland habitat of comparable size would cost nearly three times as much as an upland habitat.

The regression model was used to estimate average management costs for habitat lands that currently do not have a management program with a focus on biological resources. Representative sizes of preserves and average proportions of wetland or riparian habitats were calculated for habitat lands owned by the cities and by private individuals or organizations. In the case of Daley Ranch, the management budget stipulated in the conservation bank agreement (\$80,000 per year in 1997) was updated to 2002 prices and included in the MHCP budget.

Excluding areas that already have dedicated funding sources for management, but including costs to manage and monitor the Priority 1 conservation areas, if they are acquired, additional cost to manage and monitor habitat acres under the MHCP cities' management responsibility is \$0.73 million per year (2002 dollars). Management and monitoring of the Priority 1 areas is estimated to cost \$89,000 per year. When Priority 2 areas are acquired, management of city-owned habitat lands is estimated to cost \$0.84 million per year.

Among habitat areas under the management responsibility of private organizations, existing mitigation banks and mitigation areas approved by the cities and wildlife agencies will continue to be managed using independent funding sources. These areas generally have a management agreement with a non-profit organization specializing in habitat management, funded by an endowment. The cities have also identified other privately owned habitat areas for which management in perpetuity to protect biological resources will be required as a condition of development approval. Excluding habitat lands with existing or future funding commitments, estimated cost to manage and monitor habitat acres under the management responsibility of private organizations is \$0.73 million per year. When costs of biological monitoring activities not included in management costs noted above are added, annual management and monitoring costs total \$0.88 million. Altogether, total cost of habitat management and monitoring at buildout of the preserve system is estimated to be \$1.7 million per year.

It is assumed that federal and state governments and other local agencies will manage and monitor habitat lands that they conserve in the MHCP preserve.

**Habitat Management Contingency.** A contingency budget (provisionally estimated at 15% of annual management and monitoring costs) will be established to meet the needs of adaptive management. The contingency budget may need to be accumulated over time; that is, funds not used during one fiscal year need to be saved and augmented with additional funds in subsequent years. Funding for adaptive management and other special needs will be addressed in the cities' subarea plans and implementing agreements.

**Program Administration.** Administration of the MHCP, including habitat acquisition and management, could be performed by a single office (such as the MHCP Land Conservancy), with oversight by the MHCP cities or separately by the cities. Administrative costs cover staffing, including a biologist, and budgets for legal, insurance, public information, and office support. Annual cost is estimated to be \$200,000 during the interim financing period and \$400,000 under the permanent financing program.

**Deleted:** and biological monitoring

**Deleted:** Such an office could include a full-time administrator; a biologist; an administrative assistant;

**Deleted:** to operate the office

**Deleted:** 3

**Deleted:** both

**Deleted:** and after buildout of the preserve system

**One-Time Start-Up Cost.** The experience of the Center for Natural Lands Management (CNLM) and others indicates that there are one-time costs associated with initiating a management program, such as equipment, fencing, and other improvements. It is assumed for this plan that start-up costs, which may be expended over several years, will total 125% of annual habitat management and monitoring costs, excluding contingency and administration.

**Deleted:** Total estimated cost to manage, monitor, and administer the portions of the preserve system that are not owned by either the federal or state government is \$1.59 million per year in Year 2000 dollars, or \$3.85 million in 2030 dollars, assuming annual cost escalation of 3% (Table 2.1-3).¶

Estimated total cost of management, monitoring, and program administration to be funded by the regional funding program is \$2.39 million per year, with a start-up cost of \$2.2 million. The start-up cost is calculated as 125% of estimated annual management cost of \$1.7 million, excluding contingency and administration. The participating jurisdictions have a reasonable expectation that these estimates of annual and start-up costs will suffice to perform management, monitoring, and administration functions consistent with the MHCP.

### Endowment of Fund Recurring Costs

To fund annual costs to manage, monitor, and administer the preserve system in perpetuity, an endowment may be established. Assuming net interest revenue of 2.5% per year after inflation, the required endowment in Year 2002 dollars is \$95.5 million. The endowment may be established, for example, over 30 years by annual deposits into a sinking fund. If

**Deleted:** 3

**Deleted:** 0

**Deleted:** 52.9

**Deleted:** , or \$128

**Deleted:** .4 million in 2030 dollars

**PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES**

nominal interest revenue is 5% (which would indicate that expected inflation rate, as well as net interest rate, is 2.5%), constant annual deposit of \$3.01 million would establish the necessary endowment in 30 years. The future, 30th year, value of the endowment, after adjusting for inflation, would be \$200 million.

A condition for state or federal government purchase of the Priority 1 conservation areas is that the MHCP cities would establish endowments to manage and monitor those lands and the state's recent acquisition in Carlsbad. Assuming net interest revenue of 2.5% per year, the endowment required for all Priority 1 areas is \$5 million in 2002 dollars. Annual deposits of \$1.02 million over 5 years, with nominal interest rate of 5%, would accomplish this goal.

Deleted: .

For the MHCP study area as a whole, the proposed thresholds are lower than those for the individual Subarea Plans. This reflects the view that if substantial negative effects are observed in some, though perhaps not all, of the cities, then impacts of the subregional plan should also be considered significant. For example, a 5% increase in the average residential density of the MHCP study area is proposed as a threshold of significance, since major changes to community character are likely to occur in portions of the study area before the 10% threshold is reached. The 5% threshold may be exceeded when residential density in two or three cities increases by 10%, combined with moderate increases or even no change in the others. In such a case, a substantial change in community character would occur even when not all of the cities experience the higher (10%) threshold change in residential density. Alternatively, housing density impact for the MHCP study area would be considered significant if the project results in future residential density of more than 10% greater than forecast in two or more of the MHCP cities.

The potential for growth inducement and cumulative impacts (e.g., potential to increase development densities either in or outside the preserve) are also addressed in Sections 5 and 6.

#### **4.6.1.1 MHCP Study Area**

- A shift of greater than 10% of the forecast increase in residential units between 1995 and 2020 in the MHCP study area from within the preserve scenario boundary to locations outside is a significant impact, since such a shift will result in a substantial change in the location and pattern of future growth.
- An increase in average residential density in the MHCP study area of greater than 5% above the average density which existed in 1995 (the base year for this analysis), or which is forecast to prevail in 2020 without the project, is a significant impact.
- A shift of greater than 10% of future employment in the MHCP study area from within the preserve scenario boundary to locations outside is a significant impact.

#### **4.6.1.2 Subarea Plan**

- A shift of greater than 20% of the forecast increase in residential units between 1995 and 2020 in a Subarea Plan study area from within the preserve scenario boundary to locations outside is a significant impact.

- An increase in average residential density in the Subarea Plan study area of greater than 10% above the average density which existed in 1995 (the base year for this analysis), or which is forecast to prevail in 2020 with the project, is a significant impact.
- A shift of greater than 20% of future employment in the Subarea Plan study area from within the preserve scenario boundary to locations outside is a significant impact.

Impacts of conserving vacant, developable lands designated for residential and employment uses are summarized in Tables 4.6-1 and 4.6-2 and discussed in detail below.

#### **4.6.2 MHCP Plan/Take Authorization/Implementing Agreement**

Because implementation of the MHCP will cumulatively have different magnitudes of impacts depending upon which FPA Alternative is selected, this section addresses impacts of the MHCP for each alternative.

##### **4.6.2.1 FPA Alternative 1**

Planned land use categories of habitat lands proposed to be conserved under FPA Alternative 1 are shown in Table 4.6-1, under the column heading of “Total Cities”. A total of 18,460 acres of habitat lands will be conserved, of which 2,155 acres (= 988 + 1,083 + 84) are designated for future residential development and 344 acres (= 105 + 239) are designated for employment land uses. (It should be noted that total acres conserved differ slightly from the total shown in Section 4.3, Biological Resources, due to introduction of new data type, planned land use, in the GIS analysis.)

#### **Population and Housing**

Residential densities assigned to lands proposed for conservation differ by city and category. The “Spaced Rural Residential” category has densities less than 1 unit per acre. The “Single-Family Residential” category generally has densities from 1 unit per acre to 6 units per acre, while the “Multifamily Residential” category generally has densities in excess of 10 units per acre. Among lands proposed for conservation, 4,947 units which could be constructed may be displaced by this alternative (Table 4.6-1). However, they represent 6% of 80,632 units forecast

***ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES***

---

to be added to the study area (see previous Table 3.6-2) and do not substantially affect the pattern of future development.

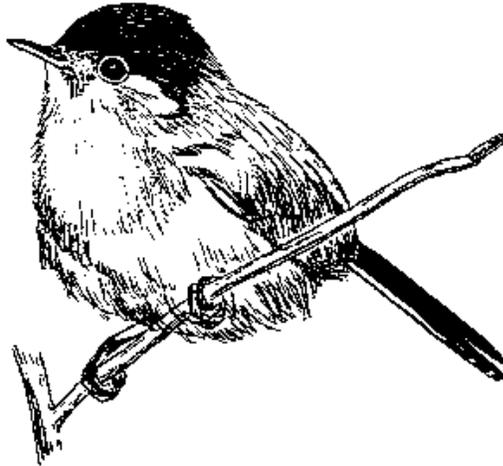
## **Population and Housing**

Among lands proposed for conservation, 12,274 units could be constructed and may be displaced by this alternative (Table 4.6-2). This represents 15% of housing units forecast to be added to the study area between 1995 and 2020 (see previous Table 3.6-2) and a substantial change in and a significant impact to the location of future development. It is assumed here that conservation of 4,777 acres of vacant land designated for future residential use will reduce total developed residential land in 2020 by an equal amount, while the same forecast number of housing units would be built in the study area. This is a worst-case analysis, which assumes that, except in the core habitat area in the unincorporated County, no additional, vacant developable lands designated for residential use will be available in 2020, and that vacant lands designated for other uses, such as employment uses, will not be rezoned for residential use. Under the 2020 forecast, the core habitat area will be only partially developed, which will permit both conservation and development to occur.

As shown in Table 4.6-3, conservation of 4,777 acres could reduce new residential development between 1995 and 2020 from 18,323 acres forecast by SANDAG to 13,716 acres. Total developed residential land of the MHCP cities and the unincorporated core habitat area in 2020 will be 46,794 acres, with an average residential density of 6.1 units per acre (rounded). The resulting density is approximately the same as that which existed in 1995, but nearly 10% greater than 5.5 units per acre under the SANDAG forecast, likely requiring major changes to the general plans and public service plans of local governments, and is a significant impact. Under this alternative, future 2020 average residential densities in two cities, Carlsbad and San Marcos, would also be 10% or higher than forecast by SANDAG (Table 4.6-3).

## **Employment**

Analysis of impacts to future development of employment uses is based on a comparison of conserved land designated for employment uses and the forecast acres of land which will remain vacant without the MHCP (Table 4.6-4). Under Alternative 3, only Escondido will have residual vacant land designated for employment use in 2020. The proposed levels of conservation will reduce new commercial and industrial development between 1995 and 2020 by nearly 600 acres, from 15,723 to 15,126 acres. This is a reduction of 11.5% from that forecast by SANDAG and represents a significant impact.



**DRAFT ENVIRONMENTAL IMPACT  
STATEMENT/ENVIRONMENTAL IMPACT REPORT**

**For Threatened and Endangered Species Due to the Urban  
Growth within the Multiple Habitat Conservation Program  
Planning Area**

**SCH NO. 93121073**

*Lead Agencies:*

**UNITED STATES FISH AND WILDLIFE SERVICE**

2730 Loker Avenue West  
Carlsbad, CA 92008  
Lee Ann Carranza, 760-431-9440

*and the*

**SAN DIEGO ASSOCIATION OF GOVERNMENTS (SANDAG)**

401 B Street, Suite 800  
San Diego, CA 92101  
Janet Fairbanks, 619-595-5300

December 2001

Cover Sheet

**DRAFT ENVIRONMENTAL IMPACT  
STATEMENT/ENVIRONMENTAL IMPACT REPORT**

**For Threatened and Endangered Species Due to the Urban Growth  
within the Multiple Habitat Conservation Program Planning Area**

**SCH NO. 93121073**

*Lead Agencies:*

**UNITED STATES FISH AND WILDLIFE SERVICE**

2730 Loker Avenue West  
Carlsbad, CA 92008  
Lee Ann Carranza, 760-431-9440

*and the*

**SAN DIEGO ASSOCIATION OF GOVERNMENTS (SANDAG)**

401 B Street, Suite 800  
San Diego, CA 92101  
Janet Fairbanks, 619-595-5300

December 2001

Abstract

The purpose of this joint Environmental Impact Statement/Environmental Impact Report (EIS/EIR) is to evaluate the potential for environmental effects from the following proposed actions:

- Adopting the Multiple Habitat Conservation Program (MHCP) and five Subarea Plans for the cities of Carlsbad, Encinitas, Escondido, Oceanside, and San Marcos.
- Issuing “incidental take” permits for covered species pursuant to Section 10(a)(1)(B) of the Endangered Species Act (ESA) and Section 2800 et seq. of the California Fish and Game Code.

The MHCP is a comprehensive multiple-jurisdictional planning program designed to create, manage, and monitor an ecosystem preserve in northwestern San Diego County. The MHCP preserve system is intended to protect viable populations of native plant and animal species and their habitats in perpetuity, while accommodating continued economic development and quality of life for residents of North County.

Comments must be received by April 28, 2002.

**TABLE OF CONTENTS**

<b>Section</b>	<b>Page No.</b>
COVER PAGE	
ES.0 EXECUTIVE SUMMARY .....	ES-1
1.0 PURPOSE AND NEED FOR ACTION .....	1-1
1.1 Introduction .....	1-1
1.1.1 MHCP Framework .....	1-2
1.2 Purpose and Need for the Proposed Action .....	1-10
1.2.1 Project Objectives .....	1-12
1.2.2 Purpose of the Joint EIS/EIR .....	1-13
1.3 Proposed Action .....	1-14
1.4 Decisions to be Made .....	1-15
1.4.1 U.S. Fish and Wildlife Service.....	1-15
1.4.2 California Department of Fish and Game .....	1-16
1.4.3 California Coastal Commission .....	1-17
1.4.4 San Diego Association of Governments .....	1-17
1.4.5 Participating Subarea Plan Jurisdictions .....	1-17
1.5 Scoping Process.....	1-17
1.5.1 Public Input During Formulation of the Draft MHCP .....	1-18
1.5.2 NEPA/CEQA Scoping Process .....	1-20
1.5.3 Identification of the Potentially Significant Issues .....	1-22
1.5.4 Issues Not Considered Significant and Not Selected for Detailed Analysis .....	1-23
1.6 Relevant Statutes, Regulations, and Guidelines.....	1-23
1.7 Organization of the EIS/EIR .....	1-24
2.0 PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES.....	2-1
2.1 Proposed Action - MHCP .....	2-1
2.1.1 Overall Plan Description .....	2-2
2.1.2 Biological Preserve Assembly and Operation.....	2-15
2.1.3 MHCP Plan Implementation Policies .....	2-24
2.2 Proposed Alternatives .....	2-25
2.2.1 Alternative No. 1 – Focused Planning Area No. 1 .....	2-27
2.2.2 Alternative No. 2 – Focused Planning Area No. 2 Adding the Gnatcatcher Core and Restoration – the Preferred Project .....	2-27
2.2.3 Alternative No. 3 – Biological Core and Linkage Area.....	2-34
2.2.4 Alternative No. 4 – No Action/No Project Alternative.....	2-38

**TABLE OF CONTENTS**

<b>Section</b>	<b>Page No.</b>
2.3	Proposed Action - Subarea Plans ..... 2-40
2.3.1	Carlsbad Subarea Plan..... 2-41
2.3.2	Encinitas Subarea Plan ..... 2-51
2.3.3	Escondido Subarea Plan ..... 2-57
2.3.4	Oceanside Subarea Plan ..... 2-62
2.3.5	San Marcos Subarea Plan..... 2-68
2.4	Alternatives Considered but Eliminated from Further Analysis ..... 2-75
2.4.1	Coastal Sage Scrub Only Preservation..... 2-75
2.4.2	Listed Species Only Preservation..... 2-77
2.4.3	Public Lands Only Preservation ..... 2-78
2.4.4	Hard-Line Option ..... 2-79
2.4.5	Inclusion of Camp Pendleton, Fallbrook Weapons Station, and County Unincorporated Properties..... 2-80
2.4.6	No Take ..... 2-81
3.0	ENVIRONMENTAL SETTING/AFFECTED ENVIRONMENT ..... 3-1
3.1	Regional Environmental Setting ..... 3-1
3.2	Land Use (Important Farmland and Extractive Resources)..... 3-2
3.2.1	Existing and Planned Land Uses within the Multiple Habitat Conservation Program Boundary ..... 3-2
3.2.2	Existing Environmental Plans for the MHCP Subareas..... 3-2
3.2.3	Important Farmland within the MHCP Boundary..... 3-10
3.2.4	Extractive Resources in the MHCP Study Area..... 3-13
3.3	Biological Resources ..... 3-17
3.3.1	Vegetation Communities..... 3-18
3.3.2	Sensitive Habitats..... 3-24
3.3.3	Sensitive Species ..... 3-25
3.4	Regional Transportation/Circulation..... 3-35
3.5	Public Services and Utilities ..... 3-39
3.5.1	Water Distribution..... 3-39
3.5.2	Wastewater Collection, Treatment, Reclamation, and Disposal ..... 3-40
3.5.3	Solid Waste Collection, Disposal Sites (Landfills), and Recycling ..... 3-40
3.5.4	Fire Protection ..... 3-40
3.5.5	Police Protection ..... 3-40
3.5.6	School Facilities ..... 3-40
3.5.7	Park Facilities ..... 3-43
3.5.8	Natural Gas..... 3-43
3.5.9	Electricity ..... 3-43
3.6	Population, Housing, and Employment..... 3-43
3.6.1	Historical Growth..... 3-43
3.6.2	Regionwide and City/County Forecasts ..... 3-49
3.6.3	Development of Residential and Employment Land Use ..... 3-50

---

**TABLE OF CONTENTS**

<b>Section</b>	<b>Page No.</b>
4.0 ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES....	4-1
4.1 Approach to Analysis and Format.....	4-1
4.2 Land Use (Includes Important Farmland and Extractive Resources) .....	4-2
4.2.1 Criteria for Determining Significance (Generally Based Upon CEQA Appendix G).....	4-2
4.2.2 MHCP Plan/Take Authorization/Implementing Agreement.....	4-3
4.2.3 Subarea Plans .....	4-3
4.2.4 Level of Significance After Mitigation .....	4-41
4.2.5 Mitigation Measures.....	4-42
4.3 Biological Resources.....	4-42
4.3.1 Criteria for Determining Significance.....	4-43
4.3.2 MHCP Plan/Take Authorization/Implementing Agreement.....	4-46
4.3.3 Subarea Plans .....	4-102
4.3.4 Level of Significance with Mitigation .....	4-128
4.3.5 Mitigation Measures.....	4-135
4.4 Regional Transportation/Circulation.....	4-215
4.4.1 Criteria for Determining Significance.....	4-215
4.4.2 MHCP Plan/Take Authorization/Implementing Agreement.....	4-215
4.4.3 Subarea Plans .....	4-215
4.4.4 Level of Significance .....	4-218
4.4.5 Mitigation Measures.....	4-219
4.5 Public Services and Utilities .....	4-220
4.5.1 Criteria for Determining Significance.....	4-220
4.5.2 MHCP Plan/Take Authorization/Implementing Agreement.....	4-220
4.5.3 Subarea Plans .....	4-221
4.5.4 Level of Significance .....	4-225
4.5.5 Mitigation Measures.....	4-226
4.6 Population, Housing, and Employment.....	4-227
4.6.1 Criteria for Determining Significance.....	4-227
4.6.2 MHCP Plan/Take Authorization/Implementing Agreement.....	4-230
4.6.3 Subarea Plans .....	4-238
4.6.4 Level of Significance .....	4-243
4.6.5 Mitigation Measures.....	4-244
5.0 GROWTH INDUCEMENT.....	5-1
6.0 CUMULATIVE IMPACTS .....	6-1
6.1 Requirements for the Analysis of Cumulative Impacts .....	6-1
6.2 Related Planning Documents Considered in the Cumulative Analysis ..	6-2
6.3 Cumulative Impact Analysis .....	6-5
6.3.1 Biological Resources.....	6-5
6.3.2 Land Use and Public Facilities.....	6-6

***TABLE OF CONTENTS***

---

<b>Section</b>	<b>Page No.</b>
7.0 ISSUES NOT CONSIDERED SIGNIFICANT .....	7-1
8.0 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES .....	8-1
9.0 REFERENCES.....	9-1
10.0 PERSONS CONSULTED.....	10-1
11.0 LIST OF PREPARERS.....	11-1
12.0 GLOSSARY.....	12-1
12.1 Definitions.....	12-1
12.2 Acronyms and Abbreviations.....	12-7

**LIST OF FIGURES**

1-1 Habitat Conservation Planning Areas ..... 1-3

1-2 MHCP Subareas ..... 1-4

2.2-1 Focused Planning Area Alternative 1..... 2-29

2.2-2 Focused Planning Area and Gnatcatcher Core Alternative 2..... 2-31

2.2-3 Biological Core and Linkage Area Alternative 3..... 2-35

2.3-1 City of Carlsbad Habitat Management Plan..... 2-43

2.3-2 City of Encinitas Subarea Plan Focused Planning Area ..... 2-53

2.3-3 City of Escondido Subarea Plan Focused Planning Area (FPA) and Constrained  
Lands Outside the FPA ..... 2-59

2.3-4 Preserve Planning Map and Habitat Conservation Overlay Zones ..... 2-65

2.3-5 City of San Marcos Subarea Plan Focused Planning Area Subareas ..... 2-71

3.2-1 Existing Land Use, MHCP Study Area..... 3-3

3.2-2 Planned Land Use, MHCP Study Area ..... 3-5

3.2-3 Important Farmland, MHCP Study Area ..... 3-11

3.2-4 Mineral Resources, MHCP Study Area ..... 3-15

3.3-1 Vegetation Communities..... 3-19

3.4-1 San Diego County 2020 Highway Plan..... 3-37

3.4-2 Local Circulation Network..... 3-41

4.2-1 Planned Land Use FPA Alternatives 1 and 2..... 4-5

4.2-2 Important Farmland, MHCP Study Area FPA Alternatives 1 and 2..... 4-15

4.2-3 Mineral Resources, MHCP Study Area FPA Alternatives 1 and 2..... 4-19

4.2-4 Planned Land Use, BCLA Alternative 3..... 4-29

4.2-5 Important Farmland, MHCP Study Area BCLA Alternative 3..... 4-35

4.2-6 Mineral Resources, MHCP Study Area BCLA Alternative 3..... 4-39

4.3-1 Vegetation Communities within the MHCP Study Area ..... 4-47

4.3-2 Recorded Locations of Sensitive Species, MHCP Study Area and FPA  
Alternative 1 ..... 4-53

4.3-3 Recorded Locations of California Gnatcatchers, FPA Alternative 1 ..... 4-59

4.3-4 Focused Planning Area (FPA) and Biological Core and Linkage Area  
(BCLA), MHCP Study Area ..... 4-75

4.3-5 Recorded Locations of Sensitive Species, MHCP Study Area and  
BCLA Alternative 3 ..... 4-95

4.3-6 Recorded Locations of California Gnatcatchers, BCLA Alternative 3..... 4-99

**LIST OF TABLES**

ES-1 Comparison of FPA Impacts on Vacant Land Designated for Future Development ..... ES-11

ES-2 Summary of Significance of Impacts ..... ES-14

ES-3 Summary of Mitigation Measures for Significant Impacts ..... ES-17

ES-4 Summary of Biological Resources, Significance of Impacts for Each Alternative ..... ES-28

ES-5 Significance for Each Subarea Plan ..... ES-33

ES-6 Summary of Biological Resources Significance of Impacts for Each Subarea Plan ..... ES-37

1-1 Decision/Actions by Lead and Responsible Agencies ..... 1-16

2.1-1 Preliminary MHCP Covered Species List ..... 2-6

2.1-2 MHCP Narrow Endemic Species List ..... 2-11

2.1-3 Annual Costs of Habitat Management, Monitoring, and Administration at Buildout and Required Endowment ..... 2-23

2.2-1 Vegetation Community Acreage within FPA Alternative 1 ..... 2-28

2.2-2 Vegetation Community Acreage within FPA Alternative 2 ..... 2-33

2.2-3 Vegetation Community Acreage within BCLA Alternative 3 ..... 2-37

2.3-1 Biological Conservation, City of Carlsbad Focused Planning Area Alternatives ..... 2-45

2.3-2 Mitigation Ratios for Impacts to HMP Habitats ..... 2-47

2.3-3 City of Carlsbad HMP Species ..... 2-48

2.3-4 Biological Conservation, City of Encinitas Focused Planning Area Alternatives ..... 2-55

2.3-5 Biological Conservation, City of Escondido Focused Planning Area Alternatives ..... 2-61

2.3-6 Biological Conservation, City of Oceanside Focused Planning Area Alternatives ..... 2-64

2.3-7 City of San Marcos Hard-Line 100% Conservation Areas ..... 2-70

2.3-8 City of San Marcos Areas Conserved by Standards Combined with Fixed Conservation Rates ..... 2-73

2.3-9 Biological Conservation, City of San Marcos Focused Planning Area Alternatives ..... 2-74

3.2-1 Existing Land Use (1998) Within the MHCP Study Area ..... 3-7

3.2-2 Planned Land Use (1998) Within the MHCP Study Area ..... 3-8

3.2-3 Important Farmland Categories ..... 3-13

3.2-4 Important Farmland Within the MHCP Boundary ..... 3-13

3.2-5 MRZ-2 Land Within the MHCP Boundary ..... 3-17

3.3-1 Acreage and Proportional Distribution of Vegetation Communities Within the MHCP Study Area and Biological Core and Linkage Area (BCLA) ..... 3-21

3.3-2 Preliminary MHCP Covered Species List ..... 3-26

3.4-1 State Highway Routes ..... 3-36

**LIST OF TABLES (continued)**

3.6-1 Population By Jurisdiction ..... 3-45

3.6-2 Housing Units By Jurisdiction ..... 3-47

3.6-3 Civilian Employment By Jurisdiction ..... 3-48

3.6-4 Developed Residential and Employment Land Use by Jurisdiction ..... 3-51

4.2-1 Impact of Conservation on Planned Land Use by City: FPA Alternative 1 ..... 4-7

4.2-2 Important Farmland Conserved as Habitat Acres ..... 4-13

4.2-3 Acreage of Habitat Conservation on MRZ-2 Land ..... 4-21

4.2-4 Impact of Conservation on Planned Land Use by City: FPA Alternative 2 ..... 4-23

4.2-5 Impact of Conservation on Planned Land Use by City: BCLA Alternative 3 ... 4-28

4.3-1 Conservation of Vegetation Communities for Each Alternative ..... 4-139

4.3-2 Conservation of Sensitive Species for Each Alternative ..... 4-141

4.3-3 Summary of Endangered, Threatened, and Rare Species and Findings of  
Significance ..... 4-161

4.3-4 Conservation of Vegetation Communities in Subarea Plans ..... 4-176

4.3-5 Conservation of Sensitive Species for Subarea Plans ..... 4-178

4.3-6 Summary of Mitigation Measures for Significant Biological Resources  
Impacts ..... 4-207

4.6-1 Impact of Conservation on Planned Land Use, Housing, and Employment  
Buildings by City: Proposed Project (FPA) and Unincorporated  
Gnatcatcher Core ..... 4-231

4.6-2 Impact of Conservation on Planned Land Use, Housing, and Employment  
Buildings by City: BCLA Alternative and Unincorporated  
Gnatcatcher Core ..... 4-232

4.6-3 Residential Land Use by Jurisdiction and Alternative ..... 4-234

4.6-4 Commercial and Industrial Land Use by Jurisdiction and Alternative ..... 4-235

4.6-5 Comparison of FPA Impacts on Vacant Land Designated for Future  
Development ..... 4-237

## **EXECUTIVE SUMMARY**

The purpose of this joint Environmental Impact Statement/Environmental Impact Report (EIS/EIR) is to evaluate the potential for environmental effects from the following proposed actions:

- Adopting the Multiple Habitat Conservation Program (MHCP) and five Subarea Plans for the cities of Carlsbad, Encinitas, Escondido, Oceanside, and San Marcos.
  
- Issuing “incidental take” permits for covered species pursuant to Section 10(a)(1)(B) of the Endangered Species Act (ESA) and Section 2800 et seq. of the California Fish and Game Code.

The MHCP is a comprehensive multiple-jurisdictional planning program designed to create, manage, and monitor an ecosystem preserve in northwestern San Diego County. The MHCP preserve system is intended to protect viable populations of native plant and animal species and their habitats in perpetuity, while accommodating continued economic development and quality of life for residents of North County.

The MHCP is one of several large, multiple-jurisdictional habitat planning efforts in San Diego County, each of which constitutes a “subregional” plan under the State of California’s Natural Community Conservation Planning (NCCP) Act of 1991. The MHCP encompasses 175 square miles comprising the seven incorporated cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista. These jurisdictions will implement their respective portions of the MHCP through citywide “Subarea” Plans, which describe the specific mechanisms each city will use to implement the MHCP.

For purposes of this EIS/EIR, five draft Subarea Plans (Carlsbad, Encinitas, Escondido, Oceanside and San Marcos) have been prepared; thus are subject to this environmental analysis. The City of Vista has not completed their plan; when completed it will require environmental analysis prior to issuance of incidental take permits and signing of an implementing agreement. At this time, the City of Solana Beach does not need to prepare a Subarea Plan, since they do not anticipate the need for incidental take permits. Upon completion of the environmental review process, the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG), and the cities will review the

findings and make the determination of adopting and/or amending the Subarea Plans and implementing the project.

To support conservation actions, participating cities will receive incidental take permits from the USFWS and CDFG. Incidental take permits allow for otherwise lawful actions that may incidentally harm individuals of a species or its habitat (generally outside of the preserve system) to support conserving the species inside the preserve system. Jurisdictions granted these permits may share their benefits by using them to permit take by public or private projects that comply with the city's Subarea Plan. This delegation of state and federal endangered species authority to local cities is made possible through a combination of the subregional MHCP and city Subarea Plans, which together serve as a multiple species Habitat Conservation Plan (HCP) pursuant to Section 10 (a)(1)(B) of the federal Endangered Species Act and Section 2800 et seq. of the California Fish and Game Code, known as the NCCP Act.

This EIS/EIR has been prepared in compliance with the National Environmental Policy Act (NEPA) as implemented by the Council on Environmental Quality Regulations (Title 40 Code of Federal Regulations [CFR] Parts 1500-1508) and the California Environmental Quality Act (CEQA) (California Public Resources Code Section 21000 et seq.). Joint environmental documents are permitted and encouraged under both NEPA (Section 1506.4) and CEQA (Section 21083.5). For this joint document, both CEQA and NEPA terminology is provided, with CEQA being listed first.

All reference materials are available for review at SANDAG offices (401 B Street, Suite 800, San Diego, CA 92101) during normal business hours.

## **PROJECT LOCATION**

The Multiple Habitat Conservation Program (MHCP) study area encompasses about 175 square miles (111,865 acres) comprising the seven incorporated cities of northwestern San Diego County (Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista). The study area also includes 400 to 500 acres of contiguous coastal sage scrub habitat supporting 16 to 23 pairs of breeding coastal California gnatcatchers in the unincorporated county area east of the Cities of Carlsbad and Encinitas and south of the City of San Marcos. Remaining unincorporated portions of the County of San Diego, including several areas surrounded by incorporated cities, are excluded from the study area and will be planned by the County of San Diego as part of the North County Subarea of the Multiple

Species Conservation Program. The Pacific Ocean shoreline defines the western border of the study area; Marine Corps Base Camp Pendleton borders the study area on the north; and unincorporated County of San Diego borders most of the study area on the east and south.

This area of north coastal San Diego County is known for its natural beauty and mild Mediterranean climate, which make it a popular recreational and tourist destination. The area is largely developed, with approximately 27% consisting of vacant lands that still support natural vegetation communities. Major land uses within the study area include residential, commercial, and industrial development; parks, preserves, and golf courses; and agriculture. Larger areas of undeveloped and naturally vegetated lands adjoin the study area, particularly on unincorporated lands to the east and south, and on Camp Pendleton to the north.

## **PURPOSE AND NEED**

The San Diego region has more rare, threatened, and endangered species than any comparable land area in the continental United States. On a national scale, it has been identified as a major “hot spot” for biodiversity and species endangerment. The San Diego region is also one of the most rapidly growing regions of the country. This combination of high biodiversity, large numbers of rare and unique species, and rapid urbanization has led to regionwide conflicts between economic growth and biological conservation. Moreover, the traditional project-by-project approach of consulting on project impacts to state and federal listed species is time consuming and can result in a piecemeal preserve design that cannot ensure species or ecosystem viability, nor guarantee that land management and biological monitoring will occur in perpetuity. The MHCP replaces this approach with a coordinated, comprehensive program that ensures that mitigations for project impacts are directed to those areas most critical to maintenance of ecosystem function and species viability based on the basic tenets of biological preserve design. The goal of the MHCP is to target the highest quality habitats for preservation, while allowing development of less important habitat areas (Ogden 1998). The MHCP Plan is consistent with the Regional Growth Management Strategy, initiated by the voters in 1988 (Proposition C) to deal with growth issues and impacts on an areawide basis (Ogden 1998).

In 1991, state law established the NCCP. The Southern California Coastal Sage Scrub NCCP Program was the first such program developed under the law. This planning area is roughly 6,000 square miles and includes parts of San Diego, Orange, Riverside, Los Angeles, and San Bernardino Counties. Human activity in this five-county area has reduced the extent of

coastal sage scrub to the point where conservation action is crucial to prevent endangerment of many species.

Because the planning area within these five counties is so large and because specific biological and land use planning considerations vary throughout the region, planning had to be conducted on a subregional scale. In March 1993, the “Ongoing Multi-species Planning Agreement” was signed by SANDAG, representing the MHCP; the City of San Diego, representing the Multiple Species Conservation Program (MSCP); the County of San Diego, representing the Multiple Habitat Conservation and Open Space Program (MHCOSP); the USFWS; the CDFG; and the California Resources Agency. The agreement recognizes the MHCP, the MSCP, and the MHCOSP as Ongoing Multi-species Plans as defined in the NCCP Process Guidelines, and therefore as NCCPs. These three local programs are recognized as providing regional protection and perpetuation of natural wildlife diversity while allowing compatible and appropriate development and growth. The three programs are designed to provide an alternative to current “single species” conservation efforts by formulating regional, natural community-based habitat protection programs to protect the numerous species inhabiting each of the targeted natural communities and to enhance the effectiveness of ongoing species protection efforts. The combination of these three programs will create a regional planning and management system designed to protect the region’s native habitats, including coastal sage scrub habitat, and reconcile conflicts between habitat protection and new development within the region.

Completion of the MHCP and Subarea Plans will allow USFWS and CDFG to issue incidental take permits to each participating city. Participating cities can then proceed with public and private projects with coverage under the ESA, so long as the projects comply with subarea and subregional plan guidelines. Hence, the MHCP Plan is required to fulfill the current mandatory requirements under the state and federal ESAs for covered species and the NCCP Process Guidelines.

## **PROPOSED PROJECT**

The proposed project entails: adopting the Multiple Habitat Conservation Program (MHCP) and five Subarea Plans for the cities of Carlsbad, Encinitas, Escondido, Oceanside, and San Marcos, and issuing “incidental take” permits for covered species.

This environmental document provides an analysis of three alternatives, plus the no action/no project alternative. The preferred alternative/proposed project is Alternative No. 2, as

described below and in Section 2 of the EIS/EIR. (Preferred alternative, proposed project, and proposed action are used interchangeably throughout the document and refer to Alternative 2.)

The MHCP contains the overall conservation strategy for the subregion and documents the conservation actions that collectively will guarantee the protection of species covered by individual Subarea Plans. The conservation strategy includes conserving existing habitat, restoring degraded habitat, managing the preserve system, and conducting biological monitoring in perpetuity. The MHCP also describes the institutional mechanisms to coordinate MHCP implementation among the cities and other agencies and identifies funding sources for project implementation. The MHCP subregional plan does not authorize the taking of biological resources and is not itself permitted.

Permits or authorizations to take biological resources (Incidental Take Permits) will be granted to individual cities preparing adequate Subarea Plans, which describe the specific conservation and management actions each city will take to implement the goals, guidelines, and standards of the MHCP.

## **PROJECT OBJECTIVES**

The specific objectives of the proposed project are as follows (Ogden 1998):

- Establish and maintain a balance between preservation of natural resources and regional growth and economic prosperity.
- Provide a plan for general public benefit through habitat conservation and access to natural preserves for passive recreation and an improved quality of life, which also will attract new business to the region.
- Obtain permits for the taking of covered species under California Fish and Game Code Section 2800 et seq. and federal Endangered Species Act. These take authorizations will replace the 5% restriction on clearing of coastal sage scrub habitat currently imposed under Section 4(d) of the federal Endangered Species Act.
- Develop and implement a program for the conservation and management of habitats of federal and state endangered, threatened, or rare species, thereby reducing the human-related causes of species extirpation within the MHCP study area.

- Provide a framework to allow participating jurisdictions to directly implement the MHCP through individual Subarea Plans using their existing land use authority, and through voluntary agreements with property owners.
- Establish a partnership among federal, state, and local agencies of government to facilitate review and approval of public- and private-sector land development and construction projects by expediting acquisition of permits from the USFWS and the CDFG.
- Describe a finance and acquisition strategy that shares implementation costs equitably among the federal, state, and local beneficiaries and is affordable to the region.

## **SUBAREA PLANS**

Each Subarea Plan describes requirements for conservation and preserve design, habitat management and biological monitoring, interim protection procedures, facility siting, permanent preserve protection, and actions each city will take to implement the goals, objectives, guidelines, and standards of the MHCP. The Subarea Plans describe how each city will use, or propose to use, their existing plan review and approval process to guarantee implementation of the plans.

Each city will guarantee implementation of the Subarea Plan through interim and permanent regulatory measures, including codes, ordinances, and policies contained in the General Plan, Local Coastal Plan, and other city policy documents. No project requiring discretionary approval by the city – and no vegetation clearing, brushing, grubbing, grading, or conversion of nonagricultural lands to active agriculture – will be approved without a determination of conformance with the Subarea Plan.

Consistency between the MHCP and the Subarea Plans is important for meeting the requirements of state and federal permits and authorizations for take of species included on the covered species list. Consistency between the documents is discussed in the body of this EIS/EIR.

Incidental take permits are issued to a city based on a completed permit package, consisting of the MHCP Plan and the city's Subarea Plan and implementing agreement. This joint EIS/EIR covers the five Subarea Plans submitted with the MHCP (Carlsbad, Encinitas,

Escondido, Oceanside, and San Marcos). Vista will prepare a Subarea Plan at a later date, including supplemental environmental documentation. It is unlikely that Solana Beach will need to prepare a Subarea Plan.

## **ALTERNATIVES**

Both NEPA and CEQA require that this document describe the proposed action and alternatives to the proposed action. The alternatives should be reasonable to achieve the need that the proposed action is intended to address. Understanding the alternatives selected for analysis requires a full understanding of the project. The MHCP is more than a preserve area; it is a comprehensive Conservation Program that defines actions the federal, state, and local governments and the private sector must undertake to assure the continued viability of sensitive species and the ecosystem they depend upon in northwestern San Diego County. These actions include land protection, habitat restoration, land management, biological monitoring, compliance monitoring, and funding of the program.

This analysis compares alternatives in terms of the acres of habitat conserved, restored, managed, and monitored, and the effects that this conservation is expected to have on each sensitive species that may occur in the study area. A range of alternatives has been included that would attain most of the basic objectives, but would avoid or substantially lessen significant effects of the project. Significant effects of the project include impacts to biological resources and population/housing.

For purposes of this joint EIS/EIR, eight alternatives were considered. Five of them were considered but eliminated from further analysis because they did not meet the objectives of the MHCP. The five rejected alternatives are: coastal sage scrub only preservation, listed species only preservation, public lands only preservation, “hard line” option, and inclusion of Camp Pendleton, Fallbrook Weapons Station, and County Unincorporated Properties (Section 2.4).

The remaining four alternatives quantitatively analyze levels of biological conservation and take under each city Subarea Plan:

- Alternative No. 1 - Focused Planning Area No. 1
- Alternative No. 2 - Focused Planning Area No. 2 - the Preferred Project
- Alternative No. 3 - Biological Core and Linkage Areas
- Alternative No. 4 - No Action/No Project alternative

Alternatives No. 1 and No. 2 were designed to conserve as much of the Biological Core and Linkage Area (BCLA) as possible, minimize preserve fragmentation, maximize use of existing public lands and open space, and maintain private property rights and economic viability. They include “hard-line” areas (lands to be conserved and managed primarily for biological resources) and “soft-line” planning areas, within which hard-line preserve areas will ultimately be delineated based on further data and planning.

Alternative No. 2 was selected as the proposed project because it meets the goals and objectives of the NCCP Act, and the requirements for multiple species Habitat Conservation Plans pursuant to Section 10(a)(1)(B) of the federal Endangered Species Act. This alternative also will help the cities achieve many of the objectives listed on pages ES-5 and ES-6, specifically establishing and maintaining a balance between preservation of natural resources and regional growth and economic prosperity. Alternative No. 1 would not assure the viability of the coastal California gnatcatcher, thus it was not selected. Alternative No. 3 essentially captures all remaining undeveloped natural areas, thus impacting the region’s ability to house future populations, meet general plan goals, and provide needed infrastructure systems. Little if any development could occur in the remaining undeveloped portions of the study area, thus developers’ mitigation contributions would be reduced, requiring more federal, state, and local dollars for plan implementation. For these reasons, this alternative is considered to be economically impractical and likely infeasible.

**Alternative No. 1 – Focused Planning Area No. 1**

This alternative comprises the Focused Planning Area (FPA) as defined by the cities, primarily within their boundaries, at levels of conservation the cities expect to obtain by implementing their general plans and various existing resource protection ordinances. It balances resource protection against private property rights, economic concerns, and projected growth within the cities. This alternative preserves 60% of the existing coastal sage scrub, 66% of the chaparral, 80% of the coastal sage/chaparral mix, and 91% of the maritime succulent scrub. Per the MHCP policies, as well as the Army Corps of Engineers (ACOE) and California Department of Fish and Game “no net loss” policies, riparian and estuarine habitats are conserved at 100%. Overall, 65% of the habitat in the total MHCP study area will be conserved.

This alternative also requires the preserve to be managed and monitored in perpetuity, and financial responsibilities to be identified and assigned. And, although it cannot be quantified,

additional coastal sage scrub may be conserved as a result of offsite mitigation for project impacts outside the Focused Planning Area or additional acquisition using state, federal, or regional funds. Likewise, if additional public funding sources become available, certain sage scrub-dominated areas have been identified by the cities as priorities for acquisition from willing sellers, which would increase overall conservation of this community.

This alternative is not the preferred project because the conservation of coastal sage scrub habitat is not sufficient to assure the viability of the coastal California gnatcatcher and other coastal sage scrub dependent species in the subregion.

**Alternative No. 2 – Focused Planning Area No. 2 Adding the Gnatcatcher Core and Restoration - the Preferred Project**

CEQA requires the project be evaluated against a list of environmental categories to determine if the project will have “significant impacts” on the environment. (See Environmental Consequences discussion on page ES-12). This alternative is considered the “environmentally preferred” alternative, based on an analysis of all the environmental categories that could potentially be affected by this project. This alternative begins with FPA 1 and adds 338 acres of coastal sage scrub restoration in key locations within the preserve area. This alternative also targets additional conservation, outside of the seven-city subregional boundary, in the unincorporated area known as the “gnatcatcher core”. The core is located south of the City of San Marcos and east of the cities of Carlsbad and Encinitas. Approximately 400 to 500 acres of contiguous coastal sage scrub supporting 16 to 23 pairs of breeding coastal California gnatcatchers will be conserved there. By adding the 338 acres of restoration and the 400 to 500 acres in the core, Alternative No. 2 brings the total conservation of coastal sage scrub in the MHCP area up to 66%. Remaining vegetation types remain the same as Alternative No. 1: 66% of the chaparral, 80% of the coastal sage/chaparral mix, and 100% of riparian and estuarine habitats. Overall, 66% of the habitat in the total MHCP study area will be conserved under this alternative.

This alternative also requires the preserve to be managed and monitored in perpetuity, and financing responsibilities to be identified and assigned. If additional public funding sources become available, certain sage scrub-dominated areas have been identified by the cities as priorities for acquisition from willing sellers, which would increase overall conservation of this community.

Alternative No. 2 is the preferred project because the levels of conservation, including restoring 338 acres and managing and monitoring the preserve in perpetuity, are adequate measures to protect coastal sage scrub species for which the MHCP is seeking coverage. Most of the other habitats (with the exception of grasslands) are adequately conserved. Many of the sensitive species are also adequately conserved under this plan. Also, this alternative does not significantly impact the cities' ability to provide housing and employment opportunities for the expected growth over the next 20 years, nor does it require the condemnation of property for purposes of habitat protection. The designation of environmentally preferred is based upon a composite of all of the environmental issues (biological resources, as well as population/housing).

### **Alternative No. 3 – Biological Core and Linkage Area**

The BCLA was originally designed as an analytical tool to assist with design of the preserve system and for comparison of alternative designs. The BCLA includes all of the highest quality remaining habitat areas, including the largest remaining blocks of habitat and critical linkages between them. This alternative is the biologically preferred preserve alternative because it identifies all large contiguous areas of habitat, all areas supporting major and critical species populations or habitat areas, and all important functional linkages and movement corridors between them. It also adds 338 acres of coastal sage scrub restoration in key locations within the preserve and requires the preserve be managed and monitored in perpetuity. It also targets additional conservation of approximately 400 to 500 acres in the unincorporated area known as the “gnatcatcher core”. Conservation levels include 89% of the coastal sage scrub, 93% of the chaparral, 95% of the coastal sage/chaparral mix, and 100% of riparian and estuarine habitats. Overall, 84% of the habitat in the total MHCP study area will be conserved under this alternative.

This alternative is not selected as the preferred project because it would have significant impacts on the region's abilities to house and provide services for the projected population growth, meet general plan goals, and provide needed infrastructure systems (Section 4.6). Section 65581 of the Government Code requires cities and counties to identify adequate sites for housing and make adequate provisions for the existing and projected needs of all economic segments of the community. With this alternative little if any development could occur, since the alternative captures most of the remaining undeveloped natural areas within the 175-square-mile study area. This alternative would remove from future development approximately 25% of vacant land currently forecast to be developed for urban use through 2020 (Table ES-1). (In comparison, Alternative No. 1 would remove about 11% of land

**Table ES-1  
Comparison of FPA Impacts on Vacant Land Designated for Future Development**

<b>Presence of Physical Constraints and General Plan Land Use Designation of Lands Proposed to be Conserved</b>	<b>FPA Alternative 1 (1)</b>	<b>FPA Alternative 2 (2)</b>	<b>BCLA Alternative 3 (3)</b>	<b>Difference (3 – 1)</b>	<b>Difference (3 – 2)</b>
<i>Unconstrained Non-OS</i>					
Spaced Rural Residential	988	1,158	1,976	988	818
Single-Family Residential	1,083	1,083	2,645	1,562	1,562
Multifamily Residential	84	84	156	72	72
Commercial, Office	105	105	293	188	188
Industrial, TCU	239	240	705	466	465
Education, Park	45	45	89	44	44
<b>Total Impact on Unconstrained, Non-OS Land</b>	<b>2,544</b>	<b>2,715</b>	<b>5,864</b>	<b>3,320</b>	<b>3,149</b>
As Percent of Land for Future Development (See Note)	11%	12%	25%	14%	13%
OS and Other Public	7,114	7,120	8,273	1,159	1,153
Constrained	8,802	8,992	10,672	1,870	1,680
<b>Total Impact on Vacant Land</b>	<b>18,460</b>	<b>18,827</b>	<b>24,809</b>	<b>6,349</b>	<b>5,982</b>

Source: Tables 4.2-1, 4.2-4, and 4.2-5.

All figures in acres. “Constrained” lands are those which are not likely to be developed or which are subject to special planning requirements due to presence of steep slopes, floodplains, or other restrictions on development. Acres of “impact” represent vacant lands which are currently designated for future development and which are also planned for conservation under the respective FPAs. For comparison, SANDAG’s 2020 Regionwide Forecast estimates that future urban growth between 1995 and 2020 will take place on 23,336 acres of vacant land designated for future urban use (18,162 acres of residential and 5,174 acres of employment use). FPA Alternative 1 would conserve, or set aside, about 11% of land forecast for future development, while FPA Alternative 3 would set aside about 25%.

OS Open space (undeveloped).  
TCU Transportation, communication, utilities.

forecast for development.) This represents a reduction in the supply of developable land, which would likely result in significant economic impacts, including curtailment of forecast population and employment growth; price increases for land and housing faster than the rate of inflation; and lack of affordable housing. Furthermore, there would be less of a contribution to the preserve from mitigation, reducing the private-sector contribution to the preserve, thus increasing the public-sector contribution. This would require substantial local funds and federal and state grants. For these reasons, this alternative is considered to be economically impractical and likely infeasible.

#### **Alternative No. 4 - No Action/No Project Alternative**

The No Action/No Project alternative provides the decision makers with the ability to compare the impacts of not approving the proposed project. The No Action/No Project alternative is a continuation of the existing program for issuing take authorizations on a project-by-project basis. This allows for a comparison of the impacts of continuing the existing take authorizations individually vs. preparing a coordinated conservation plan and issuing incidental take authorizations to local agencies.

Under the No Action/No Project Alternative, a Section 10(a)(1)(B) permit will not be issued. Instead, activities involving take of listed species normally prohibited under Section 9 of the ESA will require individual 10(a) permits or Section 7 consultation if a Federal nexus exists under the current ESA regulations. The MHCP Plan and Subarea Plans as proposed will not be implemented. Proposed land use designation changes necessary to implement the MHCP Plan will not be required. The No Action/No Project Alternative assumes that impacts to sensitive habitats/species will be evaluated and mitigated on a project-by-project basis, as is the present case.

This alternative was not selected because it does not meet any of the goals and the objectives of the MHCP. By selecting this alternative, there would not be a NCCP in northwestern San Diego County. Without the NCCP, only federal and state listed species would be protected under the mandates of the federal and state Endangered Species Acts. Habitat not occupied by a listed species would not be protected. Development and mitigation actions would continue to occur in a piecemeal fashion that does not typically conserve large and interconnected preserves required to maintain species viability. No regionally coordinated funding, monitoring, or land management would occur. Riparian and estuarine habitats would continue to be fully protected by the Army Corps of Engineers and the California Department of Fish and Game “no net loss” policies, but some resource protections afforded

species within these ecosystems by the MHCP would not occur. Other vegetation communities would be conserved as follows: coastal sage scrub – 19%, chaparral – 31%, and coastal sage/chaparral mix – 18%. Overall, 30% of natural habitats in the MHCP study area would be conserved under this alternative (Table 4.3-1).

## **ENVIRONMENTAL IMPACTS/CONSEQUENCES**

CEQA requires the project be evaluated against a list of environmental categories to determine if the project will have “significant impacts” on the environment. Environmental categories determined to have impacts and therefore analyzed in detail in this document include: land use, biological resources, regional transportation/circulation, public services and utilities, and population/housing. The analysis results and conclusions for each of these categories are summarized here and in Chapter 4. Chapter 7 lists those environmental categories not significantly impacted by this project, along with the rationale used to determine that there are no significant impacts to this category if the project is implemented.

The tabular summaries for each environmental category express the level of significance (in accordance with CEQA) for each identified action both before and after mitigation. A summary is provided for each issue statement analyzed for the particular environmental category. Impacts for which the conclusion after mitigation is significant and not mitigated (unavoidable) are highlighted in the summary tables.

### **Land Use**

Table ES-2 provides a summary of the impact analysis for each of the alternatives. Table ES-3 provides a summary of the mitigation measures for significant impacts. As shown in Table ES-2, four issues are analyzed in the land use section: (1) consistency with General Plan and community plan environmental goals; (2) effects on adjacent existing and planned land uses; (3) effects on designated important farmlands; and (4) effects on sand and gravel resources.

With respect to consistency with General Plan and community plan goals, this Joint EIS/EIR concludes that the proposed project will result in significant direct and indirect impacts. Because the project will result in changes in land use directly and indirectly from preserve design and ultimate implementation of take, impacts will occur. Amendments to cities’ general plans and Local Coastal Programs (where applicable) will be required to mitigate impacts to below a level of significance.

**Table ES-2  
Summary of Significance of Impacts**

Impact Category and Issue	FPA Alternative 1	FPA Alternative 2	BCLA Alternative 3	No Action/ No Project Alternative
<b>Land Use</b>				
Will the proposed project result in a land use which is inconsistent with the environmental goals of the General Plan and Community Plans of the jurisdictions participating in the MHCP Plan?	Significant, mitigable	Significant, mitigable	Significant, mitigable	Less than significant
Will the proposed project conflict with adjacent existing and planned land uses, as determined by using the Guidelines for Compatible Land Use, Preserve Management, and Monitoring found in Chapter 6 of the MHCP Plan, as well as the individual Subarea Plans?	Less than significant	Less than significant	Less than significant	Less than significant
Will the proposed project cause conversion of vacant land considered to be of Prime Importance, Statewide Importance, Local Importance, Unique, or Grazing Lands by the California Department of Conservation Important Farmland Mapping Program?	Less than significant	Less than significant	Less than significant	Less than significant
Will the proposed project adversely impact extraction of sand and gravel resources?	Less than significant	Less than significant	Less than significant	Less than significant
<b>Biology</b>				
Will the proposed project result in significant impacts to vegetation communities?	<b>Significant, unmitigable</b> for coastal sage scrub, coastal sage scrub/chaparral mix, and grassland	<b>Significant, unmitigable</b> for grassland	Less than significant	<b>Significant, unmitigable</b> for coastal sage scrub, coastal sage scrub/chaparral mix, chaparral, and grassland

**ENVIRONMENTAL CONSEQUENCES**

**Table ES-2, Summary of Significance of Impacts (continued)**

Impact Category and Issue	FPA Alternative 1	FPA Alternative 2	BCLA Alternative 3	No Action/ No Project Alternative
Will the proposed project result in significant impacts to sensitive habitats?	<b>Significant, unmitigable</b> for coastal sage scrub, coastal sage scrub/chaparral mix, and grassland	<b>Significant, unmitigable</b> for grassland	Less than significant	<b>Significant, unmitigable</b> for coastal sage scrub, coastal sage scrub/chaparral mix, and grassland
Will the proposed project result in significant impacts to sensitive species?	<b>Significant, unmitigable</b> for summer-holly, Blochman's dudleya, variegated dudleya, sticky dudleya, Nuttall's scrub oak, Parry's tetracoccus, San Diego horned lizard, orange throated whiptail, northern harrier, burrowing owl, coastal California gnatcatcher, grasshopper sparrow, and tricolored blackbird	<b>Significant, unmitigable</b> for summer-holly, Blochman's dudleya, variegated dudleya, sticky dudleya, Nuttall's scrub oak, Parry's tetracoccus, San Diego horned lizard, orange throated whiptail, northern harrier, burrowing owl, grasshopper sparrow, and tricolored blackbird	<b>Significant, unmitigable</b> for summer-holly, Blochman's dudleya, variegated dudleya, sticky dudleya, Nuttall's scrub oak, Parry's tetracoccus, San Diego horned lizard, and orange throated whiptail	<b>Significant, unmitigable</b> for all sensitive species
<b><i>Regional Transportation and Circulation</i></b>				
Will implementation of the alternative result in significant impacts to the transportation and circulation network?	Less than significant	Less than significant	Less than significant	Less than significant

**Table ES-2, Summary of Significance of Impacts (continued)**

Impact Category and Issue	FPA Alternative 1	FPA Alternative 2	BCLA Alternative 3	No Action/ No Project Alternative
<i><b>Public Services and Utilities</b></i>				
Will implementation of the alternative result in significant impacts to public services or utilities?	Less than significant	Less than significant	Less than significant	Less than significant
<i><b>Population and Housing</b></i>				
Will the proposed project cause a shift of greater than 10 percent of the forecast increase in residential units between 1995 and 2020 in the overall MHCP study area from within the preserve boundary to locations outside?	Less than significant	Less than significant	Less than significant	Less than significant
Will the proposed project cause an increase in average residential density in the MHCP study area of greater than 5 percent above average density which is forecast to prevail in 2020 without the project?	Less than significant	Less than significant	<b>Significant, unmitigable</b>	Less than significant
Will the proposed project cause a shift in greater than 10 percent of future employment in the MHCP study area from within the preserve boundary to locations outside?	Less than significant	Less than significant	<b>Significant, unmitigable</b>	Less than significant

**Table ES-3  
Summary of Mitigation Measures for Significant Impacts<sup>(1)(2)</sup>**

Impact	Mitigation Measures								
	Alternatives				Subarea Plans				
	FPA 1	FPA 2	BCLA 3	No Action/No Project <sup>(3)</sup>	Carlsbad	Encinitas	Escondido	Oceanside	San Marcos
Inconsistencies with the General Plan	Each City will need to prepare appropriate General Plan Amendments, Local Coastal Program, and Growth Management Plan. This mitigation measure is the responsibility of each City, and is not under the jurisdiction of SANDAG (CEQA Lead Agency).			NA	Each City will need to prepare appropriate General Plan Amendments, Local Coastal Program, and Growth Management Plan. This mitigation measure is the responsibility of each City, and is not under the jurisdiction of SANDAG (CEQA Lead Agency).				
Inadequate (significant) conservation of coastal sage scrub	Preservation of 400-500 acres of contiguous coastal sage scrub in the area referred to as the unincorporated County gnatcatcher core.	NA	NA	Prepare an integrated habitat conservation plan, providing for the conservation of sensitive communities, habitats, and species.	NA	NA	Preservation of 400-500 acres of contiguous coastal sage scrub in the area referred to as the unincorporated County gnatcatcher core.		
Inadequate (significant) conservation of chaparral	NA	NA	NA	Prepare an integrated habitat conservation plan, providing for the conservation of sensitive communities, habitats, and species.	NA	NA	NA	NA	To fully mitigate impacts to chaparral would require the following three measures: (1) The level of conservation in the Southern FPA area designated for 25% conservation will be significantly increased, and any development will be located in the least sensitive area, while significantly minimizing the linear feet of edge and significantly reducing the number and extent of constriction areas

**EXECUTIVE SUMMARY**

Impact	Mitigation Measures								
	Alternatives				Subarea Plans				
	FPA 1	FPA 2	BCLA 3	No Action/No Project <sup>(3)</sup>	Carlsbad	Encinitas	Escondido	Oceanside	San Marcos
									<p>within the larger block of chaparral habitat designated for 100% preservation.</p> <p>(2) All resulting impacts to chaparral in the Southern FPA area designated for 25% conservation will be mitigated pursuant to the Subarea Plan “Mitigation Ratios for Impacts to Subarea Plan Species” Table on Page 71.</p> <p>(3) Increase the level of conservation in the Southern FPA area designated for 60%</p>

**Table ES-3, Summary of Mitigation Measures for Significant Impacts (continued)**

Impact	Mitigation Measures								
	Alternatives				Subarea Plans				
	FPA 1	FPA 2	BCLA 3	No Action/No Project	Carlsbad	Encinitas	Escondido	Oceanside	San Marcos
									<p>conservation to 75% conservation, and any development will be located in the least sensitive area while minimizing linear feet of edge and areas of constriction.</p> <p>Increasing the preservation of chaparral in the 25% conservation area is infeasible, because of previous commitments in an existing development agreement.</p> <p>Provision of 50 acres of chaparral conservation through preservation or restoration to achieve a 50% conservation ratio within the Southern FPA; this is feasible and will partially mitigate impacts to chaparral (not to below a level of significance).</p>

**EXECUTIVE SUMMARY**

Impact	Mitigation Measures								
	Alternatives				Subarea Plans				
	FPA 1	FPA 2	BCLA 3	No Action/No Project	Carlsbad	Encinitas	Escondido	Oceanside	San Marcos
Inadequate (significant) conservation of coastal sage scrub/chaparral mix	NA	NA	N/A	Prepare an integrated habitat conservation plan, providing for the conservation of sensitive communities, habitats, and species.	Preservation of 400-500 acres of contiguous coastal sage scrub in the area referred to as the unincorporated County gnatcatcher core.	NA	NA	NA	NA
Inadequate (significant) conservation of grasslands	Provide conservation of an additional 30% of the grasslands in a consolidated preservation program. This mitigation is deemed infeasible, because of the associated impacts to population/housing. Alternatively, USFWS/CDFG can not issue take authorizations for grasslands and associated species.	N/A	Prepare an integrated habitat conservation plan, providing for the conservation of sensitive communities, habitats, and species.	Provide conservation of an additional 30% of the grasslands in a consolidated preservation program. This mitigation is deemed infeasible, because of the associated impacts to population/housing. Alternatively, USFWS/CDFG cannot issue take authorizations for grasslands and associated species.					

**Table ES-3, Summary of Mitigation Measures for Significant Impacts (continued)**

Impact	Alternatives			Mitigation Measures					
	FPA 1	FPA 2	BCLA 3	No Action/No Project	Carlsbad	Encinitas	Escondido	Oceanside	San Marcos
Reduce the number of the following species defined as endangered, threatened, or rare (15065 CEQA)									
Summer-holly		The only mitigation is avoidance of impacts, since transplantation or revegetation is speculative at this time.		Prepare an integrated habitat conservation plan, providing for the conservation of sensitive communities, habitats, and species.					The only mitigation is avoidance of impacts, since transplantation or revegetation is speculative at this time.
Blochman's dudleya		The only mitigation is avoidance of impacts, since transplantation or revegetation is speculative at this time.		Prepare an integrated habitat conservation plan, providing for the conservation of sensitive communities, habitats, and species.					The only mitigation is avoidance of impacts, since transplantation or revegetation is speculative at this time.
Sticky dudleya		The only mitigation is avoidance of impacts, since transplantation or revegetation is speculative at this time.		Prepare an integrated habitat conservation plan, providing for the conservation of sensitive communities, habitats, and species.					The only mitigation is avoidance of impacts, since transplantation or revegetation is speculative at this time.
Nuttall's scrub oak		The only mitigation is avoidance of impacts, since transplantation or revegetation is speculative at this time.		Prepare an integrated habitat conservation plan, providing for the conservation of sensitive communities, habitats, and species.					The only mitigation is avoidance of impacts, since transplantation or revegetation is speculative at this time.

**EXECUTIVE SUMMARY**

Impact	Mitigation Measures							
	Alternatives			Subarea Plans				
FPA 1	FPA 2	BCLA 3	No Action/No Project	Carlsbad	Encinitas	Escondido	Oceanside	San Marcos
Parry's tetracoccus	The only mitigation is avoidance of impacts, since transplantation or revegetation is speculative at this time.		Prepare an integrated habitat conservation plan, providing for the conservation of sensitive communities, habitats, and species.	The only mitigation is avoidance of impacts, since transplantation or revegetation is speculative at this time.				
San Diego horned lizard	The only mitigation is avoidance, since there is no known measure to increase the population numbers of this species.		Prepare an integrated habitat conservation plan, providing for the conservation of sensitive communities, habitats, and species.	The only mitigation is avoidance of impacts, since transplantation or revegetation is speculative at this time.				
Orange-throated whiptail	The only mitigation is avoidance, since there is no known measure to increase the population numbers of this species.		Prepare an integrated habitat conservation plan, providing for the conservation of sensitive communities, habitats, and species.	The only mitigation is avoidance of impacts, since transplantation or revegetation is speculative at this time.				

**Table ES-3, Summary of Mitigation Measures for Significant Impacts (continued)**

Impact	Mitigation Measures								
	Alternatives				Subarea Plans				
	FPA 1	FPA 2	BCLA 3	No Action/No Project	Carlsbad	Encinitas	Escondido	Oceanside	San Marcos
Northern harrier	Preservation of grassland habitats in areas that support this species is considered infeasible, due to the associated impacts to population and housing.		NA	Prepare an integrated habitat conservation plan, providing for the conservation of sensitive communities, habitats, and species.	Preservation of grassland habitats in areas that support this species is considered infeasible, due to the associated impacts to population and housing.				
Burrowing owl	Preservation of grassland habitats in areas that support this species is considered infeasible, due to the associated impacts to population and housing.		NA	Prepare an integrated habitat conservation plan, providing for the conservation of sensitive communities, habitats, and species.	Preservation of grassland habitats in areas that support this species is considered infeasible, due to the associated impacts to population and housing.				

**EXECUTIVE SUMMARY**

Impact	Mitigation Measures								
	Alternatives				Subarea Plans				
	FPA 1	FPA 2	BCLA 3	No Action/No Project	Carlsbad	Encinitas	Escondido	Oceanside	San Marcos
Coastal California gnatcatcher	Preservation of 400-500 acres of contiguous coastal sage scrub in the area designated as the unincorporated County gnatcatcher core.	NA	NA	Prepare an integrated habitat conservation plan, providing for the conservation of sensitive communities, habitats, and species.	NA	NA	NA	NA	NA
Grasshopper sparrow	Preservation of grassland habitats in areas that support this species is considered infeasible, due to the associated impacts to population and housing.		NA	Prepare an integrated habitat conservation plan, providing for the conservation of sensitive communities, habitats, and species.	Preservation of grassland habitats in areas that support this species is considered infeasible, due to the associated impacts to population and housing.				
Tricolored blackbird	Preservation of grassland habitats in areas that support this species is considered infeasible, due to the associated impacts to population and housing.		NA	Prepare an integrated habitat conservation plan, providing for the conservation of sensitive communities, habitats, and species.	Preservation of grassland habitats in areas that support this species is considered infeasible, due to the associated impacts to population and housing.				

Table ES-3, Summary of Mitigation Measures for Significant Impacts (continued)

Impact	Mitigation Measures									
	Alternatives				Subarea Plans					
	FPA 1	FPA 2	BCLA 3	No Action/No Project	Carlsbad	Encinitas	Escondido	Oceanside	San Marcos	
Significant increase in average density of 5% in MHCP (10% within Subarea Plan)	NA	NA	Provide for the lost residential uses through adoption of General Plan Amendments within the City increasing the densities, which would then result in significant land use infrastructure impacts, <u>OR</u> reduce the conservation level below a 5% increase. Implementation of this mitigation is essentially adoption of the preferred project.	NA	NA	NA	NA	NA	NA	Provide for the lost residential uses through adoption of General Plan Amendments within the City increasing the densities, which would then result in significant land use/infrastructure impacts, <u>OR</u> reduce the conservation level below a 10% increase. Reducing the conservation level below a 10% increase would result in greater impacts to biological resources; thus, it does not meet the objectives of the MHCP/Subarea Plan.
Significant shift (10%) of future employment in MHCP (20% within Subarea Plan)	NA	NA	Provide for the lost employment opportunities through adoption of General Plan Amendments with the City, which would then result in impacts to housing, land use, and infrastructure, <u>OR</u> reduce the	NA	NA	NA	NA	NA	NA	NA

**EXECUTIVE SUMMARY**

Impact	Mitigation Measures								
	Alternatives				Subarea Plans				
	FPA 1	FPA 2	BCLA 3	No Action/No Project	Carlsbad	Encinitas	Escondido	Oceanside	San Marcos
			conservation level to below 10%. Implementation of this mitigation is essentially adoption of the preferred project.						

- (1) Many of the impacts to biological resources have been avoided through project design features. As such, these measures are not identified as mitigation.
- (2) NA, Not Applicable, indicates that no significant impacts were identified for that alternative, no mitigation was required.
- (3) Significant impacts were identified for all sensitive communities, habitats, and most species. The “Integrated Habitat Conservation Plan” would be applicable to all of these impacts.

With respect to effects on designated important farmlands, this Joint EIS/EIR concludes that flexibility has been incorporated into the proposed MHCP Plan and Subarea Plans to minimize or avoid impacts. The MHCP specifically notes that “the MHCP recognizes the importance of some agricultural lands as wildlife habitat and considers agricultural activities to be compatible adjacent to preserve areas. The MHCP will not impose new regulations on existing agricultural activities nor attempt to displace existing agriculture.” Thus, existing agricultural activities can be maintained. Nothing regarding the Plan will adversely affect the ongoing operations. Expansion of agricultural activities will be required to undergo the same evaluation by the cities and mitigation as any “development” project. Each city has clearing and grubbing ordinances that regulate the clearing of land for future agricultural uses. No significant impacts are anticipated.

With respect to direct and indirect effects on adjacent existing and planned land uses, this Joint EIS/EIR concludes that flexibility has been incorporated into the proposed MHCP Plan and Subarea Plans to minimize or avoid impacts. No significant impacts are anticipated.

With respect to conversion of land with the potential for sand and gravel resources, this Joint EIS/EIR concludes that flexibility has been incorporated into the proposed MHCP Plan and Subarea Plans to minimize or avoid impacts. The MHCP preserve management and monitoring program specifically addresses mining operations. “The MHCP Plan does not impose any new regulations on owners or operators of existing mining operations.” New or expanded mines are generally considered incompatible with the MHCP preserve goals for covered species; however, if an agreement is made with wildlife agencies at the time of conversion, there is the possibility of new or expanded mining operations.

### **Biological Resources**

The Joint EIS/EIR has concluded that implementation of the various alternatives will result in significant unavoidable impacts.

Because the project has the potential to “... cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of an endangered, rare or threatened species ...” a significant impact to some biological resources will occur [CEQA Guidelines Section 15065(a)].

Table ES-4, “Summary of Biological Resources – Significance of Impacts for Each Alternative”, provides a synopsis of the specific vegetation communities, sensitive habitats,

**Table ES-4  
Summary of Biological Resources  
Significance of Impacts for Each Alternative**

Resource	Status (1)	FPA 1***	FPA 2***	BCLA***	No Project***
<b><i>Vegetation Communities*/** (2)</i></b>					
Coastal Sage Scrub (CSS)		Significant, unmitigated			Significant, unmitigated
Chaparral					Significant, unmitigated
CSS/Chaparral Mix		Significant, unmitigated			Significant, unmitigated
Grassland		Significant, unmitigated	Significant, unmitigated		Significant, unmitigated
<b><i>Sensitive Habitats*/** (3)</i></b>					
Coastal Sage Scrub (CSS)		Significant, unmitigated			Significant, unmitigated
CSS/Chaparral Mix		Significant, unmitigated			Significant, unmitigated
Grassland		Significant, unmitigated	Significant, unmitigated		Significant, unmitigated
Marshes					Significant, unmitigated
Riparian Habitats					Significant, unmitigated
Scrub					Significant, unmitigated
Woodland					Significant, unmitigated
<b><i>Sensitive Plant Species*/**</i></b>					
San Diego thorn-mint	FT/CE				Significant, unmitigated
San Diego ambrosia	PE				Significant, unmitigated
Del Mar manzanita	FSC*				Significant, unmitigated
Encinitas baccharis	FE				Significant, unmitigated
Thread leaved brodiaea	FT/CE				Significant, unmitigated
Wart-stemmed ceanothus	FSC*				Significant, unmitigated
Orcutt's spineflower	FE/CE				Significant, unmitigated
Summer-holly	FSC*	Significant, unmitigated	Significant, unmitigated	Significant, unmitigated	Significant, unmitigated
Del Mar Mesa sand aster	FSC*				Significant, unmitigated
Blochman's dudleya	FSC*	Significant, unmitigated	Significant, unmitigated	Significant, unmitigated	Significant, unmitigated
Short-leaved dudleya	FSC**/CE			Significant, unmitigated	Significant, unmitigated
Variiegated dudleya	FSC*	Significant, unmitigated	Significant, unmitigated	Significant, unmitigated	Significant, unmitigated
Sticky dudleya	FSC*	Significant, unmitigated	Significant, unmitigated	Significant, unmitigated	Significant, unmitigated
San Diego button-celery	FE/CE				Significant, unmitigated
Cliff spurge	None				Significant, unmitigated
San Diego barrel cactus	FSC*				Significant, unmitigated
Orcutt's hazardia	FSC*				Significant, unmitigated
San Diego marsh elder	FSC*				Significant, unmitigated
Nuttall's lotus	FSC*				Significant, unmitigated
Little mousetail	FSC*				Significant, unmitigated

**ENVIRONMENTAL CONSEQUENCES**

**Table ES-4, Summary of Biological Resources Significance of Impacts for Each Alternative (continued)**

<b>Resource</b>	<b>Status (1)</b>	<b>FPA 1***</b>	<b>FPA 2***</b>	<b>BCLA***</b>	<b>No Project***</b>
Spreading navarretia	PT				Significant, unmitigated
California orcutt grass	FE/CE				Significant, unmitigated
Torrey pine	FSC*				Significant, unmitigated
Nuttall's scrub oak	FSC*	Significant, unmitigated	Significant, unmitigated	Significant, unmitigated	Significant, unmitigated
Englemann oak	None				Significant, unmitigated
Parry's tetraococcus	FSC*	Significant, unmitigated	Significant, unmitigated	Significant, unmitigated	Significant, unmitigated
<b><i>Sensitive Animal Species</i></b>					
Riverside fairy shrimp	FE				Significant, unmitigated
San Diego fairy shrimp	FE				Significant, unmitigated
Harbison's dun skipper	FSC*				Significant, unmitigated
Hermes copper	FSC*				Significant, unmitigated
Quino checkerspot	FE				Significant, unmitigated
Western spadefoot toad	CSC				Significant, unmitigated
Arroyo southwestern toad	FE/CSC				Significant, unmitigated
Southwestern pond turtle	FSC*/CSC				Significant, unmitigated
San Diego horned lizard	FSC*/CSC	Significant, unmitigated	Significant, unmitigated	Significant, unmitigated	Significant, unmitigated
Orange-throated whiptail	FSC*/CSC	Significant, unmitigated	Significant, unmitigated	Significant, unmitigated	Significant, unmitigated
White-faced ibis	FSC*/CSC				Significant, unmitigated
Northern harrier	CSC	Significant, unmitigated	Significant, unmitigated		Significant, unmitigated
Cooper's hawk	CSC				Significant, unmitigated
Golden eagle	BEPA/CSC				Significant, unmitigated
Peregrine falcon	CE				Significant, unmitigated
Burrowing owl	FSC*/CSC	Significant, unmitigated	Significant, unmitigated		Significant, unmitigated
Southwestern willow flycatcher	FE/CE				Significant, unmitigated
Coastal cactus wren	FSC*/CSC				Significant, unmitigated
Coastal California gnatcatcher	FT/CSC	Significant, unmitigated			Significant, unmitigated
Western bluebird	None				Significant, unmitigated
Least bell's vireo	FE/CE				Significant, unmitigated
Yellow-breasted chat	CSC				Significant, unmitigated
Rufous-crowned sparrow	FSC*/CSC				Significant, unmitigated
Belding's savannah sparrow	FSC*/CE				Significant, unmitigated
Grasshopper sparrow	None	Significant, unmitigated	Significant, unmitigated		Significant, unmitigated
Tricolored blackbird	FSC*	Significant, unmitigated	Significant, unmitigated		Significant, unmitigated
Stephens' kangaroo rat	FE/CT				Significant, unmitigated
Pacific pocket mouse	FE/CSC				Significant, unmitigated

**ENVIRONMENTAL CONSEQUENCES**

**Table ES-4, Summary of Biological Resources Significance of Impacts for Each Alternative (continued)**

<b>Resource</b>	<b>Status (1)</b>	<b>FPA 1***</b>	<b>FPA 2***</b>	<b>BCLA***</b>	<b>No Project***</b>
San Diego black-tailed jackrabbit	FSC*/CSC				<b>Significant, unmitigated</b>
Mountain lion	CA protected				<b>Significant, unmitigated</b>
Southern mule deer	CA game species				<b>Significant, unmitigated</b>

Notes: \* Other communities, habitats, or species not found to be significant are not listed.

\*\* Provides a summary of this category's significance.

\*\*\* If column is blank, impact not significant.

(1) Status:

FE = Federally endangered

PE = Proposed for federal listing as endangered

FT = Federally threatened

PT = Proposed for federal listing as threatened

C = Candidate for federal listing

BEPA = Bald Eagle Protection Act

CE = State endangered

CT = State threatened

CSC = State Species of Special Concern

FSC\* = Federal Species of Concern; formerly Category 2 or 3 candidate or proposed for federal listing

FSC\*\* = Federal Species of Concern; proposed rule to list as endangered or threatened has been withdrawn

protected = moratorium on hunting

None = no federal or state status

(2) The EIS/EIR has addressed a variety of habitats and species; however, ultimately coverage will likely not be extended to all species (e.g., grasslands and burrowing owls).

(3) MHCP requires no net loss to riparian/marsh habitats.

and sensitive plant and animal species for which “significance” was determined under each of the four alternatives. This analysis includes preservation, direct impacts resulting from issuance of incidental take permits, and indirect impacts of directing development into nonsensitive areas. Some of the species will not be covered under FPA 2, the proposed project, because adequate conservation levels have not been achieved.

### **Regional Transportation and Circulation**

This Joint EIS/EIR concludes that existing and future regional and local circulation networks can be implemented through design guidelines incorporated into the proposed MHCP Plan and Subarea Plans. This will minimize or avoid impacts to regional transportation and circulation. Indirect impacts resulting from issuance of incidental take permits will not change impacts resulting from any of the alternatives (including No Action/No Project). Because development has been anticipated based upon the General Plans and evaluated as part of the Regional Transportation Plan (RTP), increased traffic resulting from this development has already been assumed. Each city’s Circulation Network, SANDAG’s RTP, and future discretionary actions analyze the direct and indirect impacts to the circulation network. Traffic generation will occur under any of the alternatives, requiring implementation of the planned improvements (as analyzed for the Circulation Elements and SANDAG’s RTP). No significant impacts have been identified for the proposed project or the alternatives. It is assumed that for any of the alternatives (FPA 1, FPA 2, BCLA, or No Action/No Project), the regional and local circulation will be built in accordance with the existing General Plans and the RTP.

### **Public Services and Utilities**

This Joint EIS/EIR concludes that public services and utilities can be constructed using the design guidelines established in the proposed MHCP Plan and Subarea Plans. This will minimize or avoid impacts to regional public services and utilities. It is assumed that the cities’ Master Plans for public services and utilities will be required for any of the alternatives. These facilities have been evaluated during the adoption of the respective Master Plans. Similar to the impacts related to the Regional Transportation and Circulation issue, issuance of the incidental take permits has been assumed and would occur for any of the alternatives (including No Action/No Project). Master Plans have assumed this development and include the provision of services concurrent with demand. Therefore, no significant impacts have been identified for the proposed project or alternatives.

## **Population and Housing**

Three issues were analyzed in the population/housing section: (1) effects of proposed project on planned residential land uses in the region; (2) effects of proposed project on the residential density in the MHCP study area; and (3) effects of proposed project on future employment. These three issues were analyzed for the overall MHCP Plan and also for the individual jurisdiction Subarea Plans. Table ES-2 summarizes the findings of this Joint EIS/EIR.

With respect to effects on planned residential land use and density (Issues 1 and 2), the analysis presented in this Joint EIS/EIR concludes that implementation of the overall MHCP Plan will not significantly affect planned residential land use in the region. BCLA Alternative 3 is significant at the plan level, as average residential density will be increased from a current projection of 5.5 units per acre to 6.1 units per acre at implementation. Although the new density will be approximately equal to the average density that prevailed in 1995, it should be recognized that much of the development is associated with parcels on the outer parts of the cities. The core areas of the cities (where densities are generally higher) have already been developed. The outer parcels, although the proposed density would be similar to earlier projects, have been planned for lower density.

With respect to employment, the analysis presented in this Joint EIS/EIR concludes that implementation of BCLA Alternative 3 will have a significant impact at the overall MHCP Plan level. The proposed levels of conservation will reduce new commercial and industrial developments between 1995 and 2020 by nearly 600 acres, from 15,723 to 15,126 acres. This reduction of 11.5% from that forecast by SANDAG represents a significant impact.

## **SUBAREA PLANS**

A summary of the significance of impacts for each of the Subarea Plans is provided in Table ES-5. The Subarea Plans implement Alternative No. 2 – the preferred project.

### **Carlsbad**

No significant impacts were noted for any regional transportation, public services and utilities, or population and housing. However, a significant and mitigable impact related to

Table ES-5  
Significance for Each Subarea Plan

Impact Category and Issue	Carlsbad	Encinitas	Escondido	Oceanside	San Marcos
<b>Land Use</b>					
Will the proposed project result in a land use which is inconsistent with the environmental goals of the General Plan and Community Plans of the jurisdictions participating in the MHCP Plan?	Significant, mitigated	Significant, mitigated	Significant, mitigated	Significant, mitigated	Significant, mitigated
Will the proposed project conflict with adjacent existing and planned land uses, as determined by using the Guidelines for Compatible Land Use, Preserve Management, and Monitoring found in Chapter 6 of the MHCP Plan, as well as the individual Subarea Plans?	Less than significant	Less than significant	Less than significant	Less than significant	Less than significant
Will the proposed project cause conversion of vacant land considered to be of Prime Importance, Statewide Importance, Local Importance, Unique, or Grazing Lands by the California Department of Conservation Important Farmland Mapping Program?	Less than significant	Less than significant	Less than significant	Less than significant	Less than significant
Will the proposed project adversely impact extraction of sand and gravel resources?	Less than significant	Less than significant	Less than significant	Less than significant	Less than significant
<b>Biology<sup>1</sup></b>					
Will the proposed project result in significant impacts to vegetation communities?	<b>Significant, unmitigated</b> for coastal sage scrub/chaparral mix	Less than significant	Less than significant	<b>Significant, unmitigated</b> for grasslands	<b>Significant, unmitigated</b> for grasslands and chaparral

<sup>1</sup> The EIS/EIR has addressed a variety of habitats and species; however, ultimately coverage will likely not be extended to all species (e.g., grasslands and burrowing owls).

**ENVIRONMENTAL CONSEQUENCES**

**Table ES-5, Significance for Each Subarea Plan (continued)**

<b>Impact Category and Issue</b>	<b>Carlsbad</b>	<b>Encinitas</b>	<b>Escondido</b>	<b>Oceanside</b>	<b>San Marcos</b>
Will the proposed project result in significant impacts to sensitive habitats?	<b>Significant, unmitigated</b> for coastal sage scrub/chaparral mix and grasslands	Less than significant	Less than significant	<b>Significant, unmitigated</b> for grasslands	<b>Significant, unmitigated</b> for grasslands and chaparral
Will the proposed project result in significant impacts to sensitive species?	<b>Significant, unmitigated</b> for aphanisma, Orcutt's brodiaea, San Diego goldenstar, northern harrier, burrowing owl, grasshopper sparrow, and tricolored blackbird	<b>Significant, unmitigated</b> for aphanisma, Orcutt's brodiaea, and San Diego goldenstar	<b>Significant, unmitigated</b> for San Diego goldenstar	<b>Significant, unmitigated</b> for aphanisma, Orcutt's brodiaea, and San Diego goldenstar	<b>Significant, unmitigated</b> for Orcutt's brodiaea, variegated dudleya, San Diego goldenstar, northern harrier, burrowing owl, grasshopper sparrow, and tricolored blackbird
<b><i>Regional Transportation and Circulation</i></b>					
Will implementation of the alternative result in significant impacts to the transportation and circulation network?	Less than significant	Less than significant	Less than significant	Less than significant	Less than significant
<b><i>Public Services and Utilities</i></b>					
Will implementation of the alternative result in significant impacts to public services or utilities?	Less than significant	Less than significant	Less than significant	Less than significant	Less than significant

**ENVIRONMENTAL CONSEQUENCES**

**Table ES-5, Significance for Each Subarea Plan (continued)**

<b>Impact Category and Issue</b>	<b>Carlsbad</b>	<b>Encinitas</b>	<b>Escondido</b>	<b>Oceanside</b>	<b>San Marcos</b>
<b><i>Population and Housing</i></b>					
Will the proposed project cause a shift of greater than 20 percent of the forecast increase in residential units between 1995 and 2020 in the Subarea Plan study area from within the preserve boundary to locations outside?	Less than significant				
Will the proposed project cause an increase in average residential density in the Subarea Plan study area of greater than 10 percent above average density which is forecast to prevail in 2020 without the project?	Less than significant	Less than significant	Less than significant	Less than significant	Significant, unmitigated
Will the proposed project cause a shift in greater than 20 percent of future employment in the Subarea Plan study area from within the preserve boundary to locations outside?	Less than significant				

inconsistencies with the Proposed Project and the General Plan of the City exists. Significant and unmitigated impacts were identified for vegetation communities, sensitive habitats, and sensitive species. (Table ES-6 details the specific issues.)

**Encinitas**

No significant impacts were noted for any regional transportation, vegetation communities, sensitive habitats, public services and utilities, or population and housing. However, a significant and mitigable impact related to inconsistencies with the Proposed Project and the policies contained in the General Plan of the City exists. Significant and unmitigated impacts were identified for sensitive species. (Table ES-6 details the specific issues.)

**Escondido**

No significant impacts were noted for any vegetation communities, sensitive habitats, regional transportation, public services and utilities, or population and housing. However, a significant and mitigable impact related to inconsistencies with the Proposed Project and the General Plan of the City exists. Significant and unmitigated impacts were identified for sensitive species. (Table ES-6 details the specific issues.)

**Oceanside**

No significant impacts were noted for regional transportation, public services and utilities, or population and housing. However, a significant and mitigable impact related to inconsistencies with the Proposed Project and the General Plan of the City exists. Significant and unmitigated impacts were identified for vegetation communities, sensitive habitats, and sensitive species. (Table ES-6 details the specific issues.)

**San Marcos**

No significant impacts were noted for any regional transportation, public services and utilities, or population and housing. However, a significant and mitigable impact related to inconsistencies with the Proposed Project and the General Plan of the City exists. Significant and unmitigated impacts were identified for vegetation communities, sensitive habitats, and sensitive species. Impacts to chaparral were found to be significant and partially mitigated. (Table ES-6 details the specific issues.)

**Table ES-6  
Summary of Biological Resources Significance of Impacts for Each Subarea Plan**

MHCP Plan Level	Status(1)	Carlsbad***(2)	Encinitas***(2)	Escondido***(2)	Oceanside***(2)	San Marcos***(2)
<b>Vegetation Communities*/**</b>		<b>Significant, unmitigated</b>	<i>Less than significant</i>	<i>Less than significant</i>	<b>Significant, unmitigated</b>	<b>Significant, unmitigated</b>
CSS/Chaparral Mix		<b>Significant, unmitigated</b>				
Chaparral						<b>Significant, unmitigated</b>
Grasslands		<b>Significant, unmitigated</b>			<b>Significant, unmitigated</b>	<b>Significant, unmitigated</b>
<b>Sensitive Habitats*/**(3)</b>		<b>Significant, unmitigated</b>	<i>Less than significant</i>	<i>Less than significant</i>	<b>Significant, unmitigated</b>	<b>Significant, unmitigated</b>
Coastal sage scrub/ chaparral mix		<b>Significant, unmitigated</b>				
Chaparral						<b>Significant, unmitigated</b>
Grasslands		<b>Significant, unmitigated</b>			<b>Significant, unmitigated</b>	<b>Significant, unmitigated</b>
<b>Sensitive Plant Species*/**</b>						
Orcutt's spineflower	FE/CE		Not applicable ++			
Variegated dudleya	FSC*					<b>Significant, unmitigated</b>
Cliff spurge	FSC*			Not applicable ++		Not applicable ++
Torrey pine	FSC*			Not applicable ++	Not applicable ++	Not applicable ++
Englemann oak	None		Not applicable ++		Not applicable ++	
Parry's tetradococcus	FSC*		Not applicable ++		Not applicable ++	
<b>Sensitive Animal Species */**</b>						
Salt marsh skipper	FSC*			Not applicable ++		Not applicable ++
San Diego horned lizard	FSC*/CSS		Not applicable ++			
California brown pelican	FE/CE			Not applicable ++		Not applicable ++
Northern harrier	CSC	<b>Significant, unmitigated</b>	Not applicable ++			<b>Significant, unmitigated</b>
Light-footed clapper rail	FE/CE			Not applicable ++		Not applicable ++
Western snowy plover	FT/CSC			Not applicable ++		Not applicable ++
Elegant tern	FSC*/CSC			Not applicable ++		Not applicable ++
California least tern	FE/CE			Not applicable ++		Not applicable ++
Burrowing owl	FSC*/CSC	<b>Significant, unmitigated</b>				<b>Significant, unmitigated</b>
Belding's savannah sparrow	FSC*/CE		Not applicable ++	Not applicable ++		Not applicable ++
Large-billed savannah sparrow	FSC*/CE			Not applicable ++	Not applicable ++	Not applicable ++

**ENVIRONMENTAL CONSEQUENCES**

**Table ES-6, Summary of Biological Resources of Impacts for Each Subarea Plan (continued)**

<b>MHCP Plan Level</b>	<b>Status(1)</b>	<b>Carlsbad***(2)</b>	<b>Encinitas***(2)</b>	<b>Escondido***(2)</b>	<b>Oceanside***(2)</b>	<b>San Marcos***(2)</b>
Grasshopper sparrow	None	<b>Significant, unmitigated</b>	Not applicable ++			<b>Significant, unmitigated</b>
Tricolored blackbird	FSC*	<b>Significant, unmitigated</b>	Not applicable ++			<b>Significant, unmitigated</b>

Notes: \* Other communities, habitats, or species not found to be significant are not listed.

\*\* Provides a summary of this category's significance.

\*\*\* If column is blank, impact is not significant.

++ Not applicable status applies to species that are highly unlikely to occur in a given area. For example, coastal Torrey pines being located in inland San Marcos.

(1) Status:

FE = Federally endangered

FT = Federally threatened

CE = State endangered

CSC = State Species of Special Concern

FSC\* = Federal Species of Concern; formerly Category 2 or 3 candidate or proposed for federal listing

None = no federal or state status

(2) The EIS/EIR has addressed a variety of habitats and species; however, coverage will likely not be extended to species associated with grasslands such as burrowing owl.

(3) MHCP requires no net loss to riparian/marsh habitats.

## **1.0 PURPOSE AND NEED FOR ACTION**

This document has been prepared as a joint Environmental Impact Statement/Environmental Impact Report (EIS/EIR) due to the combined local, state, and federal actions associated with the proposed project. Co-lead agencies are the San Diego Association of Governments (SANDAG), pursuant to the California Environmental Quality Act (CEQA), and the United States Fish and Wildlife Service (USFWS), pursuant to the National Environmental Policy Act (NEPA), as described in further detail in Section 1.2, Purpose and Need for Action. Each city is a responsible agency for its own Subarea Plan pursuant to CEQA. A consistent format has been established for the environmental consequences section of this joint EIS/EIR to assist the reader in reviewing and understanding the implications of the project and alternatives.

### **1.1 INTRODUCTION**

The federal action requiring NEPA is the issuance of incidental take permits, based upon the submission of the habitat conservation plans meeting the requirements of Section 10(a) of the Endangered Species Act. The state action requiring CEQA includes issuance of the incidental take authorizations (California Endangered Species Act) based upon submission of the Habitat Conservation Plans (HCPs) meeting the requirements under Section 2800 et seq. for listed and nonlisted species conserved under a Natural Community Conservation Plan (NCCP). The HCPs are referred to as the City's Subarea Plan.

This joint EIS/EIR evaluates the potential for environmental effects from the proposed action, which is the adoption of a Multiple Habitat Conservation Program (MHCP) and five Subarea Plans, and issuance of incidental take permits. This EIS/EIR has been prepared in compliance with NEPA as implemented by Council on Environmental Quality Regulations (Title 40 Code of Federal Regulations [CFR] Parts 1500-1508) and CEQA (California Public Resources Code Section 21000 et seq.). Joint environmental documents are permitted and encouraged under both NEPA (Section 1506.4) and CEQA (Section 21083.5). For this joint document, both CEQA and NEPA terminology is provided, generally with CEQA being listed first.

The MHCP Plan is a comprehensive multiple-jurisdictional planning program designed to create, manage, and monitor an ecosystem preserve in northwestern San Diego County. The

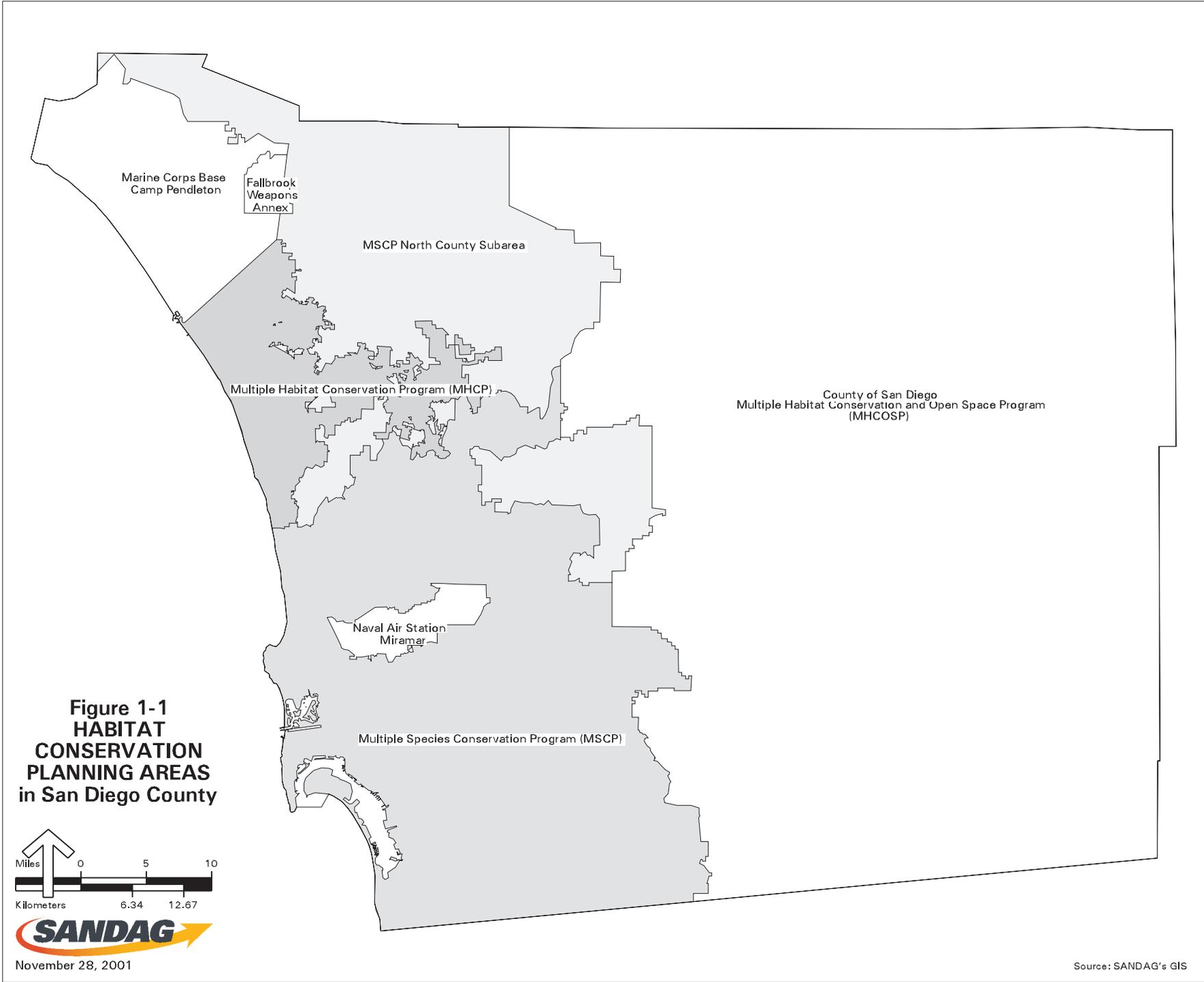
MHCP Plan is one of several Habitat Conservation Planning Areas in San Diego County (Figure 1-1). The MHCP Plan encompasses 175 square miles comprising 7 incorporated cities (Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista). These jurisdictions will implement their respective portions of the MHCP Plan through citywide “Subarea” Plans, which describe the specific mechanisms each city will use to implement the MHCP Plan. It is important to note that seven cities are participating in the MHCP; however, only five draft Subarea Plans have been prepared at this time, as described further in Section 1.3. Figure 1-2 shows the seven subareas within the MHCP Study area. The combination of the subregional MHCP and city Subarea Plans will serve as a multiple species Habitat Conservation Plan pursuant to Section 10(a) of the federal Endangered Species Act (ESA) and Section 2800 et seq. of the California Fish and Game Code, known as the Natural Community Conservation Planning Act.

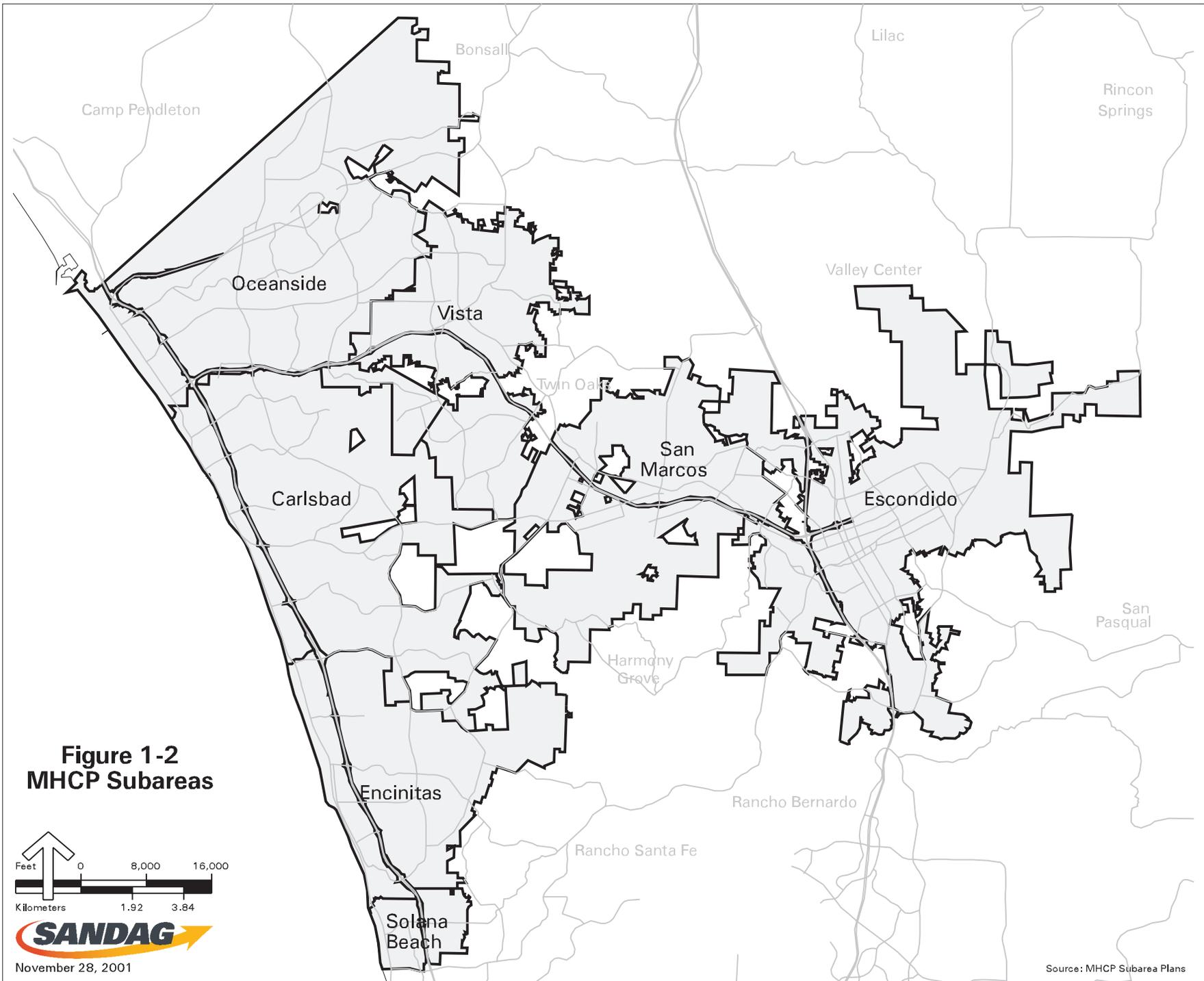
The proposed action includes issuance of citywide permits under Section 10(a) of the federal Endangered Species Act (ESA) for incidental take of threatened or endangered species and allows the inclusion of unlisted species in the permit, so long as conservation actions for these species treat them as if they were listed. The proposed action also includes the incidental take of species listed as rare, threatened, or endangered, as well as unlisted species under Section 2800 et seq. of the Code. This Draft EIS/EIR describes the environment that will be affected by the MHCP and Subarea Plans, and discusses the potential environmental consequences associated with these actions.

### **1.1.1 MHCP Framework**

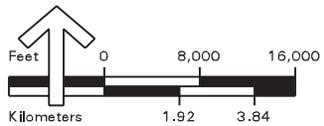
#### **Federal Endangered Species Act**

Section 10(a) of the federal Endangered Species Act (ESA), as amended, specifies the requirements of a Habitat Conservation Plan (HCP). The subregional MHCP and the five Subarea Plans are prepared in accordance with the mandatory requirements of an HCP under this Act. Specifically, Section 10(a) allows for the issuance of permits (by the U.S. Fish and Wildlife Service [USFWS]) for the incidental take of threatened or endangered species and allows the inclusion of nonlisted species as if they were listed. In 1993, the USFWS listed the coastal California gnatcatcher (gnatcatcher) as a threatened species. At that time, the USFWS also proposed a special rule pursuant to Section 4(d) of the Endangered Species Act. In this rule the USFWS defined the conditions under which incidental take of the gnatcatcher, resulting from activities conducted consistent with the State of California Natural Community Conservation Planning (NCCP) program, would not violate Section 9





**Figure 1-2  
MHCP Subareas**



November 28, 2001

Source: MHCP Subarea Plans

(take prohibitions) of the Endangered Species Act. The USFWS finalized this rule in December 1993, and found that implementation of the NCCP program and the special rule will provide for conservation and management for the gnatcatcher habitat in a manner consistent with the purpose of the Endangered Species Act. Under the special rule, incidental take of the gnatcatcher by land-use activities addressed in an approved NCCP plan will not be considered a violation of Section 9 of the Endangered Species Act, provided the Service determines that such a plan meets the issuance criteria for an incidental take permit pursuant to Section 10(a) of the Act. Under the special rule, a limited amount of incidental take of the gnatcatcher within subregions actively engaged in preparing a NCCP plan will also not be considered a violation of Section 9 of the Act, provided the activities are conducted in accordance with the NCCP Conservation Guidelines and Process Guidelines, which were finalized by the California Department of Fish and Game (CDFG). Ultimately, an approved HCP for a subregion (in this case, the MHCP and Subarea Plans within) will replace the interim Section 4(d) rule of the ESA that specifies an interim strategy as defined in CDFG's NCCP Conservation Guidelines and referenced in the special rule for the gnatcatcher regional loss of coastal sage scrub which is in effect until the HCPs are approved and implemented.

Pursuant to Section 10(a) of the Endangered Species Act, for the USFWS to issue an incidental take permit, the Conservation Plans (the MHCP and Subarea Plans in this case) must satisfy four primary standards to be considered for approval by the USFWS. These plans must specify:

- The impacts likely to result from the proposed taking of covered species within the relevant permit areas;
- Measures the “take authorization holder” will undertake to monitor, minimize, and mitigate such impacts and the funding that will be made available to undertake such measures;
- Alternative actions the “take authorization holder” considered that will not result in take, and the reasons why such alternatives are not being utilized; and
- Additional measures the USFWS may require as necessary or appropriate for purposes of the plan.

### **California NCCP Act**

In 1991, the California Legislature enacted the Natural Community Conservation Planning Act (NCCP Act, Fish and Game Code Section 2800 et seq.). This Act allowed for an NCCP Program to provide long-term, regional protection of natural vegetation and wildlife diversity while allowing compatible land uses and appropriate development and growth. The NCCP Program focuses on preservation of an entire ecosystem versus preservation on a species-by-species basis. The NCCP Program at the state level is likened to the federal HCP discussed above. The first ecosystem-based NCCP effort was initiated in 1991 and focused on southern California coastal sage scrub which provides necessary habitat for the federally-listed California gnatcatcher (*Polioptila californica californica*) and more than 50 other potentially threatened or endangered species. This MHCP and the Subarea Plans have been prepared pursuant to the NCCP guidelines and thus meet the requirements of the NCCP Act.

In 1993, the California Department of Fish and Game adopted NCCP Conservation Guidelines. The MHCP was prepared to address the basic tenets of preserve design:

1. **Conserve target species throughout the planning area.** One of the first tasks of the MHCP was to develop a “target” species list which contains species known or likely to occur in the MHCP study area. The list contains species that are listed as rare, threatened, or endangered by the federal and state Environmental Species Acts, as well as species otherwise considered sensitive by wildlife agencies and conservation organizations. This list also includes several more common species that are useful for evaluating preserve design and ecosystem function, such as mountain lion and mule deer.
2. **Larger preserves are better.** The largest remaining blocks of habitat (more than a few hundred acres each) will be substantially conserved, particularly in northeast Escondido (Daley Ranch and Escondido Water District lands), north Oceanside (adjacent to Camp Pendleton), northeast Carlsbad (the Carlsbad Highlands area), and in northern and southwestern San Marcos. In addition, the relatively large blocks of wetland habitats associated with the coastal lagoons are substantially conserved. The MHCP will help conserve a large core area, known as the Gnatcatcher core, contiguous with but outside the study area boundary located in the sphere of influence areas for the cities of San Marcos and Encinitas.
3. **Keep preserve areas close.** The MHCP will conserve and manage the majority (cumulatively, approximately 71%) of the remaining Biological Core and Linkage Area

(BCLA). Because the BCLA was delineated to capture the best remaining habitat areas, including all the largest remaining blocks of habitat and critical linkages between them, it is a relevant model against which to quantitatively compare the proposed preserve configuration. Overall, the MHCP will conserve 66% of the coastal sage scrub, 80% of the coastal sage/chaparral mix, and 100% of riparian and estuarine habitats. Overall, 66% of the habitat in the total MHCP study area will be conserved.

4. **Keep habitat contiguous.** Given the existing high degree of habitat fragmentation in the study area, it is not possible to achieve a biologically ideal preserve design consisting of large contiguous blocks of habitat connected by broad, unbroken landscape linkages. However, the MHCP will conserve as contiguous and functional a preserve system as possible given all of the legal, financial, and physical constraints to preserve design.
5. **Link preserves with corridors.** Most existing landscape linkages that connect the larger preserve blocks, either to each other or to core areas outside of the study area, will be substantially conserved, and some will be enhanced through habitat restoration. East/west linkages, primarily along narrow riparian corridors, will be maintained to most of the coastal lagoons. North/south connectivity across the study area is currently only functional for birds, due to intervening areas of development. The MHCP Plan will allow for continued stepping-stone connectivity north/south across the study area for bird species, including the California gnatcatcher. Restoration of coastal sage scrub in some critical stepping-stone areas is expected to improve functionality of this regionally important north/south linkage.
6. **Preserves should be diverse.** The MHCP preserve will protect 77 plant and animal species within habitat areas grouped according to six principal vegetation communities: wetland/riparian, rare upland, coastal sage scrub, chaparral, grasslands, and “other lands”. “Other lands” include disturbed and agricultural lands, and eucalyptus woodlands. In some cases disturbed or agricultural lands comprise important links or corridors for wildlife movement.
7. **Protect preserves from encroachment.** The MHCP requires the preparation of area-specific management directives to address species and habitat management needs in a phased manner for individual parcels or project areas, once conserved as part of the preserve, including any species-specific management required as conditions of the take authorizations. The framework plan and area-specific management directives will address management and monitoring actions for proposed infrastructure such as roads

and trails, as well as fencing, fire management, interpretive services, signage, and trash and litter removal.

## **Key HCP Elements**

### ***Focused Planning Areas***

The seven jurisdictions within the MHCP subregional area, the San Diego Association of Governments, the USFWS, the CDFG, property owners, developers, and environmental groups have worked together over the last eight years as members of the MHCP Advisory Committee to develop Focused Planning Areas (FPAs) within the overall boundary of the MHCP subregion. The goal of developing the FPAs was to identify planning areas within which land will be dedicated for habitat conservation. Development of FPAs was based primarily upon the following four objectives (Ogden 1998):

- Conserve as much of the most important biological habitat lands remaining in the subregion as possible, in a system that minimizes preserve fragmentation.
- Maximize the inclusion of public lands within the preserve.
- Maximize the inclusion of lands already conserved for conservation purposes, where appropriate.
- Maintain individual property rights and economic viability for the subregion.

The FPAs developed through this ongoing coordination and planning process resulted in two distinct planning areas: “hard-line” preserves which indicate lands that will be conserved and managed for biological resources; and “soft-line” or “standard” areas within which preserve areas will be delineated in the future based upon further data and planning (Ogden 1998). As further discussed in Section 2.3, the FPA alternatives include various preserve designs.

### ***Subarea Plans***

Five of the seven jurisdictions within the overall MHCP boundary have prepared Subarea Plans that describe specific conservation, management, facility siting, land use, and other actions each city will take to implement the goals, guidelines, and standards of the

subregional MHCP. The Subarea Plans also describe how each city will use, or propose to use, their existing plan review and approval process to guarantee funding and implementation of the plans. Consistency between the Subarea Plans and the MHCP Plan is discussed within this EIS/EIR; consistency between the subregional and Subarea Plans is necessary for meeting the requirements of state and federal permits and authorizations for take of species included on the covered species list. In addition to the specific requirements for conservation of hard-line preserve areas, each jurisdiction's Subarea Plan contains written guidelines for preserve design and planning of development and other land uses in the soft-line areas. Guidelines for habitat management, mitigation, interim protection during the planning period, and a process for establishing permanent protection of preserved lands is also addressed for soft-line or standard areas.

### ***Implementing Agreements***

Each Subarea Plan is subject to an Implementing Agreement (IA) which is a contractual obligation between the individual cities, CDFG, and the USFWS. The permits convey take authorizations to the individual cities; the cities approve projects consistent with their permits and Subarea Plans. Refer to Section 2.1 for additional information on IAs.

### **Relationship of MHCP to Other NCCP Efforts**

At approximately the same time that the NCCP Act was enacted in 1991, the City of San Diego Metropolitan Wastewater Department (MWW) initiated a Multiple Species Conservation Plan (MSCP) for a 900-square-mile study area in the southwestern quadrant of San Diego County to address mitigation for planned expansion of the City's sewerage system. The MSCP was defined as a subregional NCCP that addressed conservation of sensitive species and biodiversity throughout the study area. The MSCP Plan constitutes an HCP, pursuant to Section 10(a)(1)(B) of the federal ESA and a subregional plan of the state NCCP Program (City of San Diego 1997). The EIS/EIR for the MSCP was finalized in January 1997; the County of San Diego and the cities of San Diego, Poway, and La Mesa have completed Subarea Plans and have been issued incidental take permits. The cities of Del Mar and Coronado completed Subarea Plans but did not apply for permits.

Another HCP currently ongoing is the County of San Diego North County Subarea Plan of the MSCP in the central and eastern portions of the County. In addition to these three HCPs, habitat conservation through Integrated Resource Management Plans for military lands within San Diego County, including Camp Pendleton, Fallbrook Naval Weapons Station,

MCAS Miramar, and smaller naval bases in Point Loma, North Island, and Silver Strand (Coronado), is ongoing and being planned separately through the Department of Defense as required under the Sikes Act.

Extensive coordination between the various HCP planners/agencies is occurring and is key to addressing the boundaries, continuity of preserve areas, consistency in criteria used, and implementing agreement requirements.

## **1.2 PURPOSE AND NEED FOR THE PROPOSED ACTION**

San Diego County has more rare, threatened, and endangered species than any comparable land area in the United States. On a national scale, it has been identified as a major “hot spot” for biodiversity and species endangerment (Dobson et al. 1997). San Diego County is also one of the most rapidly growing regions of the country. This combination of high biodiversity, large numbers of rare and unique species, and rapid urbanization has led to regionwide conflicts between economic growth and biological conservation. In particular, the 1993 listing of the coastal California gnatcatcher as a federally threatened species required that projects that would result in incidental take of the gnatcatcher get take authorization pursuant to pertinent sections of the Endangered Species Act. The special rule for the gnatcatcher, under Section 4(d) of the federal ESA, allows development consistent with the NCCP to occur. During the period that a NCCP plan is being prepared, incidental take of the gnatcatcher will not be a violation of the ESA if such take occurs within an area under the jurisdiction of a local government agency that is enrolled and actively engaged in the preparation of an NCCP plan and the activities are conducted in accordance with the NCCP Conservation Guidelines and Process Guidelines.

The traditional project-by-project process for resolving conflicts between species preservation and development is costly from a dollar and schedule standpoint. Moreover, this piecemeal process results in uncoordinated preservation of scattered habitat areas set aside as mitigation for individual project impacts. These generally small, unconnected habitat areas do not necessarily guarantee the continued viability of species populations or ecosystem functions, which generally depend on large, interconnected habitat areas designed and managed in a coordinated manner. The MHCP Plan replaces this piecemeal approach to project approval and mitigation with a coordinated, comprehensive approach based on the basic convictions of biological preserve design. This approach ensures that project mitigation is directed to those areas most critical to maintenance of ecosystem function and

## ***PURPOSE AND NEED FOR ACTION***

---

species viability. The goal of the MHCP Plan is to target the highest quality habitats for preservation, while allowing development of less important habitat areas (Ogden 1998).

The Endangered Species Act is intended to identify species needing protection, means to determine the type of protective measures needed, and enforcement measures. The Secretaries of the Interior (through the U.S. Fish and Wildlife Service) and Commerce (National Marine Fisheries Service, NMFS) are responsible for implementing the ESA. There are four major sections that provide the structure of the ESA.

- Section 4 contains the listing process, requirements for listing of “critical habitat”, and requirements for preparation of recovery plans.
- Section 7 requires all federal agencies to consult with USFWS or NMFS before taking any action which may affect a listed species to ensure that the action will not jeopardize the continued existence of the species.
- Section 9 prohibits the taking of a listed species.
- Section 10 provides for incidental take permits for listed species by nonfederal entities.

The ESA provides for a process in which species are reviewed to determine if they are to be listed and receive protection under the ESA. If a species is listed, the ESA mandates that critical habitat be designated and a recovery plan prepared. The goal of the recovery plan is to recover that species to such an extent that it does not need protection under the ESA.

If a species is listed, it does not mean that individuals or habitat of that species can not be affected. Sections 7 and 10 provide provisions to “take” threatened or endangered species if consultation has concluded with a take authorization. Prior to receiving a take authorization, it must be shown that the action will not jeopardize the species, that measures have been incorporated to minimize harm (e.g., preparation of a Habitat Conservation Plan), and that the take is incidental to the action.

The NCCP program was developed to provide a mechanism for broad-based planning that provides effective conservation of the state’s wildlife heritage while allowing appropriate development and growth to continue. All plans are consistent with the intent of the California Endangered Species Act (Section 2050 et seq. of the Fish and Game Code) in their treatment of state-listed species. However, NCCP plans can address both state-listed and

unlisted species and authorize the taking of any identified species whose conservation and management are provided in a CDFG-approved NCCP.

Completion of the MHCP and constituent Subarea Plans will allow the USFWS and the CDFG (the wildlife agencies) to issue citywide take authorizations to the local jurisdictions under California Fish and Game Code Section 2800 et seq. and Section 10(a) of the federal Endangered Species Act. Participating cities can then provide take authorizations for public or private projects under their direct control, so long as the projects comply with subarea and subregional plan guidelines. Hence, the MHCP Plan is required to fulfill the current mandatory requirements under state and federal Endangered Species Acts and the NCCP.

### **1.2.1 Project Objectives**

The MHCP Plan will help achieve many objectives regarding the growth and economy of the San Diego region. First, the MHCP preserve system will replace the current fragmented, project-by-project biological mitigation process. Second, through a comprehensive conservation strategy, the MHCP will resolve the haphazard and widespread loss of habitat. Third, by identifying priority areas for conservation and other areas for future development, the MHCP Plan will facilitate and improve certainty for development approval outside the preserve area. The MHCP Plan is also consistent with the Regional Growth Management Strategy, initiated by the voters in 1988 (Proposition C) to deal with growth issues and impacts on an areawide basis (Ogden 1998).

The specific objectives of the proposed project are as follows (Ogden 1998):

- Establish and maintain a balance between preservation of natural resources and regional growth and economic prosperity.
- Provide a plan for general public benefit through open space conservation and access to natural preserves for passive recreation and an improved quality of life, which also will attract new business to the region.
- Obtain permits for the taking of covered species under California Fish and Game Code Section 2800 et seq. and federal Endangered Species Act. These take authorizations will replace the 5% restriction on clearing of coastal sage scrub habitat currently imposed under Section 4(d) of the federal Endangered Species Act.

- Develop and implement a program for the conservation and management of habitats of federal and state endangered, threatened, or rare species, thereby reducing the human-related causes of species extirpation within the MHCP study area.
- Provide a framework to allow participating jurisdictions to directly implement the MHCP through individual Subarea Plans using their existing land use authority, and through voluntary agreements with property owners.
- Establish a partnership among federal, state, and local agencies of government to facilitate review and approval of public- and private-sector land development and construction projects by expediting acquisition of permits from the wildlife agencies.
- Describe a finance and acquisition strategy that shares implementation costs equitably among the federal, state, and local beneficiaries and is affordable to the region.

### **1.2.2 Purpose of the Joint EIS/EIR**

In addition to federal, state, and local permits and discretionary actions required for implementation of the MHCP and Subarea Plans, the environmental consequences associated with the proposed action must be evaluated pursuant to the requirements of NEPA and CEQA. Approval and implementation of the MHCP, Subarea Plans, and issuance of incidental take authorizations (incidental take permits and incidental take authorizations are used interchangeably throughout the document) could potentially result in significant environmental impacts and therefore, preparation of an EIS/EIR is necessary. Due to the need for federal, state, and local approval, adoption, and implementation, a joint EIS/EIR has been prepared to address environmental consequences of the proposed action, including all FPA alternatives and five Subarea Plans, which satisfies the requirements of both NEPA and CEQA in one document and through concurrent processing. (Refer to Section 1.4 for discussion on federal, state, and local permits and discretionary actions, and Section 1.5 for discussion on the environmental scoping process and decision to prepare an EIS/EIR).

As required by both CEQA and NEPA, lead and responsible agencies must be identified that will be responsible for approval and review/comment on the environmental document. SANDAG is identified as the lead agency for the CEQA compliance requirements of the project, and the USFWS is identified as the lead NEPA agency for the proposed project. Each of the seven cities within the MHCP, as well as CDFG, are designated responsible agencies. Adoption of the MHCP, Subarea Plans, and issuance of incidental take

authorizations are required to be evaluated under NEPA and CEQA. Individual projects that require a subsequent discretionary action from a State of California agency will be subject to additional CEQA review, in accordance with the standard entitlement process.

This joint EIS/EIR is an informational document intended to provide public decision-makers, responsible or other interested agencies, and the general public with an assessment of potential environmental effects of the proposed action. The joint EIS/EIR will evaluate the potential environmental consequences and impacts associated with implementation of the proposed action (MHCP and Subarea Plans); evaluate at an equal level of detail the three FPA alternatives that meet the goals and objectives of the proposed action while reducing environmental effects; evaluate the No Action Alternative; provide mitigation measures for identified significant environmental effects; address cumulative and growth-inducing impacts from the proposed action; and provide enough data for use by decision-makers to make an informed decision whether to approve a proposed action alternative, or the No Action Alternative.

The Draft EIS/EIR will be available for public review concurrent with the Public Review Draft MHCP Plan and Subarea Plans.

### **1.3 PROPOSED ACTION**

The proposed action is to approve and implement the subregional conservation plan (MHCP) and each of the five Subarea Plans, as well as executing the incidental take authorization for species on the covered species list. The MHCP action will consist of one of the selected FPA Alternatives, defined in Section 2.2, and the Subarea Plans defined in Section 2.3. Additionally, USFWS and CDFG may issue take authorization permits for individual Subarea Plans with conditions or modifications. Although there are seven cities participating in the subregional MHCP, only five of the seven cities have prepared Subarea Plans at this time: Carlsbad, Escondido, Oceanside, San Marcos, and Encinitas. The City of Solana Beach does not anticipate the need for incidental take permits (therefore the need to prepare a Subarea Plan), because their remaining habitat areas are already protected either by previous private conservation efforts, or by public ownership of the San Elijo Lagoon and Ecological Preserve. There is no remaining privately owned undeveloped property with natural habitat. Their participation will be in the approval and implementation of the subregional MHCP. The overall MHCP Plan will cover the City of Vista; however, the City is still in the process of preparing its Subarea Plan. Therefore, they will not receive a Section 10(a) permit from

the USFWS until they have completed their plan, it has been approved by the resource agencies, and their NEPA/CEQA compliance has been met.

The MHCP consists of several key components including FPAs, IAs, and a Covered Species List. The proposed action is defined in detail in Sections 2.1 and 2.2 of this EIS/EIR. The IA included with the MHCP is an example.

#### **1.4 DECISIONS TO BE MADE**

A number of discretionary actions, decisions, approvals, and adoptions must occur prior to implementing the proposed MHCP and individual Subarea Plans. The primary decision-makers include the USFWS, CDFG, SANDAG, and the cities of Carlsbad, San Marcos, Oceanside, Encinitas, Escondido, and Vista. Decisions, approvals, and adoptions required for project implementation are summarized in Table 1-1 and the following text. The role of each agency is described below.

##### **1.4.1 U.S. Fish and Wildlife Service**

The USFWS will be responsible for deciding whether to issue or deny incidental take permits for those species listed on the Covered Species List (Section 2.1). Pursuant to Section 10(a)(1)(B) of the federal ESA, the USFWS may issue a permit authorizing take incidental to an otherwise lawful activity, if the applicant provides a Conservation Plan meeting the following factors identified in Section 10(a)(2)(B):

- i. The taking will be incidental.
- ii. The applicant will, to the maximum extent practicable, minimize and mitigate the impacts of such taking.
- iii. The applicant will ensure that adequate funding for the plan will be provided.
- iv. The taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild.

**Table 1-1  
Decisions/Actions by Lead and Responsible Agencies**

	<b>Approve Issuance of Take Authorizations</b>	<b>Adopt Subarea Plan</b>	<b>Adopt General Plan Amendment</b>	<b>Approve Implementing Agreement</b>	<b>Issue ROD<sup>1</sup>/ Certify EIR/ Consider EIR</b>	<b>Approve LCP<sup>2</sup></b>
<b>Federal</b> USFWS	X			X	X	
<b>State</b> CDFG CCC <sup>3</sup>	X		X	X	X	X
<b>Local</b> SANDAG					X	
Carlsbad		X	X	X	X	X
San Marcos		X	X	X	X	
Oceanside		X	X	X	X	X
Encinitas		X	X	X	X	X
Escondido		X	X	X	X	
Solana Beach Vista <sup>4</sup>					X	

Notes: <sup>1</sup>ROD = Record of Decision under the National Environmental Policy Act (NEPA)/USFWS.

<sup>2</sup>LCP = Local Coastal Program.

<sup>3</sup>For Carlsbad, Encinitas, and Oceanside, the California Coastal Commission (CCC) may be required to adopt an LCP Amendment.

<sup>4</sup>The City of Vista will prepare a Subarea Plan and prepare a CEQA/NEPA document, adopt their Subarea Plan, and apply for their take authorizations.

- v. The measures, if any, required under subparagraph (A)(iv) [i.e., any additional measures that the USFWS may require as being necessary or appropriate for purposes of the plan] will be met and the USFWS has received such other assurances as they may require that the plan will be implemented.

The IA between the USFWS, CDFG, and the participating jurisdictions is a legal contract and will also need to be approved prior to implementation of the proposed project.

### **1.4.2 California Department of Fish and Game**

The CDFG will be responsible for approving the MHCP Plan and IAs. These actions are necessary for CDFG to issue California State Fish and Game Code Section 2835 take authorizations under the NCCP.

It is important to note that the MHCP and its component Subarea Plans do not currently address California State Fish and Game Code Sections 1601-1607 nor federal Clean Water Act permits such as Sections 401 and 404. Policies are included for wetlands preservation and mitigation in order to aid in this permit process and help streamline any Section 7 Consultation.

### **1.4.3 California Coastal Commission**

The California Coastal Commission (CCC) may be required to approve a Local Coastal Program Amendment for the cities of Carlsbad, Encinitas, and Oceanside.

### **1.4.4 San Diego Association of Governments**

SANDAG will be responsible for approving the subregional MHCP Plan and certifying the EIR component of the joint EIS/EIR document.

### **1.4.5 Participating Subarea Plan Jurisdictions**

Implementation of the MHCP Plan relies on the approval and implementation of the various Subarea Plans by the participating cities and their authority to implement and enforce the Subarea Plans by means of adopted General Plans and zoning ordinances that recognize the policies and requirements of the individual Subarea Plans. The proposed Subarea Plans described and evaluated in this joint EIS/EIR depict the implementation strategies by each city that comprise the overall program-level MHCP. The Subarea Plans must be adopted by the various jurisdictions, as well as any consequential amendments to the city General Plans or zoning ordinances. Consistency between the Subarea Plans and the MHCP Plan is addressed under each environmental issue section of this joint EIS/EIR. Actions proposed by the various jurisdictions are described in detail in Section 2.2.

## **1.5 SCOPING PROCESS**

Several opportunities for public input have been available during the formulation of the Draft MHCP, Subarea Plans, and are continuing for this EIS/EIR.

**1.5.1 Public Input During Formulation of the Draft MHCP**

The development of the MHCP Plan has involved a substantial amount of public input and meetings throughout the process. An MHCP Advisory Committee was established in 1992 to provide a forum for public discussion and consensus building on issues and proposed policies. The Advisory Committee averaged one meeting per month over an eight-year period (1992-2000). The Advisory Committee includes representatives from the seven participating cities, the County and City of San Diego, the wildlife agencies, public facility providers, environmental groups and organizations, property owners, developers, and various citizen and special interest groups. A list of the groups represented on the MHCP Advisory Committee is provided below.

City of Del Mar	Hillman Properties
City of Solana Beach	Endangered Habitats League
City of Encinitas	Audubon Society
City of Carlsbad	Sierra Club
City of Oceanside	Fallbrook Land Conservancy
City of Vista	Buena Vista Audubon Society
City of San Marcos	Palomar Audubon Society
City of Poway	San Diego Gas and Electric Company
City of Escondido	Zoological Society of San Diego
City of San Diego	Citizen's Coordinate for Century 3
County of San Diego	Farm Bureau
San Diego County Water Authority	Bureau of Land Management
U.S. Fish and Wildlife Service	National Forest Service, Cleveland NF
California Department of Fish and Game	Assoc. of Environmental Professionals
U.S. Marine Corps	San Pasqual Indian Reservation
U.S. Navy	San Diego County Taxpayers Association
TransNet	Linnie Cooper Foundation
Caltrans	Building Industry Association
San Dieguito River Joint Powers Authority	Escondido Chamber of Commerce
Alliance for Habitat Conservation	Greater San Diego Chamber of Commerce
Standard Pacific of San Diego	North County Transit District
Shea Homes	U.C. Natural Reserve System
McMillin Companies	

Several other opportunities for public outreach have occurred including:

- Public review of the Consultants' Working Draft MHCP, 1998.
- Initial Memorandum of Agreement (MOA) dated December 1991.
- NCCP Enrollment, August 1992.
- Public review of Vegetation and Sensitive Species Maps – 1993 and 1997.

Additional public outreach efforts to inform the public about the Multiple Species/Habitat Conservation Program are underway in the San Diego region.

### **Public Outreach Efforts**

The purpose of the public outreach is:

- Inform the public and policy makers that three habitat conservation programs are underway and include all 18 cities and the County;
- Publicize that the programs are being coordinated;
- Involve representatives of interested groups and individuals in the planning process; and
- Build a broad base of understanding and support for the programs.

The audiences selected for public outreach include all affected parties such as public facility providers and government agency officials, private property owners, developers, special interest groups, and interested individuals.

Materials prepared to date include:

- *Preserving Our Native Environment -- A Joint Plan for the San Diego Region.* A brochure prepared by the Regional Public Outreach Committee. The Committee included representatives from the three Subregional Habitat Conservation Planning efforts.

---

## ***PURPOSE AND NEED FOR ACTION***

- *Endangered Species Display.* The display describes the local habitats and endangered species in the region, explains the methodology used to determine high-quality habitat areas, describes how local programs are addressing national issues of habitat conservation, and invites the public to get involved.
- *Room to Roam.* A short video presentation was prepared to accompany the Endangered Species Display.
- *Slide Show.* A slide show was also developed that describes why these programs were started, how they are unique from prior efforts, and what the programs plan to accomplish.
- *Public Presentations.* A letter offering a presentation from a representative of the Regional Public Outreach Committee was sent to organizations, groups, and agencies that will be most affected or interested in hearing about the programs.
- *Tabletop Display.* Designed to be taken on the road, this display can sit on a table at local or statewide conferences and workshops.
- *General Assembly of Elected Officials.* On March 4, 1994, SANDAG hosted a forum on Habitat Conservation Planning and the Endangered Species Act.
- *Bulletin for Landowners: Environmental Management.* The Bulletin is designed to be distributed at the zoning counter to landowners who have questions about the Endangered Species Act and the habitat conservation planning efforts.

Individual jurisdictions also made public outreach efforts. These included workshops to inform the city councils and collaborative meetings with local nonprofit groups, environmental organizations, and property owners.

### **1.5.2 NEPA/CEQA Scoping Process**

NEPA and CEQA regulations require an early and open process for determining the scope of issues related to a proposed action. To identify key issues and concerns relevant to the scope of the EIS/EIR, the USFWS, CDFG, and SANDAG encouraged public participation in the environmental review process from many different public agencies, organizations, and members of the public.

### **Notice of Intent/Notice of Preparation**

A Notice of Intent (NOI) to prepare an EIS in compliance with NEPA was published in the Federal Register on April 15, 1999. A Notice of Preparation (NOP) of a draft Joint EIS/EIR was also published on April 13, 1999 in the San Diego Union-Tribune, San Diego Transcript, Asian Journal, La Prensa, Voice & Viewpoint, and the Coastal and Inland editions of the North County Times. The NOP was also distributed by mail to 538 recipients. An Initial Study (IS) of the MHCP was also prepared and distributed with the NOP for public review.

### **Scoping Meeting**

On May 5, 1999, SANDAG, USFWS, and CDFG held a public scoping meeting to solicit public comments during the 30-day NOI/NOP public scoping period. The meeting was advertised in the NOI and NOP and held at Encinitas City Hall.

In response to this scoping process, eight letters of comment were received. Additionally, two people spoke at the public scoping meeting. Various issues were identified, including:

- Details of a financial plan to implement the MHCP.
- Loss of habitat from events such as fire, natural disasters, etc.
- Need for independent scientific review of model.
- The need to be consistent and coordinate between the MHCP and other HCPs in the area (particularly those that overlay the MHCP area).
- Need for adequate connections and habitat to ensure the survival of species.
- Preservation of canyons, ridgelines, and wetlands.

A financial plan has been prepared to determine the costs of implementing the MHCP. It is currently being used to identify funding programs.

The concerns related to loss of habitat from fires and other natural disasters will be addressed through implementation of the ultimate management plan. Fire and other natural disasters

are natural events to which the habitat has been adapted. Much of our coastal sage scrub and chaparral habitats must be subject to fire to maintain their environmental diversity. Floods maintain the young riparian woodland/scrub habitat favored by the least Bell's vireo. Through the management program, populations and habitat quality will be monitored and management measures implemented to provide protection for the sensitive habitats/species.

The model used for the MHCP was the same model as used for the MSCP. That model had undergone extensive independent scientific review during the MSCP process. Since the MHCP is a physical expansion of the MSCP and the model was only slightly modified to reflect the unique species and communities present in the MHCP, it was determined that the prior independent scientific review was adequate. The MHCP process has been an open process for interested parties. The MHCP and Subarea Plans have been distributed for an extended public review period.

The MHCP has integrated its corridors and connectivity to the MSCP properties to the south. The County of San Diego and Camp Pendleton are currently planning their portions, and will need to coordinate the linkages to the MHCP.

The need to provide adequate connections and habitat has been the focus of the entire MHCP process. This issue is addressed fully in subsequent chapters (3.3 and 4.3). Wetlands are evaluated as one of the sensitive habitats, including preservation, protection, and enhancement. The functions of canyons and ridgelines (both as supporting habitats and providing linkages) are discussed in Chapters 3.3 and 4.3.

### **1.5.3 Identification of the Potentially Significant Issues**

Through the scoping process described above, and the preparation of the Initial Study, issues considered potentially significant have been identified and are analyzed in Section 4.0 of the EIS/EIR.

For **Agriculture Resources**, environmental effects have been identified as potentially significant for conversion of prime farmland, and less than significant for conflicts with existing agricultural zoning. For **Biological Resources**, environmental effects have been identified as potentially significant for listed species, riparian habitat, and other sensitive natural communities, and for the movement of wildlife species; but less than significant for any policies or ordinances protecting biological resources.

For **Land Use and Planning**, environmental effects have been identified as potentially significant for conflicts with plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect. For **Mineral Resources**, environmental effects have been identified as potentially significant for the loss of known mineral resources and the loss of the availability of mineral resources recovery sites. For **Population and Housing**, environmental effects have been identified as potentially significant for inducing substantial population growth and displacing substantial numbers of people. For **Public Services**, environmental effects have been identified as potentially significant for the construction of new governmental facilities in order to maintain acceptable service ratios.

#### **1.5.4 Issues Not Considered Significant and Not Selected for Detailed Analysis**

CEQA Guidelines (Section 15128) require that the environmental document include a brief discussion of various environmental issues that were determined not to be significant. The Initial Study, coupled with this EIS/EIR, addressed all probable or foreseeable possible (direct and indirect) effects of the proposed project. The Initial Study determined that the project would result in no significant environmental effects to the following issue areas: Aesthetics, Air Quality, Cultural Resources, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Noise, Recreation, Transportation/Circulation, and Public Utilities and Service Systems. Chapter 7 presents the detailed rationale.

### **1.6 RELEVANT STATUTES, REGULATIONS, AND GUIDELINES**

This Joint EIS/EIR has been prepared in compliance with the following statutes and guidelines:

- National Environmental Policy Act (NEPA) of 1969, as amended (42 USC 4321 et seq.);
- Council of Environmental Quality NEPA regulations (Title 40 CFR Parts 1500-1508);
- California Environmental Quality Act (CEQA) of 1970, as amended (California Public Resources Code Section 21000 et seq.);
- State of California CEQA Guidelines, as amended;
- Natural Community Conservation Planning (NCCP) Act of 1991;

- Habitat Conservation Plan (HCP) pursuant to Section 10(a)(1)(B) of the Federal Endangered Species Act of 1973, as amended;
- Fish and Wildlife Act of 1956 (16 USC Section 742(a) - 754);
- California Endangered Species Act (Section 2080 et seq. of CDFG Code);
- Section 2800 et seq. of the California Fish and Game Code.

## **1.7 ORGANIZATION OF THE EIS/EIR**

This EIS/EIR consists of the following sections.

**Executive Summary** – provides a summary of the proposed action and alternatives, and the results of the environmental analyses, including the significant environmental impacts/effects and proposed mitigation measures contained in the EIS/EIR.

**Chapter 1.0, Purpose and Need for Action** – describes the purpose and need and background of the proposed project.

**Chapter 2.0, Project Description/Description of Alternatives** – describes the process used to formulate the alternatives, the proposed alternatives that are discussed and analyzed in this EIS/EIR, the proposed Subarea Plans, and the alternatives considered but dismissed from further consideration.

**Chapter 3.0, Environmental Setting/Affected Environment** – describes the environment that will be affected by the alternatives analyzed. Issue areas described include biological resources, land use (including agriculture and minerals), public services, and population and housing.

**Chapter 4.0, Environmental Impact Analysis/Environmental Consequences** – analyzes and compares the environmental consequences of implementing the various alternatives.

**Chapter 5.0, Growth Inducement** – analyzes the proposed action’s growth inducing impacts.

**Chapter 6.0, Cumulative Impacts** – analyzes the proposed action’s cumulative impacts.

**Chapter 7.0, Issues Not Considered Significant** – summarizes the environmental issues not considered significant.

**Chapter 8.0, Significant Irreversible Environmental Changes** - analyzes the significant irreversible changes possible from implementation of the proposed project.

**Chapters 9.0 through 12.0** – lists references, contacts, preparers, and glossary of acronyms.

**Appendix A** – Includes the NCCP Application.

**Appendix B** – Includes the federal USFWS Section 10(a)(1)(B) permit application.

**Appendix C** – Includes the model Implementing Agreement developed during the preparation of the adjacent MSCP.

**Appendix D** – Includes the Notice of Intent/Notice of Preparation for the EIS/EIR and responses received.

## **2.0 PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES**

The following provides a general description of the project's technical, economic, and environmental characteristics for the Proposed Action (including Focused Planning Alternatives and Subarea Plans). The Environmental Setting/Affected Environment is presented in Chapter 3.

### **2.1 PROPOSED ACTION – MHCP**

The Multiple Habitat Conservation Program (MHCP) is a comprehensive, multiple jurisdictional planning program designed to create, manage, and monitor an ecosystem preserve in northwestern San Diego County. Implementation of the regional preserve system is intended to protect viable populations of key sensitive plant and animal species and their habitats, while accommodating continued economic development and quality of life for residents of the North County region. The MHCP is one of several large multiple jurisdictional habitat planning efforts in San Diego County (Figure 1-1), each of which constitutes a subregional plan under the State of California's Natural Community Conservation Planning (NCCP) Act of 1991.

The current MHCP study area (Figure 1-1) encompasses about 175 square miles (111,865 acres) comprising seven incorporated cities in northwestern San Diego County (Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista). These jurisdictions will implement their respective portions of the MHCP Plan through citywide "subarea" plans, which describe the specific implementing mechanisms each city will institute for the MHCP. The Subarea Plans will contribute collectively to the conservation of biological communities and species in the MHCP study area. In turn, the MHCP Plan, in concert with other subregional plans, will contribute to continued ecosystem viability in southern coastal California.

The combination of the subregional MHCP Plan and the city Subarea Plans will serve as a multiple species Habitat Conservation Plan (HCP) pursuant to Section 10(a)(1)(B) of the federal Endangered Species Act (ESA), as well as an NCCP plan under the NCCP Act and Section 2800 et seq. of the California Fish and Game Code. The participating jurisdictions will submit these plans to the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG) in support of applications for permits and

## ***PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES***

---

authorizations to incidentally “take” listed threatened or endangered species or other species of concern. Incidental take permits issued by the wildlife agencies allow for otherwise lawful actions that may incidentally take or harm individuals of a species or its habitat (generally outside of the preserve system) to support conserving the species inside the preserve system. A jurisdiction that is issued a take authorization, referred to as a “take authorization holder”, may share the benefits of that authorization by using it to permit public or private projects that comply with the MHCP and the city’s Subarea Plan. The conservation and management responsibilities, assurances of implementation, and corresponding authorizations for all parties will be contained in an implementing agreement between each take authorization holder (city) and the wildlife agencies (USFWS and CDFG).

The proposed action includes several components as discussed in Section 1.0:

- Approve the MHCP (SANDAG), issue Record of Decision (USFWS), and certify EIR (SANDAG): As required by the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA), the environmental impacts of a project must be disclosed and considered by the decision-makers.
- Approve Implementing Agreements (IAs). USFWS and CDFG will need to enter into an IA documenting responsibilities of the resource agencies and jurisdictions.
- Approval of the five city Subarea Plans by the respective jurisdictions. Each city will need to approve their respective Subarea Plan for implementation.
- The issuance of incidental take permits by the USFWS and take authorizations by the CDFG to the respective jurisdictions for incidental take of covered species for future public and private projects.

### **2.1.1 Overall Plan Description**

The MHCP subregional plan documents the processes, guidelines, and other features that are common to all Subarea Plans. The MHCP Plan contains the overall conservation strategy for the subregion and documents the conservation actions that collectively are intended to protect species covered by individual Subarea Plans. The MHCP Plan also describes the cooperative institutional mechanisms through which participants will coordinate MHCP implementation.

## ***PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES***

---

The heart of the conservation planning process is the physical design of the preserve boundaries. MHCP preserve design began with the application of biological and land use guidelines to identify Focused Planning Areas (FPAs) for each city, within which conservation will be concentrated. The following sections describe the covered species lists and take authorizations that are proposed to be issued once Subarea Plans are approved, the implications for dealing with species not covered by the MHCP Plan, the requirements for wetlands permitting, and the guidelines for development planning and biological preserve design.

The MHCP provides the basis and guidelines for the assembly and management of a preserve for biological resources within the FPA. The FPA is the land area within which habitat will be preserved. The FPA was cooperatively designed by the participating jurisdictions in the MHCP study area, in partnership with the wildlife agencies (USFWS and CDFG), property owners, environmental groups, and other members of the MHCP Advisory Committee (refer to Section 1.5.1 for a list of Advisory Committee members). The FPA alternatives and the Subarea Plans are described in Sections 2.2 and 2.3, respectively.

The specific objectives of the MHCP are identified in Section 1.2.1; however, to implement those objectives additional goals were developed during the cooperative design process. As such, five environmental and economic goals were incorporated in the planning process to guide the design of the FPA and included:

- Conserve as much of the most important biological habitat lands remaining in the North County as possible, in a system that minimizes preserve fragmentation.
- Provide as much linkage as possible between the larger blocks of habitat lands both within and between the participating jurisdictions.
- Maximize the inclusion of public lands within the preserve.
- Maximize the inclusion of lands already conserved as open space, where appropriate.
- Maintain individual property rights and economic viability for the subregion.

The FPA developed through this process resulted in two types of planning areas: “hard-line” preserves which specifically indicate lands that will be conserved and managed for biological

## ***PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES***

---

resources; and “soft-line” or standard areas within which preserve areas will be delineated in the future based upon further data and planning.

A critical component of the MHCP preserve is a core area of conservation. The core is located south of the City of San Marcos and east of the cities of Carlsbad and Encinitas. Approximately 400 to 500 acres of contiguous coastal sage scrub supporting 16-23 pairs of breeding California gnatcatchers within this target area will be conserved as part of the proposed project.

Using the common goals listed previously, the participating jurisdictions prepared Subarea Plans and delineated their portions of the Focused Planning Area (FPA) based on biological, economic, land ownership, and land use criteria, and individual methods of implementation. Consequently, the overall MHCP FPA has different levels of preservation associated with different areas. The FPA includes property already set aside as mitigation for major development projects as a result of agreements between property owners, the wildlife agencies, jurisdictions, and environmental groups. Most of the major habitat patches designated as open space in general plans or in community plans are also included in the FPA. Some areas within the FPA are already permanently preserved and managed for their biological resources. Other portions are planning areas within which the ultimate preserves will be sited.

As the majority of the MHCP study area is urbanized or developed, much of the FPA is comprised of small habitat patches with large interfaces between native vegetation communities and developed areas. Habitat management guidelines have been identified in the Public Review Draft MHCP Plan to minimize potential biological effects of development along these edges. Potential impacts from the new activities on biological resources within the preserve that should be considered in the design of any project include: access, non-native predators, non-native species, illumination, drain water (point source), urban runoff (nonpoint source) and noise. Additionally, Subarea Plans should include only limited, compatible development within the preserve areas and linkages. See Section 6 of the MHCP, Guidelines for Compatible Land Uses, Preserve Management, and Monitoring.

## **Biological Conservation**

### ***Covered Species***

In 1992, the U.S. Fish and Wildlife Service and the California Department of Fish and Game (the wildlife agencies) developed a list of species to use in designing a preserve for the MHCP study area and to be evaluated for issuance of incidental take permits. In 1996 the San Diego County Board of Supervisors voted to proceed with open space planning for the unincorporated area of North County as a subarea of the Multiple Species Conservation Program. This action removed all unincorporated lands from the MHCP study area. As a result, the wildlife agencies, with assistance from the seven North County cities, reviewed the list of species to be evaluated for coverage, reducing the list to 77 species (29 plant and 48 animal species). This list now contains species known or likely to occur in the MHCP study area that are listed as rare, threatened, or endangered by the federal and state Environmental Species Acts, as well as species otherwise considered sensitive by wildlife agencies and conservation organizations. This list also includes several more common species that are useful for evaluating preserve design and ecosystem function, such as mountain lions and mule deer (Table 2.1-1).

A biological analysis was conducted to determine levels of conservation and take for each of the 77 species (MHCP Volume II) based on the preferred project (Alternative No. 2, FPA 2), the city Subarea Plans, and implementation of the Habitat Management Plan policies. Based on this analysis, 60 species would be adequately conserved by the MHCP and therefore would be “covered” by the MHCP program, provided that participants meet all conditions listed in Volumes I and II of the MHCP Plan. Individual Subarea Plans also include a covered species list specific to their area. Table 2.1-1 provides a preliminary list of species proposed to be covered under the MHCP Plan and individual Subarea Plans.

Final determination of adequate conservation and therefore “coverage” for MHCP species can be made only by the wildlife agencies following public review of the plans, this EIS/EIR, completion of the USFWS’ internal Section 7 consultation process, and determination that the plan meets the criteria of Section 10 of the ESA, California Endangered Species Act (CESA), and NCCP Act. The USFWS will prepare a biological opinion addressing all target species and written findings addressing consistency with the criteria in Section 10 of the ESA. CDFG, in coordination with the USFWS, will prepare a finding in accordance with

**PROJECT DESCRIPTION/DESCRIPTION OF ENVIRONMENT**

**Table 2.1-1  
Preliminary MHCP Covered Species List**

Scientific Name	Common Name	Status <sup>1</sup>	Subarea Plans				
			Carlsbad	Encinitas	Escondido	Oceanside	San Marcos
<b>Plants</b>							
<i>Acanthomintha ilicifolia</i> <sup>2</sup>	San Diego thorn-mint	FT/CE	X	X	X	X	X
<i>Ambrosia pumila</i> <sup>2</sup>	San Diego ambrosia	FSC */	X	X	X	X	
<i>Arctostaphylos glandulosa</i> ssp. <i>crassifolia</i> <sup>2</sup>	Del Mar manzanita	FE/	X	X	X	X	
<i>Baccharis vanessae</i> <sup>2</sup>	Encinitas baccharis	FT/CE	X	X	X	X	
<i>Brodiaea filifolia</i> <sup>2</sup>	Thread-leaved brodiaea	FT/CE	X	X	X	X	
<i>Ceanothus verrucosus</i> <sup>2</sup>	Wart-stemmed ceanothus	FSC */	X	X	X	X	X
<i>Chorizanthe orcuttiana</i> <sup>2</sup>	Orcutt's spineflower	FE/CE	X	X	X	X	X
<i>Comarostaphylis diversifolia</i> ssp. <i>diversifolia</i> <sup>2</sup>	Summer-holly	FSC */	X	X	X	X	X
<i>Corethrogyne filaginidolia</i> var. <i>linifolia</i> <sup>2</sup>	Del Mar mesa sand aster	FSC ⊥	X	X	X	X	
<i>Dudleya blochmaniae</i> ssp. <i>blochmaniae</i> <sup>2</sup>	Blochman's dudleya	FSC */	X	X	X	X	
<i>Dudleya blochmaniae</i> ssp. <i>brevifolia</i> <sup>2</sup>	Short-leaved dudleya	FSC ⊥/CE		X	X	X	
<i>Dudleya variegata</i>	Variegated dudleya	None					X
<i>Dudleya viscida</i> <sup>2</sup>	Sticky dudleya	FSC */	X	X	X	X	
<i>Eryngium aristulatum</i> var. <i>parishii</i> <sup>2</sup>	San Diego button-celery	FE/CE	X	X	X	X	
<i>Euphorbia misera</i> <sup>2</sup>	Cliff spurge	None	X	X	X	X	
<i>Ferocactus viridescens</i> <sup>2</sup>	San Diego barrel cactus	FSC */	X	X	X	X	X
<i>Hazardia orcuttii</i> <sup>2</sup>	Orcutt's hazardia	FSC */	X	X	X	X	
<i>Iva hayesiana</i> <sup>2</sup>	San Diego marsh-elder	FSC */	X	X	X	X	X
<i>Lotus nuttallianus</i> <sup>2</sup>	Nuttall's lotus	FSC */		X	X	X	
<i>Myosurus minimus</i> ssp. <i>apus</i> <sup>2</sup>	Little mousetail	FSC */	X	X	X	X	
<i>Navarretia fossalis</i> <sup>2</sup>	Spreading navarretia	PT/	X	X	X	X	
<i>Orcuttia californica</i> <sup>2</sup>	California Orcutt grass	FE/CE	X	X	X	X	
<i>Pinus torreyana</i> ssp. <i>torreyana</i> <sup>2</sup>	Torrey pine	FSC */	X	X	X	X	
<i>Quercus dumosa</i> <sup>2</sup>	Nuttall's scrub oak	FSC */	X	X	X	X	
<i>Quercus engelmannii</i> <sup>2</sup>	Engelmann oak	None	X	X	X	X	
<i>Tetracoccus dioicus</i> <sup>2</sup>	Parry's tetracoccus	FSC */			X	X	

**DESCRIPTION OF ENVIRONMENT**

**Table 2.1-1, Preliminary MHCP Covered Species List (Continued)**

Scientific Name	Common Name	Status <sup>1</sup>	Subarea Plans				
			Carlsbad	Encinitas	Escondido	Oceanside	San Marcos
<b>Invertebrates</b>							
<i>Streptocephalus woottoni</i> <sup>2</sup>	Riverside fairy shrimp	FE/	X	X	X	X	
<i>Branchinecta sandiegonensis</i> <sup>2</sup>	San Diego fairy shrimp	FE/	X	X	X	X	
<i>Euphyes vestris harbisoni</i> <sup>2</sup>	Harbison's dun skipper	FSC */	X	X	X	X	X
<i>Panoquina errans</i> <sup>2</sup>	Saltmarsh skipper	FSC */	X	X	X	X	
<i>Euphydryas editha quino</i> <sup>2</sup>	Quino checkerspot	FE/		X	X	X	
<i>Lycaena hermes</i>	Hermes copper butterfly	/CSC					X
<b>Amphibians and Reptiles</b>							
<i>Scaphiopus hammondi</i> <sup>2</sup>	Western spadefoot toad	/CSC		X	X	X	
<i>Bufo microscaphus californicus</i> <sup>2</sup>	Arroyo southwestern toad	FE/CSC		X	X	X	X
<i>Clemmys marmorata pallida</i> <sup>2</sup>	Southwestern pond turtle	FSC */CSC		X	X	X	X
<i>Phrynosoma coronatum blainvillei</i>	San Diego horned lizard	FSC */CSC					X
<i>Cnemidophorus hyperythrus beldingi</i> <sup>2</sup>	Orange-throated whiptail	FSC */CSC	X	X	X	X	X
<b>Birds</b>							
<i>Pelecanus occidentalis californicus</i> <sup>2</sup>	California brown pelican	FE/CE	X	X	X	X	
<i>Plegadis chihi</i> <sup>2</sup>	White-faced ibis	FSC */CSC	X	X	X	X	X
<i>Circus cyaneus</i>	Northern harrier	/CSC					X
<i>Accipiter cooperii</i> <sup>2</sup>	Cooper's hawk	/CSC	X	X	X	X	X
<i>Pandion haliaetus</i> <sup>2</sup>	Osprey	/CSC	X	X	X	X	
<i>Aquila chrysaetos</i> <sup>2</sup>	Golden eagle	BEPA/CSC		X	X	X	
<i>Falco peregrinus anatum</i> <sup>2</sup>	Peregrine falcon	/CE	X	X	X	X	
<i>Rallus longirostris levipes</i> <sup>2</sup>	Light-footed clapper rail	FE/CE	X	X	X	X	
<i>Charadrius alexandrinus nivosus</i> <sup>2</sup>	Western snowy plover	FT/CSC	X	X	X	X	
<i>Sterna elegans</i> <sup>2</sup>	Elegant tern	FSC */CSC	X	X	X	X	
<i>Sterna antillarum browni</i> <sup>2</sup>	California least tern	FE/CE	X	X	X	X	
<i>Empidonax traillii extimus</i> <sup>2</sup>	Southwestern willow flycatcher	FE/CE	X	X	X	X	X
<i>Campylorhynchus brunneicapillus cousei</i> <sup>2</sup>	Coastal cactus wren	FSC */CSC		X	X	X	
<i>Poliophtila californica californica</i> <sup>2</sup>	Coastal California gnatcatcher	FT/CSC	X	X	X	X	X
<i>Sialia mexicana</i> <sup>2</sup>	Western bluebird	None		X	X	X	
<i>Vireo bellii pusillus</i> <sup>2</sup>	Least Bell's vireo	FE/CE	X	X	X	X	X
<i>Icteria virens</i> <sup>2</sup>	Yellow-breasted chat	/CSC	X	X	X	X	

**DESCRIPTION OF ENVIRONMENT**

**Table 2.1-1, Preliminary MHCP Covered Species List (Continued)**

Scientific Name	Common Name	Status <sup>1</sup>	Subarea Plans				
			Carlsbad	Encinitas	Escondido	Oceanside	San Marcos
<i>Aimophila ruficeps canescens</i> <sup>2</sup>	Rufous-crowned sparrow	FSC */CSC	X	X	X	X	X
<i>Passerculus sandwichensis beldingi</i> <sup>2</sup>	Belding's savannah sparrow	FSC */CE	X	X	X	X	
<i>Passerculus sandwichensis rostratus</i> <sup>2</sup>	Large-billed savannah sparrow	FSC */CSC	X	X	X	X	
<i>Amphispiza belli belli</i> <sup>2</sup>	Bell's sage sparrow	FSC */CSC		X	X	X	X
<i>Ammodramus savannarum</i>	Grasshopper sparrow	None					X
<i>Agelaius tricolor</i>	Tricolored blackbird	FSC */CSC					X
<i>Athene cunicularia hypugaea</i>	Burrowing owl	FSC */CSC	X				
<b>Mammals</b>							
<i>Dipodomys stephensi</i> <sup>2</sup>	Stephens' kangaroo rat	FE/CT			X	X	
<i>Perognathus longimembris pacificus</i> <sup>2</sup>	Pacific pocket mouse	FE/CSC		X	X	X	X
<i>Chaetodipus fallax fallax</i> <sup>2</sup>	Northwestern San Diego pocket mouse	FSC */CSC		X	X	X	X
<i>Lepus californicus bennettii</i> <sup>42</sup>	San Diego black-tailed jackrabbit	FSC */CSC		X	X	X	X
<i>Felis concolor</i> <sup>2</sup>	Mountain lion	CA protected		X	X	X	
<i>Odocoileus hemionus fuliginata</i> <sup>42</sup>	Southern mule deer	CA game species		X	X	X	

**<sup>1</sup>Status (Federal/State)**

FE = Federally endangered

PE = Proposed for federal listing as endangered

FT = Federally threatened

PT = Proposed for federal listing as threatened

C = Candidate for federal listing

BEPA = Bald Eagle Protection Act

CE = State endangered

CT = State threatened

CSC = State species of special concern

FSC \* = Federal Species of Concern; formerly Category 2 or Category 3 candidate or proposed for federal listing

FSC ⊥ = Federal Species of Concern; proposed rule to list as endangered or threatened as been withdrawn

protected = moratorium on hunting

None = no federal or state status

**<sup>2</sup>Preliminary MHCP Coverage**

## ***PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES***

---

CESA and the NCCP Act. The wildlife agencies would then issue incidental take permits to the cities to "take" species covered by their individual Subarea Plans. The term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect. These permits or management authorizations are referred to as "take authorizations" (Endangered Species Act).

The Implementing Agreement is the contract among participating agencies that identifies each agency's responsibilities to implement the Subarea Plans and associated regulations. Cities that receive take authorizations will not be required to commit additional land, land restrictions, or financial compensation, beyond those described in the Subarea Plan, for the protection of any covered species, provided there is adequate implementation of the plans pursuant to the Implementing Agreement. If in the future a species covered in the Subarea Plan, but not listed by the federal and/or state wildlife agencies, becomes listed as endangered or threatened by the wildlife agencies, the take authorization will become effective concurrent with its listing.

The standards for protecting the covered species and issuance of take authorizations are consistent with the state's NCCP guidelines, Section 2835 of the California Fish and Game Code, and criteria in Section 10(a) of the federal ESA, namely:

- The taking will be incidental to otherwise covered lawful activities.
- The impacts of the taking will, to the maximum extent practicable, be minimized and mitigated.
- Adequate funding for implementation of the plan will be provided.
- The taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild.
- Fully protected species, as defined by CDFG, will not be authorized for take.
- Conservation and management is assured for all identified species (i.e., covered species).

### **Subarea Plan Covered Species Lists**

Each jurisdiction's Subarea Plan may include two lists, entitled "Covered Species" and "Covered Species Subject to Incidental Take". The covered species list includes those species within the MHCP study area for which the state and federal take authorization requirements are met by the MHCP as a subregion. Covered species subject to incidental take are those species for which state and federal take authorization requirements are met by an individual jurisdiction's Subarea Plan (i.e., more specific to the jurisdiction's geographic area; see Section 2.3 and Table 2.1-1 for a list of city-specific covered species, the decision rules used to determine coverage, and a summary description of each Subarea Plan).

### **Narrow Endemic Species**

In the MHCP study area, narrow endemic species are plant and animal species that are highly restricted by their habitat affinities, edaphic requirements, or other ecological factors, and that have limited but important populations within the MHCP area, such that substantial loss of these populations or their habitat within the MHCP area might jeopardize the continued existence or recovery of that species. For narrow endemic species, the jurisdictions have specified measures in their Subarea Plans to ensure that impacts to these resources are avoided to the maximum extent practicable. MHCP narrow endemic species are summarized in Table 2.1-2.

The specific Narrow Endemic Policy is included in Appendix D of the Biological Analysis and Permitting Conditions, MHCP Volume II. Within the FPAs, Subarea Plans will practice avoidance of impacts to the maximum extent practicable while still providing a reasonable use of the property. Avoidance and minimization measures include the use of buffer zones around narrow endemic population sites to allow for natural expansion and contraction of populations, persistence of pollinators, and other key ecological functions. Mitigation for unavoidable impacts shall be designed to achieve no net loss of narrow endemic populations, occupied acreages, or population viability within the FPA. In no case shall a city permit more than 5% gross cumulative loss of narrow endemic populations or occupied acreage within the FPA.

**PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES**

**Table 2.1-2  
MHCP Narrow Endemic Species List<sup>1,2</sup>**

Scientific Name	Common Name
<b>Plants</b>	
<i>Acanthomintha ilicifolia</i> (s)	San Diego thorn-mint
<i>Ambrosia pumila</i> (g)	San Diego ambrosia
<i>Arctostaphylos glandulosa</i> spp. <i>crassifolia</i> (g)	Del Mar manzanita
<i>Baccharis vanessae</i> (g)	Encinitas baccharis
<i>Brodiaea filifolia</i> (s)	Thread-leaved brodiaea
<i>Chorizanthe orcuttiana</i> (g)	Orcutt's spineflower
<i>Corethrogyne filaginifolia</i> var. <i>linifolia</i> (g)	Del Mar mesa sand aster
<i>Dudleya blochmaniae</i> spp. <i>brevifolia</i> (g, s)	Short-leaved dudleya
<i>Dudleya variegata</i> (s)	Variegated dudleya
<i>Eryngium aristulatum</i> var. <i>parishii</i> (v, s)	San Diego button-celery
<i>Hazardia orcutti</i> (g)	Orcutt's hazardia/Orcutt's goldenbush
<i>Lotus nuttallianus</i> (g)	Nuttall's lotus/Prostrate lotus
<i>Myosurus minimus</i> spp. <i>apus</i> (v, s)	Little mousetail
<i>Navarretia fossalis</i> (v, s)	Spreading navarretia
<i>Orcuttia californica</i> (v, s)	California Orcutt grass/Southern Orcutt grass
<b>Animals</b>	
<i>Streptocephalus woottoni</i> (v)	Riverside fairy shrimp
<i>Branchinecta sandiegonensis</i> (v)	San Diego fairy shrimp
<i>Euphyes vestris harbisoni</i>	Harbison's dun skipper butterfly
<i>Perognathus longimembris pacificus</i> (g, s)	Pacific little pocket mouse
<i>Campylorhynchus brunneicapillus cousei</i> (g)	Coastal cactus wren

Notes: 1 Species on this list are highly restricted by geographical or ecological factors *and* may have important populations within the MHCP area, such that substantial loss of these populations or their habitat within the MHCP area might jeopardize the continued existence or recovery of that species.

2 Letters in parentheses indicate the nature of the endemism: g = geographic endemic; v = vernal pool endemic; s = edaphic (soil) endemic. Note that some species classified as geographic endemics for purposes of the MHCP study are more widespread in Baja California.

Outside of the FPAs, the MHCP has established policies for maximum avoidance, minimization and mitigation for impacts to populations. In no case shall a city permit more than 20% gross cumulative loss of narrow endemic locations, population numbers, or occupied acreages within the city. Unavoidable impacts shall be mitigated based on species-specific criteria defined in Subarea Plans. Mitigation will be guided by the goals of species recovery and minimizing adverse effects to species viability. Mitigation must also be designed to achieve no net loss of narrow endemic population location, occupied acreages, or population viability in the MHCP subregion.

---

## ***PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES***

Narrow animal endemic species in the MHCP area include: Riverside fairy shrimp, San Diego fairy shrimp, Harbison's dun skipper, Pacific little pocket mouse, and, coastal cactus wren.

Additional conservation measures that will apply to narrow endemic species are included in Section 2.2.3 of the MHCP Plan.

### ***Species Not Covered by the MHCP***

Through the conservation and management actions implemented for the covered species, the MHCP will also benefit many species not on the covered species list. Listed species not on the covered species list will continue to be regulated under the state and federal ESAs. Take of listed species not on the covered species list can be authorized separately from the MHCP under separate Section 7 consultation, Section 10 HCPs, and state take authorizations under Section 2081 of the California Fish and Game Code. Alternatively, species can be added to the MHCP covered species list using the federal and state take authorization amendment process. The process for adding species to the covered species list is described in Section 5.4.1 of the MHCP Plan.

At the jurisdiction's discretion, significant impacts to unlisted sensitive species that are not covered may require additional protection or mitigation under CEQA or according to city-specific guidelines.

### ***Implementing Agreement***

Once a participating jurisdiction's Subarea Plan is completed, Implementing Agreements (IAs) will be prepared. The IA will specify the legal obligations and requirements of the jurisdiction to implement the Subarea Plan under the MHCP. A model IA was developed for the adjacent MSCP and includes some key assurances for the "take authorization holders". The model IA used under MSCP will be used as a base for development of the IAs for the various city jurisdictions.

### ***Wetlands***

Wetland communities (vernal pools, salt pan, salt marsh, alkali marsh, freshwater marsh, riparian forest, riparian woodland, riparian scrub, freshwater, estuarine, marine, disturbed

## ***PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES***

---

wetlands, and natural flood channel) within the MHCP study area include areas subject to California Fish and Game Code Section 1600 et seq. and Section 404 of the federal Clean Water Act. Such areas will continue to be regulated by these state and federal statutes. The U.S. Army Corps of Engineers (ACOE) will continue to consult with the USFWS pursuant to Section 7 of the federal ESA on projects that may affect federally listed species within Corps jurisdictional wetlands. The CDFG will work closely with the ACOE, USFWS, and local jurisdictions to ensure that Fish and Game Code 1600 et seq. agreements are consistent with (1) the mitigation required for covered species by Section 404 permits (including federal ESA Section 7 consultations), and (2) the MHCP Plan.

Subarea Plans and associated implementing mechanisms will address avoidance, minimization, and mitigation measures for wetland habitats subject to development impacts. Development projects that affect wetland vegetation communities will be required to comply with the terms of the local jurisdiction's Subarea Plan (no net loss policy), the federal and state policies of no net loss of wetland functions and values, and the U.S. Environmental Protection Agency's (EPA) 404(b)(1) Guidelines [Title 40 Code of Federal Regulations (CFR) Part 230].

Any project that proposes to directly or indirectly impact wetlands or wetland vegetation communities (whether inside or outside of the FPA) shall fully disclose and analyze such impacts in a CEQA document or in findings prepared under a local subarea implementing ordinance. The CEQA document or findings document must fully analyze and provide substantial factual evidence that impacts to wetlands were avoided and minimized to the maximum extent possible while maintaining some economic or productive use of the property. Feasible alternatives to avoid the impacts shall be described and analyzed, and reasons that these alternatives were not pursued shall be fully described and supported by substantial factual evidence.

If impacts cannot be avoided, all feasible means of minimizing encroachment into wetlands shall be fully addressed. Road or utility projects that must cross wetlands and that are permitted under MHCP Subarea Plans will be required to demonstrate that the crossing will occur at the least overall biologically sensitive location and that all feasible minimization measures have been employed. In making this determination, alignment planning must consider whether avoidance of wetland impacts will result in more significant upland impacts. The least overall biologically impactful alternative is that which has the least

## ***PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES***

---

impacts to sensitive resources and preserve configuration, considering both wetland and upland impacts together.

Private projects that propose impacts to wetlands must demonstrate with substantial factual evidence that the impact is essential to maintaining some economic or productive use of the property and that no feasible alternative will eliminate or minimize the impact or otherwise result in greater biological value. If impacts to wetlands cannot be avoided while retaining economic or productive use of the property, an evaluation of biological functions and values shall be made based on the best available science. This evaluation shall consider rarity of the wetland type (e.g., vernal pools); support of MHCP species; proportion of natural to exotic vegetation; existing level of habitat disturbance, connectivity, or isolation relative to other natural habitats and preserve areas; state of natural groundwater recharge; water quality; and other relevant ecological factors. If the wetlands to be impacted are determined to have low biological value, then they need not be avoided, so long as mitigation for the impacts will result in higher biological value than the existing condition. The determination of relative biological value with and without the project shall require USFWS and CDFG written concurrence within 30 days of receipt of written request for concurrence by the local jurisdiction. If the wetlands to be impacted are of high biological value, then acquisition of the property for conservation purposes shall be pursued as a high priority, but only from willing sellers.

Any unavoidable impacts to wetlands must be mitigated to result in no net loss of wetland vegetation acreage and biological function and value within the MHCP subregion and preferably, but not necessarily, within the same drainage and city. Subarea Plans may apply stricter avoidance standards for wetlands inside the preserve than outside the preserve. However, the no net loss standard must be achieved regardless of location. To achieve the no net loss standards inside the FPA, mitigation for unavoidable impacts should preferably occur inside the FPA. Alternatively, mitigation may occur outside of the FPA if such mitigation demonstrably contributes to the MHCP preserve design and biological value. Mitigation for wetland impacts outside the FPA may occur anywhere that furthers biological goals of the MHCP and the Subarea Plan. In any case, wetland mitigation sites must be added to the MHCP preserve system and managed for biological functions and values, regardless of whether they are located inside or outside of the FPA.

### **2.1.2 Biological Preserve Assembly and Operation**

The FPA represents the land area within which the MHCP biological preserve will be assembled. The FPA alternatives are described in Section 2.2 of this document.

The MHCP preserve will be assembled through a combination of the following methods:

- Private lands already committed to conservation;
- Conservation of lands already in public ownership;
- Public acquisition of private lands with regional habitat value from willing sellers; and
- Private actions to conserve habitat, in conformance with development regulations and mitigation of impacts.

The relative contributions of these methods and the equitable distribution of costs have been the subject of extensive discussion by the MHCP Advisory Committee, leading to the following recommendations regarding preserve assembly:

- *Conservation of Existing Public Lands.* The MHCP preserve system will incorporate public lands to the greatest extent possible, to minimize the need to acquire private lands and to avoid increasing exactions on private land development beyond the existing requirements of local, state, and federal regulations.
- *Public Acquisition of Private Lands.* Privately owned habitat lands may need to be acquired when adequate protection of resources cannot be achieved through development regulations or mitigation of impacts. Where public funds are used to acquire habitat lands for the MHCP preserve, private property rights will be fully respected and upheld, and land will be acquired only from willing sellers at fair market value or upon terms mutually satisfactory to the buyer and seller. Condemnation proceedings will not be used unless specifically requested by a property owner.
- *Private and Public Development Participation.* Private development exactions that contribute to the preserve system should not be increased beyond what is authorized under existing law. Development participation should be in accordance with

## ***PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES***

---

development regulations, where habitat impacts to sensitive resources are avoided, and through compensatory mitigation of unavoidable impacts. A specific policy of the MHCP will be to direct land development to areas outside the preserve in exchange for conservation inside.

The MHCP Preserve will conserve 19,871 acres, of which 19,083 will be assembled through a combination of public ownership (federal, state, and local governments); public acquisition of private lands with regional habitat value from willing sellers; and private actions to conserve habitat, in conformance with development regulations and mitigation of impacts. The remaining 788 acres are wetlands that are currently publicly owned and managed outside the focused planning area; therefore, they are not part of the MHCP financing plan.

Federal and state governments will contribute to the preserve 1,486 acres of habitat lands that they currently administer in the study area. Local governments (cities, county, and special districts) will contribute to the preserve 7,323 acres of habitat lands that they currently own in the study area. Together, publicly owned habitat lands proposed to be included in the MHCP preserve total 8,809 acres.

There are presently 455 acres of privately owned mitigation banks or wildlife agency-approved mitigation areas in the MHCP study area. An additional 9,109 acres will be protected in conjunction with private development, through impact avoidance or compensatory mitigation for unavoidable impacts, for a total of 9,564 acres of conserved habitat.

Under the MHCP, federal, state, and local governments would cooperatively acquire 660 acres of habitat lands, independent of and separate from any project mitigation requirements. Approximately 50 acres of core California gnatcatcher habitat in the unincorporated portion of San Diego County would be acquired for public project mitigation, resulting in total acquisition of 710 acres.

In addition to habitat conservation, habitat rehabilitation and management (including monitoring and maintenance) are part of the MHCP Plan. Specific areas of focus include managing and improving the critical linkages to other subregional habitat preserves, including the Multiple Species Conservation Program (MSCP), Multiple Habitat Conservation and Open Space Program (MHCOSP), and Camp Pendleton.

## **Financing Plan**

Implementation of the MHCP will require funding for the acquisition, restoration, and management of natural habitat areas; biological monitoring; and administration, legal, and other costs associated with habitat acquisition and management. This section describes the estimated costs of program implementation and two example financing plans for the local share of those costs.

Through the MHCP Advisory Committee and the ad hoc Committee of Elected Officials, local jurisdictions participating in the MHCP have adopted policies and recommended the use of certain assumptions regarding the financing of plan implementation, as described below.

### ***Financing Policies***

**Habitat Acquisition.** It is assumed for analysis that the federal and state governments collectively will acquire 330 acres of habitat lands in the FPA for plan implementation, and the local jurisdictions, collectively, will be responsible for acquiring 330 acres of habitat lands. All acquisitions will be from willing sellers, on terms acceptable to both the seller and the buyer.

**Habitat Management.** Federal, state, and local agencies will manage their respective public lands committed to habitat conservation, lands that they acquire for the preserve, and other lands that are conserved as mitigation for public projects. Mitigation lands that remain in private ownership will be managed by the owners.

**Biological Monitoring.** Federal, state, and local agencies that own habitat lands in the preserve system will participate in a coordinated biological monitoring program for the life of the permit. It is assumed that funding for the monitoring program will be shared by those agencies in the same proportions as the amounts of habitat lands that they manage.

**Regional or Subregional Funding Program.** It is assumed that the local share of costs to implement the MHCP Plan will be funded by a regional or subregional funding program, to be established cooperatively by the participating local jurisdictions and submitted to the voters for approval. A “regional program” refers to a countywide funding program,

---

***PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES***

---

established in cooperation with other subregional Habitat Conservation Programs (HCPs). A “subregional program” will be established for the MHCP study area only.

The MHCP Advisory Committee also adopted policies regarding the use of a regional or subregional funding program to acquire and maintain the MHCP preserve system, as described in Section 7.3.1 of the MHCP Plan.

**Timing of Voter Approval.** It is assumed for analysis that the regional or subregional funding program will be in effect for 30 years. Participating jurisdictions will agree to begin a process of establishing such a program within 18 months of federal and state approval of the MHCP Plan or the first Subarea Plan in the MHCP study area and to place a measure on the ballot within an additional 18 months. This schedule may be adjusted, if the participating jurisdictions demonstrate that their good faith efforts require additional time.

**Deficiency in Public Funds.** Implementing agreements for MHCP Subarea Plans should provide for the contingency that either federal/state or local funds may not be sufficient for full implementation of the program. If federal/state funding is not provided as committed, the MHCP Plan will be reevaluated, with possible adjustments to take authorization coverage and assurances. If adequate local funding is not provided, the wildlife agencies and local jurisdictions will develop a strategy to address the shortfall. Implementation of the MHCP, Subarea Plans, and the IAs by the Service is subject to the requirements of the Anti-Deficiency Act and the availability of appropriated funds.

***Additional Issues***

The MHCP Advisory Committee has previously reviewed the following issues related to financing of the MHCP Plan implementation; some are addressed in this document, while others are still under review.

**Conservation of Core California Gnatcatcher Habitat.** In addition to habitat areas conserved within the jurisdictional boundaries of the MHCP, the plan calls for conservation of 400 to 500 acres of core California gnatcatcher habitat in the unincorporated county area east of the cities of Carlsbad and Encinitas and south of the City of San Marcos. Of this, about 400 acres are expected to be conserved as mitigation for public and private projects in

## PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES

---

the MHCP cities. Costs to acquire and manage 100 acres of the core gnatcatcher habitat are included in the MHCP funding program.

**Long-Term Demand for Conservation or Mitigation Credits.** A number of conservation banks have been established in San Diego County, of which three active banks are located in the MHCP study area (Daley Ranch, Manchester Avenue, and Whelan Ranch conservation banks).

**MHCP Regional Funding Program and Daley Ranch Conservation Bank in Escondido.**

The City of Escondido acquired the Daley Ranch property and established a conservation bank in 1997. At the request of the City, the difference between the appraised value of the conservation bank land and anticipated revenues from the sale of conservation credits is considered to be the net cost of establishing the bank and is included as a regional cost of habitat acquisition for purposes of the MHCP financing plan.

**Indirect Fiscal Impacts of MHCP Implementation.** Habitat acquisition and other measures to implement the MHCP may impact the finances of local governments. Such impacts may be negative, when some of the private lands are acquired for conservation, or positive, when urban development is facilitated by the presence of a regional conservation plan. At the present time, this fiscal impact is not included in the MHCP financing plan.

**Prior Commitment of Funds for Habitat Management.** Previously approved HCPs or conservation bank agreements contain provisions for the management of protected habitat areas, including commitments of future funding for management activities. This financing plan assumes that these areas will continue to be managed by their owners and that no additional funds are needed from the MHCP funding program.

**Establishing an Endowment to Fund Recurring Costs in Perpetuity.** The example financing plans (MHCP Volume I, Section 7-4) provide for establishment of an endowment to fund annual management and administrative costs in perpetuity, by setting aside a portion of revenues generated by the regional funding program. An alternative approach is to renew or replace the regional funding program at the end of its initial term. The latter approach will reduce the required annual revenues of the regional funding program.

**Coordination of MHCP Financing Plan with the South County MSCP Plan.** When the City of San Diego signed an implementing agreement with the federal and state wildlife agencies on July 17, 1997, it initiated a 36-month schedule for the establishment of a regional financing program for the South County MSCP. Although the MHCP, MSCP, and MHCOSP are separate programs, there are significant benefits in coordinating the local funding components of the three programs, especially in obtaining voter approval. Local jurisdictions participating in the MHCP have the option of establishing a regional funding program cooperatively with the South County MSCP jurisdictions.

### **Estimated Costs of Plan Implementation**

#### ***Habitat Acquisition***

The MHCP cities identified three categories of potential habitat acquisition needs: (1) essential acquisition needed to meet the objectives of selected Subarea Plans; (2) acquisition of additional, biologically important habitat areas where conservation goals are better served through acquisition than through private development subject to avoidance and mitigation guidelines; and (3) payment to the City of Escondido for the net cost of dedicating conservation easements on Daley Ranch. Total cost of the three categories is estimated to range between \$31.4 and \$37.2 million, or an average of \$34.3 million.

**Note on Land Values.** Since the location and type of potential acquisition areas differ widely across the study area, a single estimate of value per acre was not developed; estimates were prepared separately by jurisdiction and for lands that contain important habitats for the MHCP. The study area is largely urbanized. Costs of potential acquisition areas were estimated using prices of recent, comparable sales of vacant land, adjusted for the presence of physical constraints, such as steep slopes or floodplains, and other limitations imposed by land use policies and environmental regulations, such as requirements for offsite mitigation. Generally, unconstrained vacant land in the study area is valued at \$2.00 to \$5.00 per square foot, depending on location and allowable use; however, presence of physical and planning constraints can substantially reduce the average value of a parcel. Cost may also be reduced by acquiring open space easements on portions of private lands, rather than fee title. Estimates of land value used in this analysis reflect a variety of site-specific conditions that could occur in potential acquisition areas.

***Habitat Restoration***

Habitat quality has been degraded in many locations by past and present land uses and invasive species. A review of habitat quality on potential conservation areas indicated that approximately 338 acres of coastal sage scrub habitat should be enhanced or restored in areas critical to conservation of the California gnatcatcher. This recommendation became a condition for coverage of the gnatcatcher by the MHCP. Depending on site-specific criteria, such efforts can vary from limited enhancement (e.g., weeding and broadcast seeding) to intensive restoration (e.g., site grading, irrigation, planting/seeding, and site-specific maintenance and monitoring for up to 5 years). Costs of these efforts vary accordingly, from about \$18,000 to \$76,000 per acre. Required new funding for coastal sage scrub restoration totals approximately \$3.4 million, with restoration sites located in the cities of Carlsbad (\$1.2 million), Oceanside (\$2.2 million), and San Marcos (\$31,000).

***Habitat Management, Biological Monitoring, and Program Administration***

Operation and management required for the MHCP preserve include the following activities.

- Habitat management, or field operations, such as trail and fencing maintenance, vegetation control, security, and visitor services;
- Biological monitoring, or biological field studies necessary to meet the conditions of wildlife agency permits; and
- Program administration required to preserve assembly and coordination, land acquisition, financing, legal, and administrative support.

**Habitat Management.** Average management costs can vary widely, depending on the size and shape of contiguous habitat areas, adjacent uses, and species-specific requirements. Data on annual expenditures for preserve management were obtained for 23 open space and habitat preserves in San Diego County and other parts of California, including data for 11 habitat preserves collected by the Center for Natural Lands Management. The data show a clear negative correlation between preserve size and average management cost per acre. The correlation is presumably due partly to location – larger preserve areas generally located away from urbanized areas – and to the greater significance of edge efforts for smaller parcels. A regression model fitted to the data indicates that average cost to manage a 100-acre habitat

## ***PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES***

---

area will be around \$135 per acre per year, while cost to manage a 500-acre habitat area will be around \$85 per acre per year. While management costs for city-owned habitat lands are also expected to vary by location and size, average cost for the MHCP cities (excluding Solana Beach, which does not have city-owned natural habitat to be included in the preserve) is estimated to be \$93 per acre per year.

At buildout, the MHCP preserve will include 6,434 acres of natural habitat currently owned by the cities and 10,274 acres owned privately – 9,774 acres inside the cities and 500 acres in the unincorporated area. Since funds for management are or will be identified for conservation banks and open space areas to be maintained by homeowners' associations, habitat lands that require new funds for management total around 10,542 acres. This assumes that up to 75% of privately conserved habitat will be dedicated to public agencies or nonprofit organizations to be managed with public funds. If cities require that an endowment be established prior to dedication, then the need for public funding of habitat management will be reduced. Management of 10,542 acres at buildout is estimated to cost \$1.29 million in Year 2000 dollars (Table 2.1-3).

It is assumed that federal and state governments will manage and monitor habitat lands that they conserve in the MHCP preserve. Including the assumed one-half of publicly acquired habitat, total lands to be managed by those agencies will be 1,816 acres. (Most of these lands are already being managed for habitat resources.) New funding is required to manage the 330 acres of habitat lands to be acquired in the future. It is likely that per-acre costs to manage the federal and state lands may be less than costs for local jurisdictions, due to the larger networks of natural lands managed by those agencies.

**Biological Monitoring.** It is assumed here that biological monitoring will cost at buildout approximately \$100,000 per year. This estimate is subject to further review. It is assumed that the cost will be shared between federal/state governments and local governments in proportion to acres of habitat that they manage at buildout, i.e., about 10% by federal and state governments and 90% by local governments. The costs to local governments are included in the habitat management costs described above.

**Table 2.1-3  
Annual Costs of Habitat Management, Monitoring, and  
Administration at Buildout and Required Endowment**

	<b>Habitat Acres Conserved</b>	<b>Habitat Acres Management with Regional Funds</b>	<b>Annual Cost at Buildout or Endowment</b>
<i>Annual Cost at Buildout<sup>1</sup></i>			
Habitat Management			
MHCP Cities <sup>2</sup>	6,434	3,552	\$330.4
Private, in MHCP Cities <sup>3</sup>	9,774	6,858	945.0
Private, in Unincorporated Area <sup>4</sup>	500	132	11.3
<b>Total</b>	<b>16,708</b>	<b>10,542</b>	<b>\$1,286.7</b>
Biological Monitoring			--- <sup>5</sup>
Program Administration			300.0
Total Annual Cost			
In Thousands of Year 2000 Dollars			\$1,586.7
In Thousands of Year 2030 Dollars <sup>6</sup>			\$3,851.2
<i>Endowment at Net Interest Revenue of 3%</i>			
In Millions of Year 2000 Dollars			\$52.9
In Millions of Year 2030 Dollars <sup>6</sup>			\$128.4

- Notes: 1. Costs in thousands of Year 2000 dollars, except where noted.
2. City-owned habitat lands to be included in the preserve system. Acres to be managed with new public funds exclude existing conservation banks.
3. Privately owned habitat lands in the MHCP cities to be included in the preserve system; includes lands to be acquired with public funds. Acres to be managed with new public funds exclude conservation banks and other approved mitigation areas and 25% of habitat lands assumed to be maintained privately.
4. Of 500 acres of core California gnatcatcher habitat, 300 acres will be managed by the City of Carlsbad, and 68 acres are assumed to be acquired and subsequently managed by federal and/or state government.
5. Included in annual habitat management cost.
6. Assumed cost escalation of 3% per year.

Source: MHCP Cities; Onaka Planning & Economics.

**Program Administration.** Administration of the MHCP, including habitat acquisition and management and biological monitoring, could be performed by a single office (such as the MHCP Land Conservancy), with oversight by the MHCP cities. Such an office could include a full-time administrator; a biologist; an administrative assistant; and budgets for legal, insurance, public information, and office support. Annual cost to operate the office is estimated to be \$300,000 both during and after buildout of the preserve system.

---

## ***PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES***

---

Total estimated cost to manage, monitor, and administer the portions of the preserve system that are not owned by either the federal or state government is \$1.59 million per year in Year 2000 dollars, or \$3.85 million in 2030 dollars, assuming annual cost escalation of 3% (Table 2.1-3).

### **Endowment of Fund Recurring Costs**

To fund annual costs to manage, monitor, and administer the preserve system in perpetuity, an endowment may be established. Assuming net interest revenue of 3% per year after inflation, the required endowment in Year 2000 dollars is \$52.9 million, or \$128.4 million in 2030 dollars.

### **2.1.3 MHCP Plan Implementation Policies**

The following implementation policies were gathered from various sources, including Issue Papers approved by the MHCP Advisory Committee, policies intended to apply to all subregional plans (as documented in the MSCP Plan), discussions of the Joint Policy Committee of MSCP and MHCP elected officials, and discussions of the MHCP ad hoc Committee of Elected Officials.

### **Cooperative Implementation Structure**

The MHCP relies on cooperation between local, state, and federal governments for successful implementation. The MHCP will be implemented by applying local land use laws, including endangered species permitting as authorized by state and federal agencies upon approval of Subarea Plans.

### ***Sequential Adoption***

Local jurisdictions may prepare Subarea Plans and execute IAs on separate schedules. Subarea Plans are, however, interdependent because they must form a collective conservation strategy when combined in a subregional plan. For example, the coverage of some species in an individual jurisdiction may depend on conservation actions in another. Some jurisdictions may complete the process earlier than others and receive coverage for a limited number of species. As other cities complete and execute the IAs, the list of covered species may increase.

### **Take Authorizations**

Take authorization holders are agencies (i.e., participating cities) that receive take authorization permits from the wildlife agencies through their Subarea Plan IAs. The benefits of these authorizations can be shared with individuals or projects within the cities holding the authorizations, provided the projects are consistent with the MHCP, the Subarea Plans, permits, and Implementing Agreements.

### ***Cities***

The jurisdictions receiving federal and state take authorizations for covered species will receive assurances from the wildlife agencies as described in the IAs.

### ***Project Proponents***

Proponents of projects approved by a city, consistent with its take authorizations, become “third-party beneficiaries” to those authorizations. Proponents will receive assurances that their mitigation obligations for covered species will not be altered once development approvals have been granted by the jurisdiction and mitigation has been assured. The IA will provide assurances including a detailed provision of responsibilities for the wildlife agencies and the cities.

### **Development Process**

Each of the Subarea Plans will include standards, criteria, and policies that will apply to development projects as they are proposed in each jurisdiction. If such standards and criteria are met and the policies are followed, project proponents will receive take authorization as “third-party beneficiaries”.

## **2.2 PROPOSED ALTERNATIVES**

Understanding the alternatives selected for analysis (under NEPA and CEQA) requires a full understanding of the project. The MHCP is more than a preserve area; it is a comprehensive Habitat Conservation Program that defines actions the federal, state, and local governments and the private sector must undertake to assure the continued viability of sensitive species

## ***PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES***

---

and the ecosystem they depend upon in northwestern San Diego County. These actions include land protection, habitat restoration, land management, biological monitoring, compliance monitoring, and funding of the program. It will also provide the cities within incidental take authorizations.

This analysis compares alternatives in terms of the acres of habitat conserved, restored, managed, and monitored, and the effects that this conservation is expected to have on each sensitive species that may occur in the study area.

For purposes of this joint EIS/EIR, nine alternatives were considered. Five of them were considered but eliminated from further analysis because they did not meet the objectives of the MHCP. The five rejected alternatives are:

- Coastal sage scrub only preservation,
- Listed species only preservation,
- Public lands only preservation,
- “Hard-line” option, and
- Inclusion of Camp Pendleton, Fallbrook Weapons Station, and County Unincorporated Properties (Section 2.4).

The remaining four alternatives quantitatively analyze levels of biological conservation and take under each city Subarea Plan:

- Alternative No. 1 - Focused Planning Area No. 1
- Alternative No. 2 - Focused Planning Area No. 2 - the Preferred Project
- Alternative No. 3 - Biological Core and Linkage Areas
- Alternative No. 4 - No Action/No Project Alternative

Alternatives No. 1 and No. 2 were designed to conserve as much of the Biological Core and Linkage Area (BCLA) as possible, minimize preserve fragmentation, maximize use of existing public lands and open space, and maintain private property rights and economic viability. They include “hard-line” areas (lands to be conserved and managed primarily for biological resources) and “soft-line” planning areas, within which hard-line preserve areas will ultimately be delineated based on further data and planning.

### **2.2.1 Alternative No. 1 – Focused Planning Area No. 1**

This alternative comprises the Focused Planning Area as defined by the cities, primarily within their boundaries, at levels of conservation the cities expect to obtain by implementing their general plans and various existing resource protection ordinances. It balances resource protection against private property rights, economic concerns, and projected growth within the cities (Figure 2.2-1). This alternative preserves 60% of the existing coastal sage scrub, 66% of the chaparral, 80% of the coastal sage/chaparral mix, and 91% of the maritime succulent scrub (Table 2.2-1). Per the MHCP policies, Subarea Plans, Army Corps of Engineers, and the California Department of Fish and Game “no-net-loss” policies, riparian and estuarine habitats are conserved at 100%. Overall, 65% of the habitat in the total MHCP study area will be conserved.

This alternative also requires the preserve to be managed and monitored in perpetuity, and financial responsibilities to be identified and assigned. Likewise, if additional public funding sources become available, certain sage scrub-dominated areas have been identified by the cities as priorities for acquisition from willing sellers, which would increase overall conservation of this community.

This alternative is not the preferred project, because the conservation of coastal sage scrub habitat is not sufficient to assure the viability of the coastal California gnatcatcher and other coastal-sage-scrub-dependent species in the subregion.

### **2.2.2 Alternative No. 2 – Focused Planning Area No. 2 Adding the Gnatcatcher Core and Restoration - the Preferred Project**

This alternative begins with FPA 1 and adds 338 acres of coastal sage scrub restoration in key locations within the preserve area (Figure 2.2-2). This alternative also targets additional conservation, outside of the seven-city subregional boundary, in the unincorporated area known as the “gnatcatcher core”. The core is located south of the City of San Marcos and east of the cities of Carlsbad and Encinitas. Approximately 400 to 500 acres of contiguous coastal sage scrub supporting 16 to 23 pairs of breeding coastal California gnatcatchers will be conserved there. By adding the 338 acres of restoration and the 400 to 500 acres in the core, Alternative No. 2 brings the total conservation of coastal sage scrub in the MHCP area up to 66% (Table 2.2-2). Other vegetation types remain the same as Alternative No. 1: 66%

**PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES**

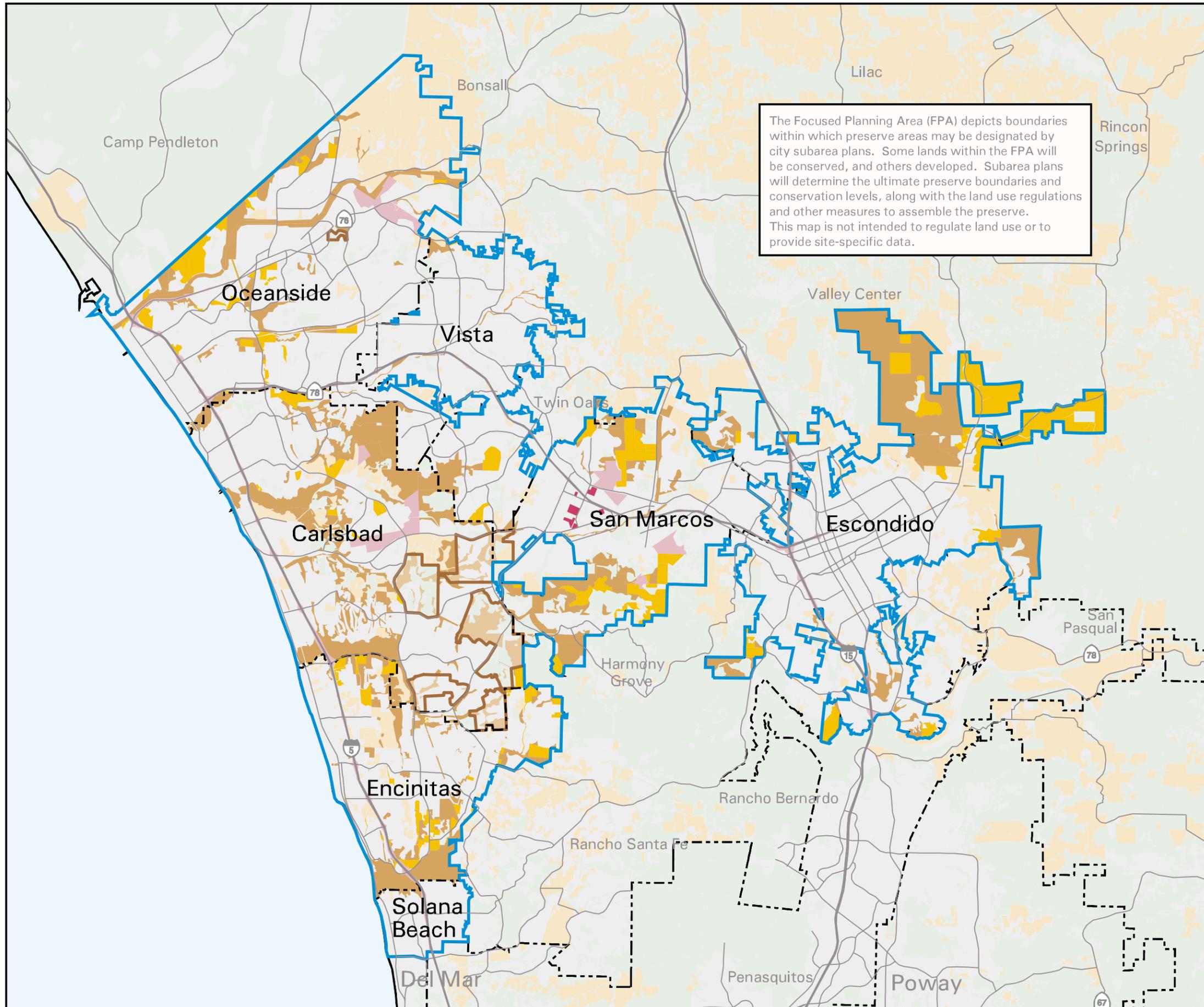
**Table 2.2-1  
Vegetation Community Acreage within FPA Alternative 1**

<b>Vegetation Community</b>	<b>Total MHCP Study Area</b>	<b>FPA Alternative 1</b>	<b>Percent of Total MHCP</b>
Southern Coastal Bluff Scrub	2	--	0%
Maritime Succulent Scrub	32	30	91%
Coastal Sage Scrub	8,570	5,171	60%
Chaparral	8,312	5,488	66%
Southern Maritime Chaparral	968	770	80%
Coastal Sage/Chaparral Mix	462	233	50%
Grassland	5,209	1,597	31%
Southern Coastal Salt Marsh	272	272	100%
Alkali Marsh	165	165	100%
Freshwater Marsh	533	533	100%
Riparian Forest	676	676	100%
Riparian Woodland	250	250	100%
Riparian Scrub	1,514	1,514	100%
Englemann Oak Woodland	230	170	74%
Coast Live Oak Woodland	650	492	76%
Other Oak Woodlands	1	1	100%
Freshwater	444	444	100%
Estuarine	955	955	100%
Disturbed Wetland	202	202	100%
Natural Flood Channel/Streambed	396	396	100%
Beach	48	9	18%
Saltpan/Mudflats	3	3	100%
<b><i>Subtotal Habitat</i></b>	<b>29,895</b>	<b>19,371</b>	<b>65%</b>
Eucalyptus Woodland	648	NA	NA
Agriculture	10,460	NA	NA
Disturbed	4,072	NA	NA
<b><i>Subtotal Vacant Land</i></b>	<b>14,532</b>	<b>NA</b>	<b>NA</b>
Developed	66,790	NA	NA
<b>TOTAL</b>	<b>111,865</b>	<b>NA</b>	<b>NA</b>

Note: Numbers may not sum to total as shown, due to rounding. Vernal pools were mapped as an overlay and thus their acreage is not included in this total. Approximately 5 acres of vernal pool habitat occur in the study area. An additional 46 acres of vernal pools in the City of San Marcos are considered to be possible major amendment areas and may be added to the FPA in the future.

Source: SANDAG 1999.

## Figure 2.2-1 Focused Planning Area Alternative 1



The Focused Planning Area (FPA) depicts boundaries within which preserve areas may be designated by city subarea plans. Some lands within the FPA will be conserved, and others developed. Subarea plans will determine the ultimate preserve boundaries and conservation levels, along with the land use regulations and other measures to assemble the preserve. This map is not intended to regulate land use or to provide site-specific data.

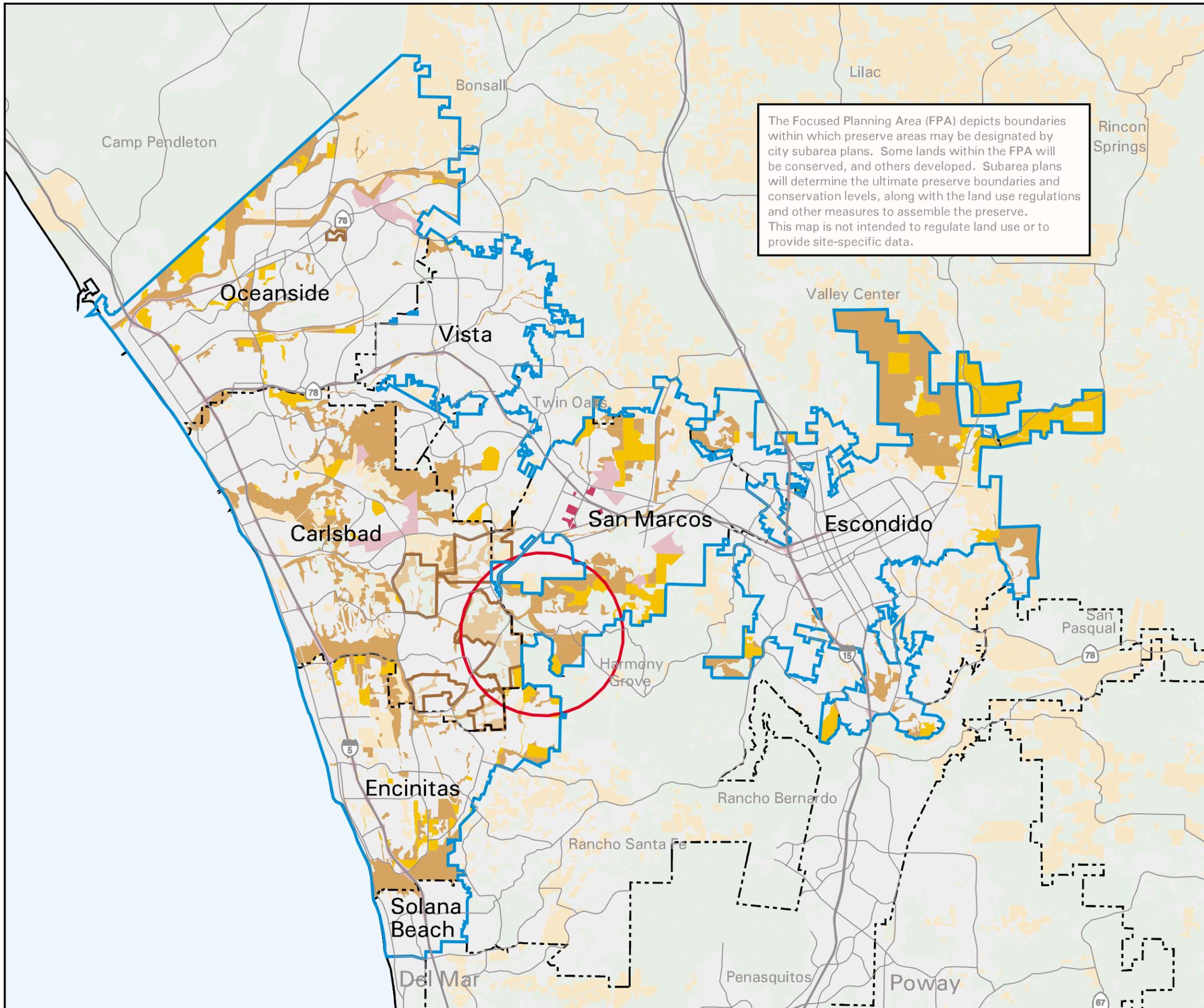
- Hardline Areas
- Softline Areas
- Hardline Preserves on Already Permitted Properties
- Not Part of Subarea Plans
- Major Amendment Areas
- Natural Habitats (Outside FPA)
- Agricultural Land
- Developed/Disturbed Land
- Projects Already Permitted
- City Boundary
- MHCP Boundary

SOURCE: Local Jurisdictions in MHCP Study Area

Feet 0 6,500 13,000  
Kilometers 1.56 3.12

**SANDAG**  
November 27, 2001

**Figure 2.2-2  
Focused Planning Area  
and Gnatcatcher Core  
Alternative 2**



The Focused Planning Area (FPA) depicts boundaries within which preserve areas may be designated by city subarea plans. Some lands within the FPA will be conserved, and others developed. Subarea plans will determine the ultimate preserve boundaries and conservation levels, along with the land use regulations and other measures to assemble the preserve. This map is not intended to regulate land use or to provide site-specific data.

-  Hardline Areas
-  Softline Areas
-  Hardline Preserves on Already Permitted Properties
-  Not Part of Subarea Plans
-  Major Amendment Areas
-  Natural Habitats (Outside FPA)
-  Agricultural Land
-  Developed/Disturbed Land
-  Projects Already Permitted
-  General Area for Core Gnatcatcher Conservation (USFWS Circle)
-  City Boundary
-  MHCP Boundary

SOURCE: Local Jurisdictions in MHCP Study Area



Feet 0 6,500 13,000  
Kilometers 1.56 3.12



November 27, 2001

**PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES**

**Table 2.2-2  
Vegetation Community Acreage within FPA Alternative 2**

<b>Vegetation Community</b>	<b>Total MHCP Study Area</b>	<b>FPA Alternative 2</b>	<b>Percent of Total MHCP</b>
Southern Coastal Bluff Scrub	2	--	0%
Maritime Succulent Scrub	32	30	91%
Coastal Sage Scrub	8,570	5,671	66%
Chaparral	8,312	5,488	66%
Southern Maritime Chaparral	968	770	80%
Coastal Sage/Chaparral Mix	462	233	50%
Grassland	5,209	1,597	31%
Southern Coastal Salt Marsh	272	272	100%
Alkali Marsh	165	165	100%
Freshwater Marsh	533	533	100%
Riparian Forest	676	676	100%
Riparian Woodland	250	250	100%
Riparian Scrub	1,514	1,514	100%
Englemann Oak Woodland	230	170	74%
Coast Live Oak Woodland	650	492	76%
Other Oak Woodlands	1	1	100%
Freshwater	444	444	100%
Estuarine	955	955	100%
Disturbed Wetland	202	202	100%
Natural Flood Channel/Streambed	396	396	100%
Beach	48	9	18%
Saltpan/Mudflats	3	3	100%
<b><i>Subtotal Habitat</i></b>	<b>29,895</b>	<b>19,871</b>	<b>66%</b>
Eucalyptus Woodland	648	NA	NA
Agriculture	10,460	NA	NA
Disturbed	4,072	NA	NA
<b><i>Subtotal Vacant Land</i></b>	<b>14,532</b>	<b>NA</b>	<b>NA</b>
Developed	66,790	NA	NA
<b>TOTAL</b>	<b>111,865</b>	<b>NA</b>	<b>NA</b>

Note: Numbers may not sum to total as shown, due to rounding. Vernal pools were mapped as an overlay and thus their acreage is not included in this total. Approximately 5 acres of vernal pool habitat occur in the study area. An additional 46 acres of vernal pools in the City of San Marcos are considered to be possible major amendment areas and may be added to the FPA in the future.

Source: SANDAG 1999.

---

## ***PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES***

---

of the chaparral, 80% of the coastal sage/chaparral mix, and 100% of riparian and estuarine habitats. Overall, 66% of the habitat in the total MHCP study area will be conserved under this alternative.

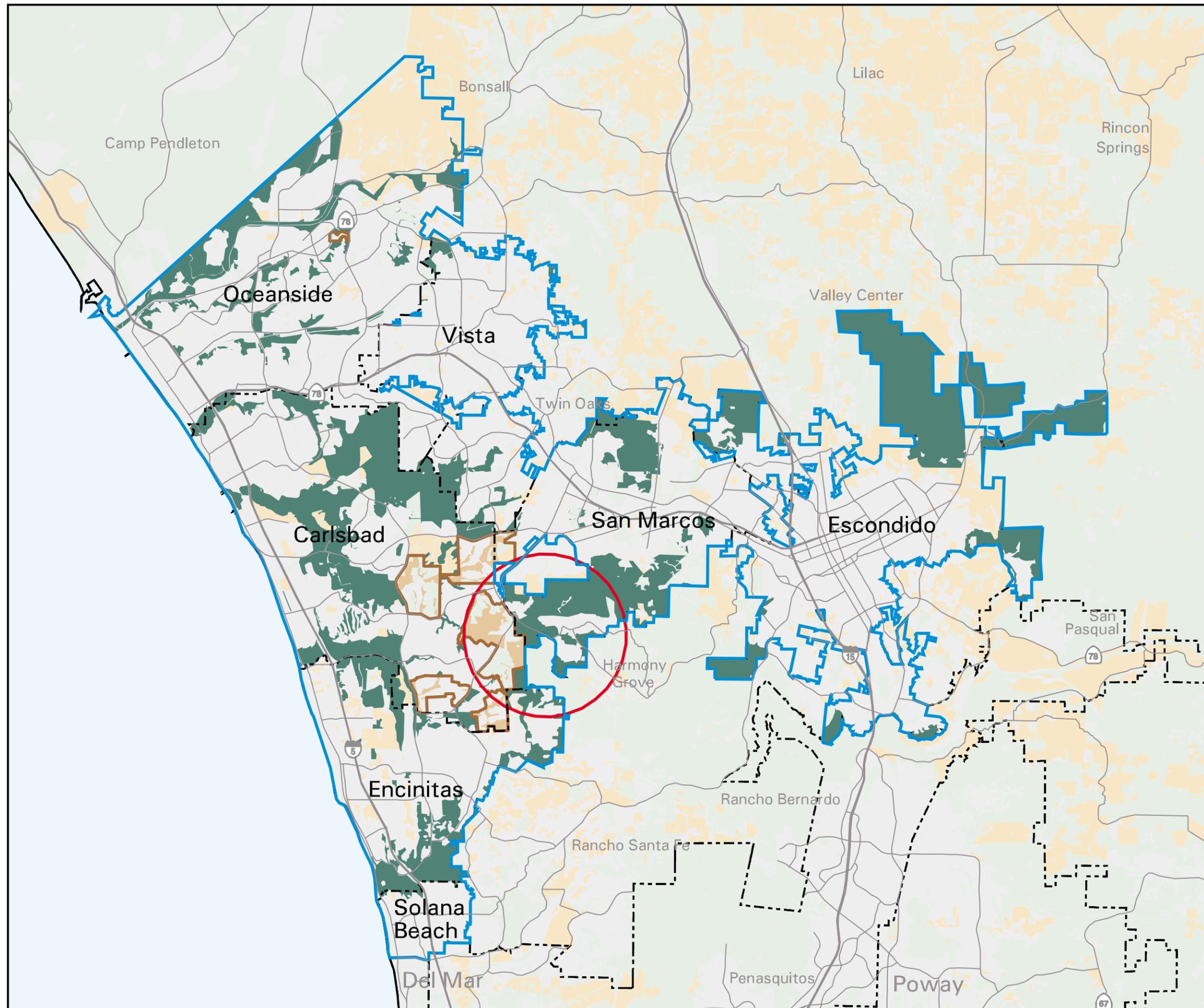
This alternative also requires the preserve to be managed and monitored in perpetuity, and financing responsibilities to be identified and assigned. Likewise, if additional public funding sources become available, certain sage-scrub-dominated areas have been identified by the cities as priorities for acquisition from willing sellers, which would increase overall conservation of this community.

Alternative No. 2 is the preferred project because the levels of conservation, including restoring 338 acres and managing and monitoring the preserve in perpetuity, are adequate measures to protect coastal sage scrub species for which the MHCP is seeking coverage. Also, this alternative does not significantly impact the cities' ability to provide housing and employment opportunities for the expected growth over the next 20 years, nor does it require the condemnation of property for purposes of habitat protection.

### **2.2.3 Alternative No. 3 – Biological Core and Linkage Area**

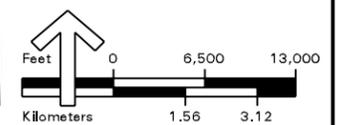
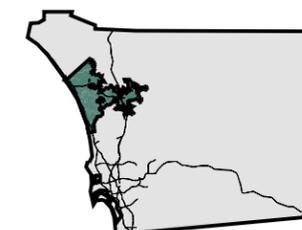
The BCLA was originally designed as an analytical tool to assist with design of the preserve system and for comparison of alternative designs. The BCLA includes all of the highest quality remaining habitat areas, including the largest remaining blocks of habitat and critical linkages between them (Figure 2.2-3). This alternative is the biologically preferred preserve alternative because it identifies all large contiguous areas of habitat, all areas supporting major and critical species populations or habitat areas, and all important functional linkages and movement corridors between them. It also adds 338 acres of coastal sage scrub restoration in key locations within the preserve and requires the preserve be managed and monitored in perpetuity. It also targets additional conservation of approximately 400 to 500 acres in the unincorporated area known as the “gnatcatcher core”. Conservation levels include 89% of the coastal sage scrub, 93% of the chaparral, 95% of the coastal sage/chaparral mix, and 100% of riparian and estuarine habitats (Table 2.2-3). Overall, 84% of the habitat in the total MHCP study area will be conserved under this alternative.

**Figure 2.2-3  
Biological Core and  
Linkage Area  
Alternative 3**



-  Biological Core and Linkage Areas
-  Hardline Preserves on Already Permitted Properties
-  Natural Habitats (Outside BCLA)
-  Agricultural Land
-  Developed/Disturbed Land
-  Projects Already Permitted
-  General Area for Core Gnatcatcher Conservation (USFWS Circle)
-  City Boundary
-  MHCP Boundary

SOURCE: Ogden Environmental



**PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES**

**Table 2.2-3  
Vegetation Community Acreage within BCLA Alternative 3**

<b>Vegetation Community</b>	<b>Total MHCP Study Area</b>	<b>BCLA Alternative 3</b>	<b>Percent of Total MHCP</b>
Southern Coastal Bluff Scrub	2	--	0%
Maritime Succulent Scrub	32	31	96%
Coastal Sage Scrub	8,570	7,628	89%
Chaparral	8,312	7,699	93%
Southern Maritime Chaparral	968	904	93%
Coastal Sage/Chaparral Mix	462	439	95%
Grassland	5,209	3,295	63%
Southern Coastal Salt Marsh	272	270	99%
Alkali Marsh	165	165	100%
Freshwater Marsh	533	457	86%
Riparian Forest	676	404	60%
Riparian Woodland	250	133	53%
Riparian Scrub	1,514	969	64%
Englemann Oak Woodland	230	207	90%
Coast Live Oak Woodland	650	583	90%
Other Oak Woodlands	1	1	100%
Freshwater	444	396	89%
Estuarine	955	954	100%
Disturbed Wetland	202	87	43%
Natural Flood Channel/Streambed	396	381	96%
Beach	48	23	48%
Saltpan/Mudflats	3	3	100%
<b>Subtotal Habitat</b>	<b>29,895</b>	<b>25,031</b>	<b>84%</b>
Eucalyptus Woodland	648	357	55%
Agriculture	10,460	NA	NA
Disturbed	4,072	NA	NA
<b>Subtotal Vacant Land</b>	<b>14,532</b>	<b>NA</b>	<b>NA</b>
Developed	66,790	NA	NA
<b>TOTAL</b>	<b>111,865</b>	<b>NA</b>	<b>NA</b>

Note: Numbers may not sum to total as shown, due to rounding. Vernal pools were mapped as an overlay and thus their acreage is not included in this total. Approximately 5 acres of vernal pool habitat occur in the study area. An additional 46 acres of vernal pools in the City of San Marcos are considered to be possible major amendment areas and may be added to the FPA in the future.

Source: SANDAG 1999.

## ***PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES***

---

This alternative is not selected as the preferred project because it would have significant impacts on the region's abilities to house and provide services for the projected population growth, meet general plan goals, and provide needed infrastructure systems (Section 4.6). Section 65581 of the Government Code requires cities and counties to identify adequate sites for housing and make adequate provisions for the existing and projected needs of all economic segments of the community. With this alternative little if any development could occur, since the alternative captures most of the remaining undeveloped natural areas within the 175-square-mile study area. This alternative would remove from future development approximately 25% of vacant land currently forecast to be developed for urban use through 2020 (Table ES-1). (In comparison, Alternative No. 1 would remove about 11% of land forecast for development.) This represents a reduction in the supply of developable land, which would likely result in significant economic impacts, including curtailment of forecast population and employment growth; price increases for land and housing faster than the rate of inflation; and lack of affordable housing. Furthermore, there would be less of a contribution to the preserve from mitigation, reducing the private-sector contribution to the preserve, thus increasing the public-sector contribution. This would require substantial local funds and federal and state grants. For these reasons, this alternative is considered to be economically impractical and likely infeasible.

### **2.2.4 Alternative No. 4 - No Action/No Project Alternative**

The No Action/No Project alternative provides the decision makers with the ability to compare the impacts of not approving the proposed project. The No Action/No Project alternative is a continuation of the existing program for issuing take authorizations on a project-by-project basis. This allows for a comparison of the impacts of continuing the existing take authorizations individually vs. preparing a coordinated conservation plan and issuing incidental take authorizations to local agencies.

Under the No Action/No Project Alternative, the existing land use and environmental regulations process described above will continue and be required for all public and private projects proposed within the MHCP study area. Existing regulatory practices require mitigation for impacts to sensitive species and habitats resulting in lands being set aside for open space preservation. The configuration of preserved lands under the No Action/No Project Alternative will, however, be implemented on a project-by-project basis and will be characterized, as it is presently, by fragmentation, poor design or no linkages, and island preserves, resulting in increasing the risk of species decline and endangerment. This project-

## ***PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES***

---

by-project pattern of planning will likely occur on both public and private lands within the MHCP study area under the No Action/No Project Alternative. Less fragmentation could occur on public lands under the No Action/No Project Alternative, since a substantial portion of these lands is already designated for open space, parks, and preserves. Public lands owned by special districts and agencies whose primary purpose is not open space or resource protection could, however, be subject to the type of piecemeal project-by-project planning that has historically occurred.

Under the No Action/No Project Alternative, a Section 10(a)(1)(B) permit will not be issued. Instead, activities involving take of listed species normally prohibited under Section 9 of the ESA will require individual 10(a) permits or Section 7 consultation if a federal nexus exists under the current ESA regulations. The MHCP Plan and Subarea Plans as proposed will not be implemented. Proposed land use designation changes necessary to implement the MHCP Plan and the Subarea Plans will not be required. The No Action/No Project Alternative assumes that impacts to sensitive habitats/species will be evaluated and mitigated on a project-by-project basis, as is the present case. Under the traditional development process, several environmental regulations apply as described below.

Environmental impact evaluations for private and public development are currently subject to the land use and environmental regulations of individual jurisdictions as well as state and federal law. Local jurisdictions provide land use regulations for the conservation and preservation of environmental resources through General Plans, zoning ordinances, and Local Coastal Programs and Specific Plans, as applicable. State laws that regulate environmental resources include CEQA and CDFG 1600 and 2081 series of permits regulating impacts to wetlands and state-listed species, respectively.

The Federal ESA allows incidental “take” of any species of animal that is federally listed as threatened or endangered to be authorized under either Section 7 or Section 10 of the ESA, provided such take is not likely to jeopardize the continued existence of an endangered or threatened species or result in adverse modification of critical habitat, the taking will not appreciably reduce the likelihood for the survival and recovery of the species in the wild, and is in compliance with the incidental take statement in the issued Biological Opinion pursuant to Section 7 or the Section 10(a)(1)(B) permit. To obtain a permit to take a listed species under Section 10(a)(1)(B) of the Federal ESA, the applicant must prepare an adequate habitat conservation plan. Section 2081 of the state ESA also requires that a permit be obtained prior to take of a state-listed species. Section 404 permits are required by federal law to

## ***PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES***

---

ensure that impacts are minimized and mitigation for individual projects that involve the discharge of dredge or fill material in impact wetlands is identified.

By selecting this alternative, there would not be a NCCP in northwestern San Diego County. Without the NCCP, only federal and state listed species would be protected under the mandates of the federal and state Endangered Species Acts. Habitat not occupied by a listed species would not be protected. Development and mitigation actions would continue to occur in a piecemeal fashion that doesn't typically conserve large and interconnected preserves required to maintain species viability. No regionally coordinated funding, monitoring, or land management would occur. Riparian and estuarine habitats would continue to be protected by the Army Corps of Engineers, and the California Department of Fish and Game "no net loss" policies, but some resource protections afforded within these ecosystems by the MHCP would not occur (e.g., vernal pools). Other vegetation communities would be conserved as follows: coastal sage scrub – 19%, chaparral – 31%, and coastal sage/chaparral mix – 18%. Overall, 30% of natural habitats in the MHCP study area would be conserved under this alternative.

### **2.3 PROPOSED ACTION – SUBAREA PLANS**

The MHCP is designed to be implemented through individual Subarea Plans prepared by participating cities. As discussed in Section 1.3, five of the seven cities within the overall MHCP boundary (Carlsbad, Encinitas, Escondido, Oceanside, and San Marcos) have prepared draft Subarea Plans which describe the specific mechanisms their respective city will use to implement the MHCP. Each of these draft Subarea Plans, along with implementing actions proposed by the individual jurisdictions, is described and illustrated on the following pages.

As discussed in Section 1.3, due to the lack of natural habitat in areas still available for development and, therefore, in need of other authorizations within the City of Solana Beach, they will be participating in the approval and implementation of the subregional MHCP Plan only and will not need to prepare a Subarea Plan. Significant habitat areas falling within City boundaries (including portions of the San Elijo Lagoon County Park and Ecological Preserve) are already preserved and included within the conservation plan. The City of Vista will be covered as well by the overall MHCP Plan; however, the City is not submitting their Subarea Plan at this time. Should the City of Vista request an incidental take permit, they will prepare a Subarea Plan and certify a CEQA document, adopt their Subarea Plan, and apply for their

take authorizations. Additional NEPA analysis will be required if the Service determines to issue an incidental take permit to the City.

### **2.3.1 Carlsbad Subarea Plan**

The following discussion is based on the Draft Habitat Management Plan for Natural Communities in the City of Carlsbad (April 1999). The overall goal of the Carlsbad Habitat Management Plan (HMP) for Natural Communities (herein referred to as the Carlsbad Subarea Plan) is to contribute to regional biodiversity and the viability of rare, unique, or sensitive biological resources throughout the City of Carlsbad and the larger region while allowing public and private development to occur consistent with the Carlsbad General Plan and Growth Management Plan.

The Carlsbad Subarea Plan proposes to preserve the diversity of natural communities and protect sensitive biological resources by establishing a preserve system that:

- Builds on existing levels of dedicated open space and conservation;
- Conserves larger remaining blocks or cores of habitat capable of sustaining threatened, listed or sensitive species over time [Subarea Plan (i.e., Habitat Management Plan) cores];
- Provides linkages that ensure connectivity to Subarea Plan cores within the City and to natural communities in adjoining jurisdictions and the region, while also preserving additional habitat;
- Protects Special Resource Areas (SRAs) outside of the core and linkage areas which are defined herein as vernal pools, significant populations of listed plant species, and movement corridors for large mammals; and
- Provides for participation in conserving a habitat core in the county area southeast of Carlsbad (MHCP core).

Figure 2.3-1 depicts Carlsbad's Subarea Plan. The City's preserve system includes existing "hard-line" areas, proposed "hard-line" areas, standards areas, and the areas subject to existing take agreement (Fieldstone/Carlsbad HCP).

### **Existing Hard-Line Preserve Areas**

Existing hard-line preserve areas include publicly and privately owned land that has been committed to habitat conservation as a result of existing open space regulations, past development approvals, or other actions. These areas include the City's three coastal lagoons and wetlands, the Dawson Los Monos Reserve, as well as preserve areas in Aviara, Villages of La Costa, Carillo Ranch, Calavera Heights, and other development areas (Figure 2.3-1).

### **Proposed Hard-Line Preserve Areas**

Proposed hard-line preserve areas have been submitted by a number of proposed public and private projects. Upon approval of the Subarea Plan, these proposals will obtain the same conservation status as the existing hard-line areas, and the City's General Plan will be amended to designate them as open space. Take of habitat will be authorized for the remaining portions of the projects. These projects include the City's municipal golf course, Lake Calavera, Veteran's Memorial Park, Hub Park, the Zone 19 park, Manzanita Partners, SDG&E south shore properties, Bressi Ranch, Carlsbad Oaks North Business Park, Holly Springs, Kelly Ranch (Kelly Hillman property), South Coast and the Raceway Property, Shiley (Heiatt), Fox-Millin, and Calavera Heights (Figure 2.3-1).

### **Standards Areas**

The Carlsbad Subarea Plan includes conservation goals and planning standards which apply to future development proposals for key properties (Standards Area) within the City which have not submitted proposed hard-line designs for inclusion in the preserve system at this time. These goals and standards have been arranged according to the City's Local Facilities Management Zones (LFMZs – defined by the City's Growth Management Plan) to which they apply. (For a description of these standards, refer to the Carlsbad Subarea Plan.)

### **Conservation Level**

Table 2.3-1 provides the total resulting levels of conservation expected to be achieved by each of the three alternatives. As shown, implementation of the Subarea Plan (FPA 2) will result in the preservation of 71% of the remaining habitat in the City (i.e., 4,497 of the



**PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES**

**Table 2.3-1  
Biological Conservation  
City of Carlsbad Focused Planning Area Alternatives**

Vegetation Type	Total	FPA 1		FPA 2*		BCLA	
		Acres	Percent	Acres	Percent	Acres	Percent
Southern Coastal Bluff Scrub	-	-	--	-	--	-	--
Maritime Succulent Scrub	32	30	91%	30	91%	31	96%
Coastal Sage Scrub	1,993	1,404	70%	1,404	70%	1,821	91%
Chaparral	604	424	70%	424	70%	578	96%
Southern Maritime Chaparral	359	271	75%	271	75%	351	98%
Coastal Sage/Chaparral Mix	273	106	39%	106	39%	272	100%
Grassland	1,299	488	38%	488	38%	1,192	92%
Southern Coastal Salt Marsh**	147	147	100%	147	100%	145	99%
Alkali Marsh**	13	13	100%	13	100%	13	100%
Freshwater Marsh**	192	192	100%	192	100%	171	89%
Riparian Forest**	86	86	100%	86	100%	84	98%
Riparian Woodland**	21	21	100%	21	100%	20	97%
Riparian Scrub**	353	353	100%	353	100%	321	91%
Engelmann Oak Woodland	-	-	--	-	--	-	--
Coast Live Oak Woodland	23	21	92%	21	92%	23	100%
Other Oak Woodlands	1	1		1		1	
Freshwater**	57	57	100%	57	100%	51	89%
Estuarine**	768	768	100%	768	100%	767	100%
Disturbed Wetland**	118	118	100%	118	100%	65	55%
Natural Flood Channel/ Streambed**	-	-	--	-	--	-	--
Beach	-	-	--	-	--	-	--
Saltpan/Mudflats**	-	-	--	-	--	-	--
<b>NATURAL HABITATS</b>	<b>6,337</b>	<b>4,497</b>	<b>71%</b>	<b>4,497</b>	<b>71%</b>	<b>5,906</b>	<b>93%</b>
<i>Agriculture (type unknown)</i>	<i>1,089</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>412</i>	<i>38%</i>
<i>Orchards, Vineyards</i>	<i>-</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>-</i>	<i>--</i>
<i>Intensive Agriculture</i>	<i>140</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>40</i>	<i>28%</i>
<i>Field &amp; Pasture Agriculture</i>	<i>603</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>328</i>	<i>54%</i>
<b>AGRICULTURE</b>	<b>1,832</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>780</b>	<b>43%</b>
Eucalyptus Woodland	245	88	NA	88	NA	197	80%
Disturbed Land	1,067	NA	NA	NA	NA	479	45%
Urban/Developed	11,076	NA	NA	NA	NA	304	3%
<b>NON-NATURAL HABITATS</b>	<b>12,143</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>782</b>	<b>6%</b>
<b>TOTAL</b>	<b>20,558</b>					<b>7,666</b>	<b>37%</b>

\* FPA 2 includes an additional 400 to 500 acres of contiguous coastal sage scrub supporting California gnatcatchers within the unincorporated County of San Diego core area.

\*\* Wetland vegetation communities, conserved at 100% both inside and outside the FPA due to current no net loss regulations.

---

## ***PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES***

remaining 6,337 acres of natural habitat), including 70% of the remaining coastal sage scrub habitat. By adding other land to the preserve system (e.g., disturbed habitat) and creating a system of 6,489 acres, the overall conservation level is 74%. Conservation levels outside those areas already holding take authorizations (e.g., the Fieldstone HCP properties) are somewhat higher, about 78%, when the already permitted properties are removed from calculations.

The primary mitigation for impacts to covered species under the Carlsbad Subarea Plan is the conservation and management of habitat for the species in the preserve system. In addition, in compliance with the ESA requirements that the impacts of incidental take be minimized and mitigated to the maximum extent practicable, measures to avoid and reduce impacts will apply on a project-level basis. Conservation goals and measures to avoid, minimize, and mitigate impacts will be applied to all public and private projects in Carlsbad. For a detailed list of these measures, refer to the Carlsbad Habitat Management Plan. All future projects will also mitigate impacts to habitat based on the mitigation requirements provided in Table 2.3-2.

### ***Covered Species***

Based on the Carlsbad subarea preserve configuration, vegetation community conservation thresholds, and proposed habitat management measures, 47 species are on Carlsbad's list of covered species subject to incidental take (Table 2.3-3). Once the wildlife agencies have approved this Subarea Plan, the agencies may issue take authorizations to the City of Carlsbad for these 47 species. Once other MHCP Subarea Plans have been approved, the City of Carlsbad may receive take authorizations for all species on the MHCP covered species list (Table 2.1-1) as a Plan Amendment upon completion of the MHCP. CDFG will not issue take authorizations for species designated as "fully protected".

### **Implementing Actions**

Upon approval of the Carlsbad Subarea Plan, the City will use its land-use regulatory authority to fully implement the provisions of the Plan. Regulatory implementation shall consist of the following actions:

***PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES***

**Table 2.3-2  
Mitigation Ratios for Impacts to HMP Habitats (1)**

<b>Habitat Group and Type</b>	<b>Mitigation Ratio by Type of Impacted Habitat</b>
A. Coastal sage marsh, alkali marsh, freshwater marsh, estuarine, salt pan/mud flats, riparian forest, riparian woodland, riparian scrub, vernal pools, disturbed wetlands, flood channel, freshwater Engelmann oak woodland, coast live oak woodland (2)	No net loss goal (mitigation ratio varies by type of replacement habitat)
B. Beach, southern coastal bluff scrub, maritime succulent scrub, southern maritime chaparral, native grass	3:1 (3)
C. Gnatcatcher – occupied coastal sage scrub	2:1 (4)
D. Unoccupied coastal sage scrub, coastal sage/chaparral mix, chaparral (excluding southern maritime chaparral)	1:1 (5)
E. Annual (non-native) grassland	0.5:1 (5)
F. Disturbed lands, eucalyptus, agricultural lands	Mitigation Fee (5)

- Notes: (1) Projects that would affect lands occupied by narrow endemic species must meet the following conservation standards. If the land is within the proposed preserve system, 100% conservation of the narrow endemic population(s) is required. If the land is outside the proposed preserve system, at least 80% conservation of the narrow endemic population(s) is required.
- (2) Group A habitats are associated with wetlands. Impacts to these habitat types are subject to review under Section 404 of the federal Clean Water Act or Section 1600 of the California Fish and Game Code.
- (3) It is assumed that all habitat types in Group B will be included in the proposed preserve system. Small, isolated patches of low-quality southern maritime chaparral may be located outside a preserve area, and maximum avoidance and onsite conservation is preferred.
- (4) Maximum avoidance and onsite conservation of Group C habitat is encouraged.
- (5) Offsite mitigation for habitat in this group which is not conserved or mitigated onsite will be paid for by a per-acre in-lieu mitigation fee in an amount to be determined by the City Council. This fee is discussed in more detail in Section E of the Plan.

*Urgency Ordinance.* Immediately upon approval of the Subarea Plan, the City will adopt an urgency ordinance, as permitted by California Government Code Section 65858, to require compliance with the Plan while permanent regulatory measures are being drafted and approved.

*City of Carlsbad General Plan.* The Open Space and Conservation Element will be amended to incorporate the Subarea Plan by reference. Both the Open Space Map contained in the Element, as well as the Land Use Map contained in the Land Use Element, will be amended to show the existing and proposed hard-line preserve areas as open space. If necessary or applicable, existing goals, objectives, or policies contained in the Element will be amended to strengthen the City position regarding implementation of the Subarea Plan.

**PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES**

**Table 2.3-3  
City of Carlsbad HMP Species**

Common Name	Scientific Name	Status <sup>1</sup>	CNPS, RED List, Code <sup>2</sup>	Habitat <sup>3</sup>
<b>Invertebrates</b>				
Harbison's Dun Skipper	<i>Euphyes vestris harbisoni</i>	*/		RW, RS, OW (rip)
Hermes Copper	<i>Lycaena hermes</i>	*/		CSS, S, mixed CHP
Riverside Fairy Shrimp	<i>Streptocephalus woottoni</i>	FE/		VP
Salt Marsh Skipper	<i>Panoquina errans</i>	*/		SM
San Diego Fairy Shrimp	<i>Branchinecta sandiegonensis</i>	FE/		VP
<b>Birds</b>				
American Peregrine Falcon	<i>Falco peregrinus anatum</i>	/CE		G, AG fields, cliffs, coastal RP
Belding's Savannah Sparrow	<i>Passerculus sandwichensis beldingi</i>	*/CE		SM
Burrowing Owl	<i>Speotyto cunicularia hypugaea</i>	*/CSC		G, coastal strand, AG
California Brown Pelican	<i>Pelecanus occidentalis californicus</i>	FE/CE		Open water
California Least Tern	<i>Sterna antillarum browni</i>	FE/CE		Coastal strand, mudflats, salt flats
Coastal California Gnatcatcher	<i>Poliopitila californica californica</i>	FT/CSC		CSS
Cooper's Hawk	<i>Accipiter cooperii</i>	/CSC		RW, OW (breeding)
Elegant Tern	<i>Sterna elegans</i>	*/CSC		SM, shoreline, estuarine/intertidal
Large-billed Savannah Sparrow	<i>Passerculus sandwichensis rostratus</i>	*/CSC		SM
Least Bell's Vireo	<i>Vireo bellii pusillus</i>	FE/CE		RW
Light-footed Clapper Rail	<i>Rallus longirostris levipes</i>	FE/CE		SM
Osprey	<i>Pandion haliaetus</i>	/CSC		Open water, wetland
So CA Rufous-crowned Sparrow	<i>Aimophila ruficeps canescens</i>	*/CSC		CSS
Southwestern Willow Flycatcher	<i>Empidonax traillii extimus</i>	FE/CE		RW
Western Snowy Plover	<i>Charadrius alexandrinus nivosus</i>	FT/CSC		Salt flats, mudflats, sandy beaches, dunes
White-faced Ibis	<i>Plegadis chihi</i>	*/CSC		FWM, estuaries, SM
Yellow-breasted Chat	<i>Icteria virens</i>	/CSC		RW
<b>Plants</b>				
Blochman's Dudleya	<i>Dudleya blochmaniae ssp. blochmaniae</i>	*/	1B, 2-2-2	CB
California Orcutt Grass	<i>Orcuttia californica</i>	FE/CE	1B, 3-3-2	VP
Cliff Spurge	<i>Euphorbia misera</i>	NONE	2, 2-2-1	MSS, CB
Del Mar Manzanita	<i>Arctostaphylos glandulosa ssp. crassifolia</i>	FE/	1B, 3-3-2	CSS, SMC
Del Mar Mesa Sand Aster	<i>Corethrogyne filaginidolia var. linifolia</i>	⊥/	1B, 3-2-3	CHP (openings)
Encinitas Baccharis	<i>Baccharis vanessae</i>	FT/CE	1B, 2-3-3	Mixed CHP
Engelmann Oak	<i>Quercus engelmannii</i>	NONE	4, 1-2-2	CHP, CLOW, G
Little Mouseltail	<i>Myosurus minimus ssp. apus</i>	*/	3, 2-3-2	VP, AM
Nuttall's Scrub Oak	<i>Quercus dumosa</i>	*/	1B, 2-3-2	SMC
Orcutt's Hazardia	<i>Hazardia orcuttii</i>	*/	1B, 3-3-2	CHP

**PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES**

**Table 2.3-3, City of Carlsbad HMP Species (continued)**

<b>Common Name</b>	<b>Scientific Name</b>	<b>Status<sup>1</sup></b>	<b>CNPS, RED List, Code<sup>2</sup></b>	<b>Habitat<sup>3</sup></b>
Orcutt's Spineflower	<i>Chorizanthe orcuttiana</i>	FE/CE	1B, 3-3-3	SMC
Spreading Navarretia	<i>Navarretia fossalis</i>	PT/	1B, 2-3-2	VP
San Diego Ambrosia	<i>Ambrosia pumila</i>	*/	1B, 3-3-2	CSS
San Diego Barrel Cactus	<i>Ferocactus viridescens</i>	*/	2, 1-3-1	CSS
San Diego Button-celery	<i>Eryngium aristulatum var. parishii</i>	FE/CE	1B, 2-3-2	VP (clay)
San Diego Marsh-elder	<i>Iva hayesiana</i>	*/	2, 2-2-1	AM, RP
San Diego Thorn-mint	<i>Acanthomintha ilicifolia</i>	PE/CE	1B, 2-3-2	G, CSS
Sticky Dudleya	<i>Dudleya viscida</i>	*/	1B, 3-2-3	CSS, CHP
Summer-Holly	<i>Comarostaphylis diversifolia ssp. diversifolia</i>	*/	1B, 2-2-2	CHP
Thread-leaved Brodiaea	<i>Brodiaea filifolia</i>	PT/CE	1B, 3-3-3	VP, G, seeps, wet meadows
Torrey Pine	<i>Pinus torreyana ssp. torreyana</i>	*/	1B, 3-2-3	SMC, Torrey Pine forest
Wart-stemmed Ceanothus	<i>Ceanothus verrucosus</i>	*/	2, 1-2-1	S, mixed CHP, SMC
<b>Amphibians and Reptiles</b>				
Orange-throated Whiptail	<i>Cnemidophorus hyperythrus beldingi</i>	*/CSC		CSS, CHP, G
<b>Birds</b>				
Bell's Sage Sparrow	<i>Amphispiza belli belli</i>	*/CSC		CSS, CHP
Coastal Cactus Wren	<i>Campylorhynchus brunneicapillus cousei</i>	*/CSC		CSS, cactus patches
Golden Eagle	<i>Aquila chrysaetos</i>	BEPA/CSC		CSS, CHP, G
Northern Harrier	<i>Circus cyaneus</i>	/CSC		G, SM, FWM, AG, open CSS
Tricolored Blackbird	<i>Agelaius tricolor</i>	*/CSC		FWM, G, AG
Western Bluebird	<i>Sialia mexicana</i>	NONE		OW (edges), G
<b>Plants</b>				
Parry's Tetracoccus	<i>Tetracoccus dioicus</i>	*/	1B, 3-2-2	CHP, CSS
<b>Amphibians and Reptiles</b>				
Arroyo Southwestern Toad	<i>Bufo microscaphus californicus</i>	FE/CSC		CSS, CHP (along streams)
San Diego Horned Lizard	<i>Phrynosoma coronatum blainvillei</i>	*/CSC		CSS, CHP
Southwestern Pond Turtle	<i>Clemmys marmorata pallida</i>	*/CSC		Aquatic, RP
<b>Mammals</b>				
Mountain Lion	<i>Felis concolor</i>	CA REG		CSS, CHP, RW
San Diego Black-tailed Jackrabbit	<i>Lepus californicus bennettii</i>	*/CSC		CSS, G, CHP
Southern Mule Deer	<i>Odocoileus hemionus fuliginata</i>	CA REG		CHP, CSS, RW

---

**PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES**

**Table 2.3-3, City of Carlsbad HMP Species (continued)**

**<sup>1</sup>Status (Federal/State)**

FE = Federally endangered  
PE = Proposed for federal listing as endangered  
FT = Federally threatened  
PT = Proposed for federal listing as threatened  
C = Candidate for federal listing  
BEPA = Bald Eagle Protection Act  
CE = State endangered  
CT = State threatened

**<sup>2</sup>California Native Plant Society (CNPS) Status**

List of Species Designation  
1B = Rare or endangered in California and elsewhere (meets CDFG criteria for rare or endangered listing)

**R-E-D Code**

R – Rarity  
1 = Rare, but found in sufficient numbers and distributed widely enough that the potential for extinction or extirpation is low.  
2 = Occurrences confined to several populations or one extended population  
3 = Occurrence limited to one or a few highly restricted populations, or present in such small numbers that it is seldom reported

**<sup>3</sup>Habitat (Holland 1986)**

AG = Agriculture  
AM = Alkali marsh  
CB = Coastal bluff  
CHP = Chaparral  
CLOW = Coast live oak woodland  
CSS = Coastal sage scrub  
FWM = Freshwater marsh  
G = Grassland  
MSS = Maritime succulent scrub

CSC = State species of special concern  
\* = Formerly Category 2 or Category 3 candidate or proposed for federal listing; no current federal status  
⊥ = Proposed rule to list as endangered or threatened has been withdrawn; no current federal status protected = moratorium on hunting  
none = no federal or state status

2 = Rare or endangered in California, more common elsewhere  
3 = Plants about which more information is needed  
4 = Plants of limited distribution

E – Endangerment  
1 = Not endangered  
2 = Endangered in a portion of its range  
3 = Endangered throughout its range  
D- Distribution  
1 = More or less widespread outside California  
2 = Rare outside California  
3 = Endemic to California

OW = Oak woodland  
RF = Riparian forest  
RP = Riparian  
RS = Riparian scrub  
RW = Riparian woodland  
SM = Saltmarsh  
SMC = Southern maritime chaparral  
VP = Vernal pool

---

## ***PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES***

---

*City of Carlsbad Growth Management Plan.* The Plan contains a requirement that an additional 15% of the otherwise developable land within a Local Facilities Management Zone be set aside for open space purposes. Priorities for use of the 15% standard are contained in the City's Open Space and Conservation Resource Management Plan. The City will amend this Plan to make the conservation of habitat as identified in the Subarea Plan a priority use for the 15% standard in the LFMZs where it is appropriate.

*City of Carlsbad Municipal Code.* The City will amend the Code by the addition of a new section to require lands located within the Standards Areas of the Subarea Plan to comply with the specific conservation standards contained in the Subarea Plan.

*City of Carlsbad Open Space Ordinance.* The City will amend this Ordinance to add conserved habitat lands, as identified in the Subarea Plan, as undevelopable open space lands.

### **2.3.2 Encinitas Subarea Plan**

The goals of the Encinitas Subarea Plan (September 1999) are:

- Address how the City of Encinitas will conserve natural biotic communities and sensitive plant and wildlife communities.
- Conserve the region's biodiversity while enhancing the quality of life for the area residents.
- Provide regulatory certainty for landowners and developers, while preserving property rights and economic goals.

Figure 2.3-2 depicts the City of Encinitas Subarea Plan. The City of Encinitas is primarily an urbanized area. Because the city is largely built out, remaining native habitat areas are restricted primarily to coastal lagoons and upland habitats along the City's periphery. Included in the Encinitas FPA are a small portion of the Batiquitos Lagoon in the north, as well as lands immediately south and southeast of the lagoon. The southern portion of the FPA consists of San Elijo Lagoon County Park and Ecological Reserve and portions of Escondido Creek.

## ***PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES***

---

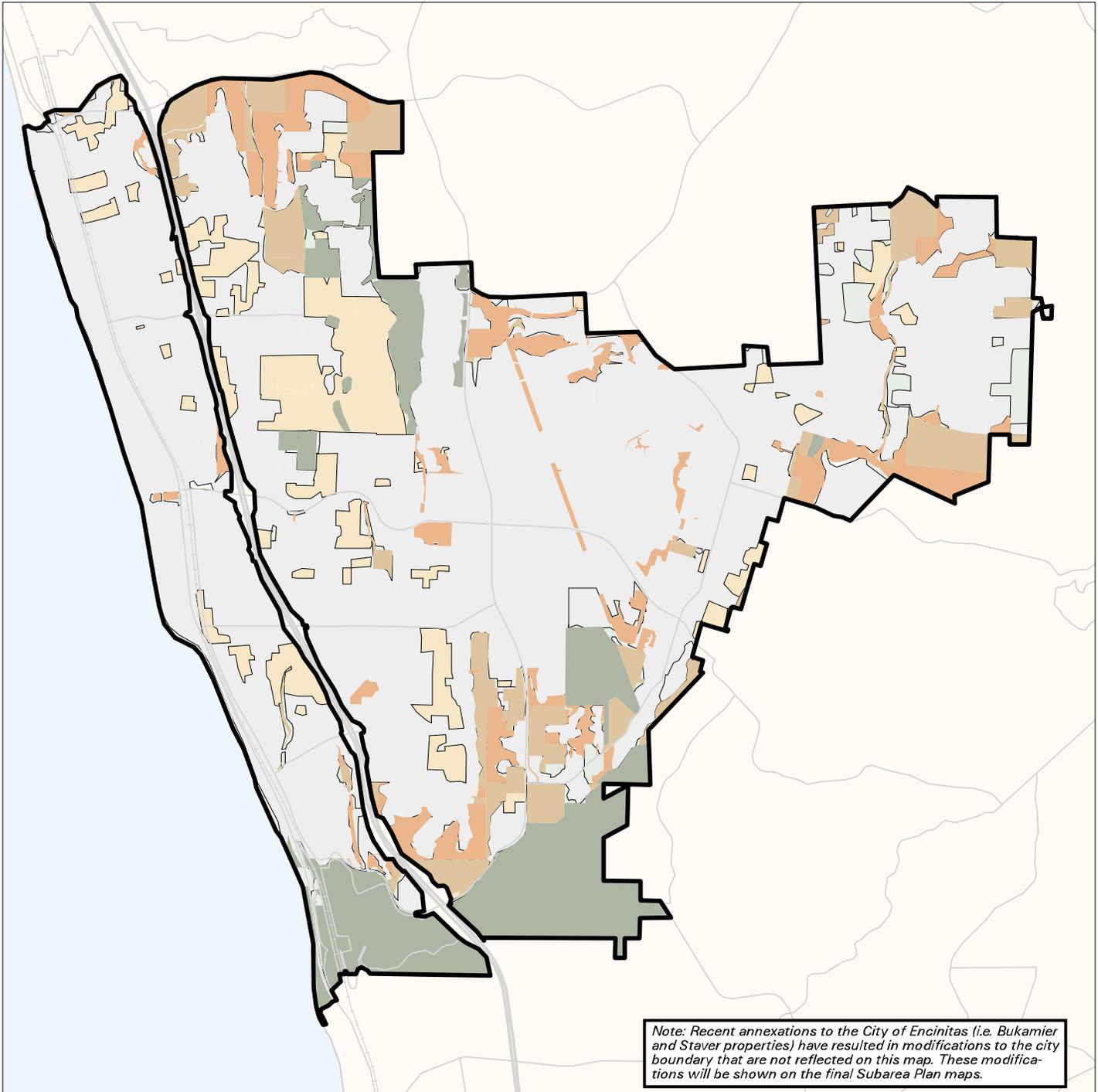
The mapped boundaries of Encinitas' FPA include hard-lined and soft-lined areas. Hard-lined areas include properties that have approved agreements between the developer and the City showing designated development and biological open spaces. For these properties, the area that has been developed or is approved for development is outside the preserve, while the open space is in the preserve and conserved at 90 to 100%, depending on the types of approved activities. For soft-lined areas, which do not have approved development agreements, development and conservation standards and criteria will be applied to achieve the projected conservation. Conservation of wetland communities will be 100% in soft-lined areas, and narrow endemics will be conserved at 95%. Conservation targets in upland areas will vary, based on the mitigation ratio to be applied to each vegetation community.

The majority of the land in Encinitas, 75%, is privately owned. The remaining 25% of the City's land area is owned by various public agencies, including CDFG, San Diego County, and the City of Encinitas, as well as other state, federal, and local agencies.

Table 2.3-4 provides the total resulting levels of conservation expected to be achieved by each of the three alternatives. As shown, implementation of the Subarea Plan (FPA 2) will result in the preservation of 82% of the remaining habitat in the City (i.e., 2,173 of the remaining 2,634 acres of natural habitat), including 71% of the remaining coastal sage scrub habitat.

### **Covered Species**

Based on the Encinitas Subarea Plan preserve configuration, vegetation community conservation thresholds, and proposed habitat management measures, 58 species will be included on Encinitas' list of covered species for which they are requesting a take authorization. Once wildlife agencies have approved this Subarea Plan, the agencies may issue a take authorization to the City of Encinitas for up to 58 species. Once other MHCP Subarea Plans have been approved, the City of Encinitas may receive additional take authorizations for all species on the MHCP conserved species list (Table 2.1-1).

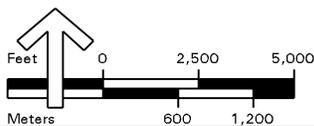


**Figure 2.3-2  
City of Encinitas Subarea Plan  
Focused Planning Area**

- |  |   |
|--|---|
|  Natural Habitats             |  Hardline Focused Planning Area              |
|  Agricultural Land            |  Existing Homeowners' Association Open Space |
|  Developed and Disturbed Land |  Softline Focused Planning Area              |



November 27, 2001



Source: City of Encinitas, 1999

**PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES**

**Table 2.3-4  
Biological Conservation  
City of Encinitas Focused Planning Area Alternatives**

Vegetation Type	Total	FPA 1		FPA 2*		BCLA	
		Acres	Percent	Acres	Percent	Acres	Percent
Southern Coastal Bluff Scrub	-	-	--	-	--	-	--
Maritime Succulent Scrub	-	-	--	-	--	-	--
Coastal Sage Scrub	852	608	71%	608	71%	811	95%
Chaparral	198	149	75%	149	75%	197	100%
Southern Maritime Chaparral	561	481	86%	481	86%	519	93%
Coastal Sage/Chaparral Mix	-	-	--	-	--	-	--
Grassland	185	97	52%	97	52%	152	82%
Southern Coastal Salt Marsh**	119	119	100%	119	100%	119	100%
Alkali Marsh**	141	141	100%	141	100%	141	100%
Freshwater Marsh**	116	116	100%	116	100%	116	100%
Riparian Forest**	3	3	100%	3	100%	3	100%
Riparian Woodland**	48	48	100%	48	100%	48	100%
Riparian Scrub**	223	223	100%	223	100%	205	92%
Engelmann Oak Woodland	-	-	--	-	--	-	--
Coast Live Oak Woodland	-	-	--	-	--	-	--
Other Oak Woodlands	-	-	--	-	--	-	--
Freshwater**	6	6	100%	6	100%	3	54%
Estuarine**	161	161	100%	161	100%	161	100%
Disturbed Wetland**	12	12	100%	12	100%	6	48%
Natural Flood Channel/ Streambed**	-	-	--	-	--	-	--
Beach	5	5	100%	5	100%	5	100%
Saltpan/Mudflats**	3	3	100%	3	100%	3	100%
<b>NATURAL HABITATS</b>	<b>2,634</b>	<b>2,173</b>	<b>82%</b>	<b>2,173</b>	<b>82%</b>	<b>2,490</b>	<b>95%</b>
<i>Agriculture (type unknown)</i>	75	NA	NA	NA	NA	27	35%
<i>Orchards, Vineyards</i>	3	NA	NA	NA	NA	-	0%
<i>Intensive Agriculture</i>	588	NA	NA	NA	NA	21	4%
<i>Field &amp; Pasture Agriculture</i>	452	NA	NA	NA	NA	132	29%
<b>AGRICULTURE</b>	<b>1,118</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>180</b>	<b>16%</b>
Eucalyptus Woodland	88	60	NA	60	NA	69	79%
Disturbed Land	83	NA	NA	NA	NA	17	20%
Urban/Developed	8,156	NA	NA	NA	NA	295	4%
<b>NON-NATURAL HABITATS</b>	<b>8,239</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>311</b>	<b>4%</b>
<b>TOTAL</b>	<b>12,080</b>					<b>3,050</b>	<b>25%</b>

\* FPA 2 includes an additional 400 to 500 acres of contiguous coastal sage scrub supporting California gnatcatchers within the unincorporated County of San Diego core area.

\*\* Wetland vegetation communities, conserved at 100% both inside and outside the FPA due to current no net loss regulations.

**Implementing Action**

Upon approval of the Encinitas Subarea Plan, the City will use its land use and regulatory authority to fully implement the provisions of the plan. Regulatory implementation shall consist of the following actions:

*Urgency Ordinance.* Immediately upon approval of the Subarea Plan, the City will enact an urgency ordinance, as permitted by California Government Code Section 65858, to require interim compliance with the plan while permanent regulatory measures are being drafted and approved.

*City of Encinitas General Plan.* The City of Encinitas General Plan reflects issues and policies related to requirements of the California Coastal Act. Policies are combined to create the General Plan and the Local Coastal Program Land Use Plan (LUP) for the City of Encinitas. Therefore, the term “General Plan” refers to both the City’s General Plan and the LUP.

The Introduction and the Land Use, Public Safety, Resource Management, and Recreation Elements will be amended to incorporate the Subarea Plan by reference. If necessary or applicable, existing goals, objectives, or policies contained in the Introduction and in the elements may be amended to strengthen the City’s position regarding plan implementation.

*City of Encinitas Municipal Ordinance.* The City will revise the Grading, Erosion, and Sediment Control Ordinance to include specific fees and penalties assessed for violations of the grading ordinance. Additionally, the City will continue to use policies and standards contained in this ordinance in reviewing project development proposals in areas affected by sensitive resources in the coastal zone.

The City will adopt, or amend as required, zoning ordinances, codes, and guidelines, to be consistent with the General Plan. This criterion will ensure that the Zoning Ordinance reflects the requirements of the Subarea Plan in appropriate areas of the City. The City will also review and modify other development regulations, as needed, to ensure that approval of private and public development projects is consistent with the Subarea Plan.

### **2.3.3 Escondido Subarea Plan**

The following discussion is based on the Internal Review Draft of the Escondido Subarea Plan (September 1999).

The three sets of goals used to develop the Escondido Subarea Plan are:

- Biological conservation goals (as defined in the MHCP Biological Goals, Standards, and Guidelines; Ogden 1998).
- Property development, property rights, and economic goals.
- Implementation of existing General Plan policies to protect habitat areas in the open space system, creation of a system of open space corridors, and preservation of sensitive lands.

Figure 2.3-3 depicts Escondido's Subarea Plan. The City's preserve or FPA is comprised of conserved habitat on public and private lands. Although public acquisition of privately owned habitat lands is not required to implement the Subarea Plan, if funding becomes available, then it is recommended that approximately 51 acres of undeveloped, private lands in the south section of the Subarea Plan area in the San Pasqual River Valley, north of Lake Hodges, be given priority for acquisition.

Included within Escondido's FPA are the Daley Ranch conservation bank; the Lake Dixon recreational area and open space area; Kit Carson Park; and City Water District property located in the northern portion near Lake Wohlford in the unincorporated area.

The mapped boundaries of Escondido's FPA include hard-lined and soft-lined areas. Hard-lined areas include properties that have approved development agreements showing designated development and biological open space areas. For these properties, the area that has been developed or is approved for development is outside the preserve, while the open space is in the preserve and conserved at 90 to 100% (depending on the types of approved activities). For soft-lined areas, which do not have approved development agreements, onsite conservation standards and mitigation ratios will be applied to achieve project conservation. In general, any development on other soft-lined properties in Escondido must be designed to maximize the size of the conserved patches, minimize fragmentation of the areas to be

## ***PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES***

---

conserved, cluster development away from sensitive resources, and avoid impacts to riparian corridors that may be used for wildlife movement. Fire breaks and fuel modification zones must be included within the development footprint and not within the preserve. Conservation targets within these soft-lined areas range from 50 to 80%, with 35% conservation in a portion of Daley Ranch (Area II).

Table 2.3-5 provides the total resulting levels of conservation expected to be achieved by each of the three alternatives. As shown, implementation of the Subarea Plan (FPA 2) will result in the preservation of 73% of the remaining habitat in the City (i.e., 6,765 of the remaining 9,206 acres of natural habitat), including 65% of the remaining coastal sage scrub habitat.

### **Covered Species**

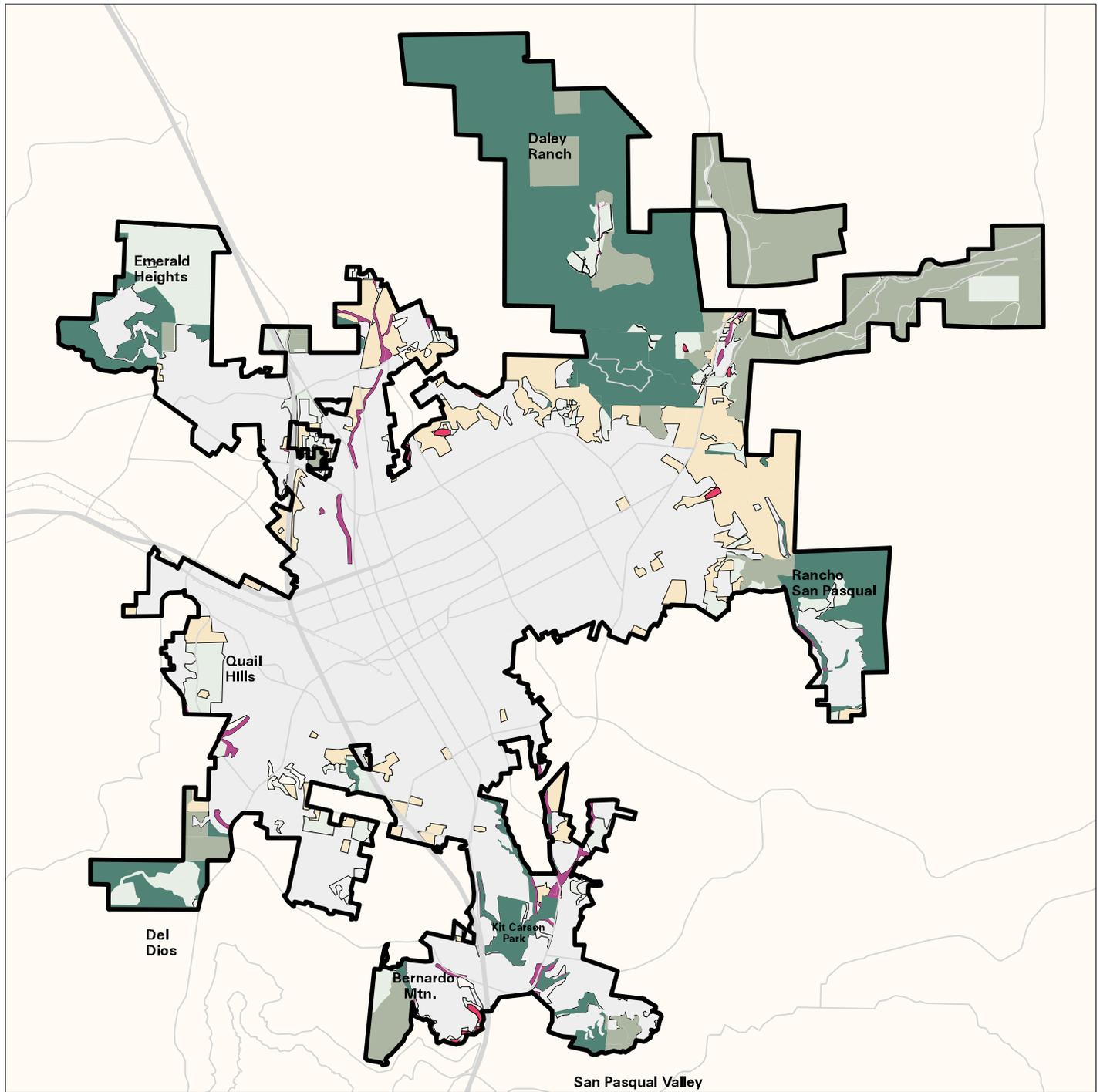
Based on the Escondido subarea preserve configuration, vegetation community conservation thresholds, and proposed habitat management measures, 47 species are on Escondido's list of covered species subject to incidental take. Once wildlife agencies have approved this Subarea Plan, the agencies may issue take authorizations to the City of Escondido for these 47 species. Once other MHCP Subarea Plans have been approved, the City of Escondido may receive take authorizations for all species on the MHCP covered species list (Table 2.1-1).

### **Implementing Actions**

Upon approval of the Escondido Subarea Plan, the City will use its land use regulatory authority to fully implement the provisions of the Plan. Regulatory implementation shall consist of the following actions:

*Urgency Ordinance.* Concurrent with approval of the Subarea Plan, the City will enact an urgency ordinance, as permitted by California Government Code Section 65858, to require interim compliance with the Plan while permanent regulatory measures are being drafted and approved.

*City of Escondido General Plan.* The Land Use Element, the Community Open Space and Conservation Element, and the Implementation Element will be amended to incorporate the Subarea Plan by reference. The Open Space and Land Use maps contained in the elements

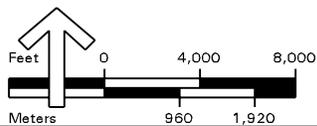


**Figure 2.3-3**  
**City of Escondido Subarea Plan**  
**Focused Planning Area (FPA) and Constrained Lands Outside the FPA**

- |                              |                                |   |
|------------------------------|--------------------------------|---|
| Natural Habitats             | Hardline Focused Planning Area | Constrained Lands (Wetlands) Outside the FPA    |
| Agricultural Land            | Softline Focused Planning Area | Constrained Land (Slopes > 35%) Outside the FPA |
| Developed and Disturbed Land |                                |   |



November 27, 2001



Source: City of Escondido, 1999

**PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES**

**Table 2.3-5  
Biological Conservation  
City of Escondido Focused Planning Area Alternatives**

Vegetation Type	Total	FPA 1		FPA 2*		BCLA	
		Acres	Percent	Acres	Percent	Acres	Percent
Southern Coastal Bluff Scrub	-	-	--	-	--	-	--
Maritime Succulent Scrub	-	-	--	-	--	-	--
Coastal Sage Scrub	2,252	1,457	65%	1,457	65%	1,731	77%
Chaparral	4,758	3,538	74%	3,538	74%	4,503	95%
Southern Maritime Chaparral	-	-	--	-	--	-	--
Coastal Sage/Chaparral Mix	52	43	82%	43	82%	40	77%
Grassland	597	371	62%	371	62%	447	75%
Southern Coastal Salt Marsh**	-	-	--	-	--	-	--
Alkali Marsh**	-	-	--	-	--	-	--
Freshwater Marsh**	37	37	100%	37	100%	24	65%
Riparian Forest**	268	268	100%	268	100%	72	27%
Riparian Woodland**	-	-	--	-	--	-	--
Riparian Scrub**	132	132	100%	132	100%	43	33%
Engelmann Oak Woodland	206	151	73%	151	73%	183	89%
Coast Live Oak Woodland	601	464	77%	464	77%	557	93%
Other Oak Woodlands	-	-	--	-	--	-	--
Freshwater**	239	239	100%	239	100%	227	95%
Estuarine**	-	-	--	-	--	-	--
Disturbed Wetland**	23	23	100%	23	100%	-	0%
Natural Flood Channel/ Streambed**	41	41	100%	41	100%	41	100%
Beach	-	-	--	-	--	-	--
Saltpan/Mudflats**	-	-	--	-	--	-	--
<b>NATURAL HABITATS</b>	<b>9,206</b>	<b>6,765</b>	<b>73%</b>	<b>6,765</b>	<b>73%</b>	<b>7,870</b>	<b>85%</b>
<i>Agriculture (type unknown)</i>	8	NA	NA	NA	NA	-	0%
<i>Orchards, Vineyards</i>	1,502	NA	NA	NA	NA	38	3%
<i>Intensive Agriculture</i>	75	NA	NA	NA	NA	1	1%
<i>Field &amp; Pasture Agriculture</i>	505	NA	NA	NA	NA	47	9%
<b>AGRICULTURE</b>	<b>2,091</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>85</b>	<b>4%</b>
Eucalyptus Woodland	94	22	NA	22	NA	34	36%
Disturbed Land	105	NA	NA	NA	NA	26	25%
Urban/Developed	13,127	NA	NA	NA	NA	17	0%
<b>NON-NATURAL HABITATS</b>	<b>13,232</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>43</b>	<b>0%</b>
<b>TOTAL</b>	<b>24,624</b>					<b>8,033</b>	<b>33%</b>

\* FPA 2 includes an additional 400 to 500 acres of contiguous coastal sage scrub supporting California gnatcatchers within the unincorporated County of San Diego core area.

\*\* Wetland vegetation communities, conserved at 100% both inside and outside the FPA due to current no net loss regulations.

---

***PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES***

---

will be amended to show the existing and proposed hard-line preserve areas as open space. If necessary or applicable, existing goals, objectives, or policies contained in the Elements will be amended to strengthen the plan implementation. The Implementation Element will also be amended to incorporate the Subarea Plan review and approval process.

*City of Escondido Master Plan for Parks, Trails, and Open Space.* The Plan will be updated by reference to reflect the final details of the Escondido Subarea Plan and MHCP as ultimately adopted by the City. The City will continue to use the goals and guidelines of the Master Plan to review project development proposals in conceptual Wildlife Corridor areas and buffer areas.

*City of Escondido Zoning Ordinance.* The City will revise the Zoning Ordinance to describe the effective boundaries and intent of the Subarea Plan. A review process similar to that described for existing overlay zones will be required for all development within the City. This addition to the Ordinance will create a Habitat Conservation Overlay Zone to supplement requirements of the underlying zone. This criterion will make the Zoning Ordinance reflect the requirements of the Subarea Plan in appropriate areas of the City. This planning document will be updated to reflect project review criteria and policies for avoiding impacts to sensitive species, as specified in the Subarea Plan. The City will update their Environmental Quality Regulations to reflect the requirements of the Subarea Plan with respect to project development boundaries and review criteria. Additionally, the City will amend the Open Space Zone by reference to add conserved habitat lands identified in the Subarea Plan, or during Plan implementation, as undevelopable open space lands. The City will also revise the Excavation and Grading Ordinance to reflect the specific mitigation ratios established by the plan and policies for avoiding impacts to sensitive species.

### **2.3.4 Oceanside Subarea Plan**

The following discussion is based on the Internal Review Draft of the Oceanside Subarea Plan (August 1999). The two sets of goals used to develop the Oceanside Subarea Plan are:

- Biological conservation goals (as defined in the MHCP Biological Goals, Standards, and Guidelines; Ogden 1998); and
- Property development, property rights, and economic goals.

## ***PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES***

---

Figure 2.3-4 depicts Oceanside's Subarea Plan. As shown, Oceanside's preserve design is based on the division of the City into distinct planning zones: a Wildlife Corridor Planning Zone; Preapproved Mitigation Areas; an Agricultural Exclusion Zone; Public Ownership Compatible with Preserve Goals; and two offsite Mitigation Zones. Each zone is defined to accomplish zone-specific preserve goals in a manner that will achieve local and regional conservation goals with minimal adverse effects on property rights and property values.

The Oceanside Subarea Plan is designed to satisfy the following biological criteria:

- Conserve at least 2,220 acres of biological open space within the City. The composition of the open space preserve system must meet the minimum acreage criteria, as described below.
  
- Conserve at least 480 acres of biological open space within the Wildlife Corridor Planning Zone in a configuration that accommodates continued movement by California gnatcatchers between State Route 78 and the San Luis Rey River. Increase the net amount of viable breeding habitat by at least 164 acres through restoration and enhancement in key locations that currently do not support viable breeding habitat.

Table 2.3-6 provides the total resulting levels of conservation expected to be achieved by each of the three alternatives. As shown, implementation of the Subarea Plan (FPA 2) will result in the preservation of 58% of the remaining habitat in the City (i.e., 2,742 of the remaining 4,704 acres of natural habitat), including 50% of the remaining coastal sage scrub habitat.

### **Covered Species**

Based on the Oceanside subarea preserve configuration, vegetation community conservation thresholds, and proposed habitat management measures, 60 species are on Oceanside's list of covered species subject to incidental take. Once the wildlife agencies have approved this Subarea Plan, the agencies may issue take authorizations to the City of Oceanside for these 60 species. Once other MHCP Subarea Plans have been approved, the City of Oceanside may receive take authorizations for all species on the MHCP covered species list (Table 2.1-1).

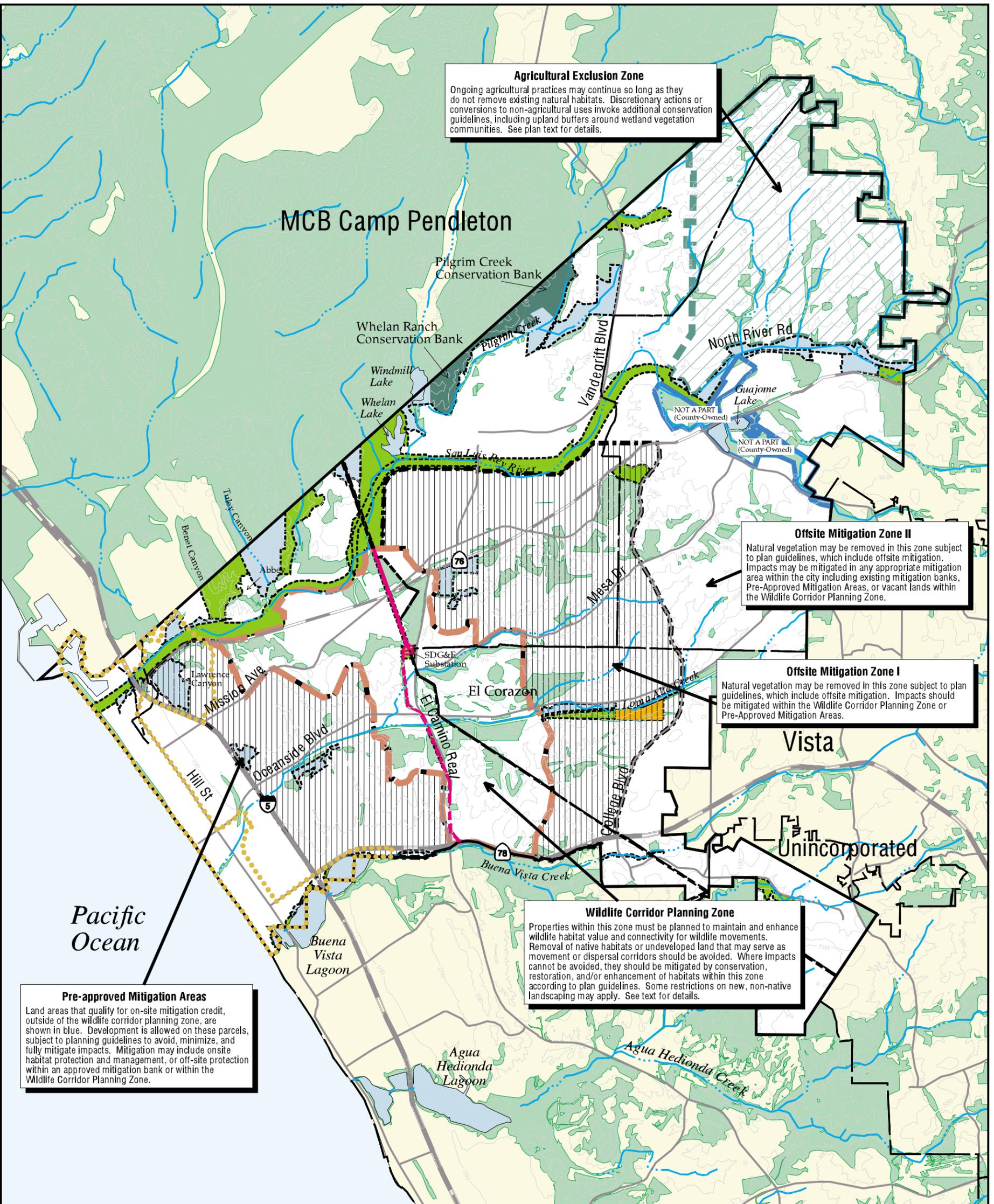
**PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES**

**Table 2.3-6  
Biological Conservation  
City of Oceanside Focused Planning Area Alternatives**

Vegetation Type	Total	FPA 1		FPA 2*		BCLA	
		Acres	Percent	Acres	Percent	Acres	Percent
Southern Coastal Bluff Scrub	-	-	--	-	--	-	--
Maritime Succulent Scrub	-	-	--	-	--	-	--
Coastal Sage Scrub	1,338	664	50%	664	50%	898	67%
Chaparral	44	14	31%	14	31%	21	48%
Southern Maritime Chaparral	-	-	--	-	--	-	--
Coastal Sage/Chaparral Mix	10	-	0%	-	0%	-	0%
Grassland	1,724	515	30%	515	30%	1,185	69%
Southern Coastal Salt Marsh**	-	-	--	-	--	-	--
Alkali Marsh**	12	12	100%	12	100%	12	100%
Freshwater Marsh**	160	160	100%	160	100%	128	80%
Riparian Forest**	238	238	100%	238	100%	206	87%
Riparian Woodland**	3	3	100%	3	100%	1	40%
Riparian Scrub**	597	597	100%	597	100%	334	56%
Engelmann Oak Woodland	-	-	--	-	--	-	--
Coast Live Oak Woodland	4	4	95%	4	95%	-	0%
Other Oak Woodlands	-	-	--	-	--	-	--
Freshwater**	139	139	100%	139	100%	111	80%
Estuarine**	24	24	100%	24	100%	24	100%
Disturbed Wetland**	14	14	100%	14	100%	0	2%
Natural Flood Channel/ Streambed**	354	354	100%	354	100%	340	96%
Beach	42	4	9%	4	9%	18	43%
Saltpan/Mudflats**	-	-	--	-	--	-	--
<b>NATURAL HABITATS</b>	<b>4,704</b>	<b>2,742</b>	<b>58%</b>	<b>2,742</b>	<b>58%</b>	<b>3,281</b>	<b>70%</b>
<i>Agriculture (type unknown)</i>	<i>11</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>8</i>	<i>78%</i>
<i>Orchards, Vineyards</i>	<i>1,283</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>-</i>	<i>0%</i>
<i>Intensive Agriculture</i>	<i>110</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>12</i>	<i>11%</i>
<i>Field &amp; Pasture Agriculture</i>	<i>2,486</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>115</i>	<i>5%</i>
<b>AGRICULTURE</b>	<b>3,890</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>136</b>	<b>3%</b>
Eucalyptus Woodland	67	10	NA	10	NA	34	51%
Disturbed Land	1,998	NA	NA	NA	NA	432	22%
Urban/Developed	15,466	NA	NA	NA	NA	53	0%
<b>NON-NATURAL HABITATS</b>	<b>17,464</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>484</b>	<b>3%</b>
<b>TOTAL</b>	<b>26,125</b>					<b>3,935</b>	<b>15%</b>

\* FPA 2 includes an additional 400 to 500 acres of contiguous coastal sage scrub supporting California gnatcatchers within the unincorporated County of San Diego core area.

\*\* Wetland vegetation communities, conserved at 100% both inside and outside the FPA due to current no net loss regulations.

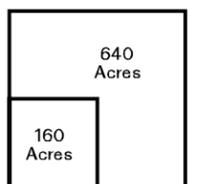


**LEGEND**

- Public/Agency Ownership Or Hardline Preserve
- Mitigation Banks
- Pre-Approved Mitigation Areas
- Corrective Action Area
- Natural Vegetation
- Agricultural Exclusion Zone
- Offsite Mitigation Zone I
- Wildlife Corridor Planning Zone
- Coastal Zone
- County-Owned Land

**Base Map Features**

- Oceanside City Boundary
- Other City Boundaries
- 100 ft. Index Contours
- SDGE Transmission Corridor
- Freeways
- Major Roads
- Streams
- Lake/Lagoon



### **Implementing Actions**

Upon approval of the Oceanside Subarea Plan, the City will use its land-use regulatory authority to fully implement the provisions of the Plan. Regulatory implementation shall consist of the following actions:

*Urgency Ordinance.* Concurrent with approval of the Subarea Plan, the City will enact an urgency ordinance, as permitted by California Government Code Section 65858, to require interim compliance with the Plan while permanent regulatory measures are being drafted and approved.

*City of Oceanside General Plan.* The Land Use Element, the Environmental Resource Management Element, the Recreational Trails Element, the Community Facilities Element, and the Master Plan for Parks and Recreation will be updated in order to reflect the final details of the Subarea Plan ultimately adopted by the City. The Open Space and Land Use maps contained in the elements will be amended to show the existing and proposed hard-line preserve areas as open space. If necessary or applicable, existing goals, objectives, or policies contained in the Elements will be amended to strengthen the City position regarding plan implementation. The goals and guidelines contained within the General Plan will continue to be used in reviewing project development proposals in areas affected by sensitive resources.

*City of Oceanside Zoning Ordinance.* Upon adoption of a Subarea Plan by the City of Oceanside, additional text will be added to the Zoning Ordinance and a new article will be drafted to describe the effective boundaries and intent of the Subarea Plan. A review process similar to the Hillside Development Plan could be required for all development within the Subarea. This addition to the Ordinance will also create the following Habitat Conservation Overlay Zones: Wildlife Corridor Planning Zone, Agricultural Exclusion Zone, Offsite Mitigation Zone I, and Offsite Mitigation Zone II (Figure 2.3-3). The addition to the Zoning Ordinance will apply these additional protections for biological resources to the overlay zones to supplement requirements of the underlying zone(s).

The Hillside Development Provisions will be revised to prohibit development within the Wildlife Corridor Planning Zone on all slopes greater than 40% with an elevation differential of at least 25 feet, regardless of underlying zoning. This revision will effectively extend protection for habitats on steep slopes to nonresidential parcels and will increase protections

## ***PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES***

---

by precluding variances from the development restrictions based on a Hillside Development Plan.

*Local Coastal Program (LCP).* The LCP Land Use Plan and the San Luis Rey River Specific Plan will be updated by reference to reflect the final details of the Subarea Plan ultimately adopted by the City. The goals, guidelines, and policies contained in the Land Use Plan and the Specific Plan will continue to be used in reviewing project development proposals in areas affected by sensitive resources in the coastal zone.

*City of Oceanside Municipal Code.* The City will amend the Code by reference to require lands addressed in the Subarea Plan to comply with the specific conservation standards contained in the Subarea Plan.

*City Ordinances.* The Grading Regulations Manual, the Subdivision Ordinance, the Flood Plain Management Ordinance, and the Fire Ordinance will be updated to reflect the final details of the Subarea Plan and the MHCP as ultimately adopted by the City. Current ordinances will be strengthened regarding enforcement and penalties for illegal grading, clearing, and other operations within habitat or other sensitive resource areas.

Upon adoption of the Subarea Plan by the City, text within the Stormwater Discharge Ordinance (Ordinance No. 96-04), will be revised to detail what types of nonstormwater discharges are acceptable to the City Engineer and consistent with state and federal laws. Additional revisions will reflect updated City policies, if applicable, requiring all new developments to retain onsite any increase in stormwater runoff.

### **2.3.5 San Marcos Subarea Plan**

The goals for the Natural Community Conservation Plan for the City of San Marcos (May 2000) are:

- Maintain populations of sensitive resources;
- Enhance the region's quality of life;
- Provide for planned, orderly, and efficient growth; and

## ***PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES***

---

- Provide the San Marcos community with recreation and educational opportunities while conserving its biodiversity.

Figure 2.3-5 depicts the City of San Marcos Subarea Plan. Conservation efforts are focused in four main areas. The Northern FPA consists of about 1,200 acres near a substantially undeveloped ridgeline. The Southern FPA consists of about 2,350 acres and is centered along the ridgeline of Cero de Las Posas, Double Peak, and Frank's Peak. Watercourses and associated wetlands of the San Marcos Creek within the City's urbanized core represent a third area of focus. Approximately 57 acres are associated with this area. The fourth area of concentration is the large number of vernal pools located in the urbanized center of San Marcos in the Business Industrial District of the General Plan.

The San Marcos FPA includes hard-line and soft-line standards conservation areas. The hard-line areas of the Subarea Plan form the portions of both the Northern and Southern Focused Planning Areas. These hard-line preservation areas result from previous project approvals, and conserve open space at 100%. Additionally, hard-line projects consistent with this Plan will qualify for take authorizations. Table 2.3-7 summarizes the areas that will fall under the hard-line designation and contribute to the Preserve.

Soft-line or standards areas represent those land areas where development has yet to occur and is not specifically planned. Soft-line or standards areas conserve open space in the 25 to 75% levels. San Marcos Creek will remain at the 100% level (no net loss). Table 2.3-8 summarizes the areas that will fall under the soft-line or standards designation and contribute to the Preserve.

Table 2.3-9 provides the total resulting levels of conservation expected to be achieved by each of the three alternatives. As shown, implementation of the Subarea Plan (FPA 2) will result in the preservation of 47% of the remaining habitat in the City (i.e., 2,505 of the remaining 5,329 acres of natural habitat), including 50% of the remaining coastal sage scrub habitat.

***PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES***

**Table 2.3-7  
City of San Marcos Hard-Line 100% Conservation Areas**

<b>Project Name</b>	<b>Acres Committed to the Preserve</b>
<b><i>Northern FPA</i></b>	
Ryan Subdivision Mitigation Lands	32.09 acres
San Marcos Highlands Open Space Area	73.39 acres
Rupe Mitigation Lands	52.33 acres
Twin Oaks Valley Ranch Golf Course Mitigation Lands	25.09 acres
Bel Esprit Open Space Area	24.22 acres
Paloma Mitigation Lands	56.00 acres
<b><i>Southern FPA</i></b>	
Meadowlark Estate Open Space Area Onsite	59.30 acres
Meadowlark Estate Offsite Mitigation Lands	83.60 acres
Rancho Santa Fe Road Widening Mitigation Lands	7.22 acres
San Elijo Hills	891.81 acres (861.8 acres ungraded)
Closed Landfill Area	110.70 acres
Kaufman and Broad Mitigation Area	76.70 acres
Village N (Rancho Coronado) Open Space Lands	40.00 acres
Huff Property <sup>1</sup>	55.95 acres
University Commons – Brookfield	138.7 onsite+137.8 offsite=276.5 acres
University Commons – Shelly	Not a part
Vista Colina Corridor	TBD
Hanson Aggregate	56.00 acres
Wilern Mitigation Lands	20.88 acres
<b>TOTAL AC. IN 100% CONSERVED OPEN SPACE</b>	<b>1,803.08 ACRES</b>

Notes: <sup>1</sup> Relying on acquisition by regional funding source of 75% of the 74.61-acre property.

TBD = To be decided.

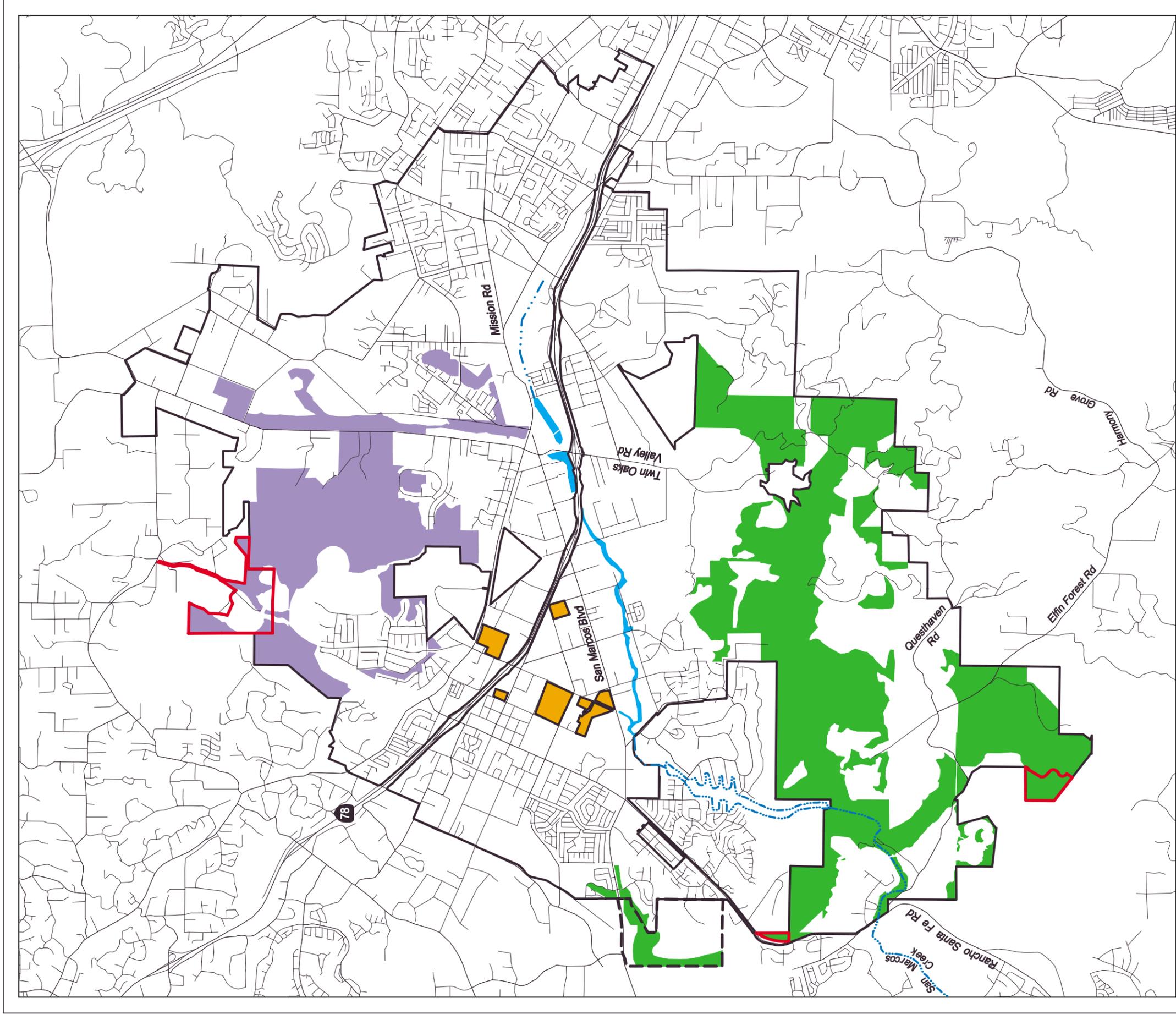
Source: City of San Marcos, 2000.

### **Covered Species**

Based on the San Marcos Subarea Plan configuration, vegetation community conservation thresholds, and the proposed habitat measures, 29 will be included on San Marcos' list of covered species subject to incidental take. Once the wildlife agencies have approved this Subarea Plan, the agencies may issue take authorizations to the City of San Marcos for these 29 species. Once other MHCP Subarea Plans have been approved, the City of San Marcos may receive take authorizations for all species on the MHCP covered species list (Table 2.1-1).

### **Implementing Actions**

Upon signing an Implementing Agreement, the City will enforce the following policies and standards for all lands located within the FPA.



**Northern Focused Planning Area**



**Subarea Plan Boundary**



**Southern Focused Planning Area**



**San Marcos Creek**



**San Marcos Creek Watercourses and Associated Wetlands**



**Potential Annexation Area Boundaries**



**Vernal Pool Major Amendment Areas**



**Projects Already Permitted**



SOURCE: SANDAG GIS



## Focused Planning Area Subareas



FIGURE 2.3-5  
City of San Marcos Subarea Plan

**PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES**

**Table 2.3-8  
City of San Marcos Areas Conserved by  
Standards Combined with Fixed Conservation Rates**

Project Name	Percent Conserved	Net Acres Committed to the Preserve
<b><i>Northern FPA</i></b>		
Lands with steep slope and rural residential land use designations	75%	285.6 acres
Murai Development	50%	43.86 acres
Habitat Linkage Area	30%	20.54 acres
<b><i>Southern FPA</i></b>		
Habitat Linkage Area between SAP-2 and CSUSM Linkage Area	75%	99.9 acres
Habitat Linkage Area to CSUSM	70%	70.30 acres
Habitat Linkage Area to SAP-2	60%	86.3 acres
Misc. Undeveloped Lands South of SAP-2	50%	36.62 acres
San Elijo Hills Golf Course	25%	47.14 acres
<b><i>San Marcos Creek</i></b>	100%*	56.6 acres
<b>TOTAL ACREAGE</b>		<b>746.86 ACRES</b>

Note: \*No net loss.

Source: City of San Marcos, 2000

***Local Zoning Ordinances and General Plan Policies***

- The Conservation Element of the General Plan shall be amended to revise the identified Resource Conservation Areas to include all properties within the preserve. Resource Conservation Areas are designated to delineate areas of biological, archaeological, and/or geological sensitivity (Section D, San Marcos General Plan).
- Pertaining to slope density, the unit-yield for all new subdivisions of land currently within a designated Specific Planning Area shall not exceed the slope density provisions of the underlying zoning designation, which implements the adopted General Plan designation.
- Maximum disturbance areas have been established for all lands within the FPA and will be enforced upon signing of an IA.

Pertaining to wetlands, the appropriate State and Federal wetland and streambed alteration regulations (Fish and Game Code 1601-1607), and Sections 401 and 404 of the Federal Clean Water Act shall continue to apply to all development and land use activities within and

**PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES**

**Table 2.3-9  
Biological Conservation  
City of San Marcos Focused Planning Area Alternatives**

Vegetation Type	Total	FPA 1		FPA 2*		BCLA	
		Acres	Percent	Acres	Percent	Acres	Percent
Southern Coastal Bluff Scrub	-	-	--	-	--	-	--
Maritime Succulent Scrub	-	-	--	-	--	-	--
Coastal Sage Scrub	1,868	934	50%	934	50%	1,696	91%
Chaparral	2,392	1,159	48%	1,159	48%	2,133	89%
Southern Maritime Chaparral	-	-	--	-	--	-	--
Coastal Sage/Chaparral Mix	123	79	65%	79	65%	122	99%
Grassland	694	85	12%	85	12%	184	27%
Southern Coastal Salt Marsh**	-	-	--	-	--	-	--
Alkali Marsh**	-	-	--	-	--	-	--
Freshwater Marsh**	10	10	100%	10	100%	-	0%
Riparian Forest**	2	2	100%	2	100%	-	0%
Riparian Woodland**	77	77	100%	77	100%	35	46%
Riparian Scrub**	107	107	100%	107	100%	30	28%
Engelmann Oak Woodland	24	19	82%	19	82%	24	100%
Coast Live Oak Woodland	4	2	63%	2	63%	3	75%
Other Oak Woodlands	-	-	--	-	--	-	--
Freshwater**	1	1	100%	1	100%	1	100%
Estuarine**	-	-	--	-	--	-	--
Disturbed Wetland**	28	28	100%	28	100%	16	57%
Natural Flood Channel/ Streambed**	-	-	--	-	--	-	--
Beach	-	-	--	-	--	-	--
Saltpan/Mudflats**	-	-	--	-	--	-	--
<b>NATURAL HABITATS</b>	<b>5,329</b>	<b>2,505</b>	<b>47%</b>	<b>2,505</b>	<b>47%</b>	<b>4,243</b>	<b>80%</b>
<i>Agriculture (type unknown)</i>	-	NA	NA	NA	NA	-	--
<i>Orchards, Vineyards</i>	233	NA	NA	NA	NA	49	21%
<i>Intensive Agriculture</i>	148	NA	NA	NA	NA	-	0%
<i>Field &amp; Pasture Agriculture</i>	539	NA	NA	NA	NA	11	2%
<b>AGRICULTURE</b>	<b>920</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>60</b>	<b>7%</b>
Eucalyptus Woodland	100	12	NA	12	NA	21	21%
Disturbed Land	701	NA	NA	NA	NA	137	20%
Urban/Developed	7,586	NA	NA	NA	NA	6	0%
<b>NON-NATURAL HABITATS</b>	<b>8,287</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>143</b>	<b>2%</b>
<b>TOTAL</b>	<b>14,635</b>					<b>4,467</b>	<b>31%</b>

\* FPA 2 includes an additional 400 to 500 acres of contiguous coastal sage scrub supporting California gnatcatchers within the unincorporated County of San Diego core area.

\*\* Wetland vegetation communities, conserved at 100% both inside and outside the FPA due to current no net loss regulations.

## ***PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES***

---

adjacent to San Marcos Creek. The appropriate State and Federal permits will be required. Additionally, all new development that affects any jurisdictional wetlands shall utilize the least environmentally damaging, practicable alternative available. Existing State and Federal policies and regulations resulting in a “no net loss” of habitat value govern the streamcourse and wetlands associated with the reaches of San Marcos Creek.

- All projects shall undergo a mandatory review by the City of San Marcos for compliance with the provisions of this plan. No grading permits, administrative permits, or discretionary permits shall be approved without a determination of compliance with the provisions of this plan by the City Manager or his designee.
  
- Projects constituting the hard-line 100% Conservation Areas are consistent with the conservation goals of this plan and shall be subjected to additional review or mitigation requirements by Wildlife Agencies.
  
- No clearing of native brush will occur anywhere in the City of San Marcos without complying with the provisions of this plan.

### **2.4 ALTERNATIVES CONSIDERED BUT ELIMINATED FROM FURTHER ANALYSIS**

The following alternatives were considered, but were eliminated from further analysis because they did not feasibly attain most of the basic objectives of the project or were considered infeasible.

#### **2.4.1 Coastal Sage Scrub Only Preservation**

Prior to development, coastal sage scrub probably stretched in a nearly unbroken swath across the study area, particularly in coastal terraces and on south- and west-facing slopes. Today, the swath of coastal sage scrub in the western half of the study area has been fragmented by development into discontinuous bands. Under this alternative, only areas dominated by coastal sage scrub will be preserved. The entire MHCP study area contains approximately 8,750 acres (7.6% of the study area) of Diegan coastal sage scrub out of a total of 112,154 acres. The existing coastal sage scrub is fragmented in relatively small patches from Escondido westerly to the coast. Much of the study area (73%) is urbanized or

## ***PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES***

---

developed. The 73% figure represents developed land, disturbed land, and land currently classified as agriculture, for a total of 81,322 acres.

Preservation of only coastal sage scrub habitat will further fragment the preserve. Because there are more and smaller fragments, the indirect impacts will increase. These indirect impacts include the invasion of non-native species (Argentine ants, urban plants), lighting, human intrusion, noise, and urban runoff.

To connect the isolated fragments, additional preservation of other vegetation communities will be needed to link the coastal sage scrub habitat blocks. Preserving coastal sage scrub only will not afford preservation to riparian, chaparral, or grassland vegetation communities. Successful coverage of the California coastal gnatcatcher in a coastal sage scrub only preserve is unlikely. Because there is a lack of connectivity among remaining blocks, species located in small islands of habitat are more often subject to extinction from natural events, such as fire and predation. Without connectivity between these islands, the potential to recolonize after those disturbances is lessened. This preserve design will also not recognize the natural succession of grasslands to coastal sage scrub. Preservation of the grassland and other linkage habitats will be necessary for the success of the gnatcatcher.

It should be recognized that the biological goal of the MHCP is to maintain the range of natural biological communities and species native to the region; therefore, a preservation plan that focuses solely on coastal sage scrub will not meet the MHCP biological objective for protecting and preserving a range of biological communities or species.

Specifically, this alternative will not meet the following objectives:

- Obtain permits for the taking of covered species under California Fish and Game Code Section 2835 and the federal Endangered Species Act. Because the only species potentially protected would be coastal sage scrub species, other species which require other habitats would not receive protection.
- Develop and implement a program for the conservation and management of habitats of federal and state endangered, threatened, or rare species, thereby reducing the human-related causes of species extirpation within the MHCP study area.

---

***PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES***

---

- Establish a partnership among federal, state, and local agencies of government to facilitate review and approval of public- and private-sector land development and construction projects by expediting acquisition of permits and management authorizations from federal and state wildlife agencies.

#### **2.4.2 Listed Species Only Preservation**

Under this alternative, species included for coverage will be limited to federally or state listed threatened or endangered species, for a total of 21 species. Species considered rare or otherwise sensitive by wildlife agencies or environmental groups, but do not have threatened or endangered status, will be excluded from the planning process.

The inclusion of species beyond those listed as threatened or endangered is potentially beneficial for evaluating preserve design and function. Additionally, a preserve which focuses on such a narrow group of species could result in a preserve design which lacks critical connectivity. This alternative was not considered because it was determined to be shortsighted, and does not consider species which could potentially be listed in the future. One of the goals of the MHCP is to prevent species from becoming listed by preserving and enhancing habitats that support a multitude of species. Therefore, by protecting only those resources supporting listed species, it will not provide protection for species that are likely to become threatened or endangered in the future.

Specifically, this alternative will not meet the following objectives:

- Obtain permits for the taking of covered species under California Fish and Game Code Section 2835 and the federal Endangered Species Act. The intent of the NCCP is to prevent species from becoming endangered, and protecting only those listed would not provide that protection.
- Develop and implement a program for the conservation and management of habitats of federal and state endangered, threatened, or rare species, thereby reducing the human-related causes of species extirpation within the MHCP study area.

### **2.4.3 Public Lands Only Preservation**

Under this alternative, only lands that are held in public ownership will be preserved. Public lands comprise about 15% (17,348 acres) of the study area and are owned by a variety of local, regional, state, and federal agencies. Federal lands in the study area are owned by the Bureau of Land Management, Department of Defense, and other federal entities. State landowners include California Department of Fish and Game, University of California, California State University, State Lands Commission, Caltrans, California State Parks, and other state agencies. Other public lands in the study area are owned by school districts, water and sanitation districts, fire districts, and cities and the County. The majority of public land, 65%, is owned by cities within the study area.

The major contributors to this conservation plan within the City of Carlsbad will include the Dawson Los Monos Reserve; Lake Calavera City Mitigation Bank, Carlsbad Highland Mitigation Bank, and the wetland areas of the Batiquitos, Agua Hedionda, and Buena Vista Lagoons. Major preserve areas in Escondido under this plan include Daley Ranch. Within the City of Encinitas, the San Elijo Lagoon County Park and Ecological Reserve will be included. Additionally, Oceanside's San Luis Rey River will provide an important component of this preserve design.

The Public Lands Only Preservation alternative will preserve 10,500 acres of habitat or approximately 35% of the natural habitats in the study area. This includes about 20% of the coastal sage scrub, and 44% of the chaparral. The pattern of public land ownership in the study area is noncontiguous; thus, a fragmented pattern will result. Additionally, a preserve comprised of only public lands does not necessarily preserve the most biologically valuable habitat. Thus it was determined, from a biological perspective, that this alternative will not be pursued, because it fails to provide adequate protection of the natural habitats and does not implement the goals and objectives of providing protection of the sensitive species. It also does not provide any assurance of no surprises for future listing of endangered or threatened species.

Specifically, this alternative will not meet the following objectives:

- Establish and maintain a balance between preservation of natural resources and regional growth and economic prosperity.

## ***PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES***

---

- Obtain permits for the taking of covered species under California Fish and Game Code Section 2835 and the federal Endangered Species Act. These take authorizations will replace the 5% restriction on clearing of coastal sage scrub habitat currently imposed under Section 4(d) of the federal act.
- Develop and implement a program for the conservation and management of habitats of federal and state endangered, threatened, or rare species, thereby reducing the human-related causes of species extirpation within the MHCP study area.
- Provide a framework to allow participating jurisdictions to directly implement the MHCP through individual Subarea Plans using their existing land use authority, and through voluntary agreements with property owners.
- Establish a partnership among federal, state, and local agencies of government to facilitate review and approval of public- and private-sector land development and construction projects by expediting acquisition of permits and management authorizations from federal and state wildlife agencies.
- Describe a finance and acquisition strategy that shares implementation costs equitably among the federal, state, and local beneficiaries and is affordable to the region.

### **2.4.4 Hard-Line Option**

Under this alternative, the preserve will be created, and areas designated for preservation will be noted, as well as potential development areas. The challenge of a hard-line approach is that it involves coordination with all of the property owners within the potential preserve area. Within the FPA there are approximately 650 vacant privately owned parcels with approximately 400 individual private property owners. Since many owners have not determined how or when they will improve their property, it is unclear what portions of individual parcels will be set aside for preservation or development. For this alternative to be fully evaluated, development areas will need to be defined for each parcel at this time. Baseline surveys for all sensitive species will need to be conducted to ensure compliance with the goals and policies of the MHCP, including protection of locally endemic species. Policies regarding preservation of endangered species will need to be implemented. Each property owner will need to complete a review of the property and prepare engineering plans to identify the extent of the impacts. Areas for preservation will then be “hard-lined”.

## ***PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES***

---

Additionally, any expansion of sensitive resources into currently disturbed areas of expansion will not be considered, since the development and preservation areas will be hard-lined. The practicability of conducting the surveys and engineering is also constrained by private ownership. Access to each property will need to be acquired, as well as the cost to conduct the biological resources evaluation and engineering. Other constraints such as cultural resources, visual quality impacts, geotechnical issues, and infrastructure will also need to be analyzed. Therefore, with all these constraints, it is infeasible to “hard line” more than 600 properties.

Specifically, this alternative will not meet the following objectives:

- Establish and maintain a balance between preservation of natural resources and regional growth and economic prosperity.
- Establish a partnership among federal, state, and local agencies of government to facilitate review and approval of public- and private-sector land development and construction projects by expediting acquisition of permits and management authorizations from federal and state wildlife agencies.
- Describe a finance and acquisition strategy that shares implementation costs equitably among the federal, state, and local beneficiaries and is affordable to the region.

### **2.4.5 Inclusion of Camp Pendleton, Fallbrook Weapons Station, and County Unincorporated Properties**

Under this alternative, the MHCP planning area will include Camp Pendleton and the Fallbrook Weapons Station to the north and an unincorporated portion of San Diego to the east. These lands were included in the initial stages of the MHCP process.

Military lands were removed from the planning area in 1994 when the Marine Corps began work on a comprehensive habitat conservation plan for the Marine Corps Base Camp Pendleton (Base). Given the mission of defense associated with military lands, it was determined that a Base-specific HCP plan would be most prudent. The Marine Corps has continued to coordinate their planning efforts with the MHCP to ensure linkages are maintained across planning boundaries.

## ***PROJECT DESCRIPTION/DESCRIPTION OF ALTERNATIVES***

---

On July 17, 1996, the County Board of Supervisors voted to proceed with open space planning for North County as a subarea of the Multiple Species Conservation Program. The July 17, 1996 letter to the Board from Pam Slater, Third District Supervisor, states that the County must have complete control of open space planning for areas under its land use jurisdiction. It goes on to state that, biologically, it is important that the open space in this plan link up with open space planned in the MSCP. She recommends that the Board not “reinvent the wheel” on a stand-alone MHCP, but rather prepare a “Subarea Plan” which can be incorporated by amendment into the existing MSCP. She states that this approach should be less costly, because it will and should rely on the already completed materials in the MSCP; it will be more efficient by supplementing the existing EIS/EIR for the MSCP, rather than creating a costly new document.

Specifically, this alternative will not meet the following objectives:

- Establish a partnership among federal, state, and local agencies of government to facilitate review and approval of public- and private-sector land development and construction projects by expediting acquisition of permits and management authorizations from federal and state wildlife agencies.

### **2.4.6 No Take**

As required by the federal ESA, a No Take alternative was considered as part of the MHCP planning process. A No Take alternative would require all landowners to avoid “taking” a listed species. Under this alternative, only occupied habitat would be preserved; unoccupied habitat would not receive protection. This alternative was eliminated from further analysis, since it was considered to be infeasible to conduct comprehensive biological surveys for a large and comprehensive program in order to determine which areas are occupied and would receive protection by this alternative. In addition, this alternative would not provide for preservation of unoccupied habitat that may be necessary for connectivity and recovery of listed species. Thus, without the MHCP, implementation of a management plan that would ensure the long-term conservation of species and habitat would not occur and an interconnected preserve system would not be established.

### **3.0 ENVIRONMENTAL SETTING/AFFECTED ENVIRONMENT**

#### **3.1 REGIONAL ENVIRONMENTAL SETTING**

The Multiple Habitat Conservation Plan (MHCP) study area encompasses about 175 square miles (111,865 acres) comprising the seven incorporated cities of northwestern San Diego County (Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach, and Vista). Unincorporated portions of the County, including several areas surrounded by incorporated cities, are excluded from the study area and will be planned by the County of San Diego as the North County Subarea of the Multiple Species Conservation Program (MSCP; Figures 2.2-1 through 2.2-3 and 2.3-1 through 2.3-5). The Pacific Ocean shoreline defines the western border of the study area; Marine Corps Base Camp Pendleton borders the study area on the north; and unincorporated County of San Diego borders most of the study area on the east and south.

This area of north coastal San Diego County is known for its natural beauty and mild Mediterranean climate, which make it a popular recreational and tourist destination. The area is largely developed, with approximately 30 percent consisting of vacant lands that still support natural vegetation communities. Major land uses within the study area include residential, commercial, and industrial development; parks, preserves, and golf courses; and agriculture. Larger areas of undeveloped and naturally vegetated lands adjoin the study area, particularly on unincorporated lands to the east and south, and on Camp Pendleton to the north.

Topography in the study area ranges from flat to hilly, with relatively gentle slopes on the coastal terraces and in broad valleys. Steeper hills, ranging up to about 2,100 feet in elevation, are found in the south/central portion of the study area (eastern Carlsbad and southern San Marcos), and in the northern portions of San Marcos and Escondido. Steep canyons associated with predominately east/west drainages cut through some of the hills and mesas. Four lagoons are more or less evenly distributed along the coast, each representing the terminus of one or more local drainages. One major river, the San Luis Rey, crosses the northern portion of the study area through the City of Oceanside.

## **3.2 LAND USE (IMPORTANT FARMLAND AND EXTRACTIVE RESOURCES)**

### **3.2.1 Existing and Planned Land Uses within the Multiple Habitat Conservation Program Boundary**

Existing land uses within the MHCP boundary include residential, commercial, industrial, parks and recreation, agricultural, and other. Existing and planned land use data are taken from the study area City's General Plan. Figure 3.2-1 shows the existing land uses in the MHCP study area. Table 3.2-1 shows the acreages of each of the existing land uses within the MHCP boundary.

Residential land use, which includes rural residential, single-family, multiple-family, and mobile homes, represents the largest land use at 32 percent (35,629 acres). Commercial, industrial, and institutional uses represent an additional 23 percent of land use. Approximately 27,837 acres (25 percent) of land is undeveloped. Figure 3.2-2 shows the planned land uses within the MHCP study area. Table 3.2-2 shows the acreages of each planned land use with the MHCP boundary. Planned land use for the MHCP study area is heavily focused on single-family residential. In total, 57 percent of the planned land use is classified as residential. Commercial, industrial, and institutional uses will represent 28 percent of the future land use.

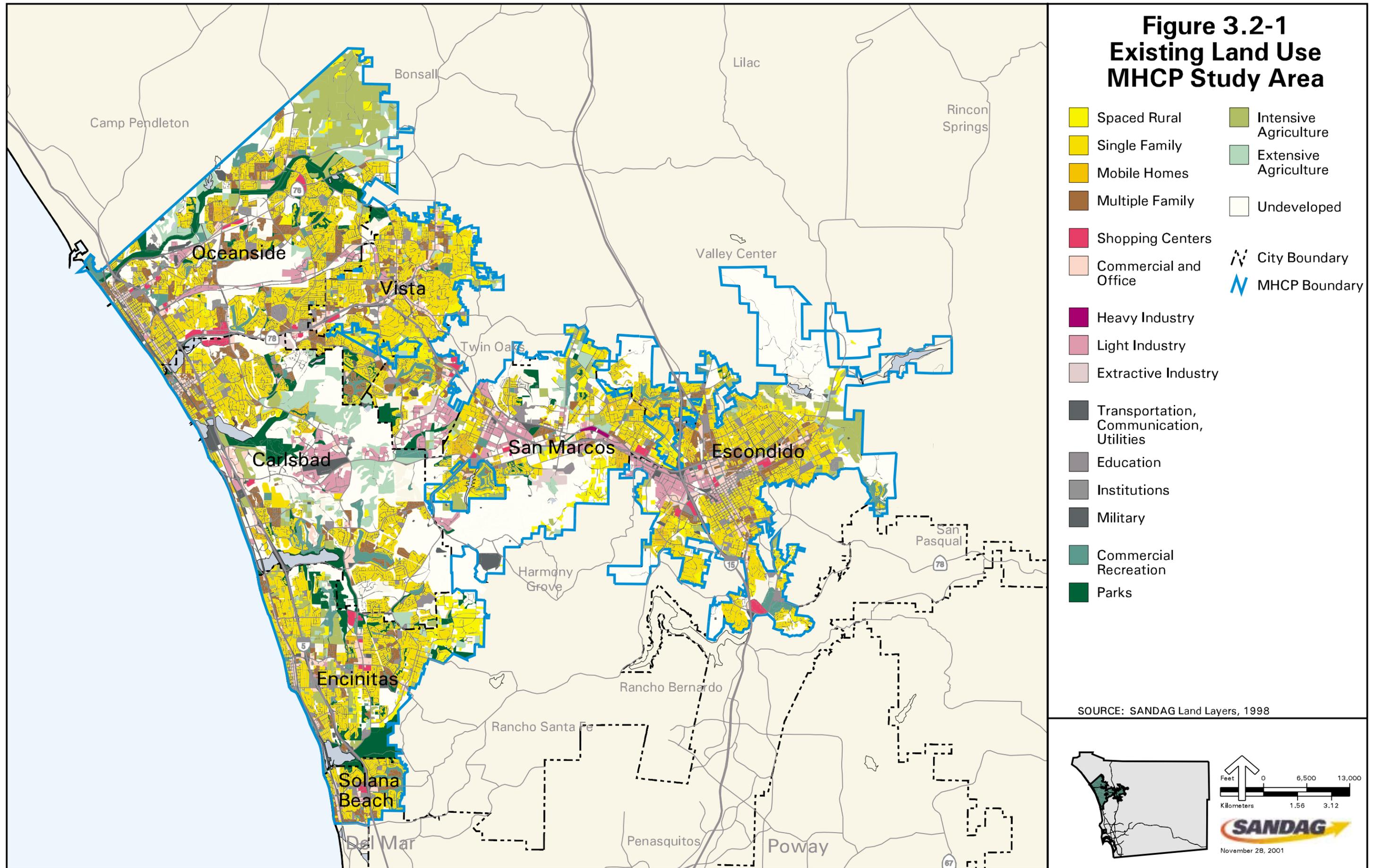
### **3.2.2 Existing Environmental Plans for the MHCP Subareas**

#### **City of Carlsbad**

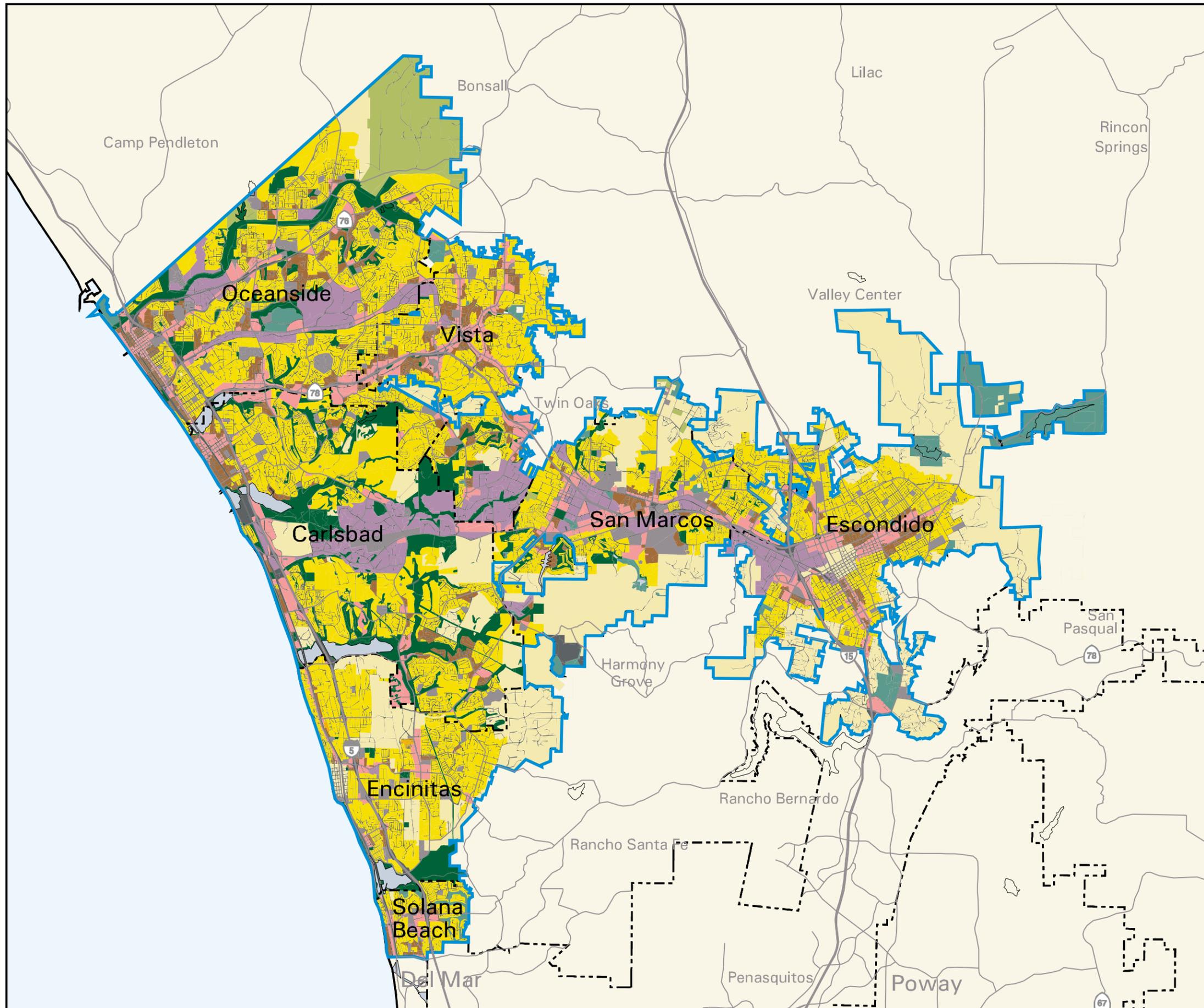
The following City of Carlsbad plans apply to the proposed project (City of Carlsbad Habitat Management Plan 1999, Page E-1):

- Open Space and Conservation Element of the General Plan
- Open Space Ordinance
- Municipal Code
- Growth Management Plan
- Local Coastal Program

### Figure 3.2-1 Existing Land Use MHCP Study Area

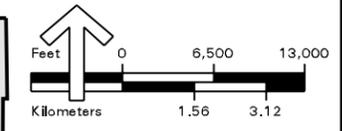
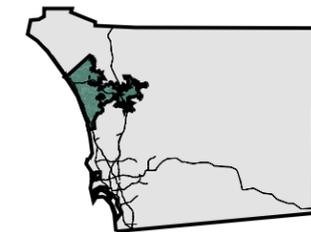


### Figure 3.2-2 Planned Land Use MHCP Study Area



- Spaced Rural
- Single Family
- Mobile Homes
- Multiple Family
- Commercial and Office
- Heavy and Light Industry
- Transportation, Communication Utilities
- Education & Institutions
- Commercial Recreation
- Parks/Open Space
- Agriculture
- Public / Semi Public
- City Boundary
- MHCP Boundary

SOURCE: SANDAG Land Layers, 1998



**ENVIRONMENTAL SETTING/AFFECTED ENVIRONMENT**

**Table 3.2-1  
Existing Land Use (1998) Within MHCP Study Area**

Land Use	Total	Percent
Rural Residential	3,947	4%
Single Family	25,441	23%
Mobile Homes	1,390	1%
Multiple Family	4,851	4%
<b><i>Subtotal Residential</i></b>	<b>35,629</b>	<b>32%</b>
Shopping Centers	885	Less than 1%
Commercial and Office	2,787	2%
<b><i>Subtotal Commercial</i></b>	<b>3,673</b>	<b>3%</b>
Heavy Industry	52	Less than 1%
Light Industry	3,285	3%
Extractive Industry	344	Less than 1%
<b><i>Subtotal Industrial</i></b>	<b>3,681</b>	<b>3%</b>
Transportation, Communication, Utilities	15,473	14%
Education	1,785	2%
Parks	1,196	1%
Military	22	Less than 1%
<b><i>Subtotal Institutional</i></b>	<b>18,476</b>	<b>17%</b>
Commercial Recreation	3,587	3%
Parks	6,675	6%
<b><i>Subtotal Parks and Recreation</i></b>	<b>10,262</b>	<b>9%</b>
Intensive Agriculture	6,549	6%
Extensive Agriculture	4,246	4%
<b><i>Subtotal Agriculture</i></b>	<b>10,796</b>	<b>10%</b>
Undeveloped	27,837	25%
Water	1,587	1%
<b>TOTAL</b>	<b>111,941</b>	

Notes: The Gnatcatcher Unincorporated Core Study Area lies between the cities of Encinitas and San Marcos within the Spheres of Influence.

Totals may be different (less than 1%) than totals shown in the biological summaries due to raster versus vector calculations.

The Land Layers database (existing and planned land use) was developed independently from and for a different purpose than the vegetation database; therefore, for some common categories, definitions and interpretations may be different between the two files.

Information in the Land Layers database is parcel aligned, and contains street rights-of-way; the vegetation database is not parcel aligned and does not contain street rights-of-way.

Source: SANDAG Land Layers 1998.

**Table 3.2-2  
Planned Land Use (1998) Within MHCP Study Area**

<b>Land Use</b>	<b>Total</b>	<b>Percent</b>
Rural Residential	21,786	19%
Single Family	37,734	34%
Mobile Homes	43	Less than 1%
Multiple Family	4,271	4%
<b><i>Subtotal Residential</i></b>	<b><i>63,834</i></b>	<b><i>57%</i></b>
Commercial and Office	6,680	6%
<b><i>Subtotal Commercial</i></b>	<b><i>6,680</i></b>	<b><i>6%</i></b>
Heavy and Light Industry	6,680	6%
Extractive Industry	--	--
<b><i>Subtotal Industrial</i></b>	<b><i>6,680</i></b>	<b><i>6%</i></b>
Transportation, Communications, Utilities	15,079	13%
Education	2,948	3%
<b><i>Subtotal Institutional</i></b>	<b><i>18,027</i></b>	<b><i>16%</i></b>
Commercial Recreation	3,519	3%
Parks and Open Space	9,527	9%
<b><i>Subtotal Parks and Recreation</i></b>	<b><i>13,046</i></b>	<b><i>12%</i></b>
Agriculture	3,633	3%
Water	14	Less than 1%
Public/Semipublic	28	Less than 1%
<b>TOTAL</b>	<b>111,942</b>	

Notes: The Gnatcatcher Unincorporated Core Study Area lies between the cities of Encinitas and San Marcos within the Spheres of Influence.

Totals may be different (less than 1%) than totals shown in the biological summaries due to raster versus vector calculations.

The Land Layers database (existing and planned land use) was developed independently from and for a different purpose than the vegetation database; therefore, for some common categories, definitions and interpretations may be different between the two files.

Information in the Land Layers database is parcel aligned, and contains street rights-of-way; the vegetation database is not parcel aligned and does not contain street rights-of-way.

Source: SANDAG Land Layers 1998.

### **City of Encinitas**

The following City of Encinitas plans apply to the proposed project (City of Encinitas Subarea Plan 1999):

- General Plan
  - Land Use Element
  - Public Safety Element
  - Resource Management Element
  - Recreation Element

---

***ENVIRONMENTAL SETTING/AFFECTED ENVIRONMENT***

---

- Local Coastal Program
- Zoning Ordinance
- Grading, Erosion and Sediment Control Chapter of the Municipal Code
- Fire Ordinance
- Encinitas Ranch Specific Plan

**City of Escondido**

The following City of Escondido environmental plans apply to the proposed project (City of Escondido Subarea Plan, 1999, Page 2-10):

- General Plan
- Master Plan for Parks, Trails and Open Space
- Zoning Ordinance, including the Environmental Quality Regulations, Excavating and Grading Ordinance Area, and San Dieguito River Valley Focused Planning Area Overlay.

**City of Oceanside**

The following City of Oceanside plans apply to the proposed project (City of Oceanside MHCP Subarea Plan 1999, Page 2-10):

- General Plan
  - Land Use Element
  - Environmental Resource Management Element
  - Recreational Trails Element
  - Community Facilities Element
  - Master Plan for Parks and Recreation
- Zoning Ordinance
- Local Coastal Program
- Buena Vista Lagoon Management Plan
- City Ordinances
  - Grading Regulations Manual
  - Subdivision Ordinance
  - Flood Plain Management Ordinance
  - Stormwater Discharge Ordinance
  - Fire Ordinance

### **City of San Marcos**

The following City of San Marcos plans apply to the proposed project (Natural Community Conservation Plan for the City of San Marcos, 2000):

- General Plan
  - Conservation/Open Space Element
  - Land Use Element
- Zoning Ordinance
- City Ordinances
  - Grading Ordinance
  - Subdivision Ordinance

### **City of Solana Beach**

The City of Solana Beach has not prepared a Subarea Plan for the MHCP. The City of Solana Beach General Plan applies to the proposed project.

### **City of Vista**

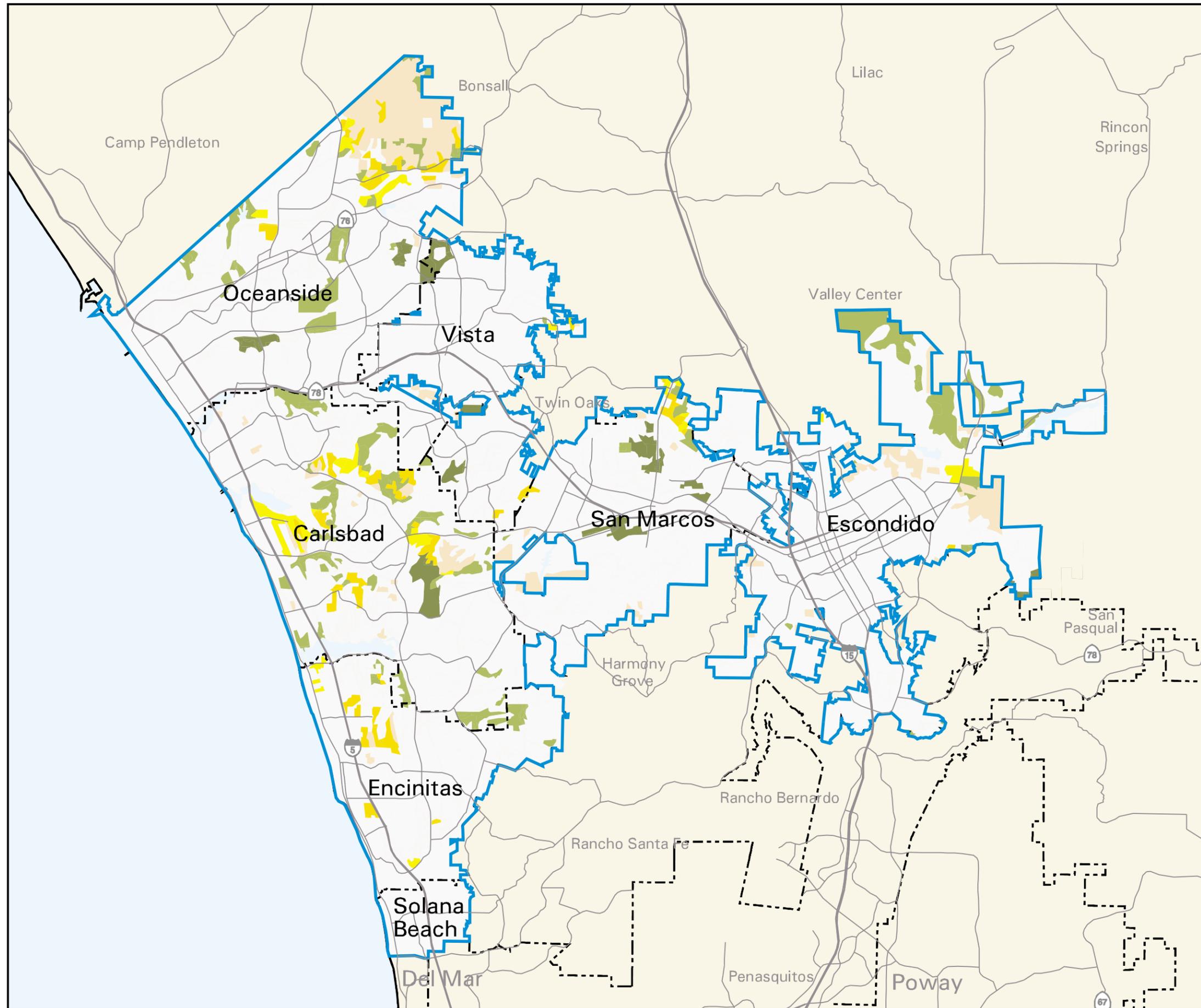
The City of Vista has not prepared a Subarea Plan for the MHCP. The City of Vista General Plan applies to the proposed project.

### **3.2.3 Important Farmland within the MHCP Boundary**

Table 3.2-3 describes California Department of Conservation (CDC) categories of Important Farmland including prime farmland, farmland of statewide importance, unique farmland, farmland of local importance, and grazing land.

Figure 3.2-3 shows the location of Important Farmland within the MHCP boundary. Table 3.2-4 summarizes the acreages of Important Farmland in each city within the MHCP boundary. There are 15,399 acres of important farmland in the MHCP study area. The majority of Important Farmland, 37 percent, is concentrated in Oceanside. A large core of Unique Farmland is located in the northeast area of the City. Carlsbad and Escondido each

### Figure 3.2-3 Important Farmland MHCP Study Area



- Prime Farmland
  - Farmland of Statewide Importance
  - Unique Farmland
  - Farmland of Local Importance
  - Grazing Land
  - Urban & Built Up Land and Other Land (does not fall in any of the categories above)
- 
- City Boundary
  - MHCP Boundary

SOURCE: California Department of Conservation, Farmland Mapping and Monitoring Program, 1998

November 28, 2001

**Table 3.2-3  
Important Farmland Categories**

<b>CDC Category</b>	<b>Description</b>
Prime Farmland	Lands with the best combination of physical and chemical features able to sustain long-term production of agricultural crops. The land must be currently cropped and supported by a developed irrigation water supply that is dependable and of adequate quality during the growing season.
Farmland of Statewide Importance	Land with a good combination of physical and chemical characteristics for production of agricultural crops (other than prime farmland). Land must have been used for production of irrigated crops within the last three years.
Unique Farmland	Land of lesser quality soils used for the production of the State's leading agricultural cash crops.
Farmland of Local Importance	Certain local areas have designated additional farmland of local importance for the production of crops. If the locally important farmland overlaps with other farmland classified by the State, the local designations take priority in terms of inventory and mapping effects.
Grazing Land	Land on which the existing vegetation is suitable to the grazing of livestock.

Source: California Department of Conservation 1982.

**Table 3.2-4  
Important Farmland Within The MHCP Boundary**

	<b>Carlsbad</b>	<b>Encinitas</b>	<b>Escondido</b>	<b>Oceanside</b>	<b>San Marcos</b>	<b>Solana Beach</b>	<b>Vista</b>	<b>Total Cities</b>
Important Farmland (acres)	3,587	854	3,504	5,688	1,290	0	476	15,399

Source: SANDAG 2000.

contain 23 percent of Important Farmland within the study area. Additional farmland is located in San Marcos and Encinitas. There is no remaining farmland in Solana Beach.

### **3.2.4 Extractive Resources in the MHCP Study Area**

In accordance with classification guidelines established by the State Mining and Geology Board and in compliance with the Surface Mining and Recovery Act of 1975 (SMARA), the State Geologist is required to classify, on the basis solely of geological factors and without regard to existing land use and ownership, the following:

## *ENVIRONMENTAL SETTING/AFFECTED ENVIRONMENT*

---

- Areas containing little or no mineral deposits;
- Areas containing significant mineral deposits; or
- Areas containing mineral deposits, the significance of which requires further evaluation.

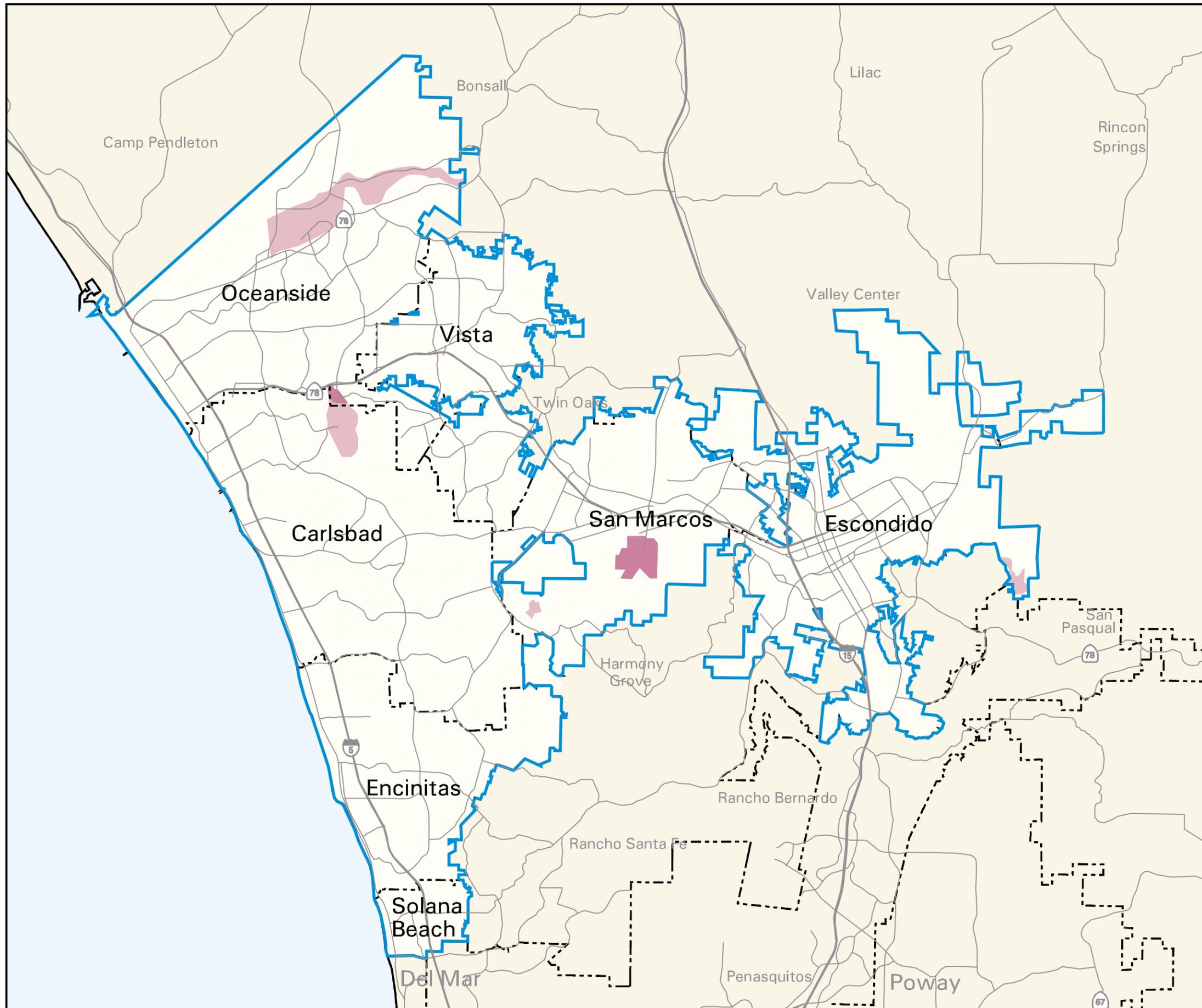
The State Mining and Geology Board has subsequently defined the above categories into Mineral Resource Zones (MRZs). These zones are established based on the presence or absence of significant sand and gravel deposits and crushed rock source areas. The guidelines for establishing the MRZs are as follows:

- MRZ-1 Areas where adequate information indicates that no significant mineral deposits are present, or where it is judged that there is little likelihood for their presence.
- MRZ-2 Areas where adequate information indicates that significant mineral deposits are present or where it is judged that there is a high likelihood for their presence.
- MRZ-3 Areas containing mineral deposits, the significance of which cannot be evaluated from available data.
- MRZ-4 Areas where available information is inadequate for assignment to any other MRZ zone.

The classification of mineral deposits in western San Diego County is provided in Special Report 153, prepared by the California Department of Mines and Geology (CDMG) in 1982. Of the aggregate resources extracted in San Diego County, Portland Cement Concrete (PCC) aggregate is the most scarce, due to its specifications being more restrictive than those of other aggregate types. Consequently, fewer sand and gravel deposits satisfy these specifications. Those deposits that are acceptable for use as PCC aggregate are thus of the most concern in terms of planning future availability of this commodity (CDMG 1982).

As shown in Figure 3.2-4, areas categorized as MRZ-2 are located throughout the study area. In general, MRZ-2 areas and mining operations within the MHCP boundary are concentrated around major drainages and valleys. The largest area of MRZ-2 land is in the San Luis Rey River area in the northern portion of the study area. An additional area of concentration is southeast of Escondido, along the Santa Ysabel Creek and San Pasqual Valley Region. Active quarry operations include the Southcoast Materials Company, Carlsbad Quarry, and

**Figure 3.2-4  
Mineral Resources  
MHCP Study Area**



- MRZ-2 (Areas that may contain significant mineral desposits)
- Permitted PCC-grade Aggregate Pits
- City Boundary
- MHCP Boundary

SOURCE: California Department of Conservation, Division of Mines and Geology, 1996

Feet

0 6,500 13,000

Kilometers

0 1.56 3.12

**SANDAG**

November 28, 2001

San Marcos Quarry. Table 3.2-5 shows the acreages of MRZ-2 areas in the cities in the MHCP study area.

**Table 3.2-5  
MRZ-2 Land Within the MHCP Boundary**

	<b>Carlsbad</b>	<b>Encinitas</b>	<b>Escondido</b>	<b>Oceanside</b>	<b>San Marcos</b>	<b>Solana Beach</b>	<b>Vista</b>	<b>Total Cities</b>
MRZ-2 Land (acres)	510	0	160	1,805	592	0	0	3,066

Source: California Department of Conservation.

### **3.3 BIOLOGICAL RESOURCES**

The Environmental Setting/Affected Environment for the biological resources is based upon data compiled during the preparation of the MHCP and individual Subarea Plans. These include digital vegetation files, and hard-copy data from biological documents, EIRs, and other technical reports. Aerial photographs were used to map areas that had not been previously mapped. The vegetation data were updated periodically using satellite imagery and a change detection algorithm. New biological technical reports were used to update the biological resources, as they became available. Unless otherwise specified, Ogden 1998, 2000a, and 2000b are the sources of the following data.

Data layers were created for natural vegetation communities (using a classification system based on Holland 1986), sensitive species locations, vernal pools, topography, soils, animal microhabitats, climate zones, and other pertinent information.

The vegetation community layer was generated using data from a variety of sources, including existing digital (computer) vegetation files and hard-copy data from biological documents, EIRs, and other technical reports. Infrared aerial photograph interpretation (at 1:24,000 scale) was used to map areas not previously mapped, and limited field surveys were used for ground truthing. In 1997, the vegetation data layer was systematically updated using 1995 satellite imagery and a change detection algorithm.

A sensitive species data layer was created using the California Natural Diversity Database (CNDDDB), review of existing environmental documentation for projects in the study area, review of the scientific literature, personal communications from local biologists, and limited

field reconnaissance. This layer has also been updated, as new information became available (e.g., results of field surveys for environmental documents).

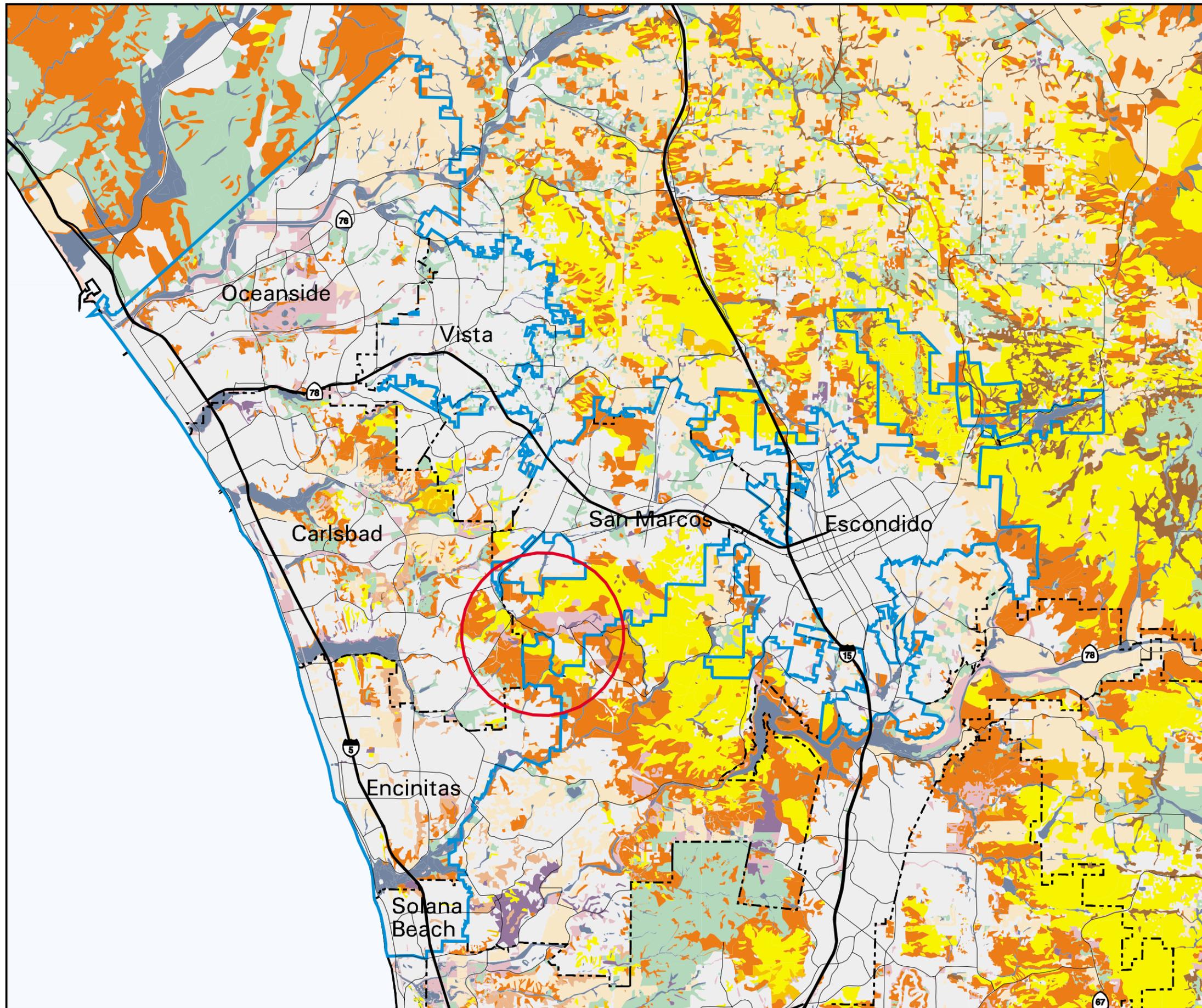
### **3.3.1 Vegetation Communities**

The MHCP identifies 22 vegetation communities, along with two vacant land categories and one developed category, covering a total Plan area of 111,865 acres (Table 3.3-1). Simplified mapping, which collapses related categories into nine habitat types for presentation purposes, has been prepared to illustrate the distribution of vegetation communities throughout the MHCP study area (Figure 3.3-1). Data used in this mapping effort have been derived from regional vegetation mapping efforts, last updated in May 1999, and limited ground-truthing. During the MHCP development period, individual cities, biologists, property owners, and environmentalists have provided corrections and updated information to improve the quality of these data sets. The Public Review Draft MHCP Plan addresses the details of the mapping program in Section 2.3.1. It is recognized that these data reflect a regional approximation of the habitats in the Plan area, and that site-specific surveys will yield some degree of variance from the Plan data. However, on the scale of the entire plan, these variations will not significantly deviate from the regional data set.

Approximately 29,895 acres (26.7%) of natural vegetation remain in the 111,865-acre study area. The largest blocks of natural vegetation (greater than 1,000 contiguous acres each) occur in northern Escondido (Daley Ranch) and in the hilly areas of southeastern Carlsbad and southwestern San Marcos. Other relatively large blocks of habitat (at least several hundred contiguous acres each) occur along the northern boundary of Oceanside (adjacent to Camp Pendleton), and in scattered areas in eastern and central Carlsbad, northern San Marcos, and southern Escondido. Otherwise, natural habitats in the MHCP area are highly fragmented and occur primarily in small (less than 200 acres), scattered patches surrounded by development or agriculture. The remnant natural vegetation occurs disproportionately on developmentally constrained lands, such as steep slopes and canyons, and lands at the periphery of incorporated cities.

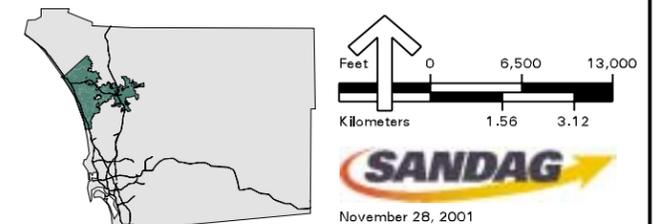
Approximately 8,570 acres (7.6% of study area) of Diegan coastal sage scrub remain in the study area. Prior to development, coastal sage scrub probably stretched in a nearly unbroken swath across the study area, particularly on coastal terraces and on south- and west-facing slopes. Coastal sage scrub nearer the coast and on lower, gentler slopes tends to be

**Figure 3.3-1  
Vegetation Communities**



- Dunes and Beaches
- Coastal Sage Scrub
- Chaparral
- Southern Maritime Chaparral
- Coastal Sage Scrub/Chaparral Mix
- Grassland
- Riparian/Wetlands
- Oak Woodlands
- Eucalyptus Woodlands
  
- Agricultural Land
- Disturbed Land
- Developed
  
- General Area for Core Gnatcatcher Conservation (USFWS Circle)
- City Boundary
- MHCP Boundary

SOURCE: 1995 Vegetation Inventory (SANDAG)



**ENVIRONMENTAL SETTING/AFFECTED ENVIRONMENT**

**Table 3.3-1  
Acreage and Proportional Distribution of Vegetation Communities Within  
the MHCP Study Area and Biological Core and Linkage Area (BCLA)**

Vegetation Type	Total MHCP Study Area		BCLA	
	Acres	% of Total	Acres	% of Total
Southern coastal bluff scrub	2	0.0%	-	0.0%
Maritime succulent scrub	32	0.0%	31	0.0%
Coastal sage scrub	8,570	7.7%	7,128	25.5%
Chaparral	8,312	7.4%	7,699	27.5%
Southern maritime chaparral	968	0.9%	904	3.2%
Coastal sage/chaparral mix	462	0.4%	439	1.6%
Grassland	5,209	4.7%	3,295	11.8%
Southern coastal salt marsh	272	0.2%	270	1.0%
Alkali marsh	165	0.1%	165	0.6%
Freshwater marsh	533	0.5%	457	1.6%
Riparian forest	676	0.6%	404	1.4%
Riparian woodland	250	0.2%	133	0.5%
Riparian scrub	1,514	1.4%	969	3.5%
Engelmann oak woodland	230	0.2%	207	0.7%
Coast live oak woodland	650	0.6%	583	2.1%
Eucalyptus woodland	648	0.6%	357	1.3%
Freshwater	444	0.4%	396	1.4%
Estuarine	955	0.9%	954	3.4%
Disturbed wetland	202	0.2%	87	0.3%
Natural flood channel/streambed	396	0.4%	381	1.4%
Beach	48	0.0%	23	0.0%
Saltpan/Mudflats	3	0.0%	3	0.0%
<b>Subtotal Habitat</b>	<b>30,541</b>	<b>27.3%</b>	<b>24,885</b>	<b>89.0%</b>
Agriculture	10,460	9.4%	1,283	4.6%
Disturbed	4,072	3.6%	1,127	4.0%
<b>Subtotal Vacant Land</b>	<b>14,532</b>	<b>13.0%</b>	<b>2,410</b>	<b>8.6%</b>
Developed	66,790	59.7%	677	2.4%
<b>Total</b>	<b>111,865</b>	<b>100%</b>	<b>27,974</b>	<b>100%</b>

Note: Numbers may not sum to total as shown due to rounding. Vernal pools were mapped as an overlay, and thus their acreage is not included in this total.

## ***ENVIRONMENTAL SETTING/AFFECTED ENVIRONMENT***

---

dominated by California sagebrush (*Artemisia californica*). Sage scrub on higher, steeper slopes, especially in more inland locales, tends to be dominated by black or white sages (*Salvia* spp.). Chaparral communities tend to replace coastal sage scrub on still higher and more inland sites, and particularly on mesic (moist) north-facing slopes.

Today, the swath of coastal sage scrub in the western half of the study area has been fragmented by development into a discontinuous band, with the largest remaining blocks in southeastern Carlsbad (La Costa area), central Carlsbad (Macario Canyon/Agua Hedionda area), and northeastern Carlsbad (Lake Calavera/Carlsbad Highlands area). Smaller remnants of coastal sage scrub are scattered across Oceanside to Camp Pendleton, and on steeper slopes and canyons scattered throughout the coastal cities. Outside of the study area, sage scrub stretches in a more continuous band north along the coastal slope on Camp Pendleton, and south to the San Dieguito River Park and Lake Hodges in the MSCP study area. Other significant stands of coastal sage scrub in the study area are found in north Oceanside (near the mouth of the San Luis Rey River and adjacent to Camp Pendleton), north to San Marcos (predominantly black-sage-dominated habitat near Twin Oaks Valley), and scattered areas around the outskirts of Escondido.

Two sensitive scrub communities are extremely rare in the MHCP study area: maritime succulent scrub and coastal bluff scrub. Only about 32 acres of maritime succulent scrub remain in the study area, on steep, south-facing slopes near lagoons in Carlsbad. Only about 2 acres of coastal bluff scrub are located in the City of Solana Beach.

Chaparral communities, particularly southern mixed chaparral and chamise chaparral, dominate on higher and steeper slopes in southern San Marcos, northeastern Carlsbad, and northern Escondido. In addition, a rare chaparral assemblage – southern maritime chaparral – occurs on slopes and terraces in the coastal cities of Encinitas and Carlsbad. This sensitive vegetation community is associated with weathered sandstone formations in the coastal fog belt and supports a variety of rare and endemic species.

Grassland habitats in the study area are primarily dominated by annual grasses, although scattered areas of native perennial grassland remain, often as small inclusions within scrub habitats. Grasslands are scattered throughout the study area, with the largest stands in north Oceanside (along the boundary with Camp Pendleton) and in central Carlsbad. Significant grassland areas are found in the valley of Daly Ranch (north Escondido). Grazing, fire, and other disturbances have converted some areas of former scrub into annual nonnative grasslands; conversely, some grassland areas are gradually succeeding back to coastal sage

## *ENVIRONMENTAL SETTING/AFFECTED ENVIRONMENT*

---

scrub following reductions in disturbance levels (e.g., slopes in Oceanside and Carlsbad). Although not considered sensitive as a vegetation community, annual grasslands are important to preserve design in helping to create linkages between other areas of native vegetation. They also provide foraging habitat for raptors and other MHCP animal species and support a number of MHCP plant species.

The study area supports a variety of riparian, marsh, and other wetland communities. However, in general, wetland vegetation has been greatly reduced in extent and altered in quality by development and associated changes in hydrology. The four coastal lagoons support a mixture of saltmarsh and freshwater marsh habitats, along with open water. Riparian forests, woodlands, and scrub communities are along many of the drainages in the study area, with the most significant stands found associated with Pilgrim Creek, the San Luis Rey River, Guajome Lake, and Loma Alta Creek in Oceanside; Buena Vista Creek upstream from Buena Vista Lagoon along the Oceanside/Carlsbad border; Agua Hedionda Creek and Macario Canyon, upstream from San Marcos Creek and Twin Oaks Valley in San Marcos; Kit Carson Park in Escondido; and Escondido Creek in south Encinitas.

Vernal pools are a highly restricted, unique wetland habitat type in San Diego County. They support high numbers of listed and “narrow endemic species”. In the MHCP study area, vernal pools are highly restricted in distribution, with two important concentrations: (1) a narrow linear configuration along a railroad right-of-way in western Carlsbad (the Poinsettia Lane pools); and (2) scattered pools in central, urbanized San Marcos. Both of these areas are considered critical to the conservation of vernal pools and associated MHCP species. A few other vernal pools are scattered in central Carlsbad. In total, wetlands and waterways, including estuarine (freshwater/marine interface), riparian (streamside), and palustrine (lakes), comprise 5,410 acres (4.8%) of the total habitat within the MHCP study area (Table 3.3-1).

Historically, north San Diego County has been a major agricultural area, and significant agricultural fields and orchards remain within the MHCP study area. However, in recent decades many agriculture areas have converted to urban and suburban uses. Sizable agricultural areas remain in northeastern Oceanside, central and eastern Carlsbad, central Encinitas (Ecke Ranch), and around the margins of Escondido. Other small agricultural fields and pastures are scattered throughout the study area. In some places, these fields function as foraging habitat or habitat linkages for a variety of MHCP species. They also help buffer native habitat and species against adverse effects from other land uses, such as edge effects from residential development.

The vegetation within the MHCP study area exists at various levels of degradation, with many of the smaller blocks of habitat suffering from prior disturbance or edge effects such as exotic species encroachment (Ogden 2000a). Larger habitat blocks are generally more pristine and have retained higher plant and animal diversity and community composition integrity. The composition and condition of the various habitats are discussed in the context of ecological communities within the MHCP Public Review Draft, Biological Analysis and Permitting Conditions.

### **3.3.2 Sensitive Habitats**

Sensitive habitats within the MHCP study area are those that are considered rare in the region, support sensitive species of plants and animals, and/or which are subject to regulatory protection through various federal, state, or local policies or regulations. In the case of habitats within the MHCP, these include all wetland and waterway habitat types, as well as several upland communities including scrub habitats, native grasslands, and oak woodlands (Figure 3.3-1).

Wetland and other waterway communities are regulated under various combinations of state and federal authority. Sections 404 and 401 of the Clean Water Act grant authority to the Army Corps of Engineers and the State Water Resources Control Board, respectively, to regulate certain activities that will impact waters of the U.S. Similarly, Section 1600 et seq. of the California Fish and Game Code and the California Coastal Act grant additional authority to the California Department of Fish and Game and the California Coastal Commission with respect to actions occurring within wetlands or other waters. Regulations affecting upland habitats are less common, and generally limited to local resource protection policies and ordinances, and environmental review impact significance thresholds. In some instances, species listed as threatened or endangered under the state or federal Endangered Species Acts are associated with upland habitat areas, thus affording a greater level of protection due to prohibitions on take of the associated listed species.

#### **Sensitive Upland Communities**

Southern coastal bluff scrub  
Maritime succulent scrub  
Coastal sage scrub  
Southern maritime chaparral  
Coastal sage/chaparral mix  
Perennial grasslands

#### **Sensitive Wetland Communities**

Southern coastal salt marsh  
Alkali marsh  
Freshwater marsh  
Riparian forest  
Riparian woodland  
Riparian scrub

**Sensitive Upland Communities**

Engelmann oak woodland  
Coast live oak woodland

**Sensitive Wetland Communities**

Freshwater  
Estuarine  
Disturbed wetland  
Natural floodchannel/streambed  
Saltpan/Mudflats

**3.3.3 Sensitive Species**

The MHCP has included the evaluation of 77 species for adequate conservation (“coverage”) under the MHCP subregional plan and its various Subarea Plans. The list includes 48 animals and 29 plants. Included are species considered to be rare, threatened, or endangered, as well as species that are likely candidates for future listing as threatened or endangered based on present population declines, diminishing habitat, or existing lesser levels of sensitivity. In addition, more common species are included that are useful for their benefits in evaluating the efficacy of preserve designs, such as the mountain lion and mule deer. There is a preliminary list of MHCP covered species that is a subset of the evaluated species list (Table 3.3-2).

Volume II of the Public Review Draft MHCP Plan provides biological information on each of the MHCP species, including their conservation status, distribution, habitat requirements, locations of major and critical populations or habitat areas, threats to species survival, and special considerations for preserve design and management. The species accounts also include guidelines for preserve management, long-term monitoring, and research needs for each species.

This section describes the status and distribution of the California gnatcatcher and other priority species in the study area. Priority species are those listed as threatened or endangered, or that have been proposed for listing, as well as Natural Community Conservation Plan (NCCP) “target species” (e.g., the orange-throated whiptail). See Volume II of the Public Review Draft MHCP Plan document for a complete discussion of all 77 MHCP species.

**ENVIRONMENTAL SETTING/AFFECTED ENVIRONMENT**

**Table 3.3-2  
Preliminary MHCP Covered Species List**

Scientific Name	Common Name	Status <sup>1</sup>	Subarea Plans				
			Carlsbad	Encinitas	Escondido	Oceanside	San Marcos
<b>Plants</b>							
<i>Acanthomintha ilicifolia</i> <sup>2</sup>	San Diego thorn-mint	FT/CE	X	X	X	X	X
<i>Ambrosia pumila</i> <sup>2</sup>	San Diego ambrosia	FSC */	X	X	X	X	
<i>Arctostaphylos glandulosa</i> ssp. <i>crassifolia</i> <sup>2</sup>	Del Mar manzanita	FE/	X	X	X	X	
<i>Baccharis vanessae</i> <sup>2</sup>	Encinitas baccharis	FT/CE	X	X	X	X	
<i>Brodiaea filifolia</i> <sup>2</sup>	Thread-leaved brodiaea	FT/CE	X	X	X	X	
<i>Ceanothus verrucosus</i> <sup>2</sup>	Wart-stemmed ceanothus	FSC */	X	X	X	X	X
<i>Chorizanthe orcuttiana</i> <sup>2</sup>	Orcutt's spineflower	FE/CE	X	X	X	X	X
<i>Comarostaphylis diversifolia</i> ssp. <i>diversifolia</i> <sup>2</sup>	Summer-holly	FSC */	X	X	X	X	X
<i>Corethrogyne filaginidolia</i> var. <i>linifolia</i> <sup>2</sup>	Del Mar mesa sand aster	FSC ⊥	X	X	X	X	
<i>Dudleya blochmaniae</i> ssp. <i>blochmaniae</i> <sup>2</sup>	Blochman's dudleya	FSC */	X	X	X	X	
<i>Dudleya blochmaniae</i> ssp. <i>brevifolia</i> <sup>2</sup>	Short-leaved dudleya	FSC ⊥/CE		X	X	X	
<i>Dudleya variegata</i>	Variegated dudleya	None					X
<i>Dudleya viscida</i> <sup>2</sup>	Sticky dudleya	FSC */	X	X	X	X	
<i>Eryngium aristulatum</i> var. <i>parishii</i> <sup>2</sup>	San Diego button-celery	FE/CE	X	X	X	X	
<i>Euphorbia misera</i> <sup>2</sup>	Cliff spurge	None	X	X	X	X	
<i>Ferocactus viridescens</i> <sup>2</sup>	San Diego barrel cactus	FSC */	X	X	X	X	X
<i>Hazardia orcuttii</i> <sup>2</sup>	Orcutt's hazardia	FSC */	X	X	X	X	
<i>Iva hayesiana</i> <sup>2</sup>	San Diego marsh-elder	FSC */	X	X	X	X	X
<i>Lotus nuttallianus</i> <sup>2</sup>	Nuttall's lotus	FSC */		X	X	X	
<i>Myosurus minimus</i> ssp. <i>apus</i> <sup>2</sup>	Little mousetail	FSC */	X	X	X	X	
<i>Navarretia fossalis</i> <sup>2</sup>	Spreading navarretia	PT/	X	X	X	X	
<i>Orcuttia californica</i> <sup>2</sup>	California Orcutt grass	FE/CE	X	X	X	X	
<i>Pinus torreyana</i> ssp. <i>torreyana</i> <sup>2</sup>	Torrey pine	FSC */	X	X	X	X	
<i>Quercus dumosa</i> <sup>2</sup>	Nuttall's scrub oak	FSC */	X	X	X	X	
<i>Quercus engelmannii</i> <sup>2</sup>	Engelmann oak	None	X	X	X	X	
<i>Tetracoccus dioicus</i> <sup>2</sup>	Parry's tetracoccus	FSC */			X	X	

**ENVIRONMENTAL SETTING/AFFECTED ENVIRONMENT**

**Table 3.3-2, Preliminary MHCP Covered Species List (Continued)**

Scientific Name	Common Name	Status <sup>1</sup>	Subarea Plans				
			Carlsbad	Encinitas	Escondido	Oceanside	San Marcos
<b>Invertebrates</b>							
<i>Streptocephalus woottoni</i> <sup>2</sup>	Riverside fairy shrimp	FE/	X	X	X	X	
<i>Branchinecta sandiegonensis</i> <sup>2</sup>	San Diego fairy shrimp	FE/	X	X	X	X	
<i>Euphyes vestris harbisoni</i> <sup>2</sup>	Harbison's dun skipper	FSC */	X	X	X	X	X
<i>Panoquina errans</i> <sup>2</sup>	Saltmarsh skipper	FSC */	X	X	X	X	
<i>Euphydryas editha quino</i> <sup>2</sup>	Quino checkerspot	FE/		X	X	X	
<i>Lycaena hermes</i>	Hermes copper butterfly	/CSC					X
<b>Amphibians and Reptiles</b>							
<i>Scaphiopus hammondi</i> <sup>2</sup>	Western spadefoot toad	/CSC		X	X	X	
<i>Bufo microscaphus californicus</i> <sup>2</sup>	Arroyo southwestern toad	FE/CSC		X	X	X	X
<i>Clemmys marmorata pallida</i> <sup>2</sup>	Southwestern pond turtle	FSC */CSC		X	X	X	X
<i>Phrynosoma coronatum blainvillei</i>	San Diego horned lizard	FSC */CSC					X
<i>Cnemidophorus hyperythrus beldingi</i> <sup>2</sup>	Orange-throated whiptail	FSC */CSC	X	X	X	X	X
<b>Birds</b>							
<i>Pelecanus occidentalis californicus</i> <sup>2</sup>	California brown pelican	FE/CE	X	X	X	X	
<i>Plegadis chihi</i> <sup>2</sup>	White-faced ibis	FSC */CSC	X	X	X	X	X
<i>Circus cyaneus</i>	Northern harrier	/CSC					X
<i>Accipiter cooperii</i> <sup>2</sup>	Cooper's hawk	/CSC	X	X	X	X	X
<i>Pandion haliaetus</i> <sup>2</sup>	Osprey	/CSC	X	X	X	X	
<i>Aquila chrysaetos</i> <sup>2</sup>	Golden eagle	BEPA/CSC		X	X	X	
<i>Falco peregrinus anatum</i> <sup>2</sup>	Peregrine falcon	/CE	X	X	X	X	
<i>Rallus longirostris levipes</i> <sup>2</sup>	Light-footed clapper rail	FE/CE	X	X	X	X	
<i>Charadrius alexandrinus nivosus</i> <sup>2</sup>	Western snowy plover	FT/CSC	X	X	X	X	
<i>Sterna elegans</i> <sup>2</sup>	Elegant tern	FSC */CSC	X	X	X	X	
<i>Sterna antillarum browni</i> <sup>2</sup>	California least tern	FE/CE	X	X	X	X	
<i>Empidonax traillii extimus</i> <sup>2</sup>	Southwestern willow flycatcher	FE/CE	X	X	X	X	X
<i>Campylorhynchus brunneicapillus cousei</i> <sup>2</sup>	Coastal cactus wren	FSC */CSC		X	X	X	
<i>Polioptila californica californica</i> <sup>2</sup>	Coastal California gnatcatcher	FT/CSC	X	X	X	X	X
<i>Sialia mexicana</i> <sup>2</sup>	Western bluebird	None		X	X	X	
<i>Vireo bellii pusillus</i> <sup>2</sup>	Least Bell's vireo	FE/CE	X	X	X	X	X
<i>Icteria virens</i> <sup>2</sup>	Yellow-breasted chat	/CSC	X	X	X	X	

**ENVIRONMENTAL SETTING/AFFECTED ENVIRONMENT**

**Table 3.3-2, Preliminary MHCP Covered Species List (Continued)**

Scientific Name	Common Name	Status <sup>1</sup>	Subarea Plans				
			Carlsbad	Encinitas	Escondido	Oceanside	San Marcos
<i>Aimophila ruficeps canescens</i> <sup>2</sup>	Rufous-crowned sparrow	FSC */CSC	X	X	X	X	X
<i>Passerculus sandwichensis beldingi</i> <sup>2</sup>	Belding's savannah sparrow	FSC */CE	X	X	X	X	
<i>Passerculus sandwichensis rostratus</i> <sup>2</sup>	Large-billed savannah sparrow	FSC */CSC	X	X	X	X	
<i>Amphispiza belli belli</i> <sup>2</sup>	Bell's sage sparrow	FSC */CSC		X	X	X	X
<i>Ammodramus savannarum</i>	Grasshopper sparrow	None					X
<i>Agelaius tricolor</i>	Tricolored blackbird	FSC */CSC					X
<i>Athene cunicularia hypugaea</i>	Burrowing owl	FSC */CSC	X				
<b>Mammals</b>							
<i>Dipodomys stephensi</i> <sup>2</sup>	Stephens' kangaroo rat	FE/CT			X	X	
<i>Perognathus longimembris pacificus</i> <sup>2</sup>	Pacific pocket mouse	FE/CSC		X	X	X	X
<i>Chaetodipus fallax fallax</i> <sup>2</sup>	Northwestern San Diego pocket mouse	FSC */CSC		X	X	X	X
<i>Lepus californicus bennettii</i> <sup>42</sup>	San Diego black-tailed jackrabbit	FSC */CSC		X	X	X	X
<i>Felis concolor</i> <sup>2</sup>	Mountain lion	CA protected		X	X	X	
<i>Odocoileus hemionus fuliginata</i> <sup>42</sup>	Southern mule deer	CA game species		X	X	X	

**<sup>1</sup>Status (Federal/State)**

FE = Federally endangered

PE = Proposed for federal listing as endangered

FT = Federally threatened

PT = Proposed for federal listing as threatened

C = Candidate for federal listing

BEPA = Bald Eagle Protection Act

CE = State endangered

CT = State threatened

CSC = State species of special concern

FSC \* = Federal Species of Concern; formerly Category 2 or Category 3 candidate or proposed for federal listing

FSC ⊥ = Federal Species of Concern; proposed rule to list as endangered or threatened as been withdrawn

protected = moratorium on hunting

None = no federal or state status

**<sup>2</sup>Preliminary MHCP Coverage**

### **3.3.3.1 California Gnatcatcher**

The California gnatcatcher is closely associated with its primary habitat, coastal sage scrub. In particular, gnatcatchers are most abundant in California sagebrush (*Artemisia californica*)-dominated coastal sage scrub that occurs in the western half of the study area, from southeast Carlsbad to Camp Pendleton. Gnatcatchers are generally less abundant in sage scrub communities in the more inland, higher elevations, or black sage (*Salvia mellifera*)-dominated associations to the east.

Approximately 378 known gnatcatcher locations are mapped in the MHCP database. Given that some areas of suitable habitat have not been surveyed for gnatcatchers, and that gnatcatcher populations vary from year to year (typical densities vary from 4 to 10 pairs per 100 acres of suitable habitat), the total number of gnatcatcher pairs in the study area probably ranges from about 400 to 600 in any given year. (See the gnatcatcher species evaluation in Volume II for more details.)

The distribution of these birds is highly patchy in the MHCP area, owing to the highly fragmented state of their habitat. Few habitat patches in the study area are large enough and contiguous enough to be considered reliable core breeding areas for gnatcatchers. A core breeding area should contain sufficient high-quality habitat (e.g., California sagebrush-dominated sage scrub on gentle slopes) to reliably support at least 25 pairs of gnatcatchers (50 adult birds) each breeding season. This threshold population size is based on theoretical and empirical studies regarding resistance to extinction for subpopulations of breeding songbirds in an interconnected reserve system (e.g., see Laymon and Haltermann 1989; Shaffer 1981). Core habitat should also be contiguous enough that gnatcatchers can freely move about or disperse to all portions of the habitat, and relatively free of internal fragmentation or edge effects from adjoining land uses. The only portion of the study area that clearly meets these requirements is the southeast Carlsbad/southwest San Marcos (La Costa/University Commons) area. This area represents the northwestern terminus of the relatively unbroken swath of sage scrub that reaches north from the San Dieguito River Valley. Relatively large and intact patches of contiguous coastal sage scrub (approximately 1,200 total acres) remain in the La Costa/University Commons area. However, much of the habitat there is approved for take under existing Section 10(a) and 7 agreements with the wildlife agencies, and habitat linkages from this area to gnatcatcher habitats farther north are fragmented by development and agriculture (Figures 2.2-1 through 2.2-3).

Other portions of the study area that may meet some, but not all, criteria for a reliable gnatcatcher breeding core are in central Carlsbad (Macario Canyon/Agua Hedionda Lagoon)

and northeastern Carlsbad (Calavera Heights/Carlsbad Highlands). Although these areas may support enough gnatcatchers to qualify as core breeding areas, habitats there are fragmented and are somewhat more disturbed and lower in quality than in southeast Carlsbad. Much of the northeast Carlsbad coastal sage scrub is dominated by black sage and occurs on relatively steep and rocky slopes. Sage scrub in the Macario Canyon area is recovering from past disturbance and supports a fairly high density of gnatcatchers. However, it is more internally fragmented and relatively poorly connected with other habitat areas.

Due to the small size of most other coastal sage scrub patches in the study area, and their relative isolation from one another, most coastal sage scrub habitat in the study area is considered “stepping-stone” linkage habitat for gnatcatchers. Coastal sage scrub habitats farther east, in Escondido and north San Marcos, may be less important to the regional conservation of gnatcatchers, because they support gnatcatchers at lower densities than the coastal cities and do not appear to effectively link together core breeding areas.

### **3.3.3.2 Other High-Priority Animals**

The other high-priority animal species in the study area are discussed in groups, based on frequency of occurrence in the study area and habitat affinities.

Several species have not been recorded in the study area in recent years, although potential habitat exists:

- The Quino checkerspot butterfly (*Euphydryas editha quino*) has known historical locations within the MHCP planning area, but may be now extirpated from the MHCP planning area. Open vegetation communities that include patches of its host plants (plantain species) likely occur in scattered locations. USFWS survey guidelines do not require surveys for this species, except for areas east of Interstate 15 (Escondido).
- The arroyo southwestern toad (*Bufo microscaphus californicus*) has no known populations within the study area, although recent observations have been made upstream of the study area along the San Luis Rey River, and one unconfirmed record within Oceanside requires verification (T. Cass, pers. comm.). Even if the arroyo toad is confirmed within the study area, its persistence could probably not be ensured, given the historic loss of upland habitat adjacent to riparian breeding areas.

## ***ENVIRONMENTAL SETTING/AFFECTED ENVIRONMENT***

---

- The Pacific little pocket mouse (*Perognathus longimembris pacificus*) was historically found on the coast in Oceanside and possibly Encinitas, but is not currently known to occur in the study area. Potential habitat for the species - sparse vegetation on fine sandy soils within about 4 miles of the coast - is scattered throughout the coastal cities. One unverified observation was reported in 1989 in Lux Canyon, Encinitas, but more recent surveys have failed to detect the species there.
- The American peregrine falcon (*Falco peregrinus anatum*) has no nesting locations in the study area, but a few peregrines have been observed foraging at the coastal lagoons.

Several MHCP species are known from only one or a few restricted locations within the study area:

- The coastal cactus wren (*Campylorhynchus brunneicapillus couesi*) is largely restricted to the San Pasqual Valley area in Escondido, which represents a major and critical population of the species. One additional location is on the north side of Batiquitos Lagoon in Carlsbad.
- The Stephens' kangaroo rat (*Dipodomys stephensi*) has been historically recorded in grasslands and agricultural areas of northern and eastern Oceanside. The MHCP database includes one location point in Guajome Regional Park that may no longer be extant due to habitat changes (S.J. Montgomery, pers. comm.). However, potential habitat still exists in northern Oceanside, and the species is found on nearby portions of Camp Pendleton and the Fallbrook Naval Weapons Station, from which it could disperse into the study area.
- The Riverside fairy shrimp (*Streptocephalus wootoni*) is known from the Poinsettia Lane vernal pools in Carlsbad, which is considered a critical location for species conservation. This species has not been recorded in the San Marcos vernal pools.
- The San Diego fairy shrimp (*Branchinecta sandiegonensis*) has been recently recorded in the Poinsettia Lane vernal pools and San Marcos vernal pools. These are considered critical locations for the species.

Two priority bird species are associated with riparian habitats in the study area:

- The least Bell's vireo is represented by 139 location points in the MHCP database and has been increasing in population in recent years (USFWS 1998). Major and critical

populations of this species are along the San Luis Rey River and Pilgrim Creek in Oceanside.

- There are six location points recorded for the southwestern willow flycatcher (*Empidonax traillii extimus*), which is restricted to mature, willow-dominated riparian woodlands and forests. Major and critical habitat areas are listed as the San Luis Rey River near Guajome Lake and Pilgrim Creek near Foss Lake, both in Oceanside.

Several priority bird species are associated with open water, estuarine, and marsh habitats along the coast or in the coastal lagoons:

- The California brown pelican (*Pelecanus occidentalis californicus*) is not known to breed in the County, but is a regular postbreeding and winter resident in coastal areas, harbors, and estuaries of the MHCP study area.
- The light-footed clapper rail (*Rallus longirostris levipes*) is found in saltmarsh habitats in all four of the coastal lagoons in the study area, which are considered major and critical locations for conservation.
- The western snowy plover (*Charadrius alexandrinus nivosus*) is known to breed at the mouth of the San Luis Rey River and at Agua Hedionda, Batiquitos, and San Elijo Lagoons, which are considered major and critical locations.
- The California least tern (*Sterna antillarum browni*) breeds regularly at Batiquitos Lagoon and occasionally at other lagoons within the study area. The mouth of the San Luis Rey River and all four lagoons are considered critical locations for the species.
- The Belding's savannah sparrow (*Passerculus sandwichensis beldingi*) is found in saltmarsh habitats associated with the lagoons and along the San Luis Rey River and Pilgrim Creek. Agua Hedionda, Batiquitos, and San Elijo Lagoons are considered major and critical breeding locations.

The orange-throated whiptail lizard (*Cnemidophorus hyperythrus beldingi*) is widely distributed within the study area, particularly in more open scrub and chaparral habitats. No major or critical locations have been identified.

### **3.3.3.3 High-Priority Plants**

The high-priority plant species in the MHCP are also all considered narrow endemic species. Narrow endemics are those species considered so restricted in distribution and abundance that substantial loss of their populations or habitat might jeopardize the species' continued existence or recovery. Several MHCP plant species are associated with specific habitat types within the study area. The following four species are either entirely or partially associated with vernal pools:

- Thread-leaved brodiaea (*Brodiaea filifolia*) occurs in heavy clay soils in grasslands in the Calavera Heights, Carlsbad Highlands, Rancho Carillo, and El Camino Real areas of Carlsbad, and in or adjacent to vernal pools in San Marcos. All of these locations are considered major populations and critical for species conservation. Recent information from the USFWS indicates a major and critical population of thread-leaved brodiaea at the Darwin Glen project site in Oceanside.
- San Diego button-celery (*Eryngium aristulatum* var. *parishii*) is known from the Poinsettia Lane vernal pools in Carlsbad, and from the San Marcos vernal pools. Both locations are considered major populations and critical for species conservation.
- Spreading navarretia (*Navarretia fossalis*) is known from the Poinsettia Lane vernal pools in Carlsbad, and from the San Marcos vernal pools. Both locations are considered major populations and critical for species conservation.
- California Orcutt grass (*Orcuttia californica*) is known from the Poinsettia Lane vernal pools in Carlsbad. This location is considered a major population and critical for species conservation. This species has not been recorded in the San Marcos vernal pools.

One priority plant species is associated with clay or gabbro-derived soils in the study area:

- San Diego thorn-mint (*Acanthomintha ilicifolia*) can be found in coastal sage scrub, chaparral, or grasslands. Within the study area, major populations of this species occur in Carlsbad (near the junction of El Camino Real and College Boulevard, south of Palomar Airport Road, north of Alga Road, north of Olivenhain, west of San Marcos), Encinitas (Quail Botanical Gardens, Lux Canyon and vicinity), San Marcos associated with the vernal pools, and south Vista. A major population formerly found in northwest Escondido was transplanted to the San Diego Wild Animal Park several years ago.

Three priority plant species are typically associated with southern maritime chaparral in the study area:

- Del Mar manzanita (*Arctostaphylos glandulosa* ssp. *crassifolia*) occurs on sandstone terraces and bluffs in Carlsbad and Encinitas. Major populations of this species in the study area occur in the vicinity of Agua Hedionda and near the Green Valley-Olivenhain area in Carlsbad, in Lux Canyon and its vicinity, in the Green Valley-Olivenhain area, and in Oak Crest Park in Encinitas. All of these populations are considered critical for species conservation.
- Encinitas baccharis (*Baccharis vanessae*) occurs in the study area in Carlsbad and Encinitas. The population on slopes above Green Valley (Carlsbad, Encinitas) is considered both major and critical for species conservation. Smaller populations in the study area occur near Alga Road to the north (Carlsbad), and in Lux Canyon to the south (Encinitas). The Lux Canyon population is also considered critical for species conservation.
- Orcutt's spineflower (*Chorizanthe orcuttiana*) appears to be restricted to sandstone bluffs, where it occurs in association with southern maritime chaparral. The only confirmed, presumably extant locality for this species in the study area is in Oak Crest Park in Encinitas. This small population is considered critical for species conservation. It should be noted that additional, potential habitat for this species occurs within the study area.

At least one MHCP species has not been recorded in the study area, although potential habitat exists and it is known from the vicinity of the study area:

- Short-leaved dudleya (*Dudleya blochmaniae* ssp. *brevifolia*) is restricted to sandstone bluffs in southern maritime chaparral. Within this habitat, this subspecies is further restricted to areas characterized by thin soils, reddish ironstone concretions, and sparse vegetation. The entire known distribution of this species lies between Del Mar and La Jolla. Any individuals detected in the MHCP study area would be considered critical for species conservation.

### **3.4 REGIONAL TRANSPORTATION/CIRCULATION**

The existing Regional Transportation System is illustrated in Figure 3.4-1. Regional highway system components include state highways, regional arterials, and local streets and roads (SANDAG 2020 Regional Transportation Plan, April 2000). There are about 600 miles of state highways (with 300 miles of freeways and expressways) within the San Diego region and more than 7,815 miles of maintained city streets and County roads. Each day there are about 11.6 million vehicle trips made on the region's roadways, accounting for more than 68 million miles traveled daily.

The regional highway system provides the basic transportation network used for the movement of people and goods in the region. Regional highways are used by nearly all travel modes including walking, bicycling, automobiles, ridesharing (i.e., carpools and vanpools), paratransit, public and private local and express bus transit, interregional bus transit, and the local and interregional trucking industry. Many of the region's adopted air quality improvement and energy conservation tactics are based on the efficient movement of people and goods on a safe and uncongested regional highway system.

The 600 miles of state highways within the San Diego region include about 2,780 lane miles of pavement. Table 3.4-1 shows that the four interstate routes (I-5, I-8, I-15, and I-805) represent nearly 40 percent of the total state highway route mileage and more than 60 percent of the lane miles. From the mid-1960s to 1990, about 80 percent of the state highway expenditures within the San Diego region have been for the construction of the interstate highway routes. More than any other factor, the four interstate highways are the reason the San Diego region has one of the highest levels of travel service of all major metropolitan areas in the country. Currently, more than half of the region's daily travel is made on state highways.

To accommodate population and development growth in the region, SANDAG developed the 2020 Regional Transportation Plan (RTP). The Highway Plan identifies the facilities and programs necessary to meet the increasing travel needs through the year 2020. This is a combined approach, where capacity improvements, increased efficiency, and reduced peak-period demand can effectively reduce projected congestion below levels experienced today. Corridors with additional High-Occupancy-Vehicle (HOV) or general-purpose lanes may see a 25 to 50 percent increase in capacity. Improved efficiency can increase capacity 5 to

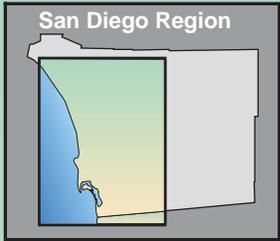
**Table 3.4-1  
State Highway Routes**

<b>Route Number</b>	<b>1999 Constructed Route Miles</b>	<b>1999 Constructed Lane Miles</b>	<b>1999 Unconstructed Route Miles</b>
1-5	72.3	592.7	--
1-8	77.8	385.7	--
1-15/SR-15	54.3	436.5	--
I-805	28.0	240.1	--
SR-11	0.0	0.0	2.0
SR-52	14.3	54.4	3.5
SR-54	8.2	49.4	8.2
SR-56	4.6	31.9	5.7
SR-67	23.9	67.9	--
SR-75	13.3	61.8	--
SR-76	52.3	111.4	--
SR-78	95.7	267.4	--
SR-79	55.7	111.6	--
SR-94	63.3	191.6	--
SR-125	3.5	17.8	27.2
SR-163	11.7	80.7	--
SR-188	1.9	3.8	--
SR-209	7.5	23.2	--
SR-241	0.0	0.0	5.5
SR-274	6.1	28.0	--
SR-282	0.6	3.6	--
SR-905	5.0	20.2	7.0
<b>TOTAL</b>	<b>600.0</b>	<b>2,779.7</b>	<b>59.1</b>

Source: San Diego Association of Governments, 2000

10 percent for all corridors. Reductions in peak-period trips on the system can also add another 1 to 2 percent. As shown in Figure 3.4-1, new transit facilities or services are proposed in the existing high-demand travel corridors. Expansion of the capacity of the freeway corridors is also proposed, including the addition of HOV lanes.

The RTP proposes expansion of the freeway and expressway system, with most of the new routes implemented prior to the year 2005. Projects in the North San Diego area include the widening of an auxiliary lane and ramp at the I-5/SR-78 Interchange and widening SR-76 between Melrose Avenue and South Mission Road. Other greater San Diego region projects include the SR-125 Tollway between SR-905 and SR-54, SR-125 from Navajo Road to Grossmont College Drive, and SR-56 from Carmel Country Road to Black Mountain Road.



PACIFIC OCEAN



UNITED STATES MEXICO

Tijuana, B.C.

The local circulation network is presented in Figure 3.4-2. The network has not been fully implemented, which will include expansion and extension of existing roadways.

### **3.5 PUBLIC SERVICES AND UTILITIES**

#### **3.5.1 Water Distribution**

Water distribution facilities are identified for the purpose of the Joint EIS/EIR as pipelines, aqueducts, water treatment plants, pump stations, and storage reservoirs. The primary water distributor in the MHCP study area is the San Diego County Water Authority (SDCWA), through a system of two aqueducts and several transmission mains that run in a northerly/southerly direction within the study area. The SDCWA distribution facilities are accessed by SDCWA member agencies through connection points along the SDCWA system. Member agencies in turn redistribute the water to the jurisdictions within the study area. The members redistributing the water to the MHCP study area consist of the Carlsbad Municipal Water District, City of Escondido, City of Oceanside, Olivenhain Municipal Water District, San Dieguito Water District, and Vista Irrigation District. The boundaries of these member agencies do not generally coincide with either the MHCP study area or the city boundaries.

The San Diego County Water Authority is in the midst of a \$720 million Capital Improvement Program, designed to provide the area with needed storage and delivery facilities to meet the region's needs to 2010. A major feature of this program is a series of pipeline projects now underway. SDCWA has five major pipelines with the combined capacity to carry 900 million gallons a day. These pipelines bring either filtered or raw water into San Diego County from Metropolitan Water District (MWD), which imports water from the Colorado River and Northern California. SDCWA is also working to fully develop local water resources through water reclamation, groundwater recovery, conservation, and possibly seawater desalination.

A major project currently underway by SDCWA is the Emergency Water Storage Project. SDCWA staff initially reviewed 57 sites where water could be stored, either above ground or below ground, for emergency use. Criteria such as location, elevation, and volume, and environmental, operational, and financial yardsticks, were used to narrow the number of potential sites. The SDCWA Board of Directors chose a site in north county known as the Olivenhain/Hodges and San Vicente System to locate the project. The completed project will include a new dam and reservoir, the reoperation of Lake Hodges, the expansion of the San

Vicente Reservoir, and additional pipelines and pump stations. The goal is to expand the County's emergency storage by over 90,000 acre feet and meet the County's projected emergency storage needs through the year 2030.

### **3.5.2 Wastewater Collection, Treatment, Reclamation, and Disposal**

Wastewater collection, treatment, reclamation, and disposal facilities include water treatment plants, water reclamation facilities, pipelines, land and ocean outfalls, pump stations, and sludge processing facilities.

### **3.5.3 Solid Waste Collection, Disposal Sites (Landfills), and Recycling**

Solid waste collection, landfills, and recycling facilities include landfill sites, transfer stations, and composting and material recovery facilities. Public or private haulers in each jurisdiction within the MHCP provide solid waste collection study areas.

### **3.5.4 Fire Protection**

Fire protection services include fire stations, fire trucks and fire fighting apparatus, and paramedic/emergency services. A variety of jurisdictions and special districts within the MHCP study area provide fire protection services.

### **3.5.5 Police Protection**

Police protection services include police stations, patrol cars, and holding facilities. A variety of law enforcement entities within the MHCP study area provide police protection and service.

### **3.5.6 School Facilities**

School facilities include elementary, middle, and high school sites and facilities. School facilities and services are provided by school districts within the MHCP study area. School district boundaries do not generally coincide with either MHCP study area or governmental boundaries. School districts within the MHCP area for Kindergarten through Grade 12 include Cardiff, Carlsbad Union, Encinitas Union, Escondido Union, Escondido Union High,

# Figure 3.4-2 Local Circulation Network

The Focused Planning Area (FPA) depicts boundaries within which preserve areas may be designated by city subarea plans. Some lands within the FPA will be conserved, and others developed. Subarea plans will determine the ultimate preserve boundaries and conservation levels, along with the land use regulations and other measures to assemble the preserve. This map is not intended to regulate land use or to provide site-specific data.

-  MHCP Focused Planning Area
-  Natural Habitats (Outside FPA)
-  Agricultural Land
-  Developed/Disturbed Land
-  City Boundary
-  MHCP Boundary

-  Freeway
-  Prime Arterial
-  Major
-  Collector
-  Local Collector
-  Rural Collector
-  Local

Existing Roads shown in gray

SOURCE: Local Jurisdiction Circulation Elements and SANDAG's Transportation Modeling Network

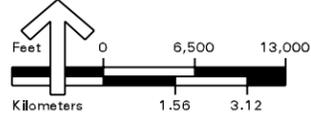


Feet

0 6,500 13,000

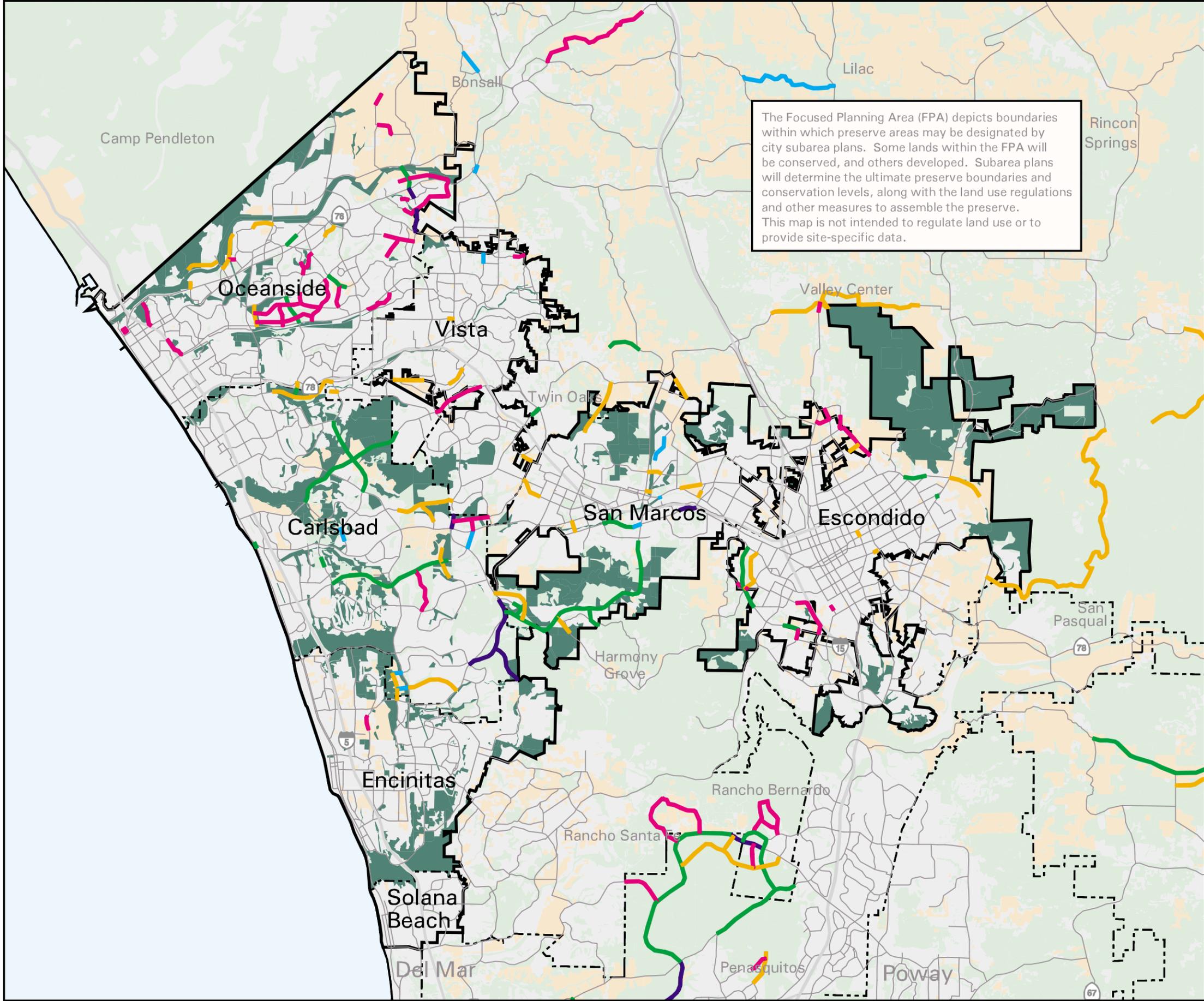
Kilometers

0 1.56 3.12



**SANDAG**

November 27, 2001



Oceanside Unified, San Dieguito Union High, San Marcos Unified, San Pasqual Union, and Valley Center Union School Districts.

### **3.5.7 Park Facilities**

Park facilities are generally classified as either passive or active parks. Active parks are generally developed parks associated with school facilities or residential development. These parks usually have playing fields or play areas and contain limited native species or features. Passive parks generally are located within identified jurisdictional preserve or resource conservation areas and are not associated with urban development. Park facilities within the study area include San Elijo Lagoon County Park, San Dieguito County Park, Oakcrest Park, Poinsettia Park, Kit Carson Park, and Dixon Lake Recreation Area. Numerous other neighborhood parks are scattered throughout the study area.

### **3.5.8 Natural Gas**

Natural gas facilities are generally owned by private utilities and include transmission pipelines and associated easements. Natural gas distribution within the study area is provided by San Diego Gas and Electric Company (SDG&E), a Sempra Energy Company.

### **3.5.9 Electricity**

Electrical facilities are owned by a private utility and include transmission towers and associated corridors, power generation plants, and transmission stations. Electrical service in the study area is provided by SDG&E.

## **3.6 POPULATION, HOUSING, AND EMPLOYMENT**

### **3.6.1 Historical Growth**

#### **3.6.1.1 Population**

The population of San Diego County, or the San Diego region, in January 2000 is estimated to be 2,911,500 (California Department of Finance, E-5 Series, 2000), an increase of 431,400 persons, or 17 percent, over 2,480,072 persons reported by the U.S. Census in 1990. Annual increases in the region's population averaged nearly 62,000 persons during the 1980s,

then declined during the early 1990s, reaching a low of 20,100 persons added in 1994. The population increase during 1999 is estimated to be 58,200 persons.

The seven cities which comprise the MHCP study area (excluding the core California gnatcatcher habitat area in unincorporated County) have an estimated 2000 population of 586,600 persons, or about 20 percent of the region's population. The study area population increased by 22 percent since 1990, much faster than the increase recorded for the region (Table 3.6-1). On a compound basis, average annual growth is approximately 2 percent per year.

Oceanside and Escondido are the largest cities in the study area by population. Together the two cities contain 288,500 persons, or nearly half of the study area population. The cities which experienced the most rapid population growth during the 1990s are San Marcos (average growth of 3.3% per year) and Carlsbad (2.7% per year). Solana Beach and Encinitas, which were incorporated in 1986, experienced the least rapid population growth (Table 3.6-1). Historical and forecast changes in population (discussed below) are important considerations for conservation planning, since they represent the primary causes of urban development and habitat loss.

The core habitat area of the California gnatcatcher is located in a study area comprising about 760 acres in the unincorporated county south of San Marcos and east of Carlsbad and Encinitas. There are few residents in this area.

### **3.6.1.2 Housing**

Total housing in the San Diego region in 2000 is estimated to be 1,039,100 units, of which 525,900, or about 51 percent, are single-family detached units (California Department of Finance, E-5 Series 2000). Between 1990 and 2000, total housing units increased by 92,860 units, or slightly less than 10 percent, which is substantially less than the growth in the region's population. As a result, average household size increased from 2.69 persons per occupied unit in 1990 to 2.89 persons in 2000. (Average household size is calculated as the ratio of household population to occupied housing, not total population to total housing units.)

**Table 3.6-1  
Population By Jurisdiction**

City	1990 Census	1995 SANDAG	2000 DOF*	2010 Forecast	2020 Forecast	Avg. Annual Change 1990-2000	Avg. Annual Change 2000-2020
Carlsbad	63,126	67,167	82,030	109,330	132,230	2.7%	2.4%
Encinitas	55,386	56,788	62,060	68,440	70,750	1.1%	0.7%
Escondido	108,635	117,525	127,813	140,490	143,230	1.6%	0.6%
Oceanside	128,398	145,903	160,753	196,610	202,590	2.3%	1.2%
San Marcos	38,974	47,360	53,938	75,360	91,560	3.3%	2.7%
Solana Beach	12,962	13,531	14,360	15,100	16,130	1.0%	0.6%
Vista	71,872	79,506	85,659	101,360	103,320	1.8%	0.9%
<b>Total Cities</b>	<b>479,353</b>	<b>527,780</b>	<b>586,613</b>	<b>706,690</b>	<b>759,810</b>	<b>2.0%</b>	<b>1.3%</b>
Unincorporated Core	0	0	0	0	540	0.0%	--
<b>Total MHCP</b>	<b>479,353</b>	<b>527,780</b>	<b>586,613</b>	<b>706,690</b>	<b>760,350</b>	<b>2.0%</b>	<b>1.3%</b>

Notes: 2010 and 2020 population from SANDAG's 2020 Cities/County Forecast, 1995 base year. Average annual change is calculated on a compound basis. Forecast numbers have been rounded.

\*DOF = California Department of Finance.

Source: U.S. Bureau of the Census; California Department of Finance; SANDAG.

In the MHCP study area, total housing units increased from 190,747 units in 1990 to 215,500 units in 2000, an increase of about 13 percent or compounded average of 1.2 percent per year (Table 3.6-2). While the rate of increase of housing units in the study area slightly exceeded that of the region, it was still lower than the rate of increase in population, indicating a shortfall in housing supply relative to population growth.

There is no existing housing in the core habitat area of the California gnatcatcher in the unincorporated County.

### **3.6.1.3 Civilian Employment**

Civilian employment includes nonmilitary wage and salary employment, self-employment, and domestic workers. SANDAG compiles inventories of civilian employment by site, that is, by location of employment, rather than by residence of employed workers. Data are available for 1990 and 1995 (SANDAG, Regional Employment Inventory, various years).

In 1995, total civilian employment in the San Diego region was 1,084,900 persons (SANDAG 1997), almost unchanged from 1,084,800 persons in 1990. In fact, the region lost about 20,000 jobs between 1990 and 1993, primarily in construction and manufacturing, then regained a comparable number of jobs between 1993 and 1995, primarily in services. SANDAG has not published data for 1999 or 2000.

The California Employment Development Department (EDD) also compiles data on civilian employment in San Diego County, though they differ from those of SANDAG. EDD reported that average annual civilian employment in the County was 1,145,700 in 1990, 1,155,300 in 1995, and 1,316,300 in 1999. These data also show little change between 1990 and 1995 (less than 1%), but a substantial increase between 1995 and 1999 (nearly 14%), indicating economic recovery in the region since 1995.

Total civilian employment in the MHCP study area in 1995 was 202,700 persons (SANDAG, 1997, revised in 1999 as part of 2020 City/County Forecast; Table 3.6-3). Civilian employment in the study area increased over 9 percent between 1990 and 1995, or an average annual growth of 1.8 percent, indicating faster economic growth in this area than in the region as a whole. Rapid increases occurred in Vista (average annual growth of 5.1%) and Carlsbad (3.8% per year). Less growth occurred in Solana Beach (0.5% per year) and Encinitas (0.8% per year).

**Table 3.6-2  
Housing Units By Jurisdiction**

City	1990 Census	1995 SANDAG	2000 DOF*	2010 Forecast	2020 Forecast	Change in Housing Units 1995-2020	Avg. Annual Change 1990-2000	Avg. Annual Change 2000-2020
Carlsbad	27,235	28,927	33,680	45,790	55,120	26,193	2.1%	2.5%
Encinitas	22,123	22,600	23,577	26,190	27,060	4,460	0.6%	0.7%
Escondido	42,040	43,742	45,355	50,570	51,760	8,018	0.8%	0.7%
Oceanside	51,109	55,836	58,592	72,350	74,530	18,694	1.4%	1.2%
San Marcos	14,476	16,736	18,119	26,040	31,740	15,004	2.3%	2.8%
Solana Beach	6,346	6,427	6,499	6,860	7,320	893	0.2%	0.6%
Vista	27,418	28,890	29,678	35,590	36,260	7,370	0.8%	1.0%
<b>Total Cities</b>	<b>190,747</b>	<b>203,158</b>	<b>215,500</b>	<b>263,390</b>	<b>283,790</b>	<b>80,632</b>	<b>1.2%</b>	<b>1.4%</b>
Unincorporated Core	0	0	0	0	160	160	0.0%	--
<b>Total MHCP</b>	<b>190,747</b>	<b>203,158</b>	<b>215,500</b>	<b>263,390</b>	<b>283,950</b>	<b>80,792</b>	<b>1.2%</b>	<b>1.4%</b>

Notes: 2010 and 2020 housing from SANDAG's 2020 Regionwide Forecast, 1995 base year. Average annual change is calculated on a compound basis. Forecast numbers have been rounded.

\*DOF = California Department of Finance.

Source: U.S. Bureau of the Census; California Department of Finance; SANDAG.

**Table 3.6-3  
Civilian Employment By Jurisdiction**

City	1990	1995	2010 Forecast	2020 Forecast	Avg. Annual Change 1990-2000	Avg. Annual Change 2000-2020
Carlsbad	34,188	41,225	73,860	86,160	3.8%	3.0%
Encinitas	22,291	22,645	27,690	27,780	0.3%	0.8%
Escondido	44,972	45,809	59,080	63,430	0.4%	1.3%
Oceanside	32,100	34,551	57,880	67,150	1.5%	2.7%
San Marcos	23,847	24,121	42,840	49,570	0.2%	2.9%
Solana Beach	7,848	8,662	9,280	9,700	2.0%	0.5%
Vista	20,114	25,748	54,070	63,030	5.1%	3.6%
<b>Total Cities</b>	<b>185,360</b>	<b>202,761</b>	<b>324,700</b>	<b>366,820</b>	<b>1.8%</b>	<b>2.4%</b>
Unincorporated Core	0	0	0	0	0%	0%
<b>Total MHCP</b>	<b>185,360</b>	<b>202,761</b>	<b>324,700</b>	<b>366,820</b>	<b>1.8%</b>	<b>2.4%</b>

Note: Number of jobs by place of employment, not employees by place of residence; 2010 and 2020 employment from SANDAG's 2020 Regionwide Forecast, 1995 base year. Average annual change is calculated on a compound basis. Forecast numbers have been rounded.

Source: SANDAG, Regional Employment Inventory, various years.

There are no employment uses in the core habitat area of the California gnatcatcher in the unincorporated County.

### **3.6.2 Regionwide and City/County Forecasts**

SANDAG and local jurisdictions of San Diego County periodically prepare forecasts of population, housing, and economic growth for the region, cities, unincorporated communities, and other geographic subdivisions. Current forecasts are the 2020 Regionwide Forecast (SANDAG 1998) and the 2020 Cities/County Forecast (SANDAG 1999), both of which use 1995 as the base year for projections.

According to these forecasts, the region's population is projected to grow 44 percent, from 2,669,200 persons in 1995 to 3,853,300 persons in 2020. Total housing units are projected to grow 41 percent, from 996,680 units in 1995 to 1,404,200 units in 2020, and civilian employment, to increase 50 percent, from 1,084,900 workers to 1,627,800 workers in 2020 (SANDAG 1999).

Prior to 1995, forecasts for individual cities and unincorporated communities were prepared as allocations of the regionwide forecast, based on planned land uses and densities shown in local general plans. In preparing the 2020 Cities/County Forecast, however, SANDAG found that current land use policies of the cities and the County allow for only about 312,000 new housing units to be built in the region between 1995 and 2020, or about 100,000 less than the nearly 408,000 new units forecast (SANDAG 1999). The discrepancy between forecast growth and planned "capacity" for new development is primarily due to the low densities assigned to vacant land planned for future residential use. Currently, the average density of developed residential land in the region's 18 incorporated cities is about 7.7 units per acre. However, the average density of vacant lands planned for residential use is only 3.7 units per acre, or less than half of the existing density. In order to accommodate the forecast growth in population and housing, the 2020 Cities/County Forecast assumes that certain policies will be implemented by the cities to encourage development along transportation corridors and in selected town centers.

Forecasts of population, housing, and employment for the MHCP cities are shown in Tables 3.6-1, 3.6-2, and 3.6-3. Most rapid increases in population are projected for San Marcos (2.7% per year between 2000 and 2020) and Carlsbad (2.4% per year) and a moderate increase in Oceanside (1.2% per year). Similarly, rapid increases in total housing units are projected for San Marcos (2.8% per year) and Carlsbad (2.5% per year). Civilian

employment in Vista is projected to increase at an average rate of 3.6% per year between 2000 and 2020, following by Carlsbad (3.0% per year), San Marcos (2.9% per year), and Oceanside (2.7% per year).

In the core habitat area of the California gnatcatcher in the unincorporated County, the 2020 Cities/County Forecast provides for 540 residents in 160 single-family dwelling units, to be constructed between 2010 and 2020 (SANDAG 1999). Although the area contains about 2 acres of land designated for use by a public utility, the forecast does not anticipate that this will support permanent employment by 2020.

### **3.6.3 Development of Residential and Employment Land Use**

According to SANDAG's inventory of land use in the San Diego region, developed land in residential use in the MHCP cities totaled 33,078 acres (SANDAG 1997, revised in 1999 as part of 2020 Cities/County Forecast; Table 3.6-4). Average density of residential development, calculated as the ratio of total housing units to developed residential land, was 6.1 units per acre. Between 1995 and 2020, developed residential land in the MHCP cities is projected to increase by 55 percent to 51,240 acres, with an additional 100 acres of residential development in the core California gnatcatcher habitat in the unincorporated area. Average density under the 2020 forecast is 5.5 units per acre, about 10 percent lower density than in 1995.

For purposes of this study, employment land use includes lands developed for commercial, office, industrial, commercial recreation, transportation, communication, and utilities uses. Developed land in these uses in 1995 totaled 10,517 acres in the MHCP cities, with an additional 32 acres in the unincorporated core habitat. This is forecast to increase by 49 percent to 15,700 acres in 2020.

**Table 3.6-4  
Developed Residential and Employment Land Use by Jurisdiction**

City	Residential Land Use				Employment Land Use			
	Developed Land (Acres)		Density (Units/Acre)		Developed Land (Acres)		Vacant Developable Land (Acres)	
	1995	2020	1995	2020	1995	2020	1995	2020
Carlsbad	4,431	9,942	6.5	5.5	2,460	4,093	1,411	172
Encinitas	4,637	6,354	4.9	4.3	577	899	132	0
Escondido	6,946	9,853	6.3	5.3	2,293	2,637	361	85
Oceanside	7,959	10,532	7.0	7.1	2,105	3,125	1,141	187
San Marcos	2,961	7,078	5.7	4.5	1,393	2,168	704	31
Solana Beach	1,177	1,220	5.5	6.0	357	352	19	0
Vista	4,967	6,261	5.8	5.8	1,332	2,417	917	0
<b>Total Cities</b>	<b>33,078</b>	<b>51,240</b>	<b>6.1</b>	<b>5.5</b>	<b>10,517</b>	<b>15,691</b>	<b>4,685</b>	<b>475</b>
Unincorporated Core	0	161	0.0	1.0	32	32	0	0
<b>Total MHCP</b>	<b>33,078</b>	<b>51,401</b>	<b>6.1</b>	<b>5.5</b>	<b>10,549</b>	<b>15,723</b>	<b>4,685</b>	<b>475</b>

Note: Average density is the ratio of total housing units to acres of developed residential land use.

Source: SANDAG, 1995 Land Use Inventory and 2020 Regionwide Forecast.

## **4.0 ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

### **4.1 APPROACH TO ANALYSIS AND FORMAT**

This document has been prepared as a joint EIS/EIR due to the combined local, state, and federal actions associated with the proposed project. Co-lead agencies are SANDAG, pursuant to CEQA, and the USFWS, pursuant to NEPA, as described in further detail in Section 1.0, Purpose and Need for Action. A consistent format has been established for the environmental consequences section of this joint EIS/EIR, to assist the reader in reviewing and understanding the implications of the project and alternatives. This section provides a narrative explanation of how the analysis was undertaken and presents the organization to which each environmental consequences section conforms.

This section, 4.0, Environmental Impacts/Environmental Consequences, forms the scientific and analytic basis for the evaluation of the proposed project and alternatives. It consists of the following components.

#### **Criteria for Determining Significance**

The criteria for determining significance provide a threshold at which a significant impact occurs. The criteria differ between issues.

#### **Impact Analysis per Issue Statement**

All phases of the project are considered when evaluating its impact on the environment. For the proposed project, this includes the MHCP Plan and the five Subarea Plans, which include policy statements, issuance of incidental take authorizations, and implementing agreements, as well as preserve boundaries unique to each jurisdiction. The MHCP Plan and alternatives are analyzed at a program level. The Subarea Plans and implementing agreements are analyzed at a project level.

One of the primary requirements of NEPA and CEQA analyses is the evaluation of project alternatives at a level equal with that of the proposed project. For each environmental issue in Section 4.0, Environmental Impacts/Environmental Consequences, analyses are conducted for the proposed MHCP as well as the three alternative preserve scenarios [FPA Alternative 1, FPA Alternative 2 (Proposed Project), BCLA Alternative 3] and the No Action/No Project Alternative.

For purposes of the alternatives analysis, which also occurs under the Impact Analysis heading, it is assumed that the policy statements and implementing techniques will be similar regardless of preserve boundary configuration, except with respect to the No Action/No Project Alternative.

### **Analysis of Significance per Issue Statement**

The analysis of significance (both prior to and after any required mitigation) is presented for each issue area.

### **Mitigation, Monitoring, and Reporting Per Issue Statement**

Measures necessary to mitigate significant impacts of the project are provided.

## **4.2 LAND USE (INCLUDES IMPORTANT FARMLAND AND EXTRACTIVE RESOURCES)**

### **4.2.1 Criteria for Determining Significance (Generally Based Upon CEQA Appendix G)**

The following criteria are used to determine the significance of impacts related to land use, important farmland, and extractive resources:

- Direct conflict or land use incompatibility with adjacent existing and planned land uses. Criteria for determining incompatibility with adjacent land uses will be determined using the Guidelines for Compatible Land Uses, Preserve Management and Monitoring found in Chapter 6 of the MHCP Plan as well as the individual Subarea Plans.
- Direct conflict or land use inconsistency with the environmental goals of the general plans and community plans (including Local Coastal Programs, as applicable) of the jurisdictions participating in the MHCP Plan.
- Conversion of vacant land considered to be of Prime Importance, Statewide Importance, Local Importance, or Unique or Grazing Land by the California Department of Conservation Important Farmland Mapping Program that contains existing agricultural

operations, or is planned for agriculture, to permanent open space associated with the preserve.

- Conversion of vacant land designated as a Mineral Resource Zone 2 by the Special Report 153 of the California Division of Mines and Geology that contains existing mining operations, or is planned for mining operations, to permanent open space associated with the preserve.

#### **4.2.2 MHCP Plan/Take Authorization/Implementing Agreement**

In accordance with the MHCP Plan, land use impacts will vary for each Subarea Plan. Each city may need to make modifications to their individual General Plans (and associated ordinances and plans) to make their plans consistent with the MHCP. Various ordinances may need to be adopted to implement the Subarea Plan. These programs have been incorporated into each individual plan. Therefore, from a land use consistency/compatibility viewpoint, adoption of the MHCP Plan will result in a significant impact. An amendment to each City's general plan and Local Coastal Program (if applicable) will be necessary to mitigate impacts to below a level of significance.

Some of the preserve areas are considered important farmland or contain regionally important extractive resources. If the Plan precluded using important farmlands or areas containing regionally important extractive resources, it would be considered a significant impact. However, because the MHCP Plan does not propose any actions that would preclude ongoing farming and extractive operations, there are no significant impacts. Similar to other development, if agriculture or extractive operations can meet the mitigation requirements, expansion is allowable, subject to issuance of a take authorization. Thus, for areas that could support these uses, expansion is feasible as long as the project obtains a take authorization. Thus, the impacts, both direct and indirect, from implementation of the MHCP are not significant.

#### **4.2.3 Subarea Plans**

In accordance with the MHCP Plan, individual Subarea Plans have established guidelines regarding compatibility of uses within the preserve that are specific to the subarea. Potential impacts for each city (Carlsbad, Encinitas, Escondido, Oceanside, and San Marcos) are discussed in the following section.

### **4.2.3.1 Impact Analysis for Focused Planning Area (FPA) Alternative 1**

#### **Impacts of FPA Alternative 1 Related to Land Use Designation Consistency**

Figure 4.2-1 shows FPA Alternative 1 and the planned land uses within the MHCP boundary. Table 4.2-1 shows the approximate number of acres for each land use category in each city within the MHCP boundary that will be changed to habitat preserve under FPA Alternative 1.

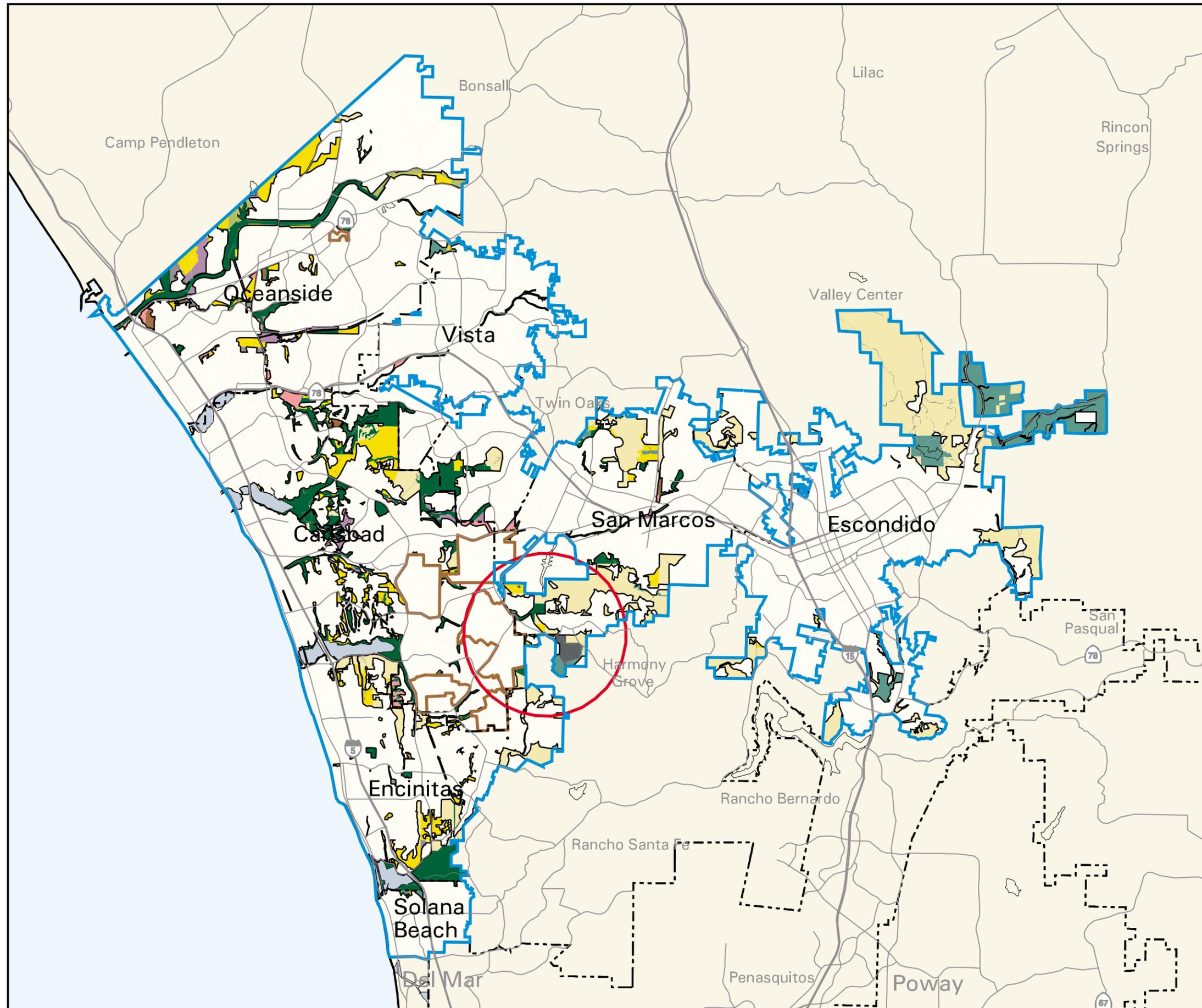
The MHCP has been designed to allow the cities some flexibility in designating areas that will be preserved for habitat. The FPAs for Alternatives 1, 2, and 3 consist of hard-line and soft-line areas. Soft-line areas are also referred to as standards areas. Hard-line and soft-line areas are shown in the Subarea Plans for the MHCP. Ninety to 100% of the land within the hard-line areas in the MHCP will be preserved as habitat, and less than 90% of the land within the soft-line areas in the MHCP will be preserved as habitat, under FPA Alternatives 1, 2, and 3. Because there will be flexibility in the development process (although the preservation criteria must be met), the exact location of land that is currently planned for development in the cities' General Plans that will be conserved as habitat is not known at this stage in the planning process. The acreages shown in Table 4.2-1 represent the levels of habitat preservation, based on the percentages of preservation under the hard-line and soft-line areas in the Subarea Plans, for each city within the MHCP boundary. Because there is an inconsistency of the land use designation, this results in a significant impact.

#### **Impacts of FPA Alternative 1 Related to Consistency with Environmental Goals of General Plans, Community Plans, and Local Coastal Programs**

Table 4.2-1 estimates the number of acres of land that will be preserved under FPA Alternative 1 and compares the amount of habitat preservation under each alternative. Again, the cities within the MHCP boundary will amend their General Plans as appropriate to ensure that the planning and development of all future projects will comply with the MHCP and Subarea Plans. Therefore, FPA Alternative 1 will result in a significant impact related to land use designation consistency.

In 1976, the California Coastal Act was enacted to protect natural resources by guiding development in the coastal zone. Portions of the cities of Carlsbad, Encinitas, Solana Beach, and Oceanside lie within the Coastal Zone. Coastal policies provide for the provision of public access; protection of marine and land resources (particularly wetlands, rare and

**Figure 4.2-1  
Planned Land Use  
FPA Alternatives 1 & 2**



- Spaced Rural
- Single Family
- Mobile Homes
- Multiple Family
- Commercial and Office
- Heavy and Light Industry
- Transportation, Communication Utilities
- Education & Institutions
- Commercial Recreation
- Parks/Open Space
- Agriculture
- Public / Semi Public
- Land Outside the FPA but Inside the MHCP Study Area
- Projects Already Permitted
- General Area for Core Gnatcatcher Conservation (USFWS Circle)
- City Boundary
- MHCP Boundary

SOURCE: SANDAG Land Layers, 1998

Feet 0 6,500 13,000  
Kilometers 1.56 3.12

**SANDAG**  
November 27, 2001

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.2-1  
Impact of Conservation on Planned Land Use by City: FPA Alternative 1**

<b>Habitat Acres Conserved</b>	<b>Carlsbad</b>	<b>Encinitas</b>	<b>Escondido</b>	<b>Oceanside</b>	<b>San Marcos</b>	<b>Solana Beach</b>	<b>Vista</b>	<b>Total Cities</b>
Not Constrained								
Spaced Rural Residential	140	89	385	0	362	0	12	988
Single-Family Residential	506	115	18	193	248	0	3	1,083
Multifamily Residential	30	0	0	38	17	0	0	64
Commercial, Office	56	4	0	35	10	0	0	105
Industrial/TCPU	137	2	10	49	16	0	25	239
Education, Park	4	7	0	27	4	0	3	45
OS and Other Public <sup>(1)</sup>	1,905	1,563	1,828	1,128	231	37	423	7,114
Constrained	1,543	359	4,264	1,018	1,542	0	76	8,802
<b>Total Conserved</b>	<b>4,320</b>	<b>2,139</b>	<b>6,505</b>	<b>2,489</b>	<b>2,429</b>	<b>37</b>	<b>541</b>	<b>18,460</b>

Notes: (1) Includes public and private lands which are in permanent open space use, such as mitigation banks, open space parks, lagoons, and other areas.

This table summarizes the impact of habitat conservation on the supply of developable land. Land is classified as constrained if there are physical or planning constraints on future development, such as zoning and the presence of steep slopes.

TCPU = Transportation/communications/utilities.

Source: SANDAG 1999 MHCP GIS Database; Onaka Planning & Economics.

## ***ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES***

---

endangered habitat areas, environmentally sensitive areas, tidepools, and stream channels); maintenance of productive agriculture; directing new housing and other development to urbanized areas; protecting the scenic beauty of the coastal landscape; and locating needed coastal energy and industrial facilities. Although the MHCP has been prepared to provide protection of habitat for endangered and threatened species, as well as species that could become endangered, it is not intended to override the requirements of the Coastal Act.

As previously discussed, the California Department of Fish and Game has the responsibility to implement the NCCP and associated guidelines. These guidelines, adopted pursuant to Section 2825 of the California Fish and Game Code for the general application of the NCCP Act, are designed to help planners provide for regional protection and perpetuation of biological diversity, meet NCCP regulatory requirements, and allow for flexibility in plan development. Further guidelines may be adopted in the future for the application of the NCCP Act to specific ecosystems or regions of the state. This MHCP and Subarea Plans have been prepared in accordance with the specifications of the NCCP.

It should be recognized that the intent of the NCCP is to provide protection of sensitive plant and wildlife resources. The CDFG is responsible for implementing the NCCP process and for establishing and controlling wildlife management programs for endangered, threatened, and rare species, in accordance with statutory requirements established by the Coastal Act (Section 30411). Therefore, it is expected that because of the involvement of CDFG and its statutory responsibilities, that the CCC will generally support the technical aspects of the plan.

Specifically, the California Coastal Act (Section 30107.5) defines “environmentally sensitive areas” as “any area in which plant or animal life or their habitat are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments”. Section 30240(a) of the Coastal Act further states that environmentally sensitive habitat areas “shall be protected against any significant disruption of habitat values”. Therefore, many areas located within the MHCP boundaries can be considered environmentally sensitive habitat areas, because they support federally and state listed endangered or threatened species. However, because of the protection of large areas of resources and provision of wildlife corridors, it can be found that environmentally sensitive habitat areas are actually being preserved.

Additionally, each individual project will be required to be evaluated at the project level for conformance with the requirements of the Coastal Act, including the acquisition of individual

## ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES

Coastal Development Permits. Procedurally, the MHCP strongly encourages cooperative coordination among local, state, and federal agencies during the design stages to accommodate site-specific issues. As member agencies of the California Biodiversity Council, the USFWS, CDFG, CCC, and SANDAG have agreed that the “ basic means of implementing the strategy are to be improved coordination, information exchange, conflict resolution, and collaboration among the signatory parties. In addition, the signatories agree to pursue the development of local and regional institutions and practices necessary to conserve biological diversity. These tools may include the establishment of mitigation and development banks, planning and zoning authorities, land preserve acquisition, incentives, alternative land management practices, restoration, and fees and regulation.” Additionally, “Given the changing characteristics of both the biological and social environment, the signatories agree to an adaptive approach in the development of bioregional strategies. Such an approach will place substantial emphasis on monitoring, assessment, and research programs. These programs will help determine if strategies are accomplishing their intended objectives, maximize the opportunities to learn from experience, and enhance the flexibility in the face of new knowledge.”

Each Coastal City will review its adopted Local Coastal Program (LCP) and make revisions to that LCP to make it consistent with its Subarea Plan. The amended LCP will be required to be approved by both the City and the CCC. This action will follow the approval of the Subarea Plan. Adoption of the LCP Amendment and the Subarea Plan will follow four basic principles:

1. State, federal, and local agencies will cooperate with the intent of improving biodiversity.
2. The MHCP will maintain and enhance the viability of the habitat within the study area.
3. The adoption of the MHCP will not result in significant impacts to coastal issues.
4. The adoption of the LCP Amendment will consider the ecosystem in which the environmentally sensitive resources and its species function.

### *City of Carlsbad*

Implementation of the MHCP and associated Subarea Plan will result in conflicts within the General Plan, Growth Management Plan, Municipal Code, and Open Space Ordinance.

## ***ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES***

---

Therefore, FPA Alternative 1 will result in a significant impact related to consistency with environmental goals of the City of Carlsbad General Plan and community plans.

### ***City of Encinitas***

Implementation of the MHCP and associated Subarea Plan will result in conflicts within the policies of the General Plan, Zoning Ordinances, and Coastal Plan. Therefore, FPA Alternative 1 will result in a significant impact related to consistency with environmental goals of the City of Encinitas General Plan and community plans.

### ***City of Escondido***

Implementation of the MHCP and associated Subarea Plan will result in conflicts within the General Plan; Master Plan for Parks, Trails and Open Space; Zoning Ordinance; and City Ordinances. Therefore, FPA Alternative 1 will result in a significant impact related to consistency with environmental goals of the City of Escondido General Plan and community plans.

### ***City of Oceanside***

Implementation of the MHCP and associated Subarea Plan will result in conflicts within the General Plan, Zoning Ordinance, Local Coastal Program, Municipal Code, and City Ordinances. Therefore, FPA Alternative 1 will result in a significant impact related to consistency with environmental goals of the City of Oceanside General Plan and community plans.

### ***City of San Marcos***

Implementation of the MHCP and associated Subarea Plan will result in conflicts within the General Plan and Zoning Ordinances. Therefore, FPA Alternative 1 will result in a significant impact related to consistency with environmental goals of the City of San Marcos General Plan and community plans.

### ***City of Solana Beach***

Because FPA Alternative 1 is consistent with the City of Solana Beach General Plan and, as such, the General Plan will not need to be amended under FPA Alternative 1. Therefore,

FPA Alternative 1 will not result in a significant impact related to consistency with environmental goals of the City of Solana Beach General Plan and community plans.

**Impacts of FPA Alternative 1 Related to Land Use Compatibility**

***City of Carlsbad***

The City of Carlsbad Subarea Plan includes standards for land uses adjacent to the preserve to maintain the biological functioning and viability of the preserve. These standards include requirements related to fire management, erosion control, landscaping, fencing, signs, lighting, and predator and exotic species control. These standards will reduce the impacts of adjacent land uses to below a level of significance on the preserve. The preserve will not result in any new impacts to adjacent land uses, because no substantial new development will occur within the areas that are proposed to be preserved for habitat. Some infrastructure improvements may occur; however, these impacts will occur with or without the MHCP, and have been integrated into the planning process. Therefore, FPA Alternative 1 will not result in a significant adverse impact related to land use compatibility in the City of Carlsbad.

***City of Encinitas***

The City of Encinitas Subarea Plan includes guidelines for land uses adjacent to the preserve to maintain the biological functioning and viability of the preserve. These guidelines include requirements related to drainage and toxics, erosion and sedimentation, lighting, noise, barriers, landscaping, and fire and brush management. These guidelines will reduce the impacts of adjacent land uses to below a level of significance on the preserve. The preserve will not result in any new impacts to adjacent land uses, because no new development will occur within the areas that are proposed to be preserved for habitat. Therefore, FPA Alternative 1 will not result in a significant adverse impact related to land use compatibility in the City of Encinitas.

***City of Escondido***

The City of Escondido Subarea Plan includes guidelines for land uses adjacent to the preserve to maintain the biological functioning and viability of the preserve. These guidelines include requirements related to drainage and toxics, erosion and sedimentation, lighting, noise, barriers, landscaping, and fire and brush management. These guidelines will reduce the impacts of adjacent land uses to below a level of significance on the preserve.

The preserve will not result in any new impacts to adjacent land uses, because no new development will occur within the areas that are proposed to be preserved for habitat. Therefore, FPA Alternative 1 will not result in a significant adverse impact related to land use compatibility in the City of Escondido.

***City of Oceanside***

The City of Oceanside Subarea Plan includes standards for the preserve design. Some of these standards may apply to land uses adjacent to the preserve to maintain the biological functioning and viability of the preserve. These guidelines include requirements related to buffers for tributaries and creeks and to fire and fuel management. These guidelines will reduce the impacts of adjacent land uses to below a level of significance on the preserve. The preserve will not result in any new impacts to adjacent land uses, because no new development will occur within the areas that are proposed to be preserved for habitat. Therefore, FPA Alternative 1 will not result in a significant adverse impact related to land use compatibility in the City of Oceanside.

***City of San Marcos***

The City of San Marcos Subarea Plan includes standards for the preserve design. Some of these standards may apply to land uses adjacent to the preserve to maintain the biological functioning and viability of the preserve. These guidelines include requirements related to landscaping, lighting, and fencing. These guidelines will reduce the impacts of adjacent land uses to below a level of significance on the preserve. The preserve will not result in any new impacts to adjacent land uses, because no new development will occur within the areas that are proposed to be preserved for habitat. Therefore, FPA Alternative 1 will not result in a significant adverse impact related to land use compatibility in the City of San Marcos.

**Impacts of FPA Alternative 1 Related to Important Farmland**

***Multiple Habitat Conservation Plan***

Table 3.2-3 provides a definition for all classifications of farmlands. Figure 4.2-2 shows the Important Farmland areas within the MHCP study area that will be converted to habitat preserve under FPA Alternative 1. Table 4.2-2 estimates the number of acres of Important Farmland that will be conserved as habitat under the assumption that all of the land within the FPA will be conserved. Approximately 88% of the area within the FPA for FPA

---

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

---

Alternative 1 will actually be conserved as habitat. However, the precise locations of all of the areas that will be preserved have not been specified at this stage in the planning process. Therefore, this section presents a worst-case analysis which overestimates the number of acres of Important Farmland that will be conserved as habitat under FPA Alternative 1, based on the assumption that all of the land within the FPA will be conserved. Future development may occur that is consistent with the local agency's General Plan that will affect important farmlands. Implementation of the MHCP will not change those impacts for any alternative considered. Therefore, because there are no conflicts with the significance thresholds related to farmlands, the indirect impacts of development of farmlands is not considered significant.

**Table 4.2-2  
Important Farmland Conserved as Habitat  
Acres (Percent of Total)**

<b>Description</b>	<b>Carlsbad</b>	<b>Encinitas</b>	<b>Escondido</b>	<b>Oceanside</b>	<b>San Marcos</b>	<b>Total Cities</b>
Total Important Farmland	3,587	854	3,504	5,688	1,290	15,399
FPA Alternative 1	1,165(32%)	87 (10%)	1,840 (53%)	652 (15%)	324 (26%)	4,222 (28%)
FPA Alternative 2	1,165(32%)	87 (10%)	1,840 (53%)	652 (15%)	324 (26%)	4,222 (28%)
BCLA Alternative 3	2,094 (58%)	113 (13%)	1,871 (53%)	841 (11%)	337 (25%)	5,487 (33%)

Source: SANDAG, 2000.

The MHCP (Section 6.2) specifically notes that “the MHCP recognizes the importance of some agricultural lands as wildlife habitat and considers agricultural activities to be compatible adjacent to preserve areas. The MHCP will not impose new regulations on existing agricultural activities nor attempt to displace existing agriculture.” Thus, existing agricultural activities can be maintained. Nothing regarding the Plan will adversely affect the ongoing operations. Expansion of agricultural activities will be required to undergo the same evaluation and mitigation as any “development” project. Compared to the current conditions (i.e., No Action/No Project), this evaluation and requirement for mitigation is identical to the current conditions. Thus, implementation of any of the FPAs will not result in any significant impacts to ongoing agricultural operations, because there are no conflicts with the significance criteria for farmland.

## **Subarea Plans**

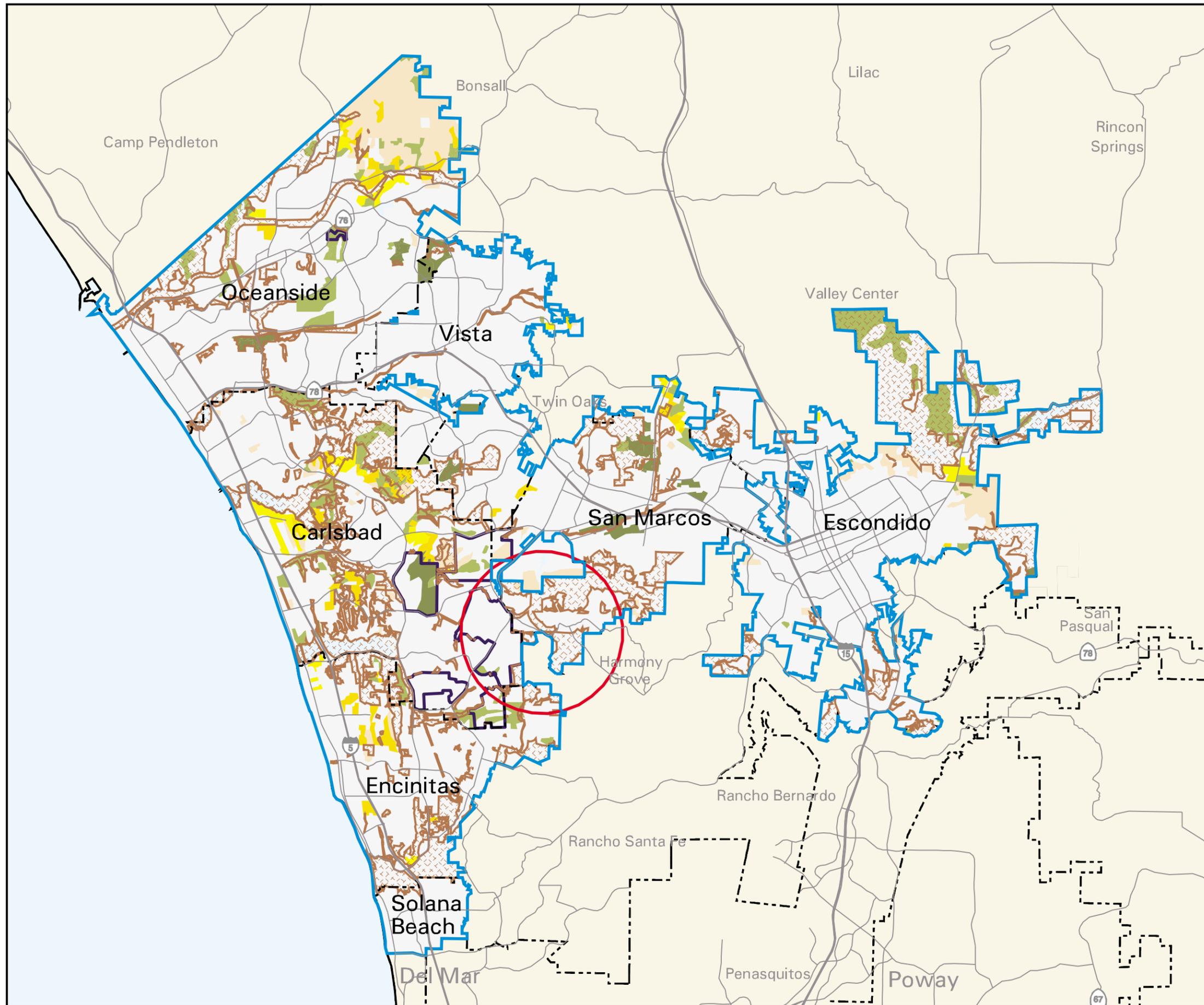
### *City of Carlsbad*

As indicated in Table 4.2-2, Carlsbad contains 3,578 acres of Important Farmland. Under FPA Alternative 1, 1,165 acres, or 32%, of Important Farmland will be conserved, and 1,746 acres of farmland of local importance. The MHCP (Section 6.2) specifically notes that “the MHCP recognizes the importance of some agricultural lands as wildlife habitat and considers agricultural activities to be compatible adjacent to preserve areas. The MHCP will not impose new regulations on existing agricultural activities nor attempt to displace existing agriculture.” Thus, existing agricultural activities can be maintained. Nothing regarding the Plan will adversely affect the ongoing operations. Expansion of agricultural activities will be required to undergo the same evaluation and mitigation as any “development” project. Compared to the current conditions (i.e., No Action/No Project), this evaluation and requirement for mitigation is identical for any expansion project. Future development may occur that is consistent with the local agency’s General Plan that will affect important farmlands. Implementation of the MHCP will not change those impacts for any alternative considered. Therefore, the indirect impacts of development of farmlands are not considered significant, because there are no conflicts with the significance criteria for farmland. Thus, implementation of any of the FPAs will not result in any significant impacts to ongoing agricultural operations.

### *City of Encinitas*

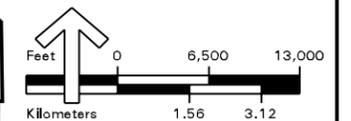
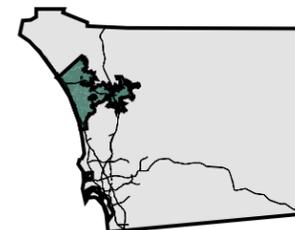
The City of Encinitas contains 854 acres of Important Farmland. Under FPA Alternative 1, 87 acres, or 10%, of Important Farmland within the City will be conserved. The MHCP (Section 6.2) specifically notes that “the MHCP recognizes the importance of some agricultural lands as wildlife habitat and considers agricultural activities to be compatible adjacent to preserve areas. The MHCP will not impose new regulations on existing

**Figure 4.2-2  
Important Farmland  
MHCP Study Area  
FPA Alternatives 1 & 2**



-  Prime Farmland
-  Farmland of Statewide Importance
-  Unique Farmland
-  Farmland of Local Importance
-  Grazing Land
-  Urban & Built Up Land and Other Land (does not fall in any of the categories above)
-  Focused Planning Area (FPA)
-  Projects Already Permitted
-  General Area for Core Gnatcatcher Conservation (USFWS Circle)
-  City Boundary
-  MHCP Boundary

SOURCE: California Department of Conservation, Farmland Mapping and Monitoring Program, 1998



agricultural activities nor attempt to displace existing agriculture.” Thus, existing agricultural activities can be maintained. Nothing regarding the Plan will adversely affect the ongoing operations. Expansion of agricultural activities will be required to undergo the same evaluation and mitigation as any “development” project. Compared to the current conditions (i.e., No Action/No Project), this evaluation and requirement for mitigation is identical for any expansion project. Thus, implementation of any of the FPAs will not result in any significant impacts to ongoing agricultural operations, because the MHCP does not conflict with the significance threshold for farmlands.

### ***City of Escondido***

As indicated in Table 4.2-2, the City of Escondido contains 3,504 acres of Important Farmland. Under FPA Alternative 1, 1,840 acres, or 53%, of the Important Farmland will be conserved. This includes 1,533 acres of farmland of local importance. Much of the farmland of local importance and unique farmland within the proposed preserve is already conserved as part of the Daley Ranch Conservation Bank. The MHCP (Section 6.2) specifically notes that “the MHCP recognizes the importance of some agricultural lands as wildlife habitat and considers agricultural activities to be compatible adjacent to preserve areas. The MHCP will not impose new regulations on existing agricultural activities nor attempt to displace existing agriculture.” Thus, existing agricultural activities can be maintained. Nothing regarding the Plan will adversely affect the ongoing operations. Expansion of agricultural activities will be required to undergo the same evaluation and mitigation as any “development” project. Compared to the current conditions (i.e., No Action/No Project), this evaluation and requirement for mitigation is identical for any expansion project. Thus, implementation of any of the FPAs will not result in any significant impacts to ongoing agricultural operations, because the MHCP does not conflict with the significance threshold for farmlands.

### ***City of Oceanside***

As indicated in Table 4.2-2, the City of Oceanside has 5,688 acres of land designated as Important Farmland. Under FPA Alternative 1, 652 acres, or 11%, of the Important Farmland within the City will be conserved. The MHCP (Section 6.2) specifically notes that “the MHCP recognizes the importance of some agricultural lands as wildlife habitat and considers agricultural activities to be compatible adjacent to preserve areas. The MHCP will not impose new regulations on existing agricultural activities nor attempt to displace existing agriculture.” Thus, existing agricultural activities can be maintained. Nothing regarding the Plan will adversely affect the ongoing operations. Expansion of agricultural activities will be

required to undergo the same evaluation and mitigation as any “development” project. Compared to the current conditions (i.e., No Action/No Project), this evaluation and requirement for mitigation is identical for any expansion project. Future development may occur that is consistent with the local agency’s General Plan that will affect important farmlands. Implementation of the MHCP will not change those impacts for any alternative considered. Therefore, the indirect impacts of development of farmlands is not considered significant, because the MHCP does not conflict with the significance threshold for farmlands. Thus, implementation of any of the FPAs will not result in any significant impacts to ongoing agricultural operations.

### *City of San Marcos*

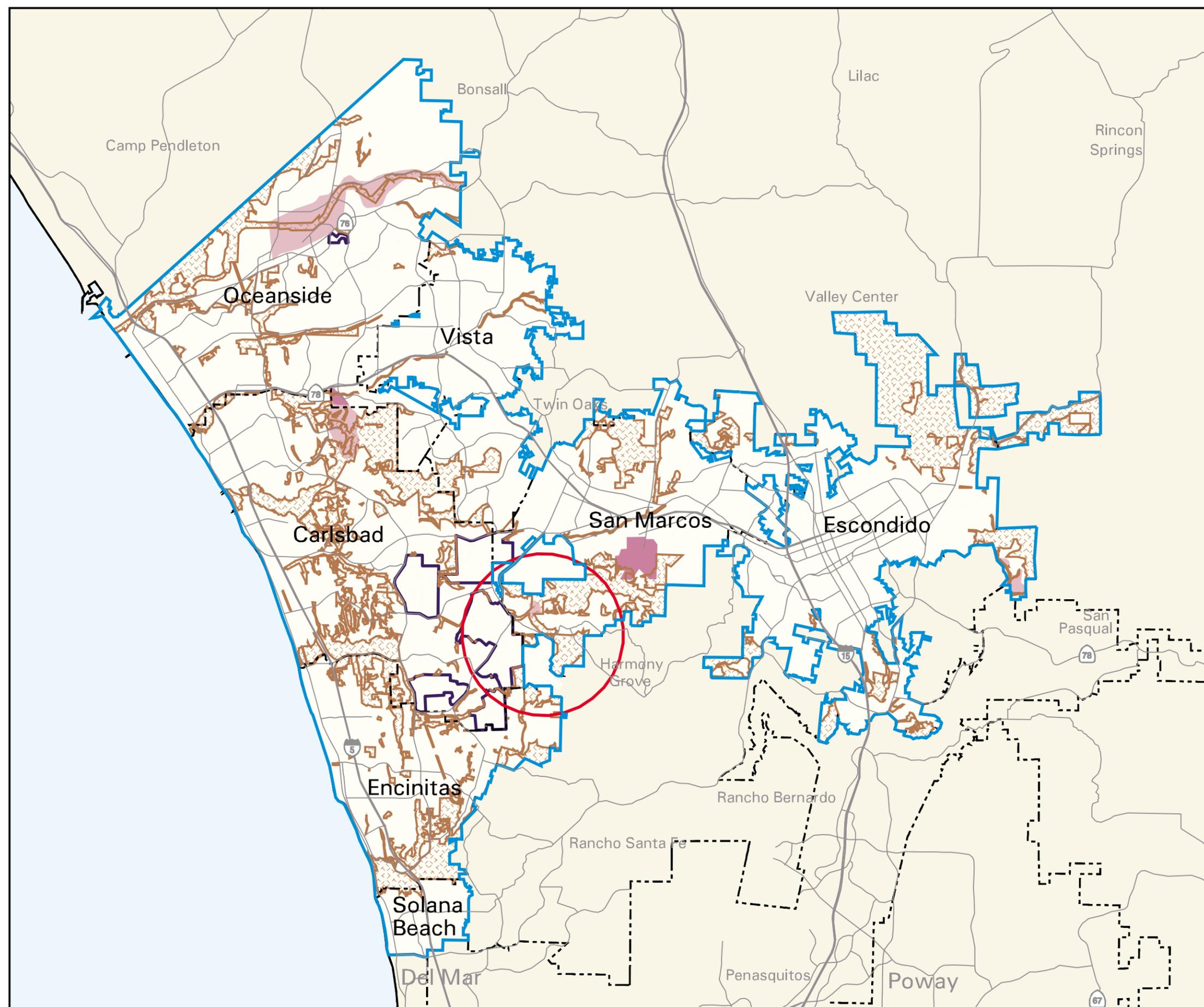
As indicated in Table 4.2-2, the City of San Marcos has 1,290 acres of land designated as Important Farmland. Under FPA Alternative 1, 324 acres, or 25%, of the Important Farmland within the City will be conserved. The MHCP specifically notes that “the MHCP recognizes the importance of some agricultural lands as wildlife habitat and considers agricultural activities to be compatible adjacent to preserve areas. The MHCP will not impose new regulations on existing agricultural activities nor attempt to displace existing agriculture.” Thus, existing agricultural activities can be maintained. Nothing regarding the Plan will adversely affect the ongoing operations. Expansion of agricultural activities will be required to undergo the same evaluation and mitigation as any “development” project. Compared to the current conditions (i.e., No Action/No Project), this evaluation and requirement for mitigation is identical for any expansion project. Future development may occur that is consistent with the local agency’s General Plan that will affect important farmlands. Implementation of the MHCP will not change those impacts for any alternative considered. Therefore, the indirect impacts of development of farmlands is not considered significant, because the MHCP does not conflict with the significance threshold for farmlands. Thus, implementation of any of the FPAs will not result in any significant impacts to ongoing agricultural operations.

### **Impacts of FPA Alternative 1 Related to Extractive Resources**

#### *MHCP*

Figure 4.2-3 shows the MRZ-2 areas within the MHCP study area that will be converted to permanent open space associated with the habitat preserve under FPA Alternative 1.

**Figure 4.2-3  
Mineral Resources  
MHCP Study Area  
FPA Alternatives 1 & 2**



- MRZ-2 (Areas that may contain significant mineral deposits)
- Permitted PCC-grade Aggregate Pits
- Focused Planning Area (FPA)
- Projects Already Permitted
- General Area for Core Gnatcatcher Conservation (USFWS Circle)
- City Boundary
- MHCP Boundary

SOURCE: California Department of Conservation, Division of Mines and Geology, 1996

November 27, 2001

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

---

Table 4.2-3 shows an estimate of the number of acres of MRZ-2 land that will be conserved as habitat under FPA Alternative 1, assuming that all of the land within the FPA will be conserved. As discussed earlier (Section 2), approximately 88% of the area within the FPA for FPA Alternative 1 will actually be conserved as habitat. However, the precise locations of all of the areas that will be preserved have not been specified at this stage in the planning process. Therefore, this section uses a worst-case analysis which shows the number of acres of MRZ-2 land that will be conserved as habitat under FPA Alternative 1.

**Table 4.2-3  
Acreage of Habitat Conservation on MRZ-2 Land**

	<b>Carlsbad</b>	<b>Encinitas</b>	<b>Escondido</b>	<b>Oceanside</b>	<b>San Marcos</b>	<b>Total Cities</b>
FPA Alternative 1	208	0	27	491	122	849
FPA Alternative 2 <sup>(1)</sup>	208	0	27	491	122	849
BCLA Alternative 3	251	0	26	487	216	980
No Project Alternative <sup>(2)</sup>	0	0	0	0	0	0

Notes: (1) No MRZ-2 lands area located in the gnatcatcher core area; thus, FPA 1 and FPA 2 impacts are the same.

(2) Under the No Project Alternative, no MRZ-2 land will be listed as conserved habitat.

Source: California Department of Conservation.

Portions of the Carlsbad and San Marcos Quarry fall within the FPA for Alternative 1. Approximately 4 acres of the 72-acre Carlsbad operation fall within the preserve area. Sixty-nine acres of the 531-acre San Marcos Quarry fall within the FPA. This, however, is not a significant impact, as the MHCP specifically allows for current activity to continue. Future development may occur that is consistent with the local agency’s General Plan that will affect MRZ-2. Implementation of the MHCP will not change those impacts for any alternative considered. Therefore, the indirect impacts of development of MRZ-2 are not considered significant, because the MHCP does not conflict with the significance threshold for mineral resources.

The MHCP preserve management and monitoring program specifically addresses extraction activities in the following manner:

“The MHCP plan does not impose any new regulations on owners or operators of existing mining operations. These owners/operators may obtain management authorizations or permits directly from the wildlife agencies. Alternatively, participating jurisdictions may develop a process to amend

previously approved local permits, subject to necessary mitigation and approval from the wildlife agencies, to allow owners/operators to avail themselves of take authorizations and third-party beneficiary status, pursuant to the MHCP.

New or expanded mining operations on lands conserved as part of the preserve are incompatible with MHCP preserve goals for covered species and their habitats unless otherwise agreed to by the wildlife agencies at the time the parcel is conserved. New or expanded rock, sand, and gravel extraction facilities outside of lands conserved as part of the preserve must be designed and mitigated for, consistent with the Subarea Plan and implementing regulations.

Land associated with abandoned mining operations within the preserve should be assessed for reclamation potential. Lands suitable for reclamation should be restored using native species. If such lands are not suitable for restoration, a compatible second use should be identified, such as trail access points, park headquarters, parking areas, interpretive centers, and research stations.”

#### **4.2.3.2 Impact Analysis for FPA Alternative 2**

##### **Impacts of FPA Alternative 2 Related to Land Use Designation Consistency**

Figure 4.2-1 also shows FPA Alternative 2 and the city boundaries and planned land uses within the MHCP boundary. Table 4.2-4 shows the approximate number of acres for each land use category in each city in the MHCP study area that will be conserved as habitat under FPA Alternative 2. The cities (Carlsbad, Encinitas, Escondido, Oceanside, and San Marcos) in the MHCP study area will amend their General Plans as appropriate to ensure that the planning and development of all future projects will comply with the MHCP and Subarea Plans. Therefore, FPA Alternative 2 will not result in a significant adverse impact related to land use designation consistency between the General Plans of the cities in the MHCP study area and the areas that will be conserved for habitat under the MHCP and MHCP Subarea Plans under FPA Alternative 2.

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.2-4  
Impact of Conservation on Planned Land Use by City: FPA Alternative 2**

<b>Habitat Acres Conserved</b>	<b>Carlsbad</b>	<b>Encinitas</b>	<b>Escondido</b>	<b>Oceanside</b>	<b>San Marcos</b>	<b>Solana Beach</b>	<b>Vista</b>	<b>Total Cities</b>	<b>Core CGN Habitat</b>	<b>Total</b>
Not Constrained										
Spaced Rural Residential	140	89	385	0	362	0	12	988	170	1,158
Single-Family Residential	506	115	18	193	248	0	3	1,083	1	1,083
Multifamily Residential	30	0	0	38	17	0	0	64	0	84
Commercial, Office	56	4	0	35	10	0	0	105	0	105
Industrial/TCPU	137	2	10	49	16	0	25	239	1	240
Education, Park	4	7	0	27	4	0	3	45	0	45
OS and Other Public <sup>(1)</sup>	1,905	1,563	1,828	1,128	231	37	423	7,114	6	7,120
Constrained	1,543	359	4,264	1,018	1,542	0	76	8,802	190	8,992
<b>Total Conserved</b>	<b>4,320</b>	<b>2,139</b>	<b>6,505</b>	<b>2,489</b>	<b>2,429</b>	<b>37</b>	<b>541</b>	<b>18,460</b>	<b>367</b>	<b>18,827</b>

Notes: (1) Includes public and private lands which are in permanent open space use, such as mitigation banks, open space parks, lagoons, and other areas.

This table summarizes the impact of habitat conservation on the supply of developable land. Land is classified as constrained if there are physical or planning constraints on future development, such as the presence of steep slopes.

CGN = California gnatcatcher.

TCPU = Transportation/communications/utilities.

Source: SANDAG 1999 MHCP GIS Database; Onaka Planning & Economics.

**Impacts of FPA Alternative 2 Related to Consistency with Environmental Goals of General Plans and Community Plans (including Local Coastal Programs)**

FPA Alternative 2 will not result in a significant adverse impact related to consistency with environmental goals of the General Plans and community plans of the cities within the MHCP boundary.

In 1976, the California Coastal Act was enacted to protect natural resources by guiding development in the coastal zone. Portions of the cities of Carlsbad, Encinitas, Solana Beach, and Oceanside lie within the Coastal Zone. Coastal policies provide for the provision of public access; protection of marine and land resources (particularly wetlands, rare and endangered habitat areas, environmentally sensitive areas, tidepools, and stream channels); maintenance of productive agriculture; directing new housing and other development to urbanized areas; protecting the scenic beauty of the coastal landscape; and locating needed coastal energy and industrial facilities. Although the MHCP has been prepared to provide protection of habitat for endangered and threatened species, as well as species that could become endangered, it is not intended to override the requirements of the Coastal Act.

As previously discussed, the California Department of Fish and Game has the responsibility to implement the NCCP and associated guidelines. These guidelines, adopted pursuant to Section 2800 et seq. of the California Fish and Game Code for the general application of the NCCP Act, are designed to help planners provide for regional protection and perpetuation of biological diversity, meet NCCP regulatory requirements, and allow for flexibility in plan development. Further guidelines may be adopted in the future for the application of the NCCP Act to specific ecosystems or regions of the state. This MHCP and the Subarea Plans have been prepared in accordance with the specifications of the NCCP.

It should be recognized that the intent of the NCCP is to provide protection of sensitive plant and wildlife resources. Because the CDFG is responsible for implementing the NCCP process and for establishing and controlling wildlife management programs for endangered, threatened, and rare species, in accordance with statutory requirements established by the Coastal Act (Section 30411).

Specifically, the California Coastal Act (Section 30107.5) defines “environmentally sensitive areas” as “any area in which plant or animal life or their habitat are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments”. Section 30240(a) of the

## ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES

Coastal Act further states that environmentally sensitive habitat areas “shall be protected against any significant disruption of habitat values”. Therefore, many areas located within the MHCP boundaries can be considered environmentally sensitive habitat areas, because they support federally and state listed endangered or threatened species. However, because of the protection of large areas of resources and provision of wildlife corridors, it can be found that environmentally sensitive habitat areas are actually being preserved.

Additionally, each individual project will be required to be evaluated at the project level for conformance with the requirements of the Coastal Act, including the acquisition of individual Coastal Development Permits. Procedurally, the MHCP strongly encourages cooperative coordination among local, state, and federal agencies during the design stages to accommodate site-specific issues. As member agencies of the California Biodiversity Council, the USFWS, CDFG, CCC, and SANDAG have agreed that the “ basic means of implementing the strategy are to be improved coordination, information exchange, conflict resolution, and collaboration among the signatory parties. In addition, the signatories agree to pursue the development of local and regional institutions and practices necessary to conserve biological diversity. These tools may include the establishment of mitigation and development banks, planning and zoning authorities, land preserve acquisition, incentives, alternative land management practices, restoration, and fees and regulation.” Additionally, “Given the changing characteristics of both the biological and social environment, the signatories agree to an adaptive approach in the development of bioregional strategies. Such an approach will place substantial emphasis on monitoring, assessment, and research programs. These programs will help determine if strategies are accomplishing their intended objectives, maximize the opportunities to learn from experience, and enhance the flexibility in the face of new knowledge.”

Each City (as appropriate) will review its adopted Local Coastal Program (LCP) and make revisions to that LCP to make it consistent with its Subarea Plan. The amended LCP will be required to be approved by both the City and the CCC. This action will follow the approval of the Subarea Plan. Adoption of the LCP Amendment and the Subarea Plan will follow four basic principles:

1. State, federal, and local agencies will cooperate with the intent of improving biodiversity.
2. The MHCP will maintain and enhance the viability of the habitat within the study area.
3. The adoption of the MHCP will not result in significant impacts to coastal issues.

4. The adoption of the LCP Amendment will consider the ecosystem in which the environmentally sensitive resources and its species function.

### **Impacts of FPA Alternative 2 Related to Land Use Compatibility**

As previously discussed in this section, the land use compatibility guidelines and standards in the MHCP and Subarea Plans that apply to land uses adjacent to the preserve will help to maintain the biological functioning and viability of the preserve. These guidelines will reduce the impacts of adjacent land uses on the preserve. The preserve will not result in any new impacts to adjacent land uses, because no new development will occur within the areas that are proposed to be preserved for habitat. Therefore, FPA Alternative 2 will not result in a significant adverse impact related to land use compatibility, because the FPA does not conflict with the significance thresholds for land use.

### **Impacts of FPA Alternative 2 Related to Important Farmland**

Figure 4.2-2 shows the Important Farmland areas within the MHCP study area that will be converted to habitat preserve under FPA Alternative 2. Table 4.2-2 shows an estimate of the number of acres of Important Farmland that will be conserved as habitat under FPA Alternative 2, assuming that all of the land within the FPA will be conserved. As discussed earlier, approximately 88% of the area within the FPA for Alternative 2 will actually be conserved as habitat. However, as mentioned previously, the precise locations of all of the areas that will be preserved have not been specified at this stage in the planning process. Therefore, this section presents a worst-case analysis to overestimate the number of acres of Important Farmland that will be covered as habitat under FPA Alternative 2, based on the assumption that all of the land within the FPA will be conserved.

The MHCP specifically notes that “the MHCP recognizes the importance of some agricultural lands as wildlife habitat and considers agricultural activities to be compatible adjacent to preserve areas. The MHCP will not impose new regulations on existing agricultural activities nor attempt to displace existing agriculture.” Thus, existing agricultural activities can be maintained. Nothing regarding the Plan will adversely affect the ongoing operations. Expansion of agricultural activities will be required to undergo the same evaluation and mitigation as any “development” project. Compared to the current conditions (i.e., No Action/No Project), this evaluation and requirement for mitigation is identical for any expansion project. Thus, implementation of any of the FPAs will not result in any

significant impacts (i.e., does not conflict with significance thresholds for farmlands) to ongoing agricultural operations.

### **Subarea Plans**

Since FPA Alternative 1 and Alternative 2 use the same boundary of the FPAs, the city-by-city discussion under FPA Alternative 1 with regard to Important Farmland is valid for FPA Alternative 2 as well. Please refer to those sections (4.2.3.1) for a description of the amount of farmland conserved and the MHCP policy on existing and planned agricultural operations.

### **Impacts of FPA Alternative 2 Related to Extractive Resources**

Figure 4.2-3 also shows the MRZ-2 areas within the MHCP study area that will be converted to permanent open space associated with the habitat preserve under FPA Alternative 2. Table 4.2-3 shows an estimate of the number of acres of MRZ-2 land that will be conserved as habitat under FPA Alternative 2, assuming that all of the land within the FPA will be conserved. As discussed earlier, approximately 87% of the area within the FPA for FPA Alternative 2 will actually be conserved as habitat. However, the precise locations of all of the areas that will be preserved have not been specified at this stage in the planning process. Therefore, this section uses a worst-case analysis which shows the number of acres of MRZ-2 land that will be conserved as habitat under FPA Alternative 2.

Portions of the Carlsbad and San Marcos Quarry fall within the FPA for Alternative 2. Approximately 4 acres of the 72-acre Carlsbad operation fall within the preserve area. Sixty nine acres of the 531-acre San Marcos Quarry fall within the FPA. This, however, is not a significant impact (i.e., does not conflict with the significance thresholds for mineral resources) on the quarry operations, as the MHCP specifically allows for current activity to continue.

#### **4.2.3.3 Impact Analysis for BCLA Alternative 3**

### **Impacts of BCLA Alternative 3 Related to Land Use Designation Consistency**

Figure 4.2-4 shows BCLA Alternative 3 and the city boundaries and planned land uses within the MHCP boundary. Table 4.2-5 shows the approximate number of acres for each land use category in each city in the MHCP study area that will be conserved as habitat under

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.2-5  
Impact of Conservation on Planned Land Use by City: BCLA Alternative 3**

<b>Habitat Acres Conserved</b>	<b>Carlsbad</b>	<b>Encinitas</b>	<b>Escondido</b>	<b>Oceanside</b>	<b>San Marcos</b>	<b>Solana Beach</b>	<b>Vista</b>	<b>Total Cities</b>	<b>Core CGN Habitat</b>	<b>Total</b>
Not Constrained										
Spaced Rural Residential	214	181	719	0	661	0	31	1,805	170	1,976
Single-Family Residential	973	158	17	417	1,059	0	20	2,645	1	2,645
Multifamily Residential	71	0	0	40	45	0	0	156	0	156
Commercial, Office	191	5	0	65	29	0	2	293	0	293
Industrial/TCPU	441	4	10	136	60	0	54	704	1	705
Education, Park	3	10	6	31	33	0	6	89	0	89
OS and Other Public <sup>(1)</sup>	2,281	1,698	2,089	1,308	348	58	485	8,267	6	8,273
Constrained	1,733	438	4,948	1,264	2,012	6	82	10,482	190	10,672
<b>Total Conserved</b>	<b>5,906</b>	<b>2,494</b>	<b>7,790</b>	<b>3,262</b>	<b>4,246</b>	<b>64</b>	<b>681</b>	<b>24,442</b>	<b>367</b>	<b>24,809</b>

Notes: (1) Includes public and private lands which are in permanent open space use, such as mitigation banks, open space parks, lagoons, and other areas.

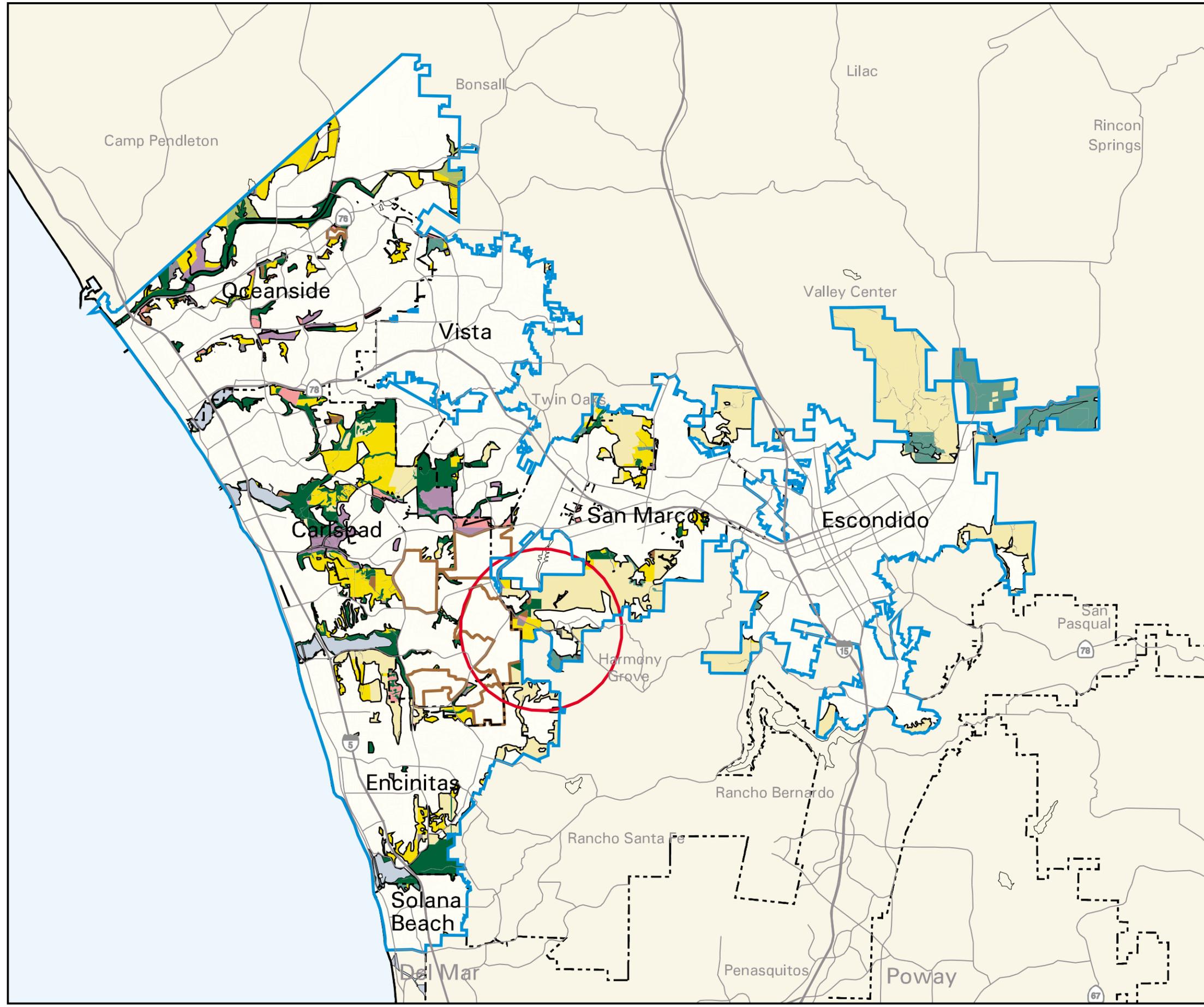
This table summarizes the impact of habitat conservation on the supply of developable land. Land is classified as constrained if there are physical or planning constraints on future development, such as the presence of steep slopes.

CGN = California gnatcatcher.

TCPU = Transportation/communications/utilities.

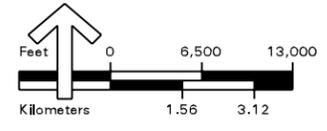
Source: SANDAG 1999 MHCP GIS Database; Onaka Planning & Economics.

**Figure 4.2-4  
Planned Land Use  
BCLA Alternative 3**



- Spaced Rural
- Single Family
- Mobile Homes
- Multiple Family
- Commercial and Office
- Heavy and Light Industry
- Transportation, Communication Utilities
- Education & Institutions
- Commercial Recreation
- Parks/Open Space
- Agriculture
- Public / Semi Public
- Land Outside the BCLA but Inside the MHCP Study Area
- Projects Already Permitted
- General Area for Core Gnatcatcher Conservation (USFWS Circle)
- City Boundary
- MHCP Boundary

SOURCE: SANDAG Land Layers, 1998



BCLA Alternative 3. The cities in the MHCP study area will amend their General Plans as appropriate to ensure that the planning and development of all future projects will comply with the MHCP and Subarea Plans. Therefore, BCLA Alternative 3 will not result in a significant adverse impact related to land use designation consistency between the General Plans of the cities within the MHCP boundary and the areas that will be conserved for habitat under the MHCP and Subarea Plans under BCLA Alternative 3.

**Impacts of BCLA Alternative 3 Related to Consistency with Environmental Goals of General Plans and Community Plans (including Local Coastal Programs)**

As described in Section 2.3 (Proposed Action – Subarea Plans) in this EIS/EIR, the cities as appropriate within the MHCP boundary will amend their respective General Plans and community plans to be consistent with the conservation of habitat as described in the MHCP and Subarea Plans. Therefore, BCLA Alternative 3 will not result in a significant adverse impact related to consistency with environmental goals of the General Plans and community plans of the cities within the MHCP boundary.

In 1976, the California Coastal Act was enacted to protect natural resources by guiding development in the coastal zone. Portions of the cities of Carlsbad, Encinitas, Solana Beach, and Oceanside lie within the Coastal Zone. Coastal policies provide for the provision of public access; protection of marine and land resources (particularly wetlands, rare and endangered habitat areas, environmentally sensitive areas, tidepools, and stream channels); maintenance of productive agriculture; directing new housing and other development to urbanized areas; protecting the scenic beauty of the coastal landscape; and locating needed coastal energy and industrial facilities. Although the MHCP has been prepared to provide protection of habitat for endangered and threatened species, as well as species that could become endangered, it is not intended to override the requirements of the Coastal Act.

As previously discussed, the California Department of Fish and Game has the responsibility to implement the NCCP and associated guidelines. These guidelines, adopted pursuant to Section 2825 of the California Fish and Game Code for the general application of the NCCP Act, are designed to help planners provide for regional protection and perpetuation of biological diversity, meet NCCP regulatory requirements, and allow for flexibility in plan development. Further guidelines may be adopted in the future for the application of the NCCP Act to specific ecosystems or regions of the state. This MHCP and Subarea Plans have been prepared in accordance with the specifications of the NCCP.

## ***ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES***

---

It should be recognized that the intent of the NCCP is to provide protection of sensitive plant and wildlife resources. The CDFG is responsible for implementing the NCCP process and for establishing and controlling wildlife management programs for endangered, threatened, and rare species, in accordance with statutory requirements established by the Coastal Act (Section 30411).

Specifically, the California Coastal Act (Section 30107.5) defines “environmentally sensitive areas” as “any area in which plant or animal life or their habitat are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments”. Section 30240(a) of the Coastal Act further states that environmentally sensitive habitat areas “shall be protected against any significant disruption of habitat values”. Therefore, many areas located within the MHCP boundaries can be considered environmentally sensitive habitat areas, because they support federally and state listed endangered or threatened species. However, because of the protection of large areas of resources and provision of wildlife corridors, it can be found that environmentally sensitive habitat areas are actually being preserved.

Additionally, each individual project will be required to be evaluated at the project level for conformance with the requirements of the Coastal Act, including the acquisition of individual Coastal Development Permits. Procedurally, the MHCP strongly encourages cooperative coordination among local, state, and federal agencies during the design stages to accommodate site-specific issues. As member agencies of the California Biodiversity Council, the USFWS, CDFG, CCC, and SANDAG have agreed that the “ basic means of implementing the strategy are to be improved coordination, information exchange, conflict resolution, and collaboration among the signatory parties. In addition, the signatories agree to pursue the development of local and regional institutions and practices necessary to conserve biological diversity. These tools may include the establishment of mitigation and development banks, planning and zoning authorities, land preserve acquisition, incentives, alternative land management practices, restoration, and fees and regulation.” Additionally, “Given the changing characteristics of both the biological and social environment, the signatories agree to an adaptive approach in the development of bioregional strategies. Such an approach will place substantial emphasis on monitoring, assessment, and research programs. These programs will help determine if strategies are accomplishing their intended objectives, maximize the opportunities to learn from experience, and enhance the flexibility in the face of new knowledge.”

## ***ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES***

---

Each Coastal City will review its adopted Local Coastal Program (LCP) and make revisions to that LCP to make it consistent with its Subarea Plan. The amended LCP will be required to be approved by both the City and the CCC. This action will follow the approval of the Subarea Plan. Adoption of the LCP Amendment and the Subarea Plan will follow four basic principles:

1. State, federal, and local agencies will cooperate with the intent of improving biodiversity.
2. The MHCP will maintain and enhance the viability of the habitat within the study area.
3. The adoption of the MHCP will not result in significant impacts to coastal issues.
4. The adoption of the LCP Amendment will consider the ecosystem in which the environmentally sensitive resources and its species function.

### **Impacts of BCLA Alternative 3 Related to Land Use Compatibility**

As previously discussed in this section, the land use compatibility guidelines and standards in the MHCP and Subarea Plans that apply to land uses adjacent to the preserve will help to maintain the biological functioning and viability of the preserve. These guidelines will reduce the impacts of adjacent land uses on the preserve. The preserve will not result in any new impacts on adjacent land uses, because no new development will occur within the areas that are proposed to be preserved for habitat. Therefore, BCLA Alternative 3 will not result in a significant adverse impact related to land use compatibility.

### **Impacts of BCLA Alternative 3 Related to Important Farmland**

Figure 4.2-5 shows the Important Farmland areas within the MHCP study area that will be converted to habitat preserve under BCLA Alternative 3. Table 4.2-2 shows an estimate of the number of acres of Important Farmland that will be conserved as habitat under BCLA Alternative 3, assuming that all of the land within the BCLA will be conserved. As discussed earlier, approximately 81% of the area within the BCLA for BCLA Alternative 3 will actually be conserved as habitat. However, the precise locations of all of the areas that will be preserved have not been specified at this stage in the planning process. Therefore, this section presents a worst-case analysis to overestimate the number of acres of Important Farmland that will be conserved as habitat under BCLA Alternative 3, based on the assumption that all of the land within the BCLA will be conserved.

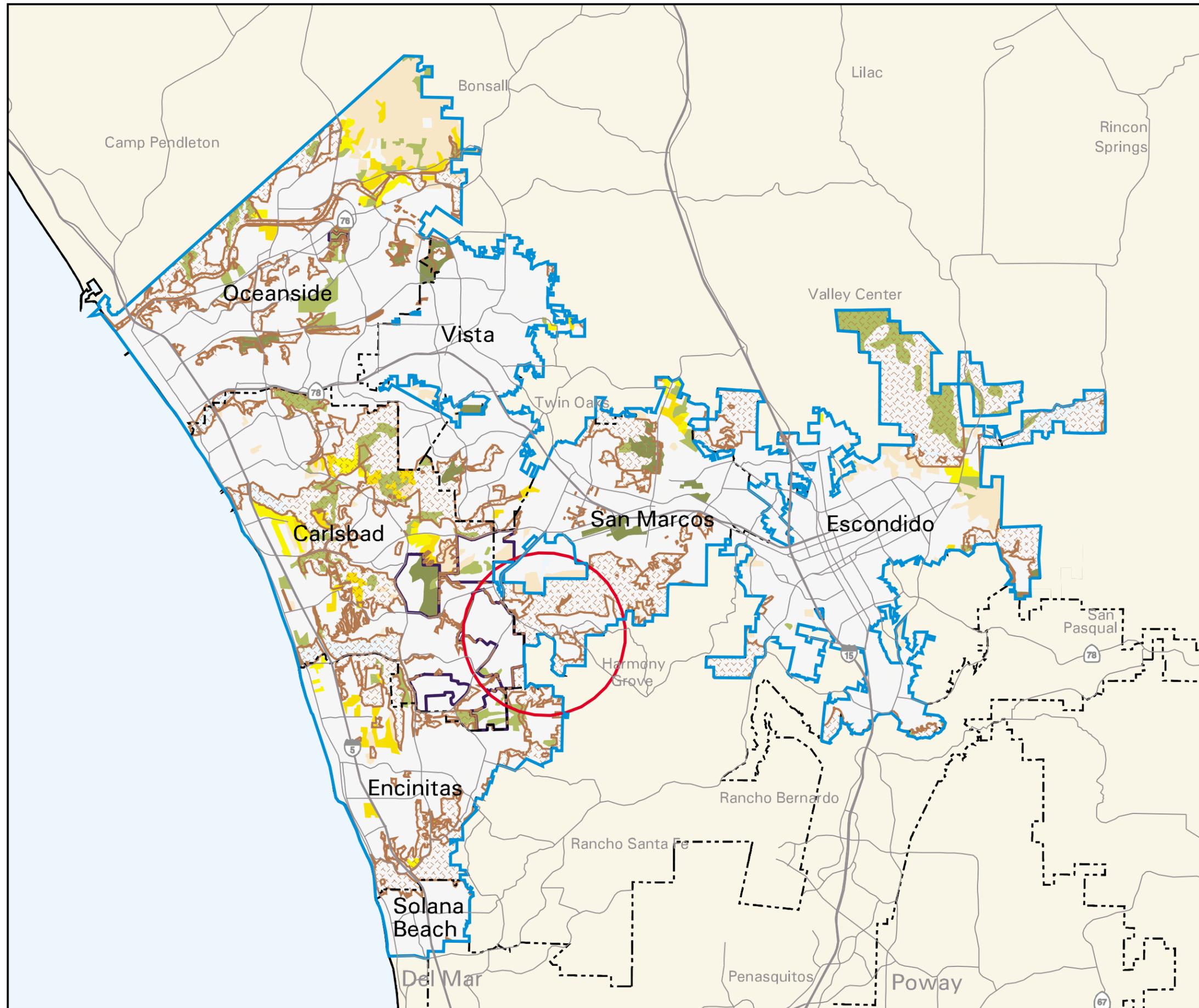
The MHCP specifically notes that “the MHCP recognizes the importance of some agricultural lands as wildlife habitat and considers agricultural activities to be compatible adjacent to preserve areas. The MHCP will not impose new regulations on existing agricultural activities nor attempt to displace existing agriculture.” Thus, existing agricultural activities can be maintained. Nothing regarding the Plan will adversely affect the ongoing operations. Expansion of agricultural activities will be required to undergo the same evaluation and mitigation as any “development” project. Compared to the current conditions (i.e., No Action/No Project), this evaluation and requirement for mitigation is identical for any expansion project. Thus, implementation of any of the FPAs will not result in any significant impacts (i.e., does not conflict with any significance thresholds for farmlands) to ongoing agricultural operations.

### **Subarea Plans**

#### ***City of Carlsbad***

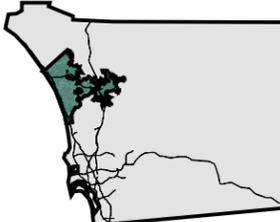
As indicated in Table 4.2-2, BCLA Alternative 3 will conserve 2,094 acres, or 58%, of the existing Important Farmland in the City. This includes 1,367 acres of farmland of local importance. The MHCP specifically notes that “the MHCP recognizes the importance of some agricultural lands as wildlife habitat and considers agricultural activities to be compatible adjacent to preserve areas. The MHCP will not impose new regulations on existing agricultural activities nor attempt to displace existing agriculture.” Thus, existing agricultural activities can be maintained. Nothing regarding the Plan will adversely affect the ongoing operations. Expansion of agricultural activities will be required to undergo the same evaluation and mitigation as any “development” project. Compared to the current conditions (i.e., No Action/No Project), this evaluation and requirement for mitigation is identical for any expansion project. Thus, implementation of any of the FPAs will not result in any significant impacts (i.e., does not conflict with significance thresholds for farmlands) to ongoing agricultural operations.

**Figure 4.2-5  
Important Farmland  
MHCP Study Area  
BCLA Alternative 3**



-  Prime Farmland
-  Farmland of Statewide Importance
-  Unique Farmland
-  Farmland of Local Importance
-  Grazing Land
-  Urban & Built Up Land and Other Land (does not fall in any of the categories above)
-  Biological Core and Linkage Area (BCLA)
-  Projects Already Permitted
-  General Area for Core Gnatcatcher Conservation (USFWS Circle)
-  City Boundary
-  MHCP Boundary

SOURCE: California Department of Conservation, Farmland Mapping and Monitoring Program, 1998



Feet 0 6,500 13,000  
Kilometers 1.56 3.12

**SANDAG**  
November 27, 2001

***City of Encinitas***

Under BCLA Alternative 3, 113 acres, or 13%, of the Important Farmland within the City of Encinitas will be preserved. The MHCP specifically notes that “the MHCP recognizes the importance of some agricultural lands as wildlife habitat and considers agricultural activities to be compatible adjacent to preserve areas. The MHCP will not impose new regulations on existing agricultural activities nor attempt to displace existing agriculture.” Thus, existing agricultural activities can be maintained. Nothing regarding the Plan will adversely affect the ongoing operations. Expansion of agricultural activities will be required to undergo the same evaluation and mitigation as any “development” project. Compared to the current conditions (i.e., No Action/No Project), this evaluation and requirement for mitigation is identical for any expansion project. Thus, implementation of any of the FPAs will not result in any significant impacts (i.e., does not conflict with significance thresholds for farmlands) to ongoing agricultural operations.

***City of Escondido***

As indicated in Table 4.2-2, BCLA Alternative 3 will conserve 1,871 acres, or 53% of Important Farmland within the City. This includes 1,604 acres of farmland of local importance. The MHCP specifically notes that “the MHCP recognizes the importance of some agricultural lands as wildlife habitat and considers agricultural activities to be compatible adjacent to preserve areas. The MHCP will not impose new regulations on existing agricultural activities nor attempt to displace existing agriculture.” Thus, existing agricultural activities can be maintained. Nothing regarding the Plan will adversely affect the ongoing operations. Expansion of agricultural activities will be required to undergo the same evaluation and mitigation as any “development” project. Compared to the current conditions (i.e., No Action/No Project), this evaluation and requirement for mitigation is identical for any expansion project. Thus, implementation of any of the FPAs will not result in any significant impacts (i.e., does not conflict with significance thresholds for farmlands) to ongoing agricultural operations.

***City of Oceanside***

Under BCLA Alternative 3, 841 acres, or 15%, of the Important Farmland within the City of Oceanside will be conserved. This includes 542 acres of farmland of local importance. The MHCP specifically notes that “the MHCP recognizes the importance of some agricultural lands as wildlife habitat and considers agricultural activities to be compatible adjacent to

preserve areas. The MHCP will not impose new regulations on existing Important Farmland Within the Boundary of BCLA Alternative 3 agricultural activities nor attempt to displace existing agriculture.” Thus, existing agricultural activities can be maintained. Nothing regarding the Plan will adversely affect the ongoing operations. Expansion of agricultural activities will be required to undergo the same evaluation and mitigation as any “development” project. Compared to the current conditions (i.e., No Action/No Project), this evaluation and requirement for mitigation is identical for any expansion project. Thus, implementation of any of the FPAs will not result in any significant impacts (i.e., does not conflict with significance thresholds for farmlands) to ongoing agricultural operations.

### ***City of San Marcos***

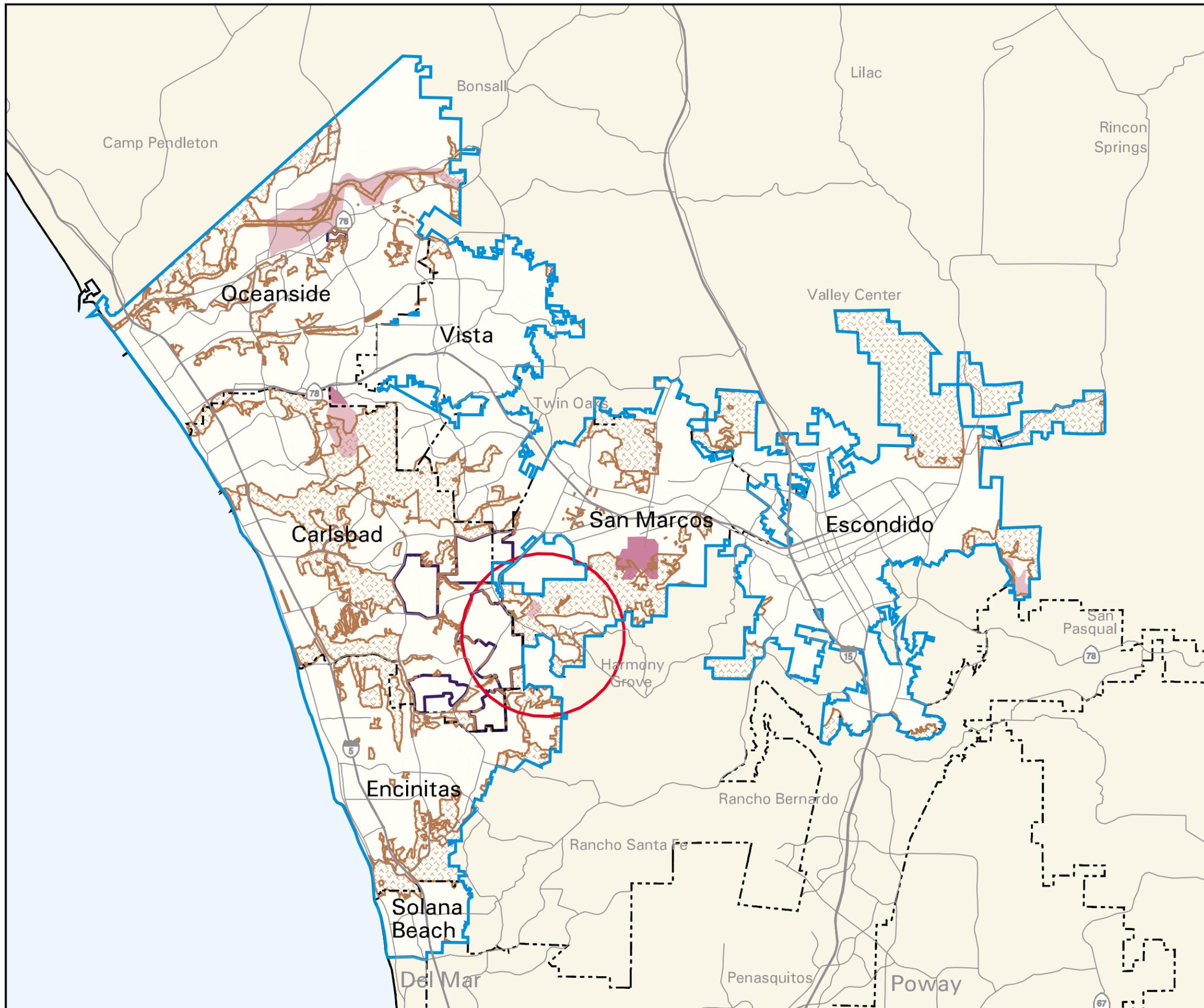
As indicated in Table 4.2-2, the City of San Marcos has 1,290 acres of land classified as Important Farmland. Under BCLA Alternative 3, 337 acres, or 26%, of the farmland will be conserved. The MHCP specifically notes that “the MHCP recognizes the importance of some agricultural lands as wildlife habitat and considers agricultural activities to be compatible adjacent to preserve areas. The MHCP will not impose new regulations on existing agricultural activities nor attempt to displace existing agriculture.” Thus, existing agricultural activities can be maintained. Nothing regarding the Plan will adversely affect the ongoing operations. Expansion of agricultural activities will be required to undergo the same evaluation and mitigation as any “development” project. Compared to the current conditions (i.e., No Action/No Project), this evaluation and requirement for mitigation is identical for any expansion project. Thus, implementation of any of the FPAs will not result in any significant impacts (i.e., does not conflict with significance thresholds for farmlands) to ongoing agricultural operations.

### **Impacts of BCLA Alternative 3 Related to Extractive Resources**

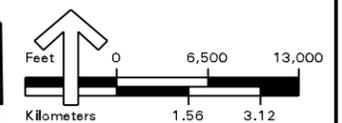
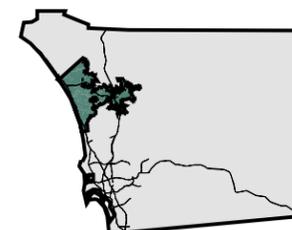
Figure 4.2-6 shows the MRZ-2 areas within the MHCP study area that will be converted to permanent open space associated with the habitat preserve under BCLA Alternative 3. Table 4.2-3 shows an estimate of the number of acres MRZ-2 land that will be conserved as habitat under BCLA Alternative 3, assuming that all of the land within the BCLA will be conserved. As discussed earlier, approximately 81% of the area within the BCLA for BCLA Alternative 3 will actually be conserved as habitat. However, the precise locations of all of the areas that will be preserved have not been specified at this stage in the planning process.

**Figure 4.2-6  
Mineral Resources  
MHCP Study Area  
BCLA Alternative 3**

-  MRZ-2 (Areas that may contain significant mineral deposits)
-  Permitted PCC-grade Aggregate Pits
-  Biological Core and Linkage Area (BCLA)
-  Projects Already Permitted
-  General Area for Core Gnatcatcher Conservation (USFWS Circle)
-  City Boundary
-  MHCP Boundary



SOURCE: California Department of Conservation, Division of Mines and Geology, 1996



Therefore, this section uses a worst-case analysis which shows the number of acres of MRZ-2 land that will be conserved as habitat under BCLA Alternative 3. Portions of the San Marcos Quarry fall within the BCLA for BCLA Alternative 3. Approximately 156 acres of the 531-acre San Marcos Quarry fall within the BCLA. This, however, is not a significant impact (i.e., does not conflict with significance thresholds for mineral resources), as the MHCP specifically allows for current activity related to MRZ-2 lands to continue.

#### **4.2.3.4 Impact Analysis for the No Action/No Project Alternative**

Under the No Action/No Project Alternative, the land use designation changes necessary to implement the MHCP alternatives will not occur, because the land use plans for all jurisdictions will be implemented as they are currently approved. However, changes in land use designations may still be necessary as the General Plans and/or Community Plans are revised in accordance with the normal update process of each jurisdiction. As a result, impacts related to land use, including land use designations and environmental goals and policies in the General Plans and community plans and agriculture and extractive resources, will be avoided under the No Action/No Project Alternative.

Although a preserve that will result in land use designation changes will not be established under this alternative, current regulations could affect planned urban development. For example, the Federal Endangered Species Act will continue to be implemented under this Alternative. Application of the ESA can require that planned land uses or intensities be modified to ensure that “take” of an endangered species is avoided or minimized. This effect will only occur under the No Action/No Project Alternative for currently listed species or species that become listed in the future. However, the environmental benefits realized under the other MHCP alternatives may not occur with implementation of the No Action/No Project Alternative.

#### **4.2.4 Level of Significance After Mitigation**

##### **MHCP Plan**

##### ***FPA Alternative 1***

Significant land use impacts (conflicts with the current land use plans and policies) will result from implementation of FPA Alternative 1; however, these impacts are reduced to below a level of significance after incorporation of mitigation measures.

***FPA Alternative 2***

Significant land use impacts (conflicts with the current land use plans and policies) will result from implementation of FPA Alternative 2; however, these impacts are reduced to below a level of significance after incorporation of mitigation measures.

***BCLA Alternative 3***

Significant land use impacts (conflicts with the current land use plans and policies) will result from implementation of BCLA Alternative 3; however, these impacts are reduced to below a level of significance after incorporation of mitigation measures.

**No Action/No Project Alternative**

The No Action/No Project Alternative will not result in a significant adverse impact, because there will be no change in the land uses within the MHCP; therefore, no mitigation measures are necessary.

**4.2.5 Mitigation Measures**

Each city will need to implement the appropriate amendments to the General Plans, Local Coastal Programs, Ordinances, and Growth Management Plans. Each city has recognized the necessity of implementing this mitigation measure in each of the Subarea Plans, respectively.

**4.3 BIOLOGICAL RESOURCES**

This section analyzes the adequacy of the proposed project and the alternatives with respect to the environmental impacts related to the implementation of the conservation of species and habitats pursuant to the issuance of Section 10(a) of the ESA and Section 2835 of the California Fish and Game Code. There are two aspects of this analysis, first, the evaluation of the MHCP Plan and alternatives from a regional perspective, and second, the evaluation of the individual Subarea Plans and their individual impacts on a local level and their cumulative impacts on the species and habitats in the study area. The biological objective of the MHCP Plan is to maintain the range of natural biological communities and species native to the region, and conserve viable populations of endangered, threatened, and key sensitive species (covered species) and their habitats, thereby preventing local extirpation

(Ogden 2000, Public Review Draft MHCP Plan, Volume 1). Therefore, impacts to species and habitats are evaluated on both the local level, under the individual Subarea Plans, and the regional level.

The MHCP Plan does not override the necessity for further environmental review for individual actions at the project level. A take authorization will not automatically be granted to individual projects; rather, each discretionary action will be subject to further environmental review.

#### **4.3.1 Criteria for Determining Significance**

This document is intended to comply with both Council of Environmental Quality Regulations (40 CFR 1508.27) and CEQA requirements. NEPA requires an examination of the environmental consequences of the project. It addresses significance through examination of the overall effects of the totality of the impacts. Section 1508.27 states that the “significance of an action must be analyzed in several contexts such as society as a whole (human, national), the affected region, the affected interests, and the locality. Significance varies with the setting of the proposed action.” However, CEQA (Section 15065) states there then will be a mandatory finding of significance if a project will “substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal”. The following analysis is presented to comply with CEQA.

Species and habitats will be covered by the plan, to the extent that conservation measures meet the criteria outlined in Section 10(a) of the ESA and Section 2800 et seq. of the California Fish and Game Code. From the perspective of the ESA, the following biological findings must be made for each species under consideration for coverage in the permit:

- Take will be incidental to otherwise lawful activities;
- Take will be minimized and mitigated to the maximum extent practicable; and
- Take will not appreciably reduce the likelihood of the survival and recovery of the species in the wild.

### **Endangered Species Act Adequacy Analysis**

The following criteria are used to determine the adequacy of coverage [as defined through Section 10(a) of the ESA and Section 2800 et seq. of the California Fish and Game Code] of the biological resources in the study area.

- Conservation and management of a major population. A major population is large enough to be self-sustaining, or at least support enough breeding individuals to contribute to overall population stability. Even though some populations may not meet the size criteria, they may still be considered to be a major population if they are important for the long-term survival of the species; for example, habitat linkages.
- Conservation and management of a critical location. Critical locations are areas that must be protected for adequate conservation under the MHCP preserve design. Critical locations may coincide with major populations, but not all major populations are critical locations. Critical locations may include dispersal corridors or breeding sites, as well as areas important for maintaining connectivity with populations to the north, south, and east of the MHCP Plan area.
- Conservation and management of sensitive species known occurrences, if no major populations or critical locations occur in the study area.
- Conservation and management of potential habitat, if no major populations, critical locations, or species known occurrences are in the study area.

Therefore, impacts to vegetation communities, sensitive habitats, or sensitive species will be considered significant if any of the above thresholds are exceeded. Levels of conservation are described by general terms such as substantial, sufficient, moderate, partial, or marginal. Substantial refers to conservation levels typically at 80% and above, sufficient refers to 70 to 79%, moderate refers to 60 to 69%, partial refers to 50 to 59%, and marginal refers to 49% and below. When determining the “adequacy” of conservation for a species, many factors were considered, such as the presence of major populations, critical locations, and/or species occurrences, occupied and potential unoccupied habitat, as well as connectivity, dispersal, and spatial distribution. The conservation analysis of vegetation communities considers not only the amount of habitat conserved in the alternatives, but also the spatial distribution of the habitat within the alternative preserve design.

## *ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES*

---

Factors such as large intact habitat blocks, and linkages between them, were preferred over small, fragmented, disjunct habitat areas with little or no connectivity, and little potential to support ecological processes. A species may only have partial (50 to 59%) conservation of known occurrences, but sufficient (60 to 69%) conservation of habitat, and be considered “adequately” conserved. On the other hand, a species may have substantial (80% and above) conservation of its major population, and moderate (60 to 69%) conservation of its habitat, but the habitat may occur on small, fragmented habitat blocks with little or no connectivity. In this case, the species may be considered inadequately conserved, since the ecological processes required by the species are unlikely to continue in small, fragmented habitat areas. The thresholds to determine the adequacy of conservation may vary from species to species, depending on the amount, condition, connectivity, and spatial distribution of available habitat. The likelihood of a species occurring in the area is also considered. For example, a coastal shorebird, such as the western snowy plover, is unlikely to occur in the Escondido area. This situation results in a “not applicable” (means no impact for purposes of CEQA) finding.

The conservation analysis of vegetation communities considers not only the amount of habitat conserved in the alternatives, but also the spatial distribution of the habitat within the alternative preserve design. Large intact habitat blocks and linkages between them of sufficient size to provide fully functional wildlife movement were preferred to small, fragmented, constrained, disjunct habitat areas. A vegetation community may only have marginal (49% and less) conservation of a specific habitat type, but be considered adequately conserved overall because the specific losses to the vegetation community may all be from small, fragmented, isolated areas. Conversely, a vegetation community may have partial (50 to 59%) conservation, but be considered inadequately conserved overall because the losses to the vegetation community may be within large intact habitat blocks that provide important linkages/wildlife movement areas.

Analysis of the adequacy of conservation for sensitive species was based primarily on the biological analysis report (Ogden and Conservation Biology Institute, November 2000, Public Review Draft MHCP Plan, Volume II), which discusses the species’ status in the study area, major populations and critical locations, known occurrences, habitat, and expected levels of conservation and take. Consideration was given to the conservation of sensitive species’ known locations; however, field surveys and databases are not complete, nor do they include all species and all areas in the MHCP. Some species have dynamic populations and may require additional habitat beyond that which is currently occupied.

Some species have been recorded in particular locations, but their range requirements may extend far beyond the habitat patch that they occupied.

Following the adequacy of conservation analysis, an analysis of the potential impacts as required by CEQA is provided.

#### **4.3.2 MHCP Plan/Take Authorizations/Implementation Agreement**

The definition of major populations and critical locations are species-specific and are discussed in the Biological Goals, Standards, and Guidelines for Multiple Habitat Preserve Design (Ogden 1998).

All tables referenced in this section are located at the end of Section 4.3, due to their extreme length and complexity. Figures are located on the page following their reference.

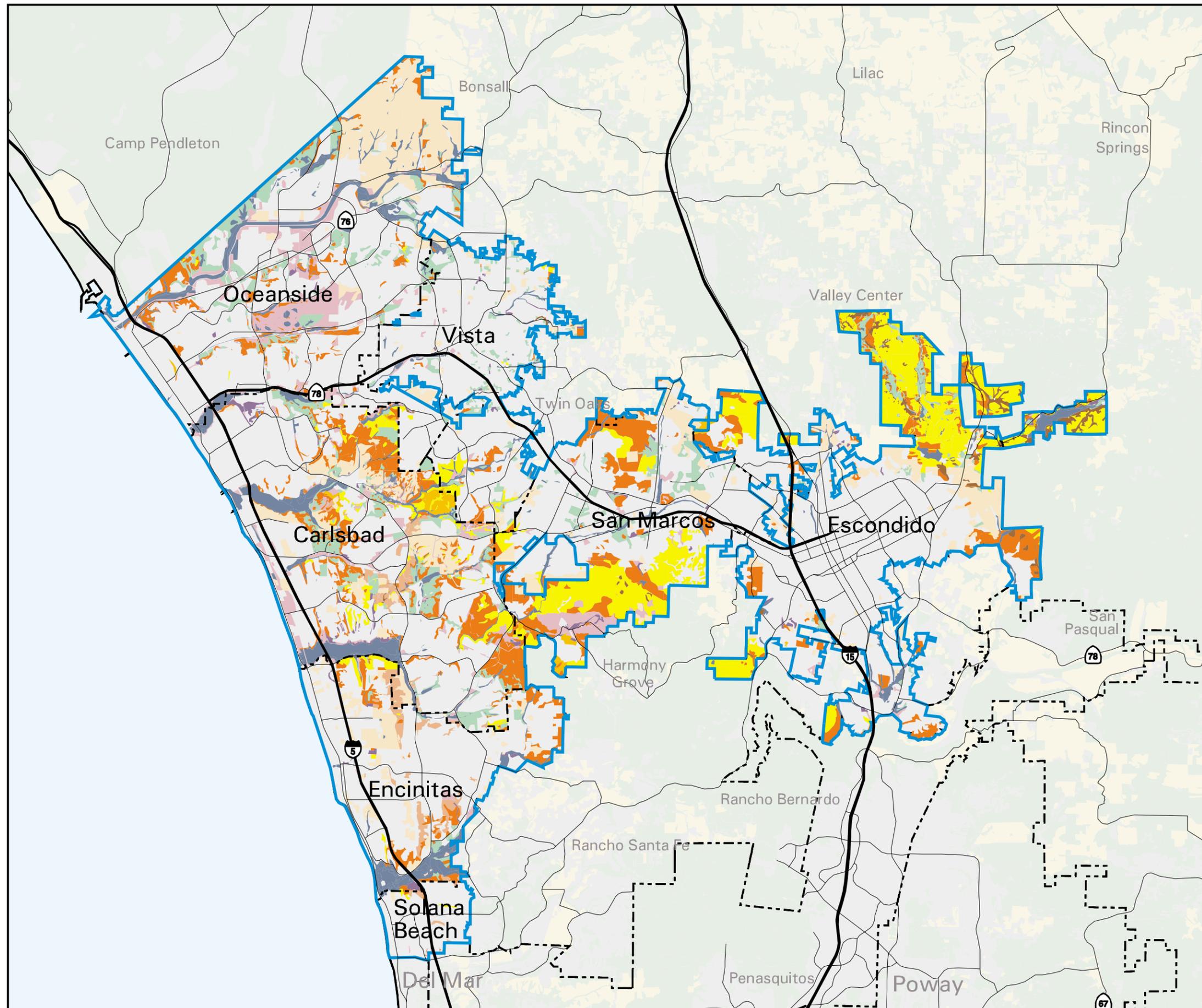
##### **4.3.2.1 FPA Alternative 1**

#### **Vegetation Communities**

Table 4.3-1 lists the proportion of vegetation communities conserved under each alternative, including Alternative 1, the FPA scenario. Figure 4.3-1 shows the existing distribution of vegetation communities in the region, and was discussed in Section 3.3.

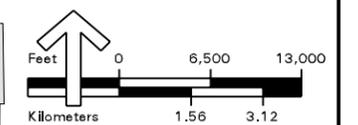
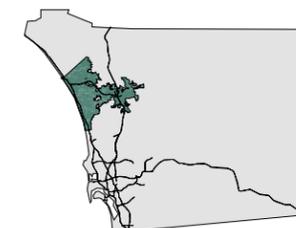
Under the MHCP no net-loss for wetlands policy, 100% of wetland vegetation, both inside and outside the FPA, will be conserved. The 100% conservation level includes mitigation at acceptable ratios. However, only the wetlands inside the FPA will be managed, and 100% conservation does not necessarily mean 100% avoidance of impacts. Wetland vegetation communities include coastal salt marsh, alkali marsh, freshwater marsh, estuarine, saltpan/mudflats, riparian forest, riparian woodland, riparian scrub, vernal pool, disturbed wetland, flood channel, and freshwater. Although there is a low conservation value (18%) of beach communities, because almost all beaches are managed for recreation, and they have little or no natural beach vegetation or habitat value, the wetland vegetation communities will be adequately conserved. Therefore, there will be no significant impacts to wetland vegetation communities under Alternative 1.

**Figure 4.3-1  
Vegetation Communities  
within the  
MHCP Study Area**



- Dunes and Beaches
- Coastal Sage Scrub
- Chaparral
- Southern Maritime Chaparral
- Coastal Sage Scrub/Chaparral Mix
- Grassland
- Riparian/Wetlands
- Oak Woodlands
- Eucalyptus Woodlands
- Agricultural Land
- Disturbed Land
- Developed
- Natural Habitats Outside the MHCP Study Area
- City Boundary
- MHCP Boundary

SOURCE: 1995 Vegetation Inventory (SANDAG)



## ***ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES***

---

Upland communities receiving substantial conservation under the FPA are maritime succulent scrub (91%), southern maritime chaparral (80%), and other oak woodlands (100%). There is only 1 acre of other oak woodlands in the study area which is included in the FPA. The 968 acres of remaining southern maritime chaparral occur on slopes and terraces in the coastal cities of Encinitas and Carlsbad. The remaining 32 acres of maritime succulent scrub occurs on steep, south-facing slopes near lagoons in Carlsbad. Some indirect impacts could occur if these areas are not managed and maintained for biological integrity. There will be no significant impacts (i.e., does not conflict with significance thresholds for sensitive communities) to these communities under Alternative 1, because of the high levels of conservation.

Upland communities receiving sufficient levels of conservation include Engelmann oak woodland (74%) and coast live oak woodland (76%). Of the remaining 230 acres of Engelmann oak woodland, 170 acres (74%) are conserved. Of the remaining 650 acres of coast live oak woodlands habitat, 492 acres (76%) are conserved. The majority of the conserved woodlands occurs in northern Escondido, mixed among chaparral and coastal sage scrub habitat. Some fragmented habitat patches in Carlsbad are also included in the FPA. The intermediate conservation level of these woodland communities avoids significant impacts under Alternative 1, in that adequate conservation will be assured through the implementation process.

The coastal scrub communities are the focus for MHCP conservation, because they are the primary habitat for the gnatcatcher and many other sensitive species. Two coastal scrub communities that receive a moderate level of conservation are chaparral (66%) and coastal sage scrub (60%). The FPA will conserve approximately 5,488 acres of the 8,312 acres of chaparral remaining in the study area.

One significant block of chaparral (500 acres) that is not included in the FPA is in northwest Escondido. This large area of chaparral habitat does not appear to support any major populations, critical locations, or known occurrences of sensitive species. In addition, it does not serve as a link to other habitat areas. Chaparral habitat in San Marcos would be fragmented by potential impacts (25% conservation ratio). Despite the loss of these chaparral habitats at the MHCP level, this impact is not significant because of the lack of sensitive populations.

Approximately 60% (5,171 of 8,570 acres) of coastal sage scrub in the study area is conserved by the FPA. This moderate level of conservation includes large habitat areas in

## *ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES*

---

the eastern portion of Carlsbad, northern San Marcos, eastern Escondido, and smaller patches in the western half of the study area. There are two habitat patches of coastal sage scrub that are not conserved by the FPA. One occurs in south San Marcos (in the vicinity of the chaparral habitat patch that is also not conserved by the FPA), and southeast Carlsbad (this area is already permitted for take). The coastal sage scrub habitat patch in San Marcos supports few known occurrences of sensitive species and does not appear to support major populations or critical locations. However, this coastal sage scrub habitat patch received a very high habitat value according to the composite habitat value analysis, and has the potential to be utilized in the future. In addition, surveys in this area may have been limited. This habitat patch contributes to the dispersal corridor for gnatcatchers and other sensitive species. Because of the critical habitat links, known occurrences of sensitive species, and very high habitat value, the loss of this habitat is a significant impact to the biological resources in this area.

Two communities that are conserved at a partial level by the FPA are coastal sage scrub/chaparral mix, and grasslands. Approximately 462 acres of coastal sage scrub/chaparral mix occur in the study area, but 233 acres (50%) is conserved. Although this habitat area received a very high habitat value, no major populations or critical locations are here. In addition, only a few sensitive species known occurrences have been recorded here. This habitat area is surrounded by chaparral habitat to the north. Although this habitat patch does not currently support any major populations or critical locations, it may contribute to the dispersal corridor and has the potential to be utilized in the future. Therefore, the loss of this habitat area is a significant impact to the biological resources in this area.

Grasslands in the study area account for 5,209 acres, of which 1,597 acres (31%) are poorly conserved by the FPA. The majority of these grasslands are nonnative, typically fragmented, and are scattered throughout the study area. However, they provide important linkages between patches of other vegetation communities. Areas of grasslands not conserved by the FPA are two patches in central Carlsbad and a few small, scattered patches in Oceanside. These grassland habitats do not appear to support any major populations; however, they do support sensitive species occurrences, are critical grassland areas for the burrowing owl and grasshopper sparrow, and provide raptor foraging habitat. These grasslands are important because they provide critical links between habitats and foraging areas. The marginal conservation level of grasslands by the FPA is inadequate and a significant impact.

In summary, under Alternative 1, the FPA scenario, there will be significant CEQA impacts to the coastal sage scrub, coastal sage scrub/chaparral mix vegetation communities, and grasslands.

### **Sensitive Habitats**

Sensitive habitats include upland communities such as southern coastal bluff scrub, maritime succulent scrub, coastal sage scrub, southern maritime chaparral, coastal sage/chaparral mix, perennial grasslands, Engelmann oak woodland, coast live oak woodland, and wetland communities such as southern coastal salt marsh, alkali marsh, freshwater marsh, riparian forest, riparian woodland, riparian scrub, freshwater, estuarine, disturbed wetland, natural flood channel/streambed, and saltpan/mudflats.

Based on the analysis of vegetation communities (Table 4.3-1), sensitive habitats that will be adequately conserved in the FPA include wetland communities such as marshes and riparian habitats, and upland communities such as scrub and woodlands. Sensitive wetland communities include disturbed wetlands, open water, natural flood channels and streambeds, southern coastal salt marsh, alkali marsh, freshwater marsh, southern coast live oak riparian forest, southern cottonwood-willow riparian forest, and southern sycamore-alder riparian forest. This is because of the MHCP no net-loss to wetlands both inside and outside the FPA. Sensitive upland habitats that are conserved at a high level (90 to 100%) include scrub communities such as southern willow scrub, mule fat scrub, coast live oak woodland, Engelmann oak woodland, and coniferous forests such as Torrey pine forest and southern interior cypress forest. Sensitive habitats that are not adequately conserved in the FPA include coastal sage scrub, coastal sage scrub and chaparral mix, and grasslands. Impacts to these habitats are significant.

### **Sensitive Species**

Table 4.3-2 lists the conservation of sensitive species major populations, critical locations, known occurrences, and habitat for the four alternatives. Figure 4.3-2 shows the distribution of sensitive species in the study area, along with the FPA boundaries. The following sensitive plant species have major populations and/or critical locations that are substantially conserved by the FPA: San Diego thorn mint, San Diego ambrosia, Del Mar manzanita, Encinitas baccharis, thread-leaved brodiaea, Del Mar mesa sand aster, San Diego button celery, Orcutt's hazardia, San Diego barrel cactus, Nuttall's lotus, little mousetail, spreading navarretia, California Orcutt grass, Nuttall's scrub oak, and Engelmann oak. Species that

## *ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES*

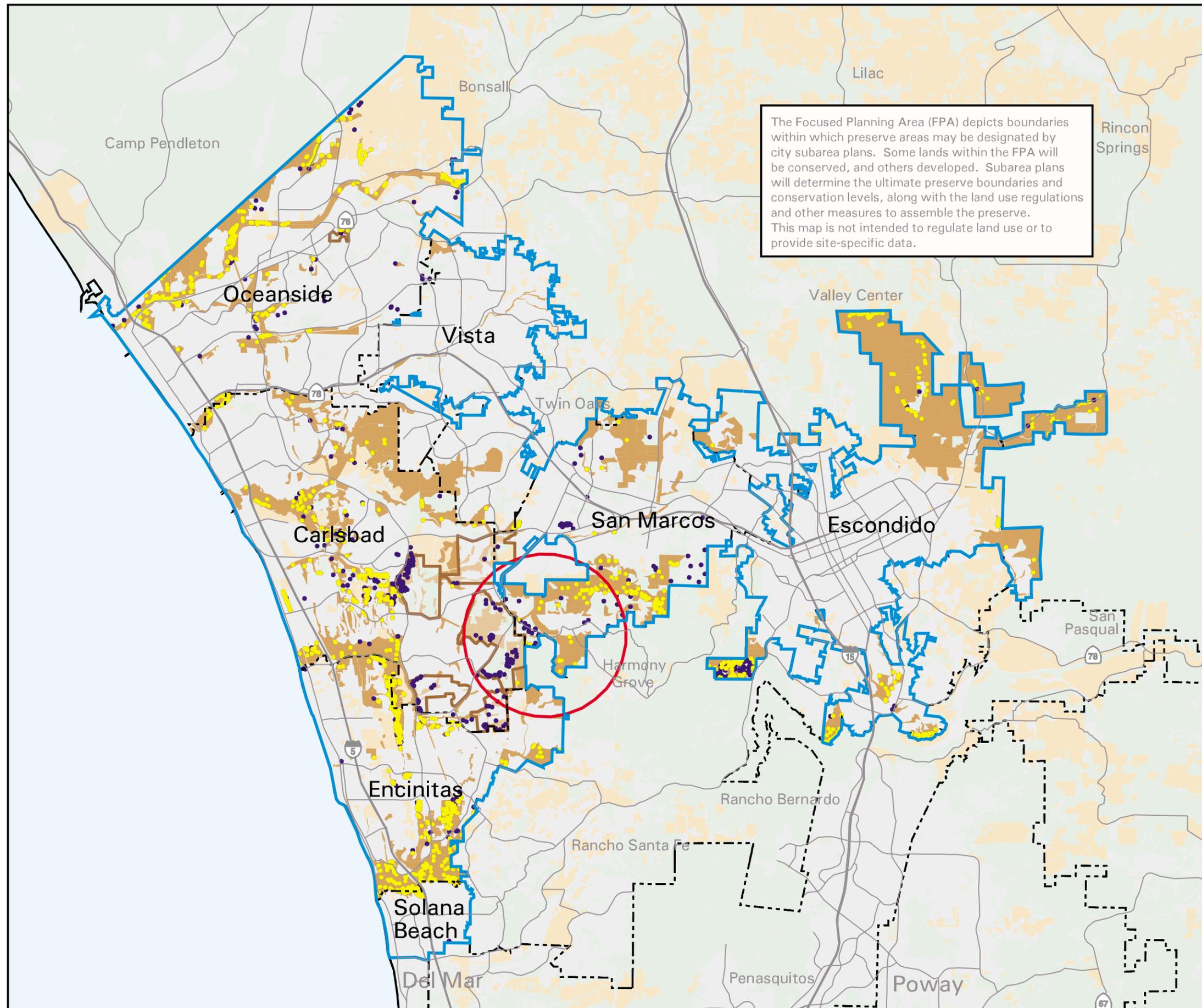
---

have major populations and/or critical locations that are sufficiently conserved include wart stemmed ceanothus, summer-holly, and sticky dudleya. Blochman's dudleya and the San Diego marsh elder have partial (approximately 50%) conservation of their major populations under the FPA. Habitat for the San Diego marsh elder will be substantially conserved and known occurrences will be sufficiently conserved. Blochman's dudleya will be adequately conserved by the FPA, since both known locations and one critical location will be substantially conserved, despite marginal conservation of habitat. The cliff spurge, Parry's tetracoccus, and Torrey pine have no major populations or critical locations in the study area; however, the known locations for the cliff spurge are substantially conserved and its associated habitat is moderately conserved. Known occurrences of Torrey pine are moderately conserved and its associated habitat is sufficiently conserved. A species that has no major populations, critical locations, or known occurrences in the study area is short-leaved dudleya. Although it does not currently occur in the study area, the habitat for this species is sufficiently conserved by the FPA. In addition to the conservation provided by the FPA, the MHCP Narrow Endemic Policy will provide additional conservation to the following species: San Diego thorn-mint, San Diego ambrosia, Del Mar manzanita, Encinitas baccharis, thread-leaved brodiaea, Orcutt's spineflower, Del Mar Mesa sand aster, short-leaved dudleya, San Diego button-celery, Orcutt's hazardia, Nuttall's lotus, little mousetail, spreading navarretia, and California Orcutt grass. Because the FPA provides adequate conservation of major populations, critical locations, known occurrences, habitat, or a combination of these, there are no significant impacts to the sensitive plant species listed above related to adequacy of coverage.

Despite the additional conservation that will be afforded to variegated dudleya by the MHCP Narrow Endemic Policy, the marginal conservation of small, disjunct habitat blocks will not adequately conserve this specie, especially if this species relies on pollinator species. Therefore, under the FPA there will be a significant impact to variegated dudleya.

The following invertebrate species have major populations, known occurrences, and habitat that will be substantially conserved by the FPA: Riverside fairy shrimp, San Diego fairy shrimp, Harbison's dun skipper butterfly, and the salt marsh skipper butterfly. In addition, the Riverside fairy shrimp and San Diego fairy shrimp are endemic species and may receive additional conservation under the FPA Narrow Endemic Policy. Pools supporting the endangered fairy shrimp in San Marcos are located in a Major Amendment Area; thus, they will not receive coverage at this time. There are no known major populations or occurrences

**Figure 4.3-2  
Recorded Locations of  
Sensitive Species\*  
MHCP Study Area and  
FPA Alternatives 1 & 2**



The Focused Planning Area (FPA) depicts boundaries within which preserve areas may be designated by city subarea plans. Some lands within the FPA will be conserved, and others developed. Subarea plans will determine the ultimate preserve boundaries and conservation levels, along with the land use regulations and other measures to assemble the preserve. This map is not intended to regulate land use or to provide site-specific data.

-  Focused Planning Area (FPA)
-  Hardline Preserves on Already Permitted Projects
-  Natural Habitats (Outside FPA)
-  Agricultural Land
-  Developed/Disturbed Land
-  Sensitive Species inside the MHCP Study Area
-  Sensitive Species inside the Focused Planning Areas
-  Projects Already Permitted
-  General Area for Core Gnatcatcher Conservation (USFWS Circle)
-  City Boundary
-  MHCP Boundary

\* Does not include the locations of the California Gnatcatcher  
SOURCE: MHCP Species Database, 1999



Feet 0 6,500 13,000  
Kilometers 1.56 3.12



November 27, 2001

## *ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES*

---

for Hermes copper butterfly; however, habitat for this species is moderately conserved. Habitat conserved for this species includes some large patches of coastal sage scrub that are contiguous with more extensive areas outside the study area; therefore, as long as management goals are implemented, this species will be adequately conserved under the FPA. The Quino checkerspot butterfly has no known major populations, critical locations, or known occurrences in the study area. However, some potential habitat areas conserved in Escondido may benefit this species. It is possible that this species may be extirpated from the study area. Under the FPA, conservation efforts for this species are aimed at viable populations outside the study area. Based on this information, the FPA will adequately conserve this species only with sufficient mitigation outside the study area to maintain viable populations. Because implementation of the MHCP would not result in impacts to these species, there are no significant CEQA impacts.

The southwestern pond turtle is substantially conserved, due to preservation of major populations and critical locations. In addition, the habitat for this species is also substantially conserved. The western spadefooted toad has known occurrences and habitat that is substantially conserved. These two species are adequately conserved by the FPA and will not be significantly impacted.

At first, it appears that two reptiles are only marginally conserved by the FPA. There are no major populations or critical locations for the San Diego horned lizard and the orange-throated whiptail in the study area. However, some populations of the orange-throated whiptail are expected in some of the larger habitat blocks. For the orange-throated whiptail, known occurrences are partially conserved by the FPA. For the San Diego horned lizard, known occurrences are marginally conserved. Although the conservation of known occurrences is low, this is not representative of the actual conservation for these two species. Field surveys conducted for these species were often unequal in intensity, methods, and biased in areas planned for development. Therefore, habitat acreages are a better representation of conservation for these species. Habitat for the San Diego horned lizard is partially conserved, and habitat for the orange-throated whiptail is moderately conserved. The majority of remaining blocks of relatively large habitat patches for these species are conserved by the FPA. As part of the management guidelines for the FPA, additional surveys for these two species should be conducted to determine the extent of adequate population and habitat conservation. These species prefer larger habitat blocks to minimize edge effects. In particular, the San Diego horned lizard relies on native harvester ants for foraging, and is susceptible to exotic species invasions by Argentine ants. The adequacy of conservation for this species relies on the implementation of management practices to

## *ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES*

---

minimize edge effects and Argentine ant populations. The adequacy of conservation for the San Diego horned lizard and the orange-throated whiptail depends on the management of the FPA preserve to benefit these species. If management goals are met, then these species will be adequately conserved by the FPA. Although these species are adequately conserved (as a function of the FPA), there will be significant impacts due to the loss of these species (Table 4.3-3).

The California red-legged frog may be extirpated from the study area, and it is highly unlikely to return to the study area, due to a lack of suitable habitat and the presence of exotic species. The FPA will probably have no effect on the conservation of this species. Although no populations of arroyo southwestern toads occur in the study area, application of the MHCP Narrow Endemic and Critical Location Policies to any newly found populations will contribute to the conservation of this species. In addition, the MHCP no net-loss of wetlands policy will conserve the potential breeding habitat for this species. Due to the monitoring efforts, management plan, and conservation efforts as incorporated in the MHCP for this species, the arroyo southwestern toad will be adequately covered by the FPA.

Avian species that have major populations or critical locations that are substantially conserved by the FPA include white-faced ibis, light-footed clapper rail, western snowy plover, California least tern, southwestern willow flycatcher, least Bell's vireo, yellow-breasted chat, and Belding's savannah sparrow. Habitat for these species is also substantially conserved. These species and associated habitat will be adequately conserved by the FPA. The only known major population for the coastal cactus wren will be substantially conserved by the FPA. Habitat for the coastal cactus wren is sufficiently conserved in terms of acreage; however, this is likely to be overestimated, because the coastal cactus wren prefers cactus patches within coastal sage scrub. Suitable habitat for the coastal cactus wren may be lacking in the study area; however, the substantial conservation of the one major population of this species in the study area will adequately conserve this species. In addition, the coastal cactus wren may receive additional conservation by the application of the MHCP Narrow Endemic Policy and Critical Population Policy.

Species that do not have any major populations, but whose known occurrences are substantially conserved, include the California brown pelican, osprey, peregrine falcon, and the elegant tern. Habitat for these species is also substantially conserved by the FPA. The known occurrences for Bell's sage sparrow are substantially conserved and its associated habitat is moderately conserved by the FPA. The known occurrences for the western bluebird are sufficiently conserved, along with substantial conservation of its associated

## *ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES*

---

habitat. Cooper's hawk known locations are moderately conserved, along with partial conservation of its habitat. The golden eagle is provided partial conservation of its known occurrences and habitat under the FPA. While there may be few to many known occurrences of these species, their known locations and associated habitat are considered to be adequately conserved by the FPA.

Five avian species, the northern harrier, tricolored blackbird, grasshopper sparrow, burrowing owl, and California gnatcatcher, are inadequately conserved under the FPA and will have significant impacts. Due to the marginal conservation of grassland habitats for the grasshopper sparrow, burrowing owl, and tricolored blackbird, and the fragmented state of grasslands in the study area, there will be significant impacts to these species, and the FPA will not adequately conserve them. Under this marginal level of conservation, critical areas for the grasshopper sparrow and burrowing owl will be partially conserved; however, portions of these critical areas will be taken. This marginal level of conservation will protect fragmented habitat, which will not be of substantial benefit to these species. Despite the moderate conservation of known occurrences for these species, the marginal conservation of habitat will result in significant impacts to these species. The FPA does not adequately conserve grasslands, and this will adversely affect these species. This is significant from a CEQA perspective.

Figure 4.3-3 depicts the recorded locations of gnatcatchers. From a regional perspective, the majority of the gnatcatcher population in southern California is in San Diego County. The MHCP study area is a critical link between core gnatcatcher populations to the north and south. Adequate conservation of this corridor is critical to maintain a functional connection between core populations. Given the importance of this corridor, the moderate level of conservation for the gnatcatcher and associated habitat under the FPA preserve is inadequate. Major populations in north, central, and southeast Carlsbad, Escondido, and north Oceanside will be substantially conserved. Major populations in central Carlsbad and central Oceanside will be partially conserved. Some areas have already been permitted for take, and these impacts have been mitigated (this mitigation is not within the scope of this document) and are unavoidable. The major population in south San Marcos (University Commons) will be only marginally conserved. A major population in Escondido (Quail Hills) will not be conserved. Of the 164 acres of coastal sage scrub, University Commons proposes to impact 85% or 126 acres (City of San Marcos 2001). The Quail Hills area is isolated and has disturbance issues. Clearly, this area is not as crucial to gnatcatcher population viability as other critical areas. Critical areas that will be substantially conserved include central Carlsbad, Escondido, and central Oceanside. The critical area in San Marcos will be

## *ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES*

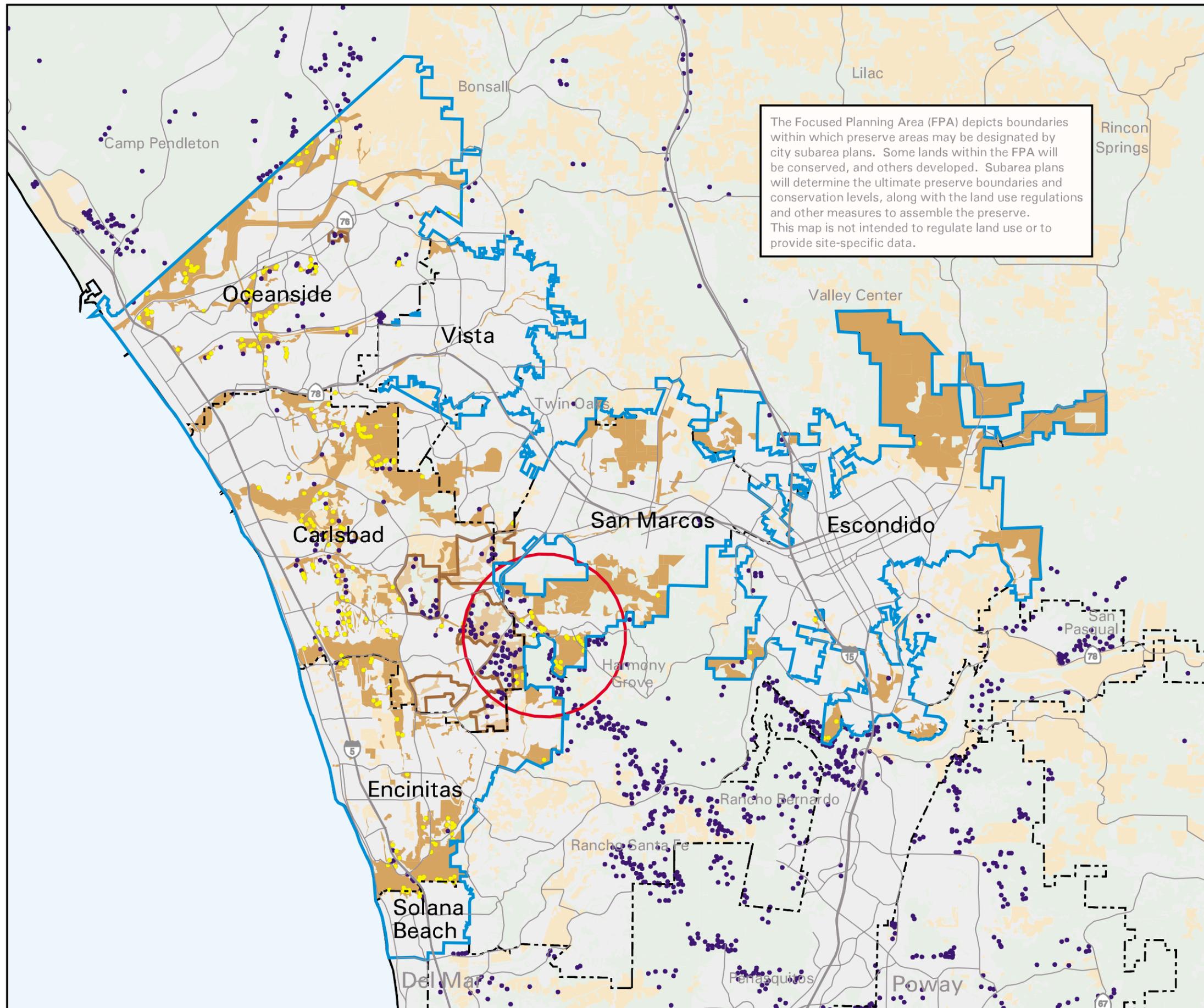
---

marginally conserved. Under the FPA preserve, known gnatcatcher occurrences and associated habitat will be conserved at a moderate level. Approximately 233 (62%) of 378 known occurrences and 5,404 acres (60%) of habitat will be conserved by the FPA. Biological analysis by Ogden (Ogden 2000, Public Review Draft Biological Analysis and Permitting Conditions, Volume II) estimates a carrying capacity of 339 to 421 pairs (62%) for the FPA. Furthermore, the conservation of gnatcatcher habitat value for the medium and high classes is approximately 58%. Given the importance of the gnatcatcher population in San Diego County and the critical corridor in the MHCP study area that links two crucial breeding areas, this moderate level of conservation is not adequate. Therefore, under the FPA preserve, there is inadequate conservation, and this will lead to subsequent significant impacts to the gnatcatcher population and associated habitat.

There are no known major populations or critical locations of any mammals in the subarea; however, based upon conservation of habitat, the Pacific little pocket mouse, northwestern San Diego pocket mouse, the San Diego black-tailed jackrabbit, mountain lion, and the southern mule deer will be adequately conserved. There are no known major populations or recorded locations for Stephens' kangaroo rat, and this species may be extirpated from the plan area. This species will be adequately conserved by the FPA, since the FPA will help maintain the potential for natural recolonization of suitable habitats, and any newly found occupied habitat areas will receive additional conservation under the MHCP Narrow Endemic and Critical Population Policy.

The mountain lion has a large geographical area and is known from Camp Pendleton, Palomar, Carlsbad, San Marcos, Escondido, and other areas in the County. This species probably occupies some of the larger natural habitat areas, such as Daley Ranch in Escondido. Given the large geographical range of this species, the conservation goal is to ensure species persistence within the plan area and contribute to regional population viability by providing suitable movement corridors between larger habitat blocks. The MHCP will achieve this goal by conserving large blocks of habitat contiguous with natural habitat outside of the study area such as Camp Pendleton, north and east of Escondido, and the unincorporated core area. While conservation of an adequate geographic area for this species within the study area may not be feasible (home range of a male mountain lion is typically a minimum of 144,000 acres, and only 26,876 acres of suitable habitat acres exist in the study area, of which approximately 16,392 acres will be conserved), conservation of large habitat blocks contiguous with natural habitat outside the study area will facilitate the conservation

**Figure 4.3-3  
Recorded Locations of  
California Gnatcatchers  
FPA Alternatives 1 & 2**



The Focused Planning Area (FPA) depicts boundaries within which preserve areas may be designated by city subarea plans. Some lands within the FPA will be conserved, and others developed. Subarea plans will determine the ultimate preserve boundaries and conservation levels, along with the land use regulations and other measures to assemble the preserve. This map is not intended to regulate land use or to provide site-specific data.

- Focused Planning Area (FPA)
- Hardline Preserves on Already Permitted Projects
- Natural Habitats (Outside FPA)
- Agricultural Land
- Developed/Disturbed Land
- Known Gnatcatcher Locations
- Gnatcatchers inside the Focused Planning Area
- Projects Already Permitted
- General Area for Core Gnatcatcher Conservation (USFWS Circle)
- City Boundary
- MHCP Boundary

SOURCE: MHCP Species Database, 1999

of suitable corridors between major blocks of habitat that will benefit this species. Due to the limited availability of habitat in the study area, implementation of the MHCP is not expected to substantially increase or decrease the population viability of the mountain lion; however, large blocks of habitat are likely to contribute to the continued persistence of mountain lions in San Diego County.

Mule deer will be adequately conserved through the protection of a few large blocks of habitat that are contiguous with larger blocks outside the study area. Currently, mule deer are fairly common in portions of the MHCP study area where sufficient habitat is present, but are declining in the coastal areas due to habitat fragmentation. While most of the habitat in the interior of the study area is too fragmented to support deer, the large blocks of habitat in Daley Ranch and other areas adjacent to more extensive habitats outside the plan area, such as south San Marcos, southeast Carlsbad, and north Oceanside, are expected to sustain deer. This species will be adequately conserved by the conservation of the large blocks of habitat inside the plan area that will maintain connectivity with habitat outside of the plan area. Conservation of Daley Ranch contributes to the connectivity of habitat north and east of the study area. The conservation of several large habitat blocks will marginally contribute to the persistence of this species in the region.

### **CEQA Significance Analysis for Species**

The possibility exists that a particular species will be conserved under the NCCP guidelines, but be subject to a mandatory finding of significance under CEQA 15065(b). One of the objectives of the NCCP program is to accommodate land use; therefore, it is not feasible to preserve all of the individuals/habitats because it would result in significant impacts to land uses in the communities.

Species listed in Table 4.3-3 include species that are either endangered or threatened under the federal or state acts. CEQA does not define rare species. Therefore, for the purposes of this environmental document, CDFG and the USFWS were consulted in preparing the list of species that should be considered rare (California Department of Fish and Game 2001). Species that are being considered “rare” in this environmental document are categorized as such based upon one or more of the following criteria:

- Species which are known or believed to have an extremely limited distribution, and/or occur in very small or localized populations.

## ***ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES***

---

- Species which are recognized as being potentially worthy of federal or state listing status, based upon limited range (i.e., more or less restricted to coastal southern California or portions thereof), and a generally recognized decline throughout that range. Coastal southern California is broadly considered to include San Diego, Orange, and western Riverside counties.
- Species whose current populations or continued persistence are likely to be significantly reduced by identifiable threats
- California Native Plant Society (CNPS) List 1B plant species and many of the State Species of Special Concern are considered to fit this criteria.
- Species that are Candidate or proposed for endangered or threatened status.

The MHCP Narrow Endemic Species Policy is designed to protect MHCP species that are highly restricted by their habitat requirements, soil requirements, or other ecological factors, and that may have limited but important populations within the MHCP area, such that loss of these populations or their habitat within the MHCP area might jeopardize the continued existence or recovery of that species.

The specific Narrow Endemic Policy is included in Appendix D of the Biological Analysis and Permitting Conditions, Volume II. Within the FPAs, Subarea Plans will practice avoidance of impacts to the extent practicable while still providing a reasonable use of the property. Avoidance and minimization measures include the use of buffer zones around narrow endemic population sites to allow for natural expansion and contraction of populations, persistence of pollinators, and other key ecological functions. To avoid impacts, the project shall be designed to achieve no net-loss of narrow endemic populations, occupied acreages, or population viability within the FPA. In no case shall a city permit more than 5% gross cumulative loss of narrow endemic populations or occupied acreage within the FPA. Each Subarea Plan has established criteria for net loss of narrow endemics; thus, there will be no significant impacts.

Outside of the FPAs, the MHCP has established policies for maximum avoidance, minimization, and mitigation for impacts to populations. In no case shall a city permit more than 20% gross cumulative loss of narrow endemic locations, population numbers, or occupied acreages within the city. Unavoidable impacts shall be mitigated based on species-specific criteria defined in Subarea Plans.

## ***ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES***

---

The following plant species will be protected under the Narrow Endemic Policy: San Diego thorn-mint, San Diego ambrosia, Del Mar manzanita, Encinitas baccharis, thread-leaved brodiaea, Orcutt's spineflower, Del Mar mesa sand aster, short-leaved dudleya, San Diego button-celery, Nuttall's lotus, spreading navarretia, and California Orcutt grass. Additionally, the following animal species will receive protection under the same policy: Riverside fairy shrimp, San Diego fairy shrimp, Harbison's dun skipper, coastal cactus wren, and Pacific pocket mouse.

Given the basis of "no net-loss" as the core goal of the Narrow Endemic Policy, incorporation of the policy will mitigate any impacts to narrow endemic species, and impacts to these species will be less than significant.

Obligate wetland species are those species for which all life requisites provided in the MHCP area are expected to be within open water or wetland vegetation communities, which are subject to the no net-loss policy. Inside the FPA, all points for obligate wetland species are calculated at 100% conserved. This assumes 100% conservation of the habitat and active habitat management to ensure no loss of habitat value to support the species. Areas outside the FPA will be still be afforded protection by the MHCP, CDFG, and ACOE "no net-loss" policies through implementation of Section 404 of the Clean Water Act and Section 1600-1607 of the Streambed Alteration Act.

The following plant species will be protected due to their wetland obligate status: San Diego button-celery, spreading navarretia, and California Orcutt grass. Additionally, the following animal species will be protected due to their wetland obligate status: Riverside fairy shrimp, San Diego fairy shrimp, salt marsh skipper, Southwestern pond turtle, California brown pelican, light-footed clapper rail, elegant tern, Southwestern willow flycatcher, least Bell's vireo, Belding's savannah sparrow, and large-billed savannah sparrow. With the wetland status applied to these species and the accompanying conservation and management program, there will be a less than significant impact on the wetland obligate species.

The following species do not have any known populations in the MHCP area: variegated dudleya, short-leaved dudleya, Hermes copper, Quino checkerspot, and arroyo southwestern toad. During the individual processing for each discretionary action, CEQA review is mandated. Therefore, in the event that these species are subsequently within project sites proposed for development, site-specific impact analysis and mitigation will be required. Through adoption of the MHCP, adequate potential habitat is conserved for these species to

expand their populations. Because of adequate conservation of habitat and the requirement of mitigation if these species are later found within project sites, the MHCP will have a less than significant impact on these species.

The findings of significance for the remaining species in the table were based on several factors. The analysis included the expected level of habitat conserved, the percentage of major populations conserved, expected level of take, and the specific management plans that were required or recommended for the species. These species include: summer-holly, Blochman's dudleya, sticky dudleya, cliff spurge, Nuttall's scrub oak, San Diego horned lizard, orange-throated whiptail, western snowy plover, California least tern, coastal gnatcatcher, and Bell's sage sparrow.

### ***Summer-Holly***

Summer-holly is not a wetland obligate, nor is it designated as a narrow endemic. Under the MHCP, approximately 75% of known locations and 70% of major populations of summer-holly will be conserved. Special conditions set forth for summer-holly include: management of edge effects and fire management. Monitoring of the species will include both short- and long-term strategies. Short-term monitoring will focus on identifying threats to the species' existence, such as invasion of nonnative plants. Long-term monitoring will include tracking population trends, including population size, density, and structure.

Required conservation/management actions include stabilizing preserved populations by removing impacts and potential impacts, developing fire management guidelines, and limiting fire frequency. Based on the results of the monitoring program and/or availability of funding, consideration of a research program for summer-holly has been recommended. Research program topics may include demographic and ecological research, and identifying management techniques for summer-holly.

Given the comprehensive conservation and management program for summer-holly, species viability and persistence will be ensured through mitigation options available both within the MHCP Plan boundaries and external to the MHCP, but within the larger Coastal Sage Scrub NCCP region. However, under CEQA Section 15065(b), plan preparers conclude that a mandatory finding of significance results from any reduction in the number of endangered, rare, or threatened species, even if such an impact is ultimately mitigated by conservation strategies incorporated into the MHCP. Therefore, consistent with this interpretation, the MHCP will result in a significant and unmitigable impact to summer-holly for purposes of

CEQA Section 15065(b), while also acknowledging that such impacts are appropriately mitigated for purposes of the Federal Endangered Species Act and the State Natural Community Conservation Planning Act.

***Blochman's Dudleya***

Blochman's dudleya is a covered species under the MHCP, but is not a narrow endemic or wetland obligate. The analysis shows 50% of the major populations and 75% of the critical locations of this species will be conserved in the study area. The MHCP preserve design and avoidance policies conserve most major and/or critical locations.

The conservation strategy for Blochman's dudleya is to conserve and manage all major populations and critical locations with an amount and configuration of suitable habitat to contribute to species recovery. Monitoring of the species will include both short- and long-term strategies. Short-term monitoring will focus on identifying threats to the species' existence, such as invasion of nonnative plants. Long-term monitoring will include tracking population trends, including population size, density, and structure.

Required conservation and management actions include: protecting species habitat by removing impacts, excluding adverse activities within the preserve area, developing fire management guidelines within conserved areas that limit fire frequency, enhancement of conserved populations that are declining, and restoration of damaged habitat. Based on the results of the monitoring program and/or the availability of funding, implementation of a research program for this species is recommended. Research may include conducting demographic and ecological research, identifying management requirements, reproductive and pollination biology, seed and pollen viability, germination requirements, and specific habitat and management requirements.

Given the comprehensive conservation and management program for Blochman's dudleya, species viability and persistence will be ensured through mitigation options available both within the MHCP Plan boundaries and external to the MHCP, but within the larger Coastal Sage Scrub NCCP region. However, under CEQA Section 15065(b), plan preparers conclude that a mandatory finding of significance results from any reduction in the number of endangered, rare, or threatened species, even if such an impact is ultimately mitigated by conservation strategies incorporated into the MHCP. Therefore, consistent with this interpretation, the MHCP will result in a significant and unmitigable impact to Blochman's dudleya for purposes of CEQA Section 15065(b), while also acknowledging that such

impacts are appropriately mitigated for purposes of the Federal Endangered Species Act and the State Natural Community Conservation Planning Act.

***Sticky Dudleya***

Sticky dudleya is a covered species under the MHCP, but is not a narrow endemic or wetland obligate. Approximately 75% of known population location points and 74% of the one major and critical population will be conserved under the MHCP. The conservation strategy for sticky dudleya is to conserve and manage all major populations and critical locations with an amount and configuration of suitable habitat to contribute to species recovery. Monitoring of the species will include both short- and long-term strategies. Short-term monitoring will focus on identifying threats to the species' existence, such as invasion of nonnative plants. Long-term monitoring will include tracking population trends, including population size, density, and structure.

Required conservation and management actions include: protecting species habitat by removing impacts, excluding adverse activities within the preserve area, developing fire management guidelines within conserved areas that limit fire frequency, enhancement of conserved populations that are declining, and restoration of damaged habitat. Based on the results of the monitoring program and/or the availability of funding, implementation of a research program for this species is recommended. Research may include conducting demographic and ecological research, identifying management requirements, reproductive and pollination biology, seed and pollen viability, germination requirements, and specific habitat and management requirements.

Given the comprehensive conservation and management program for sticky dudleya, species viability and persistence will be ensured through mitigation options available both within the MHCP Plan boundaries and external to the MHCP, but within the larger Coastal Sage Scrub NCCP region. However, under CEQA Section 15065(b), plan preparers conclude that a mandatory finding of significance results from any reduction in the number of endangered, rare, or threatened species, even if such an impact is ultimately mitigated by conservation strategies incorporated into the MHCP. Therefore, consistent with this interpretation, the MHCP will register a significant and unmitigable impact to sticky dudleya for purposes of CEQA Section 15065(b), while also acknowledging that such impacts are appropriately mitigated for purposes of the Federal Endangered Species Act and the State Natural Community Conservation Planning Act.

*Cliff Spurge*

One known population of cliff spurge exists in the MHCP area (Carlsbad), and will be conserved. The MHCP area does not appear to support any major populations of this species, nor do historical records indicate that the species was common in the area. Take of this species due to implementation of the MHCP is not expected to be significant. Approximately 69% of the suitable habitat for this species will be conserved, including 95% of maritime succulent scrub. Additional conditions of the MHCP are designed to ensure the viability of the existing population of cliff spurge. Monitoring of the species will include both short- and long-term strategies. Short-term monitoring will focus on identifying threats to the species' existence, such as invasion of nonnative plants. Long-term monitoring will include tracking population trends, including population size, density, and structure.

Additional conservation and management actions will be required. These include stabilizing preserved populations by removing impacts or potential impacts, excluding adverse activities within the preserve area, and developing fire management guidelines that limit fire frequency. If necessary, a research program for cliff spurge will be implemented. Potential research programs could focus on reproductive and pollination biology, specific habitat requirements, and management techniques for maintaining viable populations.

Given the comprehensive conservation and management program for cliff spurge, species viability and persistence will be ensured in a larger regional context. This is a goal of the NCCP; thus, impacts are less than significant. However, under CEQA 15065(b), a mandatory finding of significance must occur for any reduction in the number of endangered, rare, or threatened species. Therefore, the MHCP will represent a significant and unmitigable impact to cliff splurge.

*Nuttall's Scrub Oak*

The Nuttall's scrub oak is a covered species under the MHCP, but is not a narrow endemic or wetland obligate. Approximately 93% of major and critical locations will be conserved within the study area. Additional conditions must be met by the MHCP to adequately conserve this species. Specific conditions require conservation of major populations, a critical location at Agua Hedionda in Carlsbad, management of edge effects, and implementation of fire management plans. Monitoring of the species will include both short- and long-term strategies. Short-term monitoring will focus on identifying threats to the

species' existence, such as invasion of nonnative plants. Long-term monitoring will include tracking population trends, including population size, density, and structure.

Additional conservation and management actions will be required. These actions include stabilization of preserved populations by removing impacts or potential impacts, excluding adverse activities within the preserve area, developing fire management guidelines within conserved areas, and limiting fire frequency. There is also a need for surveys to better define the range of this species within the MHCP study area. Finally, based on the results of the monitoring program and/or availability of funding, it is recommended that a research program for Nuttall's scrub oak be undertaken.

Given the comprehensive conservation and management program for Nuttall's scrub oak, species viability and persistence will be ensured through mitigation options available both within the MHCP Plan boundaries and external to the MHCP, but within the larger Coastal Sage Scrub NCCP region. However, under CEQA Section 15065(b), plan preparers conclude that a mandatory finding of significance results from any reduction in the number of endangered, rare, or threatened species, even if such an impact is ultimately mitigated by conservation strategies incorporated into the MHCP. Therefore, consistent with this interpretation, the MHCP will result in a significant and unmitigable impact to Nuttall's scrub oak for purposes of CEQA Section 15065(b), while also acknowledging that such impacts are appropriately mitigated for purposes of the Federal Endangered Species Act and the State Natural Community Conservation Planning Act.

### ***San Diego Horned Lizard***

The San Diego horned lizard is a covered species under the MHCP, but is not a narrow endemic or wetland obligate. Approximately 57% of potential horned lizard habitat is conserved, and 38% of known locations are conserved. The conservation strategy for this species includes conserving large blocks of habitat within the planning area and also maintaining contiguity with large blocks of habitat outside the plan area. Monitoring and management will enhance the viability of the horned lizard. Conserved populations and potential habitat will be monitored to detect changes in population size and habitat quantity and quality.

Conservation and management actions may be required to ensure the species' persistence within the plan area, and contribute to regional species viability and further recovery. Any project that will have an unavoidable direct or indirect impact to horned lizards or their

## ***ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES***

---

habitat shall be required to compensate by one or more of the following actions: develop an adaptive plan that integrates the prescribed conservation and management actions with the species and habitat monitoring program, remove impacts or threats of impacts, restrict activities within the preserve that could degrade horned lizards habitat, minimize and manage effects from introduced ant species, prohibit or minimize landscaping or irrigation not associated with native habitat restoration, and monitor to identify population declines and potential sources for declines.

Additional conservation actions have been suggested based on the availability of funding: coordinate management with other horned lizards research programs, implement a program of introducing individuals into formerly occupied and potential habitat to initiate new populations, and selectively translocate individuals from nearby larger populations.

Given the comprehensive conservation and management program for San Diego horned lizard, species viability and persistence will be ensured through mitigation options available both within the MHCP Plan boundaries and external to the MHCP, but within the larger Coastal Sage Scrub NCCP region. However, under CEQA Section 15065(b), plan preparers conclude that a mandatory finding of significance results from any reduction in the number of endangered, rare, or threatened species, even if such an impact is ultimately mitigated by conservation strategies incorporated into the MHCP. Therefore, consistent with this interpretation, the MHCP will result in a significant and unmitigable impact to San Diego horned lizard for purposes of CEQA Section 15065(b), while also acknowledging that such impacts are appropriately mitigated for purposes of the Federal Endangered Species Act and the State Natural Community Conservation Planning Act.

### ***Orange-Throated Whiptail***

The orange-throated whiptail is a covered species under the MHCP, but is not a narrow endemic or wetland obligate. Approximately 60% of potential whiptail habitat is conserved, and 55% of known locations are conserved. The conservation strategy for this species includes conserving large blocks of habitat within the planning area, and also maintaining contiguity with large blocks of habitat outside the plan area. Monitoring and management will enhance the viability of the whiptail. Conserved populations and potential habitat will be monitored to detect changes in population size and habitat quantity and quality.

Conservation and management actions may be required to ensure the species' persistence within the plan area, and contribute to regional species viability and further recovery. Any

project that will have unavoidable direct or indirect impacts to whiptails or their habitats shall be required to compensate by one or more of the following actions: develop an adaptive plan that integrates the prescribed conservation and management actions with the species and habitat monitoring program, remove impacts or threats of impacts, restrict activities within the preserve that could degrade whiptail habitat, minimize and manage effects from introduced ant species, prohibit or minimize landscaping or irrigation not associated with native habitat restoration and monitor population to identify declining populations and potential sources for declines. Additional conservation actions have been suggested based on the availability of funding: coordinate management with other whiptail research programs, implement a program of introducing individuals into formerly occupied and potential habitat to initiate new populations, and selectively translocate individuals from nearby larger populations.

Given the comprehensive conservation and management program for orange-throated whiptail, species viability and persistence will be ensured through mitigation options available both within the MHCP Plan boundaries and external to the MHCP, but within the larger Coastal Sage Scrub NCCP region. However, under CEQA Section 15065(b), plan preparers conclude that a mandatory finding of significance results from any reduction in the number of endangered, rare, or threatened species, even if such an impact is ultimately mitigated by conservation strategies incorporated into the MHCP. Therefore, consistent with this interpretation, the MHCP will result in a significant and unmitigable impact to orange-throated whiptail for purposes of CEQA Section 15065(b), while also acknowledging that such impacts are appropriately mitigated for purposes of the Federal Endangered Species Act and the State Natural Community Conservation Planning Act.

### ***Western Snowy Plover***

The western snowy plover is a covered species under the MHCP, but is not a narrow endemic or wetland obligate. Breeding habitat for this species is currently very limited within the project area and is conserved by the MHCP. Minimal beach habitat (18%) is conserved within the MHCP. Beach habitat represents a possible breeding location for this species. Considering recreational uses at the beaches will preclude snowy plover nesting, minimal protection of beach habitat is not expected to impact the viability of this species. Maximum levels of conservation of lagoon and marsh ecological communities will keep the level of take for this species very low. The design of the MHCP preserve will not adversely affect connectivity of the snowy plover habitat. The habitat of this species is naturally patchy.

## ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES

The conservation strategy for the snowy plover includes conserving the existing major populations, critical locations, and additional breeding and wintering habitats. Monitoring and management will enhance the viability of the snowy plover. Conserved populations and potential habitat will be monitored to detect changes in population size and habitat quantity and quality. Monitoring will also be designed to detect increases in native and nonnative predator populations and nest predation rates, so that necessary predator control actions can be initiated.

Required conservation and management actions for the snowy plover include restriction of activities within the preserve that could impact the species population. Negative impacts include human disturbance, off-road vehicles, and predation of adults and nests by domestic animals and introduced predators. The use of fencing during breeding season will restrict potential threatening human activity. For projects that impact this species via take, suitable snowy plover habitat will be created. Periodic monitoring of species habitat will assist in identifying threats to species persistence and to look for trends that may suggest declining populations. Based on the results of the monitoring program and/or availability of funding, it is recommended that genetic and demographic studies be undertaken with the conserved plover population. Given the fact that 90% of major populations of this species are conserved, it is provided “Fully Protected” status by CDFG which precludes lethal take, combined with the comprehensive monitoring and management program, it is anticipated that impacts to the Western snowy plover will be less than significant.

### *California Least Tern*

The California least tern, which will be protected under the MHCP, is not a narrow endemic or wetland obligate. Over 95% of suitable habitat, including 100% of critical lagoon habitats and major populations will be conserved. The least tern is a “fully” protected species; thus, no lethal take of individuals or active nests is allowed.

Monitoring and conservation management strategies will be implemented to ensure the viability of the least tern. Periodic monitoring of conserved populations and potential habitats will occur at a frequency to detect change in population size and habitat. Monitoring will also detect increases of native or nonnative predator populations and nest predation rates, so that necessary predator control actions can be initiated. Conservation and management actions that will be required as part of the MHCP include: fencing of habitat, restricting of activities that could adversely impact the least tern population, active predator control, restricting human activity during breeding season, enhancing habitat to induce the initiation

of new breeding colonies, managing vegetation at existing nesting areas, continued monitoring of breeding colonies, and identifying threats to species persistence.

Considering that 100% of major populations of this species are conserved, combined with the comprehensive monitoring and management program, impacts to the species will be less than significant.

***Bell's Sage Sparrow***

Bells' sage sparrow is a covered species under the MHCP, but is not a narrow endemic or wetland obligate. Existing development patterns have greatly reduced suitable habitat for the sage sparrow, which requires large blocks of habitat to persist. Approximately 83% of the recorded point locations for this species will be conserved under the plan. The conservation strategy for this species includes conserving existing suitable habitat for the sage sparrow. Conservation of the 400- to 500-acre coastal sage scrub core will provide a core breeding ground for the sage sparrow. Additionally, the design of the preserve will protect stepping-stone/linkage corridors to other sage sparrow populations and suitable habitats, particularly the North County MHCOSP. Through implementation of the MHCP preserve, sage sparrow populations at a regional level will be maintained. Additionally, careful monitoring and management will maintain the viability of the sage sparrow. Conserved populations and potential habitat will be monitored to detect changes in population size and habitat quantity and quality.

Furthermore, required conservation and management actions will ensure the species' persistence within the plan area. Any project that will have unavoidable direct or indirect impacts to sage sparrows or their habitat shall be required to compensate by one of more of the following actions: restriction of activities within the preserve that could degrade species habitat (including habitat alteration, spraying of pesticides, brown-headed cowbird parasitism, and introduction of predators), restricting human access to areas known to support large concentrations of sage sparrows during breeding season, identification and monitoring of major populations within the MHCP area, and identification of threats to species persistence. Based on the results of the monitoring program, and/or availability of funding, it may be recommended that studies be conducted to define local demographic and habitat requirements.

With the implementation of the required conservation and management actions, as well as the consideration of preserve design including a critical core breeding area for sage sparrows habitat, impacts to this species will be less than significant.

In summary, under Alternative 1, there will be significant impacts to six sensitive plant species: summer-holly, Blochman's dudleya, sticky dudleya, Nuttall's scrub oak, Parry's tetraococcus, and variegated dudleya. The five sensitive avian species that will have inadequate conservation and subsequent significant impacts are the northern harrier, grasshopper sparrow, burrowing owl, tricolored blackbird, and the California gnatcatcher. There will also be significant impacts to two reptiles: San Diego horned lizard and orange-throated whiptail.

#### **4.3.2.2 FPA Alternative 2**

The preserve design for Alternative 2, the proposed MHCP, begins with the area encompassed in the FPA for Alternative 1, and adds 400 to 500 acres of high-quality, contiguous coastal sage scrub that is currently occupied by gnatcatchers, capable of supporting 16-23 pairs of breeding California gnatcatchers. This core gnatcatcher breeding area is located in the unincorporated area south of San Marcos and east of Carlsbad. This area is referred to as the core gnatcatcher conservation area. Figure 4.3-4 shows the preserve areas for the FPA and BCLA, along with a circle indicating the core gnatcatcher conservation area. Discussions of vegetation communities, sensitive species, and sensitive species for Alternative 2 are limited to the differences between Alternative 1 and Alternative 2 in this area. This is because the FPA preserve is the same for both alternatives, except in the general area for core gnatcatcher conservation.

Under Alternative 2, increased conservation is expected from additional contributions, which are roughly estimated in Table 4.3-1. The key to Alternative 2 is the additional conservation in the unincorporated area southeast of the MHCP boundary. The unincorporated core area will add 400 to 500 acres of high-quality, contiguous coastal sage scrub that is occupied by gnatcatchers to the preserve system under Alternative 2. Due to the logistics of purchasing land by the parcel, other habitats and additional acreage will be added to the preserve along with the 400 to 500 acres of coastal sage scrub.

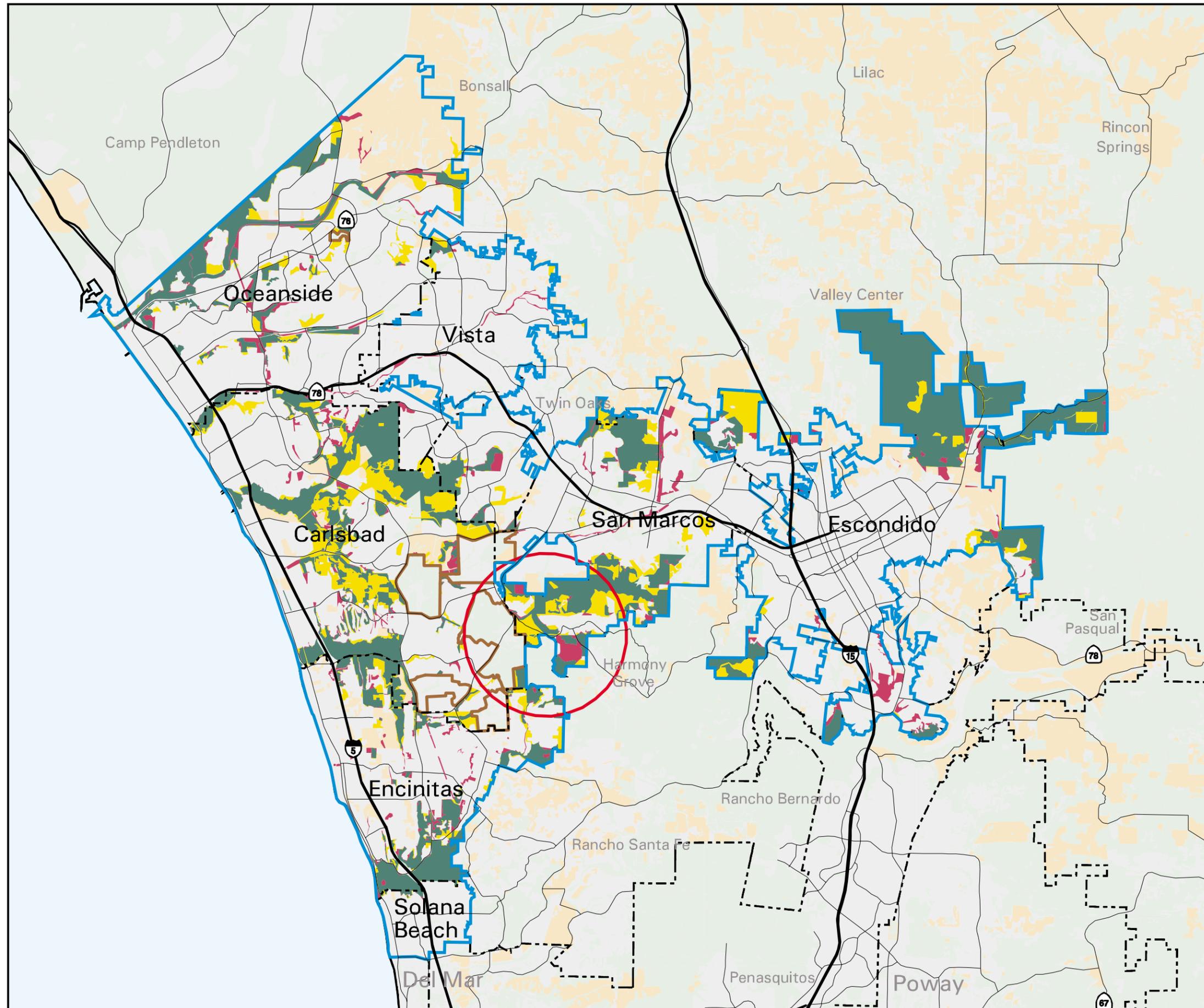
### **Vegetation Communities**

The conservation of vegetation communities under Alternative 2 will be similar to Alternative 1, with the addition of 400 to 500 acres of high-quality, contiguous coastal sage scrub that is occupied by gnatcatchers in the Carlsbad/San Marcos area. Table 4.3-1 lists the acres of vegetation conserved in the FPA under Alternative 2. The precise location of the 400 to 500 acres of high-quality, contiguous coastal sage scrub to be conserved is unknown, but the general area where the conservation will occur is just outside the FPA study area, near the southeastern boundary of Carlsbad and the southwestern boundary of San Marcos. This general area of coastal sage scrub received a very high and high habitat value according to the composite habitat value analysis (Ogden 2000). The additional conservation of 400 to 500 acres of high-quality, contiguous coastal sage scrub is crucial, because it increases the conservation of coastal sage scrub (although not directly in the study area, so the percent of coastal sage scrub conserved in the study area remains the same), and more importantly, enhances the habitat connectivity between local habitat patches and regional species populations. For Alternative 2, the FPA enhanced conservation/acquisition scenario, the additional conservation of high-quality, contiguous coastal sage scrub habitat has avoided the significant impacts to the coastal sage scrub community. However, there are still areas of remaining grasslands in the study area (previously discussed) that are not adequately conserved. Therefore, there are still significant impacts to the grassland habitat due to inadequate conservation by the FPA.

### **Sensitive Habitats**

Sensitive habitats include upland communities such as southern coastal bluff scrub, maritime succulent scrub, coastal sage scrub, southern maritime chaparral, coastal sage/chaparral mix, perennial grasslands, Engelmann oak woodland, coast live oak woodland, and wetland communities such as southern coastal salt marsh, alkali marsh, freshwater marsh, riparian forest, riparian woodland, riparian scrub, freshwater, estuarine, disturbed wetland, natural flood channel/streambed, and saltpan/mudflats. Conservation of sensitive habitats for Alternative 2 is the same as for Alternative 1, with the addition of 400 to 500 acres of high-quality, contiguous coastal sage scrub that is currently occupied by gnatcatchers. This addition enhances the conservation of this sensitive habitat. There are no significant impacts to sensitive habitats for Alternative 2.

**Figure 4.3-4  
 Focused Planning Area  
 (FPA) and Biological Core  
 and Linkage Area (BCLA)  
 MHCP Study Area**



- Inside the BCLA and FPA
- Inside the FPA and not the BCLA
- Inside the BCLA and not the FPA
- Natural Habitats (Outside the FPA & BCLA)
- Agricultural Land
- Developed/Disturbed Land
- Projects Already Permitted
- General Area for Core Gnatcatcher Conservation (USFWS Circle)
- City Boundary
- MHCP Boundary

SOURCE: Local Jurisdictions in MHCP Study Area and Ogden Environmental

Feet

0 6,500 13,000

Kilometers

1.56 3.12

**SANDAG**

November 27, 2001

## **Sensitive Species**

Conservation of sensitive species for Alternative 2 is the same as for Alternative 1, with the additional 400 to 500 acres of high-quality, contiguous coastal sage scrub that is occupied by 16-23 pairs of breeding California gnatcatchers, which will ultimately enhance gnatcatcher conservation. Table 4.3-2 lists the expected conservation levels of sensitive species known occurrences, habitat, major populations, and critical locations for each alternative, particularly Alternative 2. The general core gnatcatcher conservation area is indicated by a red circle on Figure 4.3-2.

Because the precise location of the additional 400 to 500 acres of high-quality, contiguous coastal sage scrub has not yet been determined, it is impossible to state exactly how many gnatcatcher pairs will be conserved. However, the addition of these 400 to 500 acres of high-quality, contiguous coastal sage scrub will not only enhance gnatcatcher conservation; it is considered to be a core breeding area, and will contribute to the corridor system through the study area. Other species that occur in the vicinity of this core gnatcatcher conservation area and may benefit from the additional conservation include summer-holly and the San Diego horned lizard. Under Alternative 2, the gnatcatcher habitat conservation level will increase slightly, but still remains moderate.

Gnatcatcher conservation will be enhanced by the addition of the core conservation area; however, there will still be significant impacts to the major populations and critical locations discussed in Alternative 1. The partial and marginal conservation of major populations and critical areas discussed in Alternative 1 are applicable to Alternative 2, and conservation of these areas remains inadequate. However, the addition of at least 400 to 500 acres of high-quality, contiguous coastal sage scrub that is currently occupied by gnatcatchers in the unincorporated area will help to avoid the significant impacts to the major populations inside the FPA study area. Additional mitigation will occur through habitat restoration of at least 338 acres within the FPA. The conservation of at least 400 to 500 acres of high-quality, contiguous coastal sage scrub that is currently occupied by gnatcatchers in the unincorporated area, in conjunction with the expected habitat restoration of at least 338 acres of coastal sage scrub within the FPA, will avoid significant impacts to the gnatcatcher, and enhance the conservation of this species within the FPA.

Four avian species, the northern harrier, tricolored blackbird, grasshopper sparrow, and burrowing owl, are inadequately conserved under FPA Alternative 2, and will have significant impacts. Due to the marginal conservation of grassland habitats for the

## ***ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES***

---

grasshopper sparrow, burrowing owl, and tricolored blackbird, and the fragmented state of grasslands in the study area, there will be significant impacts to these species, and the FPA will not adequately conserve them. The additional conservation of 400 to 500 acres of high-quality, contiguous coastal sage scrub will not increase conservation of these grassland species. Under this marginal level of conservation, critical areas for the grasshopper sparrow and burrowing owl will be partially conserved; however, portions of these critical areas will be taken. This marginal level of conservation will protect fragmented habitat, which will not be of substantial benefit to these species. Because of the moderate conservation of known occurrences for these species and the marginal conservation of habitat, there will be significant impacts to these species. The FPA Alternative 2 does not adequately conserve grasslands, and this will adversely affect these species.

One plant species will still have significant impacts under FPA Alternative 2: variegated dudleya. This species still remains inadequately conserved under FPA Alternative 2, due to marginal conservation of its associated habitats. The majority of the conserved habitat in the FPA occurs in small, disjunct blocks that are unlikely to support variegated dudleya and some of its associated pollinator species. Due to the marginal habitat conservation for this species, it still remains inadequately conserved under FPA Alternative 2 and will have a significant impact.

### **CEQA Significance Analysis for Species**

The possibility exists that a particular species will be conserved under the NCCP guidelines, but be subject to a mandatory finding of significance under CEQA 15065(b). One of the objectives of the NCCP program is to accommodate land use; therefore, it is not feasible to preserve all of the individuals/habitats because it would result in significant impacts to land uses in the communities.

Species listed in Table 4.3-3 include species that are either endangered or threatened under the federal or state acts. CEQA does not define rare species. Therefore, for the purposes of this environmental document, CDFG and the USFWS were consulted in preparing the list of species that should be considered rare (California Department of Fish and Game 2001). Species that are being considered “rare” in this environmental document are categorized as such based upon one or more of the following criteria:

- Species which are known or believed to have an extremely limited distribution, and/or occur in very small or localized populations.

- Species which are recognized as being potentially worthy of federal or state listing status, based upon limited range (i.e., more or less restricted to coastal southern California or portions thereof), and a generally recognized decline throughout that range. Coastal southern California is broadly considered to include San Diego, Orange, and western Riverside counties.
- Species whose current populations or continued persistence are likely to be significantly reduced by identifiable threats.
- California Native Plant Society (CNPS) List 1B plant species and many of the State Species of Special Concern are considered to fit this criteria.
- Species that are Candidate or proposed for endangered or threatened status.

The MHCP Narrow Endemic Species Policy is designed to protect MHCP species that are highly restricted by their habitat requirements, soil requirements, or other ecological factors, and that may have limited but important populations within the MHCP area, such that loss of these populations or their habitat within the MHCP area might jeopardize the continued existence or recovery of that species.

The specific Narrow Endemic Policy is included in Appendix D of the Biological Analysis and Permitting Conditions, Volume II. Within the FPAs, Subarea Plans will practice avoidance of impacts to the extent practicable while still providing a reasonable use of the property. Avoidance and minimization measures include the use of buffer zones around narrow endemic population sites to allow for natural expansion and contraction of populations, persistence of pollinators, and other key ecological functions. To avoid impacts, the project shall be designed to achieve no net-loss of narrow endemic populations, occupied acreages, or population viability within the FPA. In no case shall a city permit more than 5% gross cumulative loss of narrow endemic populations or occupied acreage within the FPA. Each Subarea Plan has established criteria for net loss of narrow endemics; thus, their will be no significant impacts.

Outside of the FPAs, the MHCP has established policies for maximum avoidance, minimization, and mitigation for impacts to populations. In no case shall a city permit more than 20% gross cumulative loss of narrow endemic locations, population numbers, or

## ***ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES***

---

occupied acreages within the city. Unavoidable impacts shall be mitigated based on species-specific criteria defined in Subarea Plans.

The following plant species will be protected under the Narrow Endemic Policy: San Diego thorn-mint, San Diego ambrosia, Del Mar manzanita, Encinitas baccharis, thread-leaved brodiaea, Orcutt's spineflower, Del Mar mesa sand aster, short-leaved dudleya, San Diego button-celery, Nuttall's lotus, spreading navarretia, and California Orcutt grass. Additionally, the following animal species will receive protection under the same policy: Riverside fairy shrimp, San Diego fairy shrimp, Harbison's dun skipper, coastal cactus wren, and Pacific pocket mouse.

Given the basis of "no net-loss" as the core goal of the Narrow Endemic Policy, incorporation of the policy will mitigate any impacts to narrow endemic species, and impacts to these species will be less than significant.

Obligate wetland species are those species for which all life requisites provided in the MHCP area are expected to be within open water or wetland vegetation communities, which are subject to the no net-loss policy. Inside the FPA, all points for obligate wetland species are calculated at 100% conserved. This assumes 100% conservation of the habitat and active habitat management to ensure no loss of habitat value to support the species. Areas outside the FPA will be still be afforded protection by the MHCP, CDFG, and ACOE "no net-loss" policies through implementation of Section 404 of the Clean Water Act and Section 1600-1607 of the Streambed Alteration Act.

The following plant species will be protected due to their wetland obligate status: San Diego button-celery, spreading navarretia, and California Orcutt grass. Additionally, the following animal species will be protected due to their wetland obligate status: Riverside fairy shrimp, San Diego fairy shrimp, salt marsh skipper, Southwestern pond turtle, California brown pelican, light-footed clapper rail, elegant tern, Southwestern willow flycatcher, least Bell's vireo, Belding's savannah sparrow, and large-billed savannah sparrow. With the wetland status applied to these species and the accompanying conservation and management program, there will be a less than significant impact on the wetland obligate species.

The following species do not have any known populations in the MHCP area: variegated dudleya, short-leaved dudleya, Hermes copper, Quino checkerspot, and arroyo southwestern toad. During the individual processing for each discretionary action, CEQA review is mandated. Therefore, in the event that these species are subsequently within project sites

proposed for development, site-specific impact analysis and mitigation will be required. Through adoption of the MHCP, adequate potential habitat is conserved for these species to expand their populations. Because of adequate conservation of habitat and the requirement of mitigation if these species are later found within project sites, the MHCP will have a less than significant impact on these species.

The findings of significance for the remaining species in the table were based on several factors. The analysis included the expected level of habitat conserved, the percentage of major populations conserved, expected level of take, and the specific management plans that were required or recommended for the species. These species include: summer-holly, Blochman's dudleya, sticky dudleya, cliff spurge, Nuttall's scrub oak, San Diego horned lizard, orange-throated whiptail, western snowy plover, California least tern, coastal gnatcatcher, and Bell's sage sparrow.

### ***Summer-Holly***

Summer-holly is not a wetland obligate, nor is it designated as a narrow endemic. Under the MHCP, approximately 75% of known locations and 70% of major populations of summer-holly will be conserved. Special conditions set forth for summer-holly include: management of edge effects and fire management. Monitoring of the species will include both short- and long-term strategies. Short-term monitoring will focus on identifying threats to the species' existence, such as invasion of nonnative plants. Long-term monitoring will include tracking population trends, including population size, density, and structure.

Required conservation/management actions include stabilizing preserved populations by removing impacts and potential impacts, developing fire management guidelines, and limiting fire frequency. Based on the results of the monitoring program and/or availability of funding, consideration of a research program for summer-holly has been recommended. Research program topics may include demographic and ecological research, and identifying management techniques for summer-holly.

Given the comprehensive conservation and management program for summer-holly, species viability and persistence will be ensured through mitigation options available both within the MHCP Plan boundaries and external to the MHCP, but within the larger Coastal Sage Scrub NCCP region. However, under CEQA Section 15065(b), plan preparers conclude that a mandatory finding of significance results from any reduction in the number of endangered, rare, or threatened species, even if such an impact is ultimately mitigated by conservation

## ***ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES***

---

strategies incorporated into the MHCP. Therefore, consistent with this interpretation, the MHCP will result in a significant and unmitigable impact to summer-holly for purposes of CEQA Section 15065(b), while also acknowledging that such impacts are appropriately mitigated for purposes of the Federal Endangered Species Act and the State Natural Community Conservation Planning Act.

### ***Blochman's Dudleya***

Blochman's dudleya is a covered species under the MHCP, but is not a narrow endemic or wetland obligate. Approximately 50% of the major populations and 75% of the critical locations of this species will be conserved in the study area. The MHCP preserve design and avoidance policies conserve most major and/or critical locations.

The conservation strategy for Blochman's dudleya is to conserve and manage all major populations and critical locations with an amount and configuration of suitable habitat to contribute to species recovery. Monitoring of the species will include both short- and long-term strategies. Short-term monitoring will focus on identifying threats to the species' existence, such as invasion of nonnative plants. Long-term monitoring will include tracking population trends, including population size, density, and structure.

Required conservation and management actions include: protecting species habitat by removing impacts, excluding adverse activities within the preserve area, developing fire management guidelines within conserved areas that limit fire frequency, enhancement of conserved populations that are declining, and restoration of damaged habitat. Based on the results of the monitoring program and/or the availability of funding, implementation of a research program for this species is recommended. Research may include conducting demographic and ecological research, identifying management requirements, reproductive and pollination biology, seed and pollen viability, germination requirements, and specific habitat and management requirements.

Given the comprehensive conservation and management program for Blochman's dudleya, species viability and persistence will be ensured through mitigation options available both within the MHCP Plan boundaries and external to the MHCP, but within the larger Coastal Sage Scrub NCCP region. However, under CEQA Section 15065(b), plan preparers conclude that a mandatory finding of significance results from any reduction in the number of endangered, rare, or threatened species, even if such an impact is ultimately mitigated by conservation strategies incorporated into the MHCP. Therefore, consistent with this

interpretation, the MHCP will result in a significant and unmitigable impact to Blochman's dudleya for purposes of CEQA Section 15065(b), while also acknowledging that such impacts are appropriately mitigated for purposes of the Federal Endangered Species Act and the State Natural Community Conservation Planning Act.

***Sticky Dudleya***

Sticky dudleya is a covered species under the MHCP, but is not a narrow endemic or wetland obligate. Approximately 75% of known population location points and 74% of the one major and critical population will occur under the MHCP. The conservation strategy for sticky dudleya is to conserve and manage all major populations and critical locations with an amount and configuration of suitable habitat to contribute to species recovery. Monitoring of the species will include both short- and long-term strategies. Short-term monitoring will focus on identifying threats to the species' existence, such as invasion of nonnative plants. Long-term monitoring will include tracking population trends, including population size, density, and structure.

Required conservation and management actions include: protecting species habitat by removing impacts, excluding adverse activities within the preserve area, developing fire management guidelines within conserved areas that limit fire frequency, enhancement of conserved populations that are declining, and restoration of damaged habitat. Based on the results of the monitoring program and/or the availability of funding, implementation of a research program for this species is recommended. Research may include conducting demographic and ecological research, identifying management requirements, reproductive and pollination biology, seed and pollen viability, germination requirements, and specific habitat and management requirements.

Given the comprehensive conservation and management program for sticky dudleya, species viability and persistence will be ensured through mitigation options available both within the MHCP Plan boundaries and external to the MHCP, but within the larger Coastal Sage Scrub NCCP region. However, under CEQA Section 15065(b), plan preparers conclude that a mandatory finding of significance results from any reduction in the number of endangered, rare, or threatened species, even if such an impact is ultimately mitigated by conservation strategies incorporated into the MHCP. Therefore, consistent with this interpretation, the MHCP will register a significant and unmitigable impact to sticky dudleya for purposes of CEQA Section 15065(b), while also acknowledging that such impacts are appropriately

mitigated for purposes of the Federal Endangered Species Act and the State Natural Community Conservation Planning Act.

***Cliff Spurge***

One known population of cliff spurge exists in the MHCP area (Carlsbad), and will be conserved. The MHCP area does not appear to support any major populations of this species, nor do historical records indicate that the species was common in the area. Take of this species due to implementation of the MHCP is not expected to be significant. Approximately 69% of the suitable habitat for this species will be conserved, including 95% of the maritime succulent scrub. Additional conditions of the MHCP are designed to ensure the viability of the existing population of cliff spurge. Monitoring of the species will include both short- and long-term strategies. Short-term monitoring will focus on identifying threats to the species' existence, such as invasion of nonnative plants. Long-term monitoring will include tracking population trends, including population size, density, and structure.

Additional conservation and management actions will be required. These include stabilizing preserved populations by removing impacts or potential impacts, excluding adverse activities within the preserve area, and developing fire management guidelines that limit fire frequency. If necessary, a research program for cliff spurge will be implemented. Potential research programs could focus on reproductive and pollination biology, specific habitat requirements, and management techniques for maintaining viable populations.

Given the comprehensive conservation and management program for cliff spurge, species viability and persistence will be ensured in a larger regional context. This is a goal of the NCCP; thus, impacts are less than significant. However, under CEQA 15065(b), a mandatory finding of significance must occur for any reduction in the number of endangered, rare, or threatened species. Therefore, the MHCP will represent a significant and unmitigable impact to cliff splurge.

***Nuttall's Scrub Oak***

The Nuttall's scrub oak is a covered species under the MHCP, but is not a narrow endemic or wetland obligate. Approximately 93% of major and critical locations will be conserved within the study area. Additional conditions must be met by the MHCP to adequately conserve this species. Specific conditions require conservation of major populations, a critical location at Agua Hedionda in Carlsbad, management of edge effects, and

implementation of fire management plans. Monitoring of the species will include both short- and long-term strategies. Short-term monitoring will focus on identifying threats to the species' existence, such as invasion of nonnative plants. Long-term monitoring will include tracking population trends, including population size, density, and structure.

Additional conservation and management actions will be required. These actions include stabilization of preserved populations by removing impacts or potential impacts, excluding adverse activities within the preserve area, developing fire management guidelines within conserved areas, and limiting fire frequency. There is also a need for surveys to better define the range of this species within the MHCP study area. Finally, based on the results of the monitoring program and/or availability of funding, it is recommended that a research program for Nuttall's scrub oak be undertaken.

Given the comprehensive conservation and management program for Nuttall's scrub oak, species viability and persistence will be ensured through mitigation options available both within the MHCP Plan boundaries and external to the MHCP, but within the larger Coastal Sage Scrub NCCP region. However, under CEQA Section 15065(b), plan preparers conclude that a mandatory finding of significance results from any reduction in the number of endangered, rare, or threatened species, even if such an impact is ultimately mitigated by conservation strategies incorporated into the MHCP. Therefore, consistent with this interpretation, the MHCP will result in a significant and unmitigable impact to Nuttall's scrub oak for purposes of CEQA Section 15065(b), while also acknowledging that such impacts are appropriately mitigated for purposes of the Federal Endangered Species Act and the State Natural Community Conservation Planning Act.

### ***San Diego Horned Lizard***

The San Diego horned lizard is a covered species under the MHCP, but is not a narrow endemic or wetland obligate. Approximately 57% of potential horned lizard habitat is conserved, and 38% of known locations are conserved. The conservation strategy for this species includes conserving large blocks of habitat within the planning area and also maintaining contiguity with large blocks of habitat outside the plan area. Monitoring and management will enhance the viability of the horned lizard. Conserved populations and potential habitat will be monitored to detect changes in population size and habitat quantity and quality.

## ***ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES***

---

Conservation and management actions may be required to ensure the species' persistence within the plan area, and contribute to regional species viability and further recovery. Any project that will have an unavoidable direct or indirect impact to horned lizards or their habitats shall be required to compensate by one or more of the following actions: develop an adaptive plan that integrates the prescribed conservation and management actions with the species and habitat monitoring program, remove impacts or threats of impacts, restrict activities within the preserve that could degrade horned lizards habitat, minimize and manage effects from introduced ant species, prohibit or minimize landscaping or irrigation not associated with native habitat restoration, and monitor population to identify declines and potential sources for declines.

Additional conservation actions have been suggested based on the availability of funding: coordinate management with other horned lizards research programs, implement a program of introducing individuals into formerly occupied and potential habitat to initiate new populations, and selectively translocate individuals from nearby larger populations.

Given the comprehensive conservation and management program for San Diego horned lizard, species viability and persistence will be ensured through mitigation options available both within the MHCP Plan boundaries and external to the MHCP, but within the larger Coastal Sage Scrub NCCP region. However, under CEQA Section 15065(b), plan preparers conclude that a mandatory finding of significance results from any reduction in the number of endangered, rare, or threatened species, even if such an impact is ultimately mitigated by conservation strategies incorporated into the MHCP. Therefore, consistent with this interpretation, the MHCP will result in a significant and unmitigable impact to San Diego horned lizard for purposes of CEQA Section 15065(b), while also acknowledging that such impacts are appropriately mitigated for purposes of the Federal Endangered Species Act and the State Natural Community Conservation Planning Act.

### ***Orange-Throated Whiptail***

The orange-throated whiptail is a covered species under the MHCP, but is not a narrow endemic or wetland obligate. Approximately 60% of potential whiptail habitat is conserved, and 55% of known locations are conserved. The conservation strategy for this species includes conserving large blocks of habitat within the planning area, and also maintaining contiguity with large blocks of habitat outside the plan area. Monitoring and management will enhance the viability of the whiptail. Conserved populations and potential habitat will be monitored to detect changes in population size and habitat quantity and quality.

Conservation and management actions may be required to ensure the species' persistence within the plan area, and contribute to regional species viability and further recovery. Any project that will have unavoidable direct or indirect impacts to whiptails or their habitats shall be required to compensate by one or more of the following actions: develop an adaptive plan that integrates the prescribed conservation and management actions with the species and habitat monitoring program, remove impacts or threats of impacts, restrict activities within the preserve that could degrade whiptail habitat, minimize and manage effects from introduced ant species, prohibit or minimize landscaping or irrigation not associated with native habitat restoration and monitor to identify declining populations and potential sources for declines. Additional conservation actions have been suggested based on the availability of funding: coordinate management with other whiptail research programs, implement a program of introducing individuals into formerly occupied and potential habitat to initiate new populations, and selectively translocate individuals from nearby larger populations.

Given the comprehensive conservation and management program for orange-throated whiptail, species viability and persistence will be ensured through mitigation options available both within the MHCP Plan boundaries and external to the MHCP, but within the larger Coastal Sage Scrub NCCP region. However, under CEQA Section 15065(b), plan preparers conclude that a mandatory finding of significance results from any reduction in the number of endangered, rare, or threatened species, even if such an impact is ultimately mitigated by conservation strategies incorporated into the MHCP. Therefore, consistent with this interpretation, the MHCP will result in a significant and unmitigable impact to orange-throated whiptail for purposes of CEQA Section 15065(b), while also acknowledging that such impacts are appropriately mitigated for purposes of the Federal Endangered Species Act and the State Natural Community Conservation Planning Act.

### ***Western Snowy Plover***

The western snowy plover is a covered species under the MHCP, but is not a narrow endemic or wetland obligate. Breeding habitat for this species is currently very limited within the project area and is conserved by the MHCP. Minimal beach habitat (18%) is conserved within the MHCP. Beach habitat represents a possible breeding location for this species. Considering recreational uses at the beaches will preclude snowy plover nesting, minimal protection of beach habitat is not expected to impact the viability of this species. Maximum levels of conservation of lagoon and marsh ecological communities will keep the level of

take for this species very low. The design of the MHCP preserve will not adversely affect connectivity of the snowy plover habitat. The habitat of this species is naturally patchy.

The conservation strategy for the snowy plover includes conserving the existing major populations, critical locations, and additional breeding and wintering habitats. Monitoring and management will enhance the viability of the snowy plover. Conserved populations and potential habitat will be monitored to detect changes in population size and habitat quantity and quality. Monitoring will also be designed to detect increases in native and nonnative predator populations and nest predation rates, so that necessary predator control actions can be initiated.

Required conservation and management actions for the snowy plover include restriction of activities within the preserve that could impact species population. Negative impacts include human disturbance, off-road vehicles, and predation of adults and nests by domestic animals and introduced predators. The use of fencing during breeding season will restrict potential threatening human activity. For projects that impact this species via take, suitable snowy plover habitat will be created. Periodic monitoring of species habitat will assist in identifying threats to species persistence and to look for trends that may suggest declining populations. Based on the results of the monitoring program and/or availability of funding, it is recommended that genetic and demographic studies be undertaken with the conserved plover population. Given the fact that 90% of major populations of this species are conserved, it is provided “Fully Protected” status by CDFG which precludes lethal take, combined with the comprehensive monitoring and management program, it is anticipated that impacts to the Western snowy plover will be less than significant.

### ***California Least Tern***

The California least tern, which will be protected under the MHCP, is not a narrow endemic or wetland obligate. Over 95% of suitable habitat, including 100% of critical lagoon habitats and major populations will be conserved. The least tern is a “fully protected” species; thus, no lethal take of individuals or active nests is allowed.

Monitoring and conservation management strategies will be implemented to ensure the viability of the least tern. Periodic monitoring of conserved populations and potential habitats will occur at a frequency to detect change in population size and habitat. Monitoring will also detect increases of native or nonnative predator populations and nest predation rates, so that necessary predator control actions can be initiated. Conservation and management

## ***ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES***

---

actions that will be required as part of the MHCP include: fencing of habitat, restricting of activities that could adversely impact the least tern population, active predator control, restricting human activity during breeding season, enhancing habitat to induce the initiation of new breeding colonies, managing vegetation at existing nesting areas, continued monitoring of breeding colonies, and identifying threats to species persistence.

Considering that 100% of major populations of this species are conserved, combined with the comprehensive monitoring and management program, impacts to the species will be less than significant.

### ***Coastal Gnatcatcher***

The California coastal gnatcatcher is a covered species under the MHCP, but is not a narrow endemic or wetland obligate. Based upon findings in Ogden 2000a and 2000b, 62% of the location points for this species will be conserved under the plan. The conservation strategy for the gnatcatcher includes conserving and managing sufficient breeding habitat in large, contiguous patches, and sufficient habitat linkages between breeding areas to ensure (1) species persistence within the plan area and (2) genetic and demographic connectivity between larger core breeding gnatcatcher habitats north and south of the plan area. A secondary conservation strategy is to restore degraded and disturbed areas to gnatcatcher habitat where necessary to increase the size of the breeding population and the functionality of linkages. The MHCP preserve includes a 400- to 500-acre core of high-quality coastal sage scrub. Additionally, the plan is designed to maintain critical linkages to regionally important populations of gnatcatchers and their corresponding habitat, particularly the North County MHCOSP.

Monitoring of conserved and potential gnatcatcher habitat will occur. Monitoring will be done with an intensity and frequency appropriate to detect changes in population size and habitat quantity and quality. The MHCP should also fund banding or other pertinent studies specifically designed to determine breeding success and other key demographic information within the stepping-stone linkages. Restored or enhanced coastal sage scrub areas must be intensively monitored for achievement of habitat goals.

Required conservation and management actions will be implemented. Any project that will have unavoidable direct or indirect impacts to gnatcatchers or their habitat shall be required to compensate by one or more of the following actions: restriction of activities or factors within the preserve that could degrade gnatcatcher habitat. These factors and activities

include livestock overgrazing, fire prevention and management methods, presence of brown-headed cowbirds, and the enhanced presence of predators. As a mitigation option for project impacts on gnatcatcher habitat, restoration of coastal sage scrub identified as high priority for restoration by the MHCP or Subarea Plan may occur. Further required management actions will include monitoring key concentrations of gnatcatchers, especially populations within the stepping-stone linkages and identified major and critical populations, and identifying threats to species persistence.

The above-mentioned management and conservation requirements are designed to improve the viability of the gnatcatcher, both within the MHCP and regionally. The inclusion of 400-500 acres of high-quality coastal sage scrub will enhance species breeding. Important linkages to regionally important gnatcatcher populations will be maintained and monitored. At a regional level, the long-term viability of the California gnatcatcher will be maintained. With these important components in place, impacts to the gnatcatcher will be less than significant.

### ***Bell's Sage Sparrow***

Bells' sage sparrow is a covered species under the MHCP, but is not a narrow endemic or wetland obligate. Existing development patterns have greatly reduced suitable habitat for the sage sparrow, which requires large blocks of habitat to persist. Approximately 83% of the recorded point locations for this species will be conserved under the plan. The conservation strategy for this species includes conserving existing suitable habitat for the sage sparrow. Conservation of the 400- to 500-acre coastal sage scrub core will provide a core breeding ground for the sage sparrow. Additionally, the design of the preserve will protect stepping-stone/linkage corridors to other sage sparrow populations and suitable habitats, particularly the North County MHCOSP. Through implementation of the MHCP preserve, sage sparrow populations at a regional level will be maintained. Additionally, careful monitoring and management will maintain the viability of the sage sparrow. Conserved populations and potential habitat will be monitored to detect changes in population size and habitat quantity and quality.

Furthermore, required conservation and management actions will ensure the species' persistence within the plan area. Any project that will have unavoidable direct or indirect impacts to sage sparrows or their habitat shall be required to compensate by one of more of the following actions: restriction of activities within the preserve that could degrade species habitat (including habitat alteration, spraying of pesticides, brown-headed cowbird

parasitism, and introduction of predators), restricting human access to areas known to support large concentrations of sage sparrows during breeding season, identification and monitoring of major populations within the MHCP area, and identification of threats to species persistence. Based on the results of the monitoring program, and/or availability of funding, it may be recommended that studies be conducted to define local demographic and habitat requirements.

With the implementation of the required conservation and management actions, as well as the consideration of preserve design including a critical core breeding area for sage sparrows habitat, impacts to this species will be less than significant.

In summary, under Alternative 2, there will be significant impacts to six sensitive plant species: summer-holly, Blochman's dudleya, sticky dudleya, Nuttall's scrub oak, Parry's tetracoccus, and variegated dudleya; and four sensitive avian species: the northern harrier, grasshopper sparrow, burrowing owl, and tricolored blackbird. Impacts to San Diego horned lizard and orange-throated whiptail are significant based upon CEQA 15065(b). These species are inadequately conserved by the FPA Alternative 2, or have been determined to be significant based upon CEQA 15065(b), and will have subsequent significant impacts.

#### **4.3.2.3 BCLA Alternative 3**

The BCLA 3 was delineated to capture the BCLA (Biological Core and Linkage Area, Figure 4.3-4). The BCLA contains the best remaining habitat areas, including all the largest remaining blocks of habitat and critical linkages between them. BCLA 3 was determined by evaluating a habitat evaluation map, biological resource data, preserve design criteria, and development constraints (Ogden 2000, Public Review Draft MHCP Plan, Volume 1). BCLA 3 is comprised of areas that are considered to be biologically valuable for preserve design. However, not all areas of BCLA 3 are critical to a preserve or are intended for preservation. BCLA 3 roughly corresponds to areas of high and very high habitat value on the composite habitat value map. Areas of low habitat value, such as agricultural fields and disturbed habitats, were incorporated into BCLA 3 to serve as linkages between high-value core habitats. BCLA 3 outlines an interconnected preserve system by identifying biological core areas that can be linked.

## **Vegetation Communities**

Table 4.3-1 lists the vegetation communities conserved under each alternative, particularly BCLA Alternative 3, the BCLA scenario. At first, conservation levels appear low for riparian communities (50 to 64%); however, 100% conservation of wetland communities is assumed, since the MHCP has a no net-loss policy for wetlands. Impacts to wetlands will occur; however, mitigation measures are required that will result in no net-loss of wetlands. Wetland vegetation communities will be conserved at 100% both inside and outside the BCLA, based on the MHCP no net-loss policy. Only wetlands inside the BCLA will be managed, and 100% conservation of wetland communities does not necessarily mean 100% avoidance of impacts. Wetland vegetation communities include coastal salt marsh, alkali marsh, freshwater marsh, estuarine, saltpan/mudflats, riparian forest, riparian woodland, riparian scrub, vernal pool, disturbed wetland, flood channel, and freshwater. The low conservation level of beach communities (48%) is misleading, since nearly all beaches are managed for recreation and have little or no natural vegetation or habitat value. Because the wetland vegetation communities will be adequately conserved, there will be no significant impacts to wetland vegetation communities under BCLA Alternative 3. The no net-loss wetlands policy of the MHCP provides for 100% conservation of wetlands inside and outside the preserve. However, only wetland communities inside the BCLA will be managed. In addition, 100% conservation of wetlands does not necessarily mean 100% avoidance of impacts. This may not directly impact major populations or critical locations, but management of these communities and associated species is required; therefore, this management issue needs to be addressed.

The majority of upland vegetation communities in the BCLA are conserved at a high conservation rate (90 to 100%), with the exception of grasslands and coastal sage scrub. Upland vegetation communities conserved at a high rate include maritime succulent scrub, chaparral, southern maritime chaparral, coastal sage/chaparral mix, Engelmann oak woodland, coast live oak woodland, and other oak woodlands. Coastal sage scrub is conserved at a medium level (83%), and grasslands are conserved at an intermediate level (63%). The majority of grasslands in the study area are dominated by annual, nonnative grasses. Some smaller areas of native perennial grasses exist, often as small patches within scrub habitats. Grasslands are important to the preserve design, because they create linkages between areas of natural communities. The critical locations of grassland communities in the MHCP study area are in north Oceanside between the boundary of Camp Pendleton and the San Luis Rey River, and in Escondido north of the Dixon Reservoir. These critical grassland communities are included in the BCLA preserve. The grasslands that are not conserved

under the BCLA are isolated, fragmented patches that do not provide linkages between other natural communities. Therefore, there are no significant impacts to the grassland community under Alternative 3, the BCLA scenario.

There are 8,570 acres of coastal sage scrub in the study area, of which 7,128 acres are included in the BCLA preserve. Conservation for this vegetation community is at a medium level of 83%. Critical habitat patches of coastal sage scrub occur in Carlsbad (south of Calavera Lake, south of Alga Road, adjacent to Rancho Santa Fe Road), southwest San Marcos (lower south-facing slopes of Mt. Whitney-Double Peak, along Questhaven Road), and in Escondido north of the Dixon Reservoir. These large stands of coastal sage scrub are incorporated in the BCLA preserve design. Critical habitat linkages of coastal sage scrub occur in Oceanside north and south of the San Luis Rey River, in Carlsbad southeast of Agua Hedionda Lagoon, and in San Marcos on the lower north-facing slopes of Mt. Whitney-Double Peak along Questhaven Road. These critical coastal sage scrub patches serve as important habitat linkages and are incorporated into the BCLA preserve. At the moderate conservation level (83%), all critical habitat patches and linkages are included in the BCLA. Areas of coastal sage scrub that are not in the BCLA are typically isolated, fragmented patches that do not provide critical habitat linkages nor support critical populations of sensitive species. Therefore, there are no significant impacts to the coastal sage scrub vegetation community under Alternative 3, the BCLA scenario.

### **Sensitive Habitats**

Based on the analysis of vegetation communities, sensitive habitats that will be adequately conserved in the BCLA include wetland communities such as marshes and riparian habitats, and upland communities such as scrub and woodlands. Sensitive wetland communities include disturbed wetlands, open water, natural flood channels and streambeds, southern coastal salt marsh, alkali marsh, freshwater marsh, southern coast live oak riparian forest, southern cottonwood-willow riparian forest, and southern sycamore-alder riparian forest. This is due to the MHCP no net-loss to wetlands both inside and outside the BCLA. Sensitive upland habitats that are conserved at a high level (90 to 100%) include scrub communities such as southern willow scrub, mule fat scrub, coast live oak woodland, Engelmann oak woodland, and coniferous forests such as Torrey pine forest and southern interior cypress forest.

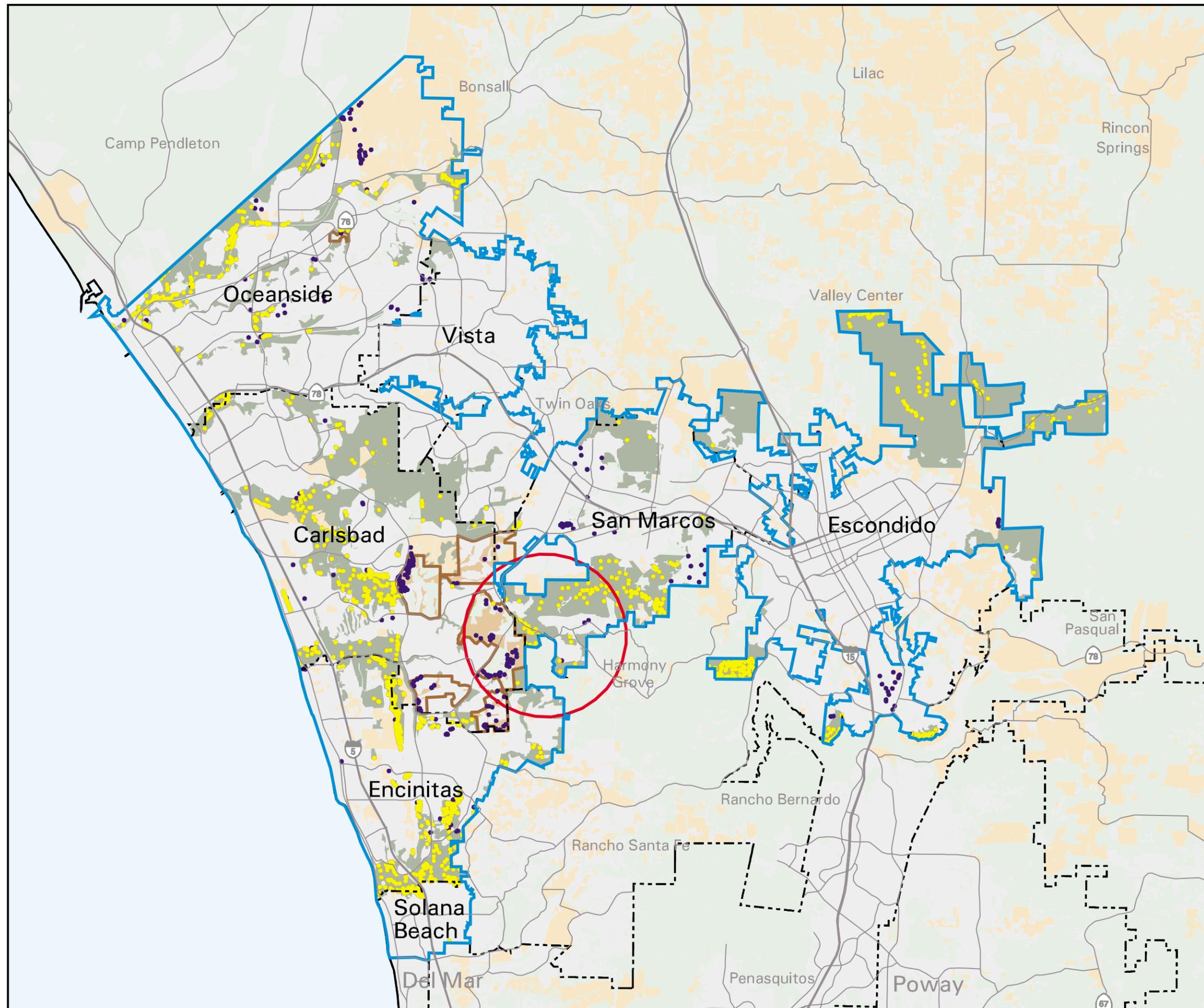
## **Sensitive Species**

Table 4.3-2 lists the conservation of species major populations, critical locations, known occurrences, and habitat for each alternative. Figure 4.3-5 shows the distribution of sensitive species in the MHCP study area and the BCLA preserve boundaries. Because the majority of large areas of remaining habitat are included in both the FPA and BCLA, the conservation of the majority of major populations and critical locations is assumed to be generally the same. One difference between Alternative 1 and Alternative 3 (BCLA) is the conservation level of known occurrences of sensitive species. For species with no major populations or critical locations, adequate conservation was based on the conservation of sensitive species known occurrences and associated habitats.

Sensitive plant species that have major populations and/or critical locations in the study area that are adequately protected by the BCLA include the San Diego thorn-mint, San Diego ambrosia, Del Mar manzanita, Encinitas baccharis, wart-stemmed ceanothus, Orcutt's spineflower, summer-holly, Del Mar mesa sand aster, Blochman's dudleya, sticky dudleya, San Diego button-celery, San Diego barrel cactus, Orcutt's hazardia, San Diego marsh elder, Nuttall's lotus, little mousetail, spreading navarretia, California Orcutt grass, Nuttall's scrub oak, and Engelmann oak. Three sensitive plant species that have no major populations or critical locations in the study area but still receive adequate conservation of their known locations include the cliff spurge (1 of 1 known occurrences, 100%), Torrey pine (21 of 24 known occurrences, 88%), and thread-leaved brodiaea (5 locations, 45%).

Sensitive animal species that have major populations in the study area and are adequately conserved by the BCLA include the Riverside fairy shrimp, San Diego fairy shrimp, salt marsh skipper, southwestern pond turtle, white-faced ibis, light-footed clapper rail, western snowy plover, California least tern, southwestern willow flycatcher, coastal cactus wren, least Bell's vireo, yellow-breasted chat, and Belding's savannah sparrow. Sensitive animal species that have no major populations, but do have critical locations and habitat areas in the BCLA that are adequately conserved include Harbison's dun skipper, California brown pelican, northern harrier, Cooper's hawk, osprey, golden eagle, peregrine falcon, burrowing owl, large-billed savannah sparrow, and grasshopper sparrow. Sensitive animal species which do not have any major populations or critical locations in the study area, but whose known occurrences are adequately conserved by the BCLA, include Harbison's dun skipper, salt marsh skipper, long-billed curlew, elegant tern, western bluebird, Bell's sage sparrow, Stephens' kangaroo rat, Pacific pocket mouse, northwestern San Diego pocket mouse, San

**Figure 4.3-5  
Recorded Locations of  
Sensitive Species\*  
MHCP Study Area  
and BCLA Alternative 3**



-  Biological Core and Linkage Areas (BCLA)
-  Hardline Preserves on Already Permitted Properties
-  Natural Habitats (Outside BCLA)
-  Agricultural Land
-  Developed/Disturbed Land
-  Sensitive Species inside the MHCP Study Area
-  Sensitive Species inside the Biological Core and Linkage Area
-  Projects Already Permitted
-  General Area for Core Gnatcatcher Conservation (USFWS Circle)
-  City Boundary
-  MHCP Boundary

\* Does not include the locations of the California Gnatcatcher

SOURCE: MHCP Species Database, 1999

**SANDAG**  
November 27, 2001

## ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES

Diego black-tailed jackrabbit, mountain lion, and southern mule deer. Because the above species are adequately conserved under Alternative 3, the BCLA scenario, there are no significant impacts to these biological resources in the study area.

There are no known major populations or occurrences of Hermes copper butterfly; however, habitat for this species is moderately conserved. Habitat conserved for this species includes some large patches of coastal sage scrub that are contiguous with more extensive areas outside the study area; therefore, as long as management goals are implemented, this species will be adequately conserved under the BCLA. The Quino checkerspot butterfly has no known major populations, critical locations, or known occurrences in the study area. However, some potential habitat areas conserved in Escondido may benefit this species. This species may be extirpated from the study area.

The BCLA adequately protects the known occurrences of the San Diego horned lizard. Under the BCLA preserve, 28 of 30 known locations of the San Diego horned lizard are intact. Of the known locations that are not included in the BCLA, one occurs in a developed area in southwest Oceanside, and the other occurs in south Escondido, on the outskirts of a patch of chaparral habitat that is included in the BCLA. Because the known occurrences of the San Diego horned lizard are adequately conserved under the BCLA, there are no significant impacts to this species.

The orange-throated whiptail reptile is moderately conserved (88%) under the BCLA. Of 33 known occurrences for this species, 29 are in the BCLA preserve boundaries. Of the four known locations that are not included in the BCLA, one is in a developed area in south Escondido. The other three known locations are in south Escondido, east Escondido, and north Oceanside, and all are on the perimeter of patches of chaparral, coastal sage scrub, or grassland habitat that is included in the BCLA. The known locations of the orange-throated whiptail are adequately conserved under the BCLA; therefore, there is no significant impact to this species under Alternative 3, the BCLA scenario.

The conservation status of the California red-legged frog cannot be determined based on existing information. The California red-legged frog may be extirpated from the study area, and it is highly unlikely to return to the study area, due to a lack of suitable habitat and the presence of exotic species. The BCLA will probably have no effect on the conservation of this species. Although no populations of arroyo southwestern toads occur in the study area, application of the MHCP Narrow Endemic and Critical Location Policies to any newly found populations will contribute to the conservation of this species. In addition, the MHCP no

net-loss of wetlands policy will conserve the potential breeding habitat for this specie. Due to the monitoring efforts, management plan, and conservation efforts for this species, the arroyo southwestern toad will be adequately covered by the FPA.

The grasshopper sparrow has no major populations and critical locations in the study area. Of the 13 known occurrences for this species, 7 (54%) are conserved by the BCLA. This moderate level of conservation is supplemented by the conservation of this species' habitat. The BCLA conserves 3,295 acres (63%) of grasslands, which will enhance the conservation of the grasshopper sparrow. Based on this information, there are no significant impacts to this species. The BCLA preserve will also adequately conserve the burrowing owl known occurrences (67%) and associated habitat (63%), so there will be no significant impacts to this species.

Figure 4.3-6 shows the distribution of gnatcatcher known occurrences in the study area, along with the BCLA boundaries. Conservation for the gnatcatcher under the BCLA will conserve the species' major populations in north, central, and southeast Carlsbad, Escondido, and north Oceanside. However, unavoidable impacts will occur to areas that have already been permitted for take. Major populations that will be partially conserved due to permitted take include the populations in central Carlsbad and central Oceanside. The major population in south San Marcos will be partially conserved. A major population in Escondido (Quail Hills) will not be conserved. The level of conservation of critical locations in central Carlsbad and central Oceanside will be increased under the BCLA preserve. Some impacts to major populations and critical locations will remain unavoidable, but the increased conservation of critical areas, major populations, known occurrences (85%), and habitat (84%) will be adequate for this species, and will minimize potential significant impacts.

### **CEQA Significance Analysis for Species**

The CEQA significance analysis prepared for FPA 2 is the same as for BCLA 3. In summary, BCLA 3 will result in significant impacts to summer-holly, Blochman's dudleya, variegated dudleya, sticky dudleya, Nuttall's scrub oak, Parry's tetracoccus, San Diego horned lizard, and orange-throated whiptail.



#### **4.3.2.4 Summary of Significance**

Table 4.3-3 represents the summary of significance for endangered, threatened, or rare species. CEQA Section 15065 states that a mandatory finding of significance must occur if a given project:

“has the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish and wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of an endangered, rare or threatened species, or eliminate important examples of the major periods of California history and prehistory.”

-- 15065 (b)

While this Section falls under Article 5, Preliminary Review of Projects and Conduct of Initial Study, of the CEQA Guidelines, this document has taken a conservative interpretation of this code and applied it to the CEQA analysis as well. Therefore, the following analysis will make mandatory finding of significance if there is any reduction in the number of endangered, rare, or threatened species.

The State of California’s Natural Community Conservation Planning program is the guiding principal of the MHCP process. The program began in 1991 under the State’s Natural Community Conservation Planning Act. The primary objective of the NCCP program is to conserve natural communities at the ecosystem scale while accommodating compatible land uses. The program is proactive, in that it seeks to anticipate and prevent controversies and gridlock caused by species’ listings by focusing on the long-term stability of plant and wildlife communities.

When considering whether the goals of the NCCP will be met for a specific species, it is important to consider the species conservation and management not only in its local setting, but also as a part of a larger regional context. Some species, for example, may experience initial net loss from the MHCP; however, the project will also restore and enhance the habitat in critical areas for the species. Important stepping-stone linkages will be provided, with an extensive management program that will focus on monitoring and restoration for several species, including the gnatcatcher. The linkages will enhance connectivity not only within the MHCP Plan, but to larger regional habitat conservation plans, including the MHCOSP,

ongoing conservation efforts on Camp Pendleton, and the City of San Diego's MSCP, thus lending to an overall greater viability of the species in the long term.

### **4.3.3 Subarea Plans**

#### **4.3.3.1 City of Carlsbad**

##### **Vegetation Communities**

Table 4.3-4 lists the vegetation communities conserved in the Carlsbad Subarea Plan. Vegetation communities that receive a substantial level of conservation (80 to 100%) include maritime succulent scrub, southern coastal salt marsh, alkali marsh, freshwater marsh, riparian forest, riparian woodland, riparian scrub, coast live oak woodland, other oak woodlands, and freshwater, estuarine, and disturbed wetlands. Under the MHCP no net-loss for wetlands, the following communities will be conserved at 100% both inside and outside the Carlsbad FPA: southern coastal salt marsh, alkali marsh, freshwater marsh, riparian forest, riparian woodland, riparian scrub, and freshwater, estuarine, and disturbed wetlands. Wetland areas outside the Carlsbad FPA will be conserved, but not managed. In addition, no net-loss to wetlands does not necessarily mean no impact.

Vegetation communities that receive a sufficient level of conservation (70 to 75%) under the Carlsbad Subarea Plan are coastal sage scrub, chaparral, and southern maritime chaparral.

Vegetation communities that are marginally conserved by the Carlsbad MHCP include grasslands and coastal sage/chaparral mix. Of the 1,299 acres of grassland in Carlsbad, approximately 488 (38%) are included in the Carlsbad FPA, and 488 acres (38%) are identified in the BCLA. The majority of the grasslands occur in central Carlsbad. Of 273 acres of coastal sage/chaparral mix, 106 acres (38%) are in the Carlsbad FPA. A large block of coastal sage/chaparral mix habitat that is not included in the Carlsbad FPA occurs in east Carlsbad. The marginal level of conservation of these two vegetation communities is inadequate, and will have subsequent significant impacts.

##### **Sensitive Habitats**

Sensitive habitats include upland communities such as southern coastal bluff scrub, maritime succulent scrub, coastal sage scrub, southern maritime chaparral, coastal sage/chaparral mix, perennial grasslands, Engelmann oak woodland, coast live oak woodland, and wetland

communities such as southern coastal salt marsh, alkali marsh, freshwater marsh, riparian forest, riparian woodland, riparian scrub, freshwater, estuarine, disturbed wetland, natural flood channel/streambed, and saltpan/mudflats. In the Carlsbad FPA, two sensitive habitats, maritime succulent scrub and coast live oak woodland, are substantially conserved. Two other sensitive upland communities that are sufficiently conserved include coastal sage scrub and southern maritime chaparral. All of the sensitive wetland communities are substantially conserved by the Carlsbad FPA. Grassland habitat is mapped at a coarse level in the Carlsbad FPA, so it is difficult to determine which grasslands are native and which are degraded. In general, grassland communities are conserved at a marginal level. In addition, the coastal sage/chaparral mix sensitive habitat is also conserved at a marginal level. The marginal level of conservation for these habitats is inadequate and will have subsequent significant impacts.

### **Sensitive Species**

Table 4.3-5 lists the conservation of sensitive species major populations, critical areas, known occurrences, and habitat for the Subarea Plans. Sensitive plant species that have major populations or critical locations in the Carlsbad FPA that are substantially conserved include San Diego thorn-mint, Del Mar manzanita, Encinitas baccharis, thread-leaved brodiaea, wart-stemmed ceanothus, Blockman's dudleya, San Diego button-celery, Nuttall's lotus, little mousetail, spreading navarretia, California Orcutt grass, and Nuttall's scrub oak. Two sensitive plant species have levels of conservation that are less than substantial. Summer-holly and the Del Mar mesa sand aster have sufficient conservation of their major populations in the Carlsbad FPA. Sensitive plant species that have no major populations or critical locations in the Carlsbad FPA, but whose known occurrences and/or habitat are substantially conserved, are cliff spurge and San Diego barrel cactus. The Torrey pine and Englemann oak have known occurrences that are marginally conserved. Habitat for the Torrey pine is sufficiently conserved; however, there appears to be a lack of suitable habitat for the Englemann oak. There are eight sensitive plant species that have no recorded locations in the Carlsbad FPA, but whose associated habitat is adequately conserved. These are Parry's tetracoccus and San Diego marsh elder, whose habitat is substantially conserved; the short-leaved dudleya and Orcutt's spineflower, whose habitat is sufficiently conserved; Orcutt's hazardia, sticky dudleya, and variegated dudleya, whose habitat is moderately conserved; and San Diego ambrosia, whose habitat is partially conserved. The above-named species will be adequately conserved by the Carlsbad FPA. Since the Carlsbad FPA adequately conserves one or more of the major populations, critical locations, known

## *ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES*

---

occurrences, and/or associated habitat, there would be no significant impacts to these sensitive plant species.

Invertebrates that are adequately conserved by the Carlsbad Subarea Plan include Riverside fairy shrimp, San Diego fairy shrimp, Harbison's dun skipper, salt marsh skipper, and Hermes copper butterfly. In addition, the Riverside fairy shrimp, San Diego fairy shrimp, and Harbison's dun skipper are endemic species and will receive additional conservation under the MHCP Narrow Endemic Policy. The Quino checkerspot butterfly has no known major populations, critical locations, or known occurrences in the study area. However, the City of Carlsbad will participate with the other jurisdictions under the MHCP and focus conservation efforts for this species on viable populations outside the MHCP study area.

Two reptiles will have their known occurrences and habitat substantially conserved by the Carlsbad Subarea Plan: the western spadefoot toad and the southwestern pond turtle. The San Diego horned lizard has known occurrences and habitat that will be moderately conserved; however, the edge effects for this species must be managed along with Argentine ant problems. The orange-throated whiptail has known occurrences that will be marginally conserved, but its habitat will be moderately conserved. However, this species has not been thoroughly surveyed, so it is possible there may be unrecorded occurrences of this species in suitable habitat; therefore, the moderate conservation of habitat is a better conservation estimate for this species. The above-named species will be adequately conserved by the Carlsbad Subarea Plan. The California red-legged frog may be extirpated from the study area, and it is highly unlikely to return to the study area, due to the lack of suitable habitat and the presence of exotic species. The Carlsbad Subarea Plan will probably have no effect on this species. Although no populations of the arroyo southwestern toad occur in the study area, application of the MHCP Narrow Endemic and Critical Location Policies to any newly found populations will contribute to the conservation of this species. In addition, the MHCP no net-loss of wetlands policy will conserve the potential breeding habitat for this species. Although the potential breeding habitat in riparian areas for this species will be conserved, it is not clear if sufficient upland habitat and corridors will be conserved to ensure the species' life processes. Due to the lack of existing information, the conservation status of this species cannot be determined.

Avian species that have major populations substantially conserved by the Carlsbad FPA are the white-faced ibis, light-footed clapper rail, western snowy plover, and Belding's savannah sparrow. Species with known occurrences that are substantially conserved include the California brown pelican, osprey, peregrine falcon, elegant tern, California least tern,

## ***ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES***

---

southwestern willow flycatcher, least Bell's vireo, and yellow-breasted chat. The habitat for these species is also substantially conserved and many of the critical areas, mostly lagoon areas, are substantially conserved. One species that has sufficient conservation of its known occurrences is Cooper's hawk, and the habitat for this species is substantially conserved. There are no major populations of the coastal cactus wren in Carlsbad; however, known locations for this species just north of Batiquitos Lagoon are substantially conserved. Coastal cactus wren habitat is likely to be overestimated, since this species prefers cactus patches within coastal sage scrub. The coastal cactus wren is an endemic species, and may receive additional protection under the MHCP Narrow Endemic Policy. Known occurrences for the western bluebird are partially conserved; however, the habitat for this species is substantially conserved. No significant impacts would result.

Four grassland species, the northern harrier, burrowing owl, grasshopper sparrow, and tricolored blackbird, are not adequately conserved by the Carlsbad Subarea Plan. The insufficient conservation of grassland habitat will have significant impacts on these species. Although the three known occurrences of the grasshopper sparrow are included in the Carlsbad FPA and conserved at 100%, critical habitat for this species occurs in north, central, and southeast Carlsbad and is only marginally conserved under the Subarea Plan. The marginal level of conservation (38%) for this species' associated habitat (grasslands) is inadequate, and will have subsequent significant impacts to the grasshopper sparrow. In addition, the inadequate conservation of critical grassland areas will have significant impacts on the burrowing owl. Even though four known occurrences (80%) are conserved under the Carlsbad Subarea Plan, the burrowing owls may rely on the areas of grassland in the vicinity of their known occurrence location. The marginal conservation of grasslands under the Carlsbad FPA will affect the conservation, future distribution, dispersal, and populations of this species. For the northern harrier, no suitable nesting areas will be conserved, and there will not be sufficient areas of grassland and agricultural areas for this species to forage. For the tricolored blackbird, critical grassland areas near marsh habitats are only partially conserved and will become further fragmented. Significant impacts to these species would occur.

Conservation in a jurisdiction is sometimes hindered by areas that have already been permitted for take. Any significant impacts can then be mitigated through offsite mitigations. The City of Carlsbad will mitigate for its significant impact to the gnatcatcher through offsite mitigation in the core breeding area. Most major populations of gnatcatchers in the Carlsbad FPA are substantially conserved, except on properties that are already permitted for take. However, major populations of gnatcatchers in central Carlsbad will be

only partially conserved, and this will lead to further fragmentation of the population in this area. The partial conservation of this major population is a significant impact on this species; however, the City of Carlsbad (along with the other cities participating in the MHCP Plan) will mitigate for this impact by contributing to the conservation of 400 to 500 acres of high-quality, contiguous coastal sage scrub in the core gnatcatcher breeding area in the unincorporated area. In addition, the City of Carlsbad will further mitigate these effects by restoring and enhancing at least 104 acres of coastal sage scrub in the Carlsbad subarea. The City of Carlsbad will moderately conserve approximately 1,510 acres of coastal sage scrub, and approximately 233 known locations of gnatcatchers. Despite the partial conservation of a major population in central Carlsbad, this significant impact will be mitigated by additional coastal sage scrub conservation in the unincorporated area and habitat restoration in the subarea.

There are no known major populations or critical locations of any mammals in the subarea; however, based upon conservation of habitat, the Pacific little pocket mouse, northwestern San Diego pocket mouse, San Diego black-tailed jackrabbit, mountain lion, and southern mule deer will be adequately conserved. There are no known major populations or recorded locations for Stephens' kangaroo rat, and this species may be extirpated from the plan area. This species will be adequately conserved by the Subarea Plan, since the Carlsbad FPA will help maintain the potential for natural recolonization of suitable habitats, and any newly found occupied habitat areas will receive additional conservation under the MHCP Narrow Endemic and Critical Population Policy.

#### **4.3.3.2 City of Encinitas**

##### **Vegetation Communities**

Table 4.3-4 lists the acres of vegetation communities conserved under the Encinitas FPA Subarea Plan. Vegetation communities that are conserved at 100% include the following riparian communities: southern coastal salt marsh, alkali marsh, freshwater marsh, riparian forest, riparian woodland, riparian scrub, freshwater, estuarine, disturbed wetlands, natural flood channel/streambed, and saltpan/mudflats. Under the MHCP no net-loss policy for wetlands, these communities will be 100% conserved both inside and outside the Encinitas FPA; however, only the wetlands inside the Encinitas FPA will be managed. In addition, no net-loss does not necessarily mean 100% avoidance of impacts. Upland vegetation communities that are conserved at a moderate level include southern maritime chaparral (86%), chaparral (86%), and coastal sage scrub (71%). Grasslands are conserved at a low

level, 97 (52%) of 185 acres; however, the majority of the grasslands in Encinitas are nonnative, small, scattered, fragmented, and of low habitat value. There are no significant impacts to these vegetation communities under the Encinitas Subarea Plan.

### **Sensitive Habitats**

Sensitive habitats include upland communities such as southern coastal bluff scrub, maritime succulent scrub, coastal sage scrub, southern maritime chaparral, coastal sage/chaparral mix, perennial grasslands, Engelmann oak woodland, coast live oak woodland, and wetland communities such as southern coastal salt marsh, alkali marsh, freshwater marsh, riparian forest, riparian woodland, riparian scrub, freshwater, estuarine, disturbed wetland, natural flood channel/streambed, and saltpan/mudflats. The sensitive habitats in the Encinitas Subarea Plan that are adequately conserved include southern maritime chaparral (481 of 561 acres, 86% conserved), alkali marsh (141 of 141 acres, 100% conserved), freshwater (6 of 6 acres, 100% conserved), and saltpan (3 of 3 acres, 100% conserved). No significant impacts to sensitive habitats will occur.

### **Sensitive Species**

Table 4.3-5 lists the major populations, critical locations, known occurrences, and/or habitats conserved for the Encinitas Subarea Plan. Sensitive plant species that have major populations and/or critical locations substantially conserved by the Encinitas FPA are San Diego thorn-mint, Del Mar manzanita, Encinitas baccharis, summer-holly, Del Mar mesa sand aster, San Diego barrel cactus, Orcutt's hazardia, Nuttall's lotus, and Nuttall's scrub oak. Major populations for the wart-stemmed ceanothus are sufficiently conserved. There is one sensitive plant species, the Torrey pine, that has no major populations or critical locations in the Encinitas study area; however, its known locations are moderately conserved, along with substantial habitat conservation. Sensitive plant species that have no major populations, critical locations, or known locations in the area, but whose habitat is adequately conserved under the Encinitas FPA, include San Diego ambrosia, Blochman's dudleya, short-leaved dudleya, variegated dudleya, sticky dudleya, thread-leaved brodiaea, San Diego button celery, cliff spurge, San Diego marsh-elder, and little mousetail. There are no significant impacts to these sensitive plant species.

Sensitive plant species that have not been recorded in the study area are spreading navarretia, California Orcutt grass, Engelmann oak, and Parry's tetracoccus. Spreading navarretia and California Orcutt grass will receive additional conservation from the application of the

## ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES

MHCP Narrow Endemic Policy, so these species will be adequately conserved. Engelmann oak and Parry's tetracoccus are highly unlikely to occur in the Encinitas subarea, due to a lack of suitable habitat. Since they are unlikely to occur in the study area and there is no suitable habitat, there are no significant impacts.

Sensitive animal species with adequate conservation for their critical areas are salt marsh skipper, California brown pelican, white-faced ibis, osprey, golden eagle, peregrine falcon, light-footed clapper rail, California least tern, Belding's savannah sparrow, and large-billed savannah sparrow. Some of these species may not be known in the study area, but their critical areas, such as San Elijo and Batiquitos Lagoons, are conserved. In addition, the known occurrences and habitats of these species are adequately conserved.

Species that do not have major populations or critical locations, but have adequate conservation of known occurrences, include southwestern pond turtle, orange-throated whiptail, Cooper's hawk, western snowy plover, southwestern willow flycatcher, California gnatcatcher, western bluebird, least Bell's vireo, yellow-breasted chat, rufous-crowned sparrow, and Bell's sage sparrow. Habitat for these species is also adequately conserved. There are no recorded locations for the elegant tern; however, the habitat for this species will be substantially conserved.

While the northern harrier, San Diego horned lizard, grasshopper sparrow, burrowing owl, and tricolored blackbird were evaluated and considered for coverage under the Encinitas Subarea Plan, these species are not proposed for coverage under the current Encinitas Subarea Plan. Therefore, the finding regarding the conservation status of these species under the Encinitas Subarea Plan is not applicable.

There are no major populations for the coastal cactus wren in the Encinitas subarea. Coastal cactus wren habitat is likely to be overestimated, since this species prefers cactus patches within coastal sage scrub. The coastal cactus wren is an endemic species, and may receive additional protection under the MHCP Narrow Endemic Policy.

Sensitive species and associated habitat that do not occur in the area are Riverside fairy shrimp and San Diego fairy shrimp. The Riverside fairy shrimp and San Diego fairy shrimp will receive additional conservation by the application of the MHCP Narrow Endemic Policy. The Quino checkerspot butterfly has no known major populations, critical locations, or known occurrences in the study area. However, the City of Encinitas will participate with

the other jurisdictions under the MHCP and focus conservation efforts for this species on viable populations outside the MHCP study area.

The California red-legged frog may be extirpated from the study area and is highly unlikely to return to the study area, due to the lack of suitable habitat and the presence of exotic species. The Encinitas Subarea Plan will probably have no effect on this species. Although no populations of the arroyo southwestern toad occur in the study area, application of the MHCP Narrow Endemic and Critical Location Policies to any newly found populations will contribute to the conservation of this species. In addition, the MHCP no net-loss of wetlands policy will conserve the potential breeding habitat for this species.

There are no known major populations or critical locations of any mammals in the subarea; however, based upon conservation of habitat, the Pacific little pocket mouse, northwestern San Diego pocket mouse, San Diego black-tailed jackrabbit, mountain lion, and southern mule deer will be adequately conserved. Coverage for certain species within the Encinitas Subarea Plan is contingent on other MHCP cities that control major populations, critical locations, the majority of the species, and/or the majority of its habitat. The controlling MHCP cities must meet all Section 10(a), NCCP, and MHCP criteria within their boundaries in order for the species to be covered within the Encinitas Subarea Plan. Therefore, coverage of the San Diego black-tailed jackrabbit, mountain lion, and southern mule deer in the Encinitas subarea are contingent upon the approved Escondido Subarea Plan.

Large blocks of suitable habitat for the San Diego black-tailed jackrabbit are conserved in the Daley Ranch area of north Escondido, and several smaller blocks in southwest San Marcos, east Carlsbad, and north Oceanside. Much of this conserved habitat is contiguous with large blocks of habitat outside the study area. Implementation of the MHCP is expected to maintain the population viability of this species in the region through increased management and monitoring. There are no known major populations or recorded locations for Stephens' kangaroo rat, and this species may be extirpated from the plan area. This species will be adequately conserved by the Subarea Plan, since the Encinitas FPA will help maintain the potential for natural recolonization of suitable habitats, and any newly found occupied habitat areas will receive additional conservation under the MHCP Narrow Endemic and Critical Population Policy.

### **4.3.3.3 City of Escondido**

#### **Vegetation Communities**

Table 4.3-4 lists the acres of vegetation communities conserved in the Escondido Subarea Plan. Wetland communities that will be 100% conserved include freshwater marsh, riparian forest, riparian scrub, freshwater, disturbed wetland, and natural flood channel/streambed. These communities will receive 100% conservation both inside and outside the Escondido FPA; however, only the wetlands inside the Escondido FPA will be managed. While these areas will be 100% conserved outside the Escondido FPA, 100% conservation does not always mean 100% avoidance of impacts. Coastal sage scrub/chaparral mix will be substantially conserved. Other upland vegetation communities that are sufficiently conserved by the Escondido FPA include chaparral, Engelmann oak woodland, and coast live oak woodland. Upland habitats that will be moderately conserved include coastal sage scrub and grassland. It is worth noting that the Escondido FPA has the highest level of conservation for grassland habitats. There are no significant impacts to vegetation communities under the Escondido Subarea Plan.

#### **Sensitive Habitats**

Sensitive habitats include upland communities such as southern coastal bluff scrub, maritime succulent scrub, coastal sage scrub, southern maritime chaparral, coastal sage/chaparral mix, perennial grasslands, Engelmann oak woodland, coast live oak woodland, and wetland communities such as southern coastal salt marsh, alkali marsh, freshwater marsh, riparian forest, riparian woodland, riparian scrub, freshwater, estuarine, disturbed wetland, natural flood channel/streambed, and saltpan/mudflats. Sensitive habitats in the Escondido area that are adequately conserved by the Escondido Subarea Plan are coastal sage scrub, freshwater marsh, coast live oak woodland, and Englemann oak woodland. There are no significant impacts to sensitive habitats under the Escondido Subarea Plan.

#### **Sensitive Species**

Table 4.3-5 lists the major populations, critical locations, known occurrences, and/or habitats conserved for the Escondido Subarea Plan. Sensitive plant species that have major populations or critical locations that are adequately conserved by the Escondido Subarea Plan are San Diego thorn-mint, wart-stemmed ceanothus, summer-holly, and Engelmann oak. Engelmann oak and San Diego thorn-mint are substantially conserved, wart-stemmed

## ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES

ceanothus is sufficiently conserved, and summer-holly is moderately conserved. Habitat for these species is sufficiently conserved. Several sensitive plant species do not occur in the area; however, their habitat is sufficiently conserved. These species are Encinitas baccharis, San Diego barrel cactus, Orcutt's hazardia, sticky dudleya, Nuttall's scrub oak, and Parry's tetracoccus. Habitat for the San Diego ambrosia is moderately conserved, although there are no known recorded locations for this species in the subarea. There are no known occurrences of variegated dudleya in the subarea, and the habitat is partially conserved at approximately 50%. Variegated dudleya is associated with coastal sage scrub on clay soils. Habitat for this species in the Escondido subarea may be limited. This species will receive additional protection under the MHCP Narrow Endemic Policy, so newly discovered occurrences will be at least 80% conserved. Blochman's dudleya has no known occurrences in the study area and very limited, marginally conserved potential habitat. This species is typically found on coastal bluffs, and is unlikely to occur in the Escondido area. The Escondido Subarea Plan will adequately conserve the above-named species.

Seven species, Del Mar manzanita, thread-leaved brodiaea, San Diego marsh elder, Nuttall's lotus, little mousetail, spreading navarretia, and California Orcutt grass, have no known occurrences or potential habitat in the Escondido subarea. However, most of these species are endemics and will receive additional conservation through the application of the MHCP Narrow Endemic Policy. Even outside the area, these species will receive at least 80% conservation. The Escondido Subarea Plan will adequately conserve these species.

Three species, Orcutt's spineflower, cliff spurge, and Torrey pine, have no known occurrences in the study area, have no potential habitat, and are highly unlikely to occur in the Escondido subarea. Most of these species typically occur in coastal areas. No significant impacts would occur.

Sensitive species and associated habitat that do not occur in the Escondido subarea are the Riverside fairy shrimp, San Diego fairy shrimp, and salt marsh skipper butterfly. The Riverside fairy shrimp and San Diego fairy shrimp typically occur in vernal pools, and any new occurrences will receive additional conservation by the application of the MHCP Narrow Endemic Policy. The Quino checkerspot butterfly has no known major populations, critical locations, or known occurrences in the study area. However, potential habitat areas in the Escondido subarea are conserved, particularly at Daley Ranch. In addition, the City of Escondido will participate with the other jurisdictions under the MHCP and focus conservation efforts for this species on viable populations outside the MHCP study area. Therefore, there are no significant impacts.

Two sensitive animal species have major populations or critical locations in the area: Harbison's dun skipper and southwestern pond turtle. These species are substantially conserved by the Escondido Subarea Plan. Known occurrences for the western spadefoot toad are substantially conserved, along with its potential habitat. The Hermes copper butterfly is a sensitive species that does not have a major population, critical location, or known occurrence in the area, but whose habitat will be adequately conserved by the Escondido Subarea Plan. The California red-legged frog may be extirpated from the study area, and it is highly unlikely to return, due to the lack of suitable habitat and the presence of exotic species. The Escondido Subarea Plan will probably have no effect on this species. Although no populations of the arroyo southwestern toad occur in the study area, application of the MHCP Narrow Endemic and Critical Location Policies to any newly found populations will contribute to the conservation of this species. In addition, the MHCP no net-loss of wetlands policy will conserve the potential breeding habitat for this species. No significant impacts would occur.

The known occurrences for the San Diego horned lizard (33%) and orange-throated whiptail (48%) are marginally conserved. However, because of possible bias in the field surveys, and the lack of field surveys in some areas, the level of conservation for these species is best represented by the species habitat conservation. Habitat for the San Diego horned lizard is sufficiently conserved at 71% (6,024 acres), and moderately conserved at 65% (1,500 acres) for the orange throated whiptail. Suitable habitat for the San Diego horned lizard includes chaparral, coastal sage scrub, grassland, and oak woodlands, with microhabitat characteristics including loose sand and their primary food source, harvester ants. Increased habitat fragmentation has led to an edge effect, including the invasion of Argentine ants that can encroach harvester ants' habitat up to 200 meters from a created edge. Therefore, fragments with edges less than 200 meters would not be suitable for the San Diego horned lizard. However, large blocks of habitat in north and east Escondido are suitable for the San Diego horned lizard, and also are contiguous with similar areas outside of the Escondido FPA. Conservation of the San Diego horned lizard in small habitat patches will have to include management for edge effects and Argentine ants. Conservation of the San Diego horned lizard in larger habitat blocks will be contiguous with suitable habitat outside the study area and provide dispersal. Adequate conservation must include management of Argentine ants and edge effects. Suitable habitats for the orange-throated whiptail include coastal sage scrub and chaparral with a mosaic of openings and a suitable food base, typically termites. The orange-throated whiptail is also affected by edge effects, including the detrimental impact of Argentine ants. Similar to the San Diego horned lizard, smaller habitat fragments

## *ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES*

---

are not likely to support the orange-throated whiptail; however, large blocks of suitable habitat in north and east Escondido are suitable for the orange-throated whiptail, and also are contiguous with similar areas outside of the Escondido FPA. Adequate conservation for the orange-throated whiptail must include management of Argentine ants and edge effects, along with more detailed mapping of the suitable habitat structure of a mosaic of open areas. Based on the level of habitat conservation for these species, there are no significant impacts.

Avian species that have substantial conservation of their major populations, critical locations, and habitat are the least Bell's vireo and the yellow-breasted chat. For Cooper's hawk, critical oak woodlands will be conserved, along with substantial habitat conservation and sufficient conservation of known occurrences. Critical locations for the golden eagle will be substantially conserved, along with known occurrences and moderate habitat conservation. Grassland species, such as the northern harrier, burrowing owl, grasshopper sparrow, and tricolored blackbird, will be adequately conserved by the Escondido Subarea Plan. In the Escondido Subarea Plan, 1,865 acres (65%) of habitat (this includes 78% of habitat identified in the BCLA) for the northern harrier will be conserved. For the northern harrier, while an adequate amount of habitat is conserved, there are no critical locations to conserve for breeding pairs. Implementation of the MHCP is expected to allow for continued foraging for the northern harrier. While the Escondido FPA will not significantly conserve this species, due to a lack of available habitat and known nesting pairs, the Escondido FPA will contribute to the regional conservation of this species by maintaining foraging area and some connectivity of coastal sage scrub and grassland habitat in the area of Daley Ranch. For the burrowing owl, approximately 371 acres (62%) of habitat (this includes 81% of habitat identified in the BCLA) will be conserved under the Escondido FPA. While the MHCP overall does not provide adequate conservation of the burrowing owl, the Escondido FPA does provide conservation of habitat in the critical areas in Escondido. Although there are no known nesting pairs or location points of the burrowing owl in Escondido, potential habitat does exist, and the conservation of this potential habitat is expected to contribute to the overall conservation of this species in the study area. Conservation of this potential habitat is all the Escondido FPA can do, given the lack of adequate conservation of grasslands for the burrowing owl in other areas of the MHCP. The Escondido Subarea Plan will moderately conserve grassland habitat for the northern harrier and substantially conserve critical grasslands in north and south Escondido for the burrowing owl, grasshopper sparrow, and tricolored blackbird. In addition, the Escondido Subarea Plan will adequately conserve the few known occurrences for these species. For the coastal cactus wren, the major population and critical location along San Pasqual Valley and Lake Hodges are conserved. Coastal cactus wren habitat is likely to be overestimated, since this species prefers cactus patches

## ***ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES***

---

within coastal sage scrub. The coastal cactus wren is an endemic species, and may receive additional protection under the MHCP Narrow Endemic Policy. This species will be adequately conserved by the Escondido Subarea Plan.

The Escondido Subarea Plan will substantially conserve habitat for the osprey, along with two known occurrences, the peregrine falcon, and the southwestern willow flycatcher. The western bluebird will have its only known occurrence conserved, and its habitat will be sufficiently conserved. Known occurrences for the rufous-crowned sparrow and Bell's sage sparrow will be substantially conserved, and their habitats will be moderately conserved. Habitat for the white-faced ibis will be marginally conserved, and its only known occurrence will be substantially conserved.

Seven species, the California brown pelican, elegant tern, California least tern, light-footed clapper rail, western snowy plover, Belding's savannah sparrow, and large-billed savannah sparrow, have no major populations, known occurrences, or potential habitat in the Escondido subarea. These species are typically coastal species, and are unlikely to occur in the Escondido subarea. Therefore, there are no significant impacts.

For the gnatcatcher, major populations at Bernardo Mountain, Kit Carson Park, and San Pasqual Valley will be substantially conserved. Coastal sage scrub habitat for this species will be moderately conserved in the Escondido Subarea Plan. Known occurrences for the gnatcatcher will only be marginally conserved at approximately 26%. This marginal conservation of known occurrences is because the majority of the gnatcatcher known occurrences are in developed areas, and are, therefore, not in the Escondido FPA. A major population at Quail Hills will not be conserved. This population has less than 10 gnatcatcher pairs, is somewhat degraded, and is relatively isolated. Although Quail Hills is considered a major population, the conservation of this area is not as important to overall gnatcatcher conservation as other areas. Overall, the substantial conservation of major populations at Bernardo Mountain, Kit Carson Park, and San Pasqual Valley, in addition to moderate habitat conservation of coastal sage scrub, will adequately conserve this species in the Escondido subarea. In addition, the City of Escondido will also provide for offsite mitigation in the unincorporated core gnatcatcher breeding area, along with the other jurisdictions.

There are no known major populations or critical locations of any mammals in the Escondido subarea. Habitat for four mammals, the northwestern San Diego pocket mouse, San Diego black-tailed jackrabbit, mountain lion, and southern mule deer, will be sufficiently conserved. There are no known major populations or recorded locations for Stephens'

kangaroo rat or the Pacific little pocket mouse, and these species may be extirpated from the plan area. With the application of the MHCP Narrow Endemic and Critical Locations Policies, these species will be adequately conserved by the Escondido Subarea Plan.

#### **4.3.3.4 City of Oceanside**

##### **Vegetation Communities**

Table 4.3-4 lists the acres of vegetation communities conserved in the Oceanside Subarea Plan. Wetland vegetation communities that will be 100% conserved both inside and outside the Oceanside FPA include alkali marsh, freshwater marsh, riparian forest, riparian woodland, riparian scrub, freshwater, estuarine, disturbed wetland, and natural flood channel/streambed. These communities will be managed if they are in the Oceanside FPA. The wetlands not included in the Oceanside FPA will be 100% conserved under the MHCP no net-loss wetland policy, but they will not be managed. No net-loss does not necessarily mean 100% avoidance of impacts. Beaches will be conserved at a low level of 9%; however, this is misleading, since the majority of beaches are managed for recreation and have little natural vegetation remaining. No significant impacts would occur.

One upland community is conserved at a substantial level, coast live oak woodland. The coastal sage scrub vegetation community is partially conserved. However, the City of Oceanside's Subarea Plan calls for a mitigation ratio of 3:1 acres. This mitigation ratio is higher than the typical 2:1 acres that most other jurisdictions will use. In addition, the City of Oceanside will restore at least 164 acres of coastal sage scrub. These measures will contribute to the partial conservation of coastal sage scrub habitat in Oceanside. The majority of coastal sage scrub not included in the Oceanside Subarea Plan is fragmented and will not make a substantial contribution to the dispersal corridor through Oceanside. Despite the partial conservation level of coastal sage scrub, there is no significant impact to this vegetation community.

Chaparral is also conserved at a low level, 31%; however, the chaparral habitat accounts for only a small amount of the Oceanside area (44 acres), and the Oceanside FPA (14 acres). The chaparral patch that is not included in the Oceanside FPA is located in east Oceanside. This area is rather isolated from other areas of the Oceanside FPA, and does not appear to provide a stepping-stone or linkage between other areas. Because the chaparral habitat not included in the Oceanside FPA is small in size, fragmented, and isolated, this is not a significant impact.

Of 1,724 acres of grassland, only 515 acres (30%) are included in the Oceanside FPA. Large habitat patches of grassland, mostly in northern Oceanside, are adjacent to the Oceanside FPA, but not included in it. In central Oceanside, there are many patches of grassland that are near the Oceanside FPA, but not included in it. The inadequate conservation of the grassland community is a significant effect.

### **Sensitive Habitats**

Sensitive habitats include upland communities such as southern coastal bluff scrub, maritime succulent scrub, coastal sage scrub, southern maritime chaparral, coastal sage/chaparral mix, perennial grasslands, Engelmann oak woodland, and coast live oak woodland, and wetland communities such as southern coastal salt marsh, alkali marsh, freshwater marsh, riparian forest, riparian woodland, riparian scrub, freshwater, estuarine, disturbed wetland, natural flood channel/streambed, and saltpan/mudflats. Sensitive habitats that are adequately protected under the Oceanside FPA include coastal sage scrub, alkali marsh freshwater marsh, and coast live oak woodland. The grassland vegetation community in Oceanside is not adequately conserved. The current GIS mapping of the grassland vegetation community does not delineate between perennial grasslands and annual grasslands. The proportion of perennial grassland habitat can not be precisely determined; however, only 515 acres (30%) of grassland will be conserved in Oceanside. This marginal level of conservation is unlikely to adequately conserve the sensitive habitat of perennial grasslands. The inadequate conservation of grassland is a significant effect.

### **Sensitive Species**

Table 4.3-5 lists the conservation of major populations, critical locations, known occurrences, and/or habitat for sensitive species in the Oceanside FPA. Sensitive plant species that have major populations or critical locations that are adequately conserved include San Diego ambrosia, sticky dudleya, and Nuttall's lotus. Major populations for Nuttall's lotus will be substantially conserved, and for sticky dudleya, the major populations will be sufficiently conserved, and for Blochman's dudleya, the major populations will be partially conserved. Species that have known occurrences that will be substantially conserved are San Diego ambrosia, thread-leaved brodiaea, and Del Mar mesa sand aster. Although the above-named species have marginal to moderate habitat conservation, the level of survey effort for these species is high, and the known occurrences will be adequately conserved by the Oceanside Subarea Plan. There are a few sensitive plant species that have

## *ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES*

---

no major populations, critical locations, or known occurrences in the study area, but their associated habitat will be adequately conserved by the Oceanside Subarea Plan.

These sensitive species are the San Diego thorn-mint, Encinitas baccharis, wart-stemmed ceanothus, summer-holly, variegated dudleya, San Diego button-celery, cliff spurge, San Diego barrel cactus, Orcutt's hazardia, San Diego marsh-elder, little mousetail, and Nuttall's scrub oak. The conservation level for these species is generally marginal to partial. There has been a high level of survey effort for most of these species. Some species, such as the Encinitas baccharis, variegated dudleya, San Diego button-celery, and Orcutt's hazardia, will receive additional conservation through the application of the MHCP Narrow Endemic and Critical Population Policies.

Plant species that have no major populations, known occurrences, or potential habitat in the study area include Del Mar manzanita, Orcutt's spineflower, short-leaved dudleya, spreading navarretia, and California Orcutt grass. Based on the application of the MHCP Narrow Endemic policy to these narrow endemic plant species, newly found occurrences of these species will be adequately conserved.

Three plant species, the Torrey pine, Engelmann oak, and Parry's tetracoccus, have no major populations, critical areas, known locations, or potential habitats in the Oceanside subarea. These species are unlikely to occur in the study area, based on the lack of suitable habitat; therefore, no significant impacts would occur.

Two invertebrate species that have habitat that will be conserved by the Oceanside Subarea Plan include the Harbison's dun skipper butterfly and the Hermes copper butterfly. Habitat for Harbison's dun skipper butterfly will be substantially conserved, and habitat for Hermes copper butterfly will be partially conserved. Also, additional conservation may be applicable to Harbison's dun skipper through the MHCP Narrow Endemic Policy. The Riverside fairy shrimp and San Diego fairy shrimp do not have any major populations or known occurrences in the Oceanside Subarea Plan. The Riverside fairy shrimp and San Diego fairy shrimp typically occur in vernal pools, and any new occurrences will receive additional conservation by the application of the MHCP Narrow Endemic Policy. The Quino checkerspot butterfly has no known major populations, critical locations, or known occurrences in the study area. However, the City of Oceanside will participate with the other jurisdictions under the MHCP, and focus conservation efforts for this species on viable populations outside the MHCP study area. The above-named species will be adequately conserved by the Oceanside Subarea Plan.

## *ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES*

---

The only reptilian major population in the Oceanside subarea is the southwestern pond turtle. This species will be substantially conserved, including its riparian and aquatic habitats. One other species, the orange-throated whiptail, has known occurrences in the Oceanside subarea that are partially conserved. Habitat for this species is also partially conserved. These species will be adequately conserved by the Oceanside Subarea Plan.

Habitat for the San Diego horned lizard is marginally conserved by the Oceanside Subarea Plan. However, this species prefers relatively large blocks of coastal sage scrub habitat, and much of the coastal sage scrub outside the FPA in Oceanside is fragmented and isolated. As long as the edge effects and Argentine ant effects are properly managed for this species, it will be adequately conserved by the Oceanside FPA. Habitat for the western spadefoot toad, both aquatic and riparian, will be adequately conserved by the Oceanside Subarea Plan.

The arroyo southwestern toad and the California red-legged frog do not have any major populations, critical locations, known occurrences, or habitats in the Oceanside study area. Suitable habitat for these species in the Oceanside subarea is unknown. The arroyo toad will receive additional protection under the MHCP Critical Location Policy, so this species will receive adequate conservation if it is found in the subarea. The California red-legged frog may be extirpated from the study area, and it is unlikely to return to the study area, due to the lack of suitable habitat and the presence of exotic species. The Oceanside FPA will have no effect on the conservation of this species.

Avian species that have major populations and critical locations that are substantially conserved by the Oceanside FPA are the California brown pelican, osprey, peregrine falcon, light-footed clapper rail, western snowy plover, California least tern, and southwestern willow flycatcher. Habitat for these species will be adequately conserved. The white-faced ibis and Cooper's hawk will have moderate conservation of their known occurrences and substantial conservation of their associated habitats. Known occurrences for the elegant tern will be moderately conserved and its habitat will be marginally conserved. For the golden eagle, its three known occurrences will be substantially conserved, but its habitat will be only marginally conserved. However, critical grassland areas that are considered critical locations will be partially conserved. Four species have known occurrences that will be substantially conserved: least Bell's vireo, yellow-breasted chat, rufous-crowned sparrow, and Belding's savannah sparrow. Habitat for the yellow-breasted chat and least Bell's vireo will be substantially conserved. Habitat for the rufous-crowned sparrow and Belding's savannah sparrow is marginally conserved. Two species, the western bluebird and Bell's sage sparrow,

## ***ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES***

---

have no known occurrences in the study area. Habitat for the western bluebird is substantially conserved, and habitat for Bell's sage sparrow is marginally conserved. The above-named species will be adequately conserved by the Oceanside Subarea Plan.

Grassland habitat in the Oceanside Subarea Plan is inadequately conserved. However, some grassland critical locations are included in the Oceanside FPA, and this will help conserve grassland species, such as the northern harrier, burrowing owl, grasshopper sparrow, and tricolored blackbird. The critical location grassland area adjacent to Camp Pendleton for the northern harrier is substantially conserved, along with other critical lagoon and marsh habitats. The substantial conservation of the grassland areas adjacent to Camp Pendleton will also benefit the burrowing owl and grasshopper sparrow. The tricolored blackbird will benefit from the grassland conservation, and freshwater marsh and riparian scrub habitat conservation. These species will be adequately conserved by the Oceanside Subarea Plan.

There are no major populations or known occurrences for the coastal cactus wren in the Oceanside subarea. Coastal cactus wren habitat is likely to be overestimated, since this species prefers cactus patches within coastal sage scrub. The coastal cactus wren is an endemic species, and may receive additional protection under the MHCP Narrow Endemic Policy. This species will be adequately conserved by the Oceanside FPA.

Conservation in a jurisdiction is sometimes hindered by areas that have already been permitted for take. Any significant impacts can then be mitigated through offsite mitigations. The City of Oceanside will mitigate for its significant impact to the gnatcatcher through offsite mitigation in the core breeding area. Major populations of the gnatcatcher in northern Oceanside will be substantially conserved. Another major population of gnatcatchers in central Oceanside will be only partially conserved. The City of Oceanside, along with the other cities participating in the MHCP Plan, will mitigate for this impact by contributing to the conservation of 400 to 500 acres of high-quality, contiguous coastal sage scrub in the core gnatcatcher breeding area in the unincorporated area. In addition, the City of Oceanside will further mitigate these effects by restoring and enhancing at least 164 acres of coastal sage scrub in the study area. The City of Oceanside will provide critical stepping-stones of coastal sage scrub habitat for the gnatcatchers to utilize as a dispersal corridor. The City of Oceanside will also partially conserve approximately 664 acres of coastal sage scrub and approximately 67 known locations of gnatcatchers. The significant impact resulting from the partial conservation of a major gnatcatcher population in central Oceanside will be mitigated by additional coastal sage scrub conservation in the unincorporated area and habitat restoration in the subarea.

There are no known major populations, critical locations, or known occurrences of any mammals in the Oceanside subarea. Based on the marginal to partial conservation of habitat, the Pacific little pocket mouse, northwestern San Diego pocket mouse, San Diego black-tailed jackrabbit, mountain lion, and southern mule deer will be adequately conserved. There are no known major populations or recorded locations for Stephens' kangaroo rat, and this species may be extirpated from the plan area. This species will be adequately conserved by the Subarea Plan, since the Oceanside FPA will help maintain the potential for natural recolonization of suitable habitats, and any newly found occupied habitat areas will receive additional conservation under the MHCP Narrow Endemic and Critical Population Policy. Therefore, no significant impacts would occur.

#### **4.3.3.5 City of San Marcos**

##### **Vegetation Communities**

Table 4.3-4 lists the acres of vegetation communities conserved in the San Marcos Subarea Plan. Wetland vegetation communities that receive 100% conservation include freshwater marsh, riparian forest, riparian woodland, riparian scrub, freshwater, and disturbed wetland. Under the MHCP no net-loss for wetlands policy, even the wetlands outside the San Marcos FPA will be 100% conserved. Only the wetlands inside the San Marcos FPA will be managed, and no net-loss does not necessarily mean 100% avoidance of impacts. The upland communities that receive adequate conservation are Engelmann oak woodland (82%), coast live oak woodland (63%), and coastal sage/chaparral mix (65%). These vegetation communities are adequately conserved under the San Marcos Subarea Plan, so there are no significant impacts to these communities.

The coastal sage scrub community will receive a partial level of conservation. Of 1,868 acres of coastal sage scrub, approximately 934 acres (50%) are included in the Plan.

Of 2,392 acres of chaparral, 1,159 acres (48%) are included in the Plan. The conservation level for chaparral will be adequate only with the increase of the percent conservation. The largest contiguous block of chaparral in the City of San Marcos which occurs along the southern portion of the City is roughly 760 acres. This chaparral habitat is part of the largest contiguous block of natural vegetation (over 1,000 acres) in the entire MHCP planning area, outside of the Daley Ranch mitigation bank in the City of Escondido. The 760 acres of chaparral are not known to support critical locations or known occurrences of sensitive

## ***ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES***

---

species; however, the City of San Marcos is proposing 188 acres of chaparral in the center of this large contiguous block of chaparral to be 25% conserved. Thus, resulting in the loss of approximately 141 contiguous acres of chaparral (18.5%), a sixfold increase in linear feet of edge, and at least a sixfold increase in the number of areas constricting the corridor. The loss of chaparral in the center of this contiguous block of habitat is considered significant because of impacts to preserve design.

Grasslands are conserved at a very low level, 12%. Of 694 acres, 85 acres are conserved in the San Marcos FPA. Over half of this area occurs in the downtown area of San Marcos, where these grassland patches are surrounded by development. Impacts here may be unavoidable, due to the surrounding development. Other grassland habitat patches that are not conserved by the San Marcos FPA are in northern San Marcos. These grassland habitat patches are adjacent to coastal sage scrub habitat in the San Marcos FPA. The extremely low conservation level of 12% for the grassland community has a significant impact on the biological resources of and in this habitat.

### **Sensitive Habitats**

Sensitive habitats include upland communities such as southern coastal bluff scrub, maritime succulent scrub, coastal sage scrub, southern maritime chaparral, coastal sage/chaparral mix, perennial grasslands, Engelmann oak woodland, coast live oak woodland, and wetland communities such as southern coastal salt marsh, alkali marsh, freshwater marsh, riparian forest, riparian woodland, riparian scrub, freshwater, estuarine, disturbed wetland, natural flood channel/streambed, and saltpan/mudflats. In the San Marcos FPA, the Engelmann oak woodland habitat is substantially conserved. In addition, the wetland habitats, including freshwater marsh, riparian forest, riparian woodland, riparian scrub, freshwater, and disturbed wetlands, are also substantially conserved. Three sensitive upland communities that are conserved include moderate conservation of coast live oak woodland and coastal sage/chaparral mix habitat and partial conservation of coastal sage scrub habitat. Only a few acres of coast live oak woodland and riparian forest occur in the San Marcos subarea study area. Grassland habitat is mapped at a coarse level in the San Marcos FPA, so it is difficult to determine which grasslands are native and which are degraded. In general, grassland communities are conserved at a very poor level, around 12%. The marginal level of conservation for grasslands is inadequate and will have subsequent significant impacts.

### **Sensitive Species**

Table 4.3-5 lists the conservation of major populations, critical locations, known occurrences, and/or habitats for sensitive species in the San Marcos FPA. Sensitive plant species that have major populations or critical locations substantially conserved in the San Marcos Subarea Plan include San Diego thorn-mint, thread-leaved brodiaea, San Diego button-celery, and spreading navarretia. Habitat for the San Diego thorn-mint, thread-leaved brodiaea, and San Diego button-celery is marginally conserved. Application of the MHCP critical location and wetland policies will increase the level of protection for existing populations for the San Diego marsh-elder. For the thread-leaved brodiaea, part of the San Marcos population occurs in a Major Amendment Area. The major populations of summer-holly will be moderately conserved, and the major populations for the San Diego marsh-elder will be partially conserved. Major populations of wart-stemmed ceanothus are only marginally conserved; however, the habitat for this species will be partially conserved. Engelmann oak does not have any major populations in the San Marcos subarea, but the known occurrences and habitat will be substantially conserved. Known occurrences for Del Mar manzanita will also be substantially conserved, and this species will receive additional protection by the MHCP Narrow Endemic Policy.

Three plant species, sticky dudleya, Orcutt's hazardia, and Nuttall's scrub oak, do not occur in the San Marcos subarea; however, their associated habitat will be partially conserved. Four plant species do not occur in the subarea and their habitat is marginally conserved: the San Diego ambrosia, Encinitas baccharis, San Diego barrel cactus, and Parry's tetracoccus. This marginal conservation of habitat is approximately 40% and will be adequate. Blochman's dudleya is not known to occur in the subarea, and habitat for this species is marginally conserved at approximately 20%. Blochman's dudleya is typically found on coastal bluffs in association with coastal scrub habitat; therefore, it is unlikely that this species will occur in the San Marcos subarea. Orcutt's spineflower, Del Mar mesa sand aster, short-leaved dudleya, Nuttall's lotus, little mousetail, and California Orcutt grass have no known occurrences, major populations, or habitat in the San Marcos subarea. It is unlikely that these species will occur in the San Marcos subarea. In addition, these species will receive additional conservation under the MHCP Narrow Endemic Policy and Critical Locations Policy. Therefore, based on the small chance that the species will occur in the San Marcos subarea, and the additional conservation they will receive if they were found, these species will be adequately conserved.

## *ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES*

---

One species, variegated dudleya, will not be adequately conserved by the San Marcos Subarea Plan. Despite the additional conservation that will be afforded to variegated dudleya by the MHCP Narrow Endemic Policy, the low level of marginal habitat conservation will not be adequate and will lead to subsequent significant impacts on this species.

The following two species, Encinitas baccharis and San Diego barrel cactus, have moderate habitat conservation (48% for both). This conservation level is adequate, because there has been a high survey effort for these species, and it is unlikely that they will be detected in the San Marcos study area. In addition, Encinitas baccharis will receive additional conservation outside the San Marcos FPA under the MHCP Narrow Endemic Policy. Despite the marginal conservation of habitat (20%) for Blochman's dudleya in San Marcos, this species is associated with coastal bluff habitat and is unlikely to occur in San Marcos. Therefore, there are no significant impacts to these species.

The following invertebrates will be adequately conserved by the San Marcos Subarea Plan: Riverside fairy shrimp, San Diego fairy shrimp, Harbison's dun skipper butterfly, and Hermes copper butterfly. There are no known occurrences of these species (except San Diego fairy shrimp) in the subarea; however, conservation of habitat and application of the MHCP Narrow Endemic Policy will provide adequate conservation. The conservation of vernal pools, especially in the Major Amendment Area, will benefit the Riverside fairy shrimp and San Diego fairy shrimp. The Quino checkerspot butterfly is not known to occur in the study area; however, conservation efforts for this species are aimed at viable populations outside of the study area. Based on this information, the San Marcos FPA will adequately conserve this species only with sufficient conservation efforts outside the study area to maintain viable populations.

There are no major populations, critical locations, or known occurrences for amphibians and reptiles (except a sighting of the pond turtle) in the San Marcos study area. The habitat for sensitive wetland species, such as the western spadefooted toad and southwestern pond turtle, is adequately conserved at 100%. The arroyo southwestern toad and the California red-legged frog do not have any major populations, critical locations, known occurrences, or habitats in the San Marcos study area. Suitable habitat for these species in the San Marcos subarea is unknown. The arroyo toad will receive additional protection under the MHCP Critical Location Policy, so this species will receive adequate conservation if it is found in the subarea. The California red-legged frog may be extirpated from the study area, and is unlikely to return to the study area, due to the lack of suitable habitat and the presence of exotic species. The San Marcos FPA will probably have no effect on the conservation of this

## *ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES*

---

species. The habitat for two reptiles, San Diego horned lizard and orange-throated whiptail, is marginally conserved at 45% and 51%. These species do not have any major populations, critical locations, or known occurrences in the San Marcos study area. These species prefer relatively larger blocks of habitat, particularly coastal sage scrub and chaparral. As long as San Marcos protects chaparral at a high rate of at least 60%, the orange-throated whiptail will be adequately conserved. For the San Diego horned lizard, however, the marginal conservation of coastal sage scrub must be coupled with management practices to minimize edge effects and Argentine ants. Subject to implementation of the Plan, the San Diego horned lizard will be adequately conserved.

Three avian species have known occurrences that will be adequately conserved by the San Marcos Subarea Plan. Cooper's hawk will have marginal conservation and substantial conservation of its habitat. Rufous-crowned sparrow will have moderate conservation and partial conservation of its habitat. Bell's sage sparrow will have substantial conservation and partial conservation of its habitat. Species that have no recorded locations, but substantial conservation of habitat, include white-faced ibis, osprey, peregrine falcon, southwestern willow flycatcher, western bluebird, least Bell's vireo, and yellow-breasted chat. Habitat for the golden eagle is marginally conserved and critical scrub habitat in north and southwest San Marcos is partially conserved, so the habitat conservation for this species is adequate. For most of the estuarine and marsh associated species, California brown pelican, light-footed clapper rail, western snowy plover, elegant tern, California least tern, Belding's savannah sparrow, and large-billed savannah sparrow, there is little to no suitable habitat for these species in the San Marcos subarea, and these species are unlikely to occur. Since these species are unlikely to occur in the San Marcos subarea due to the lack of suitable habitat, the conservation status of these species cannot be determined, and is not applicable to the San Marcos FPA. There are no major populations or known occurrences for the coastal cactus wren in the San Marcos subarea. Coastal cactus wren habitat is likely to be overestimated, since this species prefers cactus patches within coastal sage scrub. The coastal cactus wren is an endemic species, and may receive additional protection under the MHCP Narrow Endemic Policy. Therefore, this species will be adequately conserved by the San Marcos FPA.

Conservation in a jurisdiction is sometimes hindered by areas that have already been permitted for take. Any significant impacts can then be mitigated through offsite mitigations. The City of San Marcos will mitigate its significant impact to the gnatcatcher through offsite mitigation in the core breeding area. The major populations at the San Marcos portion of La Costa/University Commons will be marginally conserved. The habitat

## *ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES*

---

will be disturbed (City of San Marcos 2001). The critical locations at the San Marcos portion of the La Costa/University Commons area will be marginally conserved. The marginal conservation of this important gnatcatcher area is a significant impact. Of 164 acres of coastal sage scrub habitat, 85% of the habitat will be disturbed (City of San Marcos 2001). The City of San Marcos (along with Brookfield Homes) will provide for an approximate 1,000-foot corridor with one pinch-point (along with other improvements to conservation in the area). A mitigation program will include 2:1 mitigation for all coastal sage scrub and 1:1 mitigation for chamise chaparral. This will include on- and off-site components, such as restoration and habitat preservation. These efforts will minimize the significant impact resulting from marginal conservation of critical population coastal sage scrub habitat. The City of San Marcos, along with the other cities participating in the MHCP Plan, will mitigate for this impact by contributing to the conservation of 400 to 500 acres of high-quality, contiguous coastal sage scrub in the core gnatcatcher breeding area in the unincorporated area. In addition, the City of San Marcos will further mitigate these effects by restoring and enhancing at least 70 acres of coastal sage scrub in the study area. The City of San Marcos will conserve approximately 1,014 acres of coastal sage scrub, and approximately 22 known locations of gnatcatchers. The significant impact resulting from the marginal conservation of a major gnatcatcher population will be mitigated by additional coastal sage scrub conservation in the unincorporated area and habitat restoration in the subarea.

Four grassland species will be inadequately conserved under the San Marcos Subarea Plan. The northern harrier, burrowing owl, grasshopper sparrow, and tricolored blackbird are grassland-dependant species, and grassland habitat in San Marcos is poorly conserved at approximately 12%. The insufficient conservation of grassland habitat will have significant impacts on these species. Although one known occurrence of the grasshopper sparrow is included in the San Marcos FPA, critical grassland areas for this species are poorly conserved. The marginal level of conservation for this species' habitat is inadequate and will have subsequent significant impacts to the grasshopper sparrow. In addition, the inadequate conservation of critical grassland areas will have significant impacts on the burrowing owl. Even though one known occurrence is conserved in the San Marcos Subarea Plan, the burrowing owls may rely on the areas of grassland in the vicinity of their known occurrence location. The poor conservation of grasslands under the San Marcos FPA will affect the conservation, future distribution, dispersal, and population of these species. For the northern harrier, no suitable nesting areas will be conserved, and there will not be sufficient conservation of grassland and agricultural areas for this species to forage.

There are no known major populations or critical locations of any mammals in the San Marcos subarea; however, based on the marginal conservation of habitat, the northwestern San Diego pocket mouse, San Diego black-tailed jackrabbit, mountain lion, and southern mule deer will be adequately conserved. There are no known major populations or recorded locations for Stephens' kangaroo rat, and this species may be extirpated from the plan area. This species will be adequately conserved by the Subarea Plan, since the San Marcos FPA will help maintain the potential for natural recolonization of suitable habitats, and any newly found occupied habitat areas will receive additional conservation under the MHCP Narrow Endemic and Critical Population Policy. There are no known locations or habitat for the Pacific little pocket mouse; however, this species will receive additional conservation under the MHCP Narrow Endemic Policy.

#### **4.3.3.6 No Action/No Project Alternative**

If no action is taken, the MHCP Plan and subsequent Subarea Plans will not be implemented. An incidental take permit will not be issued. Mitigation will continue to occur on a project-by-project basis, with no comprehensive approach to conservation. This current process will result in fragmented mitigation areas, which will not contribute adequately to the preservation of sensitive species, their associated habitats, and overall ecosystem functions. Widespread habitat loss and piecemeal mitigation will continue to occur. This piecemeal approach results in the uncoordinated conservation of small, scattered habitats that are typically unconnected and do not necessarily guarantee the continued viability of species populations or ecosystem functions.

#### **Vegetation Communities**

This section includes the vegetation communities protected by Daley Ranch in Escondido, along with the other existing parks and open spaces in the MHCP area.

If no plan is implemented, in addition to piecemeal mitigation efforts, vegetation communities in parks and open spaces will probably be conserved. Vegetation communities in parks and open spaces are listed in Table 4.3-1. These communities will exist in parks, but there is no guarantee that they will be managed. The current and future recreational demands on these areas may impact the vegetation communities, especially if the primary emphasis for park usage is on recreation, rather than conservation. Marsh communities will remain protected at an moderate level (southern coastal salt marsh 88%, alkali marsh 73%, and freshwater marsh 61%), along with other wetland communities that have an intermediate

## ***ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES***

---

level of conservation (riparian forest 34%, riparian woodland 23%, riparian scrub 35%, freshwater 35%, natural flood channel/streambed 75%, and beach 17%). Coastal preserves protect substantial amounts of estuarine (97%) and saltpan/mudflats (100%) areas.

With no plan, the majority of vegetation communities will be marginally conserved in parks and open space areas, but they may not persist with recreation demands. Approximately 31% of chaparral habitat (2,604 acres) will be protected, with the majority at Daley Ranch in Escondido. This area of chaparral is relatively isolated and lacks connectivity to other areas. Coastal sage scrub is protected at a low level, 19%, and only 1,637 acres of 8,570 acres will be conserved. This low level of conservation contributes to the fragmentation of this habitat and loss of any potential dispersal corridors and habitat links. Grassland habitat is marginally conserved (22%), and this will further lead to habitat fragmentation. Oak woodlands that are protected are located in Daley Ranch. Approximately 84 acres (37%) of Engelmann oak woodland and 183 acres (28%) of coast live oak woodland will be conserved.

Under the No Action/No Project Alternative, vegetation communities, especially upland communities, will have low levels of conservation that will provide little, if any, connectivity between habitats. Wetland communities will be partially conserved; however, lack of management could result in detrimental impacts to these ecosystems. This marginal conservation is a significant impact to the vegetation communities in the study area. In addition, if the existing parks are not managed for conservation, the vegetation communities could be impacted by the loss of ecological functions, and recreational demand.

### **Sensitive Habitats**

The following sensitive habitats will be marginally conserved if no plan is implemented; maritime succulent scrub (32%), coastal sage scrub (19%), southern maritime chaparral (13%), southern coastal salt marsh (88%), alkali marsh (73%), freshwater marsh (61%), riparian forest (34%), riparian woodland (23%), riparian scrub (35%), Engelmann oak woodland (37%), coast live oak woodland (28%), disturbed wetland (47%), and natural flood channel/streambed (75%).

### **Sensitive Species**

Under the No Action/No Project Alternative, sensitive species will be conserved opportunistically if they occur in the park and open space areas. This section includes the

vegetation communities protected by Daley Ranch in Escondido, along with the other existing parks and open spaces in the MHCP area. Table 4.3-1 lists the expected conservation level of known occurrences, major populations, critical locations, and habitats for sensitive species. If no plan is implemented, it is likely that there will be no habitat management, except maybe as part of mitigation. Without active habitat conservation and management, sensitive species populations and ecosystem functions will probably not persist. Under the No Action/No Project Alternative, there will be significant impacts to the long-term viability of sensitive species. The sensitive plant species that are inadequately conserved under the No Action/No Project Alternative include San Diego thorn-mint, San Diego ambrosia, Del Mar manzanita, Encinitas baccharis, thread-leaved brodiaea, wart-stemmed ceanothus, summer-holly, Del Mar mesa sand aster, Blochman's dudleya, sticky dudleya, San Diego button-celery, cliff spurge, San Diego barrel cactus, Orcutt's hazardia, San Diego marsh elder, Nuttall's lotus, little mousetail, spreading navarretia, California Orcutt grass, Torrey pine, Englemann oak, and Nuttall's scrub oak. The sensitive animal species that are not adequately conserved under the No Action/No Project Alternative include Riverside fairy shrimp, San Diego fairy shrimp, Hermes copper butterfly, western spadefoot toad, southwestern pond turtle, San Diego horned lizard, orange-throated whiptail, white-faced ibis, northern harrier, Cooper's hawk, golden eagle, peregrine falcon, light-footed clapper rail, southwestern willow flycatcher, coastal cactus wren, California gnatcatcher, least Bell's vireo, yellow-breasted chat, rufous-crowned sparrow, Belding's savannah sparrow, large-billed savannah sparrow, grasshopper sparrow, tricolored blackbird, San Diego black-tailed jackrabbit, mountain lion, and mule deer. The inadequate level of conservation for these species and habitats will have significant impacts.

#### **4.3.4 Level of Significance with Mitigation**

##### **MHCP/Take Authorization/Implementing Agreement**

In general, the take of a listed species calls for avoidance, minimization, and mitigation. For most of the sensitive species that are not adequately conserved by the alternatives and/or Subarea Plans, avoidance of take and subsequent impacts is by additional conservation of species occurrences and/or habitat. If additional conservation of species and/or habitat is not possible (usually because there are no remaining blocks of habitat to conserve, or the species' known occurrences are in a developed area), then take and impacts can be minimized through habitat restoration and enhancement, and populations management.

## **FPA Alternative 1**

### *Vegetation Communities*

Vegetation communities that are not adequately conserved by the FPA include coastal sage scrub, coastal sage scrub and chaparral mix, and grasslands. The adequacy criteria were based not only on the percent of habitat that is conserved, but the spatial distribution and relatively large habitat areas that are not included in the FPA, and were identified as biologically valuable by the BCLA. The significant impact to these vegetation communities can be avoided by including the relatively large habitat blocks included in the BCLA, but not included in the FPA preserve, which will ultimately improve the preserve design configuration.

### *Sensitive Habitats*

Sensitive habitats that are not adequately conserved by the FPA are coastal sage scrub, and coastal sage scrub and chaparral mix. As mentioned above, the significant impacts to these sensitive habitats can be avoided if the remaining large habitat blocks that are biologically valuable are incorporated into the FPA preserve. Grassland communities are mapped at a course level in the FPA, so it is difficult to determine which grasslands are native, and which are degraded. In general, grassland communities are conserved at a marginal level. The only way to avoid these significant impacts is to incorporate the relatively large remaining grassland areas that were identified as biologically valuable in the BCLA into the FPA preserve.

### *Sensitive Species*

Because of insufficient conservation of species and/or habitat, there are significant impacts to the following sensitive species: variegated dudleya, grasshopper sparrow, tricolored blackbird, burrowing owl, northern harrier, and California gnatcatcher. The insufficient conservation and subsequent significant impacts can be avoided only by additional conservation of species and/or habitat.

## **FPA Alternative 2**

### *Vegetation Communities*

The FPA Alternative 2 is identical to the FPA Alternative 1, but with the addition of approximately 400 to 500 acres of high-quality, contiguous coastal sage scrub in the core gnatcatcher conservation area. The inclusion of this 400 to 500 acres of high-quality, contiguous coastal sage scrub, along with restoration of at least 338 acres of coastal sage scrub within the study area, will avoid significant impacts. There will still be significant and unmitigable impacts to the grassland communities.

### *Sensitive Habitats*

Sensitive habitats that are not adequately conserved by the FPA Alternative 2 are coastal sage scrub, and coastal sage scrub and chaparral mix. The significant impacts to coastal sage scrub are avoided by the addition of 400 to 500 acres of high-quality, contiguous coastal sage scrub in the unincorporated area, along with the restoration of at least 338 acres of coastal sage scrub within the MHCP study area. Impacts to grasslands are significant and unmitigable.

### *Sensitive Species*

The preserve for FPA Alternative 2 is the same as the preserve for Alternative 1, with the exception of the additional conservation of 400 to 500 acres of high-quality, contiguous coastal sage scrub, currently occupied by gnatcatchers in the gnatcatcher core conservation area. The addition of these 400 to 500 acres of high-quality, contiguous coastal sage scrub, along with at least 338 acres of coastal sage scrub habitat restoration in the MHCP study (from all the cities in the MHCP) area, will avoid significant impacts to the gnatcatcher due to take of a few major populations. For variegated dudleya there will still be a significant impact. For the grassland species, northern harrier, grasshopper sparrow, burrowing owl, and tricolored blackbird, there will still be significant and unmitigable impacts due to inadequate conservation of grassland habitat.

### **BCLA Alternative 3**

#### *Vegetation Communities*

The Alternative 3 BCLA preserve adequately conserves coastal sage scrub, chaparral, and grassland areas. However, the BCLA does not include as many wetland and riparian areas as the FPA. The MHCP no net-loss for wetlands will provide additional conservation of wetland and riparian areas that are outside the BCLA. Only the lands inside the BCLA will be managed. To ensure adequate conservation of wetland and riparian areas, the BCLA Alternative must provide adequate management for the wetland and riparian communities that are outside the BCLA.

#### *Sensitive Habitats*

Due to the MHCP no net-loss wetland policy, all sensitive wetland, riparian, and other sensitive habitats in the study area will be adequately conserved.

#### *Sensitive Species*

Under Alternative 3, BCLA scenario, impacts to the following species are significant and unmitigated: summer-holly, Blochman's dudleya, variegated dudleya, sticky dudleya, Nuttall's scrub oak, Parry's tetracoccus, San Diego horned lizard, and orange-throated whiptail.

### **Subarea Plans**

#### *City of Carlsbad*

##### *Vegetation Communities*

Vegetation communities that are not adequately conserved by the Carlsbad Subarea Plan are grasslands and coastal sage scrub and chaparral mix. Because of a low level of conservation, significant impacts to these communities can be avoided by including additional habitat in the Subarea Plan. Any impacts to the coastal sage scrub will be avoided through the additional conservation of at least 400 to 500 acres of high-quality, contiguous coastal sage scrub in the gnatcatcher core conservation area, along with at least 104 acres of coastal sage

---

## ***ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES***

---

scrub habitat restoration in the Carlsbad subarea. Impacts to grasslands are significant and unmitigable.

### ***Sensitive Habitats***

The marginal level of conservation to the sensitive habitat of coastal sage scrub and chaparral mix is inadequate and can be avoided by increasing the conservation of this vegetation community in the Carlsbad FPA. It is difficult to determine which grasslands are native and which are degraded. These impacts are significant and unmitigable. Any impacts to the coastal sage scrub will be avoided through the additional conservation of at least 400 to 500 acres of high-quality, contiguous coastal sage scrub supporting 16-23 pairs of gnatcatchers in the gnatcatcher core conservation area, along with at least 104 acres of coastal sage scrub habitat restoration in the Carlsbad subarea.

### ***Sensitive Species***

Because of insufficient conservation of species and/or habitat, there are significant impacts to the following sensitive species: grasshopper sparrow, burrowing owl, northern harrier, and tricolored blackbird. These impacts are significant and unmitigable.

### ***City of Encinitas***

#### ***Vegetation Communities***

There are no significant impacts to the vegetation communities under the City of Encinitas' Subarea Plan.

#### ***Sensitive Habitats***

Any impacts to the coastal sage scrub will be avoided through the additional conservation of at least 400 to 500 acres of high-quality, contiguous coastal sage scrub supporting 16 to 23 pairs of gnatcatchers in the gnatcatcher core conservation area. There are no significant impacts to the sensitive habitats under the City of Encinitas' Subarea Plan.

## ***ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES***

---

### *Sensitive Species*

There are no significant impacts to sensitive species under the City of Encinitas' Subarea Plan.

### ***City of Escondido***

#### *Vegetation Communities*

There are no significant impacts to the vegetation communities under the City of Escondido's Subarea Plan.

#### *Sensitive Habitats*

Any impacts to the coastal sage scrub will be avoided through the additional conservation of at least 400 to 500 acres of high-quality, contiguous coastal sage scrub supporting 16 to 23 pairs of gnatcatchers in the gnatcatcher core conservation area. There are no significant impacts to the sensitive habitats under the City of Escondido Subarea Plan.

#### *Sensitive Species*

Take impacts to the major population of gnatcatchers at Quail Hills, although this is not significant, will be mitigated by the additional conservation of at least 400 to 500 acres of high-quality, contiguous coastal sage scrub in the unincorporated core gnatcatcher conservation area that is currently occupied by 16-23 pairs of breeding gnatcatchers.

### ***City of Oceanside***

#### *Vegetation Communities*

The inadequate conservation of grasslands in the Oceanside Subarea Plan is a significant impact to this vegetation community. The grassland habitat in Oceanside is largely fragmented and degraded by nonnative species. These impacts are significant and unmitigable.

*Sensitive Habitats*

The inadequate conservation of grasslands in the Oceanside Subarea Plan is a significant impact on this sensitive habitat. This impact is significant and unmitigable. Any impacts to the coastal sage scrub will be avoided through the additional conservation of at least 400 to 500 acres of high-quality, contiguous coastal sage scrub supporting 16 to 23 pairs of gnatcatchers in the gnatcatcher core conservation area.

*Sensitive Species*

There are no significant impacts to sensitive species under the City of Oceanside's Subarea Plan.

***City of San Marcos***

*Vegetation Communities*

Grasslands and chaparral are not adequately conserved by the San Marcos Subarea Plan. Grassland impacts are significant and unmitigated.

*Sensitive Habitat*

There are significant impacts to the coastal sage scrub sensitive habitat, because of the low level of conservation for these vegetation communities. Significant impacts to coastal sage scrub will be avoided by the additional conservation of at least 400 to 500 acres of high-quality, contiguous coastal sage scrub in the unincorporated core gnatcatcher conservation area, along with at least 70 acres of coastal sage scrub habitat restoration within the San Marcos area.

Grassland impacts are significant and unmitigable.

The largest contiguous block of chaparral in the City of San Marcos which occurs along the southern portion of the City is roughly 760 acres. This chaparral habitat is part of the largest contiguous block of natural vegetation (over 1,000 acres) in the entire MHCP planning area, outside of the Daley Ranch mitigation bank in the City of Escondido. The 760 acres of chaparral are not known to support critical locations or known occurrences of sensitive species; however, the City of San Marcos is proposing 188 acres of chaparral in the center of

this large contiguous block of chaparral to be 25% conserved. Thus, resulting in the loss of approximately 141 contiguous acres of chaparral (18.5%), a sixfold increase in linear feet of edge, and at least a sixfold increase in the number of areas constricting the corridor. The loss of chaparral in the center of this contiguous block of habitat is considered significant because of impacts to preserve design. The only way to avoid this inadequate conservation level and subsequent significant impacts is to incorporate additional areas of coastal sage scrub into the Subarea Plan.

### *Sensitive Species*

The following species are inadequately conserved under the regional MHCP FPA plan, and under the San Marcos Subarea Plan: variegated dudleya, northern harrier, burrowing owl, grasshopper sparrow, tricolored blackbird, and California gnatcatcher. In general, the San Marcos Subarea Plan conserves below 50% of potential habitat for many sensitive species. Significant impacts to the gnatcatcher will be avoided by the additional conservation of at least 400 to 500 acres of high-quality, contiguous coastal sage scrub in the unincorporated core gnatcatcher conservation area that is currently occupied by 16-23 pairs of breeding gnatcatchers, along with at least 70 acres of coastal sage scrub habitat restoration within the San Marcos area. Grasslands are poorly conserved (approximately 12%), and this will have significant impacts on the grassland species such as the northern harrier, burrowing owl, grasshopper sparrow, and tricolored blackbird. Grassland impacts are significant and unmitigable.

In situations where there are no reasonable blocks of habitat to incorporate into the preserve, these impacts can be minimized and mitigated by habitat restoration and enhancement. This is only applicable for some species, such as the vernal pool species. The majority of vernal pools in San Marcos occur in the downtown area, which is developed. Conservation of the vernal pool habitat may not be adequate for some species. Some species will require habitat restoration and enhancement, along with population monitoring to ensure species survival.

### **4.3.5 Mitigation Measures**

Each city will need to implement the appropriate amendments to the General Plans, Local Coastal Programs, Ordinances, and Growth Management Plans. Each city has recognized the necessity of implementing this measure in each of the Subarea Plans, respectively. The following mitigation measures will be required to partially mitigate impacts to biological resources:

- The MHCP and Subarea Plans have included the adoption and implementation of a Biological Mitigation, Monitoring, and Management Program that implements the conservation, monitoring, management, enhancement, and research programs.
- It is also a part of the MHCP and Subarea Plan that the USFWS, CDFG, SANDAG, and each city will be responsible for implementing these measures as a condition of the IA.

Project-specific measures for each alternative follow. Table 4.3-6 provides a summary of mitigation measures for each component. To mitigate impacts to grassland would require conservation of an additional 20% of grassland community. This conservation would need to be contiguous with existing preserves. This mitigation has been determined to be infeasible because of the associated impacts to population and housing. Alternatively, the coverage of grassland and associated species would not be included in the MHCP; thus, no take would be authorized.

To fully mitigate impacts to chaparral would require the following three measures:

- The level of conservation in the Southern FPA area designated for 25% conservation will be significantly increased, and any development will be located in the least sensitive area, while significantly minimizing the linear feet of edge and significantly reducing the number and extent of constriction areas within the larger block of chaparral habitat designated for 100% preservation.
- All resulting impacts to chaparral in the Southern FPA area designated for 25% conservation will be mitigated pursuant to the Subarea Plan “Mitigation Ratios for Impacts to Subarea Plan Species” Table on Page 71.
- Increase the level of conservation in the Southern FPA area designated for 60% conservation to 75% conservation, and any development will be located in the least sensitive area while minimizing linear feet of edge and areas of constriction.

Increasing the preservation of chaparral in the 25% conservation area is infeasible, because of previous commitments in an existing development agreement.

## ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES

Provision of 50 acres of chaparral conservation through preservation or restoration to achieve a 50% conservation ratio within the Southern FPA; this is feasible and will partially mitigate impacts to chaparral (not to below a level of significance).

Impacts to grasslands (MHCP and all Subarea Plans) and associated species are unavoidable.

Impacts to summer-holly, Blochman's dudleya, variegated dudleya, sticky dudleya, Nuttall's scrub oak, and Parry's tetracoccus were considered unavoidably significant for all of the alternatives because:

- These plants can not be transplanted or create new populations via seed stock, because it is not technically feasible at this time. At this time, transplantation has not been found successful; therefore, it can not be ascertained to ensure that there will be no loss of individuals.
- Avoidance of each of the populations is also considered infeasible, because of the overall distribution of the resources.

Mitigation measures for San Diego horned lizards and orange-throated whiptails for all of the alternatives were also considered infeasible to ensure there is no reduction in populations (CEQA 15065) unless there are no impacts to the occupied habitat because there is no feasible way to increase the population numbers through the project.

Impacts to northern harriers, burrowing owls, grasshopper sparrows, and tricolored blackbirds for all of the alternatives are unmitigated because of:

- The overall loss of grasslands.
- Infeasible to preserve additional grasslands, due to the associated loss of population and housing.

Impacts to the California gnatcatcher in FPA 1 can be mitigated through the preservation of 400 to 500 acres of high-quality, contiguous coastal sage scrub habitat (i.e., Preferred Project).

The MHCP does provide partial mitigation through conservation of critical populations, critical habitats, management of the preserve, and enhancement of the resources. Thus, in

## *ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES*

accordance with the findings of CEQA 15065, it is infeasible to fully mitigate the impacts and ensure that there is no loss in populations.

Coastal sage scrub/chaparral mix in the Carlsbad Subarea Plan is mitigated through provision of 400 to 500 acres of coastal sage scrub habitat in the unincorporated County gnatcatcher core as part of FPA 2 (Preferred Project).

The No Action/No Project alternative can only be mitigated through the preparation of an integrated habitat conservation planning effort, providing conservation of sensitive communities, habitats, and species.

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-1  
Conservation of Vegetation Communities for Each Alternative**

Vegetation Community	Acres in Study Area	FPA Alternative 1	FPA Alternative 2	BCLA Alternative 3	No Action/ No Alternative
<i>Natural Habitats</i>					
Southern coastal bluff scrub	2	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Maritime succulent scrub	32	30 (91%)	30 (91%)	31 (96%)	10 (32%)
Coastal sage scrub	8,570	5,171 (60%)	5,671 (66%)	7,628 (89%)	1,637 (19%)
Chaparral	8,312	5,488 (66%)	5,488 (66%)	7,699 (93%)	2,604 (31%)
Southern maritime chaparral	968	770 (80%)	770 (80%)	904 (93%)	125 (13%)
Coastal sage/chaparral mix	462	233 (50%)	233 (50%)	439 (95%)	81 (18%)
Grassland	5,209	1,597 (31%)	1,597 (31%)	3,295 (63%)	1,138 (22%)
Southern coastal salt marsh	272	272 (100%)	272 (100%)	270 (99%)	238 (88%)
Alkali marsh	165	165 (100%)	165 (100%)	165 (100%)	121 (73%)
Freshwater marsh	533	533 (100%)	533 (100%)	457 (86%)	327 (61%)
Riparian forest	676	676 (100%)	676 (100%)	404 (60%)	227 (34%)
Riparian woodland	250	250 (100%)	250 (100%)	133 (53%)	58 (23%)
Riparian scrub	1,514	1,514 (100%)	1,514 (100%)	969 (64%)	531 (35%)
Engelmann oak woodland	230	170 (74%)	170 (74%)	207 (90%)	84 (37%)
Coast live oak woodland	650	492 (76%)	492 (76%)	583 (90%)	183 (28%)
Other oak woodlands	1	1 (100%)	1 (100%)	1 (100%)	1 (100%)
Freshwater	444	444 (100%)	444 (100%)	396 (89%)	157 (35%)
Estuarine	955	955 (100%)	955 (100%)	954 (100%)	923 (97%)
Disturbed wetland	202	202 (100%)	202 (100%)	87 (43%)	96 (47%)
Natural floodchannel/streambed	396	396 (100%)	396 (100%)	381 (96%)	299 (75%)
Beach	48	9 (18%)	9 (18%)	23 (48%)	8 (17%)
Saltpan/mudflats	3	3 (100%)	3 (100%)	3 (100%)	3 (100%)
<b>Natural Habitats Total</b>	<b>29,895</b>	<b>19,371 (65%)</b>	<b>19,871 (66%)</b>	<b>25,031 (84%)</b>	<b>8,874 (30%)</b>

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-1, Conservation of Vegetation Communities for Each Alternative (continued)**

<b>Vegetation Community</b>	<b>Acres in Study Area</b>	<b>FPA Alternative 1</b>	<b>FPA Alternative 2</b>	<b>BCLA Alternative 3</b>	<b>No Action/ No Alternative</b>
<b><i>Agriculture</i></b>					
Agriculture (type unknown)	1,183	N/A	N/A	447 (38%)	438 (37%)
Orchards, vineyards	3,132	N/A	N/A	87 (3%)	7 (0%)
Intensive agriculture	1,213	N/A	N/A	74(6%)	17 (1%)
Field & pasture agriculture	4,931	N/A	N/A	675 (14%)	64 (1%)
<b>Agriculture Total</b>	10,460	N/A	N/A	1,283 (12%)	527 (5%)
<b><i>Non-Natural Habitats</i></b>					
Eucalyptus woodland	648	N/A	N/A	357 (55%)	220 (34%)
Disturbed land	4,072	N/A	N/A	1,127(28%)	633 (16%)
Urban/developed	66,790	N/A	N/A	677 (1%)	2,320 (3%)
<b>Non-Natural Habitats Total</b>	71,510	N/A	N/A	2,160 (3%)	3,173 (4%)
<b>TOTAL FOR ALL LANDS</b>	111,865	N/A	N/A	28,474 (25%)	12,574 (11%)

Notes: 100% conservation of wetlands assumed due to MHCP's no net loss policy.  
No management is assumed for wetlands outside the preserve boundaries.

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-2  
Conservation of Sensitive Species for Each Alternative**

<b>Sensitive Species</b>	<b>Number in Study Area</b>	<b>FPA Alternative 1</b>	<b>FPA Alternative 2</b>	<b>BCLA Alternative 3</b>	<b>No Action/ No Alternative</b>
<b>Plants</b>					
<i>Acanthomintha ilicifolia</i> San Diego thorn-mint	This species will receive additional protection by the MHCP narrow endemic policy. <sup>(1)</sup> Additional conservation may occur through the critical population policy. <sup>(2)</sup>				
Known Occurrences	18	17 (93%)	17 (93%)	13 (72%)	1 (6%)
Habitat	Unable to determine	3,354 (52%)	3,354 (52%)	Unable to determine	Unable to determine
Comments		91% of major populations and critical locations conserved.			-
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Ambrosia pumila</i> San Diego ambrosia	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	2	2 (80%)	2 (80%)	2 (100%)	0 (0%)
Habitat	Unable to determine	6,768 (49%)	6,768 (49%)	Unable to determine	Unable to determine
Comments		80% of major populations and critical locations are conserved. One major population occurs outside the BCLA in Oceanside, but it is included in the BCLA.			-
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Arctostaphylos glandulosa</i> ssp. <i>crassifolia</i> Del Mar manzanita	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	145	140 (96%)	140 (96%)	136 (94%)	2 (1%)
Habitat	Unable to determine	472 (75%)	472 (75%)	Unable to determine	Unable to determine
Comments		97% of major populations and critical locations conserved.			
Finding		Adequate	Adequate	Adequate	Inadequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-2, Conservation of Sensitive Species for Each Alternative (continued)**

<b>Sensitive Species</b>	<b>Number in Study Area</b>	<b>FPA Alternative 1</b>	<b>FPA Alternative 2</b>	<b>BCLA Alternative 3</b>	<b>No Action/ No Alternative</b>
<i>Baccharis vanessae</i> Encinitas baccharis	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	19	19 (99%)	19 (99%)	19 (100%)	0 (0%)
Habitat	Unable to determine	6,258 (67%)	6,258 (67%)	Unable to determine	Unable to determine
Comments		97% of major populations and critical locations conserved.			
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Brodiaea filifolia</i> Thread-leaved brodiaea	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	11	10 (90%)	10 (90%)	5 (45%)	0 (0%)
Habitat	Unable to determine	294 (25%)	294 (25%)	Unable to determine	Unable to determine
Comments		90% of major populations and critical locations conserved.			
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Ceanothus verrucosus</i> Wart-stemmed ceanothus					
Known Occurrences	152	99 (65%)	99 (65%)	140 (92%)	0 (0%)
Habitat	Unable to determine	2,270 (63%)	2,270 (63%)	Unable to determine	Unable to determine
Comments		72% of major populations conserved.			
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Chorizanthe orcuttiana</i> Orcutt's spineflower	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	1	1 (100%)	1 (100%)	1 (100%)	0 (0%)
Habitat	Unable to determine	480 (75%)	480 (75%)	Unable to determine	Unable to determine
Comments		No known major populations in area. 100% of critical locations conserved.			
Finding		Adequate	Adequate	Adequate	Inadequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-2, Conservation of Sensitive Species for Each Alternative (continued)**

<b>Sensitive Species</b>	<b>Number in Study Area</b>	<b>FPA Alternative 1</b>	<b>FPA Alternative 2</b>	<b>BCLA Alternative 3</b>	<b>No Action/ No Alternative</b>
<i>Comarostaphylis diversifolia</i> ssp. <i>diversifolia</i> Summer-holly					
Known Occurrences	149	112 (75%)	112 (75%)	147 (99%)	4 (3%)
Habitat	Unable to determine	1,781 (60%)	1,781 (60%)	Unable to determine	Unable to determine
Comments		71% of major populations conserved. No known critical locations in area.			
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Corethrogyne filaginifolia</i> var. <i>linifolia</i> Del Mar mesa sand aster		This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.			
Known Occurrences	33	31 (95%)	31 (95%)	27 (82%)	21 (64%)
Habitat	Unable to determine	1,968 (71%)	1,968 (71%)	Unable to determine	Unable to determine
Comments		94% of major populations conserved. No critical locations in study area.			
Finding		Adequate	Adequate	Adequate	Adequate
<i>Dudleya blochmaniae</i> ssp. <i>blochmaniae</i> Blochman's dudleya					
Known Occurrences	2	2 (75%)	2 (75%)	3 (100%)	0 (0%)
Habitat	Unable to determine	310 (49%)	310 (49%)	Unable to determine	Unable to determine
Comments		50% of major populations and 75% of critical locations conserved.			
Finding		Adequate	Adequate	Adequate	Inadequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-2, Conservation of Sensitive Species for Each Alternative (continued)**

<b>Sensitive Species</b>	<b>Number in Study Area</b>	<b>FPA Alternative 1</b>	<b>FPA Alternative 2</b>	<b>BCLA Alternative 3</b>	<b>No Action/ No Alternative</b>
<i>Dudleya blochmaniae</i> ssp. <i>brevifolia</i> Short-leaved dudleya	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	-	-	-	-	-
Habitat	Unable to determine	472 (75%)	472 (75%)	Unable to determine	Unable to determine
Comments	No known major populations or critical locations in area.				
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Dudleya variegata</i> Variegated dudleya	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	-	-	-	-	-
Habitat	Unable to determine	310 (49%)	310 (49%)	Unable to determine	Unable to determine
Comments	No known major populations or critical locations in study area. Potential habitat is ineffectively conserved as small, fragmented blocks of habitat.				
Finding		Inadequate	Inadequate	Inadequate	Unable to determine conservation status; inadequate
<i>Dudleya viscida</i> Sticky dudleya					
Known Occurrences	24	18 (75%)	18 (75%)	24 (100%)	0 (0%)
Habitat	Unable to determine	4,132 (61%)	4,132 (61%)	Unable to determine	Unable to determine
Comments	74% of major populations and critical locations conserved.				
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Eryngium aristulatum</i> var. <i>parishii</i> San Diego button-celery	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	15	15 (97%)	15 (97%)	13 (87%)	0 (0%)
Habitat	Unable to determine	295 (25%)	295 (25%)	Unable to determine	Unable to determine
Comments	90% of major populations and critical locations conserved.				
Finding		Adequate	Adequate	Adequate	Inadequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-2, Conservation of Sensitive Species for Each Alternative (continued)**

<b>Sensitive Species</b>	<b>Number in Study Area</b>	<b>FPA Alternative 1</b>	<b>FPA Alternative 2</b>	<b>BCLA Alternative 3</b>	<b>No Action/ No Alternative</b>
<i>Euphorbia misera</i> Cliff spurge					
Known Occurrences	1	1 (100%)	1 (100%)	1 (100%)	0 (0%)
Habitat	Unable to determine	1,171 (69%)	1,171 (69%)	Unable to determine	Unable to determine
Comments		No known major populations or critical locations in the study area.			
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Ferocactus viridescens</i> San Diego barrel cactus					
Known Occurrences	32	28 (88%)	28 (88%)	27 (84%)	3 (9%)
Habitat	Unable to determine	2,351 (61%)	2,351 (61%)	Unable to determine	Unable to determine
Comments		86% of major populations and critical locations conserved.			
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Hazardia orcutti</i> Orcutt's hazardia					
		This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.			
Known Occurrences	6	6 (97%)	6 (97%)	5 (83%)	0 (0%)
Habitat	Unable to determine	4,620 (62%)	4,620 (62%)	Unable to determine	Unable to determine
Comments		97% of major populations and critical locations conserved.			
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Iva hayesiana</i> San Diego marsh-elder					
		This species may receive additional protection under the MHCP no net-loss of wetlands policy.			
Known Occurrences	4	3 (75%)	3 (75%)	3 (75%)	1 (25%)
Habitat	Unable to determine	7 (100%)	7 (100%)	Unable to determine	Unable to determine
Comments		50% of major populations and known occurrences conserved.			
Finding		Adequate	Adequate	Adequate	Inadequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-2, Conservation of Sensitive Species for Each Alternative (continued)**

<b>Sensitive Species</b>	<b>Number in Study Area</b>	<b>FPA Alternative 1</b>	<b>FPA Alternative 2</b>	<b>BCLA Alternative 3</b>	<b>No Action/ No Alternative</b>
<i>Lotus nuttallianus</i> Nuttall's lotus	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	8	8 (95%)	8 (95%)	7 (87%)	1 (13%)
Habitat	Unable to determine	9 (18%)	9 (18%)	Unable to determine	Unable to determine
Comments		92% of major populations and known occurrences conserved.			
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Myosurus minimus</i> spp. <i>apus</i> Little mousetail	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	1	1 (100%)	1 (100%)	1 (100%)	0 (0%)
Habitat	Unable to determine	12 (100%)	12 (100%)	Unable to determine	Unable to determine
Comments		100% of major populations and known occurrences conserved.			
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Navarretia fossalis</i> Spreading navarretia	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	3	3 (87%)	3 (87%)	1 (33%)	0 (0%)
Habitat	Unable to determine	5 (100%)	5 (100%)	Unable to determine	Unable to determine
Comments		90% of major populations and critical locations conserved.			
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Orcuttia californica</i> California Orcutt grass	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	1	1 (100%)	1 (100%)	1 (100%)	0 (0%)
Habitat	Unable to determine	5 (100%)	5 (100%)	Unable to determine	Unable to determine
Comments		100% of major populations and critical locations conserved.			
Finding		Adequate	Adequate	Adequate	Inadequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-2, Conservation of Sensitive Species for Each Alternative (continued)**

<b>Sensitive Species</b>	<b>Number in Study Area</b>	<b>FPA Alternative 1</b>	<b>FPA Alternative 2</b>	<b>BCLA Alternative 3</b>	<b>No Action/ No Alternative</b>
<i>Pinus torreyana</i> ssp. <i>torreyana</i> Torrey pine					
Known Occurrences	24	15 (60%)	15 (60%)	21 (88%)	4 (17%)
Habitat	Unable to determine	488 (75%)	488 (75%)	Unable to determine	Unable to determine
Comments		No known major populations or critical locations in study area.			
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Quercus dumosa</i> Nuttall's scrub oak					
Known Occurrences	34	28 (82%)	28 (82%)	33 (97%)	15 (44%)
Habitat	Unable to determine	4,132 (61%)	4,132 (61%)	Unable to determine	Unable to determine
Comments		93% of major populations and critical locations conserved.			
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Quercus engelmannii</i> Engelmann oak					
Known Occurrences	76	62 (82%)	62 (82%)	71 (93%)	17 (22%)
Habitat	Unable to determine	170 (74%)	170 (74%)	Unable to determine	Unable to determine
Comments		81% of major populations and critical locations conserved.			
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Tetracoccus dioicus</i> Parry's tetracoccus					
Known Occurrences	-	-	-	-	-
Habitat	Unable to determine	782 (72%)	782 (72%)	Unable to determine	Unable to determine
Comments		No known major populations or critical locations in study area.			
Finding		Adequate	Adequate	Adequate	Unable to determine conservation status

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-2, Conservation of Sensitive Species for Each Alternative (continued)**

<b>Sensitive Species</b>	<b>Number in Study Area</b>	<b>FPA Alternative 1</b>	<b>FPA Alternative 2</b>	<b>BCLA Alternative 3</b>	<b>No Action/ No Alternative</b>
<b>Invertebrates</b>					
<i>Streptocephalus woottoni</i> Riverside fairy shrimp	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	2	2 (100%)	2 (100%)	2 (100%)	0 (0%)
Habitat	-	-	-	-	-
Comments	100% of vernal pools at Carlsbad conserved.				
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Branchinecta sandiegonensis</i> San Diego fairy shrimp	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	2	2 (100%)	2 (100%)	2 (100%)	0 (0%)
Habitat	-	-	-	-	-
Comments	100% of vernal pools at Carlsbad and San Marcos conserved.				
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Euphyes vestris harbisoni</i> Harbison's dun skipper	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	3	3 (100%)	3 (100%)	2 (67%)	0 (0%)
Habitat	3,321	3,103 (93%)*	3,103 (93%)*	2,297 (69%)*	1,083 (33%)
Comments	No known major populations in study area. Critical area habitats conserved include 100% in riparian area and 75% in oak woodlands.				
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Panoquina errans</i> Salt marsh skipper	This species may receive additional protection under the MHCP no net-loss of wetlands policy.				
Known Occurrences	1	1 (100%)	1 (100%)	1 (100%)	1 (100%)
Habitat	272	275 (100%)	275 (100%)	270 (99%)*	238 (88%)
Comments	All major populations conserved. Critical breeding habitat 100% conserved in coastal lagoons.				
Finding		Adequate	Adequate	Adequate	Adequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-2, Conservation of Sensitive Species for Each Alternative (continued)**

<b>Sensitive Species</b>	<b>Number in Study Area</b>	<b>FPA Alternative 1</b>	<b>FPA Alternative 2</b>	<b>BCLA Alternative 3</b>	<b>No Action/ No Alternative</b>
<i>Lycaena hermes</i> Hermes copper					
Known Occurrences	-	-	-	-	-
Habitat	9,032	5,404 (60%)	5,904 (65%)	7,567 (84%)	1,718 (19%)
Comments		No known major populations or critical locations in study area.			
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Euphydryas editha quino</i> Quino checkerspot					
Known Occurrences	-	-	-	-	-
Habitat	-	-	-	-	-
Comments		No known major populations or critical locations in study area. Potential habitat areas conserved in Escondido. Species may be extirpated from the study area. Conservation efforts aimed at viable populations outside the study area.			
Finding		Adequate only with sufficient mitigation to maintain viable populations outside the study area.	Adequate only with sufficient mitigation to maintain viable populations outside the study area.	Adequate only with sufficient mitigation to maintain viable populations outside the study area.	Inadequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-2, Conservation of Sensitive Species for Each Alternative (continued)**

Sensitive Species	Number in Study Area	FPA Alternative 1	FPA Alternative 2	BCLA Alternative 3	No Action/ No Alternative
<b>Amphibians and Reptiles</b>					
<i>Scaphiopus hammondi</i> Western spadefoot toad	This species may receive additional protection through the MHCP no net-loss of wetlands policy.				
Known Occurrences	3	3 (100%)	3 (100%)	3 (100%)	0 (0%)
Habitat	1,374	Aquatic 1,374 (100%)* Riparian 2,440 (100%)*	Aquatic 1,374 (100%)* Riparian 2,440 (100%)*	Aquatic 1,235 (90%)* Riparian 1,506 (62%)*	Aquatic 783 (57%) Riparian 815 (33%)
Comments	No known major populations or critical locations				
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Bufo microscaphus californicus</i> Arroyo southwestern toad	This species may receive additional protection through the MHCP no net-loss of wetlands policy which will protect this species' breeding habitat. Additional conservation may occur through application of the critical location policy.				
Known Occurrences	-	-	-	-	-
Habitat	-	-	-	-	-
Comments	No known major populations or critical locations in study area.				
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Clemmys marmorata pallida</i> Southwestern pond turtle	This species may receive additional protection through the MHCP no net-loss of wetlands policy.				
Known Occurrences	7	7 (100%)	7 (100%)	7 (100%)	0 (0%)
Habitat	Aquatic 1,374 Riparian 2,440	Aquatic 1,374 (100%)* Riparian 2,440 (100%)*	Aquatic 1,374 (100%)* Riparian 2,440 (100%)*	Aquatic 1,235 (90%)* Riparian 1,506 (62%)*	Aquatic 783 (57%) Riparian 815 (33%)
Comments	100% conservation of all major populations and critical locations including Buena Vista Lagoon, Escondido Creek, and San Luis Rey River.				
Finding		Adequate	Adequate	Adequate	Inadequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-2, Conservation of Sensitive Species for Each Alternative (continued)**

<b>Sensitive Species</b>	<b>Number in Study Area</b>	<b>FPA Alternative 1</b>	<b>FPA Alternative 2</b>	<b>BCLA Alternative 3</b>	<b>No Action/ No Alternative</b>
<i>Phrynosoma coronatum blainvillei</i> San Diego horned lizard					
Known Occurrences	30	11 (38%)	11 (38%)	28 (93%)	3 (10%)
Habitat	24,068	13,922 (57%)	14,442 (57%)	19,531 (81%)	5,991 (25%)
Comments		No known major populations or critical locations in the study area. Conservation efforts must include management of Argentine ants and edge effects.			
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Cnemidophorus hyperythrus beldingi</i> Orange-throated whiptail					
Known Occurrences	33	18 (55%)	18 (55%)	29 (88%)	6 (18%)
Habitat	9,032	5,404 (60%)	5,904 (65%)	7,567 (84%)	1,718 (19%)
Comments		No known major population or critical locations; however, substantial populations are expected throughout some of the large habitat blocks.			
Finding		Adequate	Adequate	Adequate	Inadequate
<b>Birds</b>					
<i>Pelecanus occidentalis californicus</i> California brown pelican <sup>(3)</sup>	This species may receive additional protection through the MHCP no net-loss of wetlands policy.				
Known Occurrences	5	5 (100%)	5 (100%)	5 (100%)	0 (0%)
Habitat	955	955 (100%)	955 (100%)	955 (100%)*	923 (97%)
Comments		No known major populations in study area. Critical habitat in coastal lagoons is 100% conserved.			
Finding		Adequate	Adequate	Adequate	Adequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-2, Conservation of Sensitive Species for Each Alternative (continued)**

<b>Sensitive Species</b>	<b>Number in Study Area</b>	<b>FPA Alternative 1</b>	<b>FPA Alternative 2</b>	<b>BCLA Alternative 3</b>	<b>No Action/ No Alternative</b>
<i>Plegadis chihi</i> White-faced ibis	This species may receive additional protection through the MHCP no net-loss of wetlands policy.				
Known Occurrences	16	12 (75%)	12 (75%)	13 (81%)	3 (19%)
Habitat	768	728 (95%)*	728 (95%)*	693 (90%)*	407 (53%)
Comments		Major populations at Buena Vista, Batiquitos, and San Elijo Lagoons, and Guajome Lake conserved. Critical location breeding colonies at Buena Vista Lagoon and Guajome Lake conserved.			
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Circus cyaneus</i> Northern harrier					
Known Occurrences	35	21 (60%)	21 (60%)	24 (69%)	1 (3%)
Habitat	14,749	7,739 (52%)	8,239 (56%)	11,316 (77%)	3,463 (23%)
Comments		No known major populations in study area. Critical locations in coastal lagoons 100% conserved. Insufficient conservation of grasslands.			
Finding		Inadequate	Inadequate	Adequate	Inadequate
<i>Accipiter cooperii</i> Cooper's hawk					
Known Occurrences	37	24 (64%)	24 (64%)	25 (68%)	1 (3%)
Habitat	15,046	7,807 (52%)	8,307 (55%)	11,590 (77%)	3,422 (23%)
Comments		No known major populations in study area. Critical locations in riparian areas are 100% conserved, and in oak woodlands are 75% conserved.			
Finding		Adequate	Adequate	Adequate	Inadequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-2, Conservation of Sensitive Species for Each Alternative (continued)**

<b>Sensitive Species</b>	<b>Number in Study Area</b>	<b>FPA Alternative 1</b>	<b>FPA Alternative 2</b>	<b>BCLA Alternative 3</b>	<b>No Action/ No Alternative</b>
<i>Pandion haliaetus</i> Osprey	This species may receive additional protection through the MHCP no net-loss of wetlands policy.				
Known Occurrences	9	9 (100%)	9 (100%)	8 (89%)	1 (11%)
Habitat	1,399	1,399 (100%)	1,399 (100%)	1,350 (96%)	1,080 (77%)
Comments		No known major populations in study area. Critical locations in coastal lagoons and estuaries are 100% conserved.			
Finding		Adequate	Adequate	Adequate	Adequate
<i>Aquila chrysaetos</i> Golden eagle					
Known Occurrences	15	8 (50%)	8 (50%)	11 (73%)	1 (7%)
Habitat	14,241	7,001 (49%)	7,501 (53%)	10,862 (76%)	2,857 (20%)
Comments		No known major populations. Some of the foraging habitat in critical locations is substantially conserved.			
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Falco peregrinus anatum</i> Peregrine falcon <sup>(3)</sup>					
Known Occurrences	2	2 (100%)	2 (100%)	2 (100%)	0 (0%)
Habitat	7,697	4,202 (100%)	4,202 (100%)	4,825 (63%)*	1,961 (25%)
Comments		No known major populations in study area. Some of the foraging habitat in critical locations is substantially conserved.			
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Rallus longirostris levipes</i> Light-footed clapper rail <sup>(3)</sup>	This species may receive additional protection through the MHCP no net-loss of wetlands policy.				
Known Occurrences	16	16 (100%)	16 (100%)	16 (100%)	0 (0%)
Habitat	272	274 (100%)*	274 (100%)*	270 (99%)*	238 (88%)
Comments		All major populations conserved. Critical breeding habitat in coastal lagoons 100% conserved, and no net-loss policy is expected to maintain upstream wintering habitat.			
Finding		Adequate	Adequate	Adequate	Adequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-2, Conservation of Sensitive Species for Each Alternative (continued)**

<b>Sensitive Species</b>	<b>Number in Study Area</b>	<b>FPA Alternative 1</b>	<b>FPA Alternative 2</b>	<b>BCLA Alternative 3</b>	<b>No Action/ No Alternative</b>
<i>Charadrius alexandrinus nivosus</i> Western snowy plover					
Known Occurrences	20	18 (90%)	18 (90%)	19 (95%)	15 (75%)
Habitat	51	12 (23%)	12 (23%)	26 (51%)	12 (23%)
Comments		Major populations and critical locations in San Luis Rey River mouth and the lagoon and estuarine habitats in Encinitas, Carlsbad, and Oceanside conserved.			
Finding		Adequate	Adequate	Adequate	Adequate
<i>Sterna elegans</i> Elegant tern	This species may receive additional protection through the MHCP no net-loss of wetlands policy.				
Known Occurrences	7	6 (86%)	6 (86%)	6 (86%)	1 (14%)
Habitat	1,006	967 (96%)	967 (96%)	980 (97%)	935 (93%)
Comments		No known major populations or critical locations in study area.			
Finding		Adequate	Adequate	Adequate	Adequate
<i>Sterna antillarum browni</i> California least tern <sup>(3)</sup>					
Known Occurrences	18	17 (94%)	17 (94%)	18 (100%)	7 (39%)
Habitat	1,006	967 (96%)	967 (96%)	980 (97%)	935 (93%)
Comments		All major populations conserved. Critical breeding and foraging habitat in coastal lagoons is 100% conserved.			
Finding		Adequate	Adequate	Adequate	Adequate
<i>Athene cunicularia hypugaea</i> Burrowing owl					
Known Occurrences	9	6 (67%)	6 (67%)	6 (67%)	1 (11%)
Habitat	5,209	1,597 (31%)	1,597 (31%)	3,295 (63%)	1,138 (22%)
Comments		No known major populations in study area. Some of the foraging habitat in critical locations is substantially conserved. Insufficient conservation of grasslands.			
Finding		Inadequate	Inadequate	Adequate	Inadequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-2, Conservation of Sensitive Species for Each Alternative (continued)**

<b>Sensitive Species</b>	<b>Number in Study Area</b>	<b>FPA Alternative 1</b>	<b>FPA Alternative 2</b>	<b>BCLA Alternative 3</b>	<b>No Action/ No Alternative</b>
<i>Empidonax traillii extimus</i> Southwestern willow flycatcher	This species may receive additional protection through the MHCP no net-loss of wetlands policy.				
Known Occurrences	6	6 (100%)	6 (100%)	5 (83%)	3 (50%)
Habitat	2,190	2,190 (100%)	2,190 (100%)	1,373 (63%)*	758 (35%)
Comments	All major populations and critical areas are conserved.				
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Campylorhynchus brunneicapillus cousei</i> Coastal cactus wren	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through application of the critical population policy.				
Known Occurrences	25	24 (97%)	24 (97%)	25 (100%)	0 (0%)
Habitat	9,032	5,405 (60%)	5,904 (65%)	7,567 (84%)	1,178 (19%)
Comments	One major population and critical locations conserved along San Pasqual Valley and Lake Hodges. Habitat acres are likely to be an overestimate, since the coastal cactus wren prefers cactus patches within coastal sage scrub, and the habitat acres given are of coastal sage scrub. Suitable habitat may be limited.				
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Polioptila californica californica</i> Coastal California gnatcatcher					
Known Occurrences	378	233 (62%)	233 (62%)	322 (85%)	38 (10%)
Habitat	9,032	5,434 (60%)	5,934 (66%)	7,567 (84%)	1,718 (19%)
Comments	Most major populations are substantially conserved. Substantial conservation for some critical locations. Marginal conservation of the San Marcos portion of the La Costa/University Commons area. Conservation efforts must include the unincorporated core breeding area and substantial restoration in the unincorporated core breeding area and stepping-stone areas.				

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-2, Conservation of Sensitive Species for Each Alternative (continued)**

<b>Sensitive Species</b>	<b>Number in Study Area</b>	<b>FPA Alternative 1</b>	<b>FPA Alternative 2</b>	<b>BCLA Alternative 3</b>	<b>No Action/ No Alternative</b>
Finding		Inadequate	Adequate only with substantial conservation of core gnatcatcher breeding area and substantial habitat restoration.	Adequate	Inadequate
<i>Sialia mexicana</i> Western bluebird	This species may receive additional protection through the MHCP no net-loss of wetlands policy.				
Known Occurrences	4	3 (75%)	3 (75%)	3 (75%)	1 (25%)
Habitat	1,096	937 (86%)	937 (86%)	980 (89%)	341 (31%)
Comments	No known major populations or critical locations.				
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Vireo bellii pusillus</i> Least Bell's vireo	This species may receive additional protection through the MHCP no net-loss of wetlands policy.				
Known Occurrences	139	131 (94%)	131 (94%)	115 (83%)	16 (12%)
Habitat	2,440	2,440 (100%)*	2,440 (100%)*	1,506 (62%)*	815 (33%)
Comments	All major populations and critical locations conserved.				
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Icteria virens</i> Yellow-breasted chat	This species may receive additional protection through the MHCP no net-loss of wetlands policy.				
Known Occurrences	47	44 (94%)	44 (94%)	45 (96%)	8 (17%)
Habitat	2,440	2,440 (100%)	2,440 (100%)	1,506 (62%)*	815 (33%)
Comments	All major populations and critical locations conserved.				
Finding		Adequate	Adequate	Adequate	Inadequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-2, Conservation of Sensitive Species for Each Alternative (continued)**

<b>Sensitive Species</b>	<b>Number in Study Area</b>	<b>FPA Alternative 1</b>	<b>FPA Alternative 2</b>	<b>BCLA Alternative 3</b>	<b>No Action/ No Alternative</b>
<i>Aimophila ruficeps canescens</i> Rufous-crowned sparrow					
Known Occurrences	-	-	-	-	-
Habitat	9,032	5,404 (60%)	5,904 (65%)	7,567 (84%)	1,718 (19%)
Comments		No known major populations or critical locations.			
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Passerculus sandwichensis beldingi</i> Belding's savannah sparrow		This species may receive additional protection through the MHCP no net-loss of wetlands policy.			
Known Occurrences	33	29 (88%)	29 (88%)	31 (94%)	14 (42%)
Habitat	275	275 (100%)	275 (100%)	274 (99%)*	242 (88%)
Comments		All major populations conserved. Critical breeding habitat areas in coastal lagoons are 100% conserved.			
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Passerculus sandwichensis rostratus</i> Large-billed savannah sparrow		This species may receive additional protection through the MHCP no net-loss of wetlands policy.			
Known Occurrences	-	-	-	-	-
Habitat	275	275 (100%)*	275 (100%)*	274 (99%)*	242 (88%)
Comments		No known major populations in study area. Critical breeding habitat in coastal lagoon is 100% conserved.			
Finding		Adequate	Adequate	Adequate	Adequate
<i>Amphispiza belli belli</i> Bell's sage sparrow					
Known Occurrences	9	8 (83%)	8 (83%)	7 (78%)	0 (0%)
Habitat	9,032	5,404 (60%)	5,904 (65%)	7,567 (84%)	1,718 (19%)
Comments		No known major populations or critical locations in study area.			
Finding		Adequate	Adequate	Adequate	Inadequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-2, Conservation of Sensitive Species for Each Alternative (continued)**

<b>Sensitive Species</b>	<b>Number in Study Area</b>	<b>FPA Alternative 1</b>	<b>FPA Alternative 2</b>	<b>BCLA Alternative 3</b>	<b>No Action/ No Alternative</b>
<i>Ammodramus savannarum</i> Grasshopper sparrow					
Known Occurrences	13	9 (65%)	9 (65%)	7 (54%)	3 (23%)
Habitat	5,209	1,597 (31%)	1,597 (31%)	3,295 (63%)	1,138 (22%)
Comments		No known major populations in study area. Critical areas will be partially conserved, and partially taken. Preserved grasslands will be substantially fragmented. Insufficient conservation of grasslands.			
Finding		Inadequate	Inadequate	Adequate	Inadequate
<i>Agelaius tricolor</i> Tricolored blackbird					
Known Occurrences	7	5 (71%)	5 (71%)	4 (57%)	2 (29%)
Habitat	Riparian scrub 2,974 Grasslands 5,209	Riparian scrub 2,974 (100%)* Grasslands 1,597 (31%)	Riparian scrub 2,974 (100%)* Grasslands 1,597 (31%)	Riparian scrub 1,964 (66%)* Grasslands 3,295 (63%)	Riparian scrub 1,142 (38%) Grasslands 1,138 (22%)
Comments		No known major population or critical locations in study area. Insufficient conservation of grasslands.			
Finding		Inadequate	Inadequate	Adequate	Inadequate
<b>Mammals</b>					
<i>Dipodomys stephensi</i> Stephens' kangaroo rat					
Known Occurrences	-	-	-	-	-
Habitat	-	-	-	-	-

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-2, Conservation of Sensitive Species for Each Alternative (continued)**

<b>Sensitive Species</b>	<b>Number in Study Area</b>	<b>FPA Alternative 1</b>	<b>FPA Alternative 2</b>	<b>BCLA Alternative 3</b>	<b>No Action/ No Alternative</b>
Comments		No known major populations or critical locations in study area. Conservation efforts must include maintaining potential habitats for recolonization and managing newly found occupied habitat areas.			
Finding		Adequate	Adequate	Adequate	Unable to determine conservation status
<i>Perognathus longimembris pacificus</i> Pacific little pocket mouse	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	1	1 (95%)	1 (95%)	1 (100%)	0 (0%)
Habitat	13,779	6,768 (49%)	7,268 (53%)	10,423 (76%)	2,776 (20%)
Comments		No known major populations or critical locations in study area.			
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Chaetodipus fallax fallax</i> Northwestern San Diego pocket mouse					
Known Occurrences	2	1 (50%)	1 (50%)	2 (100%)	2 (100%)
Habitat	23,553	13,288 (56%)	13,788 (59%)	19,496 (83%)	5,596 (24%)
Comments		No known major populations or critical locations in study area.			
Finding		Adequate	Adequate	Adequate	Adequate
<i>Lepus californicus bennittii</i> San Diego black-tailed jackrabbit					
Known Occurrences	9	4 (44%)	4 (44%)	8 (89%)	2 (22%)
Habitat	14,241	7,001 (49%)	7,501 (53%)	10,862 (76%)	2,857 (20%)
Comments		No known major populations or critical locations in study area.			
Finding		Adequate	Adequate	Adequate	Inadequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-2, Conservation of Sensitive Species for Each Alternative (continued)**

<b>Sensitive Species</b>	<b>Number in Study Area</b>	<b>FPA Alternative 1</b>	<b>FPA Alternative 2</b>	<b>BCLA Alternative 3</b>	<b>No Action/ No Alternative</b>
<i>Felis concolor</i> Mountain lion					
Known Occurrences	1	1 (100%)	1 (100%)	1 (100%)	1 (100%)
Habitat	26,874	16,392 (61%)	16,892 (63%)	21,793 (81%)	6,680 (25%)
Comments		No known major populations or critical locations in study area.			
Finding		Adequate	Adequate	Adequate	Inadequate
<i>Odocoileus hemionus fuliginata</i> Southern mule deer					
Known Occurrences	12	6 (47%)	6 (47%)	10 (83%)	1 (8%)
Habitat	26,874	16,392 (61%)	16,892 (63%)	21,793 (81%)	6,680 (25%)
Comments		No known major populations or critical locations in study area.			
Finding		Adequate	Adequate	Adequate	Inadequate

Note: \* 100% conservation of wetland and riparian communities is assumed due to the MHCP no net-loss of wetlands policy, both inside and outside the preserve. Only the wetland communities inside the preserve will be managed.

- (1) This species falls under protection of the MHCP Narrow Endemic Species Policy. Both inside and outside the FPA, impacts to narrow endemic populations shall be avoided to the maximum extent practicable. Inside FPAs, mitigation for unavoidable impacts and management practices must be designed to achieve no net-loss of narrow endemic populations, occupied acreage, or population viability. In no case shall a city permit more than 5% loss of narrow endemic populations or occupied acreage within the FPA.
- (2) Critical locations are areas that must be protected for adequate conservation under the MHCP preserve design. Critical locations may coincide with major populations, but not all major populations are critical locations. Critical locations may include dispersal corridors or breeding sites, as well as areas important for maintaining connectivity with populations to the north, south, and east of the MHCP Plan area.
- (3) This is a fully protected species, and lethal take of individuals is forbidden. The MHCP Subarea Plans will only allow habitat alteration or disturbance that will not affect breeding individuals.

**Table 4.3-3  
Summary of Endangered, Threatened, and Rare Species and Findings of Significance**

<b>Species</b>	<b>Status<sup>1</sup></b>	<b>Impact Summary</b>
San Diego Thorn-mint	<b>FT/CE/ NE</b>	The San Diego thorn mint will receive protection under the MHCP Narrow Endemic Species Policy. Monitoring efforts for the species include detecting short-term threats to the species' persistence (e.g., invasion of nonnative species), while long-term monitoring will track population trends that may suggest declining populations. Required conservation and management actions include protecting habitat by removing potential impacts and excluding adverse activities within the preserve, enhancing conserved populations, restoring damaged habitat, establishing a seed bank, and conducting additional demographic and ecological research on the species. Because the above conservation and management strategies are incorporated into the MHCP Plan, it is anticipated the project will have a less than significant impact on the San Diego thorn-mint.
San Diego Ambrosia	<b>PE/NE</b>	The San Diego ambrosia will receive protection under the MHCP Narrow Endemic Species Policy. Monitoring efforts for the species include detecting short-term threats to the species' persistence (e.g., invasion of nonnative species), while long-term monitoring will track population trends that may suggest declining populations. Required conservation and management actions include protecting habitat by removing potential impacts and excluding adverse activities within the preserve, enhancing conserved populations, restoring damaged habitat, and conducting additional demographic and ecological research on the species. Because the above conservation and management strategies are incorporated into the MHCP Plan, it is anticipated the project will have a less than significant impact on the San Diego ambrosia.
Del Mar Manzanita	<b>FSC*/ NE</b>	The Del Mar manzanita will receive protection under the MHCP Narrow Endemic Species Policy. Monitoring efforts for the species include detecting short-term threats to the species' persistence (e.g., invasion of nonnative species), while long-term monitoring will track population trends that may suggest declining populations. Required conservation and management actions include protecting habitat by removing potential impacts and excluding adverse activities within the preserve, and conducting additional demographic and ecological research on the species. Because the above conservation and management strategies are incorporated into the MHCP Plan, it is anticipated the project will have a less than significant impact on the Del Mar manzanita.

**Table 4.3-3, Summary of Endangered, Threatened, and Rare Species and Findings of Significance (continued)**

Species	Status <sup>1</sup>	Impact Summary
Encinitas Baccharis	<b>FE/NE</b>	The Encinitas baccharis will receive protection under the MHCP Narrow Endemic Species Policy. Monitoring efforts for the species include detecting short-term threats to the species' persistence (e.g., invasion of nonnative species), while long-term monitoring will track population trends that may suggest declining populations. Required conservation and management actions include protecting habitat by removing potential impacts and excluding adverse activities within the preserve, and conducting additional demographic and ecological research on the species. Because the above conservation and management strategies are incorporated into the MHCP Plan, it is anticipated the project will have a less than significant impact on the Encinitas baccharis.
Thread-leaved Brodiaea	<b>FT/CE/NE</b>	The thread-leaved brodiaea will receive protection under the MHCP Narrow Endemic Species Policy. Monitoring efforts for the species include detecting short-term threats to the species' persistence (e.g., invasion of nonnative species), while long-term monitoring will track population trends that may suggest declining populations. Required conservation and management actions include protecting habitat by removing potential impacts and excluding adverse activities within the preserve, and conducting additional demographic and ecological research on the species. Because the above conservation and management strategies are incorporated into the MHCP Plan, it is anticipated the project will have a less than significant impact on the thread-leaved brodiaea.
Orcutt's Spineflower	<b>FE/CE/NE</b>	Orcutt's spineflower will receive protection under the MHCP Narrow Endemic Species Policy. Monitoring efforts for the species include detecting short-term threats to the species' persistence (e.g., invasion of nonnative species), while long-term monitoring will track population trends that may suggest declining populations. Required conservation and management actions include protecting habitat by removing potential impacts and excluding adverse activities within the preserve, and conducting additional demographic and ecological research on the species. Additionally, attempts to establish this species in formerly occupied habitat or suitable unoccupied habitat will occur. The goal for this species will be a minimum of five populations through the historic range of the species. Because the above conservation and management strategies are incorporated into the MHCP Plan, it is anticipated the project will have a less than significant impact on Orcutt's spineflower.
Summer-holly	<b>FSC*</b>	Monitoring efforts for the species include detecting short-term threats to the species' persistence (e.g., invasion of nonnative species), while long-term monitoring will track population trends that may suggest declining populations. Required conservation and management actions include protecting habitat by removing potential impacts and excluding adverse activities within the preserve, and conducting additional demographic and ecological research on the species. Even with the above conservation and management strategies, it is anticipated that the MHCP Plan will have a significant and unmitigable impact to summer-holly.

**Table 4.3-3, Summary of Endangered, Threatened, and Rare Species and Findings of Significance (continued)**

<b>Species</b>	<b>Status<sup>1</sup></b>	<b>Impact Summary</b>
Del Mar Mesa Sand Aster	<b>FSC*/NE</b>	The Del Mar mesa sand aster will receive protection under the MHCP Narrow Endemic Species Policy. Monitoring efforts for the species include detecting short-term threats to the species' persistence (e.g., invasion of nonnative species), while long-term monitoring will track population trends that may suggest declining populations. Required conservation and management actions include protecting habitat by removing potential impacts and excluding adverse activities within the preserve, enhancing conserved populations, restoring declining habitat, and conducting additional demographic and ecological research on the species. Because the above conservation and management strategies are incorporated into the MHCP Plan, it is anticipated the project will have a less than significant impact on the Del Mar mesa sand aster.
Blochman's Dudleya	<b>FSC*</b>	Monitoring efforts for the species include detecting short-term threats to the species' persistence (e.g., invasion of nonnative species), while long-term monitoring will track population trends that may suggest declining populations. Required conservation and management actions include protecting habitat by removing potential impacts and excluding adverse activities within the preserve, enhancing conserved populations, restoring declining habitat, and conducting additional demographic and ecological research on the species. Even with the above conservation and management strategies, it is anticipated that the MHCP Plan will have a significant and unmitigable impact to Blochman's dudleya.
Short-leaved Dudleya	<b>FSC**/CE/NE</b>	The short-leaved dudleya will receive protection under the MHCP Narrow Endemic Species Policy. Monitoring efforts for the species include detecting short-term threats to the species' persistence (e.g., invasion of nonnative species), while long-term monitoring will track population trends that may suggest declining populations. Required conservation and management actions include protecting habitat by removing potential impacts and excluding adverse activities within the preserve, and conducting additional demographic and ecological research on the species. Because the above conservation and management strategies are incorporated into the MHCP Plan, it is anticipated the project will have a less than significant impact on the short-leaved dudleya.
Sticky Dudleya	<b>FSC*</b>	Monitoring efforts for the sticky dudleya include detecting short-term threats to the species' persistence (e.g., invasion of nonnative species), while long-term monitoring will track population trends that may suggest declining populations. Required conservation and management actions include protecting habitat by removing potential impacts and excluding adverse activities within the preserve, and conducting additional demographic and ecological research on the species. Even with the above conservation and management strategies, it is anticipated that the MHCP Plan will have a significant and unmitigable impact to sticky dudleya.

**Table 4.3-3, Summary of Endangered, Threatened, and Rare Species and Findings of Significance (continued)**

<b>Species</b>	<b>Status<sup>1</sup></b>	<b>Impact Summary</b>
San Diego Button Celery	<b>FE/CE/ NE/WO</b>	The San Diego button celery will receive protection under the MHCP Narrow Endemic Species Policy. Additionally, the button celery is a wetland obligate species. Monitoring efforts for the species include detecting short-term threats to the species' persistence (e.g., invasion of nonnative species), while long-term monitoring will track population trends that may suggest declining populations. Required conservation and management actions include protecting habitat by removing potential impacts and excluding adverse activities within the preserve, enhancing conserved populations, restoring damaged habitat, and conducting additional demographic and ecological research on the species. Because the above conservation and management strategies are incorporated into the MHCP Plan, it is anticipated the project will have a less than significant impact on the San Diego button celery.
Cliff Spurge	<b>RARE</b>	One hundred percent of the known population of this species will be conserved with the project. Monitoring efforts for the cliff spurge include detecting short-term threats to the species' persistence (e.g., invasion of nonnative species), while long-term monitoring will track population trends that may suggest declining populations. Required conservation and management actions include protecting habitat by removing potential impacts and excluding adverse activities within the preserve, and conducting additional demographic and ecological research on the species. Because the above conservation and management strategies are incorporated into the MHCP Plan, it is anticipated the project will have a less than significant impact on the cliff spurge.
Nuttall's Lotus	<b>FSC*/ NE</b>	The Nuttall's lotus will receive protection under the MHCP Narrow Endemic Species Policy. Monitoring efforts for the species include detecting short-term threats to the species' persistence (e.g., invasion of nonnative species), while long-term monitoring will track population trends that may suggest declining populations. Required conservation and management actions include protecting habitat by removing potential impacts and excluding adverse activities within the preserve, and conducting additional demographic and ecological research on the species. Because the above conservation and management strategies are incorporated into the MHCP Plan, it is anticipated the project will have a less than significant impact on the Nuttall's lotus.
Spreading Navarretia	<b>PT/ NE/WO</b>	The spreading navarretia will receive protection under the MHCP Narrow Endemic Species Policy. Additionally, the spreading navarretia is a wetland obligate species. Monitoring efforts for the species include detecting short-term threats to the species' persistence (e.g., invasion of nonnative species), while long-term monitoring will track population trends that may suggest declining populations. Required conservation and management actions include protecting habitat by removing potential impacts and excluding adverse activities within the preserve, enhancing conserved populations that are declining, restoring damaged habitat, establishing a seed bank for the species, and conducting additional demographic and ecological research on the species. Because the above conservation and management strategies are incorporated into the MHCP Plan, it is anticipated the project will have a less than significant impact on the spreading navarretia.

**Table 4.3-3, Summary of Endangered, Threatened, and Rare Species and Findings of Significance (continued)**

Species	Status <sup>1</sup>	Impact Summary
California Orcutt Grass	<b>FE/CS/ NE/WO</b>	The California Orcutt grass will receive protection under the MHCP Narrow Endemic Species Policy. Additionally, the California Orcutt grass is a wetland obligate species. Monitoring efforts for the species include detecting short-term threats to the species' persistence (e.g., invasion of nonnative species), while long-term monitoring will track population trends that may suggest declining populations. Required conservation and management actions include protecting habitat by removing potential impacts and excluding adverse activities within the preserve, and conducting additional demographic and ecological research on the species. Because the above conservation and management strategies are incorporated into the MHCP Plan, it is anticipated the project will have a less than significant impact on the California Orcutt grass.
Nuttall's Scrub Oak	<b>RARE</b>	Monitoring efforts for the species include detecting short-term threats to the species' persistence, while long-term monitoring will track population trends that may suggest declining populations. Required conservation and management actions include restriction of activities in the preserve that could degrade potential species habitat, delimiting the natural distribution of this species by conducting surveys to better define range, and conducting additional demographic and ecological research on the species. Even with the above conservation and management strategies, it is anticipated that the MHCP Plan will have a significant and unmitigable impact on Nuttall's scrub oak.
Parry's Tetracoccus	<b>FSC*</b>	Monitoring efforts for the species include detecting short-term threats to the species' persistence (e.g., invasion of nonnative species), while long-term monitoring will track population trends that may suggest declining populations. Required conservation and management actions include protecting habitat by removing potential impacts and excluding adverse activities within the preserve, and conducting additional demographic and ecological research on the species. Even with the above conservation and management strategies, it is anticipated that the MHCP Plan will have a significant and unmitigable impact on Parry's tetracoccus.
Riverside Fairy Shrimp	<b>FE/ NE/WO</b>	The Riverside fairy shrimp will receive protection under the MHCP Narrow Endemic Species Policy. Additionally, the species has wetland obligate status. Monitoring efforts for the species include detecting short-term threats to the species' persistence, while long-term monitoring will track population trends that may suggest declining populations. Required conservation and management actions include developing an adaptive management plan that integrates prescribed conservation and management actions in the Vernal Pool Recovery Program with the species and habitat-monitoring plan. Other actions which will ensure species persistence include identifying watershed boundaries and possible hydrological input from subsurface hydrology, removing impacts or threats of impacts, and identifying factors which cause significant species decline and extirpation at each pool. Additional demographic and ecological research on the species is also recommended. Because the above conservation and management strategies are incorporated into the MHCP Plan, it is anticipated the project will have a less than significant impact on the Riverside fairy shrimp.

**Table 4.3-3, Summary of Endangered, Threatened, and Rare Species and Findings of Significance (continued)**

<b>Species</b>	<b>Status<sup>1</sup></b>	<b>Impact Summary</b>
San Diego Fairy Shrimp	<b>FE/ NE/WO</b>	The San Diego fairy shrimp will receive protection under the MHCP Narrow Endemic Species Policy. Additionally, the species has wetland obligate status. Monitoring efforts for the species include detecting short-term threats to the species' persistence, while long-term monitoring will track population trends that may suggest declining populations. Required conservation and management actions include developing an adaptive management plan that integrates prescribed conservation and management actions in the Vernal Pool Recovery Program with the species and habitat monitoring plan. Other actions which will ensure species persistence include identifying watershed boundaries and possible hydrological input from subsurface hydrology, removing impacts or threats of impacts, and identifying factors which cause significant species decline and extirpation at each pool. Additional demographic and ecological research on the species is also recommended. Because the above conservation and management strategies are incorporated into the MHCP Plan, it is anticipated the project will have a less than significant impact on the San Diego fairy shrimp.
Harbison's Dun Skipper	<b>FSC*/ NE</b>	The Harbison's dun skipper will receive protection under the MHCP Narrow Endemic Species Policy. Monitoring efforts for the species include detecting short-term threats to the species' persistence, while long-term monitoring will track population trends that may suggest declining populations. Required conservation and management actions include removal of impacts or potential impacts (e.g., off-road vehicles, pedestrians, exotic weeds, and invertebrate predators, and modifying hydrology), monitoring conserved populations and potential species habitat, identifying threats to species persistence, and conducting additional demographic and ecological research on the species. Because the above conservation and management strategies are incorporated into the MHCP Plan, it is anticipated the project will have a less than significant impact on the Harbison's dun skipper.
Salt Marsh Skipper	<b>FSC*/ WO</b>	The salt marsh skipper is a wetland obligate species. Monitoring efforts for the species include detecting short-term threats to the species' persistence, while long-term monitoring will track population trends that may suggest declining populations. Required conservation and management actions include removing impacts or potential impacts (e.g., off-road vehicles, pedestrians, exotic weeds, and invertebrate predators, and modifying hydrology), monitoring conserved populations and potential species habitat, identifying threats to species persistence, and conducting additional demographic and ecological research on the species. Because the above conservation and management strategies are incorporated into the MHCP Plan, it is anticipated the project will have a less than significant impact on the salt marsh skipper.

**Table 4.3-3, Summary of Endangered, Threatened, and Rare Species and Findings of Significance (continued)**

Species	Status <sup>1</sup>	Impact Summary
Hermes Copper	<b>FSC*</b>	The Hermes copper has known historical locations in the project area, but no recent documentation of its presence. Monitoring efforts for the species include detecting short-term threats to the species' persistence, while long-term monitoring will track population trends that may suggest declining populations. Required conservation and management actions include restriction of activities in the preserve that could degrade potential species habitat, implementation of management measures to reduce the risk of catastrophic fire, identification of threats to species persistence, and surveying for populations and potential species habitat. Additional demographic and ecological research on the species is also recommended. Because the above conservation and management strategies are incorporated into the MHCP Plan, it is anticipated the project will have a less than significant impact on the Hermes copper.
Quino Checkerspot	<b>FE</b>	The Quino checkerspot has known historical locations in the project area, but no recent documentation of its presence. Monitoring efforts for the species include detecting short-term threats to the species' persistence, while long-term monitoring will track population trends that may suggest declining populations. Required conservation and management actions include restriction of activities in the preserve that could degrade potential species habitat, implementation of management measures to reduce the risk of catastrophic fire, identification of threats to species persistence, and surveying for populations and potential species habitat. Additional conservation strategies include conducting studies that identify management requirements for Quino checkerspot, investigating the possibility of species reintroduction, translocating individuals from the nearest population to potential habitat within the preserve, and incorporating relevant information from other butterfly metapopulation management plans. Because the above conservation and management strategies are incorporated into the MHCP Plan, it is anticipated the project will have a less than significant impact on the Quino checkerspot.
Western Spadefoot Toad	<b>CSC</b>	The western spadefoot toad has been recently observed in the project area. Monitoring efforts for the species include detecting short-term threats to the species' persistence, while long-term monitoring will track population trends that may suggest declining populations. Required conservation and management actions include restricting activities in the preserve or upstream areas that could degrade species habitat, surveying for populations and potential habitat for the species, and identifying threats to species persistence. Additional conservation strategies include conducting studies to determine the spatial relationship between breeding and nonbreeding habitats of this species. Because the above conservation and management strategies are incorporated into the MHCP Plan, it is anticipated the project will have a less than significant impact on the western spadefoot toad.

**Table 4.3-3, Summary of Endangered, Threatened, and Rare Species and Findings of Significance (continued)**

Species	Status <sup>1</sup>	Impact Summary
Arroyo Southwestern Toad	<b>FE/CSC</b>	No known populations of arroyo southwestern toad exist in the project area. Monitoring efforts for the species include detecting short-term threats to the species' persistence, while long-term monitoring will track population trends that may suggest declining populations. Required conservation and management actions include developing an adaptive management plan that integrates the prescribed conservation and management actions with the species and habitat monitoring plan, restricting activities in the preserve and areas upstream that could degrade potential species habitat, minimizing and managing effects of nonnative predators, protecting and maintaining low gradient stream habitats, and minimizing the frequency of high-velocity releases from upstream impoundments. Additional conservation strategies include conducting studies to determine the spatial relationship between breeding and nonbreeding habitats of the arroyo southwestern toad. Because the above conservation and management strategies are incorporated into the MHCP Plan, it is anticipated the project will have a less than significant impact on the arroyo southwestern toad.
Southwestern Pond Turtle	<b>FSC*/ CSC/ WO</b>	The southwestern pond turtle is a wetland obligate species. Monitoring efforts for the species include detecting short-term threats to the species' persistence, while long-term monitoring will track population trends that may suggest declining populations. Required conservation and management actions include: restricting activities in the preserve and areas upstream that could degrade species habitat; maintaining and managing a 1,500-foot upland buffer area as nesting habitat around known locations of this species within the preserve lands; enhancing and restoring wetland habitats appropriate for the species, to compensate for any take of habitat by the project; implementing a program of introducing individuals into formerly occupied habitat; and periodically monitoring conserved populations and potential habitats of the species. Additional conservation strategies include conducting studies to determine the spatial relationship between breeding and nonbreeding habitats of this species. Because the above conservation and management strategies are incorporated into the MHCP Plan, it is anticipated the project will have a less than significant impact on the southwestern pond turtle.

**Table 4.3-3, Summary of Endangered, Threatened, and Rare Species and Findings of Significance (continued)**

<b>Species</b>	<b>Status<sup>1</sup></b>	<b>Impact Summary</b>
San Diego Horned Lizard	<b>FSC*/ CSC</b>	Monitoring efforts for the San Diego horned lizard include detecting short-term threats to the species' persistence, while long-term monitoring will track population trends that may suggest declining populations. Required conservation and management actions include: developing an adaptive management plan that integrates the prescribed conservation and management actions with the species and habitat monitoring plan, removing threats to species viability within the preserve, restricting activities within the preserve, minimizing and managing effects from introduced species (including the termite prey base), prohibiting and minimizing landscaping not associated with native habitat restoration in the preserve, and monitoring populations to identify declining populations and potential sources for decline. Additional conservation strategies include: coordinating management with other whiptail research programs, introducing individuals into formerly occupied and potential habitat, and selecting individuals for translocation from nearby larger populations. Even with the above conservation and management strategies, it is anticipated that the MHCP Plan will have a significant and unmitigable impact to San Diego horned lizard.
Orange-throated Whiptail	<b>FSC*/ CSC</b>	Monitoring efforts for the orange-throated whiptail include detecting short-term threats to the species' persistence, while long-term monitoring will track population trends that may suggest declining populations. Required conservation and management actions include: developing an adaptive management plan that integrates the prescribed conservation and management actions with the species and habitat monitoring plan, removing threats to species viability within the preserve, restricting activities within the preserve, minimizing and managing effects from introduced species (including the termite prey base), prohibiting and minimizing landscaping not associated with native habitat restoration in the preserve, and monitoring populations to identify declining populations and potential sources for decline. Additional conservation strategies include: coordinating management with other whiptail research programs, introducing individuals into formerly occupied and potential habitat, and selecting individuals for translocation from nearby larger populations. Even with the above conservation and management strategies, it is anticipated that the MHCP Plan will have a significant and unmitigable impact to orange-throated whiptail.

**Table 4.3-3, Summary of Endangered, Threatened, and Rare Species and Findings of Significance (continued)**

<b>Species</b>	<b>Status<sup>1</sup></b>	<b>Impact Summary</b>
California Brown Pelican	<b>FE/CE/ WO</b>	The California brown pelican is a wetland obligate species. Monitoring efforts for the species include detecting short-term threats to the species' persistence, while long-term monitoring will track population trends that may suggest declining populations. Required conservation and management actions include: stabilizing and maintaining populations by removing impacts or potential impacts, minimizing contamination of pelican roosting and foraging areas with pesticide, oil, and other pollutants; and minimizing human disturbances at important foraging and roosting areas. Additional conservation strategies include the continuation of longitudinal studies of the effectiveness of rehabilitation methods for pelicans affected by oil spills. Because the above conservation and management strategies are incorporated into the MHCP Plan, it is anticipated the project will have a less than significant impact on the California brown pelican.
Peregrine Falcon	<b>FE/CE</b>	A pair of peregrines has been noted foraging in the vicinity of the coastal lagoons. Monitoring efforts for the species include detecting short-term threats to the species' persistence, while long-term monitoring will track population trends that may suggest declining populations. Required conservation and management actions include: restricting activities within the preserve that could degrade habitat and restricting human activity from nest sites that become established in the preserve during breeding season. Additional conservation strategies include modifying utility wires to make them more visible to flying falcons and evaluating the potential of unoccupied historical falcon nest sites or potential nesting habitats within preserve areas. Because the above conservation and management strategies are incorporated into the MHCP Plan, it is anticipated the project will have a less than significant impact on the peregrine falcon.
Light-footed Clapper Rail	<b>FE/CE/ WO</b>	The light-footed clapper rail is a wetland obligate species. Monitoring efforts for the species include detecting short-term threats to the species' persistence, while long-term monitoring will track population trends that may suggest declining populations. Required conservation and management actions include: creating suitable habitat and establishing new populations in the study area to compensate for take by projects, evaluating areas of disturbed coastal marsh habitat for potential enhancement or revegetation with cordgrass and pickleweed to compensate for take projects, providing nesting platforms to compensate for take projects, protecting species habitats, minimizing threats to species, and restricting activities within the preserve that could degrade habitat. Additional conservation strategies include the reintroduction of species into areas of historic occurrence or into other appropriate unoccupied habitat, such as enhanced or newly created coastal salt marsh. Because the above conservation and management strategies are incorporated into the MHCP Plan, it is anticipated the project will have a less than significant impact on the light-footed clapper rail.

**Table 4.3-3, Summary of Endangered, Threatened, and Rare Species and Findings of Significance (continued)**

<b>Species</b>	<b>Status<sup>1</sup></b>	<b>Impact Summary</b>
Western Snowy Plover	<b>FT/CSC</b>	Monitoring efforts for the western snowy plover include detecting short-term threats to the species' persistence, while long-term monitoring will track population trends that may suggest declining populations. Required conservation and management actions include: restricting activities within the preserve that could degrade habitat, restricting human activity by fencing within the nesting habitat during breeding season, creating suitable species habitat to compensate for take projects, and periodically monitoring species population levels in conserved habitat. Additional conservation strategies include conducting genetic and demographic studies of the conserved species populations. Because the above conservation and management strategies are incorporated into the MHCP Plan, it is anticipated the project will have a less than significant impact on the western snowy plover.
Elegant Tern	<b>FSC*/ CSC/ WO</b>	The elegant tern is a wetland obligate species. Monitoring efforts for the species include detecting short-term threats to the species' persistence, while long-term monitoring will track population trends that may suggest declining populations. Required conservation and management actions include: restricting activities within the preserve that could prevent establishment of additional species colonies, fencing and signing new colony sites, enhancing habitat to induce the initiation of the new breeding colonies to compensate for any take habitat by a project, periodically monitoring elegant tern use of habitat, and identifying threats to species persistence. Because the above conservation and management strategies are incorporated into the MHCP Plan, it is anticipated the project will have a less than significant impact on the elegant tern.
California Least Tern	<b>FE/CE</b>	One hundred percent of the California least tern populations will be conserved with the project. California least tern viability will be ensured through a rigorous monitoring and management program. Monitoring efforts for the species include detecting short-term threats to the species' persistence, while long-term monitoring will track population trends that may suggest declining populations. Required conservation and management actions include: fencing nesting habitats and restricting activities within the preserve that could impact the species, implementing active predator control when deemed necessary, restricting human activity within and adjacent to nesting habitat during the breeding season, enhancing habitat to induce the initiation of new breeding colonies to compensate for any take by a project, managing vegetation near existing nesting areas, monitoring least tern breeding colonies, and identifying potential threats to species persistence. Because the above conservation and management strategies are incorporated into the MHCP Plan, it is anticipated the project will have a less than significant impact on the California least tern.

**Table 4.3-3, Summary of Endangered, Threatened, and Rare Species and Findings of Significance (continued)**

Species	Status <sup>1</sup>	Impact Summary
Southwestern Willow Flycatcher	<b>FE/CE/ WO</b>	The southwestern willow flycatcher a wetland obligate species. Monitoring efforts for the species include detecting short-term threats to the species' persistence, while long-term monitoring will track population trends that may suggest declining populations. Required conservation and management actions include: restricting activities that could degrade species habitat, controlling cowbird populations where deemed necessary, restricting human access to potential habitat during the breeding season (May 1 to September 15), enhancing conserved riparian habitats to allow for establishment of new flycatcher populations to compensate for any take of habitat by a project, removing invasive exotic species, maintaining upland buffers of all known populations (minimum of 50 feet and up to 100 feet wide), monitoring willow flycatcher populations and potential habitat within the preserve, and identifying threats to species persistence. Additional conservation strategies include: conducting studies of local habitat use and preferences of this species, and conducting demographic and dispersion studies to identify sensitive stages of its life history/annual cycle. Because the above conservation and management strategies are incorporated into the MHCP Plan, it is anticipated the project will have a less than significant impact on the southwestern willow fly catcher.
Coastal Cactus Wren	<b>FSC*/ CSC/NE</b>	The coastal cactus wren will receive protection under the MHCP Narrow Endemic Species Policy. Monitoring efforts for the species include detecting short-term threats to the species' persistence, while long-term monitoring will track population trends that may suggest declining populations. Required conservation and management actions include: initiating a cactus wren habitat enhancement program, discouraging human disturbance adjacent to occupied habitat, maintaining a 300-foot biological buffer around nests, prohibiting activity within occupied habitat from February 15 through August 15, monitoring cactus wren populations, and identifying threats to species persistence. Additional conservation strategies include relocating cactus wren individuals from nonviable to viable populations, conducting a management program to "seed" newly created habitat with juvenile cactus wrens of known genetic origin, monitoring the demographics and population genetics of conserved cactus wren populations, determining the importance of fire to the distribution of <i>Optunia</i> patches, and instituting a fire management program in habitat patches of appropriate size. Because the above conservation and management strategies are incorporated into the MHCP Plan, it is anticipated the project will have a less than significant impact on the coastal cactus wren.
Coastal California Gnatcatcher	<b>FT/CSC</b>	Monitoring efforts for the coastal California gnatcatcher include restricting activities within the preserve that could potentially degrade habitat, restoring coastal sage scrub habitats in disturbed areas identified as high priority for restoration by either the MHCP or MSCP, monitoring key concentrations of the species, and identifying major and critical populations. Particular attention will be given to populations within the stepping-stone linkages. Because the above conservation and management strategies are incorporated into the MHCP Plan, it is anticipated the project will have a less than significant impact on the coastal California gnatcatcher.

**Table 4.3-3, Summary of Endangered, Threatened, and Rare Species and Findings of Significance (continued)**

<b>Species</b>	<b>Status<sup>1</sup></b>	<b>Impact Summary</b>
Least Bell's Vireo	<b>FE/CE/ WO</b>	The least Bell's vireo is a wetland obligate species. Monitoring efforts for the species include detecting short-term threats to the species' persistence, while long-term monitoring will track population trends that may suggest declining populations. Required conservation and management actions include: restricting activities that could degrade species habitat, controlling cowbird populations where deemed necessary, restricting human access to occupied habitat during breeding season (March 1 to September 15), enhancing habitat through restoration or creation of disturbed habitats within floodplains or adjacent to species-occupied habitat, maintaining upland buffers for all major populations, and looking for trends that may suggest declining populations. Because the above conservation and management strategies are incorporated into the MHCP Plan, it is anticipated the project will have a less than significant impact on the least Bell's vireo.
Belding's Savannah Sparrow	<b>FSC*/ CSC/ WO</b>	Monitoring efforts for the species include detecting short-term threats to the species' persistence, while long-term monitoring will track population trends that may suggest declining populations. Required conservation and management actions include: restricting activities or factors within the preserve that could degrade species habitat, restoring or creating salt marsh habitat within the preserve, maintaining upland buffers for all major populations and other high-quality habitat areas (minimum 50 feet and up to 100 feet), monitoring conserved potential wintering habitat of the savannah sparrow, and identifying threats to species persistence. Additional conservation strategies include conducting detailed studies of interpopulation dispersal and genetics for conserved species and using translocation methods if deemed necessary. Because the above conservation and management strategies are incorporated into the MHCP Plan, it is anticipated the project will have a less than significant impact on the Belding's savannah sparrow.
Large-billed Savannah Sparrow	<b>FSC*/ CSC/ WO</b>	The large-billed savannah sparrow is a wetland obligate species. Monitoring efforts for the species include detecting short-term threats to the species' persistence, while long-term monitoring will track population trends that may suggest declining populations. Required conservation and management actions include: restricting activities within the preserve that could degrade species habitat; enhancing, restoring, or creating salt marsh habitat within the preserve; monitoring conserved potential wintering habitats of large-billed savannah sparrow; and identifying threats to species persistence. Because the above conservation and management strategies are incorporated into the MHCP Plan, it is anticipated the project will have a less than significant impact on the large-billed savannah sparrow.

**Table 4.3-3, Summary of Endangered, Threatened, and Rare Species and Findings of Significance (continued)**

Species	Status <sup>1</sup>	Impact Summary
Bell's Sage Sparrow	<b>FSC*/ CSC</b>	Monitoring efforts for the species include detecting short-term threats to the species' persistence, while long-term monitoring will track population trends that may suggest declining populations. Required conservation and management actions include: restricting activities within the preserve that could degrade habitat, restricting human access to areas known to support large concentrations of sage sparrow during the breeding season, identifying and monitoring major populations within the MHCP, and identifying threats to species persistence. An additional conservation strategy is to conduct detailed studies to define local demographic and habitat requirements. Because the above conservation and management strategies are incorporated into the MHCP Plan, it is anticipated the project will have a less than significant impact on the Bell's sage sparrow.
Pacific Pocket Mouse	<b>FE/CSC/ NE</b>	The Pacific pocket mouse will receive protection under the MHCP Narrow Endemic Species Policy. Monitoring efforts for the species include detecting short-term threats to the species' persistence, while long-term monitoring will track population trends that may suggest declining populations. Required conservation and management actions include: buffering future development adjacent to occupied habitat to reduce predation by domestic cats and minimization of other edge effects, managing occupied areas to remove threats, and managing vegetation structure. Because the above conservation and management strategies are incorporated into the MHCP Plan, it is anticipated the project will have a less than significant impact on the Pacific pocket mouse.

**1 Listing Status**

FE = Federally endangered

PE = Proposed for federal listing as endangered

FT = Federally threatened

PT = Proposed for federal listing as threatened

CE = State endangered

CT = State threatened

CSC = State Species of Special Concern

FSC\* = Federal Species of Concern; formerly Category 2 or 3 candidate or proposed for federal listing

FSC\*\* = Federal Species of Concern; proposed rule to list as endangered or threatened has been withdrawn

RARE = Species which meet one of the following criteria:

- 1) Species which are known or believed to have an extremely limited distribution, and/or occur in very small or localized populations, or
- 2) Species which are recognized as being potentially worthy of federal or state listing status, based upon limited range (i.e., more or less restricted to coastal southern California or portions thereof), and a generally recognized decline throughout that range. Coastal southern California is broadly considered to include San Diego, Orange, and western Riverside counties, or,

**Table 4.3-3, Summary of Endangered, Threatened, and Rare Species and Findings of Significance (continued)**

- 3) Species whose current populations or continued persistence are likely to be significantly reduced by identifiable threats, or
- 4) CNPS List 1B plant species and many of the State Species of Special Concern are considered to fit this criteria, or
- 5) Species that are Candidates or proposed for endangered or threatened status.

**NE** This species falls under protection of the MHCP Narrow Endemic Species Policy. Both inside and outside the FPA, impacts to narrow endemic populations shall be avoided to the maximum extent practicable. Inside of FPAs, mitigation for unavoidable impacts and management practices must be designed to achieve no net loss of narrow endemic populations, occupied acreage, or population viability. In no case shall a city permit more than 5% loss of narrow endemic populations or occupied acreage within the FPA.

**WO** Any project that proposes to directly or indirectly impact wetland or wetland vegetation communities shall fully disclose and analyze such impacts in a CEQA document or in findings prepared under a local MHCP implementing ordinance. Any unavoidable impacts to wetlands must be mitigated to result in no net loss of wetland vegetation acreage and biological function and value within the MHCP subregion. Wetland mitigation sites must be added to the MHCP preserve system and managed for biological functions and values, regardless of whether they are located inside of outside of the FPA.

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-4  
Conservation of Vegetation Communities in Subarea Plans**

<b>Vegetation Community</b>	<b>Carlsbad Subarea Plan</b>	<b>Percent</b>	<b>Encinitas Subarea Plan</b>	<b>Percent</b>	<b>Escondido Subarea Plan</b>	<b>Percent</b>	<b>Oceanside Subarea Plan</b>	<b>Percent</b>	<b>San Marcos Subarea Plan</b>	<b>Percent</b>
Southern Coastal Bluff Scrub	-	--	-	--	0	--	0	--	0	--
Maritime Succulent Scrub	30	91%	-	--	0	--	0	--	0	--
Coastal Sage Scrub	1,404	70%	608	71%	1,457	65%	664	50%	934	50%
Chaparral	424	70%	149	75%	3,538	74%	14	31%	1,159	48%
Southern Maritime Chaparral	271	75%	481	86%	0	--	0	--	0	--
Coastal Sage/Chaparral Mix	106	39%	-	--	43	82%	0	0%	79	65%
Grassland	488	38%	97	52%	371	62%	515	30%	85	12%
Southern Coastal Salt Marsh	147	100%	119	100%	0	--	0	--	0	--
Alkali Marsh	13	100%	141	100%	0	--	12	100%	0	--
Freshwater Marsh	192	100%	116	100%	37	100%	160	100%	10	100%
Riparian Forest	86	100%	3	100%	268	100%	238	100%	2	100%
Riparian Woodland	21	100%	48	100%	0	--	3	100%	77	100%
Riparian Scrub	353	100%	223	100%	132	100%	597	100%	107	100%
Engelmann Oak Woodland	-	--	-	--	151	73%	0	--	19	82%
Coast Live Oak Woodland	21	92%	-	--	464	77%	4	95%	2	63%
Other Oak Woodlands	1	100%	-	--	0	--	0	--	0	--
Freshwater	57	100%	6	100%	239	100%	139	100%	1	100%
Estuarine	768	100%	161	100%	0	--	24	100%	0	--
Disturbed Wetland	118	100%	12	100%	23	100%	14	100%	28	100%
Natural Floodchannel/Streambed	-	--	-	--	41	100%	354	100%	0	--
Beach	-	--	5	100%	0	--	4	9%	0	--
Saltpan/Mudflats	-	--	3	100%	0	--	0	--	0	--
<i>Natural Habitats Total</i>	<i>4,497</i>	<i>71%</i>	<i>2,173</i>	<i>82%</i>	<i>6,765</i>	<i>73%</i>	<i>2,742</i>	<i>58%</i>	<i>2,505</i>	<i>47%</i>

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-4, Conservation of Vegetation Communities in Subarea Plans (continued)**

<b>Vegetation Community</b>	<b>Carlsbad Subarea Plan</b>	<b>Percent</b>	<b>Encinitas Subarea Plan</b>	<b>Percent</b>	<b>Escondido Subarea Plan</b>	<b>Percent</b>	<b>Oceanside Subarea Plan</b>	<b>Percent</b>	<b>San Marcos Subarea Plan</b>	<b>Percent</b>
Agriculture (type unknown)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Orchards, Vineyards	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Intensive Agriculture	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Field & Pasture Agriculture	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>Agriculture Total</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>
Eucalyptus Woodland	88	NA	60	NA	22	NA	10	NA	12	NA
Disturbed Land	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Urban/Developed	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<i>Non-Natural Habitats Total</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>	<i>NA</i>
<b>Total in Subarea Plan</b>	<b>9,083</b>	<b>44%</b>	<b>4,407</b>	<b>36%</b>	<b>13,551</b>	<b>55%</b>	<b>5,493</b>	<b>21%</b>	<b>5,022</b>	<b>34%</b>

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5  
Conservation of Sensitive Species for Subarea Plans**

Sensitive Species	Carlsbad Subarea Plan	Encinitas Subarea Plan	Escondido Subarea Plan	Oceanside Subarea Plan	San Marcos Subarea Plan
<b>Plants</b>					
<i>Acanthomintha ilicifolia</i> San Diego thorn-mint	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.*				
Known Occurrences	5 (87%)	7 (100%)	1 (100%)	-	2 (80%)
Habitat	1,156 (74%)	524 (69%)	725 (78%)	870 (44%)	35 (15%)
Comments	88% of major populations and critical locations conserved.	100% of major populations and critical locations conserved.	100% of major populations and critical locations conserved.	No major populations or critical locations.	80% of major populations and critical locations conserved.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate
<i>Ambrosia pumila</i> San Diego ambrosia	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	-	-	-	2 (88%)	-
Habitat	1,892 (57%)	705 (68%)	1,828 (64%)	1,179 (39%)	1,019 (40%)
Comments	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate
<i>Arctostaphylos glandulosa ssp. Crassifolia</i> Del Mar Manzanita	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	47 (95%)	86 (97%)	-	-	5 (100%)
Habitat	167 (70%)	289 (84%)	-	-	-
Comments	97% of major populations and critical locations conserved.	98% of major populations and critical locations conserved.	No known major populations or critical locations. Species is unlikely to occur here.	No known major populations or critical locations.	No known major populations or critical locations.
Finding	Adequate	Adequate	Adequate**	Adequate**	Adequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

<b>Sensitive Species</b>	<b>Carlsbad Subarea Plan</b>	<b>Encinitas Subarea Plan</b>	<b>Escondido Subarea Plan</b>	<b>Oceanside Subarea Plan</b>	<b>San Marcos Subarea Plan</b>
<i>Baccharis vanessae</i> Encinitas baccharis	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	7 (100%)	12 (100%)	-	-	-
Habitat	695 (72%)	630 (83%)	3,538 (74%)	14 (32%)	1,159 (48%)
Comments	100% of major populations and critical locations conserved.	98% of major populations and critical locations conserved.	No known major populations or critical locations conserved.	No known major populations or critical locations conserved.	No known major populations or critical locations conserved.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate
<i>Brodiaea filifolia</i> Thread-leaved brodiaea	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	5 (96%)	-	-	3 (93%)	2 (80%)
Habitat	168 (37%)	15 (28%)	-	82 (20%)	15 (9%)
Comments	93% of major populations and critical locations conserved.	No known major populations or critical locations conserved.	No known major populations or critical locations conserved.	No known major populations or critical locations conserved.	80% of major populations and critical locations conserved.
Finding	Adequate	Adequate	Adequate**	Adequate	Adequate
<i>Ceanothus verrucosus</i> Wart-stemmed ceanothus					
Known Occurrences	30 (81%)	35 (85%)	16 (56%)	-	14 (35%)
Habitat	442 (69%)	417 (82%)	434 (78%)	6 (35%)	936 (53%)
Comments	92% of major populations conserved.	78% of major populations conserved. No known critical locations.	71% of major populations conserved. No known critical locations.	No known major populations or critical locations.	31% of major populations conserved. No known critical locations.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

Sensitive Species	Carlsbad Subarea Plan	Encinitas Subarea Plan	Escondido Subarea Plan	Oceanside Subarea Plan	San Marcos Subarea Plan
<i>Chorizanthe orcuttiana</i> Orcutt's spineflower	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	-	1 (100%)	-	-	-
Habitat	167 (70%)	296 (84%)	-	-	-
Comments	No known major populations or critical locations.	No known major populations. 100% of critical locations conserved.	No known major populations or critical locations. Species is unlikely to occur here since there is no southern maritime chaparral habitat.	No known major populations or critical locations. Species is unlikely to occur here since there is no southern maritime chaparral habitat.	No known major populations or critical locations. Species is unlikely to occur here since there is no southern maritime chaparral habitat.
Finding	Adequate	Adequate	Adequate**	Adequate**	Adequate**
<i>Comarostaphylis diversifolia ssp. Diversifolia</i> Summer-holly					
Known Occurrences	20 (62%)	42 (97%)	4 (67%)	-	41 (65%)
Habitat	267 (68%)	121 (77%)	434 (77%)	6 (34%)	936 (53%)
Comments	60 % of major populations conserved.	82% of major populations conserved. No known critical locations.	67% of major populations conserved.	No known major populations or critical locations.	64% of major populations conserved. No known critical locations.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate
<i>Corethrogyne filaginifolia var. linifolia</i> Del Mar Mesa sand aster	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	8 (89%)	20 (97%)	-	1 (100%)	-
Habitat	778 (71%)	689 (81%)	-	463 (63%)	-

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

<b>Sensitive Species</b>	<b>Carlsbad Subarea Plan</b>	<b>Encinitas Subarea Plan</b>	<b>Escondido Subarea Plan</b>	<b>Oceanside Subarea Plan</b>	<b>San Marcos Subarea Plan</b>
Comments	60% of major populations conserved.	93% of major populations conserved. No known critical locations.	No known major populations or critical locations. Species is unlikely to occur here.	No known major populations or critical locations.	No known major populations or critical locations. Species is unlikely to occur here.
Finding	Adequate	Adequate	Adequate**	Adequate**	Adequate**
<i>Dudleya blochmaniae</i> ssp. <i>Blochmaniae</i> Blochman's dudleya					
Known Occurrences	1 (100%)	-	-	1 (50%)	0 (0%)
Habitat	173 (61%)	59 (57%)	7 (14%)	60 (32%)	6 (20%)
Comments	100% of critical locations conserved.	No known major populations or critical locations.	No known major populations or critical locations. Species is unlikely to occur here.	50% of major population and critical location conserved.	No known major populations or critical locations. Species is unlikely to occur here.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate
<i>Dudleya blochmaniae</i> ssp. <i>Brevifolia</i> Short-leaved dudleya	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	-	-	-	-	-
Habitat	167 (70%)	286 (84%)	-	-	-
Comments	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations. Species is unlikely to occur here.	No known major populations or critical locations. Species is unlikely to occur here.	No known major populations or critical locations. Species is unlikely to occur here.
Finding	Adequate	Adequate	Adequate**	Adequate**	Adequate**

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

Sensitive Species	Carlsbad Subarea Plan	Encinitas Subarea Plan	Escondido Subarea Plan	Oceanside Subarea Plan	San Marcos Subarea Plan
<i>Dudleya variegata</i> Variegated dudleya	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	-	-	-	-	-
Habitat	173 (61%)	59 (57%)	7 (50%)	60 (32%)	6 (19%)
Comments	No known major populations or critical locations. Potential habitat is ineffectively conserved as small, fragmented blocks of habitat.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations. Potential habitat is ineffectively conserved as small, fragmented blocks of habitat.
Finding	Adequate	Adequate	Adequate	Adequate	Inadequate
<i>Dudleya viscida</i> Sticky dudleya					
Known Occurrences	-	-	-	18 (75%)	-
Habitat	958 (67%)	643 (71%)	710 (77%)	524 (56%)	1,267 (52%)
Comments	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	74% of major populations and critical locations conserved.	No known major populations or critical locations.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate
<i>Eryngium aristulatum var. parishii</i> San Diego button-celery	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	13 (100%)	-	-	-	2 (100%)
Habitat	168 (39%)	15 (28%)	-	82 (20%)	15 (9%)

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

<b>Sensitive Species</b>	<b>Carlsbad Subarea Plan</b>	<b>Encinitas Subarea Plan</b>	<b>Escondido Subarea Plan</b>	<b>Oceanside Subarea Plan</b>	<b>San Marcos Subarea Plan</b>
Comments	100% of major populations and critical locations conserved.	No known major populations or critical locations.	No known major populations or critical locations. Species is unlikely to occur here.	No known major populations or critical locations.	80% of major populations and critical location conserved.
Finding	Adequate	Adequate	Adequate**	Adequate	Adequate
<i>Euphorbia misera</i> Cliff spurge					
Known Occurrences	1 (100%)	-	-	-	-
Habitat	420 (71%)	286 (78%)	-	518 (57%)	-
Comments	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations. Species is unlikely to occur here.	No known major populations or critical locations.	No known major populations or critical locations. Species is unlikely to occur here.
Finding	Adequate	Adequate	Not Applicable	Adequate	Not Applicable
<i>Ferocactus viridescens</i> San Diego barrel cactus					
Known Occurrences	1 (100%)	27 (87%)	-	-	-
Habitat	691 (66%)	522 (70%)	276 (77%)	518 (57%)	331 (48%)
Comments	No known major populations or critical locations.	86% of major populations and critical locations conserved.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

Sensitive Species	Carlsbad Subarea Plan	Encinitas Subarea Plan	Escondido Subarea Plan	Oceanside Subarea Plan	San Marcos Subarea Plan
<i>Hazardia orcutti</i> Orcutt's hazardia	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	-	6 (97%)	-	-	-
Habitat	1,133 (67%)	939 (75%)	710 (77%)	524 (56%)	1,267 (52%)
Comments	No known major populations or critical locations.	97% of major populations and critical locations conserved.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate
<i>Iva hayesiana</i> San Diego marsh-elder	This species may receive additional protection by the MHCP no net-loss of wetlands policy.				
Known Occurrences	-	2 (100%)	-	-	1 (50%)
Habitat	1 (100%)	5 (100%)	-	1 (100%)	-
Comments	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	50% of major populations and critical area conserved.
Finding	Adequate	Adequate	Adequate**	Adequate	Adequate
<i>Lotus nuttallianus</i> Nuttall's lotus	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	2 (100%)	5 (96%)	-	1(80%)	-
Habitat	-	5 (100%)	-	4 (10%)	-
Comments	100% of major populations and critical locations conserved.	96% of major populations and critical locations conserved.	No known major populations or critical locations. Species is unlikely to occur here.	80% of major populations and critical locations conserved.	No known major populations or critical locations. Species is unlikely to occur here.
Finding	Adequate	Adequate	Adequate**	Adequate	Adequate**

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

Sensitive Species	Carlsbad Subarea Plan	Encinitas Subarea Plan	Escondido Subarea Plan	Oceanside Subarea Plan	San Marcos Subarea Plan
<i>Myosurus minimus spp. apus</i> Little mouse-tail	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	1 (100%)	-	-	-	-
Habitat	6 (100%)	5 (100%)	-	1 (100%)	-
Comments	100% of major populations and critical locations conserved.	No known major populations or critical locations.			
Finding	Adequate	Adequate	Adequate**	Adequate	Adequate**
<i>Navarretia fossalis</i> Spreading navarretia	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	1 (100%)	-	-	-	2 (90%)
Habitat	5 (100%)	-	-	-	-
Comments	100% of major populations and critical locations conserved.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	80% of major populations and critical locations conserved.
Finding	Adequate	Adequate**	Adequate**	Adequate**	Adequate
<i>Orcuttia californica</i> California Orcutt grass	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	1 (100%)	-	-	-	-
Habitat	5 (100%)	-	-	-	-
Comments	100% of major populations and critical locations conserved.	No known major populations or critical locations.			
Finding	Adequate	Adequate**	Adequate**	Adequate**	Adequate**

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

Sensitive Species	Carlsbad Subarea Plan	Encinitas Subarea Plan	Escondido Subarea Plan	Oceanside Subarea Plan	San Marcos Subarea Plan
<i>Pinus torreyana ssp. Torreyana</i> Torrey pine					
Known Occurrences	1 (50%)	14 (61%)	-	-	-
Habitat	175 (70%)	296 (84%)	-	-	-
Comments	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations. Species is unlikely to occur here.	No known major populations or critical locations. Species is unlikely to occur here.	No known major populations or critical locations. Species is unlikely to occur here.
Finding	Adequate	Adequate	Not Applicable	Not Applicable	Not Applicable
<i>Quercus dumosa</i> Nuttall's scrub oak					
Known Occurrences	6 (60%)	18 (100%)	-	-	-
Habitat	958 (67%)	643 (71%)	710 (77%)	524 (56%)	1,267 (52%)
Comments	80% of major populations and critical locations conserved.	100% major populations and critical locations conserved.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate
<i>Quercus engelmannii</i> Engelmann oak					
Known Occurrences	1 (33%)	-	60 (83%)	-	1 (100%)
Habitat	-	-	151 (73%)	-	19 (82%)
Comments	No known major populations or critical locations.	No known major populations or critical locations. Species is unlikely to occur here.	81% of major populations and critical locations conserved.	No known major populations or critical areas. Species is unlikely to occur here.	No known major populations or critical areas.
Finding	Adequate	Not Applicable	Adequate	Not Applicable	Adequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

Sensitive Species	Carlsbad Subarea Plan	Encinitas Subarea Plan	Escondido Subarea Plan	Oceanside Subarea Plan	San Marcos Subarea Plan
<i>Tetracoccus dioicus</i> Parry's tetracoccus					
Known Occurrences	-	-	-	-	-
Habitat	69 (100%)	-	700 (79%)	-	13 (42%)
Comments	No known major populations or critical locations.	No known major populations or critical locations. Species is unlikely to occur here.	No known major populations or critical locations.	No known major populations or critical locations. Species is unlikely to occur here.	No known major populations or critical locations.
Finding	Adequate	Not Applicable	Adequate	Not Applicable	Adequate
<b>Invertebrates</b>					
<i>Streptocephalus woottoni</i> Riverside fairy shrimp	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	1 (100%)	-	-	-	-
Habitat	-	-	-	-	-
Comments	100% conservation of vernal pools.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.
Finding	Adequate	Adequate**	Adequate**	Adequate**	Adequate**
<i>Branchinecta sandiegonensis</i> San Diego fairy shrimp	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	1 (100%)	-	-	-	0 (0%)
Habitat	-	-	-	-	-
Comments	100% conservation of vernal pools at Carlsbad.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	Vernal pools in San Marcos major amendment area are conserved.
Finding	Adequate	Adequate**	Adequate**	Adequate**	Adequate**

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

Sensitive Species	Carlsbad Subarea Plan	Encinitas Subarea Plan	Escondido Subarea Plan	Oceanside Subarea Plan	San Marcos Subarea Plan
<i>Euphyes vestris harbisoni</i> Harbison's dun skipper	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through the critical population policy.				
Known Occurrences	-	-	3 (100%)	-	-
Habitat	482 (100%)	274 (100%)	1,106 (84%)	842 (100%)	208 (97%)
Comments	No known major populations or critical locations.	No known major populations or critical locations.	Major populations in Escondido are 100% conserved.	No known major populations or critical locations.	No known major populations or critical locations.
Finding	Adequate**	Adequate**	Adequate	Adequate**	Adequate**
<i>Panoquina errans</i> Salt marsh skipper	This species may receive additional protection under the MHCP no net-loss of wetlands policy.				
Known Occurrences	1 (100%)	-	-	-	-
Habitat	147 (100%)	123 (100%)	-	-	-
Comments	Major populations and critical areas at Agua Hedionda and Batiquitos lagoons 100% conserved.	Major populations and critical locations at San Elijo and Batiquitos lagoons 100% conserved.	No known major populations or critical locations. Species is unlikely to occur here.	No known major populations or critical locations	No known major populations or critical locations. Species is unlikely to occur here.
Finding	Adequate	Adequate	Not Applicable	Unable to determine conservation status.	Not Applicable
<i>Lycaena hermes</i> Hermes copper					
Known Occurrences	-	-	-	-	-
Habitat	1,510 (67%)	608 (71%)	1,500 (65%)	664 (49%)	1,014 (51%)
Comments	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

Sensitive Species	Carlsbad Subarea Plan	Encinitas Subarea Plan	Escondido Subarea Plan	Oceanside Subarea Plan	San Marcos Subarea Plan
<i>Euphydryas editha quino</i> Quino checkerspot	Species may be extirpated from the study area. Conservation efforts aimed at viable populations outside the study area.				
Known Occurrences	-	-	-	-	-
Habitat	-	-	-	-	-
Comments	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations. Potential habitat areas conserved.	No known major populations or critical locations.	No known major populations or critical locations.
Finding	Adequate only with sufficient mitigation to maintain viable populations outside the study area.	Adequate only with sufficient mitigation to maintain viable populations outside the study area.	Adequate	Adequate only with sufficient mitigation to maintain viable populations outside the study area.	Adequate only with sufficient mitigation to maintain viable populations outside the study area.
<b>Amphibians and Reptiles</b>					
<i>Scaphiopus hammondii</i> Western spadefoot toad	This species may receive additional protection under the MHCP no net-loss of wetlands policy.				
Known Occurrences	1 (100%)	-	2 (100%)	-	-
Habitat	Aquatic 249 (100%) Riparian 459 (100%)	Aquatic 122 (100%) Riparian 274 (100%)	Aquatic 317 (100%) Riparian 401 (100%)	Aquatic 654 (100%) Riparian 838 (100%)	Aquatic 11 (100%) Riparian 186 (100%)
Comments	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

Sensitive Species	Carlsbad Subarea Plan	Encinitas Subarea Plan	Escondido Subarea Plan	Oceanside Subarea Plan	San Marcos Subarea Plan
<i>Bufo microscaphus californicus</i> Arroyo southwestern toad	This species may receive additional protection under the MHCP no net-loss of wetlands policy which will protect this species' breeding habitat. Additional conservation may occur through application of the critical location policy.				
Known Occurrences	-	-	-	-	-
Habitat	-	-	-	-	-
Comments	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.
Finding	Adequate**	Adequate**	Adequate**	Adequate**	Adequate**
<i>Clemmys marmorata pallida</i> Southwestern pond turtle	This species may receive additional protection under the MHCP no net-loss of wetlands policy.				
Known Occurrences	1 (100%)	4 (100%)	1 (100%)	1 (100%)	-
Habitat	Aquatic 249 (100%) Riparian 459 (100%)	Aquatic 122 (100%) Riparian 274 (100%)	Aquatic 317 (100%) Riparian 401 (100%)	Aquatic 654 (100%) Riparian 838 (100%)**	Aquatic 11 (100%) Riparian 186 (100%)
Comments	No known major populations or critical locations.	No known major populations or critical locations.	Major populations and critical locations at Escondido Creek conserved at 100%.	Major populations and critical locations at San Luis Rey River and Buena Vista Lagoon conserved at 100%.	No known major populations or critical locations.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

Sensitive Species	Carlsbad Subarea Plan	Encinitas Subarea Plan	Escondido Subarea Plan	Oceanside Subarea Plan	San Marcos Subarea Plan
<i>Phrynosoma coronatum blainvillei</i> San Diego horned lizard	Conservation efforts must include management of Argentine ants and edge effects.				
Known Occurrences	4 (63%)	3 (83%)	5 (33%)	0 (0%)	0 (0%)
Habitat	2,714 (60%)	1,335 (74%)	6,024 (71%)	1,197 (38%)	2,280 (45%)
Comments	No known major populations or critical locations. Conservation efforts must include management of Argentine ants and edge effects.	No known major populations or critical locations. Conservation efforts must include management of Argentine ants and edge effects.	No known major populations or critical locations. Conservation efforts must include management of Argentine ants and edge effects.	No known major populations or critical locations. Conservation efforts must include management of Argentine ants and edge effects.	No known major populations or critical locations. Conservation efforts must include management of Argentine ants and edge effects.
Finding	Adequate	Not Applicable	Adequate	Adequate	Adequate
<i>Cnemidophorus hyperythrus beldingi</i> Orange-throated whiptail					
Known Occurrences	3 (38%)	9 (71%)	5 (48%)	1 (50%)	-
Habitat	2,234 (69%)	1,239 (77%)	5,038 (71%)	678 (49%)	2,173 (50%)
Comments	No known major populations or critical locations.				
Finding	Adequate	Adequate	Adequate	Adequate	Adequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

Sensitive Species	Carlsbad Subarea Plan	Encinitas Subarea Plan	Escondido Subarea Plan	Oceanside Subarea Plan	San Marcos Subarea Plan
<b>Birds</b>					
<i>Pelecanus occidentalis californicus</i> California brown pelican <sup>(1)</sup>	This species may receive additional protection under the MHCP no net-loss of wetlands policy.				
Known Occurrences	4 (100%)	1 (100%)	-	-	-
Habitat	768 (100%)	161 (100%)	-	24 (100%)	-
Comments	No known major populations. Critical areas at Aqua Hedionda and Batiquitos lagoons are 100% conserved.	No known major populations. Critical areas at San Elijo and Batiquitos lagoons are 100% conserved.	No known major populations or critical locations. Species is unlikely to occur here.	No known major populations. Critical areas at San Luis Rey River mouth and Buena Vista Lagoon are 100% conserved.	No known major populations or critical locations. Species is unlikely to occur here.
Finding	Adequate	Adequate	Not Applicable	Adequate	Not Applicable
<i>Plegadis chihi</i> White-faced ibis	This species may receive additional protection through the MHCP no net-loss of wetlands policy.				
Known Occurrences	3 (100%)	1 (50%)	1 (100%)	6 (67%)	-
Habitat	339 (100%)	235 (100%)	37 (100%)	106 (100%)	9 (100%)
Comments	Major populations at Batiquitos Lagoon conserved. No known critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate
<i>Circus cyaneus</i> Northern harrier					
Known Occurrences	12 (78%)	3 (83%)	1 (100%)	5 (36%)	1 (30%)
Habitat	2,243 (62%)	1,081 (76%)	1,865 (65%)	1,351 (42%)	1,029 (43%)

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

<b>Sensitive Species</b>	<b>Carlsbad Subarea Plan</b>	<b>Encinitas Subarea Plan</b>	<b>Escondido Subarea Plan</b>	<b>Oceanside Subarea Plan</b>	<b>San Marcos Subarea Plan</b>
Comments	No known major populations. Critical areas at Agua Hedionda and Batiquitos lagoons 100% conserved. Insufficient conservation of grasslands.	No major populations. Critical areas in San Elijo and Batiquitos lagoons 100% conserved. Insufficient conservation of grasslands.	No known major populations or critical locations.	No major populations. Critical areas at San Luis Rey River mouth and Buena Vista Lagoon are 100% conserved. Marsh habitat adjacent to Camp Pendleton is 100% conserved. Grasslands adjacent to Camp Pendleton are substantially conserved.	No known major populations or critical locations. Insufficient conservation of grasslands.
Finding	Inadequate	Not Applicable	Adequate	Adequate	Inadequate
<i>Accipiter cooperii</i> Cooper's hawk					
Known Occurrences	6 (72%)	2 (67%)	3 (75%)	10 (63%)	2 (40%)
Habitat	129 (99%)	51 (100%)	883 (82%)	245 (100%)	101 (95%)
Comments	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations. 75% conservation for critical oak woodland area.	No known major populations or critical locations.	No known major populations. 75% conservation for critical oak woodland area.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

Sensitive Species	Carlsbad Subarea Plan	Encinitas Subarea Plan	Escondido Subarea Plan	Oceanside Subarea Plan	San Marcos Subarea Plan
<i>Pandion haliaetus</i> Osprey	This species may receive additional protection under the MHCP no net-loss of wetlands policy.				
Known Occurrences	1 (100%)	3 (100%)	2 (100%)	3 (100%)	-
Habitat	825 (100%)	167 (100%)	239 (100%)	163 (100%)	1 (100%)
Comments	No known major populations. Critical areas at Agua Hedionda and Batiquitos lagoons 100% conserved.	No known major populations. Critical area at San Elijo and Batiquitos lagoons 100% conserved..	No known major populations or critical locations.	No known major populations. Critical area at San Luis Rey River mouth and Buena Vista Lagoon conserved at 100%.	No known major populations or critical locations.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate
<i>Aquila chrysaetos</i> Golden eagle					
Known Occurrences	1 (100%)	3 (100%)	2 (100%)	3 (100%)	-
Habitat	1,998 (56%)	705 (68%)	1,871 (64%)	1,176 (38%)	1,099 (41%)
Comments	No known major populations. Critical grassland and scrub habitats in central and southeast Carlsbad are substantially conserved.	No known major populations. Critical scrub habitat in east Encinitas is substantially conserved.	No known major populations. Critical scrub habitat in north and east Escondido is substantially conserved.	No known major populations. Critical grassland and scrub habitat adjacent to Camp Pendleton is partially conserved.	No known major populations. Critical scrub habitat in north and southwest San Marcos is partially conserved.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

Sensitive Species	Carlsbad Subarea Plan	Encinitas Subarea Plan	Escondido Subarea Plan	Oceanside Subarea Plan	San Marcos Subarea Plan
<i>Falco peregrinus anatum</i> Peregrine falcon <sup>(1)</sup>					
Known Occurrences	1 (100%)	1 (100%)	-	-	-
Habitat	1,566 (100%)	671 (100%)	438 (100%)	1,022 (100%)	196 (100%)
Comments	No known major populations. Critical areas at Agua Hedionda and Batiquitos lagoons 100% conserved.	No known major populations. Critical foraging area at San Elijo and Batiquitos lagoons 100% conserved.	No known major populations or critical locations.	No known major populations. Critical foraging areas at San Luis Rey River mouth and Buena Vista Lagoon are 100% conserved.	No known major populations or critical locations.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate
<i>Rallus longirostris levipes</i> Light-footed clapper rail <sup>(1)</sup>	This species may receive additional protection under the MHCP no net-loss of wetlands policy.				
Known Occurrences	3 (100%)	14 (100%)	-	-	-
Habitat	148 (100%)	120 (100%)	-	-	-
Comments	Major populations and critical areas at Agua Hedionda and Batiquitos lagoons 100% conserved.	Major populations and critical locations at San Elijo and Batiquitos lagoons 100% conserved.	No known major populations or critical locations. Species is unlikely to occur here.	No known major populations or critical locations. Buena Vista Lagoon is conserved at 100%.	No known major populations or critical locations. Species is unlikely to occur here.
Finding	Adequate	Adequate	Not Applicable	Adequate	Not Applicable

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

Sensitive Species	Carlsbad Subarea Plan	Encinitas Subarea Plan	Escondido Subarea Plan	Oceanside Subarea Plan	San Marcos Subarea Plan
<i>Charadrius alexandrinus nivosus</i> Western snowy plover					
Known Occurrences	1 (100%)	-	-	-	-
Habitat	-	-	-	-	-
Comments	Major populations at San Luis Rey River mouth and lagoon and estuarine habitats of Carlsbad conserved. Critical breeding areas at San Luis Rey River, and Agua Hedionda and Batiquitos lagoons conserved.	Major populations at San Luis Rey River mouth and lagoon and estuarine habitats of Encinitas conserved. Critical breeding areas at Batiquitos and San Elijo lagoons conserved.	No known major populations or critical locations. Species is unlikely to occur here.	Major populations at San Luis Rey River mouth and lagoon and estuarine habitats of Oceanside conserved. Critical breeding areas at San Luis Rey River and Buena Vista Lagoon conserved.	No known major populations or critical locations. Species is unlikely to occur here.
Finding	Adequate	Adequate	Not Applicable	Adequate	Not Applicable
<i>Sterna elegans</i> Elegant tern	This species may receive additional protection under the MHCP no net-loss of wetlands policy.				
Known Occurrences	3 (100%)	-	-	2 (67%)	-
Habitat	768 (100%)	169 (100%)	-	28 (42%)	-
Comments	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations. Species is unlikely to occur here.	No known major populations or critical locations.	No known major populations or critical locations. Species is unlikely to occur here.
Finding	Adequate	Adequate	Not Applicable	Adequate	Not Applicable

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

Sensitive Species	Carlsbad Subarea Plan	Encinitas Subarea Plan	Escondido Subarea Plan	Oceanside Subarea Plan	San Marcos Subarea Plan
<i>Sterna antillarum browni</i> California least tern <sup>(1)</sup>					
Known Occurrences	11 (100%)	3 (100%)	-	3 (75%)	-
Habitat	768 (100%)	169 (100%)	-	28 (42%)	-
Comments	Breeding habitat at Batiquitos Lagoon 100% conserved. Critical areas at Aqua Hedionda and Batiquitos lagoons 100% conserved.	No known major populations. Critical area at San Elijo and Batiquitos lagoons 100% conserved.	No known major populations or critical locations. Species is unlikely to occur here.	Major populations and critical areas at the breeding habitat at the San Luis Rey River mouth is 100% conserved.	No known major populations or critical locations. Species is unlikely to occur here.
Finding	Adequate	Adequate	Not Applicable	Adequate	Not Applicable
<i>Athene cucularia hypugaea</i> Burrowing owl					
Known Occurrences	4 (80%)	1 (100%)	-	0 (0%)	1 (50%)
Habitat	448 (38%)	97 (52%)	371 (62%)	515 (30%)	85 (12%)
Comments	No known major populations. Critical area of grassland in eastern Batiquitos Lagoon and southeast Carlsbad are partially conserved. Insufficient conservation of grasslands.	No known major populations. Critical area of grassland in eastern San Elijo Lagoon is substantially conserved.	No known major populations. Critical area of grassland in north and south Escondido is substantially conserved.	No known major populations. Critical area of grassland adjacent to Camp Pendleton is substantially conserved.	No known major populations. Critical area of grassland in San Marcos is poorly conserved. Insufficient conservation of grasslands.
Finding	Inadequate	Not Applicable	Adequate	Adequate	Inadequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

Sensitive Species	Carlsbad Subarea Plan	Encinitas Subarea Plan	Escondido Subarea Plan	Oceanside Subarea Plan	San Marcos Subarea Plan
<i>Empidonax traillii extimus</i> Southwestern willow flycatcher	This species may receive additional protection through the MHCP no net-loss of wetlands habitat policy.				
Known Occurrences	2 (100%)	3 (100%)	-	1 (100%)	-
Habitat	439 (100%)	226 (100%)	401 (100%)	834 (100%)	109 (100%)
Comments	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	Major populations and critical locations at San Luis Rey River near Guajome Lake and Pilgrim Creek near Foss Lake conserved.	No known major populations or critical locations.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate
<i>Campylorhynchus brunneicapillus</i> <i>cousei</i> Coastal cactus wren	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through application of the critical population policy.				
Known Occurrences	24 (97%)	-	-	-	-
Habitat	-	-	-	-	-
Comments	No known major populations or critical locations.	No known major populations or critical locations. Suitable habitat may be limited in this area.	Major population and critical location along San Pasqual Valley and Lake Hodges is conserved.	No known major populations or critical locations. Suitable habitat may be limited in this area.	No known major populations or critical locations. Suitable habitat may be limited in this area.
Finding	Adequate	Adequate**	Adequate	Adequate**	Adequate**

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

<b>Sensitive Species</b>	<b>Carlsbad Subarea Plan</b>	<b>Encinitas Subarea Plan</b>	<b>Escondido Subarea Plan</b>	<b>Oceanside Subarea Plan</b>	<b>San Marcos Subarea Plan</b>
<i>Polioptila californica californica</i> Coastal California gnatcatcher					
Known Occurrences	233 (62%)	44 (85%)	6 (26%)	67 (52%)	22 (55%)
Habitat	1,510 (67%)	608 (71%)	1,500 (65%)	664 (49%)	1,014 (51%)
Comments	Most major populations are substantially conserved. Major populations in central Carlsbad will be partially conserved, and will become more fragmented. Much of the Calavera Lake/Calavera Highlands location will be conserved. The critical location in the La Costa area is largely on properties already permitted for take.	No known major populations or critical locations.	Major populations at Bernardo Mountain, Kit Carson Park, and San Pasqual Valley will be substantially conserved. Major populations at Quail Hills will not be conserved. No known critical locations.	Major populations in north Oceanside will be substantially conserved. Major population in central Oceanside will be partially conserved. Critical location in north Oceanside adjacent to Camp Pendleton will be substantially conserved.	Major populations at San Marcos portion of La Costa/University Commons will be marginally conserved (on a “project level” basis). The critical location at the San Marcos portion of the La Costa/ University Commons area will be marginally conserved.
Finding	Adequate only with substantial conservation of core gnatcatcher breeding area and substantial habitat restoration.	Adequate	Adequate only with substantial conservation of core gnatcatcher breeding area and substantial habitat restoration.	Adequate only with substantial conservation of core gnatcatcher breeding area and substantial habitat restoration.	Adequate only with substantial conservation of core gnatcatcher breeding area and substantial habitat restoration.

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

Sensitive Species	Carlsbad Subarea Plan	Encinitas Subarea Plan	Escondido Subarea Plan	Oceanside Subarea Plan	San Marcos Subarea Plan
<i>Sialia mexicana</i> Western bluebird	This species may receive additional protection through the MHCP no net-loss of wetlands policy.				
Known Occurrences	1 (50%)	1 (100%)	1 (100%)	-	-
Habitat	22 (92%)	-	615 (76%)	4 (95%)	22 (80%)
Comments	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate
<i>Vireo bellii pusillus</i> Least Bell's vireo	This species may receive additional protection through the MHCP no net-loss of wetlands policy.				
Known Occurrences	6 (100%)	3 (100%)	1 (100%)	121 (94%)	-
Habitat	459 (100%)	274 (100%)	401 (100%)	838 (100%)	186 (100%)
Comments	No known major populations or critical locations.	No known major populations or critical locations.	Major population and critical location at San Luis Rey River/Pilgrim Creek conserved.	No known major populations or critical locations.	No known major populations or critical locations.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate
<i>Icteria virens</i> Yellow-breasted chat	This species may receive additional protection through the MHCP no net-loss of wetlands habitat policy.				
Known Occurrences	1 (100%)	5 (100%)	1 (100%)	37 (93%)	-
Habitat	459 (100%)	274 (100%)	401 (100%)	838 (100%)	185 (100%)
Comments	No known major populations or critical locations.	No known major populations or critical locations.	Major population and critical location at San Luis Rey River/Pilgrim Creek conserved.	No known major populations or critical locations.	No known major populations or critical locations.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

Sensitive Species	Carlsbad Subarea Plan	Encinitas Subarea Plan	Escondido Subarea Plan	Oceanside Subarea Plan	San Marcos Subarea Plan
<i>Aimophila ruficeps canescens</i> Rufous-crowned sparrow	This species may receive additional protection through the MHCP no net-loss of wetlands habitat policy.				
Known Occurrences	2 (40%)	6 (79%)	9 (88%)	4 (100%)	3 (69%)
Habitat	1,510 (67%)	608 (71%)	1,500 (65%)	664 (49%)	1,014 (51%)
Comments	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate
<i>Passerculus sandwichensis beldingi</i> Belding's savannah sparrow	This species may receive additional protection through the MHCP no net-loss of wetlands habitat policy.				
Known Occurrences	10 (71%)	16 (100%)	-	3 (100%)	-
Habitat	147 (100%)	123 (100%)	-	-	-
Comments	Major populations and critical locations at Agua Hedionda and Batiquitos lagoons 100% conserved.	Major populations and critical locations at San Elijo and Batiquitos lagoons 100% conserved.	No known major populations or critical locations. Species is unlikely to occur here.	No known major populations or critical locations.	No known major populations or critical locations. Species is unlikely to occur here.
Finding	Adequate	Adequate	Not Applicable	Adequate	Not Applicable
<i>Passerculus sandwichensis rostratus</i> Large-billed savannah sparrow	This species may receive additional protection through the MHCP no net-loss of wetlands habitat policy.				
Known Occurrences	-	-	-	-	-
Habitat	147 (100%)	123 (100%)	-	-	-
Comments	No known major populations. Critical areas at Agua Hedionda and Batiquitos lagoons 100% conserved.	No known major populations. Critical areas at San Elijo and Batiquitos lagoons 100% conserved.	No known major populations or critical locations. Species is unlikely to occur here.	No known major populations or critical locations.	No known major populations or critical locations. Species is unlikely to occur here.

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

Sensitive Species	Carlsbad Subarea Plan	Encinitas Subarea Plan	Escondido Subarea Plan	Oceanside Subarea Plan	San Marcos Subarea Plan
Finding	Adequate	Adequate	Not Applicable	Unable to determine conservation status.	Not Applicable
<i>Amphispiza belli belli</i> Bell's sage sparrow					
Known Occurrences	-	1 (50%)	4 (85%)	-	3 (92%)
Habitat	1,510 (67%)	608 (71%)	1,500 (65%)	664 (49%)	1,014 (51%)
Comments	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate
<i>Ammodramus savannarum</i> Grasshopper sparrow					
Known Occurrences	3 (100%)	4 (88%)	1 (100%)	-	1 (20%)
Habitat	488 (38%)	97 (52%)	371 (62%)	515 (30%)	85 (12%)
Comments	No known major populations. Critical grassland areas in north, central, and southeast Carlsbad are partially conserved. Insufficient conservation of grasslands.	No known major populations. Critical grassland areas in south and east Encinitas are partially conserved.	No known major populations. Critical grassland areas in north and south Escondido are partially conserved.	No known major populations. Critical grassland area adjacent to Camp Pendleton is partially conserved. Insufficient conservation of grasslands.	No known major populations. Critical grassland area in San Marcos is poorly conserved. Insufficient conservation of grasslands.
Finding	Inadequate	Not Applicable	Adequate	Adequate	Inadequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

Sensitive Species	Carlsbad Subarea Plan	Encinitas Subarea Plan	Escondido Subarea Plan	Oceanside Subarea Plan	San Marcos Subarea Plan
<i>Agelaius tricolor</i> Tricolored blackbird					
Known Occurrences	2 (100%)	1 (100%)	1 (50%)	1 (50%)	-
Habitat	1,033 (56%)	435 (83%)	541 (71%)	1,271 (51%)	202 (25%)
Comments	No known major populations or critical locations. Insufficient conservation of grasslands.	No known major populations or critical locations. Insufficient conservation of grasslands.			
Finding	Inadequate	Not Applicable	Adequate	Adequate	Inadequate
<b>Mammals</b>					
<i>Dipodomys stephensi</i> Stephens' kangaroo rat	This species may receive additional conservation through application of the critical population policy.				
Known Occurrences	-	-	-	-	-
Habitat	-	-	-	-	-
Comments	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.
Finding	Adequate	Adequate	Adequate	Adequate	Adequate
<i>Perognathus longimembris pacificus</i> Pacific little pocket mouse	This species will receive additional protection by the MHCP narrow endemic policy. Additional conservation may occur through application of the critical location policy.				
Known Occurrences	-	-	-	-	-
Habitat	1,085 (54%)	257 (60%)	-	541 (50%)	-
Comments	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.	No known major populations or critical locations.
Finding	Adequate	Adequate	Adequate**	Adequate	Adequate**

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

Sensitive Species	Carlsbad Subarea Plan	Encinitas Subarea Plan	Escondido Subarea Plan	Oceanside Subarea Plan	San Marcos Subarea Plan
<i>Chaetodipus fallax fallax</i> Northwestern San Diego pocket mouse					
Known Occurrences	0 (0%)	1 (100%)	-	-	-
Habitat	2,360 (62%)	1,247 (77%)	6,014 (71%)	1,054 (42%)	2,257 (46%)
Comments	No known major populations or critical locations.				
Finding	Adequate	Adequate	Adequate	Adequate	Adequate
<i>Lepus californicus bennittii</i> San Diego black-tailed jackrabbit					
Known Occurrences	2 (40%)	1 (50%)	1 (100%)	0 (0%)	-
Habitat	1,998 (58%)	705 (68%)	1,739 (78%)	1,179 (38%)	1,099 (41%)
Comments	No known major populations or critical locations.				
Finding	Adequate	Adequate	Adequate	Adequate	Adequate
<i>Felis concolor</i> Mountain lion					
Known Occurrences	-	-	-	-	-
Habitat	3,203 (64%)	1,610 (78%)	6,425 (72%)	2,035 (51%)	2,465 (47%)
Comments	No known major populations or critical locations.				
Finding	Adequate	Adequate	Adequate	Adequate	Adequate

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.3-5, Conservation of Sensitive Species for Subarea Plans (continued)**

Sensitive Species	Carlsbad Subarea Plan	Encinitas Subarea Plan	Escondido Subarea Plan	Oceanside Subarea Plan	San Marcos Subarea Plan
<i>Odocoileus hemionus fuliginata</i> Southern mule deer					
Known Occurrences	-	-	-	-	-
Habitat	3,203 (64%)	1,610 (78%)	6,425 (72%)	2,035 (51%)	2,465 (47%)
Comments	No known major populations or critical locations.				
Finding	Adequate	Adequate	Adequate	Adequate	Adequate

Notes \* Species that do not occur in a subarea are considered adequately conserved if they are an endemic species and will be protected by the MHCP Narrow Endemic Policy. In addition, species that do not occur in a subarea are considered adequately conserved if they are considered a wetland community obligate species and will be protected under the MHCP no net-loss of wetlands policy. Also, some species will receive additional protection under the MHCP Critical Population Policy.

\*\* 100% conservation of wetland and riparian communities is assumed due to the MHCP no net-loss of wetlands policy, both inside and outside the preserve. Only the wetland communities inside the preserve will be managed.

Information in this table based on the Public Review Draft Biological Analysis and Permitting Conditions, Volume II, Ogden 2000.

<sup>(1)</sup> This is a fully protected species, and lethal take of individuals is forbidden. The MHCP Subarea Plans will only allow habitat alteration or disturbance that will not affect breeding individuals.

**Table 4.3-6  
Summary of Mitigation Measures for Significant Biological Resources Impacts<sup>(1)(2)</sup>**

Impact	Mitigation Measures								
	Alternatives				Subarea Plans				
	FPA 1	FPA 2	BCLA 3	No Action/No Project <sup>(3)</sup>	Carlsbad	Encinitas	Escondido	Oceanside	San Marcos
Inadequate (significant) conservation of coastal sage scrub	Preservation of 400-500 acres of contiguous coastal sage scrub in the area referred to as the unincorporated County gnatcatcher core.	NA	NA	Prepare an integrated habitat conservation plan, providing for the conservation of sensitive communities, habitats, and species.	NA	NA	Preservation of 400-500 acres of contiguous coastal sage scrub in the area referred to as the unincorporated County gnatcatcher core.		
Inadequate (significant) conservation of chaparral	NA	NA	NA	Prepare an integrated habitat conservation plan, providing for the conservation of sensitive communities, habitats, and species.	NA	NA	NA	NA	To fully mitigate impacts to chaparral would require the following three measures: (1) The level of conservation in the Southern FPA area designated for 25% conservation will be significantly increased, and any development will be located in the least sensitive area, while significantly minimizing the linear feet of edge and significantly reducing the number and extent of constriction areas within the larger block of chaparral habitat designated for 100% preservation. (2) All resulting impacts to chaparral in the Southern FPA area designated for 25% conservation will be mitigated pursuant to the Subarea Plan "Mitigation Ratios for Impacts to Subarea Plan Species" Table on Page 71. (3) Increase the level of conservation in the Southern FPA area designated for 60% conservation to 75% conservation, and any development will be located in the least

Table 4.3-6, Summary of Mitigation Measures for Significant Biological Resources Impacts (continued)

Impact	Mitigation Measures								
	Alternatives				Subarea Plans				
	FPA 1	FPA 2	BCLA 3	No Action/No Project	Carlsbad	Encinitas	Escondido	Oceanside	San Marcos
									<p>sensitive area while minimizing linear feet of edge and areas of constriction.</p> <p>Increasing the preservation of chaparral in the 25% conservation area is infeasible, because of previous commitments in an existing development agreement.</p> <p>Provision of 50 acres of chaparral conservation through preservation or restoration to achieve a 50% conservation ratio within the Southern FPA; this is feasible and will partially mitigate impacts to chaparral (not to below a level of significance).</p>
Inadequate (significant) conservation of coastal sage scrub/chaparral mix	NA	NA	N/A	Prepare an integrated habitat conservation plan, providing for the conservation of sensitive communities, habitats, and species.	Preservation of 400-500 acres of contiguous coastal sage scrub in the area referred to as the unincorporated County gnatcatcher core.	NA	NA	NA	NA
Inadequate (significant) conservation of grasslands	Provide conservation of an additional 30% of the grasslands in a consolidated preservation program. This mitigation is deemed infeasible, because of the associated impacts to population/housing. Alternatively, USFWS/CDFG can not issue take authorizations for grasslands and associated species.		N/A	Prepare an integrated habitat conservation plan, providing for the conservation of sensitive communities, habitats, and species.	Provide conservation of an additional 30% of the grasslands in a consolidated preservation program. This mitigation is deemed infeasible, because of the associated impacts to population/housing. Alternatively, USFWS/CDFG cannot issue take authorizations for grasslands and associated species.				
Reduce the number of the following species defined as endangered, threatened, or rare (15065 CEQA)									
Summer-holly	The only mitigation is avoidance of impacts, since transplanted or revegetation is speculative at this time.			Prepare an integrated habitat conservation plan, providing for the conservation of sensitive communities, habitats, and species.	The only mitigation is avoidance of impacts, since transplanted or revegetation is speculative at this time.				

Table 4.3-6, Summary of Mitigation Measures for Significant Biological Resources Impacts (continued)

Impact	Alternatives				Mitigation Measures				
	FPA 1	FPA 2	BCLA 3	No Action/No Project	Carlsbad	Encinitas	Subarea Plans		
							Escondido	Oceanside	San Marcos
Blochman's dudleya	The only mitigation is avoidance of impacts, since transplantation or revegetation is speculative at this time.			Prepare an integrated habitat conservation plan, providing for the conservation of sensitive communities, habitats, and species.	The only mitigation is avoidance of impacts, since transplantation or revegetation is speculative at this time.				
Sticky dudleya	The only mitigation is avoidance of impacts, since transplantation or revegetation is speculative at this time.			Prepare an integrated habitat conservation plan, providing for the conservation of sensitive communities, habitats, and species.	The only mitigation is avoidance of impacts, since transplantation or revegetation is speculative at this time.				
Nuttall's scrub oak	The only mitigation is avoidance of impacts, since transplantation or revegetation is speculative at this time.			Prepare an integrated habitat conservation plan, providing for the conservation of sensitive communities, habitats, and species.	The only mitigation is avoidance of impacts, since transplantation or revegetation is speculative at this time.				
Parry's tetraococcus	The only mitigation is avoidance of impacts, since transplantation or revegetation is speculative at this time.			Prepare an integrated habitat conservation plan, providing for the conservation of sensitive communities, habitats, and species.	The only mitigation is avoidance of impacts, since transplantation or revegetation is speculative at this time.				
San Diego horned lizard	The only mitigation is avoidance, since there is no known measure to increase the population numbers of this species.			Prepare an integrated habitat conservation plan, providing for the conservation of sensitive communities, habitats, and species.	The only mitigation is avoidance of impacts, since transplantation or revegetation is speculative at this time.				
Orange-throated whiptail	The only mitigation is avoidance, since there is no known measure to increase the population numbers of this species.			Prepare an integrated habitat conservation plan, providing for the conservation of sensitive communities, habitats, and species.	The only mitigation is avoidance of impacts, since transplantation or revegetation is speculative at this time.				
Northern harrier	Preservation of grassland habitats in areas that support this species is considered infeasible, due to the associated impacts to population and housing.	NA		Prepare an integrated habitat conservation plan, providing for the conservation of sensitive communities, habitats, and species.	Preservation of grassland habitats in areas that support this species is considered infeasible, due to the associated impacts to population and housing.				

Table 4.3-6, Summary of Mitigation Measures for Significant Biological Resources Impacts (continued)

Impact	Alternatives				Mitigation Measures				
	FPA 1	FPA 2	BCLA 3	No Action/No Project	Subarea Plans				
					Carlsbad	Encinitas	Escondido	Oceanside	San Marcos
Burrowing owl	Preservation of grassland habitats in areas that support this species is considered infeasible, due to the associated impacts to population and housing.		NA	Prepare an integrated habitat conservation plan, providing for the conservation of sensitive communities, habitats, and species.	Preservation of grassland habitats in areas that support this species is considered infeasible, due to the associated impacts to population and housing.				
Coastal California gnatcatcher	Preservation of 400-500 acres of contiguous coastal sage scrub in the area designated as the unincorporated County gnatcatcher core.	NA	NA	Prepare an integrated habitat conservation plan, providing for the conservation of sensitive communities, habitats, and species.	NA	NA	NA	NA	NA
Grasshopper sparrow	Preservation of grassland habitats in areas that support this species is considered infeasible, due to the associated impacts to population and housing.		NA	Prepare an integrated habitat conservation plan, providing for the conservation of sensitive communities, habitats, and species.	Preservation of grassland habitats in areas that support this species is considered infeasible, due to the associated impacts to population and housing.				
Tricolored blackbird	Preservation of grassland habitats in areas that support this species is considered infeasible, due to the associated impacts to population and housing.		NA	Prepare an integrated habitat conservation plan, providing for the conservation of sensitive communities, habitats, and species.	Preservation of grassland habitats in areas that support this species is considered infeasible, due to the associated impacts to population and housing.				

(1) Many of the impacts to biological resources have been avoided through project design features. As such, these measures are not identified as mitigation.

(2) NA, Not Applicable, indicates that no significant impacts were identified for that alternative, no mitigation was required.

(3) Significant impacts were identified for all sensitive communities, habitats, and most species. The “Integrated Habitat Conservation Plan” would be applicable to all of these impacts.

## **4.4 REGIONAL TRANSPORTATION/CIRCULATION**

### **4.4.1 Criteria for Determining Significance**

For this section, the following criteria are used to determine significance of an impact:

- If the project would result in the elimination or reconfiguration of transportation/circulation facilities necessary to achieve MHCP Plan or Subarea Plan goals that will result in increased traffic congestion or unacceptable levels of service (Level of Service D or below), these are regarded as significant impacts.

### **4.4.2 MHCP Plan/Take Authorization/Implementing Agreement**

The proposed FPA or any alternative planning area scenario occupies significant portions of the MHCP study area. Due to the size of the area, planned alignments of regional transportation, as well as General Plan circulation element roads, will extend through potential preserve areas under the proposed FPA or any of the alternative scenarios.

Although major roadways are considered to be incompatible with preserve goals, the MHCP Plan acknowledges that existing and planned regionally important facilities such as roads and other key infrastructure are expected to be included in Subarea Plans in a manner which will allow a functional preserve. In particular, regional roads are expected to be incorporated into preserve design, with necessary mitigation measures to ensure that a biologically functional preserve system can be achieved.

However, the locations of proposed regional transportation facilities within or adjacent to core linkage areas could adversely affect preserve resources.

Growth in the region has already been considered during the adoption of SANDAG's Regional Transportation Program and each city's General Plan. Each of these program/plans have undergone environmental review. Implementation of the project or any alternative will result in no difference in impacts.

### **4.4.3 Subarea Plans**

In accordance with the MHCP Plan, individual Subarea Plans have established guidelines regarding compatibility of uses within the preserve that are specific to the subarea. Potential

impacts regarding the ability of the jurisdiction to implement public facilities within each Subarea Plan are analyzed below.

#### **4.4.3.1 City of Carlsbad**

Future street projects are discussed under the Circulation Element of the City of Carlsbad General Plan. Select projects include Cannon Road (Reaches 1, 2, and 4), Carlsbad Boulevard Realignment, Faraday Avenue to Koll Property, and Palomar Airport Road (widening of railroad bridge and Carlsbad Boulevard intersection).

Implementation of the Subarea Plan will not preclude implementation of the circulation projects identified in the above element of the Carlsbad General Plan. In summary, no significant impacts in relation to public services and utilities will result for the City of Carlsbad Subarea Plan.

#### **4.4.3.2 City of Encinitas**

The Encinitas Subarea Plan states that road construction is an acceptable land use within the preserve, as long as the roads meet certain criteria set forth in the Subarea Plan. These include observing wetland/wetland buffer policies, narrow endemic policies, critical location policy, and other sensitive species policies.

As part of the City of Encinitas General Circulation Plan Element, the following projects are planned: South Coast Highway 101/San Elijo Lagoon Mouth Restoration, I-5 Interchange at Manchester Reconstruction, and I-5 at Encinitas Boulevard Interchange Reconstruction. Improvements are also slated for various portions of Manchester Avenue.

Implementation of the Subarea Plan would not preclude implementation of the circulation projects identified in the above Circulation Element of the Encinitas General Plan. In summary, no significant impacts in relation to public services and utilities will result for the City of Encinitas Subarea Plan.

#### **4.4.3.3 City of Escondido**

The Escondido Subarea Plan states that roads in the preserve shall be limited to those identified in the General Plan Circulation Element and necessary maintenance/emergency access roads. Specific Circulation Element Improvements include Citracado Parkway

extensions, Bear Valley Parkway widening, Centre City Parkway widening, Valley Center Road widening, and Washington Avenue/El Norte Parkway widening.

The Subarea Plan also gives guidelines for any road construction projects within the preserve. Local streets shall not cross the preserve. Development of roads in canyon bottoms is prohibited, and roads shall be designed to cross the shortest length possible of the preserve. If roads cross the preserve, they shall provide for fully functional wildlife movement capability. Bridges are the preferred method of providing movement, although large culverts in selected locations may be acceptable (at least 30 feet wide by 15 feet high with a maximum 2:1 length-to-width ratio). Fencing, grading, and plant cover shall be provided where needed to protect and shield animals and guide them from roads to appropriate crossings.

Implementation of the Subarea Plan will not preclude implementation of the circulation projects identified in the above element of the Escondido General Plan. In summary, no significant impacts in relation to public services and utilities will result for the City of Escondido Subarea Plan.

#### **4.4.3.4 City of Oceanside**

Implementation of the Subarea Plan will not preclude implementation of the circulation projects identified in the Circulation Element of the Oceanside General Plan. In summary, no significant impacts in relation to public services and utilities will result for the City of Oceanside Subarea Plan.

#### **4.4.3.5 City of San Marcos**

The City of San Marcos 2020 General Plan anticipates the long-range needs of the City. Pertaining to transportation and circulation, major Capital Improvement Projects include Questhaven Road, Discovery Street, Twin Oaks Valley Road, Rancho Santa Fe Road, Melrose Avenue, and Los Posas Road. All General Plan Circulation Element Roads are included here by reference as allowed uses in the Focused Planning Area.

Roads in the FPA are limited to those identified in the Circulation Element Map, collector streets essential for area circulation, and existing maintenance roads. Specific additional measures are outlined in the City of San Marcos Subarea Plan in regard to San Marcos Creek crossing, intersection of roads with preserve, and access points for maintenance roads.

Implementation of the Subarea Plan will not preclude implementation of the circulation projects identified in the above element of the San Marcos General Plan. In summary, no significant impacts in relation to public services and utilities will result for the City of San Marcos Subarea Plan.

**4.4.3.6 No Action/No Project Alternative**

No feature of the No Action/No Project Alternative will limit future construction of regional transportation facilities, and no significant impacts are anticipated.

**4.4.4 Level of Significance**

**MHCP Plan**

No significant impacts to the regional transportation facilities will occur as a result of implementation; thus, no mitigation is necessary.

***FPA Alternative 1***

No significant impacts to the regional transportation facilities will occur as a result of implementation; thus, no mitigation is necessary.

***FPA Alternative 2***

No significant impacts to the regional transportation facilities will occur as a result of implementation; thus, no mitigation is necessary.

***BCLA Alternative 3***

No significant impacts to the regional transportation facilities will occur as a result of implementation; thus, no mitigation is necessary.

***No Action/No Project Alternative***

No significant impacts to the regional transportation facilities will occur as a result of implementation; thus, no mitigation is necessary.

#### **4.4.5 Mitigation Measures**

No significant impacts were identified; therefore, no mitigation measures are required.

## **4.5 PUBLIC SERVICES AND UTILITIES**

This section evaluates the potential conflicts between the proposed MHCP Plan and alternative scenarios and public facilities, services, and utilities throughout the MHCP study area. The program level of analysis concentrates on potential impacts to public facilities, services, and utilities throughout the MHCP Plan study area, while the project level of analysis evaluates potential impacts to existing and proposed facilities within the cities of Carlsbad, Encinitas, Escondido, Oceanside, and San Marcos.

### **4.5.1 Criteria for Determining Significance**

The proposed project will have a significant effect on public facilities and the ability to provide public services if implementation of the MHCP Plan, or the individual Subarea Plans, will result in the need for deletion or relocation of public facilities or services, and such deletion or relocation will have adverse effects on the ability of local jurisdictions to provide public services and facilities in an adequate manner to residents of the region.

### **4.5.2 MHCP Plan/Take Authorization/Implementing Agreement**

Public facilities are planned within or to traverse both the proposed FPA and the planning areas associated with the three FPA alternative scenarios. The No Action/No Project Alternative is discussed in Section 4.5.3.6.

Due to the size of the FPA, it is anticipated that regional public facilities such as utilities (water, sewer, power, or gas) will traverse potential areas of the preserve. In addition, it is assumed that facilities for public services such as police stations, fire stations, schools, or parks may be currently designated within or adjacent to areas proposed as preserve.

The MHCP Plan includes guidelines regarding the compatibility of various uses within and adjacent to the FPA. Land uses are generally categorized according to the location of the use within and adjacent to the FPA. The MHCP Plan categorizes uses, which include public facilities, services, and utilities, as either compatible, conditionally compatible, or incompatible with the FPA core, linkage, and buffer areas.

A key objective of the MHCP Plan is to provide public recreation opportunities within the preserve. Riding and hiking trails will be allowed within appropriate portions of the preserve to provide passive recreational opportunities for the public. Other passive activities such as

photography, bird watching, scientific research, and public education programs should be encouraged. Sailing, swimming, and fishing can also be compatible with biological objectives. Active recreational uses, such as camping, athletic fields, and other organized sports activities, are generally incompatible with preserve linkages, but may be compatible at the edges of preserves, provided light, noise, and trash impacts are controlled. Off-highway vehicle use is incompatible within the preserve.

Utilities, such as gas, water, electric, phone, and sewer facilities, planned within the study area can be sited within preserve areas. Utilities can be located in preserve areas with incorporation into individual Subarea Plans. As a result, significant impacts – such as the deletion of planned utilities – are not anticipated with implementation of the preserve.

### **4.5.3 Subarea Plans**

In accordance with the MHCP Plan, individual Subarea Plans have established guidelines regarding compatibility of uses within the preserve that are specific to the subarea. Potential impacts regarding the ability of the jurisdiction to implement public facilities within each Subarea Plan are analyzed below.

#### **4.5.3.1 City of Carlsbad**

Future public utility and service projects for the City of Carlsbad are discussed under elements of the General Plan, including the Master Drainage and Storm Water Quality Management Plan, Sewer Master Plan, Water and Reclaimed Water Master Plan, and the Parks and Recreation Element. Future drainage projects include the Agua Hedionda Creek Channel Enhancement, Cannon Road Drainage Channel and Basin, and South Carlsbad Storm Drain. Sewer projects include sewers, inceptor sewers, trunk lines, and lift stations. Water projects include pipeline replacements, pump stations, reclaimed water projects, and reservoir site maintenance. Park facilities will include the Carlsbad Municipal Golf Course, Veterans Memorial Park, Leo Carillo Park, Lake Calavera recreational uses, and Zone 19 Park.

Implementation of the Subarea Plan will not preclude implementation of the public facilities identified in the above elements of the Carlsbad General Plan. In summary, no significant impacts in relation to public services and utilities will result for the City of Carlsbad Subarea Plan.

#### **4.5.3.2 City of Encinitas**

The Encinitas Subarea Plan provides a review of general land uses and activities that are compatible within the preserve and a listing of existing and proposed activities for specific properties. Impacts to the following land uses and activities have been avoided through measures incorporated into the Subarea Plan (e.g., siting and mitigation for biological disturbance):

- Passive recreation (e.g., hiking, bird watching);
- Limited active recreation (e.g., equestrian use, mountain biking);
- Interpretive and/or nature centers;
- Utility lines in compliance with guidelines presented in the Subarea Plan; and
- Limited water facilities and other essential public facilities in compliance with guidelines presented in the Subarea Plan.

A number of anticipated public projects that could potentially impact the focused planning area have been identified by the City of Encinitas. At the City level, implementation of the Recreation Trails Master Plan and the Water Master Plans is planned. Specific drainage projects include the Leucadia Nuisance Water Collection System, the Manchester Avenue/Lux Canyon Culvert, and the Cottonwood Creek Restoration. Wastewater projects include the Moonlight Beach Force Main Rehabilitation and the Olivenhain Trunk Sewer Monitoring, Rehabilitation, and Easement Access. Recreation related projects include development of the Encinitas Sanitary District site, Sun Vista Park Development, Moonlight Beach Park Master Plan Improvement, and Indian Head Canyon Park Development. Expansion of Hawkview Park is also planned.

Implementation of the Subarea Plan will not preclude implementation of the public projects and facilities identified in the above elements of the Encinitas General Plan. Measures have been incorporated into the Subarea Plan (siting and provisions for mitigation of project-specific impacts) that will allow these projects to be constructed. Therefore, there are no conflicts with the provision of public services or utilities. In summary, no significant impacts in relation to public services and utilities will result for the City of Encinitas Subarea Plan.

#### **4.5.3.3 City of Escondido**

The Escondido Subarea Plan provides a review of general land uses and activities that will be compatible within the preserve and a listing of existing and proposed activities for specific

properties. The following land uses and activities, related to public services and utilities, are considered conditionally compatible with the biological objectives of the Escondido Subarea Plan and thus will be allowed within the City's preserve, as long as they are in compliance with policies set forth in the Subarea Plan:

- Passive recreation and limited active recreational uses;
- Utility lines;
- Limited water facilities and other essential public facilities; and
- Interpretive centers.

Expansion of existing permitted uses within the preserve must comply with applicable land use regulations and should provide measures to minimize impacts on the preserve, including lighting, noise, dust, or controlled access.

A number of anticipated major Capital Improvement Projects have been identified by Escondido. These projects, which may occur over the next 20-year planning horizon, include public facilities and utilities. Primary public facility improvements include the Daley Ranch Master Plan improvements (conversion of ranch house and outbuildings for public use, caretaker's quarters, and trail and camping areas); Ryan Park Master Plan Improvements (soccer fields, high school facility, parking, and amenities); Kit Carson Master Plan Improvements (expansion of arena soccer/skate park facility and the potential expansion of the animal shelter); and the Water Master Plan Improvements. Primary utility improvements include Hale Avenue Resource Recovery Facility (HARRF) Water Reclamation Distribution System Conveyance System and Northern and Southern Reservoirs, and the HARRF Water Reclamation Plant Improvements. Impacts resulting from these projects will be avoided in accordance with the guidelines in the Escondido Subarea Plan.

Implementation of the Subarea Plan will not preclude implementation of the public facilities identified in the Escondido General Plan. In summary, no significant impacts will result for the City of Escondido Subarea Plan.

#### **4.5.3.4 City of Oceanside**

The City of Oceanside General Plan is the long-range, public policy guiding the private and public development of lands within Oceanside. The Regional Trails Element calls for future river improvements to accommodate equestrian and pedestrian trails, but acknowledges that crossing of environmentally sensitive areas may be constrained. The document states that

trail planning in the river area will be required to meet guidelines established by the MHCP. The Community Facilities Element of the General Plan states that all social, economic, and environmental factors must be reviewed before major extensions of facilities or services are made by Oceanside. The Master Plan for Parks and Recreation is an implementation tool of the City General Plan and provides comprehensive, long-range plans for development of parks in the city. Specific reference is made to the MHCP when discussing potential parks in the Whelan Lake Area, San Luis Rey River Project, Tule Canyon Park, and the Pilgrim Creek Open Space and River Park. Implementation guidelines contained in the document refer to implementing any guidelines established by the MHCP.

Implementation of the Subarea Plan will not preclude implementation of the public facilities identified in the above elements of the Oceanside General Plan. In summary, no significant impacts in relation to public services and utilities will result for the City of Oceanside Subarea Plan.

#### **4.5.3.5 City of San Marcos**

The San Marcos Subarea Plan identifies the following public facilities and utilities:

- Passive recreation within parks;
- Trails;
- Utility lines; and
- Limited water facilities (e.g., reservoirs, tanks, transmission and pipelines, valves, etc.).

Implementation of the Subarea Plan will not preclude implementation of the public facilities identified in the San Marcos General Plan. In summary, no significant impacts in relation to public services and utilities will result for the City of San Marcos Subarea Plan.

#### **4.5.3.6 No Action/No Project Alternative**

Under the No Action/No Project Alternative, the potential preserve will not be implemented. All general plans and community plans discussed at the program level of this section will be implemented as adopted. With implementation of adopted plans, the changes or elimination of planned facilities anticipated with implementation of the MHCP will not occur. Potential

impacts to existing or planned facilities resulting from conversion of facility sites to open space will be avoided.

#### **4.5.4 Level of Significance**

##### **MHCP/Take Authorization/Implementing Agreement**

With implementation of the plan, there are no significant impacts associated with public facilities; thus, no mitigation is required.

##### **City of Carlsbad**

With implementation of the plan, there are no significant impacts associated with public facilities; thus, no mitigation is required.

##### **City of Encinitas**

With implementation of the plan, there are no significant impacts associated with public facilities; thus, no mitigation is required.

##### **City of Escondido**

With implementation of the plan, there are no significant impacts associated with public facilities; thus, no mitigation is required.

##### **City of Oceanside**

With implementation of the plan, there are no significant impacts associated with public facilities; thus, no mitigation is required.

##### **City of San Marcos**

With implementation of the plan, there are no significant impacts associated with public facilities; thus, no mitigation is required.

**No Action/No Project**

With implementation of the plan, there are no significant impacts associated with public facilities; thus, no mitigation is required.

**4.5.5 Mitigation Measures**

No significant impacts were identified; therefore, no mitigation measures are required.

## **4.6 POPULATION, HOUSING, AND EMPLOYMENT**

California state law requires each city and county to adopt a general plan “for the physical development of the county or city, and any land outside its boundaries which . . . bears relation to its planning (Section 65300)”. The role of a community’s general plan is to act as a “constitution”; a basis for rational decisions regarding a city’s or county’s long-term physical development. The general plan expresses the community’s development goals and embodies public policy relative to the distribution of future land uses, both public and private.

Section 65581 of the Government Code requires cities and counties to identify adequate sites for housing and make adequate provisions for the existing and projected needs of all economic segments of the community.

Housing element law (Section 65583) requires quantification of each jurisdiction’s existing and projected housing needs for all income levels. The housing element’s requirements to accommodate projected housing needs are a critical factor influencing the housing supply and availability statewide and within regional housing markets. The local regulation of the housing supply through planning and zoning powers affects the State’s ability to achieve the State housing goal of “decent housing and a suitable living environment for every California family”, and is an important influence on housing costs.

Shares of the regional housing need are determined for constituent cities and counties of the affected region(s) of the housing element update cycle. This involves an iterative process conducted among state, regional, and local levels of government which is driven by projected population growth.

Thus, the following will analyze the impacts resulting from implementation of the alternatives and the requirement for each City to provide adequate housing for its proportionate share of the population. Additionally, the impacts related to employment will also be addressed.

### **4.6.1 Criteria for Determining Significance**

The following criteria were used to determine significance of impacts from the adoption or implementation of the proposed conservation plan or alternatives on population, housing and employment in the MHCP study area and in jurisdictions with Subarea Plans.

## ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES

Socioeconomic impacts will be due primarily to the conservation of vacant, developable lands which are designated for future urban use, including residential and employment use. Conservation of these lands will likely displace uses which might otherwise occur and relocate them to other parts of the study area, since it is not anticipated that the conservation program will reduce future growth in population, housing, or employment.

Criteria for significance are defined in terms of the percentage of displacement and relocation of future land use relative to existing or future development in the study area. Criteria selected for individual Subarea Plans are consistent with those used in the environmental analysis of a similar habitat conservation program in south San Diego County (MSCP). A certain level (up to 20%) of residential shift generally can be accommodated by slightly increasing density in future residential and redevelopment projects. Residential density increases are acceptable to a certain level (10%); however, any increases above that level will cause a significant change in neighborhood character. The loss of commercial land to conservation or residential land uses can be absorbed up to the 20% level, since cities routinely “overzone” the amount of commercial land uses.

The proposed significance threshold of a 10% increase in residential density for a Subarea Plan reflects (1) the role of new development in providing housing growth and (2) planning policies adopted by the local governments on the character of residential neighborhoods. SANDAG's forecast of housing growth for the MHCP study area indicates that land developed for residential use would need to increase by roughly half between 1995 and 2020 (from 33,078 to 51,401 acres; see Table 4.6-3 later in this section). If there is any increase in citywide average residential density between these years, it must come almost entirely from greater density in the newly developed areas, since there are few opportunities for and little community acceptance of increasing densities in existing communities.

Increasing the citywide average density by 10%, while maintaining the same density in the existing residential areas, requires that the density of new development (whose aggregate area is assumed to be 50% of the existing) must increase by 30%. In most jurisdictions, such an increase would require "up-planning" of much of the vacant residential areas. A typical density range for a single-family residential area is 3 to 5 units per acre, with a planning guideline of around 4 units per acre. Increasing the density by 30% would require use of the next-higher category of land use, commonly associated with attached housing. This implies a substantial change to the city's general plan, intended neighborhood character, and the planning and delivery of public services.

For the MHCP study area as a whole, the proposed thresholds are lower than those for the individual Subarea Plans. This reflects the view that if substantial negative effects are observed in some, though perhaps not all, of the cities, then impacts of the subregional plan should also be considered significant. For example, a 5% increase in the average residential density of the MHCP study area is proposed as a threshold of significance, since major changes to community character are likely to occur before the 10% threshold is reached. The 5% threshold may be exceeded when residential density in two or three cities increases by 10%, combined with moderate increases in the others. In such a case, a substantial change in community character would occur even when not all of the cities experience the higher (10%) threshold change in residential density.

The potential for growth inducement and cumulative impacts (e.g., potential to increase development densities either in or outside the preserve) are also addressed in Sections 5 and 6.

#### **4.6.1.1 MHCP Study Area**

- A shift of greater than 10% of the forecast increase in residential units between 1995 and 2020 in the MHCP study area from within the preserve scenario boundary to locations outside is a significant impact, since such a shift will result in a substantial change in the location and pattern of future growth.
- An increase in average residential density in the MHCP study area of greater than 5% above the average density which is forecast to prevail in 2020 without the project is a significant impact.
- A shift of greater than 10% of future employment in the MHCP study area from within the preserve scenario boundary to locations outside is a significant impact.

#### **4.6.1.2 Subarea Plan**

- A shift of greater than 20% of the forecast increase in residential units between 1995 and 2020 in a Subarea Plan study area from within the preserve scenario boundary to locations outside is a significant impact.

- An increase in average residential density in the Subarea Plan study area of greater than 10% above the average density which is forecast to prevail in 2020 with the project is a significant impact.
- A shift of greater than 20% of future employment in the Subarea Plan study area from within the preserve scenario boundary to locations outside is a significant impact.

Impacts of conserving vacant, developable lands designated for residential and employment uses are summarized in Tables 4.6-1 and 4.6-2 and discussed in detail below.

#### **4.6.2 MHCP Plan/Take Authorization/Implementing Agreement**

Because implementation of the MHCP will cumulatively have different magnitudes of impacts depending upon which FPA Alternative is selected, this section addresses impacts of the MHCP for each alternative.

##### **4.6.2.1 FPA Alternative 1**

Planned land use categories of habitat lands proposed to be conserved under FPA Alternative 1 are shown in Table 4.6-1, under the column heading of “Total Cities”. A total of 18,460 acres of habitat lands will be conserved, of which 2,155 acres (= 988 + 1,083 + 84) are designated for future residential development and 344 acres (= 105 + 239) are designated for employment land uses. (It should be noted that total acres conserved differ slightly from the total shown in Section 4.3, Biological Resources, due to introduction of new data type, planned land use, in the GIS analysis.)

#### **Population and Housing**

Residential densities assigned to lands proposed for conservation differ by city and category. The “Spaced Rural Residential” category has densities less than 1 unit per acre. The “Single-Family Residential” category generally has densities from 1 unit per acre to 6 units per acre, while the “Multifamily Residential” category generally has densities in excess of 10 units per acre. Among lands proposed for conservation, 4,947 units which could be constructed may be displaced by this alternative (Table 4.6-1). However, they represent 6% of 80,632 units forecast to be added to the study area (see previous Table 3.6-2) and do not substantially affect the pattern of future development.

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.6-1  
Impact of Conservation on Planned Land Use, Housing, and Employment Buildings by City:  
Proposed Project (FPA) and Unincorporated Gnatcatcher Core**

	Carlsbad	Encinitas	Escondido	Oceanside	San Marcos	Solana Beach	Vista	Total Cities	Core CGN Habitat	Total
<b>Habitat Acres Conserved</b>										
Not Constrained										
Spaced Rural Residential	140	89	385	0	362	0	12	988	170	1,158
Single-Family Residential	506	115	18	193	248	0	3	1,083	1	1,083
Multifamily Residential	30	0	0	38	17	0	0	84	0	84
Commercial, Office	56	4	0	35	10	0	0	105	0	105
Industrial	137	2	10	49	16	0	25	239	1	240
Education, Park	4	7	0	27	4	0	3	45	0	45
OS and Other Public <sup>(1)</sup>	1,905	1,563	1,828	1,128	231	37	423	7,114	6	7,120
Constrained	1,543	359	4,264	1,018	1,542	0	76	8,802	190	8,992
<b>Total Conserved</b>	<b>4,320</b>	<b>2,139</b>	<b>6,505</b>	<b>2,489</b>	<b>2,429</b>	<b>37</b>	<b>541</b>	<b>18,460</b>	<b>367</b>	<b>18,827</b>
<b>Dwelling Units Not Constructed<sup>(2)</sup></b>										
Spaced Rural Residential	140	46	112	0	201	0	7	507	76	583
Single-Family Residential	1,838	120	61	644	655	0	4	3,324	1	3,324
Multifamily Residential	335	0	0	518	264	0	0	1,116	0	1,116
<b>Total Units</b>	<b>2,313</b>	<b>167</b>	<b>173</b>	<b>1,162</b>	<b>1,120</b>	<b>0</b>	<b>11</b>	<b>4,947</b>	<b>77</b>	<b>5,024</b>
<b>Employment Bldgs. Not Constructed (x1000 SF)</b>										
Commercial, Office <sup>(3)</sup>	410	26	0	376	104	0	1	917	0	917
Industrial <sup>(4)</sup>	1,236	18	42	437	112	0	268	2,113	5	2,118
<b>Total (x 1000 SF)</b>	<b>1,646</b>	<b>43</b>	<b>42</b>	<b>814</b>	<b>216</b>	<b>0</b>	<b>269</b>	<b>3,030</b>	<b>5</b>	<b>3,034</b>

Notes: (1) Includes public and private lands which are in permanent open space use, such as mitigation banks, open space parks, lagoons, and other areas.  
 (2) Housing units which might be developed on habitat lands planned for conservation; numbers reflect averages of high and low densities for various categories of planned residential use.  
 (3) Assumed average floor area ratio (FAR) of 0.25 for commercial and office use and 0.1 for commercial recreation.  
 (4) Assumed average floor area ratio (FAR) of 0.25 for light industrial use and 0.1 for transportation, communication, and utilities.  
 This table summarizes the impact of habitat conservation on the supply of developable land. Land is classified as constrained if there are physical or planning constraints on future development, such as the presence of steep slopes. Dwelling units and employment buildings "not constructed" indicate uses which might be developed in the absence of biological resources.

Source: SANDAG 1999 MHCP GIS Database; Onaka Planning & Economics.

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.6-2  
Impact of Conservation on Planned Land Use, Housing, and Employment Buildings by City:  
BCLA Alternative and Unincorporated Gnatcatcher Core**

	Carlsbad	Encinitas	Escondido	Oceanside	San Marcos	Solana Beach	Vista	Total Cities	Core CGN Habitat	Total
<b>Habitat Acres Conserved</b>										
Not Constrained										
Spaced Rural Residential	214	181	719	0	661	0	31	1,806	170	1,976
Single-Family Residential	973	158	17	417	1,059	0	20	2,645	1	2,645
Multifamily Residential	71	0	0	40	45	0	0	156	0	156
Commercial, Office	191	5	0	65	29	0	2	293	0	293
Industrial	441	4	10	136	60	0	54	704	1	705
Education, Park	3	10	6	31	33	0	6	89	0	89
OS and Other Public <sup>(1)</sup>	2,281	1,698	2,089	1,308	348	58	485	8,267	6	8,273
Constrained	1,733	438	4,948	1,264	2,012	6	82	10,482	190	10,672
<b>Total Conserved</b>	<b>5,906</b>	<b>2,494</b>	<b>7,790</b>	<b>3,262</b>	<b>4,246</b>	<b>64</b>	<b>681</b>	<b>24,442</b>	<b>367</b>	<b>24,809</b>
<b>Dwelling Units Not Constructed<sup>(2)</sup></b>										
Spaced Rural Residential	214	90	197	0	370	0	15	886	76	962
Single-Family Residential	3,593	170	68	1,700	3,191	0	95	8,817	1	8,817
Multifamily Residential	909	0	0	558	1,028	0	0	2,495	0	2,495
<b>Total Units</b>	<b>4,716</b>	<b>260</b>	<b>265</b>	<b>2,258</b>	<b>4,589</b>	<b>0</b>	<b>110</b>	<b>12,197</b>	<b>77</b>	<b>12,274</b>
<b>Employment Bldgs. Not Constructed (x1000 SF)</b>										
Commercial, Office <sup>(3)</sup>	1,124	37	0	703	317	5	23	2,209	0	2,209
Industrial <sup>(4)</sup>	4,289	36	43	1,273	400	0	586	6,627	5	6,631
<b>Total (x 1000 SF)</b>	<b>5,413</b>	<b>73</b>	<b>43</b>	<b>1,976</b>	<b>717</b>	<b>5</b>	<b>609</b>	<b>8,836</b>	<b>5</b>	<b>8,841</b>

Notes: (1) Includes public and private lands which are in permanent open space use, such as mitigation banks, open space parks, lagoons, and other areas.  
 (2) Housing units which might be developed on habitat lands planned for conservation; numbers reflect averages of high and low densities for various categories of planned residential use.  
 (3) Assumed average floor area ratio (FAR) of 0.25 for commercial and office use and 0.1 for commercial recreation.  
 (4) Assumed average floor area ratio (FAR) of 0.25 for light industrial use and 0.1 for transportation, communication, and utilities.  
 This table summarizes the impact of habitat conservation on the supply of developable land. Land is classified as constrained if there are physical or planning constraints on future development, such as the presence of steep slopes. Dwelling units and employment buildings "not constructed" indicate uses which might be developed in the absence of biological resources.

Source: SANDAG 1999 MHCP GIS Database; Onaka Planning & Economics.

It is assumed for this analysis that conservation of 2,155 acres of vacant land designated for future residential use will reduce total developed residential land in 2020 by an equal amount while the same forecast number of housing units would be built in the study area. This is a worst-case analysis, which assumes that no additional, vacant developable lands, designated for residential use, will be available in 2020, and that vacant lands designated for other uses, such as employment uses, will not be rezoned for residential use. With these assumptions, conservation of 2,155 acres could reduce new residential development between 1995 and 2020 from 18,162 acres forecast by SANDAG to 16,007 acres (Table 4.6-3). Developed residential land in the MHCP cities in 2020 will total 49,085 acres, with an average density of 5.8 units per acre. While this is 4.4% greater than 5.5 units per acre under the SANDAG forecast, it remains 6% less than the average density in 1995 (6.1 units per acre). As a result, this alternative will not have any significant impact on future population or housing in the MHCP study area.

### **Employment**

Impacts of conserving vacant, developable lands designated for future employment uses vary, depending on how much developable land is forecast to remain in 2020. Without the proposed program, lands designated for employment uses in the MHCP study area, which remain vacant in 2020, total 475 acres. In Carlsbad, Encinitas, and Vista, conservation (or reduction in developable land) exceeds SANDAG's forecast of remaining vacant land in 2020, while in Escondido, Oceanside, and San Marcos, conservation will be less than the forecast remainder (Table 4.6-4). Under Alternative 1, the MHCP study area will have new employment development of 5,121 acres between 1995 and 2020, which is 1%, or 53 acres, less than 5,174 acres of new development under the SANDAG forecast. This is not a significant impact on future commercial or industrial development in the study area.

#### **4.6.2.2 FPA Alternative 2**

### **Population and Housing**

Conserving 367 acres in the core habitat area of the California gnatcatcher will reduce developable land designated for residential use by 170 acres (Table 4.6-1). However, since this area contains 348 acres of developable land designated for residential use (Table 4.6-3), this level of conservation will still leave sufficient land for construction of 160 single-family

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.6-3  
Residential Land Use by Jurisdiction and Alternative**

	SANDAG Forecast(1)			Forecast with FPA(2)			Forecast with BCLA(3)		
	1995	2020	Change 1995-2020	2020	Change 1995-2020	Reduc. In Dev. Land	2020	Change 1995-2020	Reduc. In Dev. Land
<b>Residential Land Use</b>									
Carlsbad	4,431	9,942	5,511	9,267	4,836	675	8,685	4,254	1,257
Encinitas	4,637	6,354	1,717	6,150	1,513	204	6,015	1,378	339
Escondido	6,946	9,853	2,907	9,450	2,504	403	9,116	2,170	737
Oceanside	7,959	10,532	2,573	10,301	2,342	231	10,074	2,115	458
San Marcos	2,961	7,078	4,117	6,451	3,490	627	5,313	2,352	1,765
Solana Beach	1,177	1,220	43	1,220	43	0	1,220	43	0
Vista	4,967	6,261	1,294	6,247	1,280	14	6,210	1,243	51
<b>Total Cities</b>	<b>33,078</b>	<b>51,240</b>	<b>18,162</b>	<b>49,085</b>	<b>16,007</b>	<b>2,155</b>	<b>46,633</b>	<b>13,555</b>	<b>4,607</b>
Unincorporated Core	0	161	161	161	161	0(5)	161	161	0(5)
<b>Total MHCP</b>	<b>33,078</b>	<b>51,401</b>	<b>18,323</b>	<b>49,246</b>	<b>16,168</b>	<b>2,155</b>	<b>46,794</b>	<b>13,716</b>	<b>4,607</b>
<b>Density (Units/Ac.) and % Chg in Density</b>			<b>Chg. from 1995</b>		<b>Chg. from 1995</b>	<b>Chg. from 2020(4)</b>		<b>Chg. from 1995</b>	<b>Chg. From 2020(4)</b>
Carlsbad	6.5	5.5	-15.1%	5.9	-8.9%	7.3%	6.3	-2.8%	14.5%
Encinitas	4.9	4.3	-12.6%	4.4	-9.7%	3.3%	4.5	-7.7%	5.6%
Escondido	6.3	5.3	-16.6%	5.5	-13.0%	4.3%	5.7	-9.8%	8.1%
Oceanside	7.0	7.1	0.9%	7.2	3.1%	2.2%	7.4	5.5%	4.5%
San Marcos	5.7	4.5	-20.7%	4.9	-13.0%	9.7%	6.0	5.7%	33.2%
Solana Beach	5.5	6.0	9.9%	6.0	9.9%	0.0%	6.0	9.9%	0.0%
Vista	5.8	5.8	-0.4%	5.8	-0.2%	0.2%	5.8	0.4%	0.8%
<b>Total Cities</b>	<b>6.1</b>	<b>5.5</b>	<b>-9.8%</b>	<b>5.8</b>	<b>-5.9%</b>	<b>4.4%</b>	<b>6.1</b>	<b>-0.9%</b>	<b>9.9%</b>
Unincorporated Core	0.0	1.0	.....	1.0	.....	0.0%	1.0	.....	0.0%
<b>Total MHCP</b>	<b>6.1</b>	<b>5.5</b>	<b>-10.1%</b>	<b>5.8</b>	<b>-6.1%</b>	<b>4.4%</b>	<b>6.1</b>	<b>-1.2%</b>	<b>9.8%</b>

- Notes: 1 Forecast land use from Table 3.6-4; forecast total housing units from Table 3.6-2.  
 2 Potential reduction in residentially zoned land from Table 4.6-1.  
 3 Potential reduction in residentially zoned land from Table 4.6-2.  
 4 Percent change in comparison to residential density in 2020 under SANDAG forecast without MHCP.  
 5 Although 170 acres of residentially zoned land would be conserved in the unincorporated core, there is sufficient other land to support the forecast development of 161 acres.

This table summarizes the impact of conserving habitat lands which are designated for residential use on future density. It is assumed here that while conservation reduces the amount of residentially zoned land, the forecast number of housing units will remain the same, resulting in a higher density than will otherwise occur. Average density is the ratio of total housing units to acres of developed residential land use.

Source: SANDAG 1995 Land Use Inventory and 2020 Cities/County Forecast; Onaka Planning & Economics.

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.6-4  
Commercial and Industrial Land Use by Jurisdiction and Alternative**

	SANDAG Forecast(1)			Forecast with FPA(2)			Forecast with BCLA(3)		
	1995	2020	Change 1995-2020	2020	Change 1995-2020	Reduc. In Dev. Land	2020	Change 1995-2020	Reduc. In Dev. Land
<b>Commercial and Industrial Land Use</b>									
Carlsbad	2,460	4,093	1,633	4,071	1,611	194	3,633	1,173	632
Encinitas	577	899	322	892	315	7	890	313	9
Escondido	2,293	2,637	344	2,637	344	10	2,637	344	10
Oceanside	2,105	3,125	1,020	3,125	1,020	84	3,112	1,007	200
San Marcos	1,393	2,168	775	2,168	775	25	2,110	717	89
Solana Beach	357	352	-5	352	-5	0	352	-5	0
Vista	1,332	2,417	1,085	2,392	1,060	25	2,361	1,029	56
<b>Total Cities</b>	<b>10,517</b>	<b>15,691</b>	<b>5,174</b>	<b>15,638</b>	<b>5,121</b>	<b>344</b>	<b>15,094</b>	<b>4,577</b>	<b>997</b>
Unincorporated Core	32	32	0	32	0	1	32	0	1
<b>Total MHCP</b>	<b>10,549</b>	<b>15,723</b>	<b>5,174</b>	<b>15,670</b>	<b>5,121</b>	<b>345</b>	<b>15,126</b>	<b>4,577</b>	<b>998</b>
<b>Vacant Developable Land and Net Reduction in Land Developed(4)</b>	<b>Vac. Dev. Land (Ac.)</b>	<b>Vac. Dev. Land (Ac.)</b>		<b>Vac. Dev. Land (Ac.)</b>	<b>Net Red. New Dev.</b>	<b>% Red. In New Dev.</b>	<b>Vac. Dev. Land (Ac.)</b>	<b>Net Red. New Dev.</b>	<b>% Red. In New Dev.</b>
Carlsbad	1,411	172	.....	0	-22	-1.3%	0	-460	-28.2%
Encinitas	132	0	.....	0	-7	-2.0%	0	-9	-2.8%
Escondido	361	85	.....	75	0	0.0%	75	0	0.0%
Oceanside	1,141	187	.....	103	0	0.0%	0	-13	-1.3%
San Marcos	704	31	.....	6	0	0.0%	0	-58	-7.5%
Solana Beach	19	0	.....	0	0	0.0%	0	0	9.6%
Vista	917	0	.....	0	-25	-2.3%	0	-56	-5.2%
<b>Total Cities</b>	<b>4,685</b>	<b>475</b>	<b>.....</b>	<b>184</b>	<b>-53</b>	<b>-1.0%</b>	<b>75</b>	<b>-597</b>	<b>-11.5%</b>
Unincorporated Core	0	0	.....	0	0	.....	0	0	.....
<b>Total MHCP</b>	<b>4,685</b>	<b>475</b>	<b>.....</b>	<b>184</b>	<b>-53</b>	<b>-1.0%</b>	<b>75</b>	<b>-597</b>	<b>-11.5%</b>

- Notes: 1 Forecast land use from Table 3.6-4.  
 2 Potential reduction in developable land designated for employment uses from Table 4.6-1.  
 3 Potential reduction in developable land designated for employment uses from Table 4.6-2.  
 4 Vacant, developable land designated for employment uses in the year noted; percent reduction in new development between 1995 and 2020, after accounting for developable lands which are not proposed for conservation.

This table summarizes the impact of conserving habitat lands which are designated for employment use on future commercial and industrial development. It is assumed here that the impact of conserving vacant, developable land for new development is moderated by the availability of other developable lands designated for employment use.

Source: SANDAG 1995 Land Use Inventory and 2020 Cities/County Forecast; Onaka Planning & Economics

units at an average density of 1 unit per acre as shown in the 2020 Cities/County Forecast. No significant impacts to population or housing will occur.

### **Employment**

Other than that identified in FPA 1, there are no additional employment uses in this area, and none are forecast to occur. Thus, FPA 2 will not have a significant effect on employment in this area.

#### **4.6.2.3 BCLA Alternative 3**

Planned land use categories of habitat lands proposed to be conserved under BCLA 3, including the core habitat area of the California gnatcatcher, are shown in Table 4.6-2 under the column heading of “Total”. A total of 24,809 acres of habitat lands will be conserved, of which 4,777 acres (= 1,976 + 2,645 + 156) are designated for future residential development and 998 acres (= 293 + 705) are designated for employment land uses. (As previously noted, the figure for total acres conserved differs slightly from the total shown in Section 4.3, “Biological Resources”, due to introduction of new data type, planned land use, in the GIS analysis.

BCLA 3 essentially captures all remaining undeveloped natural areas within the 175-square-mile study area. The alternative would remove from future development approximately 25% of vacant land currently forecast to be developed for urban use through 2020. (In comparison, FPA Alternative No. 1 would remove about 11% of land forecast for development; see Table 4.6-5.) This will represent a substantial reduction in the supply of developable land, which will likely result in significant economic impacts, including curtailment of forecast population and employment growth; price increasing for land and housing faster than the rate of inflation; and lack of affordable housing. Furthermore, additional costs of habitat acquisition and management associated with a larger preserve system must be funded by a smaller tax base than would be available under the other alternatives. Implementation of this alternative would therefore require substantial outside funding, for example, from federal and state grants. For these reasons, this alternative is considered to be economically impractical and likely infeasible, if it were to rely primarily on local funding sources. This would result in a significant unmitigated impact.

**ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES**

**Table 4.6-5  
Comparison of FPA Impacts on Vacant Land Designated for Future Development**

Presence of Physical Constraints and General Plan Land Use Designation of Lands Proposed to be Conserved	FPA Alternative 1 (1)	FPA Alternative 2 (2)	BCLA Alternative 3 (3)	Difference (3 – 1)	Difference (3 – 2)
<i>Unconstrained Non-OS</i>					
Spaced Rural Residential	988	1,158	1,976	988	818
Single-Family Residential	1,083	1,083	2,645	1,562	1,562
Multifamily Residential	84	84	156	72	72
Commercial, Office	105	105	293	188	188
Industrial, TCU	239	240	705	466	465
Education, Park	45	45	89	44	44
<b><i>Total Impact on Unconstrained, Non-OS Land</i></b>	<b>2,544</b>	<b>2,715</b>	<b>5,864</b>	<b>3,320</b>	<b>3,149</b>
As Percent of Land for Future Development (See Note)	11%	12%	25%	14%	13%
OS and Other Public	7,114	7,120	8,273	1,159	1,153
Constrained	8,802	8,992	10,672	1,870	1,680
<b>Total Impact on Vacant Land</b>	<b>18,460</b>	<b>18,827</b>	<b>24,809</b>	<b>6,349</b>	<b>5,982</b>

Source: Tables 4.2-1, 4.2-4, and 4.2-5.

All figures in acres. “Constrained” lands are those which are not likely to be developed or which are subject to special planning requirements due to presence of steep slopes, floodplains, or other restrictions on development. Acres of “impact” represent vacant lands which are currently designated for future development and which are also planned for conservation under the respective FPAs. For comparison, SANDAG’s 2020 Regionwide Forecast estimates that future urban growth between 1995 and 2020 will take place on 23,336 acres of vacant land designated for future urban use (18,162 acres of residential and 5,174 acres of employment use). FPA Alternative 1 would conserve, or set aside, about 11% of land forecast for future development, while FPA Alternative 3 would set aside about 25%.

OS     Open space (undeveloped).  
TCU    Transportation, communication, utilities.

## **Population and Housing**

Among lands proposed for conservation, 12,274 units could be constructed and may be displaced by this alternative (Table 4.6-2). This represents 15% of housing units forecast to be added to the study area between 1995 and 2020 (see previous Table 3.6-2) and a substantial change in and a significant impact to the location of future development. It is assumed here that conservation of 4,777 acres of vacant land designated for future residential use will reduce total developed residential land in 2020 by an equal amount, while the same forecast number of housing units would be built in the study area. This is a worst-case analysis, which assumes that, except in the core habitat area in the unincorporated County, no additional, vacant developable lands designated for residential use will be available in 2020, and that vacant lands designated for other uses, such as employment uses, will not be rezoned for residential use. Under the 2020 forecast, the core habitat area will be only partially developed, which will permit both conservation and development to occur.

As shown in Table 4.6-3, conservation of 4,777 acres could reduce new residential development between 1995 and 2020 from 18,323 acres forecast by SANDAG to 13,716 acres. Total developed residential land of the MHCP cities and the unincorporated core habitat area in 2020 will be 46,794 acres, with an average residential density of 6.1 units per acre (rounded). The resulting density is nearly 10% greater than 5.5 units per acre under the SANDAG forecast, likely requiring major changes to the general plans and public service plans of local governments, and is a significant impact.

## **Employment**

Analysis of impacts to future development of employment uses is based on a comparison of conserved land designated for employment uses and the forecast acres of land which will remain vacant without the MHCP (Table 4.6-4). Under Alternative 3, only Escondido will have residual vacant land designated for employment use in 2020. The proposed levels of conservation will reduce new commercial and industrial development between 1995 and 2020 by nearly 600 acres, from 15,723 to 15,126 acres. This is a reduction of 11.5% from that forecast by SANDAG and represents a significant impact.

### **4.6.3 Subarea Plans**

The following analysis evaluates the impacts of population, housing, and employment for each City, assuming that the Subarea Plans are adopted consistent with FPA 2 – Preferred

Project. The impacts to each City have been quantified, and the significance of those impacts is measured against the significance thresholds identified in Section 4.6.1.2.

#### **4.6.3.1 City of Carlsbad**

##### **Population and Housing**

Of 4,320 acres of conserved land in the Subarea Plan study area, 675 acres are designated for residential use, with a development potential of 2,313 units (Table 4.6-1). Assuming that new residential development between 1995 and 2020 will be reduced by equivalent acres, total residential land use in 2020 will be 9,267 acres, instead of 9,942 acres forecast by SANDAG (Table 4.6-3). If the forecast housing units are developed over this period, average residential density in 2020 will be 5.9 units per acre, which is 7% higher than 5.5 units per acre under the SANDAG forecast, but nearly 9% lower than the density which prevailed in 1995. Accordingly, the proposed conservation plan will not significantly impact either population growth or the general pattern of housing development in the city.

##### **Employment**

The proposed program will conserve 194 acres of land designated for employment uses, with potential development of 1.6 million square feet (Table 4.6-1). These lands, however, may be partially substituted by 172 acres of developable land designated for employment uses, which are anticipated in the SANDAG forecast to remain undeveloped through 2020. That is, the net loss in employment-use development through 2020 due to the program is 22 acres, or 1.3% of the new development forecast by SANDAG (Table 4.6-4). This is not a significant impact.

#### **4.6.3.2 City of Encinitas**

##### **Population and Housing**

Of 2,139 acres of conserved land in the Subarea Plan study area, 204 acres are designated for residential use, with a development potential of 167 units (Table 4.6-1). Assuming that new residential development between 1995 and 2020 will be reduced by equivalent acres, total residential land use in 2020 will be 6,150 acres, instead of 6,354 acres forecast by SANDAG (Table 4.6-3). If the forecast housing units are developed over this period, average

residential density in 2020 will be 4.4 units per acre, which is 3% higher than 4.3 units per acre under the SANDAG forecast, but nearly 10% lower than the density which prevailed in 1995. Accordingly, the proposed conservation plan will not significantly impact either population growth or the general pattern of housing development in the city.

### **Employment**

The proposed program will conserve 7 acres of land designated for employment uses, with potential development of 43,000 square feet (Table 4.6-1). Since no developable employment-use land will remain vacant in 2020 under the SANDAG forecast, the conserved land represents a loss of employment-use development, representing 2% of the new commercial and industrial development through 2020 forecast by SANDAG (Table 4.6-4). This is not a significant impact.

#### **4.6.3.3 City of Escondido**

### **Population and Housing**

Of 6,505 acres of conserved land in the Subarea Plan study area, 403 acres are designated for residential use, with a potential development of 173 units (Table 4.6-1). Assuming that new residential development between 1995 and 2020 will be reduced by equivalent acres, total residential land use in 2020 will be 9,450 acres, instead of 9,853 acres forecast by SANDAG (Table 4.6-3). If the forecast housing units are developed over this period, average residential density in 2020 will be 5.5 units per acre, which is 4% higher than 5.3 units per acre under the SANDAG forecast, but 13% lower than the density which prevailed in 1995. Thus, the proposed conservation plan will not significantly impact either population growth or the general pattern of housing development in the city.

### **Employment**

The proposed program will conserve 10 acres of land designated for employment uses, with potential development of 42,000 square feet (Table 4.6-1). These lands, however, may be substituted by a part of 85 acres of developable land designated for employment uses, which are anticipated in the SANDAG forecast to remain undeveloped through 2020 (Table 4.6-4). There will be no loss of and no significant impact to employment-use development through 2020 due to the conservation program.

#### **4.6.3.4 City of Oceanside**

##### **Population and Housing**

Of 2,489 acres of conserved land in the Subarea Plan study area, 231 acres are designated for residential use, with a potential development of 1,162 units (Table 4.6-1). Assuming that new residential development between 1995 and 2020 will be reduced by equivalent acres, total residential land use in 2020 will be 10,301 acres, instead of 10,532 acres forecast by SANDAG (Table 4.6-3). If the forecast housing units are developed over this period, average residential density in 2020 will be 7.2 units per acre, which is 2% higher than 7.1 units per acre under the SANDAG forecast, and 3% higher than the density which prevailed in 1995. These increases are small, and the proposed conservation plan will not significantly impact either population growth or the general pattern of housing development in the city.

##### **Employment**

The proposed program will conserve 84 acres of land designated for employment uses, with potential development of 814,000 square feet (Table 4.6-1). These lands, however, may be substituted by a part of 187 acres of developable land designated for employment uses, which are anticipated in the SANDAG forecast to remain undeveloped through 2020 (Table 4.6-4). There will be no loss of and no significant impact to employment-use development through 2020 due to the conservation program.

#### **4.6.3.5 City of San Marcos**

##### **Population and Housing**

Of 2,429 acres of conserved land in the Subarea Plan study area, 627 acres are designated for residential use, with a potential development of 1,120 units (Table 4.6-1). Assuming that new residential development between 1995 and 2020 will be reduced by equivalent acres, total residential land use in 2020 will be 6,451 acres, instead of 7,078 acres forecast by SANDAG (Table 4.6-3). If the forecast housing units are developed over this period, average residential density in 2020 will be 4.9 units per acre, which is 10% higher than 4.5 units per acre under the SANDAG forecast. The proposed conservation plan will result in a significant impact to housing density on a plan-to-plan basis.

## **Employment**

The proposed program will conserve 25 acres of land designated for employment uses, with potential development of 216,000 square feet (Table 4.6-1). These lands, however, may be substituted by a part of 31 acres of developable land designated for employment uses, which are anticipated in the SANDAG forecast to remain undeveloped through 2020 (Table 4.6-4). There will be no loss of and no significant impact to employment-use development through 2020 due to the conservation program.

### **4.6.3.6 No Action/No Project Alternative**

## **Population and Housing**

SANDAG's 2020 Cities/County Forecast describes one scenario of future population growth and residential development in the MHCP study area under the No Action/No Project Alternative. However, the forecast assumes that permitted impacts to habitat areas under the No Action/No Project Alternative will be greater than under the project alternatives, which may not be the case if federal and state regulations to protect endangered species and their habitats impose constraints on land development. The forecast also assumes that local jurisdictions will adopt land use policies which direct and accommodate future growth of population and housing in areas which have adequate transportation and public services. Absent such policies, it is possible that the No Action/No Project Alternative may lead simultaneously to slower growth and greater congestion than under the proposed conservation program.

## **Employment**

Forecast growth in employment, i.e., commercial and industrial land uses, could be accommodated under the No Action/No Project Alternative, if issues related to biological resources and availability of public services are resolved. Historically, growth in employment depends more crucially on general economic conditions than on the supply of developable land. While a conservation program is likely to improve quality of life and influence an individual firm's decision to locate or expand, such an effect will be secondary to those of market conditions which cannot be adequately forecast.

#### **4.6.4 Level of Significance**

##### **MHCP/Take Authorization/Implementing Agreement**

###### *FPA Alternative 1*

No significant impacts were identified for population and housing or employment; thus, no mitigation is required.

###### *FPA Alternative 2*

No significant impacts were identified for population and housing or employment; thus, no mitigation is required.

###### *BCLA Alternative 3*

Significant impacts for both population and housing and employment were identified if BCLA Alternative 3 is selected. These impacts are unmitigable within the framework of the MHCP.

##### **Subarea Plans**

###### *City of Carlsbad*

No significant impacts were identified for population and housing or employment; thus, no mitigation is required.

###### *City of Encinitas*

No significant impacts were identified for population and housing or employment; thus, no mitigation is required.

###### *City of Escondido*

No significant impacts were identified for population and housing or employment; thus, no mitigation is required.

***City of Oceanside***

No significant impacts were identified for population and housing or employment; thus, no mitigation is required.

***City of San Marcos***

Significant impacts relating to housing on a plan to plan basis were identified for the City of San Marcos. These impacts are unmitigable within the framework of the MHCP.

**4.6.5 Mitigation Measures**

**MHCP/Take Authorization/Implementing Agreement**

***FPA Alternative 1***

No significant impacts were identified for population and housing or employment; thus, no mitigation is required.

***FPA Alternative 2***

No significant impacts were identified for population and housing or employment; thus, no mitigation is required.

***BCLA Alternative 3***

No mitigation measures are feasible through the MHCP process. Mitigation measures for impacts to population and housing and employment will necessitate an increase in density within or outside the MHCP planning area to accommodate the expected growth (as defined by SANDAG Series 9). This will entail a regional planning effort to respond to demand, transportation, air quality, and other infrastructure needs (sewer, water, etc.). This planning process is outside the jurisdiction of MHCP planning.

***No Action/No Project Alternative***

No significant impacts were identified for population and housing or employment; thus, no mitigation is required.

**Subarea Plans**

*City of Carlsbad*

No significant impacts were identified for population and housing or employment; thus, no mitigation is required.

*City of Encinitas*

No significant impacts were identified for population and housing or employment; thus, no mitigation is required.

*City of Escondido*

No significant impacts were identified for population and housing or employment; thus, no mitigation is required.

*City of Oceanside*

No significant impacts were identified for population and housing or employment; thus, no mitigation is required.

*City of San Marcos*

No mitigation measures are feasible for this impact. To mitigate the loss of residential uses, the City would need to provide for the lost residential uses through adoption of General Plan Amendments within the City increasing the densities, which would then result in significant land use/infrastructure impacts, or reduce the conservation level below a 10% increase. Reducing the conservation level below a 10% increase would result in greater impacts to biological resources; thus, it does not meet the objectives of the MHCP/Subarea Plan. Mitigation measures for impacts to housing will necessitate a increase in density within or outside the MHCP planning area to accommodate the expected growth. This will entail a planning effort at the City level to respond to demand for transportation, air quality, and other infrastructure needs. This planning process is outside the jurisdiction of MHCP planning.

## **5.0 GROWTH INDUCEMENT**

Section 15126.2(d) of the CEQA Guidelines directs growth inducement analysis in environmental documents as follows:

*The Growth-Inducing Impact of the Proposed Action. Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of a wastewater treatment plant might, for example, allow for more construction in a service area). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also discuss the characteristics of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.*

**SOURCE: 1999 CEQA Guidelines, Section 15126.2(d)**

According to the Guidelines, growth-inducing impacts can occur if a project will induce growth either directly or indirectly in the surrounding environment. A project with direct growth-inducing impacts might be one in which a currently undeveloped area was supplied with urban levels of public services and facilities with significant capacity for growth. Placement of a major employment attractor in an outlying, underdeveloped area may also be considered to be direct growth inducement. No features of the proposed MHCP or alternative scenarios will directly induce growth. Although provisions of a regional preserve system will likely be regarded as an enhancement in the region's quality of life, it is not anticipated that people will be induced to move to San Diego County due to implementation of the MHCP Plan.

A project with indirect growth-inducing impacts might be one that will cause a change in the location, type, or pattern of growth, resulting in the construction of additional housing in an area not currently planned for such housing. A project that will reduce the supply of available land for housing in one area may be considered to have indirect growth-inducing effects, if such a reduction will result in a shift in projected growth to an area not currently

planned for such growth. Each of the alternatives (FPA 1, FPA 2, and BCLA 3), to a differing level, will result in land use implications related to the loss of developable lands. If development can not occur where it is currently proposed to be accommodated at the levels identified in the associated General Plans, this growth must be accommodated elsewhere. This demand for growth may occur in areas with an adopted habitat plan or in areas that are unincorporated. As a result of implementation of any of the alternatives, the demand for housing could be felt in the unincorporated County lands where it is not currently anticipated. Infrastructure is not available to support this growth.

Adoption of the MHCP and associated Subarea Plans is not anticipated to result in growth-inducing impacts associated with timing. Currently, the time to process individual permits is anticipated to be greater than after adoption of the MHCP/Subarea Plans; however, the time to process the permits is factored into development plans. Additionally, the MSCP and future County of San Diego plan would result in most of San Diego County being subject to the same timing constraints for development as associated with the issuance of take authorizations. It should also be noted that all of the areas are subject to General Plans that regulate development intensity. Thus, with or without the adoption of the MHCP, growth is projected to occur generally within a 20-year buildout period.

There is an indirect impact to growth in the event that growth shifts into the unincorporated areas. Each of the alternatives has significant growth-inducing impacts.

## 6.0 CUMULATIVE IMPACTS

### 6.1 REQUIREMENTS FOR THE ANALYSIS OF CUMULATIVE IMPACTS

NEPA defines “cumulative impact” as “the impact on the environment which results from the incremental impact of the action when added to other, past, present, and reasonably foreseeable future actions regardless of what agency (federal or nonfederal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.” Section 15065(c) states that there is a mandatory finding of significance if the project has possible environmental effects which are individually limited but cumulatively considerable. “Cumulatively considerable” means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects as defined in Section 15130.

#### Section 15130

*“(a) An EIR shall discuss cumulative impacts of a project when the project’s incremental effect is cumulatively considerable, as defined in section 15065(c). Where a lead agency is examining a project with an incremental effect that is not “cumulatively considerable”, a lead agency need not consider that effect significant, but shall briefly describe its basis for concluding that the incremental effect is not cumulatively considerable.*

*(1) As defined in Section 15355, a cumulative impact consists of an impact which is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. An EIR should not discuss impacts which do not result in part from the project evaluated in the EIR.*

*(2) When the combined cumulative impact associated with the project’s incremental effect and the effects of other projects is not significant, the EIR shall briefly indicate why the cumulative impact is not significant and is not discussed in further detail in the EIR. A lead agency shall identify facts and analysis supporting the lead agency’s conclusion that the cumulative impact is less than significant.*

*(3) An EIR may determine that a project’s contribution to a significant cumulative impact will be rendered less than cumulatively*

*considerable and thus is not significant. A project's contribution is less than cumulatively considerable if the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact. The lead agency shall identify facts and analysis supporting its conclusion that the contribution will be rendered less than cumulatively considerable.*

*(b) The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact. The following elements are necessary to an adequate discussion of significant cumulative impacts:*

*(1) Either:*

*(A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or*

*(B) A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or areawide conditions contributing to the cumulative impact. Any such planning document shall be referenced and made available to the public at a location specified by the lead agency."*

Significance of impacts are identified subject to CEQA.

## **6.2 RELATED PLANNING DOCUMENTS CONSIDERED IN THE CUMULATIVE ANALYSIS**

In addition to the MHCP Plan, a variety of other conservation plans and regional planning efforts are currently underway in San Diego County and summarized below. Most notably, two subregional habitat planning efforts are underway in the San Diego region, as well as others in Orange and Riverside counties. The two San Diego County plans are being developed as NCCP Plans. These include the MSCP in southwestern and north central San Diego County, and the County of San Diego Multiple Habitat Conservation and Open Space Program. The City of San Diego and County of San Diego MSCP Plans and Implementing

Agreements have been approved. These subregional plans will create a habitat preserve system that provides coordinated coverage for most of the County. The County of San Diego is also in the process of updating the General Plan for the unincorporated County. SANDAG is also reviewing growth projects and regional planning efforts to accommodate regional growth.

A focused effort has been made to assure the coordination of these programs in all key scientific, public, policy, and finance/acquisition strategy aspects through the MHCP Advisory Committee, the MHCP Working Group, the SANDAG Regional Conservation Coordinating Committee, and the five-county NCCP Funding Committee. Additional effort has also been applied to achieving coordination between the MHCP and other habitat conservation and open space plans, such as the Conservation Plan for the Least Bell's Vireo and Riparian Habitat on the Sweetwater and San Diego Rivers, and Master Plans for the San Dieguito River Valley Park and the Otay Valley Regional Park, as described below.

- **San Diego Multiple Species Conservation Program (MSCP):** In December 1996, the California Department of Fish and Game and the U.S. Fish and Wildlife Service approved a habitat plan that encompasses 582,000 acres and establishes a 172,000-acre preserve system in southwestern San Diego County. This subregional plan covers 85 species of plants and animals and 23 vegetation types. The MSCP area encompasses 11 planning subareas in various stages of plan development. Other jurisdictions within the MSCP Subregion include Imperial Beach, Lemon Grove, and National City. These cities have not initiated the development of Subarea Plans. Approved Subarea Plans to date include the La Mesa Subarea Plan, Poway Subarea Plan, City of San Diego Subarea Plan, and the County of San Diego Subarea Plan.
  
- **County of San Diego Multiple Habitat Conservation and Open Space Plan (MHCOSP):** Encompasses unincorporated areas of the County not included within the MSCP or MHCP study areas; current efforts are concentrated on developing a biological data base.
  
- **SANDAG Regional Conservation Coordination Committee:** A committee sponsored by SANDAG to coordinate mapping and regional conservation efforts; efforts to date have concentrated on establishment of standardized mapping classifications, development of conservation guidelines, public outreach, and exploring financing opportunities.

- **San Dieguito River Valley Regional Open Space Park:** Encompasses a 55-mile stretch of the San Diego River including public lands and lands still to be acquired; a park concept plan has been developed and has undergone environmental review that calls for natural open space and both passive and active recreation within the park boundaries.
- **Otay Valley Regional Park JEPA:** Encompasses the Otay River Valley watershed from Otay Lakes west to the Pacific Ocean; a Joint Exercise of Powers Agreement (JEPA) has been established to coordinate planning efforts for a park, including natural open space and passive and active recreation.
- **Natural Community Conservation Plan (NCCP) Program:** An NCCP has been approved in the Central/Coastal Subregion of Orange County, and an NCCP is underway in the Southern Subregion; the San Diego MSCP and MHCP have been determined to be NCCP equivalents; the County of Riverside is pursuing a multispecies conservation planning effort that may be coordinated with the NCCP Program.
- **San Diego Gas & Electric (SDG&E) Company Subregional Plan:** The NCCP Plan for SDG&E, a linear NCCP extending from southern Orange County south to the Mexican border, was the first plan approved in San Diego County (1995). The project covers 110 plant and animal species and emphasizes avoidance of impacts. The plan establishes mitigation requirements, which may include revegetation or use of up to 240 acres of mitigation credits set aside in several land parcels purchased by SDG&E as mitigation banks. SDG&E's properties and easements play an important role in the NCCP Region in providing habitat connectivity in areas where little natural habitat remains.
- **Joint Water Agencies Subregional Plan:** The JWA Subregional Plan describes how certain water districts in San Diego County will manage their lands to conserve natural habitats and species while continuing to provide their mandated water services. The subregional plan currently serves as an umbrella document for the Subarea Plans of four water districts: Helix Water District, Padre Dam Municipal Water District, Sweetwater Authority, and Santa Fe Irrigation District.
- **City of Carlsbad General Plan:** This plan provides guidance for development of the City and associated Sphere of Influence.

- **City of Encinitas General Plan:** This plan provides guidance for development of the City and associated Sphere of Influence.
- **City of Escondido General Plan:** This plan provides guidance for development of the City and associated Sphere of Influence.
- **City of Oceanside General Plan:** This plan provides guidance for development of the City and associated Sphere of Influence.
- **City of San Marcos General Plan:** This plan provides guidance for development of the City and associated Sphere of Influence.
- **County of San Diego General Plan:** This plan provides guidance for development of the County and associated Sphere of Influence.

### **6.3 CUMULATIVE IMPACT ANALYSIS**

This discussion evaluates the potential cumulative effects on biological resources, land use, and public facilities. In particular, the analysis focuses on the cumulative effects of the proposed MHCP with NCCP plans being developed by adjoining jurisdictions in San Diego County, as well as the General Plan updates.

Together, the programs described above encompass all of San Diego County, as well as areas within Orange and Riverside counties. Although the programs are in various stages of planning, all of the programs have been, or are being, designed consistent with the NCCP conservation guidelines and the overall goal of the NCCP Act to balance preservation of biological resources, land use, and economics. Impacts associated with implementation of the MHCP, as described in Section 4.0, could also be associated with cumulative implementation of the various programs described above with potential beneficial and adverse environmental consequences.

#### **6.3.1 Biological Resources**

Implementation of the proposed MHCP, and the projects on the cumulative projects list, will result in direct and significant impacts to species on the Covered Species Lists of the programs on the cumulative projects list due to issuance of incidental take permits. Habitat and individuals may be taken as a result of the take permits.

Cumulatively significant indirect impacts will be associated with edge effects and increased development pressure outside the preserves established by the various multiple species planning programs. As discussed in Section 4.3, such indirect impacts will primarily be associated with impacts to grassland and chaparral habitats, and the nonsensitive species will receive little or no protection outside the preserves under existing and proposed ordinances and regulations. These indirect impacts are not regarded as significant, either cumulatively or at the project level, for a variety of reasons including:

- Impacts will be limited to indirect effects to portions of grassland and chaparral habitats;
- Substantial acreages of these habitats are anticipated to be captured within preserves, because these habitats often occur in a mosaic with other sensitive habitats; and
- Portions of these habitats located outside the preserve may be constrained for development for other reasons, such as slope.

It should also be noted that large areas of chaparral are found on public lands in eastern San Diego County (such as Cleveland National Forest and Bureau of Land Management Lands) where federal protections are in place. It is further noted that the MHCP study area, and the study areas for the cumulative projects (with the exception of the County Multiple Conservation Plan and Open Space Plan), include no desert communities. Therefore, no protections are afforded to desert communities, where increased development pressure may also occur. Such an effect has not been documented, however, and is only speculative at this time.

### **6.3.2 Land Use and Public Facilities**

With development pressure being shifted from preserve areas to nonpreserve areas, increased urbanization or intensification of land use may occur in areas not presently subject to these kinds of development pressures, both within and outside the MHCP study area. As discussed elsewhere in this document, such land use intensification may result in community character impacts. However, these issues are anticipated to arise regardless of any multispecies conservation planning and implementation being conducted in the County, due to the growth projected in SANDAG's 2020 Series 9 growth forecasts. While the proposed project and most of the alternatives, to one degree or another, could shift development to outlying areas or encourage increases in development intensity in areas not currently subject to substantial

development pressure, the magnitude of the shift is proportionate to Year 2020 projected shortfalls in developable land that will likely result in substantial pressure to increase development intensity with or without the MHCP Plan.

Potential beneficial effects will be associated with preservation of resources within designated preserves and with changes in development patterns that may increase intensity along transportation corridors and possibly reduce traffic congestion and air pollutant emissions. Potential adverse effects could be associated with increased development pressure outside designated preserves, resulting in increased risk to certain biological, cultural, and landform resources. In general, it is a goal of the various programs under consideration to balance both biological and land use considerations, thereby reducing the potential for significant cumulative impacts.

## **7.0 ISSUES NOT CONSIDERED SIGNIFICANT**

Adoption of the proposed project or one of the three alternative scenarios and issuance of a take permit under Section 10(a)(1)(b) of the federal ESA will permanently preserve portions of habitat areas within northwestern San Diego County and will permit take of species on the Covered Species List outside the preserve. Long-term implementation of the MHCP will result in changes in regional land use patterns, with possible increased development pressure outside the designated preserve boundaries and possible intensification of development outside of designated preserves. Circulation systems may be modified, as will the location for some public facilities. Changes to land use patterns could result in both beneficial and adverse environmental changes, with increased development pressure potentially adversely affecting biological, cultural, and landform resources outside designated preserve boundaries and concentrating development in proximity to transportation corridors, potentially benefiting regional traffic and air quality conditions.

Incidental take of species on the covered species list will represent an irreversible environmental change associated with implementation of the proposed federal action. The numbers of covered plant and animal species that could be taken outside the preserve under the proposed MHPA and alternative scenarios are summarized below and described in detail in Section 4.3, Biological Resources, of this document.

CEQA Guidelines (Section 15128) require that the environmental document include a brief discussion of various environmental issues that were determined not to be significant. The Initial Study, coupled with this EIS/EIR, addressed all probable or foreseeable possible effects of the proposed project. The Initial Study determined that the project would result in no significant environmental effects to the following issue areas: Aesthetics, Air Quality, Cultural Resources, Hazards and Hazardous Materials, Hydrology and Water Quality, Noise, Transportation/Circulation, Public Utilities and Service Systems, Environmental Justice, Housing and Employment, Geology and Soils, and Recreation.

The proposed project protects species by conserving habitat, restoring degraded habitat, managing the preserve system, and conducting biological monitoring in perpetuity. The proposed project also issues incidental take permits for covered species to the participating jurisdictions, who then become take authorization holders. The benefits of take authorizations held by the cities can be shared with individuals or projects within those cities.

However, individual project proponents are still required to conduct an environmental review in compliance with CEQA.

### **Aesthetics**

The proposed project involves the following actions: adopt the MHCP, the five Subarea Plans, and Implementing Agreements, and issue incidental take permits to the participating cities. Adoption of the MHCP and the Subarea Plan plans will create a preserve system designed to protect and preserve natural habitats. This project preserves scenic vistas and scenic resources such as trees, rock outcroppings, and historic buildings within a state scenic highway, preserves the visual character of the site and its surroundings and, since no physical improvements are proposed, the project will not create light and/or glare.

An indirect effect of issuing incidental take permits could be an increase in development pressure outside the preserve, resulting in a change in the density, form, and character of development. Such increased development pressure could result in more compact development outside the preserve, resulting in a change in the aesthetic or visual character of development outside the preserve. More compact development may result in taller, more massive structures with potential urban design, glare, and shading effects. However, as noted in Section 4.6, Population, Housing, and Employment, the density increases expected to occur under the proposed project would likely maintain low residential densities outside the preserve, without the necessity for greater urban density levels. In addition, the same amount of development is projected to occur with the proposed project as with the baseline conditions or the existing setting.

Future projects that may benefit from the incidental take permit will be required to conduct an environmental analysis in compliance with CEQA. At that time, any impact of the proposed project on aesthetics will be determined.

The proposed project will not have a significant effect on scenic vistas, because there is no change between the baseline condition and the proposed actions. The proposed project will not damage scenic resources such as trees, rock outcroppings, or historic buildings within a state scenic highway, since there is no change between the baseline condition and the proposed actions. As well, the proposed project will not degrade the existing visual character or quality of the site and its surroundings, nor create light and/or glare, since there is no change between the baseline condition and the proposed action.

Therefore, because the threshold for determining significance is the baseline condition/existing setting, and there is no change between the baseline condition/existing setting and the proposed project, there is a less than significant effect, and further analysis is unwarranted.

### **Air Quality**

The MHCP study area is located within the San Diego Air Basin (SDAB). According to the 2000 Annual Report data published by the San Diego Air Pollution Control District (SDAPCD), the SDAB is in compliance with the federal and state Ambient Air Quality Standards (AAQS) for all regulated air pollutants, with the exception of ozone (federal and state) and total suspended particulates (PM<sub>10</sub>, state only). In general, air quality has improved in the SDAB; the number of days not in compliance with federal and state standards has decreased significantly in the last 5 years.

An air quality analysis was conducted as part of the final EIR for the 2020 Regional Transportation Plan (RTP). The 2020 RTP was based on the 2020 cities/County forecast that included the regional habitat conservation plans (including the MHCP) that focused densities and land uses away from the regional preserves and into urban areas. The EIR determined that the 2020 RTP's program-level impacts to air quality are less than significant, and project-level impacts will be less than significant, due to compliance with the adopted habitat conservation plans and compliance with approved mitigation measures to reduce air quality emissions.

Air pollution impacts relating to the project area would be primarily related to mobile emissions, rather than point source emissions. Air quality impacts tend to be regional in origin, rather than localized, and are based on population growth and land use patterns. There are no potential direct impacts of the proposed project on air quality, because implementation of the proposed actions is not expected to differ significantly from the baseline conditions/existing setting. An indirect effect of implementing the proposed project (issuing incidental take permits) may affect the location and character of development by increasing development pressure outside the preserve, thus "shifting" densities from the preserve to areas outside the preserve. However, issuance of incidental take permits would not affect the rate or amount of development within the MHCP study area. Mobile emissions associated with growth and development are, therefore, anticipated to be similar under the proposed project as under the baseline condition/existing setting, since the same amount of growth would occur under all scenarios, generating similar levels of emissions in the overall SDAB.

Future projects that may benefit from the incidental take permit will be required to conduct an environmental analysis in compliance with CEQA. At that time the impact of the future projects on air quality will be determined.

In some respects, implementation of the MHCP may have beneficial effects on air quality, due to a change in the land use pattern to more compact development outside the preserve; this may reduce trip length, with a concomitant reduction in air pollutant emissions. The extent to which such beneficial effect may occur has not been quantified. Federal, state, and local air quality regulations would continue to apply to activities both within and outside the preserve.

The proposed project will not violate any air quality standard or contribute substantially to an existing or projected air quality violation, because there is no change between the baseline condition and the proposed actions. The proposed project will not result in the release of emissions, nor will it expose sensitive receptors to pollutants or create objectionable odors, because there is no change between the baseline condition and the proposed action. Therefore, there is no significant impact relating to air quality, and further analysis is unnecessary.

Because the threshold for determining significance is the baseline condition/existing setting, and there is no change between the baseline condition/existing setting and the proposed project, further analysis is unwarranted.

### **Cultural Resources**

Implementing the proposed project (adopting the MHCP, Subarea Plans, and Implementing Agreements, and issuing incidental take permits) will not directly affect cultural resources, because it is not expected to differ significantly from the baseline conditions/existing setting. An indirect effect of the proposed project could be an increase in development pressure outside the preserve, resulting in a change in the density, form, and character of development. Such increased development pressure could expose areas outside the preserve to increased grading, scraping, and excavation activities that could result in adverse impacts to cultural resources. Potential impacts to cultural resources associated with development activities that could be located within the preserve under the baseline conditions/existing setting would, however, be eliminated under the proposed project. Also, encouraging more dense or compact development outside the preserve may reduce the aerial extent of lands subject to

development, reducing the overall potential for impacts to cultural resources within the MHCP study area when compared with the baseline conditions/existing setting. In addition, existing archeological review and salvage and recovery requirements of local jurisdictions would continue to apply to development activities outside the preserve.

Future projects that may benefit from the incidental take permit will be required to conduct an environmental analysis in compliance with CEQA. At that time the impact of the proposed project on cultural resources will be determined.

The proposed project will not cause a substantial adverse change in the significance of a historical resource, because there is no change between the baseline condition and the proposed actions. The proposed project will not cause a substantial adverse change in the significance of an archeological or paleontological resource or disturb any human remains, because there is no change between the baseline condition and the proposed actions.

Therefore, because the threshold for determining significance is the baseline condition/existing setting, and there is no change between the baseline condition/existing setting and the proposed project, there is a less than significant impact, and further analysis is unwarranted.

### **Hazards and Hazardous Materials**

The proposed project (adopting the MHCP, Subarea Plans, Implementing Agreements, and issuing incidental take permits) will not directly affect hazards and hazardous materials, because it is not expected to differ significantly from the baseline conditions/existing setting. As noted in Section 4.6, Population, Housing, and Employment, the density increases expected to occur under the proposed project would likely maintain the same residential densities outside the preserve and, therefore, would not differ substantially from the baseline conditions/existing setting, including development of land uses that could result in hazards to human health and public safety.

An indirect effect of the proposed project could be an increase in development pressure outside the preserve within the vicinity of McClellan/Palomar and Oceanside Public Airports. However, future projects that may benefit from the incidental take permit will be required to conduct an environmental analysis in compliance with CEQA. At that time, the impact of the proposed project on public and private airports will be determined.

The proposed project will not create a hazard to the public or the environment through transportation of hazardous materials or the release of hazardous materials into the environment, including near a school, because there is no change between the baseline condition/existing setting and the proposed action. The proposed project is not proposing a change to existing hazardous material sites, and those sites that are located within the MHCP study area will be designated for preservation. The proposed project will not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan, or expose people or structures to a significant risk of loss, injury, or death involving wildland fires, because there is no change between the baseline condition/existing setting and the proposed action.

Since essentially the same potential for development resulting in hazards to human health and public safety would occur under the proposed action as under the baseline conditions/existing setting, there is less than a significant impact, and further analysis of this issue is unwarranted.

### **Hydrology and Water Quality**

Effects on water quality from implementing the proposed project will not differ significantly compared to the threshold of significance, which is the baseline conditions/existing setting. Therefore, the project will not have a direct impact on hydrology and water quality. As noted in Section 4.6, Population, Housing, and Employment, an indirect effect of the proposed project would be an increase in development pressure outside the preserve, resulting in a change in the density, form, and character of development. Such increased development pressure could result in adverse water quality impacts outside the preserve, since land clearing and scraping activities associated with development generally increase erosion and sedimentation; and automobiles, people, and industries associated with development generally increase the amount of debris, dirt, grease, and pathogens in stormwater runoff.

While the proposed project may alter the location and density of projected growth within the MHCP study area, the amount and rate of growth would not be altered. Development that would be focused outside the preserve under the proposed project would be distributed throughout the MHCP study area, resulting in similar water quality impacts to those which would be expected under the baseline conditions/existing setting. Although the locations of discharges may differ somewhat under the proposed project, cumulative discharges and ultimate effects on overall water quality within watersheds located in the MHCP study area would essentially be the same.

Future projects that may benefit from the incidental take permit will be required to conduct an environmental analysis in compliance with CEQA. At that time, the impact of the proposed project on hydrology and water quality will be determined.

The proposed project will not violate any water quality standards or waste discharge requirements, reduce groundwater supplies, alter existing drainage patterns, contribute to runoff water, or degrade water quality, because there is no change between the baseline condition/existing setting and the proposed action. The project is not proposing to build houses or other structures in a 100-year flood hazard area; therefore, there is no change between the baseline condition/existing setting and the proposed action.

Since the threshold for determining significance is the baseline condition/existing setting, and there are no effects to hydrology and water quality beyond what would occur under the baseline conditions/existing setting, there is a less than significant impact, and further analysis is unwarranted.

### **Noise**

The proposed project will not have direct impacts on noise, because the results of implementation are not expected to differ significantly from the baseline conditions/existing setting. There may be an indirect effect of the proposed project on noise, due to an increase in development pressure outside the preserve and a change in the density, form, and character of development outside the preserve. Such increased development pressure could result in adverse noise impacts outside the preserve, since less land will have to accommodate more people, likely resulting in intensification of uses, potentially generating increased traffic in localized areas with higher resulting noise volumes, and increasing the potential for location of high-volume noise activities in proximity to sensitive receptors. Local noise ordinances would continue to apply to development activities outside the preserve to ensure avoidance, minimization, or mitigation of potential noise impacts to sensitive receptors associated with development.

An indirect effect of the proposed project could be an increase in development pressure outside the preserve within the vicinity of McClellan/Palomar and Oceanside Public Airports. However, future projects that may benefit from the incidental take permit will be required to conduct an environmental analysis in compliance with CEQA. At that time, the impact of the proposed project on noise will be determined.

The proposed project will not expose people to increases in noise levels, either permanently or temporarily, nor expose people to vibrations, because there is no change between the baseline condition/existing setting and the proposed action.

Since the threshold for determining significance is the baseline condition/existing setting, and there are no effects to noise beyond what would occur under the baseline condition/existing setting, there is a less than significant impact, and further analysis is unwarranted.

### **Transportation/Circulation**

The MHCP study area is part of SANDAG's 2020 Regional Transportation Plan (RTP). The 2020 RTP was based on the 2020 cities/County forecast that included the regional habitat conservation plans (including the MHCP) that focused densities and land uses away from the regional preserves and into urban areas. The purpose of the RTP is to reduce projected cumulative impacts that would be expected to occur as the region continues to grow and develop over the next 20 years. When considered with all other projects (past, proposed, and future), the RTP serves to reduce regional impacts. The proposed project will not have a direct impact on transportation/circulation, because the results of implementation are not expected to differ significantly from the baseline condition/existing setting. An indirect effect of implementing the proposed project may affect the location and character of development by increasing development pressure outside the preserve, thus "shifting" densities from the preserve to areas outside the preserve. However, issuance of incidental take permits would not affect the rate or amount of development within the MHCP study area. Transportation/circulation issues associated with growth and development are, therefore, anticipated to be similar under the proposed project as under the baseline condition/existing setting, since the same amount of growth would occur under all scenarios, generating similar levels of traffic.

Future projects that may benefit from the incidental take permit will be required to conduct an environmental analysis in compliance with CEQA. At that time the impact of the proposed project on transportation/circulation will be determined.

The proposed project will not cause an increase in traffic congestion; will not affect levels of service; will not increase safety risks or increase the need for additional parking; and will not preclude the development of planned roadways, affect emergency access, or conflict with adopted plans, because there is no change between the baseline condition/existing setting and

the proposed action. Therefore, there is a less than significant impact relating to transportation/circulation, and further analysis is unnecessary.

### **Public Utilities and Service Systems**

The proposed project will not have a direct impact on public utilities and service systems, because it will not differ significantly from the baseline condition/existing setting. An indirect effect of the proposed project could be an increase in development pressure outside the preserve, resulting in a change in the density, form, and character of development. Such increased development pressure could cause the need to “shift” public facilities to areas outside the preserve. Also, encouraging more dense or compact development outside the preserve may change the location of planned facilities. The proposed project will not generate the need for new facilities and services.

Future projects that may benefit from the incidental take permit will be required to conduct an environmental analysis in compliance with CEQA. At that time the impact of the proposed project on public facilities and services will be determined.

The proposed project will not exceed wastewater treatment requirements of the Regional Water Quality Control Board, because there is no change between the baseline condition and the proposed actions. The proposed project will not require the construction or expansion of water facilities, wastewater treatment facilities, or storm water drainage facilities, nor require water or wastewater treatment, nor require the use of a landfill, because there is no change between the baseline condition and the proposed actions.

Since the threshold for determining significance is the baseline condition/existing setting, and there are no effects to public facilities and services beyond what would occur under the baseline condition/existing setting, there is less than significant impact, and further analysis is unwarranted.

### **Environmental Justice**

The following discussion of environmental justice applies to the proposed project: adoption of the MHCP and the five Subarea Plans, and issuance of incidental take permits.

### ***Health and Safety***

Please see the discussions in this Chapter regarding air quality, geology and soils, hazards and hazardous materials, hydrology and water quality, and noise. These sections describe why there are no direct impacts of the proposed project on potential health and safety issues and describe what the indirect impacts could be. Accordingly, there will not be differential or disproportionate negative health or safety impacts on minority populations, low-income populations, or Indian tribes. There are no tribal lands located in the MHCP study area.

### ***Community Character***

Adoption of the MHCP and the Subarea Plans will create a preserve system designed to protect and preserve natural habitats. One of the goals of the proposed project is to protect large contiguous blocks of habitat connected by broad, unbroken landscape linkages. The proposed project will not have a direct impact to community character, because it preserves existing habitat areas, preserves the visual character and natural setting of the site and its surroundings, and does not propose any physical improvements. Therefore, since the threshold for determining significance is the baseline condition/existing setting, and there is no change between the baseline condition/existing setting and the proposed project, there is a less than significant effect on community character.

As noted in Section 4.6, Population, Housing, and Employment, an indirect effect of implementing the proposed project (issuing incidental take permits) may affect the location and character of development by increasing development pressure outside the preserve, thus “shifting” densities from the preserve to areas outside the preserve. However, there will not be differential or disproportionate negative impacts on the character of communities where minority or low-income populations reside.

### ***Housing and Employment***

Measures of economic activity, including land and housing prices, are affected by many variables, such as population growth, public policy (both national and local), and technological change, that are unrelated to the environmental impacts associated with the proposed project or its alternatives. There is no reliable information which will indicate if the project and its alternatives will significantly affect housing prices and employment opportunities for the general population or for minority and low-income populations. However, the following general observations may be made regarding this issue.

The proposed project and its alternatives (FPA Alternatives 1 and 2 and BCLA Alternative 3), when compared to development forecast by SANDAG, will slightly reduce the amount of vacant land available to accommodate future residential or employment development in the study area and subareas (see Section 4.6). This in turn may increase the demand for developable land outside the areas proposed for habitat conservation and contribute to increases in prices of land and housing. Such increases, if they occur, will limit the availability of affordable housing or employment opportunities, particularly for minority and low-income populations.

At the same time, implementation of a habitat conservation plan may also reduce the costs of environmental mitigation and compliance with federal and state environmental laws and thus lower the cost of urban development relative to the present practice of project-by-project permit review. The project is also consistent with and furthers the elements of "smart growth" strategies recommended by local jurisdictions and SANDAG, including location of higher-density housing near transit stations and traditional town centers and development of mixed land uses and mixed housing types. These smart growth strategies are intended to increase the supply of affordable housing, which will have a beneficial effect on minority and low-income populations.

### **Geology and Soils**

The proposed project (adopting the MHCP, Subarea Plans, and Implementing Agreements, and issuing incidental take permits) will not have a direct impact on geology and soils, because the results of implementation are not expected to differ significantly from the baseline conditions/existing setting. An indirect effect of the proposed project could be an increase in development pressure outside the preserve, resulting in a change in the density, form, and character of development. Such increased development pressure could result in increased pressure to build on sensitive or unstable geologic formations, or soils subject to erosion or otherwise unsuitable for development. Increased pressure for development on sensitive hillsides may also occur. Pressure to develop such geologically constrained areas within the preserve would, however, be eliminated with implementation of the proposed project. Also, encouraging more dense or compact development outside the preserve may reduce the extent of lands subject to development, reducing the extent of overall exposure of sensitive soils and geologic formations when compared with the baseline condition/existing setting. In addition, existing hillside, grading, and building code regulations of the local jurisdictions would continue to apply to proposed developments outside the preserve.

Future projects that may benefit from the incidental take permit will be required to conduct an environmental analysis in compliance with CEQA. At that time, the impact of the proposed project on geology and soils will be determined.

The proposed project will not expose people or structures to potential substantial adverse effects or result in substantial soil erosion or the loss of topsoil, because there is no change between the baseline condition and the proposed actions. The proposed project is not proposing the development of any structure within the preserve; therefore, the action will not cause the potential for landslide, lateral spreading or collapse, nor cause the need for septic tanks or alternative wastewater disposal systems.

Therefore, because the threshold for determining significance is the baseline condition/existing setting, and there are no effects to geology/soils beyond what would occur under the baseline conditions/existing setting, there is a less than significant impact, and further analysis is unwarranted.

### **Recreation**

The proposed project will not directly affect recreation, because it will not differ significantly from the baseline condition/existing setting. An indirect effect of the proposed project could be an increase in development pressure outside the preserve, resulting in a change in the density, form, and character of development. Such increased development pressure could cause the need for “shifting” recreational facilities in areas outside the preserve. Also, encouraging more dense or compact development outside the preserve may change the location of planned recreational facilities. The proposed project will not generate the need for new parks. The proposed action will allow trails as a compatible use, and may increase recreational opportunities by providing more open space for passive recreation. Recreational opportunities could include passive activities such as hiking and bird watching. The proposed project is not proposing ball fields or other active recreational uses, nor will it generate an increased need for these facilities.

Future projects that may benefit from the incidental take permit will be required to conduct an environmental analysis in compliance with CEQA. At that time the impact of the proposed project on recreation will be determined.

---

***ISSUES NOT CONSIDERED SIGNIFICANT***

The proposed project will not increase the use of neighborhood and regional parks, nor will the project include recreational facilities or require the construction or expansion of recreational facilities, because there is no change between the baseline condition and the proposed actions.

Since the threshold for determining significance is the baseline condition/existing setting, and there are no effects to recreation beyond what would occur under the baseline condition/existing setting, there is a less than significant impact, and further analysis is unwarranted.

## **8.0 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES**

### **ANY SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES WHICH WILL BE INVOLVED IN THE PROPOSED ACTION SHOULD IT BE IMPLEMENTED**

Adoption of the proposed project or one of the alternative scenarios and issuance of a take permit under Section 10(a)(1)(b) of the federal ESA will permanently preserve portions of habitat areas within northwestern San Diego County and will permit take of species on the Covered Species List outside the preserve.

Incidental take of species on the covered list will represent an irreversible environmental change associated with implementation of the proposed federal action. The number of covered plant and animal species that could be taken outside the preserve under the proposed MHCP Plan and alternative scenarios are summarized in detail in Section 4.3, Biological Resources, of this document. Significant, unavoidable impacts for any of the alternatives (FPA 1, FPA 2, or BCLA) would result for land use, growth inducement, and cumulative impacts (see Table ES-2).

## **9.0 REFERENCES**

California Department of Mines and Geology

1982 Special Report 153.

California Department of Fish and Game

2001 Correspondence Referenced as Tier Definitions for Species Evaluated for MHCP Coverage. June 8, W.E. Tippets to Betty Dehoney.

City of Carlsbad

1999 Habitat Management Plan for Natural Communities in the City of Carlsbad.

City of Encinitas

1999 Encinitas Subarea Plan (Internal Review Draft).

City of Escondido

1999 Escondido Subarea Plan (Internal Review Draft).

City of Oceanside

1999 Oceanside Subarea Habitat Conservation Plan/Natural Communities Conservation Plan (Wildlife Agency Review Draft).

City of San Diego

1997 Final Joint EIR/EIS Issuance of Take Authorizations for Threatened and Endangered Species Due to Urban Growth within the Multiple Species Conservation Program (MSCP) Planning Area; SCH # 93121073.

City of San Marcos

2001 University Commons Specific Plan, Amendment No. 1. Final Supplemental Environmental Impact Report.

2000 Natural Communities Conservation Plan for the City of San Marcos (Draft).

Dudek & Associates

1996 Recirculated Draft Joint EIR/EIS Issuance of Take Authorizations for Threatened and Endangered Species Due to Urban Growth within the

## *REFERENCES*

---

Multiple Species Conservation Program (MSCP) Planning Area. Prepared for City of San Diego and USFWS.

Holland, R.F.

1986 Preliminary Descriptions of the Terrestrial Natural Communities of California. State of California, The Resources Agency.

Laymon, S.A., and M.D. Haltermann

1989 A Proposed Habitat Management Plan for Yellow-Billed Cuckoos in California. USDA Forest Service Gen. Tech. Rep. PSW-110.

Montgomery, S.J.

2000 Personal communication.

Ogden

2000a Public Review Draft MHCP Plan for Administrative Review. Volume 1. Prepared for SANDAG and MHCP Advisory Committee.

2000b Public Review Draft Biological Analysis and Permitting Conditions for Administrative Review. Volume II. Prepared for SANDAG and MHCP Advisory Committee.

1998 Consultants Working Draft Multiple Habitat Conservation Program (MHCP) Plan.

San Diego Association of Governments (SANDAG)

2000a 2020 Regional Transportation Plan.

2000b 2020 Cities/County Forecast.

1999 MHCP GIS Database.

1995 Land Use Inventory.

Shaffer, M.L.

1981 Minimum Population Sizes for Species Conservation. *BioScience* 31(2):131-134.

**10.0 PERSONS CONSULTED**

**CALIFORNIA DEPARTMENT OF FISH AND GAME**

William Tippetts, Biologist

David Meyer, Biologist

Ron Rempel, Deputy Director Habitat Conservation Division

Angela Scott, Staff Counsel

**CITY OF CARLSBAD**

Michael Holzmilller, Director of Planning

Don Rideout, Principal Planner

**CITY OF ENCINITAS**

Gary Barberio, Senior Planner

Scott Vurbef, Environmental Coordinator

**CITY OF ESCONDIDO**

Barbara Redlitz, Principal Planner

**CITY OF OCEANSIDE**

Jerry Hittleman, Senior Planner

**CITY OF SAN MARCOS**

Jerry Backoff, Planning Director

David Acuff, Consulting Planner

**CONSERVATION BIOLOGY INSTITUTE**

Wayne Spencer, Conservation Biologist

Jerre Stallcup, Conservation Biologist

**OGDEN ENVIRONMENTAL**

Michael Howard, Biologist

**U.S. DEPARTMENT OF THE INTERIOR**

Kerry O'Hara, Attorney

**U.S. FISH AND WILDLIFE SERVICE**

Nancy Gilbert, Biologist

Julie Vanderwier, Biologist

Susan Winn, Biologist

Lee Ann Carranza, Biologist

## **11.0 LIST OF PREPARERS**

### **SAN DIEGO ASSOCIATION OF GOVERNMENTS**

Janet Fairbanks	Senior Regional Planner
Sue Carnevale	Senior Research Analyst GIS Biological Analysis, Cartographic Production
John Hofmockel	GIS Economic Analysis
Debra Greenfield	Legal Counsel
Sophia Hawker	Project Assistant

### **U.S. FISH AND WILDLIFE SERVICE/U.S. DEPARTMENT OF THE INTERIOR**

Sherry Barret	Biologist
Nancy Gilbert	Biologist
Julie Vanderwier	Biologist
Susan Winn	Biologist
Lee Ann Carranza	Biologist
Kerry O'Hara	Assistant Regional Solicitor

### **CALIFORNIA DEPARTMENT OF FISH AND GAME**

William Tippetts	Biologist
David Meyer	Biologist
Angela Scott	Staff Counsel

### **P&D CONSULTANTS, INC.**

Betty Dehoney	Project Director/Manager
MS (Biology)	
Shawna Anderson, AICP	Project Manager
MA (Geography)	
Robert Rusby, AICP	Technical Analysis – Land Use
MUP (Urban Planning)	

***LIST OF PREPARERS***

---

Jeffrey Galizio BA (Ecology)	Environmental Specialist
Josephine Gabriel BS (Geology)	Technical Environmental Analysis
Alex Jewell, AICP BA (Environmental Studies)	Technical Environmental Analysis
T. Alejandro Marchant BS (Biology)	Technical Analysis – Biological Resources
Salvatore Zimmitti MS (Biology)	Technical Analysis – Biological Resources
Gregory Graber MA (Urban Planning)	Technical Analysis – Land Use
Sophia Habl BA (Geography)	Technical Environmental Analysis
Clayton Kraft BA (Geography)	Cartographic Production
Terri Parsons	Document Production
Carolyn Darga	Document Preparation

**ONAKA PLANNING AND ECONOMICS**

Jun Onaka PhD (Urban Planning)	Technical Analysis – Population, Housing, and Employment
-----------------------------------	---

**RECON**

Shannon Turek	Technical Analysis - Biological Impacts
Paul Fromer	Technical Analysis - Biological Impacts

**FOX-SOHAGI**

Margaret Sohagi	Technical Advisor
-----------------	-------------------

## **12.0 GLOSSARY**

### **12.1 DEFINITIONS**

**Assurances:** Mutual agreements and covenants contained in the Implementing Agreement which bind the parties to specified actions and provide each party with benefits. The benefits include, for example, authorization for incidental take of species in accordance with the Habitat Management Plan (HMP), and conservation of species resulting from actions to implement the plan.

**Authorizations:** Permits for incidental take of species in accordance with the HMP.

**Biological Core and Linkage Area (BCLA):** The area of undisturbed native vegetation in the County and in the cities. Conservation efforts in the cities and Countywide that result in take authorizations are evaluated with regard to the percent of the BCLA preserved.

**California Department of Fish and Game (CDFG):** Department charged with management, protection, and enhancement of California's natural resources and charged with implementing the California Endangered Species Act.

**California Endangered Species Act (CESA):** The State of California Endangered Species Act.

**California Environmental Quality Act (CEQA):** The Act was passed in 1970 to: (1) inform government decision makers and the public about the potential environmental effects of proposed activities; (2) identify the ways that environmental damage can be avoided or significantly reduced; (3) prevent significant, avoidable environmental damage by requiring changes in projects, whether by the adoption of alternatives or imposition of mitigation measures; and (4) disclose to the public why a project was approved if that project will have significant environmental effects.

**Conservation:** As defined in the federal Endangered Species Act (ESA), the use of all methods and procedures which are necessary to bring endangered or threatened species to the point at which the measures provided pursuant to the Act are no longer necessary; such measures and procedures include, but are not limited to, all activities associated with scientific resource management such as research, census, law enforcement, habitat

acquisition and management, propagation, live trapping and transportation, and in rare cases, regulated taking (ESA, Section 3[3]).

**Core:** A component of the preserve system established under HMP, consisting of large blocks of conserved habitat capable of sustaining species over time.

**Corridor:** A component of the preserve system, usually linear, through which a species must travel to reach habitat suitable for reproduction and other life-sustaining needs.

**ESA (Endangered Species Act):** Refers to both the State of California and the federal endangered species acts.

**Existing Hardlines:** Areas which have already been conserved for their wildlife value due to actions occurring in the past. Examples include onsite open space required to be set aside as part of approval of a development project and areas that have been purchased and set aside as mitigation for project impacts.

**Focused Planning Area (FPA):** Target area of local jurisdictions for inclusion in the MHCP. Objectives for the creation of FPAs include: (1) conserving as much of the biologically important habitat lands remaining in the subregion as possible; (2) maximizing the inclusion of public lands within the preserve; (3) maximizing the inclusion of lands already conserved as open space; and (4) maintaining individual property rights and economic viability for the subregion.

**Habitat:** The combination of environmental conditions of a specific place occupied by a species or a population of such species.

**Harass:** A form of incidental take under the federal Endangered Species Act; defined in federal regulations as an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, or sheltering (50 CFR 17.3).

**Hard-Line Preserves:** Land in a focused planning area that will be conserved and managed for biological resources.

**Harm:** A form of incidental take under the federal Endangered Species Act; defined in federal regulations as an act which actually kills or injures wildlife. Such acts may include significant habitat modification or degradation that actually kills or injures wildlife by significant impairing essential behavioral patterns, including breeding, feeding, or sheltering.

**Implementing Agreement (IA):** A contractual obligation between individual cities within the MHCP study area, California Department of Fish and Game, and the United States Fish and Wildlife Service.

**Incidental Take:** The taking of a federally listed wildlife species, if such taking is incidental to and not the purpose of carrying out otherwise lawful activities (also see Take). Incidental take authorization and incidental take permit are used interchangeably.

**Linkage:** A component of the preserve system established under an HMP, consisting of conserved habitat that provides connectivity between Cores and to natural communities within the region.

**Mitigation:** Measures undertaken to diminish or compensate for the negative impacts of a project or activity on the environment, including: (a) avoiding the impact altogether by not taking a certain action or parts of an action; (b) minimizing impacts by limiting the degree or magnitude of the action and its implementation; (c) rectifying the impact by repairing, rehabilitating, or restoring the affected environment; (d) reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; or (e) compensating for the impact by replacing or providing substitute resources or environments.

**Multiple Habitat Conservation and Open Space Program (MHCOSP):** A comprehensive habitat preservation planning program which addresses multiple species habitat needs and preservation of natural communities in eastern San Diego County, generally east of Cleveland National Forest.

**Multiple Habitat Conservation Program (MHCP):** A comprehensive habitat preservation planning program which addresses multiple species habitat needs and preservation of natural communities in northwestern San Diego County.

**Multiple-Habitat Planning Area (MHPA):** An area within which preserve planning is focused or defined and implementation provides for conservation of viable habitat and

wildlife use and movement; designed cooperatively by the participating jurisdictions in the MSCP study area in consultation with United States Fish and Wildlife Services (USFWS) and the California Department of Fish and Game (CDFG) staff, major property owners and environmental groups, based on biological, economic, ownership, and land use criteria.

**Multiple Species Conservation Program (MSCP):** A comprehensive habitat preservation planning program which addresses multiple species habitat needs and preservation of natural communities for a 900-square-mile area in southwestern San Diego County.

**Metropolitan Wastewater Department (MWWD):** A special department of the City of San Diego established to oversee implementation of a comprehensive wastewater collection, treatment, and disposal system within the MSCP area.

**Narrow Endemic Species:** Native species with restricted geographic distributions, soil affinities, and/or habitats, and for purposes of the HMP, species that in addition have important populations within the Plan area, such that substantial loss of these populations or their habitat within the HMP area might jeopardize the continued existence or recovery of that species.

**National Environmental Policy Act (NEPA):** The federal equivalent to CEQA that requires federal agencies to evaluate their proposed actions on the human environment.

**Natural Community Conservation Planning (NCCP) Program:** A habitat conservation program instituted by the State of California in 1991 to encourage the preservation of natural communities before species within those communities are threatened with extinction.

**Open Space (OS):** Area that is in permanent open space use, such as mitigation banks, open space parks, lagoons, and other areas.

**Population:** A group of individuals of a given species that inhabits a relatively well-defined geographic area and has the opportunity to interbreed freely.

**Preserve:** As a noun, an area set apart for the protection of wildlife and natural resources. As a verb: to keep in safety; protect from danger or harm; to keep intact or unimpaired; maintain. Preservation and conservation are similar terms and are used in much the same way. Preservation connotes the act of securing the land and its values, whereas conservation generally is broader and includes activities such as management of the land and its resources.

**Proposed Hard-Line Areas:** Properties whose conservation and development areas have been planned as part of the MHCP.

**Rare:** A species (plant or animal) existing in such small numbers throughout all or a significant portion of its range that it may become endangered or threatened (as defined by CESA or FESA) if its environment worsens.

**Soft-Line Planning Areas:** Portion of a focused planning area within which preserve areas will be delineated based on further data and planning (see Standards Area).

**Special Resource Areas:** Areas outside the core and linkage areas, such as vernal pools, significant populations of listed plants species, and movement corridors for large mammals.

**Species:** Any distinct population of wildlife that interbreeds when mature.

**Standards:** Special land use regulations to be adopted by the City of San Marcos to implement the Subarea Plan. The Standards will be applied only to the lands designated as occurring in standards areas.

**Standards Area:** Areas of the Subarea Plan where a development proposal has yet to be approved by the City of San Marcos. Standard areas establish assured levels of conservation through a series of required conservation percentages and development goals, rather than through the drawing of a hard-line development footprint.

**Subarea Plan:** The MHCP Plan requires that Subarea Plans be completed by individual jurisdictions containing lands proposed to be included in the Preserve to implement the goals of the draft MHCP Plan. The Subarea Plans need to contain a description of land use considerations, as well as preserve management guidelines and policies that pertain to specific characteristics of preserve lands within the individual jurisdictions.

**Take:** To harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect a federally listed species or to attempt to engage in such conduct. (Section 3 [19] of the federal ESA).

**Threatened Species:** Any species or subspecies that is likely to become an endangered species within the foreseeable future throughout all or significant portions of its range.

**United State Fish and Wildlife Service (USFWS):** Part of the United States Department of the Interior, responsible for implementation of the Endangered Species Act (ESA).

**Wildlife Corridor:** A wildlife corridor is a linear landscape feature that allows animal movement between two patches of habitat or between habitat and sources of essential resources.

**12.2 ACRONYMS AND ABBREVIATIONS**

ACOE	Army Corps of Engineers
AG	Agriculture
AM	Alkali marsh
BCLA	Biological Core and Linkage Area
BLM	Bureau of Land Management
BMO	Biological Mitigation Ordinance
BP	Biologically Preferred Scenario
CB	Coastal bluff scrub
CCC	California Coastal Commission
CDC	California Department of Conservation
CDFG	California Department of Fish and Game
CDMG	California Department of Mines and Geology
CEQ	Council on Environmental Quality
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulation
CHP	Chaparral
CLOW	Coast live oak woodland
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CEO	Coalition of Environmental Organizations
CP	Community Plan
CSS	Coastal sage scrub
DIF	Development Impact Fee
EAB	Environmental Advisory Board
EDD	Employment Development Department (California)
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FAR	Floor Area Ratio
FESA	Federal Endangered Species Act
FPA	Focused Planning Area
FWM	Freshwater marsh
G	Grassland

GIS	Geographical Information System
GP	General Plan
HARRF	Hale Avenue Resource Recovery Facility
HCP	Habitat Conservation Plan
HMP	Habitat Management Plan
HOV	High Occupancy Vehicle
IA	Implementing Agreement
IS	Initial Study
JWA	Joint Water Agencies
LCP	Local Coastal Program
LFMZ	Local Facilities Management Zone
LUP	Land Use Plan
MCAS	Marine Corps Air Station
MHCOSP	Multiple Habitat Conservation and Open Space Plan
MHCP	Multiple Habitat Conservation Program
MHPA	Multi-Habitat Planning Area
MOA	Memorandum of Agreement
MRZ	Mineral Resource Zone
MSCP	Multiple Species Conservation Program
MSS	Maritime succulent scrub
MWD	Metropolitan Water District
MWWD	Metropolitan Wastewater Department
NCCP	Natural Community Conservation Plan
NEPA	National Environmental Policy Act
NMFS	National Marine Fisheries Service
NOI	Notice of Intent
NOP	Notice of Preparation
OS	Open Space
OW	Oak woodland
PL	Public Lands
PRC	Public Resources Code
RF	Riparian forest
ROD	Record of Decision
RP	Riparian
RS	Riparian scrub
RTP	Regional Transportation Plan
RW	Riparian woodland

RWQCB	Regional Water Quality Control Board
SANDAG	San Diego Association of Governments
SDCWA	San Diego County Water Authority
SDG&E	San Diego Gas and Electric
SESA	State Endangered Species Act
SM	Saltmarsh
SMARA	Surface Mining and Recovery Act
SMC	Southern maritime chaparral
SPA	Special Planning Area
SRA	Special Resource Area(s)
USFWS	United States Fish and Wildlife Service
VP	Vernal pool

**THIS PAGE INTENTIONALLY LEFT BLANK**