APPENDIX A
PROPOSED COVERED SPECIES
CONSERVATION ANALYSIS AND CONDITIONS OF COVERAGE

A.1 Introduction

This document provides an analysis of conservation and the conditions of coverage for 10 plants and 26 animal species. The conservation analysis has been completely revised based on updated vegetation and species occurrence data and reflects all the modifications of the 2009 Final Oceanside Subarea Plan (SAP). The following sections provide a description of the conservation analysis methods, a comparison of the current analysis to previous analyses, and a species-by-species analysis of conservation and conditions of coverage. This conservation analysis and conditions of coverage is intended to be used by the Wildlife Agencies, in conjunction with their own internal analyses, to make determinations on species coverage for the issuance of take authorization under the SAP and Implementing Agreement.

A.2 Methods

In 2003, the San Diego Association of Governments (SANDAG), in association with five participating cities including Oceanside, approved the Final Multiple Habitat Conservation Program (MHCP) Subregional Plan and Final MHCP Environmental Impact Statement – Environmental Impact Report (EIS/EIR). An overview of this planning process is provided in Section 1.2 of the SAP. Volume II of the MHCP Subregional Plan provided the biological analysis and permitting conditions for the program. Wherever possible, this conservation analysis has employed consistent methods as described in MHCP Volume II (SANDAG 2003).

Section 3 of the SAP provides a discussion of the methods and results related to biological resources. Section 4 and Section 5 of the SAP describe the conservation planning and policies designed to establish the Oceanside preserve system. Since the analysis conducted for the 2003 Subregional Plan, data layers for Oceanside have been updated and are reflected in this analysis, including:

- Vegetation: The vegetation community data was updated in 2008, primarily through aerial interpretation, in conjunction with Wildlife Agency staff. The

vegetation community data edits were digitized and all habitat calculations in this analysis and the SAP are based on this revised layer.

- Species Occurrences: The species point database was updated in 2008 with new species point data from CNDDB and USFWS since 2002. Redundant or out-dated points were culled from the new data consistent with the methods described in Section 2 of MHCP Volume II.

- Focused Planning Areas: The analysis of conservation is based on "hardline" and "softline" planning areas, which are the existing or planned preserve areas. These planning areas have been updated to reflect existing and planned development and preservation in the City since 2002.

Based on the revised data layers, an updated conservation analysis for habitat and species occurrences was conducted. This analysis was conducted consistent with the methods of MHCP Volume II.

In addition to updates to data layers, the policy language pertaining to the planning zones has been refined, the habitat restoration analysis has been updated, and the cost and funding analyses have been completely reworked. Based on the revised cost and funding analyses, the City is proposing to fund the program under a phased approach, and this conservation analysis also evaluates the conservation effects of the phased implementation schedule.

A.3 Comparison between the Final Oceanside Subarea Plan and the MHCP Subregional Plan

The following provides an evaluation of the consistency of Final Oceanside Subarea Plan with the 2003 MHCP Subregional Plan. A summary of the vegetation community net conservation comparison is provided below and a detailed side-by-side comparison is provided in Table A-1.

- From an overall habitat conservation perspective, the SAP would result in 2,833 acres of habitat conserved, which is nearly exactly as proposed under the MHCP for Oceanside.

Table A-1

Comparison of Net Conservation for the Vegetation Communities in Oceanside

Natural Vegetation Community	Oceanside Subarea Plan (2009)		MHCP Volume II (2003)	
	Total Acreage	Habitat Conserved	Total Acreage	Habitat Conserved
Coastal Sage Scrub	1,195	719 (60%)	1,338	692 (52%)
Chaparral	45	19 (43%)	44	21 (47%)
Coastal Sage/Chaparral Mix	10	--	10	--
Grassland	1,234	633 (51%)	1,724	570 (33%)
Alkali Marsh	11	11 (100%)	12	12 (100%)
Freshwater Marsh	146	146 (100%)	160	160 (100%)
Riparian Forest	216	216 (100%)	238	238 (100%)
Riparian Woodland	6	6 (100%)	3	3 (100%)
Riparian Scrub	644	644 (100%)	847	847 (100%)
Coast Live Oak Woodland	5	5 (94%)	4	4 (95%)
Freshwater	129	129 (100%)	139	139 (100%)
Estuarine	24	24 (100%)	24	24 (100%)
Disturbed Wetland	14	14 (100%)	14	14 (100%)
Natural Floodchannel/Streambed	262	262 (100%)	100	100 (100%)
Beach	44	4 (9%)	42	4 (8%)
Saltpan/Mudflats	--	--	4	4 (100%)
Total	**3,986**	**2,833 (71%)**	**4,705**	**2,832 (60%)**

- For coastal sage scrub habitat, 719 acres would be conserved under the SAP compared to the 692 acres of coastal sage scrub habitat proposed under the MHCP for Oceanside. Also notable in the comparison of coastal sage scrub is the reduction of 143 acres of total acreage in the City, which is a result of the vegetation community layer update and project implementation between 2002 and 2008.

- Grassland habitat conservation is higher under the SAP, 633 acres as compared to 570 acres proposed under the MHCP. Similar to coastal sage scrub, the total acreage in the City is reduced reflecting the updated vegetation community mapping and project implementation between 2002 and 2008.

- Wetland communities (i.e., alkali marsh, freshwater marsh, riparian forest, riparian woodland, riparian scrub, freshwater, estuarine, disturbed wetland, natural floodchannel/streambed, and saltpan/mudflat) are assumed to be conserved at 100% under the SAP, which is the same as the MHCP. The differences in total acreage and conserved acreage for these communities are exclusively a result of the reclassification of community types, mainly along the San Luis Rey River corridor.

Under the MHCP Subregional Plan, it was assumed that preserve assembly and plan implementation would "ramp up" over time, but preservation and SAP implementation phasing was not specifically defined. Chapter 5 of the SAP describes the specific phasing plan for the preservation and implementation of management/monitoring on preserve lands. Certain lands are currently preserved and managed, other lands are currently preserved but not fully managed, and other lands are planned for preservation but are currently not preserved or managed. For planning purposes, six phases have been identified: currently funded/implemented, Phase I (Years 1-5), Phase II (Years 6-10), Phase III (Years 11-25), Phase IV (Year 26 and beyond), and Other (unknown future phase). The following is a summary of how the planned conservation of vegetation communities, as shown in Table A-1, will be phased in.

- For coastal sage scrub: Approximately 33% (235 acres of 719 acres) are currently considered preserved and managed/monitored (Phase 0). Nearly 20% (130 acres of 719 acres) are planned for preservation and management/monitoring within the first 10 years (Phase I and II). The remainder (353 acres) are planned for preservation and management/monitoring after year 10 (Phase III and beyond). Two key parcels of land with planned coastal sage scrub conservation that are forecast for later phase implementation are the City-owned Benet Canyon (29 acres of coastal sage scrub) and Tuley Canyon (62 acres of coastal sage scrub) properties. These properties collectively comprise nearly 13% of the coastal sage scrub planned for conservation under the SAP. These properties have

been identified as potential future mitigation banks and are designated as Pre-approved Mitigation Areas. Although not planned for full management/monitoring until Phase III, these properties are City-owned and planned for preservation, and property-level management is currently conducted by the City for these properties.

- For grassland communities: Approximately 73% (464 acres of 633 acres) are currently considered preserved and managed/monitored (Phase 0). The remainder (169 acres) are planned for preservation and management/monitoring after year 6 (Phase II and beyond). Although a high percentage of grassland communities are currently preserved and managed/monitored, only 51% (see Table A-1) of these communities are planned for conservation overall. Additionally, 164 acres of coastal sage scrub restoration is planned under the SAP, and a majority of this restoration is likely to occur on lands currently characterized by grasslands and disturbed habitat.

- For wetland communities: Approximately 65% (661 acres of 1,012 acres) are currently considered preserved and managed/monitored (Phase 0). Nearly 6% (64 acres of 1,012 acres) are planned for preservation and management/monitoring within the first 10 years (Phase I and II). The remainder (287 acres) are planned for preservation and management/monitoring after year 10 (Phase III and beyond). A majority of the key wetland resources are currently considered preserved and managed/monitored, including the lower San Luis Rey River corridor, Pilgrim Creek, and the Buena Vista Lagoon. Additionally, all wetland resources are currently subject to the potential jurisdiction of the regulatory agencies (i.e., U.S. Army Corps of Engineers, Regional Water Quality Control Board, and the California Department of Fish and Game), which provides an assumed level of protection.

A summary of the proposed covered species net conservation comparison is provided below and a detailed side-by-side comparison is provided in Table A-2. Species habitat and point conservation calculation employed for the SAP were consistent with the MHCP (see MHCP Volume II [2003] for a full discussion of these methods).

Table A-2
Comparison of Net Conservation for the Proposed Covered Species

	Oceanside Subarea Plan (2009)			MHCP Volume II (2003)		
	Total Acreage	Habitat Conserved	Points Conserved[1]	Total Acreage	Habitat Conserved	Points Conserved[1]
Plants						
San Diego Thorn-mint	1,132	950 (84%)	2 of 2 (95%)	1,998	906 (45%)	2 of 2 (95%)
San Diego Ambrosia	2,429	1,352 (56%)	3 of 3 (100%)	3,062	1,262 (41%)	2 of 2 (95%)
Brodiaea filifolia	177	135 (76%)	50 of 54 (93%)	410	110 (27%)	47 of 50 (95%)
Del Mar Mesa Sand Aster	420	371 (88%)	1 of 1 (100%)	738	472 (64%)	1 of 1 (100%)
Blochman's Dudleya	76	68 (89%)	1 of 3 (17%)	188	62 (33%)	2 of 3 (50%)
Sticky Dudleya	1,240	739 (60%)	18 of 29 (63%)	1,383	713 (52%)	19 of 25 (74%)
Cliff Spurge	413	362 (88%)	--	722	463 (64%)	--
San Diego Barrel Cactus	1,195	719 (60%)	--	1,338	692 (52%)	--
Orcutt's Harzardia	1,240	739 (60%)	--	1,383	713 (52%)	--
San Diego Marsh-elder	11	11 (100%)	--	12	12 (100%)	--
Nuttall's Lotus	44	4 (9%)	1 of 1 (95%)	42	4 (8%)	1 of 1 (80%)
Nuttall's Scrub Oak	1,240	739 (60%)	--	1,383	713 (52%)	--
Invertebrates						
Salt marsh skipper[2]	--	--	--	4	4 (100%)	--
Reptiles and Amphibians						
Western Spadefoot Toad	1,403	1,403 (100%)	--	1,488	1,487 (100%)	--
Arroyo toad[3]	--	--	0 of 1 (0%)	--	--	0 of 1 (0%)
Southwestern Pond Turtle	1,403	1,403 (100%)	1 of 1 (100%)	1,488	1,487 (100%)	1 of 1 (100%)
Orange-throated whiptail	1,251	739 (59%)	3 of 6 (50%)	1,393	713 (51%)	3 of 5 (60%)
Birds						
California Brown Pelican	24	24 (100%)	--	24	24 (100%)	--
White-faced Ibis	146	146 (100%)	7 of 15 (47%)	160	160 (100%)	7 of 10 (70%)
Cooper's Hawk	227	227 (100%)	11 of 18 (59%)	245	245 (100%)	12 of 17 (71%)

	Oceanside Subarea Plan (2009)			MHCP Volume II (2003)		
	Total Acreage	Habitat Conserved	Points Conserved[1]	Total Acreage	Habitat Conserved	Points Conserved[1]
Osprey	153	153 (100%)	2 of 4 (50%)	163	163 (100%)	3 of 3 (100%)
Golden Eagle	2,440	1,352 (55%)	0 of 3 (0%)	3,072	1,262 (41%)	0 of 3 (0%)
American Peregrine Falcon	1,047	1,047 (100%)	--	1,284	1,284 (100%)	--
Light-footed Clapper Rail[4]	146	146 (100%)	12 of 14 (86%)	--	--	0 of 1 (0%)
Western Snowy Plover	44	4 (9%)	0 of 1 (0%)	47	8 (17%)	--
Elegant Tern	68	28 (41%)	2 of 3 (67%)	71	32 (45%)	2 of 3 (67%)
California Least tern	68	28 (41%)	2 of 4 (50%)	71	32 (45%)	3 of 4 (75%)
Southwestern Willow Flycatcher	860	860 (100%)	9 of 10 (90%)	1,085	1,085 (100%)	1 of 1 (100%)
Least Bell's Vireo	866	866 (100%)	190 of 293 (65%)	1,088	1,088 (100%)	139 of 161 (86%)
Coastal California Gnatcatcher	1,205	719 (60%)	92 of 166 (55%)	1,348	692 (51%)	77 of 154 (50%)
Yellow-breasted Chat	866	866 (100%)	36 of 53 (68%)	1,088	1,088 (100%)	39 of 45 (87%)
Southern California Rufous-crowned sparrow	1,205	719 (60%)	4 of 6 (63%)	1,348	692 (51%)	4 of 6 (67%)
Belding's Savannah Sparrow[2]	--	--	6 of 6 (100%)	4	4 (100%)	4 of 6 (67%)
Large-billed savannah sparrow[2]	--	--	--	4	4 (100%)	--
Bell's Sage Sparrow	1,205	719 (60%)	--	1,348	692 (51%)	--
Mammals						
Stephens' Kangaroo Rat	2,429	1,352 (56%)	0 of 1 (0%)	3,062	1,262 (41%)	--
Northwestern San Diego Pocket Mouse	2,229	1,167 (52%)	--	2,522	1,114 (44%)	--
San Diego Black-tailed Jackrabbit	2,440	1,352 (55%)	1 of 1 (95%)	3,072	1,262 (41%)	1 of 1 (100%)

[1]Point conservation percentage, as calculated in the MHCP and the SAP, is based on the FPA percentage (e.g., 100%, 75%, or 50% conservation) applied to each occurrence point. The proportion of points (e.g., 2 of 4) indicates just the number of points inside an FPA out of the total points in the SAP plan area.

[2]Suitable habitat for each of these species is considered salt marsh. The small difference between the MHCP habitat conservation estimate and the Subarea Plan estimate is a result of vegetation mapping revisions not habitat loss. Although no suitable habitat is mapped in the City, portions of Buena Vista Lagoon occur within the City, which has the potential to support these species.

[3]Suitable habitat not modeled.

[4]The increase in conserved suitable habitat for this species is a result of including freshwater marsh in the modeled suitable habitat. The MHCP model for suitable habitat only included salt marsh.

The following plant species were originally evaluated for coverage under the MHCP Subregional Plan but were not considered covered by MHCP due to insufficient conservation and are not considered for coverage under the Oceanside Subarea Plan: Aphanisma, Orcutt's brodiaea, short-leaved dudleya, variegated dudleya, and San Diego goldenstar. The following plant species were originally evaluated for coverage under the MHCP but are not being considered for coverage under the Oceanside Subarea Plan due to minimal suitable habitat and lack of occurrence in the City: Del Mar manzanita, Encinitas baccharis, wart-stemmed ceanothus, Orcutt's spineflower, summer holly, San Diego button-celery, little mousetail, spreading navarretia, California orcutt grass, Torrey pine, Engelmann oak, and Parry's tetracoccus. No analysis of conservation is provided for these species.

The following animal species were originally evaluated for coverage under the MHCP but were not covered by MHCP due to insufficient conservation and are not considered for coverage under the Oceanside Subarea Plan: Sandy beach tiger beetle, oblivious tiger beetle, globose dune beetle, Hermes copper butterfly, Quino checkerspot butterfly, California red-legged frog, San Diego horned lizard, northern harrier, long-billed curlew, burrowing owl, tricolored blackbird, Townsend's western big-eared bat, and Pacific pocket mouse. The following animal species were originally evaluated for coverage under the MHCP but are not being considered for coverage under the Oceanside Subarea Plan due to minimal suitable habitat and lack of occurrence in the City: Riverside fairy shrimp, San Diego fairy shrimp, Harbison's dun skipper butterfly, coastal cactus wren, and western bluebird. The following animal species were originally evaluated for coverage under the MHCP but are not being considered for coverage under the Oceanside Subarea Plan: mountain lion and mule deer. No analysis of conservation is provided for these species.

For San Diego thorn-mint, San Diego ambrosia, thread-leaved brodiaea, Blochman's dudleya, sticky dudleya, San Diego barrel cactus, Orcutt's hazardia, Nuttal's lotus, and Nuttal's scrub oak, net habitat conserved is equivalent to or greater than the planned conservation under the MHCP Subregional Plan for Oceanside. For Del Mar Mesa sand aster, cliff spurge, and San Diego Marsh Elder, the net habitat conserved is less than the planned conservation under the MHCP Subregional Plan for Oceanside.

For Del Mar Mesa sand aster and cliff spurge, the reduction in net conservation is primarily a result of the reduction of coastal sage scrub habitat on sandstone substrates.

The SAP provides for conservation of substantially less suitable habitat than originally proposed under the MHCP for these species. The species-specific conservation analysis for these two species has determined that the SAP does not meet the take authorization requirements for coverage. The minor difference in habitat conservation for San Diego marsh-elder is reflection of mapping differences between the MHCP analysis and the SAP analysis.

With the exception of Blochman's dudleya and sticky dudleya, the net conservation of known species occurrence points for all plant species proposed for coverage is equivalent to or greater than the planned conservation under the MHCP Subregional Plan for Oceanside. For Blochman's dudleya, net point conservation was reduced by one point due to preserve planning area revisions. For sticky dudleya, net point conservation was reduced by one point and the total number of occurrence points in the City increased from 25 to 29.

For the proposed covered animal species, net conservation can be summarized by ecological community. The main ecological communities occurring in Oceanside include coastal sage scrub, riparian, and lagoon. Additionally, several species are considered generalists and will utilize a variety of ecological communities. A summary of the net conservation for these ecological communities is provided below.

The coastal sage scrub ecological community includes the following proposed covered animal species: orange-throated whiptail, coastal California gnatcatcher, southern California rufous-crowned sparrow, Bell's sage sparrow, Steven's kangaroo rat (with grasslands), and northwestern San Diego pocket mouse. Net habitat conservation for these species under the SAP is greater than the planned conservation under the MHCP Subregional Plan for Oceanside. As shown in Table A-2, the total acreage of habitat for the coastal sage scrub species in the City has decreased but the net habitat conservation has increased, which is indicative of development occurring outside the preserve planning areas and conservation occurring within the preserve planning areas in accordance with the SAP. Similarly, the net conservation of known species occurrence points for coastal sage scrub animal species proposed for coverage is equivalent to or greater than the planned conservation under the MHCP Subregional Plan for Oceanside.

The riparian ecological community includes the following proposed covered animal species: western spadefoot toad, arroyo toad, southwestern pond turtle, Cooper's hawk, American peregrine falcon (with estuarine open water and marsh), southwestern willow flycatcher, least Bell's vireo, and yellow-breasted chat. Oceanside supports several important riparian ecological community areas, most notably the San Luis Rey River corridor, Pilgrim Creek, Loma Alta Creek, and Buena Vista Creek.

The conservation analysis for riparian species has been revised substantially to incorporate the effects of the U.S. Army Corps of Engineers (ACOE) Flood Control Project on the San Luis Rey River. The ACOE Flood Control Project is an approved project designed to provide improved flood flow conveyance through the lower San Luis Rey River corridor, from College Boulevard to the Pacific Ocean. The project includes the clearing and maintenance of a main channel and periodic vegetation maintenance within the floodplain. To reflect this project, the SAP reclassified the main channel as natural floodchannel (from riparian vegetation) and removed the main channel and the floodplain maintenance areas from the focused planning area. Consistent with the MHCP, all wetland communities are assumed conserved based on the no net loss of wetlands policy; however, the revisions to the analysis resulted in the conservation of more natural floodchannel and less riparian forest, riparian scrub, and freshwater marsh.

In addition to the changes to the riparian habitat conservation analysis described above, the update to the species database yielded substantial changes to species occurrence data for riparian bird species, most notably southwestern willow flycatcher, least Bell's vireo, and yellow-breasted chat. Despite the reduction in conservation of riparian habitat under the SAP, the known occurrence points for these species have increased substantially since the Subregional Plan was prepared and the planned point conservation for these species has increased.

The lagoon ecological community includes the following proposed covered animal species: California brown pelican, white-faced ibis, osprey, light-footed clapper rail, western snowy plover, elegant tern, California least tern, Belding's savannah sparrow, and large-billed savannah sparrow. Similar to the conservation assumption for riparian ecological communities, all lagoon habitats are assumed to be conserved based on the no net loss of wetlands policy. Compared to the Subregional Plan, habitat conservation for lagoon species was reduced slightly due to reclassifying habitat near the mouth of the San Luis Rey as a result of the ACOE Flood Control Project. Species occurrence point

conservation for lagoon species under the SAP is equivalent to the Subregional Plan except for species foraging points of Osprey and California least tern, which were each reduced by one occurrence due to the San Luis Rey modifications.

Proposed covered animals species known to use a variety ecological communities include: golden eagle and San Diego black-tailed jackrabbit. Habitat conservation for these species under the SAP is greater than was planned under the Subregional Plan, and point conservation for these species is equivalent under the SAP.

A.4 Species Conservation Analysis and Conditions of Coverage

The following provides the conditions of coverage and conservation analysis for the plant and animal species that the City of Oceanside is proposing obtain take authorization for under the Oceanside Subarea Plan (see Table 3-4). The conditions of coverage as established under the MHCP must be met in order for the City to obtain take authorization. For each species, the basis for the take authorization is provided by the conservation and impact analyses.

San Diego Thorn-mint
Acanthomintha ilicifolia
MHCP Narrow Endemic

MHCP Conditions of Coverage

1. The major populations and critical locations of San Diego thorn-mint in Carlsbad and in San Marcos must be conserved at a level consistent with the critical location policy and managed as part of the preserve system.

2. Fire management plans must be implemented for all conserved populations to protect them from frequent or high-intensity fires and fire suppression activities. Fire management plans should include emergency access plans for conserved areas to protect populations from fires and disturbances associated with fire suppression.

3. As part of the project review process (e.g., CEQA) for individual projects within the MHCP area, a qualified biologist must survey for this species in all potential habitat areas.

4. The MHCP Narrow Endemic Policy must be applied to any populations of this species, including those already known and any found in the future.

5. Declining populations must be enhanced, and damaged habitat restored, if determined necessary through monitoring.

6. If not already established in the region by another entity, the MHCP management program must establish a seed bank as a guarantee against extinction and to provide source material for conservation and research activities. A seed bank must be established within 15 years of permit issuance. Collections should be based on established guidelines and subject to seed availability. Collected seed should be stored at an established seed bank facility (e.g., Rancho Santa Ana Botanic Garden or San Diego Wild Animal Park).

7. All species-specific monitoring and management identified in the MHCP Monitoring and Management Plan shall be implemented.

Subarea Plan Conditions of Coverage

1. The long-term preserve management plan shall provide area specific management directives (ASMDs) for the two known populations of San Diego thorn-mint in Oceanside, including specific management measures to protect against detrimental edge effects from adjacent development, recreational impacts and other direct and indirect impacts.

Conservation Analysis

Conserved Habitat

Suitable habitat for this species considered to be coastal sage scrub, chaparral, and grassland on marine sandstone, gabbro, or clay derived soils. A total of 950 acres out of

the total 1,132 acres of suitable habitat (84%) would be conserved in the City of Oceanside.

Conserved Points / Populations

There are a total of two known localities for this species in the City of Oceanside. There are no designated major populations or critical locations for this species in the City. Two out of two (95%) of the points have been conserved. Both of these points occur in the Darwin-Taylor area.

Management and Monitoring Measures

The two known points occur within an area designated as a preserve and will be managed and monitored according to MHCP and Subarea Plan specifications.

Special Considerations

As an annual, San Diego thorn-mint populations are susceptible to annual fluctuations in temperature, rainfall, and other environmental factors. Consequently, this species may be missed during a poor survey year. San Diego thorn-mint is an insect-pollinated outcrosser; seeds of this species may be dispersed by animal vectors. San Diego thorn-mint appears to be susceptible to damage by fire and soil surface disturbance.

Impact Analysis

All known points within the City are conserved by the subarea plan. Impacts to any newly discovered locations would be limited by the narrow endemic policy. Approximately 147 acres out of the total 896 acres of suitable habitat (16%) may be subject to impacts outside preserve areas.

Basis of Take Authorization

The Subarea Plan meets the take authorization for this species due to: conservation of the two known localities in the City, conservation of 84% of suitable habitat, application of the narrow endemic policy to known and newly discovered occurrences, and application

of MHCP management and monitoring measures. Coverage of this species in Oceanside is contingent upon the cities of Carlsbad, Encinitas, Escondido, San Marcos, and Vista meeting all Section 10 (a), NCCP, and MHCP criteria within their boundaries.

San Diego Ambrosia
Ambrosia pumila
MHCP Narrow Endemic

MHCP Conditions of Coverage

1. The major population and critical location near Mission Boulevard in east Oceanside must be conserved at a level consistent with the critical location policy and managed as part of the preserve system.

2. As part of the project review process (e.g., CEQA) for individual projects within the MHCP area, a qualified biologist must survey for this species in all potential habitat areas.

3. Fire management plans must be implemented for all conserved populations to protect them from frequent or high-intensity fires and fire suppression activities.

4. The MHCP Narrow Endemic Policy must be applied to any populations of this species, including those already known and any found in the future.

5. Declining populations must be enhanced, and damaged habitat restored, if determined necessary through monitoring. Enhancement may include introduction of plant materials to existing populations, while restoration may include site-specific habitat improvement actions. Unless analyses determine that there is no significant genetic variation between populations, introduced plant materials must be from the parental population or a population in proximity.

6. All species-specific monitoring and management identified in the MHCP Monitoring and Management Plan shall be implemented.

Conservation Analysis

Conserved Habitat

Suitable habitat for this species considered to be coastal sage scrub and grassland. A total of 1,352 acres out of the total 2,429 acres of suitable habitat (56%) would be conserved in the City of Oceanside. An estimated 719 acres (60%) of coastal sage scrub and 633 acres (51%) of grassland will be conserved throughout the City.

Conserved Points / Populations

There are a total of three known localities for this species in the City of Oceanside. Please refer to Section 3 for figures demonstrating species locations. One of these populations, located near Mission Avenue, is designated a major population and critical location for this species in the City. Three out of three (95%) of the points will be conserved.

Management and Monitoring Measures

The known points occur within designated preserves and will be managed and monitored according to MHCP and Subarea Plan specifications.

Special Considerations

In part, San Diego ambrosia is a perennial herb that blooms in late summer and fall. This species reproduces asexually through rhizomes and is wind-pollinated. Seeds may be dispersed by animals. San Diego ambrosia may be vulnerable to fire and competition from other plants, but appears to be somewhat tolerant of soil surface disturbance.

Impact Analysis

All known points within the City are conserved by the subarea plan. Impacts to any newly discovered locations would be limited by the narrow endemic policy. Approximately 1,077 acres out of the total 2,429 acres of suitable habitat (44%) may be subject to impacts outside preserve areas.

Basis of Take Authorization

The Subarea Plan meets the take authorization for this species due to: conservation of three of three known localities in the City, conservation of 56% of suitable habitat, application of the narrow endemic policy to known and newly discovered occurrences, and application of MHCP management and monitoring measures.

Thread-leaved Brodiaea
Brodiaea filifolia
MHCP Narrow Endemic

MHCP Conditions of Coverage

1. The major populations and critical locations of thread-leaved brodiaea in Oceanside, Carlsbad, and San Marcos must be conserved at a level consistent with the critical location policy and managed as part of the preserve system, regardless of the timing or method used to permit take for individual projects or locations.

2. The MHCP Narrow Endemic Policy must be applied to any populations of this species, including those already known and any found in the future.

3. Watershed management plans must be implemented to avoid or minimize adverse changes to vernal pool watersheds.

4. Fire management plans must be implemented for all conserved populations to protect them from frequent or high-intensity fires and fire suppression activities.

5. Declining populations must be enhanced, and damaged habitat restored, if determined necessary through monitoring. Enhancement may include introduction of plant materials (e.g., corms) to existing populations, while restoration may include site-specific habitat improvement activities. Unless analyses determine that there is no significant genetic variation between populations, introduced plant materials must be from the parental population or a population in proximity.

6. All species-specific monitoring and management identified in the MHCP Monitoring and Management Plan shall be implemented.

Conservation Analysis

Conserved Habitat

Suitable habitat for this species is considered to be grasslands and vernal pools on clay soils. A total of 135 acres out of the total 177 acres of suitable habitat (76%) would be conserved in the City of Oceanside. Thread-leaved brodiaea is restricted to mesic areas of grassland habitat. Thus, this species has a specialized micro-habitat within its suitable habitats and the analysis is not exclusively habitat based.

Conserved Points / Populations

There are a total of 54 known localities for this species in the City of Oceanside. The locations in the Darwin area and Mesa-El Camino area are designated major populations and critical locations for this species in the City. A total of 50 out of 54 (93%) of the points will be conserved.

Management and Monitoring Measures

Suitable habitat and occurrences within preserves would be managed and monitored according to MHCP and Subarea Plan specifications.

Special Considerations

Thread-leaved brodiaea is a perennial herb that is generally associated with wetlands, wetland edges, and swales. This herb reproduces asexually by producing corm offsets. Flowering of corm species is dependent on climatic conditions so this species does not necessarily bloom every year. Thread-leaved brodiaea is likely pollinated by insects, such as bees, and seeds are apparently self-dispersed. This species may be vulnerable to fire damage and changes in hydrology.

Impact Analysis

Although 50 of the known point locations of this species will be conserved, 4 (7%) may be impacted. Impacts to any newly discovered locations would be limited by the narrow endemic policy. Approximately 42 acres out of the total 129 acres of suitable habitat (24%) may be subject to impacts outside preserve areas.

Basis of Take Authorization

The Subarea Plan meets the take authorization for this species due to: conservation of 50 of 54 known localities in the City, conservation of 76% of suitable habitat, application of the narrow endemic policy to known and newly discovered occurrences, and application of the management and monitoring measures. Coverage of this species in Oceanside is contingent upon the cities of Carlsbad and San Marcos meeting all Section 10 (a), NCCP, and MHCP criteria within their boundaries.

Del Mar Mesa Sand Aster
Corethrogyne filaginifolia var. *linifolia*
MHCP Narrow Endemic

MHCP Conditions of Coverage

1. Fire management plans must be implemented for all conserved populations to promote biological goals (e.g., regeneration) while protecting individual plants and habitat from frequent fires and fire suppression activities. Fire management plans should include emergency access plans for conserved areas to protect populations from fires and disturbances associated with fire suppression.

2. The MHCP Narrow Endemic Policy must be applied to any populations of this species, including those already known and any found in the future.

3. Declining populations must be enhanced, and damaged habitat restored, if determined necessary through monitoring. Enhancement may include introduction of plant materials to existing populations, while restoration may include site-specific habitat improvement activities. Unless analyses determine that there is

no significant genetic variation between populations, introduced plant materials must be from the parental population or a population in proximity.

4. All species-specific monitoring and management identified in the MHCP Monitoring and Management Plan shall be implemented.

Conservation Analysis

Conserved Habitat

Suitable habitat for this species is considered to be coastal sage scrub or chaparral (including southern maritime chaparral) on sandstone substrates. A total of 371 acres out of the total 420 acres of suitable habitat (88%) would be conserved in the City of Oceanside. An estimated 719 (60%) of coastal sage scrub and 19 acres (43%) of chaparral would be conserved by the Subarea Plan. This is substantially lower (by approximately 100 acres) than the proposed conservation under the MHCP.

Conserved Points / Populations

There is one known locality for this species in the City of Oceanside. Refer to Section 3 for figures demonstrating species locations. This population is not designated a major population or critical location for this species in the City. The only known point (95%) will be conserved.

Management and Monitoring Measures

The point location and suitable habitat within preserves would be managed and monitored according to MHCP and Subarea Plan specifications.

Special Considerations

Del Mar Mesa sand aster is a perennial herb that blooms in late summer and early fall. This species appears to be insect-pollinated, primarily by bees and butterflies. Seeds are presumably both wind- and animal-dispersed. Changes to the natural fire regime appear

to the primary threat to Del Mar Mesa sand aster; concurrently, this species appears to be somewhat tolerant of soil surface disturbance.

Del Mar Mesa sand aster is actually indistinct from the more widespread *Lessingia filaginifolia* var. *filaginifolia* based on current taxonomic information; therefore, the USFWS withdrew a proposal to list this species as threatened under the federal Endangered Species Act.

Impact Analysis

The only known point within the City is conserved by the subarea plan. Impacts to any newly discovered locations would be limited by the narrow endemic policy. Approximately 46 acres out of the total 354 acres of suitable habitat (12%) may be subject to impacts outside preserve areas.

Basis of Take Authorization

The Subarea Plan does not meet the take authorization for this species because of the overall loss of suitable habitat in the City since the MHCP and the substantial reduction in proposed conservation of suitable habitat under the SAP.

Blochman's Dudleya
Dudleya blochmaniae ssp. *blochmaniae*

MHCP Conditions of Coverage

1. The major population and critical location of Blochman's dudleya in Oceanside must be conserved at a level consistent with the critical location policy and managed as part of the preserve system.

2. Fire management plans must be implemented for all conserved populations to protect them from frequent and high-intensity fires and fire suppression activities.

3. Declining populations must be enhanced, and damaged habitat restored, if determined necessary through monitoring. Enhancement may include introduction of plant materials to existing populations, while restoration may include site-

specific habitat improvement activities. Unless analyses determine that there is no significant genetic variation between populations, introduced plant materials must be from the parental population or a population in proximity.

4. As part of the project review process (e.g., CEQA) for individual projects within the MHCP area, a qualified biologist must survey for this species in all potential habitat areas.

5. All species-specific monitoring and management identified in the MHCP Monitoring and Management Plan shall be implemented.

Conservation Analysis

Conserved Habitat

Suitable habitat for this species is considered to be coastal bluff scrub (although this is not mapped in the City of Oceanside) and coastal sage scrub in primarily rocky or clay soils. A total of 68 acres out of the total 76 acres of suitable habitat (89%) would be conserved in the City of Oceanside. This species has a specialized micro-habitat within these suitable habitats; therefore, the analysis is not exclusively habitat based.

Conserved Points / Populations

There are three known localities for this species in the City of Oceanside. One of these populations, located at Lawrence Canyon, is a designated major population and critical location for this species in the City. One out of three (17%) of the points will be conserved.

Management and Monitoring Measures

The point location and suitable habitat within preserves would be managed and monitored according to MHCP and Subarea Plan specifications.

Special Considerations

Blochman's dudleya is a perennial herb. This species is an insect-pollinated outcrosser with self-dispersed seeds. Insect pollinators may include bees and bee flies. Blochman's Dudleya may be vulnerable to fire as well as fire suppression activities.

Impact Analysis

Although one of the known point locations of this species will be conserved, two (83%) may be impacted. Approximately 8 acres out of the total 76 acres of suitable habitat (11%) may be subject to impacts outside preserve areas.

Basis of Take Authorization

The Subarea Plan does not currently meet the take authorization requirements for this species; however, the species would be considered covered if the major population and critical location of the species at Lawrence Canyon is preserved and managed as part of the preserve system. Coverage of this species in Oceanside is contingent upon Carlsbad meeting all Section 10 (a), NCCP, and MHCP criteria within its boundaries.

Sticky Dudleya
Dudleya viscida

MHCP Conditions of Coverage

1. The major population and critical location at the San Luis Rey River in Oceanside must be conserved at a level consistent with the critical location policy and managed as part of the preserve system.

2. Fire management plans must be implemented for all conserved populations to protect them from frequent and high-intensity fires and fire suppression activities. If determined necessary to maintain the population, develop fire management guidelines within conserved areas that limit fire frequency and emergency access.

3. All species-specific monitoring and management identified in the MHCP Monitoring and Management Plan shall be implemented.

Conservation Analysis

Conserved Habitat

Suitable habitat for this species is considered to be coastal sage scrub or chaparral. A total of 739 acres out of the total 1,240 acres of suitable habitat (60%) would be conserved in the City of Oceanside. This species has a specialized micro-habitat within these suitable habitats; therefore, the analysis is not exclusively habitat based.

Conserved Points / Populations

There are 29 known localities for this species in the City of Oceanside. The locations around the San Luis Rey and Lawrence Canyon are a designated major population and critical location for this species in the City. A total of 18 out of 29 (63%) of the points will be conserved.

Management and Monitoring Measures

The point location and suitable habitat within preserves would be managed and monitored according to MHCP and Subarea Plan specifications.

Special Considerations

Sticky dudleya is a perennial herb. This species is pollinated by insects, such as bees and bee flies. Seeds appear to be self-dispersed. Sticky dudleya may be susceptible to fire in addition to disturbance caused by fire suppression activities.

Impact Analysis

Although 18 of the known point locations of this species will be conserved, 11 (37%) may be impacted. Approximately 502 acres out of the total 1,240 acres of suitable habitat (40%) may be subject to impacts outside preserve areas.

Basis of Take Authorization

The Subarea Plan does not currently meet the take authorization requirements for this species; however, the species would be considered covered if the major population and critical location of the species at the San Luis Rey is preserved and managed as part of the preserve system.

Cliff Spurge
Euphorbia misera

MHCP Conditions of Coverage

1. Fire management plans must be implemented for all conserved populations to protect them from frequent and high-intensity fires and fire suppression activities. If determined necessary to maintain the population, develop fire management guidelines within conserved areas that limit fire frequency and emergency access.

2. All species-specific monitoring and management identified in the MHCP Monitoring and Management Plan shall be implemented.

Conservation Analysis

Conserved Habitat

Suitable habitat for this species is considered to be coastal scrubs, including coastal sage scrub on sandstone substrates, coastal bluff scrub, and maritime succulent scrub. A total of 362 acres out of the total 413 acres of suitable habitat (88%) would be conserved in the City of Oceanside. This is substantially lower (by approximately 100 acres) than the proposed conservation under the MHCP.

Conserved Points / Populations

There are no known localities in the City of Oceanside.

Management and Monitoring Measures

Suitable habitat within preserves would be managed and monitored according to MHCP and Subarea Plan specifications.

Special Considerations

Cliff spurge is an insect-pollinated shrub with self-dispersed seeds. This species appears to be ill-adapted to fire due as a result of its succulence.

Impact Analysis

There are no known points in the City of Oceanside. Approximately 44 acres out of the total 347 acres of suitable habitat (13%) may be subject to impacts outside preserve areas.

Basis of Take Authorization

The Subarea Plan does not meet the take authorization for this species because of the overall loss of suitable habitat in the City since the MHCP and the substantial reduction in proposed conservation of suitable habitat under the SAP.

San Diego Barrel Cactus
Ferocactus viridescens

MHCP Conditions of Coverage

1. The major population and critical location at Lux Canyon in Encinitas must be conserved at a level consistent with the critical location policy and managed as part of the preserve system.

2. Fire management plans must be implemented for all conserved populations to protect them from frequent or high-intensity fires and fire suppression activities. If determined necessary to maintain the population, develop fire management guidelines within conserved areas that limit fire frequency and emergency access.

3. As part of the project review process (e.g., CEQA) for individual projects within the MHCP area, a qualified biologist must survey for this species in all potential habitat areas. Newly found populations or individuals shall be avoided by the project to the maximum extent feasible, and any individuals that cannot be avoided shall be salvaged and transplanted to a suitable preserve area.

4. All species-specific monitoring and monitoring identified in the MHCP Monitoring and Management Plan shall be implemented.

Conservation Analysis

Conserved Habitat

Suitable habitat for this species is primarily coastal sage scrub. A total of 719 acres out of the total 1,195 acres of suitable habitat (60%) would be conserved in the City of Oceanside.

Conserved Points / Populations

There are no point locations in the database for the City of Oceanside, but a major population was identified in the MHCP north of the San Luis Rey River in Tuley and Benet canyons, which are City-owned lands planned for conservation.

Management and Monitoring Measures

Suitable habitat within preserves would be managed and monitored according to MHCP and Subarea Plan specifications.

Special Considerations

San Diego barrel cactus is a perennial succulent with a fleshy fruit. This species is insect-pollinated with presumably self-dispersed seeds. As a succulent, San Diego barrel cactus appears to be ill-adapted to fire.

Impact Analysis

There are no known points in the City of Oceanside, except for the major population on City land north of the San Luis Rey. Approximately 475 acres out of the total 1,195 acres of suitable habitat (40%) may be subject to impacts outside preserve areas.

Basis of Take Authorization

The Subarea Plan meets the take authorization for this species due to: conservation of 60% of suitable habitat and application of the management and monitoring measures. The major population on City lands north of the San Luis Rey is also planned for conservation.

Orcutt's Hazardia
Hazardia orcuttii
MHCP Narrow Endemic

MHCP Conditions of Coverage

1. The MHCP Narrow Endemic Policy must be applied to any populations of this species, including those already known and any found in the future.

2. Fire management plans must be implemented for all conserved populations to promote biological goals (e.g., regeneration) while protecting individual plants and habitat from frequent or high-intensity fires and fire suppression activities. Develop fire management guidelines within conserved areas that incorporate controlled burns (or other fuel reduction methods in urban areas), while limiting fire frequency and emergency access.

3. Declining populations must be enhanced, and damaged habitat restored, if determined necessary through monitoring. Enhancement may include introduction of plant materials to existing populations, while restoration may include site-specific habitat improvement activities. Unless analyses determine that there is no significant genetic variation between populations, introduced plant materials must be from the parental population or a population in proximity.

4. All species-specific monitoring and management identified in the MHCP Monitoring and Management Plan shall be implemented.

Conservation Analysis

Conserved Habitat

Suitable habitat for this species is chaparral, southern maritime chaparral, and coastal sage scrub. A total of 739 acres out of the total 1,240 acres of suitable habitat (60%) would be conserved in the City of Oceanside.

Conserved Points / Populations

There are no known localities in the City of Oceanside.

Management and Monitoring Measures

Suitable habitat within preserves would be managed and monitored according to MHCP and Subarea Plan specifications.

Special Considerations

Orcutt's hazardia is an insect-pollinated shrub. The seeds are presumably animal-dispersed. Although Orcutt's hazardia appears to be fire-adapted, little is known regarding its fire response mechanism. Although fire-adapted, unnatural fire regimes may negatively affect this species. In addition, Orcutt's hazardia may be susceptible to edge effects and habitat fragmentation.

Impact Analysis

There are no known points in the City of Oceanside. Approximately 502 acres out of the total 1,240 acres of suitable habitat (40%) may be subject to impacts outside preserve areas.

Basis of Take Authorization

The Subarea Plan meets the take authorization for this species due to: conservation of 60% of suitable habitat, application of the narrow endemic policy to known and newly discovered occurrences, and application of the management and monitoring measures. Coverage of this species in Oceanside is contingent upon Encinitas meeting all Section 10 (a), NCCP, and MHCP criteria within its boundaries.

San Diego Marsh-elder
Iva hayesiana

MHCP Conditions of Coverage

1. The major population and critical location along Encinitas Creek in San Marcos must be conserved in accordance with wetland and critical location policies and managed as part of the preserve system.

2. Declining populations must be enhanced, and damaged habitat restored, if determined necessary through monitoring. Enhancement may include introduction of plant materials to existing populations, while restoration may include site-specific habitat improvement activities. Unless analyses determine that there is no significant genetic variation between populations, introduced plant materials must be from the parental population or a population in proximity.

3. All species-specific monitoring and monitoring identified in the MHCP Monitoring and Management Plan shall be implemented.

Conservation Analysis

Conserved Habitat

Suitable habitat for this species is alkali marsh. All 11 acres out of suitable habitat (100%) would be conserved in the City of Oceanside.

Conserved Points / Populations

There are no known points in the City of Oceanside.

Management and Monitoring Measures

Suitable habitat within preserves would be managed and monitored according to MHCP and Subarea Plan specifications.

Special Considerations

San Diego marsh-elder is a perennial sub-shrub. This species is wind-pollinated and the seeds are self-dispersed. Commercially available San Diego marsh-elder has been planted in restoration projects with success in the past.

Impact Analysis

There are no known points in the City of Oceanside. None of the 11 acres of suitable habitat would be considered impacted due to the no-net-loss policy for wetlands.

Basis of Take Authorization

The Subarea Plan meets the take authorization for this species due to: conservation of 100% of suitable habitat and application of the management and monitoring measures. Coverage of this species in Oceanside is contingent upon the cities of Encinitas and San Marcos meeting all Section 10 (a), NCCP, and MHCP criteria within their boundaries.

Nuttall's Lotus
Lotus nuttallianus
MHCP Narrow Endemic

MHCP Conditions of Coverage

1. The major population and critical location along the San Luis Rey River in Oceanside and at the San Elijo Lagoon in Encinitas must be conserved at a level

consistent with the critical location policy and managed as part of the preserve system.

2. The MHCP Narrow Endemic Policy must be applied to any populations of this species, including those already known and any found in the future.

3. If not already established in the region by another entity, the MHCP management program must establish a seed bank as a guarantee against extinction and to provide source material for conservation and research activities. A seed bank must be established within 15 years of permit issuance. Collections should be based on established guidelines and subject to seed availability. Collected seed should be stored at an established seed bank facility (e.g., Rancho Santa Ana Botanic Garden or San Diego Wild Animal Park).

4. Declining populations must be enhanced, and damaged habitat restored, if determined necessary through monitoring. Enhancement may include introduction of plant materials to existing populations, while restoration may include site-specific habitat improvement activities. Unless analyses determine that there is no significant genetic variation between populations, introduced plant materials must be from the parental population or a population in proximity.

5. All species-specific monitoring and management identified in the MHCP Monitoring and Management Plan shall be implemented.

Conservation Analysis

Conserved Habitat

Suitable habitat for this species is considered to be coastal dunes (beach) and coastal scrub (coastal bluff scrub). A total of 4 acres out of the total 44 acres of suitable habitat (9%) would be conserved in the City of Oceanside. A majority of areas mapped as beach are not considered coastal dunes; therefore, the actual conservation of suitable habitat is higher than is reported here.

Conserved Points / Populations

There is one known locality for this species in the City of Oceanside. The locations around the San Luis Rey river mouth is designated major population and critical location for this species in the City. A total of 1 out of 1 (80%) of the points will be conserved.

Management and Monitoring Measures

Suitable habitat and known localities within preserves would be managed and monitored according to MHCP and Subarea Plan specifications.

Special Considerations

As an annual, Nuttall's lotus germinates under certain climatic conditions, and population sizes may fluctuate from year to year. Nuttall's lotus is insect-pollinated and seeds may be self-dispersed, although little is known regarding this species' seed dispersal mechanism. In addition, Nuttall's lotus requires specific hydrological conditions.

Impact Analysis

Up to 20% of the known location could be impacted in the City of Oceanside. Approximately 40 acres out of the total 44 acres of suitable habitat (91%) may be subject to impacts outside preserve areas. Much of this acreage is non-dune beach, which would not be considered suitable habitat for the species.

Basis of Take Authorization

The Subarea Plan does not currently meet the take authorization requirements for this species; however, the species would be considered covered if the major population and critical location of the species at the mouth of the San Luis Rey is preserved and managed as part of the preserve system.

Nuttall's Scrub Oak
Quercus dumosa

MHCP Conditions of Coverage

1. The major population and critical location at Agua Hedionda in Carlsbad must be conserved at a level consistent with the critical location policy and managed as part of the preserve system.

2. Fire management plans must be implemented for all conserved populations to promote biological goals (e.g., regeneration), while protecting individual plants and habitat from frequent or high-intensity fires and fire suppression activities. Develop fire management guidelines within conserved areas that incorporate controlled burns (or other fuel reduction methods in urban areas), while limiting fire frequency and emergency access.

3. All species-specific monitoring and management identified in the MHCP Monitoring and Management Plan shall be implemented.

Conservation Analysis

Conserved Habitat

Suitable habitat for this species includes chaparral and coastal sage scrub. A total of 739 acres of the total 1,240 acres of suitable habitat (60%) would be conserved in the City of Oceanside.

Conserved Points / Populations

There are no known localities in the City of Oceanside.

Management and Monitoring Measures

Suitable habitat within preserves would be managed and monitored according to MHCP and Subarea Plan specifications.

Special Considerations

Nuttall's scrub oak is a wind-pollinated evergreen shrub. Seeds are both self- and animal-dispersed. Nuttall's scrub oak can form hybrids with *Quercus berberidifolia*. The inland distribution of Nuttall's scrub oak remains unclear although its coastal distribution is relatively well-defined. This species is fire-adapted and resprouts from buried root crowns after fire. Given its reliance on fire for recruitment and regeneration, disrupted fire regimes may pose a threat to the persistence of Nuttall's scrub oak

Impact Analysis

There are no known points in the City of Oceanside. Approximately 502 acres out of the total 1,240 acres of suitable habitat (40%) may be subject to impacts outside preserve areas.

Basis of Take Authorization

The Subarea Plan meets the take authorization for this species due to: conservation of 60% of suitable habitat and application of the management and monitoring measures. Coverage of this species in Oceanside is contingent upon the cities of Carlsbad and Encinitas meeting all Section 10 (a), NCCP, and MHCP criteria within their boundaries.

Salt Marsh Skipper Butterfly
Panoquina errans

MHCP Conditions of Coverage

1. Maintain natural tidal flushing of lagoons to maintain sufficient saltgrass habitat for the species. Periodic dredging may be required to open lagoon mouths, as indicated by results of monitoring.

Conservation Analysis

Conserved Habitat

Suitable habitat for this species includes all salt marsh and saltpan vegetation communities. There is no modeled suitable habitat for this species within the City of Oceanside; however, the Buena Vista Lagoon does provide potentially suitable habitat for this species.

Conserved Points / Populations

There are no known localities in the City of Oceanside.

Management and Monitoring Measures

There are no known localities or modeled suitable habitat for this species in the City of Oceanside. Therefore, no management and monitoring measures are proposed.

Special Considerations

Salt marsh skipper caterpillars forage at night. They are therefore susceptible to tramping by humans, as well as vehicles, during the nighttime. Salt marsh skippers may also be vulnerable to edge effects.

Impact Analysis

There are no known localities or modeled suitable habitat for this species in the City of Oceanside.

Basis of Take Authorization

There are no known localities or modeled suitable habitat for this species in the City of Oceanside; however, the species has the potential to occur in the Buena Vista Lagoon. Coverage of this species in Oceanside is contingent upon the cities of Carlsbad and Encinitas meeting all Section 10 (a), NCCP, and MHCP criteria within their boundaries.

Western Spadefoot Toad
Scaphiopus [Spea] hammondii

MHCP Conditions of Coverage

1. As part of the project review process (e.g., CEQA) for individual projects, a qualified biologist will survey, using approved survey methods, all areas of the property containing potentially suitable breeding habitat (ephemeral ponds, vernal pools, washes, riparian areas) or upland foraging habitat (open scrublands, woodlands, grasslands) that is contiguous with potential breeding habitat. Surveys will also identify any known or likely movement corridors used by toads, including any existing road crossings or culverts, bridges, or other features used by dispersing toads. They will also identify locations where road undercrossings and fencing could be created to benefit toads by reducing roadkill on either new or existing roadways. Surveys shall occur prior to any proposed impact both inside and outside of the FPA. Surveys shall be conducted when impacts to western spadefoot toad could occur as a result of direct or indirect impacts by placement of the project in or adjacent to occupied habitat or through creation of suitable conditions for nonnative predators (e.g., bullfrogs). All pertinent agencies (including CDFG, USFWS, and County of San Diego Vector Control Program) will be informed about the location of any toad populations.

2. Although western spadefoot toads is not an MHCP Narrow Endemic, all currently known or future discovered populations will be treated consistent with requirements of the Narrow Endemics Policy, including the following: (a) maximum avoidance of impacts, to the degree feasible while maintaining reasonable use of the property; (b) for unavoidable impacts, species-specific mitigation designed to minimize adverse effects to species viability and to contribute to species recovery; and (c) no more than 5% gross cumulative loss inside the FPA or 20% gross cumulative loss outside the FPA.

3. Projects having direct or indirect impacts to the western spadefoot toad shall adhere to the following measures to avoid or reduce impacts:

a) The removal of breeding pools, streams, and adjacent dispersal/adult burrowing areas shall be avoided to the maximum extent practicable. Determination of adequate avoidance and minimization of impacts shall be consistent with Sections 3.6 and 3.7 of the MHCP plan. Deviations from these guidelines shall require written concurrence of the USFWS and CDFG. For temporary impacts, the work site shall be returned to preexisting contours and revegetated with appropriate native species. All revegetation shall occur at the ratios specified in Section 4.3 of the MHCP plan. All revegetation plans shall be prepared and implemented consistent with Appendix C (Revegetation Guidelines) and shall require written concurrence of the USFWS and CDFG. If written objections are not provided by the wildlife agencies within 30 days of receipt of written request for concurrence by the local jurisdiction, then the deviation may proceed as approved by the local agency. The wildlife agencies shall provide written comments specifying wildlife agency concerns.

b) Projects proposing impacts to occupied habitat during the breeding season (January through May) shall be required to trap emerged adults and relocate them to appropriate, conserved habitat areas within the FPA. Trapping of larvae (tadpoles) and juveniles shall be required if they are found in breeding pools. Captured larvae or juveniles shall be relocated to appropriate, conserved habitat areas within the FPA.

c) Projects shall be carried out consistent with Appendix B (Standard Best Management Practices).

d) Project-construction vehicle travel shall be limited to daylight hours, as western spadefoot toad use roadways primarily during nighttime hours. New roads near occupied toad habitat shall include provisions for barriers to minimize traffic mortality. Culverts and fencing designed to funnel toads through culverts shall be included within the road design to allow safe crossings between potential habitat areas (including both wetland breeding areas and upland foraging areas). Culverts and fences will be located to maximize value to toads, unless this is totally precluded by engineering constraints, in which case the biologically most beneficial design that is feasible will be implemented.

e) Projects that cannot be conducted without placing equipment or personnel in sensitive habitats shall be timed to avoid the breeding season of the western spadefoot toad when eggs and tadpoles are present.

f) Silt fencing/drift fence and pitfall traps shall be installed around the impact area adjacent to occupied western spadefoot toad habitat at least 21 days prior to impact to minimize access by toads and to allow for removal of western spadefoot toad from the impact area. A biologist experienced with the identification, handling, and ecology of toads shall implement and oversee proper execution of the toad exclusion fencing, relocation efforts, and monitoring. The exclusion fencing shall be maintained until the completion of all construction activities within or adjacent to occupied western spadefoot toad habitat. For the duration of construction, the enclosure shall be surveyed on a daily basis early in the morning and any toads that may have breached the fencing shall be relocated.

g) Bullfrogs and other exotic species that prey upon or displace toads should be removed from the site as part of an ongoing management plan.

4. Western spadefoot toad populations within the FPA shall be managed to provide adjacent adult burrowing habitat, control of predatory or competing nonnative species such as bullfrogs and mosquito-fish, and control of water pollution and nonnative vegetation in the breeding pools and adjacent burrowing habitat. Activities that may degrade habitat value will be precluded, including draining of wetlands, mosquito control, livestock grazing, off-road vehicle activity, and degradation of water quality. Management will actively coordinate with any pertinent Vector Control programs to develop methods to minimize impacts on spadefoot toads and their habitat, such as changing the timing of any pesticide spraying or use of other alternative control techniques.

5. Wetlands that contain suitable, unoccupied breeding habitat areas within the FPA will be delineated and protected from development or uses that negatively affect runoff and ponding processes to ensure adequate ponding during normal (e.g., not El Niño) rain years. These areas shall be the recipient areas for relocation efforts for approved projects that impact occupied western spadefoot toad habitat.

6. Any wetlands created for mitigation for impacts to wetlands occupied by western spadefoot toads must be demonstrated to be capable of supporting the species prior to impacts, to ensure no net loss of occupied breeding habitat.

Conservation Analysis

Conserved Habitat

Suitable habitat for this species includes freshwater, natural flood channel/streambed, and freshwater marsh aquatic vegetation communities, as well as all riparian vegetation communities. All 1,403 acres of suitable aquatic and riparian habitat (100%) would be conserved in the City of Oceanside.

Conserved Points / Populations

There are no known localities in the City of Oceanside.

Management and Monitoring Measures

Suitable habitat within preserves would be managed and monitored according to MHCP and Subarea Plan specifications.

Special Considerations

Western spadefoot toads require both aquatic habitat for breeding and adjacent upland habitat for aestivating. During dispersal toads are susceptible to vehicular collisions; however, when properly fenced to direct toads, culverts and other road undercrossings have been an effective means avoiding such collisions. Other potential threats to this species include edge effects and mosquito control measures.

Impact Analysis

There are no known points in the City of Oceanside. In addition, none of the suitable aquatic and riparian habitat would be considered impacted due to the no-net-loss policy for wetlands.

Basis of Take Authorization

The Subarea Plan meets the take authorization for this species due to: conservation of 100% of suitable habitat and application of the management and monitoring measures.

Arroyo Toad
Bufo californicus

MHCP Conditions of Coverage

1. As part of the project review process (e.g., CEQA) for individual projects within the MHCP area, a qualified biologist possessing a Section 10(a)1(A) research permit for this species must survey all areas of the property containing potentially suitable breeding habitat for arroyo toads, including but not limited to survey areas included on the MHCP Database Records Map, which shows potential suitable arroyo toad habitat, or upland foraging habitat that is contiguous with potential breeding habitat. Surveys shall be conducted by a qualified biologist using approved survey protocol. Surveys shall occur prior to any proposed impact as part of the project review process (e.g., CEQA process) both within and outside of the FPA. Surveys shall be conducted when impacts to arroyo toad could occur as a result of indirect impacts by placement of the project adjacent to occupied habitat or through creation of suitable conditions for nonnative predators (e.g., bullfrogs, freshwater game fish).

2. Any newly found population with more than 25 adults shall be treated consistent with the Critical Population Policy (Appendix D), including (a) maximum avoidance of impacts, to the degree feasible while maintaining reasonable use of the property; (b) for unavoidable impacts, species-specific mitigation designed to result in no net loss in species viability and to contribute to species recovery; and (c) no more than 5% gross cumulative loss, regardless of location inside or outside of the FPA.

3. Arroyo toad populations within the FPA shall be managed to provide adjacent adult burrowing habitat, control of predatory or competing nonnative species such

as bullfrogs and mosquito-fish, and control of water pollution and nonnative vegetation in the breeding pools and adjacent burrowing habitat. Activities that may degrade habitat value will be precluded, including draining of wetlands, mosquito control, livestock grazing, off-road vehicle activity, and degradation of water quality. Management will actively coordinate with any pertinent Vector Control programs to develop methods to minimize impacts on arroyo toads and their habitat, such as changing the timing of any pesticide spraying or use of other alternative control techniques.

4. Sufficient upland foraging habitat shall be conserved and managed adjacent to any newly found population to promote continued viability of the population. "Sufficient Upland Foraging Habitat" shall be defined as all natural habitat or agricultural land contiguous with and within 1 kilometer (0.6 mile) of the edge of suitable breeding habitat, excluding habitat patches not expected to be reachable by toads due to intervening development or movement barriers (e.g., large or heavily traveled roads). Conservation of less than 1 kilometer (0.6 mile) of contiguous foraging habitat shall require USFWS and CDFG written concurrence within 30 days of receipt of written request for concurrence by the local jurisdiction.

5. Suitable unoccupied habitat preserved within the FPA shall be managed to maintain or mimic effects of natural fluvial processes (e.g., periodic substrate scouring and deposition) and to maintain suitable low-gradient sandy stream habitat. Applicable Regional Water Quality Control Board criteria shall be adhered to.

6. Natural riparian connections with upstream riparian habitat shall be maintained to ensure linkage to suitable occupied and unoccupied habitat within the MHCP, County MSCP North Segment, and City of San Diego MSCP Subarea Plan.

7. Projects impacting occupied arroyo toad habitat, or potential habitat contiguous with and within 1 kilometer (0.6 mile) of occupied habitat, shall adhere to the following measures to avoid or reduce impacts:

a) The removal of native vegetation and habitat shall be avoided and minimized to the maximum extent practicable. Determination of adequate avoidance and minimization of impacts shall be consistent with Sections 3.6 and 3.7 of the MHCP plan. Deviations from these guidelines shall require written concurrence of the USFWS and CDFG. For temporary impacts, the work site shall be returned to preexisting contours and revegetated with appropriate native species. All revegetation shall occur at the ratios specified in Section 4.3 of the MHCP plan. All revegetation plans shall be prepared and implemented consistent with Appendix C (Revegetation Guidelines) and shall require written concurrence of the USFWS and CDFG. If written objections are not provided by the wildlife agencies within 30 days of receipt of written request for concurrence by the local jurisdiction, then the deviation may proceed as approved by the local agency. The wildlife agencies shall provide written comments specifying wildlife agency concerns.

b) All habitat destroyed that is not in the approved project footprint shall be disclosed immediately to the jurisdictional city, USFWS, and CDFG, and shall be compensated at a minimum ratio of 5:1.

c) Projects shall be carried out consistent with Appendix B (Standard Best Management Practices).

d) Project-construction vehicle travel shall be limited to daylight hours, as arroyo toads use roadways primarily during nighttime hours. New roads adjacent to occupied toad habitat shall include provisions for barriers to minimize traffic mortality. Culverts and fencing designed to funnel toads through culverts shall be included within the road design to allow safe crossings.

e) Projects shall be designed to avoid the placement of equipment and personnel within the stream channel or on sand and gravel bars, banks, and adjacent upland habitats used by arroyo toads.

f) Projects that cannot be conducted without placing equipment or personnel in sensitive habitats shall be timed to avoid the breeding season of the arroyo toad (generally March through August) when eggs and tadpoles are present. To minimize further effects to breeding populations and to reduce sedimentation and

erosion, such projects shall be timed so that work within or near the stream channel is conducted during the dry season when flows are at their lowest or are nonexistent.

g) Silt fencing/drift fence and pitfall traps shall be installed around the impact area adjacent to occupied arroyo toad habitat at least 21 days prior to impact to minimize access by toads and to allow for removal of arroyo toads from the impact area. A permitted biologist experienced with the identification, handling, and ecology of the arroyo toad shall implement and oversee proper execution of the toad exclusion fencing, relocation efforts, and monitoring. The exclusion fencing shall be maintained until the completion of all construction activities within or adjacent to occupied arroyo toad habitat. For the duration of construction, the enclosure shall be surveyed on a daily basis early in the morning, and any toads that may have breached the fencing shall be relocated.

h) Bullfrogs and other exotic species that prey upon or displace arroyo toad shall be removed from the site as part of an ongoing management plan.

i) To minimize injury to or mortality of individual arroyo toads, the USFWS may authorize qualified project biologists to relocate individual arroyo toads to nearby suitable habitat. Authorization will be granted only to jurisdictions with signed implementing agreements and issued permits that cover arroyo toads and will require coordination with the wildlife agencies and written concurrence.

j) Require road projects (including new roads or improvements to existing roads) passing within 1 kilometer (0.6 mile) of known breeding habitats to consider, based on an appropriate, site-specific biological study approved by the wildlife agencies, whether creating underpasses and associated toad fencing would benefit toad populations in the area. Where there would be benefits to allowing toads safe dispersal routes across roads, appropriately designed underpasses and associated toad fencing shall be constructed as part of the project.

Conservation Analysis

Conserved Habitat

Suitable breeding habitat for this species is wetland habitats. Riparian corridors buffered by sufficient upland habitats (e.g., coastal scrub and chaparral) support all life requires for this species. Suitable habitat within the City of Oceanside has not been quantified. All suitable breeding habitat for this species will be conserved under the no-net-loss of wetlands habitat policy.

Conserved Points / Populations

There is one historic locality for this species in the City of Oceanside, along the San Luis Rey corridor in the eastern portion of the City. The centroid for this point does not occur within a preserve planning area and is therefore not considered conserved; however, the San Luis Rey riparian habitat immediately adjacent the point would be 100% conserved.

Management and Monitoring Measures

Suitable habitat within preserves would be managed and monitored according to MHCP and Subarea Plan specifications.

Special Considerations

The breeding season for arroyo toads is generally between March and July but can extend to September. Arroyo toads require both aquatic habitat for breeding and adjacent upland habitat for aestivating. Juvenile toads require basking sites, such as streamside gravel bars, as well as shallow banks for dispersal. Adults will migrate up and downstream in search of suitable breeding habitat. Although tadpoles can be washed significant distances downstream, sudden releases of water from upstream impoundments seriously threaten populations of arroyo toads by flushing eggs and juvenile toads from suitable habitat.

Impact Analysis

The only known point location of this species will be impacted. However, none of the suitable breeding habitat for this species would be considered impacted due to the no-net-loss policy for wetlands.

Basis of Take Authorization

The Subarea Plan does not currently meet the take authorization requirements for this species because it has not established the implementation measures necessary for coverage. The City may obtain take authorization for this species if the City demonstrates that the species-specific conditions described here are satisfied.

Southwestern Pond Turtle
Clemmys marmorata pallida

MHCP Conditions of Coverage

1. As part of the project review process (e.g., CEQA) for individual projects within the MHCP area, a qualified biologist must survey all areas of the property containing or adjacent to suitable aquatic habitat (streams, ponds, riparian, and marsh areas) for this species. Impacts proposed in natural upland vegetation that is contiguous with and within 1,500 feet of potential aquatic habitats may affect turtle nests or hibernating turtles. Consequently, whenever possible, potential suitable habitats within 1,500 feet of the proposed impact area shall be surveyed, unless this adjoining habitat can be demonstrated not to be appropriate for nesting or hibernating. Surveys shall be conducted during the presumed active period (March through October) prior to any proposed impact as part of the project review process (e.g., CEQA process) both within and outside of the FPA. Any report of a pond turtle observed during the initial survey shall require a follow-up intensive trapping study to determine if breeding is occurring. Evidence of breeding shall include individuals representing multiple-year classes, presence of adult male and female turtles, or nest locations.

2. Avoid and minimize impacts to critical breeding locations, including at Buena Vista Lagoon, Escondido Creek, and the San Luis Rey River. Although western pond turtle is not an MHCP Narrow Endemic, all currently known or future discovered populations will be treated consistent with requirements of the Narrow Endemics Policy, including the following: (a) maximum avoidance of impacts, to the degree feasible while maintaining reasonable use of the property; (b) for unavoidable impacts, species-specific mitigation designed to minimize adverse effects to species viability and to contribute to species recovery; and (c) no more than 5% gross cumulative loss inside the FPA or 20% gross cumulative loss outside the FPA.

3. Any identified pond turtle breeding area, including aquatic, riparian, marsh, and associated uplands, shall be delineated and conserved. The breeding area shall be conserved such that the full range of life activities can continue at an equivalent level, preferably through avoidance/minimization of impacts to the site. Sufficient upland nesting/hibernating habitat shall be provided adjacent to occupied turtle habitat on a case-by-case basis and shall require the written concurrence of the USFWS and CDFG within 30 days of receipt of request for written concurrence from the local jurisdiction.

4. Projects having direct or indirect impacts to the southwestern pond turtle shall adhere to the following measures to avoid or reduce impacts:

   a) The removal of native vegetation and habitat shall be avoided and minimized to the maximum extent practicable. Determination of adequate avoidance and minimization of impacts shall be consistent with Sections 3.6 and 3.7 of the MHCP plan. Deviations from these guidelines shall require written concurrence of the USFWS and CDFG. For temporary impacts, the work site shall be returned to preexisting contours and revegetated with appropriate native species. All revegetation shall occur at the ratios specified in Section 4.3 of the MHCP plan. All revegetation plans shall be prepared and implemented consistent with Appendix C (Revegetation Guidelines) and shall require written concurrence of the USFWS and CDFG. If written objections are not provided by the wildlife agencies within 30 days of receipt of written request for concurrence by the local jurisdiction, then the deviation may proceed as approved by the local agency. The

wildlife agencies shall provide written comments specifying wildlife agency concerns.

b) Projects shall be implemented consistent with Appendix B (Standard Best Management Practices).

c) Projects shall avoid or minimize placement of equipment and personnel within the stream and adjacent natural habitats in known turtle locations.

d) If necessary and acceptable to the wildlife agencies, turtles shall be captured and held in an approved facility until the site is restored and acceptable for reintroduction.

e) Individuals found in areas that are determined to be nonbreeding sites may be relocated to unoccupied, appropriate breeding areas within the MHCP preserve.

5. Known breeding populations and areas shall be included in the MHCP monitoring protocol.

Conservation Analysis

Conserved Habitat

Suitable habitat for this species includes freshwater, natural floodchannel/streambed, freshwater marsh aquatic, and all riparian vegetation communities, although this does not include hibernating and nesting habitat in uplands. A total of 1,403 acres (100%) of aquatic and riparian suitable habitat would be conserved in the City of Oceanside. All of the freshwater and riparian habitat areas are conserved in the Subarea Plan.

Conserved Points / Populations

There is one known locality for this species in the City of Oceanside. A total of 1 out of 1 (100%) of the points will be conserved.

Management and Monitoring Measures

Suitable habitat within preserves would be managed and monitored according to MHCP and Subarea Plan specifications.

Special Considerations

Turtles nest in upland habitat adjacent to riparian habitat, bask on logs, rocks, or vegetation mats, and use emergent marsh vegetation for cover. This species may be impacted by disturbances and edge effects if a sufficient upland buffer (at least 1,500 ft) is not maintained.

Impact Analysis

None of the suitable aquatic and riparian suitable habitat would be considered impacted due to the no-net-loss policy for wetlands.

Basis of Take Authorization

The Subarea Plan meets the take authorization for this species due to: conservation of 100% of suitable habitat and application of the management and monitoring measures.

Orange-throated Whiptail
Cnemidophorus hyperythrus beldingi

MHCP Conditions of Coverage

Species-specific conditions are not applicable to this species.

Conservation Analysis

Conserved Habitat

Suitable habitat for this species includes southern coastal bluff scrub chaparral, maritime succulent scrub, coastal sage scrub, southern maritime chaparral, and coastal sage

scrub/chaparral mix vegetation communities. Of the 1,251 acres of suitable habitat, 739 acres (59%) would be conserved in the City of Oceanside.

Conserved Points / Populations

There are six known localities for this species in the City of Oceanside. Three out of six (50%) of the points will be conserved. Refer to Section 3 for figures demonstrating species locations.

Management and Monitoring Measures

The point localities and suitable habitat that occur within designated preserves would be managed and monitored according to MHCP and Subarea Plan specifications.

Special Considerations

Unlike other species of *Cnemiodphorus* lizards, the orange-throated lizard does not reproduce asexually. Whiptails primarily consume termites, but will expand their prey selection where termites are unavailable. One species of termite in particular, *Reticulitermes hesperus*, constitutes the majority of the orange-throated whiptail diet. Although it appears that orange-throated whiptails are not as susceptible to invasion by non-native ants, including the Argentine ant (*Linepithema humile*) and fire ant (*Solenopsis invicta*), as the San Diego horned lizard, non-native ants may still depress the termite prey base for the species in areas subject to edge effects. Whiptails may also be vulnerable to the construction of roads, which may interfere with dispersal.

Impact Analysis

Although 3 of the known point locations of this species will be conserved, 3 (50%) will be impacted. In addition, 512 acres out of the total 1,251 acres of suitable habitat (41%) may be subject to impacts outside preserve areas.

Basis of Take Authorization

The Subarea Plan meets the take authorization for this species due to: conservation of 3 of 6 known localities in the City, conservation of 59% of suitable habitat and application of the management and monitoring measures.

California Brown Pelican
Pelecanus occidentalis californicus
MHCP Obligate Wetland Species

MHCP Conditions of Coverage

No take of individuals, roosts, or nests is permitted for this fully protected species. Preserve management must control access to avoid harassment in roost areas.

Conservation Analysis

Conserved Habitat

Suitable breeding habitat for this species includes estuarine vegetation communities. All 24 acres of suitable habitat (100%) would be conserved in the City of Oceanside. In addition, 100% conservation of pelican habitat is expected outside the preserve areas due to a low potential for impacts and the protection provided by the City's no-net-loss of wetlands policy and state and federal regulations.

Conserved Points / Populations

There are no known points in the City of Oceanside, but the species occurs near San Luis Rey River mouth and Buena Vista Lagoon, which are 100% conserved.

Management and Monitoring Measures

The suitable habitat that occurs within designated preserves would be managed and monitored according to MHCP and Subarea Plan specifications.

Special Considerations

California brown pelicans roost sites are susceptible to human disturbance. In addition, given their high trophic level in the food chain, pelicans are especially vulnerable to bioaccumulations of toxins, such as DDT.

Impact Analysis

There are no known points in the City of Oceanside. In addition, none of the suitable habitat would be considered impacted due to the no-net-loss policy for wetlands.

Basis of Take Authorization

No take of individuals or active nests of this species is allowed for this fully protected species. The Subarea Plan meets the take authorization for habitat used by this species due to: conservation of 100% of suitable habitat and application of the management and monitoring measures.

White-faced Ibis
Plegadis chihi
MHCP Obligate Wetland Species

MHCP Conditions of Coverage

Species-specific conditions are not applicable to this species.

Conservation Analysis

Conserved Habitat

Suitable habitat for this species considered to be freshwater marsh and the upstream brackish water portions of southern coastal salt marsh habitat. All 146 acres of suitable habitat (100%) would be conserved in the City of Oceanside. In addition, 100% conservation of freshwater marsh is expected outside the preserve areas due to a low

potential for impacts and the protection provided by the City's no-net-loss of wetlands policy and state and federal regulations.

Conserved Points / Populations

There are a total of 15 known localities for this species in the City of Oceanside. Refer to Section 3 for figures that demonstrate species locations. A total of 7 out of 15 (47%) of the points occur within designated preserves and are considered conserved.

Management and Monitoring Measures

The point localities and suitable habitat that occur within designated preserves would be managed and monitored according to MHCP and Subarea Plan specifications.

Special Considerations

Although white-faced ibis can occur in brackish water, water must be fresh enough to support tall emergent vegetation, such as cattails and tules, for nesting. This species may be susceptible to the degradation of water quality and human disturbance in breeding areas.

Impact Analysis

Although 7 of the known point locations of this species will be conserved, 8 (53%) will be impacted. None of the suitable wetland habitat would be considered impacted due to the no-net-loss policy for wetlands.

Basis of Take Authorization

The Subarea Plan meets the take authorization for this species due to: conservation of 7 of 15 known localities in the City, conservation of 100% of suitable habitat, and application of the management and monitoring measures.

Cooper's Hawk
Accipiter cooperii

MHCP Conditions of Coverage

1. As part of the project review process (e.g., CEQA) for individual projects within the MHCP area, qualified biologists must survey all potential nesting areas during the nesting season. Surveys shall be conducted when impacts could occur as a result of direct or indirect impacts by placement of a project in or adjacent to suitable habitat. Preserve areas must include 300-foot biological buffers around nest sites where feasible. No direct impact to active nests allowed during the nesting season.

2. Avoid tree pruning activities in or near reserve areas during the breeding season (March 1 through July 31).

Conservation Analysis

Conserved Habitat

Suitable habitat for this species considered to be riparian forest, riparian woodlands, and all oak woodland vegetation communities. All 227 acres of suitable habitat (100%) would be conserved in the City of Oceanside. In addition, 100% conservation of breeding habitat for Cooper's hawk is expected outside the preserve areas due to a low potential for impacts to wetlands and the protection of wetlands provided by the City's no-net-loss of wetlands policy and state and federal regulations.

Conserved Points / Populations

There are a total of 18 known localities for this species in the City of Oceanside. There are no designated critical populations for this species in the City. A total of 11 out of 18 (59%) of the points will be conserved.

Management and Monitoring Measures

The point localities and suitable habitat that occur within designated preserves would be managed and monitored according to MHCP and Subarea Plan specifications.

Special Considerations

Cooper's hawk is threatened by human disturbance near nest sites. Adequate buffers (at least 300 ft) should be established around nests to protect Cooper's hawk breeding activity. In addition, Cooper's hawks have large territory and home ranges, which may make them vulnerable to habitat fragmentation,

Impact Analysis

Although 11 of the known point locations of this species will be conserved, 7 (41%) will be impacted. In addition, none of the suitable habitat for this species would be considered impacted due to the no-net-loss policy for wetlands.

Basis of Take Authorization

The Subarea Plan meets the take authorization for this species due to: conservation of 11 of 18 known localities in the City, conservation of 100% of suitable habitat, and application of the management and monitoring measures. Coverage of this species in Oceanside is contingent upon the cities of Escondido and San Marcos meeting all Section 10 (a), NCCP, and MHCP criteria within their boundaries.

Osprey
Pandion haliaetus
MHCP Obligate Wetlands Species

MHCP Conditions of Coverage

Species-specific conditions are not applicable to this species.

Conservation Analysis

Conserved Habitat

Suitable habitat for this species includes estuarine and freshwater vegetation communities. All 153 acres out of suitable habitat (100%) would be conserved in the City of Oceanside. In addition, 100% conservation of suitable habitat for this species is expected outside the preserve areas due to a low potential for impacts and the protection of wetlands provided by the City's no-net-loss of wetlands policy and state and federal regulations.

Conserved Points / Populations

There are a total of four known localities for this species in the City of Oceanside. Two out of four (50%) of the points occur within preserve planning areas and are considered conserved. Refer to Section 3 for figures demonstrating species locations.

Management and Monitoring Measures

The point localities and suitable habitat that occur within designated preserves would be managed and monitored according to MHCP and Subarea Plan specifications.

Special Considerations

Ospreys inhabit clean water with a sufficient fish prey base. In addition, this species requires suitable roosting and nesting habitat adjacent to foraging grounds. Osprey are especially vulnerable to the degradation of water quality in suitable estuarine and coastal wetland habitat, which is impacted by water quality in upstream wetland habitats as well. Osprey may also be prone to nesting failure where there is human disturbance at nest sites.

Impact Analysis

Although two of the known point locations of this species will be conserved, two (50%) may be impacted. None of the suitable habitat for this species would be considered impacted due to the no-net-loss policy for wetlands.

Basis of Take Authorization

The Subarea Plan meets the take authorization for this species due to: conservation of 2 of 4 known localities in the City, conservation of 100% of suitable habitat, and application of the management and monitoring measures.

Golden Eagle
Aquila chrysaetos

MHCP Conditions of Coverage

No take (including harassment) of individuals or active nests is allowed for this Fully Protected species. The following include the conditions of coverage for habitats used by this species.

1. Maintain a 4,000-foot disturbance avoidance radius around any nest locations, including currently used locations and any historically active nest locations that could be used again in the future, as determined by species experts. Absolute buffers of less than 4,000 feet (but not less than 3,000 feet) may be allowed if topography effectively blocks the line of sight between the nest location and any proposed human development, and provided that the situation prevents any disturbance (including noise, artificial light, recreational access, etc.) from being perceivable by eagles at the nest site, as determined by species experts with experience monitoring golden eagle nesting pairs in San Diego County (e.g., golden eagle researchers at the Wildlife Research Institute [WRI]).

2. Reserve lands within 4,000 feet of nesting locations (including current and historically active locations), or within habitat areas identified as "primary foraging areas" by golden eagle experts (e.g., WRI) must be managed to restrict any activities that could disturb eagles during their normal nesting, loafing,

foraging or other activities (including hiking, mountain biking, or off-road vehicle use). Existing roads that allow access within 4,000 feet of active nests will be closed to the public, including a dirt road in the Del Dios area that passes near the currently occupied nest site.

3. No poisoning of ground squirrels or other wildlife, or other use of pesticides, will be allowed within primary foraging areas or within 4,000 feet of known occupied or historic nests within occupied territories.

Conservation Analysis

Conserved Habitat

Suitable foraging habitat for this species includes coastal sage scrub, coastal sage scrub/chaparral mix, and grassland vegetation communities. Nesting habitat includes rocky cliffs, which are not quantified. A total of 1,352 acres out of the total 2,440 acres of suitable habitat (55%) would be conserved in the City of Oceanside.

Conserved Points / Populations

There are a total of three known localities for this species in the City of Oceanside. The critical grasslands and scrub habitat adjacent to Camp Pendleton is partially conserved. Overall, none of the three known historic points are considered conserved by the Subarea Plan. These are historical data points that are likely no longer extant.

Management and Monitoring Measures

Suitable habitat that occurs within designated preserves would be managed and monitored according to MHCP and Subarea Plan specifications.

Special Considerations

Golden eagles are known to maintain territories in which they nest and forage. Although the species exhibits high nest site fidelity, golden eagles typically have three to four alternate nest sites within their territories. Nest sites are generally located on cliffs in

large trees in open areas. Eagles require extensive foraging areas that can extend up to approximately 30 square miles, but commonly use a "core" foraging area near the nest. Golden eagles are especially susceptible to human disturbance near nest sites, including humans approaching on foot and developing within their viewshed, which has been documented to cause nest abandonment.

Impact Analysis

All three known points within the City and 1,087 acres out of the total 2,440 acres of suitable habitat (45%) may be subject to impacts outside preserve areas.

Basis of Take Authorization

No take of individuals or active nests of this species is allowed for this fully protected species. The Subarea Plan meets the take authorization for habitat used by this species due to: conservation of 55% of suitable habitat in the City and application of the management and monitoring measures.

American Peregrine Falcon
Falco peregrinus anatum

MHCP Conditions of Coverage

No take of individuals or active nests is permitted for this fully protected species. Any nesting pairs discovered or established in the future must be fully protected against harassment during the breeding season.

Conservation Analysis

Conserved Habitat

Suitable breeding habitat for this species includes all estuarine, marsh, and riparian vegetation communities. All 1,047 acres of suitable habitat (100%) would be conserved in the City of Oceanside.

Conserved Points / Populations

There are no known localities in the City of Oceanside.

Management and Monitoring Measures

Suitable habitat that occurs within designated preserves would be managed and monitored according to MHCP and Subarea Plan specifications.

Special Considerations

American peregrine falcons nest on cliff edges, but can also nest in human-made structures, such as tall building ledges and towers. Despite this adaptation to human development, peregrine falcons remain susceptible to human disturbance at nest sites. In addition, this species is vulnerable to bioaccumulation of toxins, such as DDT, given their high trophic level.

Impact Analysis

There are no known points in the City of Oceanside. None of the 1,047 acres of suitable breeding habitat will be directly impacted.

Basis of Take Authorization

No take of individuals or active nests of this species is allowed for this fully protected species. The Subarea Plan meets the take authorization for habitat used by this species due to: conservation of 100% of suitable habitat in the City and application of the management and monitoring measures.

Light-footed Clapper Rail
Rallus longirostris levipes
MHCP Obligate Wetland Species

MHCP Conditions of Coverage

No take (including harassment) of individuals or active nests is allowed for this Fully Protected species. The following is the condition of coverage for habitats used by this species.

1. As part of the project review process (e.g., CEQA) for individual projects within the MHCP area, a qualified biologist possessing a Section 10(a)1(A) research permit for this species must survey all areas containing suitable habitat for this species using approved survey protocols. Any take of habitat must be mitigated in part by creating or enhancing light-footed clapper rail habitat and/or establishing new populations in reserve areas. Possible restoration and enhancement actions include revegetation of cordgrass and pickleweed vegetation, and providing nesting platforms in potential nesting habitat.

Conservation Analysis

Conserved Habitat

Suitable habitat for this species is considered to be southern coastal salt marsh and freshwater marsh. All 146 acres of suitable habitat for this species will be conserved in the City of Oceanside. In addition, 100% conservation of suitable habitat for this species is expected outside the preserve areas due to a low potential for impacts and the protection of wetlands provided by the City's no-net-loss of wetlands policy and state and federal regulations.

Conserved Points / Populations

There are 14 known localities for this species in the City of Oceanside. The major population and critical location at the Buena Vista Lagoon in conserved at 100%. A total of 12 out of 14 (86%) of the points will be conserved. Refer to Section 3 for figures demonstrating species locations.

Management and Monitoring Measures

The point localities and suitable habitat that occur within designated preserves would be managed and monitored according to MHCP and Subarea Plan specifications.

Special Considerations

The light-footed clapper rail is currently protected by state and wildlife agencies under the species recovery plan. This species remains susceptible to increases in populations of mesopredators, such as skunks, foxes, domestic cats and dogs, which may increase clapper rail nest predation. Adequate populations of larger mammals, such as coyotes, are necessary to maintain moderate populations of such medium-sized predators and minimize nest predation. Poor water quality, caused by the degradation of upstream wetlands and upland runoff, may negatively impact clapper rail as well.

Impact Analysis

Although 12 of the known point locations of this species will be conserved, 2 (12%) may be subject to impacts outside preserve areas. None of the suitable habitat for this species would be considered impacted due to the no-net-loss policy for wetlands.

Basis of Take Authorization

No take of individuals or active nests of this species is allowed for this fully protected species. The Subarea Plan meets the take authorization for habitat used by this species due to: conservation of 12 of 14 known localities in the City, conservation of 100% of suitable habitat, and application of the management and monitoring measures.

Western Snowy Plover
Charadrius alexandrinus nivosus
MHCP Obligate Wetland Species

MHCP Conditions of Coverage

No take (including harassment) of individuals or active nests is allowed for this Fully Protected species. The following include the conditions of coverage for habitats used by this species.

1. Management will restrict activities within the preserve that could adversely plover populations, including human disturbance, off-road vehicular activity, and predation of adults and nests by domestic animals (e.g., dogs and cats) and introduced predators (e.g., red fox) or artificially enhanced populations of natural predators (e.g., gulls, raccoons, ravens, and skunks).

2. Human activity will be restricted by fencing off nesting areas during the breeding season (April 1 through August 31). Signs restricting access are usually not effective without fencing.

3. Create suitable snowy plover habitat to compensate for take by projects. Evaluate areas of disturbed salt flats, mudflats, beach and estuarine habitats for potential snowy plover breeding habitat enhancement and protection. Cover created breeding habitats with shells or similar coarse materials to suppress weed growth and offer nest camouflage and scatter patches of sticks, small rocks, dried kelp or similar debris in small amounts (15% cover) as hiding cover, as directed by results of monitoring and research (Powell and Collier 2000).

Conservation Analysis

Conserved Habitat

Suitable habitat for this species includes beach and saltpan. A total of 4 acres out of the total 44 acres of suitable habitat (9%) would be conserved in the City of Oceanside. In addition, 100% conservation of suitable habitat for this species is expected outside the preserve areas due to a low potential for impacts and the protection of wetlands provided

by the City's no-net-loss of wetlands policy and state and federal regulations. A majority of areas mapped as beach are not considered suitable habitat; therefore, the actual conservation of suitable habitat is higher than is reported here.

Conserved Points / Populations

There is one known locality for this species in the City of Oceanside in the database; however the species is known from the San Luis Rey river mouth and Buena Vista Lagoon. The known locality does not occur within a preserve planning area and is not considered conserved by the Subarea Plan. This point occurs in the Pilgrim Creek area.

Management and Monitoring Measures

Suitable habitat that occurs within designated preserves would be managed and monitored according to MHCP and Subarea Plan specifications.

Special Considerations

The western snowy plover breeds in ephemeral habitats created by the natural movement of beach sands. The species is quick to utilize habitats that have been protected from human disturbance and animal predation. However, a rapid increase in reproductive success may leave western snowy plovers more susceptible to increased predation at nesting sites from domestic cats and dogs and avian predators. Increased cover of non-native vegetation may also adversely impact this species' breeding grounds.

Impact Analysis

The one known point within the City and 40 acres out of the total 44 acres of suitable habitat (91%) may be subject to impacts outside preserve areas.

Basis of Take Authorization

No take of individuals or active nests of this species is allowed for this fully protected species. The Subarea Plan meets the take authorization for habitat used by this species

due to: conservation of the San Luis Rey and Buena Vista Lagoon and application of the management and monitoring measures.

Elegant Tern
Sterna elegans

MHCP Conditions of Coverage

1. Management will restrict activities within the preserve that could prevent the establishment of additional elegant tern colonies at conserved coastal wetlands. Adverse activities include human disturbance; off-road vehicle and pedestrian activity; changes in nesting substrates and vegetative structure at suitable nesting sites; and presence of domestic animals, introduced predators (e.g., red fox), or artificially enhanced populations of natural predators (e.g., gulls, raccoons, and skunks).

2. Mitigation for any take of occupied breeding habitat must include enhancement of conserved habitat to induce the initiation of new breeding colonies. This may include modification of nesting substrates, vegetation clearing in limited areas deemed appropriate for tern nesting, and placement of tern decoys to attract prospecting terns. If a colony is established, the site will be fenced and signs erected to prohibit public access.

Conservation Analysis

Conserved Habitat

Suitable habitat for this species includes estuarine, beach, saltpan, and mudflats. A total of 28 acres out of the total 68 acres of suitable habitat (41%) would be conserved in the City of Oceanside. In addition, 100% conservation of salt marsh and estuarine habitat is expected outside the preserve areas due to a low potential for impacts and the protection of wetlands provided by the City's no-net-loss of wetlands policy and state and federal regulations.

Conserved Points / Populations

There are a total of three known localities for this species in the City of Oceanside. Two out of three (67%) of the points will be conserved. These points occur in the Buena Vista Lagoon, Windmill Lake, and Pilgrim Creek area.

Management and Monitoring Measures

The point localities and suitable habitat that occur within designated preserves would be managed and monitored according to MHCP and Subarea Plan specifications.

Special Considerations

Elegant terns commonly form breeding colonies. Human disturbance at roost sites may decrease reproductive success. Elegant terns are also threatened by introduced predators and artificial increases in natural predators.

Impact Analysis

Although two of the known point locations of this species will be conserved, one (33%) will be impacted. Approximately 40 acres out of the total 68 acres of suitable habitat (59%) may be subject to impacts outside preserve areas.

Basis of Take Authorization

The Subarea Plan meets the take authorization for this species due to: conservation of two of three known localities, conservation of Buena Vista Lagoon in the City, and application of the management and monitoring measures. Coverage of this species in Oceanside is contingent upon the cities of Carlsbad and Encinitas meeting all Section 10 (a), NCCP, and MHCP criteria within their boundaries.

California Least Tern
Sterna antillarum browni

MHCP Conditions of Coverage

No take (including harassment) of individuals or active nests is allowed for this Fully Protected species. The following include the conditions of coverage for habitats used by this species.

1. Management will restrict human access in active nesting areas during the breeding season (April 1 through September 15) by fencing and signage. Management will also control other threats to the species, including off-road vehicle activity; changes in nesting substrates and vegetative structure at nesting sites; inundation of colonies by high tides or freshwater; and predation of adults and nests by domestic animals (e.g., dogs and cats), introduced predators (e.g., red fox), or artificially enhanced populations of natural predators (e.g., gulls, raccoons, and skunks).

2. Mitigation for any impacts to occupied habitat must include enhancement of habitat to induce the initiation of new breeding colonies. This may include fencing, modification of nesting substrate, vegetation clearing in limited areas deemed appropriate for tern nesting, placement of tern decoys to attract prospecting terns, and creation of islands of vegetation or tile shelters to provide cover for chicks.

Conservation Analysis

Conserved Habitat

Suitable habitat for this species includes estuarine, beach, saltpan, and mudflats. A total of 28 acres out of the total 68 acres of suitable habitat (41%) would be conserved in the City of Oceanside. In addition, 100% conservation of salt marsh and estuarine habitat is expected outside the preserve areas due to a low potential for impacts and the protection of wetlands provided by the City's no-net-loss of wetlands policy and state and federal regulations.

Conserved Points / Populations

There are a total of four known localities for this species in the City of Oceanside. Two out of four (50%) of the points occur within preserve planning areas and are considered conserved. These points occur in the Buena Vista Lagoon and San Luis Rey River mouth area.

Management and Monitoring Measures

The point localities and suitable habitat that occur within designated preserves would be managed and monitored according to MHCP and Subarea Plan specifications.

Special Considerations

The California least tern is currently protected by state and federal wildlife agencies under the species recovery plan. Suitable breeding habitat may be constricted due to the presence of humans and predators. Fencing such habitat has resulted in increased use of these areas. Nest predation by mesopredators, including skunks and foxes, threaten this species and may be managed by maintaining populations of larger predators.

Impact Analysis

Although two of the known point locations of this species will be conserved, two (50%) will be impacted. In addition, 40 acres out of the total 68 acres of suitable habitat (59%) may be subject to impacts outside preserve areas.

Basis of Take Authorization

No take of individuals or active nests of this species is allowed for this fully protected species. The Subarea Plan meets the take authorization for habitat used by this species due to: conservation of two of four known localities in the City, conservation of Buena Vista Lagoon, and application of the management and monitoring measures.

Southwestern Willow Flycatcher
Empidonax traillii extimus
MHCP Obligate Wetland Species

MHCP Conditions of Coverage

1. As part of the project review process (e.g., CEQA) for individual projects within the MHCP area, a qualified biologist possessing a Section 10(a)1(A) research permit for this species must survey all areas containing suitable habitat (riparian woodlands and forests) using approved survey protocols. Surveys shall be conducted when impacts could occur as a result of indirect impacts by placement of the project in or adjacent to potential habitat or through creation of suitable conditions for brown-headed cowbirds (e.g., agricultural fields, livestock presence, woodland parks, roadsides). Surveys shall occur prior to any proposed impact regardless of location inside or outside of the FPA.

2. Nesting southwestern willow flycatchers shall be treated consistent with the Critical Population Policy (Appendix D) and impacts totally avoided. Although southwestern willow flycatcher is not an MHCP Narrow Endemic, wintering localities and confirmed vagrants shall be treated consistent with the Narrow Endemic Species Policy (Appendix D), including the following: (a) maximum avoidance of impacts, to the degree feasible while maintaining reasonable use of the property; (b) for unavoidable impacts, species-specific mitigation designed to minimize adverse effects to species viability and to contribute to species recovery; and (c) no more than 5% gross cumulative loss of suitable habitat inside the FPA or 20% gross cumulative loss outside the FPA.

3. Occupied habitat within the FPA shall be managed to restrict activities that could degrade willow flycatcher habitat, including livestock grazing, human disturbance, clearing or alteration of riparian vegetation, brown-headed cowbird parasitism, and insufficient water levels leading to loss of riparian habitat and surface water. Area-specific management directives shall include measures to provide appropriate successional habitat, cowbird control, and specific measures to protect against detrimental edge effects, and will remove invasive exotic species (e.g., *Arundo donax*). Human access to flycatcher-occupied habitat will be restricted during the breeding season (May 1-September 15) except for

qualified researchers or land managers performing essential preserve management, monitoring, or research functions.

4. Projects having direct or indirect impacts to the southwestern willow flycatcher shall adhere to the following measures to avoid or reduce impacts:

a) The removal of native vegetation and habitat shall be avoided and minimized to the maximum extent practicable. Determination of adequate avoidance and minimization of impacts shall be consistent with Sections 3.6 and 3.7 of the MHCP plan. Deviations from these guidelines shall require written concurrence of the USFWS and CDFG. For temporary impacts, the work site shall be returned to preexisting contours and revegetated with appropriate native species. All revegetation for temporary and permanent impacts shall occur at the ratios specified in Section 4.3 of the MHCP plan, with a minimum 3:1 ratio for creation of occupied or potential willow flycatcher habitat. Revegetation specifications shall ensure creation and restoration of riparian woodland vegetation to a quality that eventually is expected to support nesting southwestern willow flycatchers, in the opinion of experts on this species, recognizing that it may take decades to achieve this state. All revegetation plans shall be prepared and implemented consistent with Appendix C (Revegetation Guidelines) and shall require written concurrence of the USFWS and CDFG. If written objections are not provided by the wildlife agencies within 30 days of receipt of written request for concurrence by the local jurisdiction, then the deviation may proceed as approved by the local agency. The wildlife agencies shall provide written comments specifying wildlife agency concerns.

b) Projects shall be carried out consistent with Appendix B (Standard Best Management Practices).

c) Projects shall to the maximum extent practicable avoid impacts during the breeding season of the flycatcher (May 1 to September 15). Projects that cannot be conducted without placing equipment or personnel in or adjacent to sensitive habitats shall be timed to ensure that habitat is removed prior to the initiation of the breeding season.

d) Construction noise levels at the riparian canopy edge shall be kept below 60 dBA L_{eq} (measured as equivalent sound level) from 5 a.m. to 11 a.m. during the peak nesting period of May 1 to September 15. For the balance of the day/season, the noise levels shall not exceed 60 decibels, averaged over a 1-hour period on an A-weighted decibel (dBA) (i.e., 1 hour L_{eq}/dBA). Noise levels shall be monitored, and monitoring reports shall be provided to the jurisdictional city, the USFWS, and the CDFG. Noise levels in excess of this threshold shall require written concurrence from the USFWS and CDFG within 30 days of receipt of request for written concurrence from the local jurisdiction and may require additional minimization/mitigation measures.

e) Brown-headed cowbirds and other exotic species that prey upon the flycatcher shall be removed from the site. For new developments adjacent to preserve areas that create conditions attractive to brown-headed cowbirds, jurisdictions shall require monitoring and control of cowbirds.

f) Biological buffers of at least 100 feet shall be maintained adjacent to occupied flycatcher habitat, measured from the outer edge of riparian vegetation. Within this 100-foot buffer, no new development shall be allowed, and the area shall be managed for natural biological values as part of the preserve system. Buffers less than 100 feet shall require written concurrence of the USFWS and CDFG within 30 days of receipt of request for written concurrence from the local jurisdiction.

5. Suitable unoccupied habitat preserved within the FPA shall be managed to maintain or mimic effects of natural fluvial processes (e.g., periodic substrate scouring and deposition).

6. Natural riparian connections with upstream riparian habitat shall be maintained to ensure linkage to suitable occupied and unoccupied habitat within the County MSCP and City of San Diego MSCP Subarea Plans.

Subarea Plan Conditions of Coverage

1. In association with the ACOE Flood Control Project on the San Luis Rey River, the City, ACOE, and Wildlife Agencies are responsible for implementing numerous measures with regard to southwestern willow flycatchers. The City

must ensure implementation of all required ACOE Flood Control Project related permit conditions in order to obtain coverage for the species under the Subarea Plan.

Conservation Analysis

Conserved Habitat

Suitable habitat for this species includes riparian scrub and riparian forest. All 860 acres of suitable habitat (100%) would be conserved in the City of Oceanside. In addition, 100% conservation of riparian habitat is expected outside the preserve areas due to a low potential for impacts and the protection of wetlands provided by the City's no-net-loss of wetlands policy and state and federal regulations.

Conserved Points / Populations

There are 10 known localities for this species in the City of Oceanside. Major populations and critical locations are located at San Luis Rey River near Guajome Lake and Pilgrim Creek near Foss Lake. A total of 9 out of 10 (90%) of the points will be conserved.

Management and Monitoring Measures

The point localities and suitable habitat that occur within designated preserves would be managed and monitored according to MHCP and Subarea Plan specifications.

Special Considerations

Southwestern willow flycatchers generally inhabit mature, closed canopy riparian forest. They typically nest near slow-moving streams, standing water, or seeps. Nest parasitism by brown-headed cowbirds pose a threat to the reproductive success of southwestern willow flycatchers. In addition, flycatcher habitat is susceptible to degradation via stochastic events, including fire and flooding.

Impact Analysis

Although nine of the known point locations of this species will be conserved, one (10%) will be impacted. None of the suitable habitat for this species would be considered impacted due to the no-net-loss policy for wetlands.

Basis of Take Authorization

The Subarea Plan meets the take authorization for this species due to: conservation of 9 of 10 known localities in the City, conservation of 100% of suitable habitat, and application of the management and monitoring measures.

Least Bell's Vireo
Vireo bellii pusillus
MHCP Obligate Wetland Species

MHCP Conditions of Coverage

1. As part of the project review process (e.g., CEQA) for individual projects within the MHCP area, a qualified biologist possessing a Section 10(a)1(A) research permit for this species must survey all areas containing potentially suitable habitat (riparian vegetation communities) using approved survey protocols. Surveys shall occur prior to any proposed impact regardless of location inside or outside of the FPA. Surveys shall be conducted when impacts could occur as a result of indirect impacts by placement of the project in or adjacent to suitable habitat or through creation of suitable conditions for brown-headed cowbirds (e.g., agricultural fields, livestock presence, woodland parks, and roadsides).

2. Any take, both inside and outside of the FPA, shall be consistent with the conditions outlined herein. Projects that impact least Bell's vireo populations outside the FPA shall be required to ensure sufficient management to maintain these populations.

3. Occupied habitat within the FPA shall be managed to restrict activities that could degrade least Bell's vireo habitat, including livestock grazing, human disturbance, clearing or alteration of riparian vegetation, brown-headed cowbird parasitism,

and insufficient water levels leading to loss of riparian habitat and surface water. Area-specific management directives shall include measures to provide appropriate successional habitat, cowbird control, and specific measures to protect against detrimental edge effects, and will remove invasive exotic species (e.g., *Arundo donax*). Initiate cowbird trapping when cowbird parasitism rates exceed 10% or as recommended by monitoring results. Restrict human access to vireo-occupied habitat during the breeding season (March 15 to September 15) except for qualified researchers or land managers performing essential preserve management, monitoring, or research functions.

4. Projects having direct or indirect impacts to the least Bell's vireo within the MHCP planning area shall adhere to the following measures to avoid or reduce impacts:

a) The removal of native vegetation and habitat shall be avoided and minimized to the maximum extent practicable. Determination of adequate avoidance and minimization of impacts shall be consistent with Sections 3.6 and 3.7 of the MHCP plan. Deviations from these guidelines shall require written concurrence of the USFWS and CDFG. For temporary impacts, the work site shall be returned to preexisting contours and revegetated with appropriate native species. All revegetation for temporary and permanent impacts shall occur at the ratios specified in Section 4.3 of the MHCP plan, with a minimum 3:1 ratio for recreation of occupied or potential vireo habitat. Revegetation specifications shall ensure creation and restoration of riparian woodland vegetation to vireo quality. All revegetation plans shall be prepared and implemented consistent with Appendix C (Revegetation Guidelines) and shall require written concurrence of the USFWS and CDFG. If written objections are not provided by the wildlife agencies within 30 days of receipt of written request for concurrence by the local jurisdiction, then the deviation may proceed as approved by the local agency. The wildlife agencies shall provide written comments specifying wildlife agency concerns.

b) Projects shall be carried out consistent with Appendix B (Standard Best Management Practices).

c) Projects shall to the maximum extent practicable avoid impacts during the breeding season of the least Bell's vireo (generally March 15 - September 15). Projects that cannot be conducted without placing equipment or personnel in or adjacent to sensitive habitats shall be timed to ensure that habitat is removed prior to the initiation of the breeding season (generally before March 15).

d) Construction noise levels at the riparian canopy edge shall be kept below 60 dBA L_{eq} (Measured as Equivalent Sound Level) from 5 a.m. to 11 a.m. during the peak nesting period of March 15 to July 15. For the balance of the day/season, the noise levels shall not exceed 60 decibels, averaged over a 1-hour period on an A-weighted decibel (dBA) (i.e., 1 hour L_{eq}/dBA). Noise levels shall be monitored and monitoring reports shall be provided to the jurisdictional city, the USFWS, and the CDFG. Noise levels in excess of this threshold shall require written concurrence from the USFWS and CDFG and may require additional minimization/mitigation measures.

e) Brown-headed cowbirds and other exotic species detrimental to least Bell's vireo shall be removed from the site. For new developments adjacent to preserve areas that create conditions attractive to brown-headed cowbirds, jurisdictions shall require monitoring and control of cowbirds.

f) Biological buffers of at least 100 feet shall be maintained adjacent to occupied least Bell's vireo habitat, measured from the outer edge of riparian vegetation. Within this 100-foot buffer, no new development shall be allowed, and the area shall be managed for natural biological values as part of the preserve system. Buffers less than 100 feet shall require written concurrence of the USFWS and CDFG within 30 days of receipt of written request for concurrence by the local jurisdiction.

5. Suitable unoccupied habitat preserved within the FPA shall be managed to maintain or mimic effects of natural fluvial processes (e.g., periodic substrate scouring and deposition).

6. Natural riparian connections with upstream riparian habitat shall be maintained to ensure linkage to suitable occupied and unoccupied habitat within the County MSCP and City of San Diego MSCP Subarea Plans.

Subarea Plan Conditions of Coverage

1. In association with the ACOE Flood Control Project on the San Luis Rey River, the City, ACOE, and Wildlife Agencies are responsible for implementing numerous measures with regard to least Bell's vireo. The City must ensure implementation of all required ACOE Flood Control Project related permit conditions in order to obtain coverage for the species under the Subarea Plan.

Conservation Analysis

Conserved Habitat

Suitable habitat for this species includes riparian scrub, riparian woodland, and riparian forest. All 866 acres (100%) would be conserved in the City of Oceanside. In addition, 100% conservation of riparian habitat is expected outside the preserve areas due to a low potential for impacts and the protection of wetlands provided by the City's no-net-loss of wetlands policy and state and federal regulations.

Conserved Points / Populations

There are a total of 293 known localities for this species in the City of Oceanside. A total of 190 out of 293 (65%) of the points will be conserved. A majority of these points occur along the San Luis Rey and Pilgrim Creek.

Management and Monitoring Measures

The point localities and suitable habitat that occur within designated preserves would be managed and monitored according to MHCP and Subarea Plan specifications.

Special Considerations

Least bell's vireo often occupies semi-open riparian woodlands with a dense shrub understory. Least bell's vireo are vulnerable to nest parasitism by brown-headed

cowbirds. In addition, noise greater than 62 dBA may interfere with territorial behaviors during the breeding season, which may reduce reproductive success.

Impact Analysis

Although 190 of the known point locations of this species will be conserved, 103 (35%) will be impacted. None of the suitable habitat for this species would be considered impacted due to the no-net-loss policy for wetlands.

Basis of Take Authorization

The Subarea Plan meets the take authorization for this species due to: conservation of 190 of 293 known localities, conservation of 100% of suitable habitat, and application of the management and monitoring measures.

Coastal California Gnatcatcher
Polioptila californica californica

MHCP Conditions of Coverage

In addition to minimum conservation levels, all of the following conditions must be met by individual cities for the California gnatcatcher to be adequately conserved.

1. Implement an adaptive management program to comprehensively monitor and manage gnatcatcher habitat and populations throughout the preserve system. Increased coordination of monitoring and management may improve knowledge of species' requirements and habitat quality in the study area.

2. Take of occupied gnatcatcher habitat must be mitigated according to approved MHCP (Volume I, Section 4.3) or subarea plan ratios using one or more of the following measures: (a) conservation of occupied gnatcatcher habitat inside the BCLA or in the unincorporated core area; (b) conservation of linkage areas identified by the MHCP as critical to regional gnatcatcher population connectivity (whether or not such areas are currently occupied by gnatcatchers or vegetated with coastal sage scrub); or (c) restoration of gnatcatcher habitat within critical breeding or linkage areas identified by the MHCP.

3. *Oceanside*—Conserve at least 664 acres of existing coastal sage scrub in the city, and restore or enhance at least 164 additional acres of coastal sage scrub. Within the city's designated Wildlife Corridor Planning Zone, conserve at least 480 acres of biological open space in a configuration that accommodates continued movement by California gnatcatchers between State Route 78 and the San Luis Rey River. Of this 480-acre total, conserve at least 210 acres of existing gnatcatcher breeding habitat (coastal sage scrub), and increase the net amount of viable breeding habitat within the zone by at least 145 acres through restoration of disturbed, developed, or annual grassland habitats to coastal sage scrub in key locations (Note: Acreages conserved and restored within the Wildlife Corridor Planning Zone count towards the 664 total coastal sage scrub and 164 total restoration acreage requirements for the city.) Conserve 120 acres of contiguous biological open space on the western portion of the city-owned El Corazon property, including at least 45 acres west of the San Diego Gas and Electric transmission easement and 75 acres along Garrison Creek on the northern portion of the property, as detailed in the Oceanside Subarea Plan.

Conservation Analysis

Conserved Habitat

Suitable habitat for this species includes southern coastal bluff scrub, maritime succulent scrub, coastal sage scrub, and coastal sage scrub/chaparral mix. A total of 719 acres out of the total 1,205 acres of suitable habitat (60%) would be conserved in the City of Oceanside. In addition, the enhancement and restoration of coastal sage scrub habitats with preserve areas is expected to provide additional conservation for this species. The creation of breeding opportunities for this species within constrained linkages will be prioritized.

Conserved Points / Populations

There are a total of 166 known localities for this species in the City of Oceanside. Habitat restoration will increase the available breeding habitat in contiguous areas of central Oceanside, at least partially offsetting impacts there. The critical location in north

Oceanside adjacent to Camp Pendleton will be substantially conserved. The critical, regional stepping-stone linkage through central Oceanside will be substantially conserved and enhanced. Some development is likely to further constrain portions of the linkage and increase edge effects. Restoration, enhancement, and management are expected to maintain and possibly improve overall linkage function. Overall, 92 out of 166 (55%) of the points will be conserved.

Management and Monitoring Measures

The point localities and suitable habitat that occur within designated preserves would be managed and monitored according to MHCP and Subarea Plan specifications.

Special Considerations

Coastal California gnatcatchers in San Diego County are generally restricted to coastal sage scrub below 1,000 ft. While slopes greater than 40% are not considered suitable breeding habitat, they are considered suitable for foraging and dispersal. Fire influences gnatcatcher demography by decreasing the proportion of California sagebrush, which has been correlated with lower nesting densities, but also with greater nest survival and reproductive rates.

Gnatcatchers primarily forage for insects on California sagebrush (*Artemisia californica*) and flat-topped buckwheat (*Eriogonum fasciculatum*), but may prefer redberry (*Rhamnus crocea*) and broom baccharis (*Baccharis sarothroides*). Gnatcatchers have been documented foraging in habitats other than coastal sage scrub, including riparian edges, chaparral, and disturbed areas. It appears that gnatcatchers do not readily occupy coastal sage scrub dominated by black sage (*Salvia mellifera*). Concurrently, selection of nest sites appears to be more dependent upon the structure of vegetation than the species composition.

Territory sizes appear to be inversely related to habitat quality. Although previously thought to be unsuitable for occupation, patches as small as 5 acres along the coast, and 10 acres inland, are now considered suitable for occupation by gnatcatchers. In Oceanside, small patches of habitat are reliably occupied by gnatcatchers year after year. Although impacted by habitat fragmentation, gnatcatchers, especially juveniles, are capable of dispersing relatively long distances (i.e., as much as 3 miles and sometimes up

to 6 miles) across suburban landscapes. The ability of gnatcatchers to occupy small patches and disperse long distances suggests that the preservation of isolated patches of suitable habitat to form stepping-stone corridors may be an effective conservation strategy.

Impact Analysis

Although 92 of the known point locations of this species will be conserved, 74 (45%) will be impacted. In addition, 486 acres out of the total 1,205 acres of suitable habitat (40%) may be subject to impacts outside preserve areas.

Basis of Take Authorization

The Subarea Plan meets the take authorization for this species due to: conservation of 92 of 166 known localities in the City, conservation of 55% of suitable habitat and application of the management and monitoring measures. Coverage of this species in Oceanside is dependent upon the City establishing implementation measures for the conditions of coverage described above and meeting the coastal sage scrub habitat restoration obligation. Coverage of this species in Oceanside is contingent upon Carlsbad meeting all Section 10 (a), NCCP, and MHCP criteria within its boundaries.

Yellow-breasted Chat
Icteria virens
MHCP Obligate Wetland Species

MHCP Conditions of Coverage

1. Manage suitable unoccupied habitat preserved within the FPA to maintain or mimic effects of natural fluvial processes (e.g., periodic substrate scouring and deposition to rejuvenate riparian vegetation).

2. Maintain biological buffers of at least 100 feet adjacent to occupied habitat, measured from the outer edge of riparian vegetation.

3. Reserve areas will be managed to avoid and minimize clearing and alteration of riparian vegetation, invasion of exotic plants and trees into the native riparian system, human disturbance, brown-headed cowbird parasitism, insufficient maintenance of water levels leading to loss of riparian habitat, and predation of adults and nests by domestic animals.

4. As mitigation for project impacts, enhance or restore yellow-breasted chat habitat consistent with management of other sensitive riparian bird species. Enhancement may include providing sufficient water flow to ensure sustained willow growth, restriction of human activities within the habitat during the breeding season, removal of invasive plant species, and predator/cowbird control.

5. Protect upland buffers around riparian habitat. Buffer areas should be a minimum of 50 feet and up to 100 feet wide.

Subarea Plan Conditions of Coverage

1. In association with the ACOE Flood Control Project on the San Luis Rey River, the City, ACOE, and Wildlife Agencies are responsible for implementing numerous measures with regard to riparian bird species. The City must ensure implementation of all required ACOE Flood Control Project related permit conditions in order to obtain coverage for the species under the Subarea Plan.

Conservation Analysis

Conserved Habitat

Suitable habitat for this species includes riparian scrub, riparian woodland, and riparian forest. All 866 acres of suitable habitat (100%) would be conserved in the City of Oceanside. In addition, 100% conservation of riparian habitat is expected outside the preserve areas due to a low potential for impacts and the protection of wetlands provided by the City's no-net-loss of wetlands policy and state and federal regulations.

Conserved Points / Populations

There are a total of 53 known localities for this species in the City of Oceanside. A total of 36 out of 53 (68%) of the points will be conserved.

Management and Monitoring Measures

The point localities and suitable habitat that occur within designated preserves would be managed and monitored according to MHCP and Subarea Plan specifications.

Special Considerations

Yellow-breasted chat is susceptible to habitat fragmentation and brown-headed cowbird nest parasitism.

Impact Analysis

Although 36 of the known point locations of this species will be conserved, 17 (32%) will be impacted. None of the suitable habitat would be considered impacted due to the no-net-loss policy for wetlands.

Basis of Take Authorization

The Subarea Plan meets the take authorization for this species due to: conservation of 36 of 53 known localities in the City, conservation of 100% of suitable habitat, and application of the management and monitoring measures.

Southern California Rufous-crowned Sparrow
Aimophila ruficeps canescens

MHCP Conditions of Coverage

Manage reserve areas by controlling factors detrimental to rufous-crowned sparrow habitat, including livestock overgrazing, fire prevention and management methods, presence of brown-headed cowbirds, and unnaturally abundant predators. As a mitigation

option for project impacts on rufous-crowned sparrow habitat, restore coastal sage scrub habitats in disturbed areas adjacent to occupied habitat.

Conservation Analysis

Conserved Habitat

Suitable habitat for this species includes coastal sage scrub and coastal sage scrub/chaparral mix. A total of 719 acres out of the total 1,205 acres of suitable habitat (60%) would be conserved in the City of Oceanside. In addition, suitable habitat for this species tends to overlap with suitable habitat for the California gnatcatcher. Therefore, efforts directed toward conserving California gnatcatcher habitat will likely benefit the southern California rufous-crowned sparrow as well.

Conserved Points / Populations

There are a total of six known localities for this species in the City of Oceanside. Four out of six (67%) of the points will be conserved.

Management and Monitoring Measures

The point localities and suitable habitat that occur within designated preserves would be managed and monitored according to MHCP and Subarea Plan specifications.

Special Considerations

Southern California rufous-crowned sparrow seems to prefer patchy landscape and will occupy steep slopes with little shrub cover. This species commonly nests in openings in scrub habitat, including rocky outcroppings.

Impact Analysis

Although four of the known point locations of this species will be conserved, two (33%) will be impacted. Approximately 40% of the suitable habitat has the potential to be impacted outside of the preserve.

Basis of Take Authorization

The Subarea Plan meets the take authorization for this species due to: conservation of 4 of 6 known localities in the City, conservation of 60% of suitable habitat, and application of the management and monitoring measures. Coverage of this species in Oceanside is contingent upon the cities of Carlsbad and Escondido meeting all Section 10 (a), NCCP, and MHCP criteria within their boundaries.

Belding's Savannah Sparrow
Passerculus sandwichensis beldingi
MCHP Obligate Wetland Species

MHCP Conditions of Coverage

1. As part of the project review process (e.g., CEQA) for individual projects within the MHCP area, a qualified biologist possessing a Section 10(a)1(A) research permit for this species must survey all areas containing potentially suitable habitat (salt marsh, mudflats, and coastal strands) using approved survey protocols. Surveys shall occur prior to any proposed impact regardless of location inside or outside of the FPA. Surveys shall be conducted when impacts could occur as a result of direct or indirect impacts by placement of the project in or adjacent to occupied or potentially suitable habitats.

2. Implement wetland mitigation standards that require a minimum 4:1 replacement ratio for unavoidable impacts to occupied habitat for this species, with particular emphasis on restoring upper marsh zones preferred by this species. Control recreational use by humans within pickleweed habitats to reduce trampling.

3. Manage occupied areas to control activities that degrade Belding's Savannah sparrow habitat, including human disturbance, filling and diking of salt marsh habitat, predation of adults and nests by introduced feral and domestic animals (e.g., dogs and cats), adverse changes in water level, water quantity and quality, and introduction of pesticides and other contaminants into preserve wetlands.

4. As mitigation for project impacts, enhance, restore, or create salt marsh habitat within the preserve to allow for the expansion of Belding's Savannah sparrow populations into new locations.

5. Protect upland buffer areas to minimize edge effects. Buffer areas should be a minimum of 50 feet and up to 100 feet wide where possible.

Conservation Analysis

Conserved Habitat

Suitable habitat for this species includes southern coastal salt marsh and mudflats. There is no modeled suitable habitat for this species within the City of Oceanside; however, the Buena Vista Lagoon does provide potentially suitable habitat for this species. Additionally, 100% conservation of salt marsh habitat is expected outside the preserve areas due to a low potential for impacts and the protection of wetlands provided by the City's no-net-loss of wetlands policy and state and federal regulations.

Conserved Points / Populations

There are a total of six known localities for this species in the City of Oceanside. All six (95%) of the points will be conserved.

Management and Monitoring Measures

The point localities and suitable habitat that occur within designated preserves would be managed and monitored according to MHCP and Subarea Plan specifications.

Special Considerations

Belding's savannah sparrow individuals do not commonly migrate or disperse between salt marshes, resulting in genetic differences between populations. Sparrows do not readily nest on frequently flooded substrates, although populations in marshes with full tidal flushing generally attain the highest densities. This species prefers to nest in pickleweed habitat in upper marsh zones. Upper marsh zones are often used for

recreation, which may pose a threat to Belding's savannah sparrow given the species' vulnerability to disturbance and edge effects.

Impact Analysis

None of the six known points will be directly impacted. There is no modeled suitable habitat for this species in the City of Oceanside.

Basis of Take Authorization

The Subarea Plan meets the take authorization for this species due to: conservation of 6 of 6 known localities in the City, conservation of the Buena Vista Lagoon, and application of the management and monitoring measures. Coverage of this species in Oceanside is contingent upon the cities of Carlsbad and Encinitas meeting all Section 10 (a), NCCP, and MHCP criteria within their boundaries.

Large-billed Savannah Sparrow
Passerculus sandwichensis rostratus
MHCP Obligate Wetland Species

MHCP Conditions of Coverage

Not applicable, although this species will benefit from management designed for the Belding's savannah sparrow.

Conservation Analysis

Conserved Habitat

Suitable habitat for this species includes southern coastal salt marsh and mudflats. There is no modeled suitable habitat for this species within the City of Oceanside; however, the Buena Vista Lagoon does provide potentially suitable habitat for this species. Additionally, 100% conservation of salt marsh habitat is expected outside the preserve areas due to a low potential for impacts and the protection of wetlands provided by the City's no-net-loss of wetlands policy and state and federal regulations.

Conserved Points / Populations

There are no known localities in the City of Oceanside.

Management and Monitoring Measures

There are no known localities or modeled suitable habitat for this species in the City of Oceanside. Therefore, no management and monitoring measures are proposed.

Special Considerations

Large-billed savannah sparrow may be vulnerable to human disturbance and edge effects. This species is similar to Belding's savannah sparrow and would likely benefit from similar management and monitoring measures.

Impact Analysis

There are no known localities or modeled suitable habitat for this species in the City of Oceanside.

Basis of Take Authorization

There are no known localities or modeled suitable habitat for this species in the City of Oceanside; however, the species has the potential to occur in Buena Vista Lagoon. Coverage of this species in Oceanside is contingent upon the cities of Carlsbad and Encinitas meeting all Section 10 (a), NCCP, and MHCP criteria within their boundaries.

Bell's Sage Sparrow
Amphispiza belli belli

MHCP Conditions of Coverage

Manage reserve areas to restrict activities that degrade Bell's sage sparrow habitat, including habitat alteration, spraying of pesticides, brown-headed cowbird parasitism, and introduction of predators (e.g., domestic dogs and cats). Restrict human access to

areas known to support relatively large concentrations of sage sparrow during the breeding season (February 15 to August 31).

Conservation Analysis

Conserved Habitat

Suitable habitat for this species includes coastal sage scrub and coastal sage scrub/chaparral mix vegetation communities. A total of 719 acres out of the total 1,205 acres of suitable habitat (60%) would be conserved in the City of Oceanside.

Conserved Points / Populations

There are no known localities in the City of Oceanside.

Management and Monitoring Measures

Suitable habitat that occurs within designated preserves would be managed and monitored according to MHCP and Subarea Plan specifications.

Special Considerations

None identified.

Impact Analysis

There are no known points in the City of Oceanside. Approximately 486 acres out of the total 1,205 acres of suitable habitat (40%) may be subject to impacts outside preserve areas.

Basis of Take Authorization

The Subarea Plan meets the take authorization for this species due to: conservation of 60% of suitable habitat in the City and application of the management and monitoring measures. Coverage of this species in Oceanside is contingent upon the cities of

Carlsbad and Escondido meeting all Section 10 (a), NCCP, and MHCP criteria within their boundaries.

Stephens' Kangaroo Rat
Dipodomys stephensi

MHCP Conditions of Coverage

Any Stephens' kangaroo rat population shall be treated consistent with the Narrow Endemic Policy until all criteria for full recovery (i.e., species delisting) have been met.

1. As part of the project review process (e.g., CEQA) for individual projects within the survey area indicated on the MHCP Database Records Map, a qualified biologist possessing a Section 10(a)1(A) research permit for this species must survey all areas containing potentially suitable habitat (open coastal sage scrub, agricultural fields, and grasslands on soils low in clay content) using approved survey protocols (sign surveys for burrows, scats, tracks, trails, or other sign of kangaroo rat presence, followed by protocol trapping surveys to verify species identification if sign is detected). Surveys shall occur prior to any proposed impact regardless of location inside or outside of the FPA. Surveys shall be conducted when impacts could occur as a result of indirect impacts by placement of the project in or adjacent to potential habitat within survey areas shown on the MHCP Database Records Map.

2. Any Stephens' kangaroo rat population shall be treated consistent with the Narrow Endemic Species Policy (Appendix D) until all criteria for full recovery (i.e., delisting) of the species have been met.

3. Conserve and manage natural habitats contiguous with occupied habitat areas to allow for natural population expansions, to the degree feasible.

4. Conserve and manage sufficient linkages between occupied areas and other potential or occupied areas within the MHCP study area, or outside the MHCP study area (e.g., on MCB Camp Pendleton), to allow for dispersal and colonization.

5. Manage any occupied reserve areas to maintain early successional phases required by Stephens' kangaroo rat. Buffer future developments adjacent to occupied habitat to preclude predation by domestic cats and minimize other edge effects. Prohibit use of rodenticides in or near occupied areas.

6. Projects in or adjacent to occupied habitat shall adhere to the following measures to avoid or reduce impacts:

   a) The removal of native vegetation and habitat shall be avoided and minimized to the maximum extent practicable. Determination of adequate avoidance and minimization of impacts shall be consistent with Section 3.7 of the MHCP plan. Deviations from these guidelines shall require written concurrence of the USFWS and CDFG. For temporary impacts, the work site shall be returned to preexisting contours and revegetated with appropriate native species. All revegetation shall occur at the ratios specified in Section 4.3 of the MHCP plan. All revegetation plans shall be prepared and implemented consistent with Appendix C (Revegetation Guidelines) and shall require written concurrence of the USFWS and CDFG. If written objections are not provided by the wildlife agencies within 30 days of receipt of written request for concurrence by the local jurisdiction, then the deviation may proceed as approved by the local agency. The wildlife agencies shall provide written comments specifying wildlife agency concerns.

   b) Projects shall be carried out consistent with Appendix B (Standard Best Management Practices).

   c) Construction-related vehicle travel shall be limited to daylight hours to minimize roadkill.

   d) For temporary impacts involving trenching or other excavation, measures shall be taken to prevent Stephens' kangaroo rats from falling into the trench. Excavations shall not be covered (e.g., with metal plates or boards) to exclude rodents, because these may actually attract them to burrow beneath and become entrapped.

e) To minimize injury or mortality of individuals, the USFWS may authorize qualified biologists to relocate individual Stephens' kangaroo rats to nearby suitable habitat. Authorizations will be granted only to jurisdictions with signed implementing agreements and issued permits and will require coordination with the wildlife agencies and their written concurrence. Such salvage relocation may include exclusion fencing and creation of artificial burrows to increase success, if deemed appropriate by the wildlife agencies.

Conservation Analysis

Conserved Habitat

Suitable habitat for this species includes grasslands and coastal sage scrub. A total of 1,352 acres of the total 2,429 acres of suitable habitat (56%) would be conserved in the City of Oceanside.

Conserved Points / Populations

There is one known locality in the City of Oceanside, which does not occur in a preserve planning area is not considered conserved. Refer to Section 3 for figures demonstrating species locations.

Management and Monitoring Measures

Suitable habitat that occurs within designated preserves would be managed and monitored according to MHCP and Subarea Plan specifications.

Special Considerations

The geographic range of Stephenson's kangaroo rat only partially extends into the City of Oceanside. Therefore, the City likely only provides marginal habitat for dispersing populations. Although Stephenson's kangaroo rats can disperse more than 1 km across open habitats, dispersal may be hindered by development, especially large roads.

Impact Analysis

The one known locality and 1,077 acres of suitable habitat (44%) may be subject to impacts outside preserve areas.

Basis of Take Authorization

The Subarea Plan meets the take authorization for this species due to: conservation of 56% of suitable habitat and application of the management and monitoring measures. Coverage of this species in Oceanside is dependent upon the City establishing implementation measures for the conditions of coverage described above.

Northwestern San Diego Pocket Mouse
Chaetodipus fallax fallax

MHCP Conditions of Coverage

Not applicable, although general habitat management actions instituted for other coastal sage scrub species should benefit this species as well.

Conservation Analysis

Conserved Habitat

Suitable habitat for this species includes all scrub, oak, and grassland vegetation communities without clay soils. A total of 1,167 acres of the total 2,229 acres of suitable habitat (52%) would be conserved in the City of Oceanside.

Conserved Points / Populations

There are no known localities in the City of Oceanside.

Management and Monitoring Measures

Suitable habitat that occurs within designated preserves would be managed and monitored according to MHCP and Subarea Plan specifications.

Special Considerations

Northwestern San Diego pocket mouse is susceptible to predation by domestic cats, especially in the small habitat patches near residential development.

Impact Analysis

The only known point location of this species and 1,062 acres out of the total 2,229 acres of suitable habitat (48%) may be subject to impacts outside preserve areas.

Basis of Take Authorization

The Subarea Plan meets the take authorization for this species due to: conservation of 52% of suitable habitat and application of the management and monitoring measures. Coverage of this species in Oceanside is contingent upon the Escondido meeting all Section 10 (a), NCCP, and MHCP criteria within its boundaries.

San Diego Black-tailed Jackrabbit
Lepus californicus bennettii

MHCP Conditions of Coverage

Not applicable, although general habitat management actions instituted for other species should benefit this species as well.

Conservation Analysis

Conserved Habitat

Suitable habitat for this species includes coastal sage scrub, coastal sage scrub/chaparral, and grassland. A total of 1,352 acres out of the total 2,440 acres of suitable habitat (55%) would be conserved in the City of Oceanside.

Conserved Points / Populations

There is one known locality for this species in the City of Oceanside. The only known point (95%) will be conserved.

Management and Monitoring Measures

The point localities and suitable habitat that occur within designated preserves would be managed and monitored according to MHCP and Subarea Plan specifications.

Special Considerations

None identified.

Impact Analysis

All known points within the City are conserved by the subarea plan. Approximately 1,087 acres out of the total 2,440 acres of suitable habitat (45%) may be subject to impacts outside preserve areas.

Basis of Take Authorization

The Subarea Plan meets the take authorization for this species due to: conservation of 1 of 1 known locality in the City, conservation of 55% of suitable habitat, and application of the management and monitoring measures. Coverage of this species in Oceanside is contingent upon the Escondido meeting all Section 10 (a), NCCP, and MHCP criteria within its boundaries.