

4.0 Establishment of the MSHCP Reserve System

The Conservation Plan includes the establishment of an MSHCP Reserve System, setting Conservation Goals and Objectives to ensure the Conservation of the Covered Species and conserved natural communities in the MSHCP Reserve System, provisions for management of the MSHCP Reserve System, and a Management and Monitoring Program. This section describes the establishment of the MSHCP Reserve System and the Conservation Objectives that will protect the Plan's Covered Species and conserved natural communities. The MSHCP Reserve System will be established from lands within 21 Conservation Areas. Because some Take Authorization is provided under the Plan for Development in Conservation Areas, the actual MSHCP Reserve System will be somewhat smaller than the total acres in the Conservation Areas. When assembled, the Reserve System will provide for the Conservation of the Covered Species in the Plan Area. The Conservation Areas are further described in terms of Core Habitat, Other Conserved Habitat, the conserved natural communities, Essential Ecological Processes, and Biological Corridors and Linkages. The description of the Conservation Areas also includes lands already developed and the amount of land that could be developed under the Permits. The subsection on each Conservation Area describes in detail the measures that will be implemented by the Permittees to achieve the identified Conservation Objectives.

The discussion of multiple Conservation Areas is not intended to imply that these areas exist in isolation from one another. The division is based on a combination of ecological and jurisdictional factors. Discussion of multiple Conservation Areas also facilitates the presentation of acreages regarding species' Habitat and natural community Conservation. Figure 4-1 depicts the location of the Conservation Areas. More detailed maps are found in the descriptions of the individual Conservation Areas. Figure 4-2 shows the Existing Conservation Lands within the MSHCP Reserve System.

Additional benefits of assembling the MSHCP Reserve System include maintaining viewsheds and natural areas that provide relief from urban areas, protecting cultural resources, providing trails opportunities, and avoiding significant flooding impacts.

For each Conservation Area, Conservation Objectives and Required Measures are articulated for conserving Core Habitat for Covered Species, Essential Ecological Processes necessary to maintain Habitat viability, Biological Corridors and Linkages as needed, and the less common conserved natural communities. Core Habitat has not been delineated for all species. Where it has not been delineated, Conservation Objectives are stated for either acres of Habitat or known occurrences. Specific Conservation Objectives for Other Conserved Habitat are generally not delineated because Other Conserved Habitat overlaps with and will be conserved in conjunction with attaining Conservation Objectives such as conserving Essential Ecological Process areas, Biological Corridors, Linkages, or Core Habitat for other Covered Species. An analysis of the Conservation achieved for Other Conserved Habitat through other Conservation Objectives is included in Section 4.1 of Appendix I. Specific Conservation Objectives are also not articulated for the more broadly distributed conserved natural communities because sufficient amounts of these communities in an appropriate configuration are conserved in conjunction with

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attaining Conservation Objectives for Core Habitat for Covered Species, Essential Ecological Processes, Biological Corridors and Linkages. This analysis is also found in Section 4.1 of Appendix I. Attainment of the Conservation Objectives in each Conservation Area will result in the establishment of the MSHCP Reserve System.

The MSHCP Reserve System consists of the following components, as described in Sections 4.1 and 4.2:

- Existing Conservation Lands, managed by local, state, or federal agencies, or non-profit conservation organizations.
- Complementary Conservation lands
- Additional Conservation Lands

The MSHCP Reserve System will be assembled as shown in Table 4-1. The table shows acreage as of 1996, at the time the Planning Agreement was signed, and as of November 2006, the most recent data available. Conservation Objectives, Take Authorization, and Permittee mitigation obligations are based on the 1996 acreages. The November 2006 acreages show what Conservation occurred between 1996 and November 2006, the most recent date for which data is available.

Table 4-1: MSHCP Reserve System Assembly (in acres)

1996	2006	Lands
458,800	484,600	Existing federal lands in MSHCP Reserve System ¹
32,700	44,600	Existing state lands in MSHCP Reserve System
900	19,100	Existing non-profit organization lands in MSHCP Reserve System ²
4,000	8,800	Existing Local Permittee Conservation lands in the MSHCP Reserve System
496,400	557,100	<i>SUBTOTAL</i>
69,290	29,990	Acres of Complementary Conservation
39,850	21,390	Acres to be acquired by state and federal agencies
7,700	7,700	Additional Local Permittee acres for which there will be cooperation to conserve
93,100	88,900	Acres to be acquired or otherwise conserved by the Local Permittees
10,800	10,800	Non-Permittee public and quasi-public lands
7,800	7,800	Fluvial sand transport area where the Conservation Objective is met through non-acquisition. Development consistent with Conservation Objectives is allowed. ³
228,540	166,580	<i>SUBTOTAL - COMPLEMENTARY CONSERVATION AND ADDITIONAL CONSERVATION LANDS</i>
22,660	22,420	Potential Development within Conservation Areas from Table 5-1.
747,600	746,100⁴	<i>TOTAL – CONSERVATION AREAS</i>

¹ The acreage includes lands purchased by non-profit organizations and donated to federal agencies.

² The acreage includes lands owned by non-profit organizations but acquired with State grant funds or local funds.

³ These acres are in the Cabazon, Long Canyon, and West Deception Canyon Conservation Areas.

⁴ Revisions in the overall Conservation Area acreage from 1996 to 2006 reflect changes in boundaries due to Like Exchanges, modifications in Response to Comments, and a higher resolution analysis of the Conservation Area boundaries. These revisions do not change the obligations of the Permittees to Conserve the acreages described in the 1996 column.

Section 4 focuses on the establishment and operation of the MSHCP Reserve System through description of the Conservation Objectives, Reserve Assembly, and the measures that will be implemented to achieve the Conservation Area and Covered Species Goals and Objectives. Section 4.1 provides an overview of the Existing Conservation Lands and how existing management constraints were used to determine their contribution to meeting the Conservation Objectives of the Conservation Areas. Section 4.2 describes MSHCP Reserve System Assembly. This is followed in Section 4.3 by an in-depth description of the 21 Conservation Areas from which the MSHCP Reserve System will be assembled. This section includes a description of Conservation Objectives and Required Measures to avoid, minimize, and mitigate Take. Section 4.4 provides additional description of avoidance, minimization, and mitigation measures for Covered Activities. Section 4.5 describes guidelines for land uses within or adjacent to the MSHCP Reserve System. These guidelines are another form of avoidance, minimization, and mitigation measures. Section 4.6 summarizes Conservation and Take or Habitat loss levels for the Covered Species (Take for animal species) and conserved natural communities within the Plan Area.

Implementation of the Plan must ensure that the Conservation Objectives delineated for each Conservation Area are achieved and that the Required Measures are carried out. Implementation relies on cooperation among all the signatories to the IA, including local, state, and federal agencies. Assembly of the MSHCP Reserve System is a component of Plan implementation.

4.1 Existing Conservation Lands within Conservation Areas

The Conservation Areas contained approximately 496,400 acres of Existing Conservation Lands in 1996 at the time of the signing of the Planning Agreement. Since then, approximately 59,600 acres have been acquired in the Conservation Areas by federal, state, and local agencies, and non-profit organizations. (See Section 4.2 in Appendix I for information on acquisitions since the Planning Agreement.) As of November 2006, there were approximately 557,100 acres of Existing Conservation Lands in the Conservation Areas composed of approximately 529,200 acres of state and federal lands, 8,800 acres of local lands, and approximately 19,100 acres of non-profit organization lands. These are lands in public or private ownership that are managed for Conservation and/or open space values, and which contribute to the Conservation of the Covered Species and the conserved natural communities included in the Plan. These lands are expected to be maintained in their current natural state. Tables 4-2 and 4-3 in Sections 4.1.1 and 4.1.2 show the ownership of these lands. These lands have been assigned one of three Conservation Levels, as explained in Section 2.

On Conservation Level 1 land, Development is precluded in Wilderness Areas except to the extent that federal agencies must provide reasonable access across public lands to private inholdings within wilderness. Notwithstanding this, virtually no Habitat loss is anticipated. The Plan anticipates only minimal Habitat loss on Conservation Level 2 lands, in conjunction with trails and trailheads identified in Section 7.4, or as necessitated by an Adaptive Management action. Section 7 of the Plan addresses Covered Activities including Operation and Maintenance

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Activities (O&M) for any existing Permittee facilities that may occur on Existing Conservation Lands. New Development on federal Existing Conservation Lands would be subject to a Section 7 consultation as applicable pursuant to FESA. New Development on state Existing Conservation Lands would be subject to appropriate permitting processes with CDFG. New Development on Local Permittee or Private Conservation Land, except as specifically authorized in Section 7 of this Plan, would be permitted only through a Plan amendment and must be consistent with the Conservation Objectives of the relevant Conservation Area.

On Conservation Level 3 land, the Plan anticipates that Habitat loss will not occur on more than 1% of lands managed by each entity, and that any Development will be consistent with the Conservation Objectives for the relevant Conservation Area. The BLM 2002 CDCA Plan Amendment for the Coachella Valley specifically commits BLM to conserving at least 99% of vegetation community types on the lands it administers in the MSHCP Reserve System. In the portion of the MSHCP Area where the Northern and Eastern Colorado (NECO) Plan applies to federal land, new surface disturbance is cumulatively limited to one percent of the federal portion of each Desert Wildlife Management Area. New Development on federal Existing Conservation Lands would be subject to a Section 7 consultation as applicable. New Development on state Existing Conservation Lands, except as specifically authorized in Section 7 of this Plan, would be subject to appropriate permitting processes with CDFG. New Development on Local Permittee and Private Conservation Land, except as specifically authorized in Section 7 of this Plan, may be permitted only through a Plan amendment and must be consistent with the Conservation Objectives of the relevant Conservation Area.

The Existing Conservation Lands include the Coachella Valley Fringe-toed Lizard Preserve system established pursuant to the Coachella Valley Fringe-toed Lizard Habitat Conservation Plan (CVFTL HCP), approved in 1986. Three preserves were established: Coachella Valley (Thousand Palms), Whitewater Floodplain, and Willow Hole/Edom Hill. As described in Section 16.2 of the IA, the lands acquired under the CVFTL HCP will be subsumed into and managed as part of the MSHCP Reserve System. The CVFTL Incidental Take Permit will be relinquished per 50 CFR 13.26 and 50 CFR 17.22(a)(7). The CVFTL is a Covered Species under the MSHCP.

4.1.1 Federal and State Existing Conservation Lands

Federal lands within the MSHCP Reserve System that will contribute to the Conservation of the Covered Species include lands administered by BLM, BOR, NPS, USFWS, and USFS. State lands within the MSHCP Reserve System that will contribute to the Conservation of the Covered Species include lands administered by CDFG, State Parks, CVMC, and UC. The federal and state Existing Conservation Lands are summarized in Table 4-2, and the lands managed by the federal and state agencies as of November 2006 are briefly described following the table. The difference in acreage between 1996 and 2006 reflects acquisitions during that period. Acquisitions may include purchases as well as lands donated to the agency. Additional information concerning the lands described below is found in Section 8.2.3. While the federal and state Existing Conservation Lands are a component of the MSHCP Reserve System and add value to the lands to be conserved by the Permittees, their Conservation does not constitute mitigation for impacts of the Covered Activities. Conversely, Take Authorization and mitigation and minimization of impacts from the

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Covered Activities are not dependent on the Conservation of the federal and state Existing Conservation Lands.

Table 4-2: State and Federal Existing Conservation Lands¹

Agency	Acres (1996)	Acres (November 2006)	Conservation Area
BLM	260,300		Santa Rosa and San Jacinto Mountains; Mecca Hills/Orocopia Mountains; Upper Mission Creek/Big Morongo Canyon; Dos Palmas; Whitewater Canyon; Willow Hole; Edom Hill; Thousand Palms; Indio Hills/Joshua Tree National Park Linkage
BOR	600		Dos Palmas
NPS	138,000		Joshua Tree National Park
USFWS	3,600		Thousand Palms
USFS	56,400		Santa Rosa and San Jacinto Mountains; Cabazon; Stubbe and Cottonwood Canyons; Upper Mission Creek/Big Morongo Canyon; Whitewater Canyon
CDFG	22,300		Santa Rosa and San Jacinto Mountains; Dos Palmas; Thousand Palms; Indio Hills/Joshua Tree National Park Linkage
Caltrans	0		Dos Palmas
State Lands Commission	500		Joshua Tree National Park
State Parks	3,400		Santa Rosa and San Jacinto Mountains; Indio Hills Palms; Indio Hills/Joshua Tree National Park Linkage
CVMC	200		Snow Creek/Windy Point; Willow Hole; Thousand Palms; Santa Rosa and San Jacinto Mountains
UC	6,300		Santa Rosa and San Jacinto Mountains
TOTAL	491,500		

¹ Acreage is rounded to nearest 100 acres.

Bureau of Land Management

The management of BLM lands in the MSHCP Reserve System is consistent with the Conservation Goals and Conservation Objectives of the Plan. These areas, totaling approximately 277,100 acres, are BLM portions of the Santa Rosa and San Jacinto Mountains National Monument, the Santa Rosa Wilderness (which also lies within the National Monument), the Mecca Hills Wilderness, the Orocopia Mountains Wilderness, the San Gorgonio Wilderness, the Big Morongo Canyon Preserve/ACEC, portions of the Chuckwalla Desert Wildlife Management Area/ACEC (some portions lie outside the Plan Area), portions of the Dos Palmas Preserve/ACEC, the Whitewater Canyon ACEC, the Willow Hole-Edom Hill Preserve/ACEC, and portions of the Thousand Palms CVFTL Preserve. The BLM also manages land in the MSHCP Reserve System that is not included in any of the foregoing management units. Pursuant to BLM's 2002 CDCAPA for the Coachella Valley, BLM commits to conserving at least 99% of vegetation community types on lands it administers within the MSHCP Reserve System. CVCC will use its best efforts to enter into a Memorandum of Understanding (MOU) with BLM to ensure monitoring and management consistent with the MSHCP prior to issuance of the Permits and no later than 3 years after the

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issuance of the Permits. This MOU will address cooperative efforts to control OHV trespass on Reserve System lands and will encourage cooperative agreements to enforce third-party noncompliance with the requirements of the Plan. BLM has the responsibility to address OHV trespass across BLM lands within the Plan Area through implementation of the CDCA Plan Amendment and any associated Section 7 consultations, consistent with the Terms and Conditions of any associated Biological Opinions and re-initiation of consultation on previous BLM actions when necessary.

Bureau of Reclamation

BOR administers approximately 600 acres of land adjacent to the Coachella Canal in the Dos Palmas Conservation Area. The Permits will not provide Take Authorization for activities on this land.

National Park Service

NPS manages approximately 146,000 acres within Joshua Tree National Park that are in the MSHCP Reserve System. NPS management of these areas will ensure that the biological resource values on these lands are managed in a manner consistent with the MSHCP. NPS has three relevant plans that guide management of these areas: the Joshua Tree National Park General Management Plan, the Land Protection Plan for Joshua Tree National Park, and the Backcountry and Wilderness Management Plan. CVCC will use its best efforts to enter into an MOU with NPS to ensure monitoring and management consistent with the MSHCP prior to issuance of the Permits and no later than 3 years after Permit issuance.

U.S. Fish and Wildlife Service

USFWS manages approximately 3,600 acres in the Coachella Valley National Wildlife Refuge, which is the USFWS portion of the CVFTL Preserve. USFWS will monitor and manage these lands consistent with the Conservation Goals and Conservation Objectives of the Plan.

U.S. Forest Service

The approximately 57,300 acres of USFS lands within the MSHCP Reserve System include portions of the San Jacinto Wilderness, portions of the San Geronio Wilderness Management Area, portions of the Santa Rosa Wilderness, and some non-Wilderness portions of the San Bernardino National Forest. USFS management objectives for these lands are compatible with the Conservation Goals and Conservation Objectives of the Plan. The approved 2004 Land and Resource Management Plan provides specific standards and guidelines for the protection of Peninsular bighorn sheep and riparian birds. CVCC will use its best efforts to enter into an MOU with USFS to ensure monitoring and management consistent with the MSHCP prior to issuance of the Permits and no later than 3 years after Permit issuance.

California Department of Fish and Game

CDFG manages approximately 27,700 acres of land within the MSHCP Reserve System. This includes the Carrizo Canyon Ecological Reserve, Hidden Palms Ecological Reserve, Sky

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Valley Ecological Reserve, Magnesia Springs Ecological Reserve, Oasis Springs Ecological Reserve, and the Santa Rosa Mountains State Wildlife Area. In addition, CDFG manages some lands in the CVFTL Preserve as an Ecological Reserve. CDFG will monitor and manage these lands consistent with the Conservation Goals and Conservation Objectives of the Plan.

California Transportation Department (Caltrans)

Caltrans manages approximately 500 acres in the Dos Palmas Conservation Area.

State Lands Commission

The State Lands Commission administers more than 4,800 acres in the Plan Area. All but 700 acres are managed for revenue generating purposes. By special agreement with NPS, State Lands Commission manages 700 acres in Joshua Tree National Park for conservation purposes. The remaining 4,100 acres are not considered conserved. The State Lands Commission is not a Permittee and receives no Take Authorization through the MSHCP.

State Parks

The mission of State Parks is to provide for the health, inspiration, and education of the people of California by helping to preserve the state's extraordinary biological diversity, protecting its most valued natural and cultural resources, and creating opportunities for high-quality outdoor recreation. State Parks lands totaling approximately 6,800 acres within the MSHCP Reserve System include portions of Mt. San Jacinto Wilderness State Park and the Indio Hills Palms unit of the State Parks system. The Wilderness designation of the former provides management that is consistent with the Conservation Goals and Conservation Objectives of the Plan. The latter is currently managed per an MOU as part of the CVFTL Preserve. This preserve will be incorporated into the MSHCP Reserve System and management of State Parks' lands will be consistent with the Conservation Area and Covered Species Goals and Objectives of the Plan. State Parks is a Permittee and will sign the IA. Management and monitoring of approximately 6,800 acres within the Conservation Areas consistent with the MSHCP is part of State Parks' obligation as a Permittee.

Coachella Valley Mountains Conservancy

CVMC acquires mountainous lands surrounding the Coachella Valley and natural community conservation lands within the Coachella Valley to hold in perpetual open space and to provide for the protection of wildlife resources on, the public's enjoyment of, and the enhancement of their recreational and educational experiences on those lands in a manner consistent with the protection of the lands and the resource values thereon. CVMC buys land directly and makes local assistance grants to other entities to acquire land for CVMC's purposes. CVMC owns approximately 2,600 acres of land or a conservation easement interest in land in the Snow Creek/Windy Point Conservation Area, the Willow Hole Conservation Area, the Thousand Palms Conservation Area, and the Santa Rosa and San Jacinto Mountains Conservation Area. CVMC manages these lands to protect their biological resource values pursuant to Public Resources Code Section 33501. CVMC will monitor and manage these lands consistent with the Conservation Area

and Covered Species Goals and Objectives of the Plan as part of its obligation as a Permittee. CVMC will sign the IA.

Regents of the University of California

UC owns and manages land totaling approximately 6,300 acres in two areas of the MSHCP Reserve System as part of its Natural Reserve System. The two areas are Deep Canyon Desert Research Center and Oasis de los Osos, both of which are located in the Santa Rosa and San Jacinto Mountains Conservation Area. The mission of the Natural Reserve System is to protect the biological resources of its sites while providing for teaching and research opportunities. Management of these lands is consistent with the Conservation Goals and Conservation Objectives of the Plan. CVCC will use its best efforts to enter into an MOU with Regents to ensure monitoring and management consistent with the MSHCP prior to issuance of the Permits and no later than 3 years after Permit issuance.

4.1.2 Local Permittee Existing Conservation Lands, Including CVFTL HCP Lands

As part of their mitigation obligation under the Plan, the Local Permittees will commit to manage and protect approximately 8,800 acres of Existing Conservation Lands as part of the MSHCP Reserve System, and consistent with the Conservation Area and Covered Species Goals and Objectives of the Plan. This includes the Covered Species Conservation Goals and Objectives in Section 9. The Local Permittee Existing Conservation Lands are summarized in Table 4-3. Local Permittee lands in the MSHCP Reserve System that are currently conserved and which will be managed for Plan purposes include lands owned by the Cities and County Parks. Prior to relinquishment of the CVFTL Permit, CVCC will conserve the parcels through a recorded Legal Instrument acceptable to the Wildlife Agencies. CVCC may obtain conservation easements on or fee title to the lands owned by the Cities and County Parks. CVCC will enter into MOUs with these jurisdictions assuring management of these lands consistent with the MSHCP.

Also included in the Local Permittee Existing Conservation Lands are lands owned by the Center for Natural Lands Management, which were acquired with local mitigation fees pursuant to the CVFTL HCP, and lands owned by CVWD and managed pursuant to the CVFTL HCP. The CVFTL HCP required establishment of three preserves for the Conservation of the CVFTL and its Habitat. These are the Coachella Valley Preserve in the Thousand Palms area, the Willow Hole/Edom Hill Preserve near the west end of the Indio Hills, and the Whitewater Floodplain Preserve east of Indian Avenue in the Whitewater River area. These lands are displayed in Figure 6-2 in Section 6.6.1.3 of the Plan. These preserves consist of BLM, CDFG, USFWS, State Parks, CVMC, CVWD, TNC, and CNLM lands. Table 6-1 shows the ownership in the three reserves. Of the land in the reserves, approximately 1,700 acres in the Whitewater Floodplain Reserve is CVWD land, and approximately 500 acres was acquired with local CVFTL mitigation fees. These lands will be included in the MSHCP Reserve System.

In conjunction with Plan approval and Permit issuance, the CVFTL Incidental Take Permit will be relinquished per 50 CFR 13.26 and 50 CFR 17.22(a)(7). A new Incidental Take Permit will be issued pursuant to the MSHCP. Prior to relinquishment of the CVFTL Permit, CVCC shall

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conserve these lands through a recorded Legal Instrument acceptable to the Wildlife Agencies. CVCC may obtain conservation easements on or fee title to these mitigation lands. (See Section 6.6.1.3 of the Plan and Section 16.2 of the IA for additional details.)

Table 4-3: Local Permittee Existing Conservation Lands¹

<i>Permittee</i>	<i>Acres (1996)</i>	<i>Acres (November 2006)</i>	<i>Land Designation</i>	<i>Conservation Area</i>
City of Cathedral City	0	100	Deed Restricted	Edom Hill
City of Indian Wells	600	600	Leased to Living Desert	Santa Rosa and San Jacinto Mountains
City of La Quinta	0	100	Deed Restricted	Santa Rosa and San Jacinto Mountains
City of Palm Desert	0	1,000	Deed Restricted	Santa Rosa and San Jacinto Mountains
City of Palm Springs	1,800	2,100	Deed Restricted	Santa Rosa and San Jacinto Mountains
City of Rancho Mirage	0	1,000	Conservation Easement	Santa Rosa and San Jacinto Mountains
CVWD	1,200	1,700	Restricted pursuant to CVFTL HCP	Whitewater Floodplain
County Parks	400	400	Regional Open Space	Upper Mission Creek/Big Morongo Canyon; Santa Rosa and San Jacinto Mountains
CVAG	0	1,300	Transportation mitigation	Willow Hole; West Deception; Indio Hills/Joshua Tree Linkage
Center for Natural Lands Management	0	500	Acquired with CVFTL local mitigation fees pursuant to the CVFTL HCP	Thousand Palms
TOTAL	4,000	8,800		

¹ Acreage is rounded to the nearest 100 acres.

4.1.3 Non-Profit Organization Conservation Lands

Various non-profit conservation organizations own land in the MSHCP Reserve System, which they acquired for Conservation purposes. CVCC will use its best efforts to enter into an MOU regarding cooperative management with non-profit conservation organizations within three years of Permit issuance to ensure the permanent Conservation by the execution of a Legal Instrument and management of the lands they own pursuant to the Plan, including providing access to the property for biological monitoring and management purposes. The text of the model MOU is included in Section 4.3 of Appendix I.

Table 4-4 shows non-profit conservation organization Existing Conservation Lands.

Table 4-4: Non-Profit Organization Existing Conservation Lands¹

<i>Non-profit Organization</i>	<i>Acres (1996)</i>	<i>Acres (November 2006)</i>	<i>Conservation Area</i>
American Land Conservancy	0	500	Santa Rosa and San Jacinto Mountains
Center for Natural Lands Management	0	800	Dos Palmas
Center for Natural Lands Management (CVFTL Preserve)	0	1,100	Thousand Palms; Willow Hole; Edom Hill
Friends of the Desert Mountains	0	12,400	Snow Creek/Windy Point; Stubbe and Cottonwood Canyons; Whitewater Canyon; Willow Hole; Thousand Palms; Indio Hills Palms; Indio Hills/Joshua Tree National Park Linkage; Santa Rosa and San Jacinto Mountains
The Living Desert	0	600	Santa Rosa and San Jacinto Mountains
The Nature Conservancy	900	900	Thousand Palms; Dos Palmas
Wildlands Conservancy	0	2,800	Joshua Tree National Park; Upper Mission Creek/Big Morongo Canyon; Santa Rosa and San Jacinto Mountains
NON-PROFIT ORGANIZATION TOTAL	900	19,100	

¹ Acreage is rounded to the nearest 100 acres.

4.2 MSHCP Reserve System Assembly

4.2.1 Complementary Conservation

Several acquisition efforts for Conservation purposes are ongoing. These acquisition programs have broader rationales than the MSHCP program and are independent of the MSHCP effort, though they may be coordinated with it. They complement implementation of the MSHCP, but the acquisition is not a Permittee obligation for purposes of the authorization of Take. In the case of public agencies, the goal of these acquisition programs is to consolidate public ownership of lands within Joshua Tree National Park, the Santa Rosa and San Jacinto Mountains National Monument, and the Mecca Hills and Orocopia Mountains Wilderness areas. Other Complementary Conservation includes acquisitions by non-profit organizations and possibly Tribal acquisition of land for Conservation purposes outside reservation boundaries. Between 1996 and November 2006, Complementary Conservation has accounted for the conservation of approximately 36,900 acres in the Conservation Areas. Table 4-5 shows where this Complementary Conservation has occurred, as well as where future Complementary Conservation is projected to occur.

During the term of the Permits, approximately 29,990 acres of additional Complementary Conservation is projected to occur in the Conservation Areas after November 2006. Based on past

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performance, this is a reasonable estimate of the acquisitions that might be accomplished through these programs over the life of the Permits. For purposes of projecting acquisition costs for the Plan, it has been assumed that future Complementary Conservation will occur in Joshua Tree National Park, the Santa Rosa and San Jacinto Mountains National Monument, and the Mecca Hills and Orocopia Mountains Wilderness areas. Figure 4-3 shows the location of these projected future Complementary Conservation areas. Acquisitions by non-profit organizations or Tribes may also occur in the Conservation Areas. Any such acquisitions will be considered as part of the Complementary Conservation acres projected under the Plan, as long as the Conservation is not for mitigation for projects or other HCPs. CVCC shall note in its Annual Report to the Wildlife Agencies how much land, if any, non-profit organizations and the Tribes have acquired in the Conservation Areas.

If, during the course of Plan implementation, Complementary Conservation is not occurring as anticipated, the Parties will meet and confer regarding impacts to meeting Conservation Objectives.

Table 4-5: Complementary Conservation¹

<i>Conservation Area</i>	<i>Complementary Conservation since 1996</i>	<i>Projected Complementary Conservation</i>
Desert Tortoise and Linkage	600	0
Dos Palmas	800	0
Edom Hill	200	0
Indio Hills/JTNP Linkage	700	0
Indio Hills Palms	1,000	0
Joshua Tree National Park ²	9,300	11,900
Mecca Hills/Orocopia Mountains ³	1,000	6,900
Santa Rosa and San Jacinto Mountains ⁴	17,000	10,700
Snow Creek/Windy Point ⁵	1,000	490
Upper Mission Creek/Big Morongo Canyon	4,200	0
West Deception Canyon	500	0
Willow Hole	100	0
Whitewater Canyon	500	0
<i>TOTAL⁶</i>	<i>36,900</i>	<i>29,990</i>

¹ Complementary Conservation is represented in acreage rounded to the nearest 100 acres.

² Future Complementary Conservation consists of National Park inholding acquisitions by NPS.

³ Future Complementary Conservation consists of Wilderness inholding acquisitions by BLM.

⁴ Future Complementary Conservation consists of National Monument inholding acquisitions by BLM and USFS.

⁵ Future Complementary Conservation consists of Wilderness inholding acquisitions by BLM.

⁶ Total Complementary Conservation includes some lands that were purchased by Private Conservation agencies and transferred to Federal Ownership.

4.2.1.1 Tribal Land outside the Reservation

Between 1996 and 2003, the Agua Caliente Band of Cahuilla Indians purchased approximately 3,800 acres of land outside the Indian Reservation and within the Santa Rosa and San Jacinto Mountains Conservation Area. This land is the subject of a proposed land exchange between the Agua Caliente Band and the Bureau of Land Management. It is not known at this time how much of the 3,800 acres may ultimately be included in the exchange. The purpose of the proposed land exchange is to consolidate tribal land inside the external boundaries of the reservation, and for BLM to consolidate its land within the Santa Rosa and San Jacinto Mountains National Monument. BLM would obtain some or all of the 3,800 acres of tribal lands outside the reservation. Upon completion of the land exchange, the CVCC will coordinate with the Agua Caliente Band of Cahuilla Indians regarding the preparation of a Minor Amendment without Wildlife Agency concurrence to adjust land ownership and conservation acreages in this Conservation Area.

4.2.2 Additional Conservation Lands

A minimum of 129,690 acres in the Conservation Areas will be conserved as Additional Conservation Lands after November 2006, to be acquired or otherwise conserved through state and federal acquisitions, Permittee contributions, and the Conservation of public and quasi-public lands.

4.2.2.1 The Role of Federal and State Governments in Assembly of the Reserve System

Sensitive species and their Habitats are public resources; the benefits of protecting these resources accrue broadly to the citizens of the state and the nation. The federal and state governments have acknowledged their role in Habitat Conservation and agree to assist in creating an MSHCP Reserve System that reduces or avoids the need to list additional species and contributes to the recovery of Covered Species. Between 1996 and November 2006, the state and federal governments have acquired or funded the acquisition of 37,700 acres in the Conservation Areas (in addition to Complementary Conservation). Through the MSHCP and its IA, the federal and state governments have agreed to partner with the Permittees in assembling, managing, and monitoring the MSHCP Reserve System. The federal and state governments will undertake the following actions:

- Acquire 21,390 acres of privately owned lands in the Conservation Areas after November 2006, as a contribution to Plan implementation.
- Manage certain federal and state lands in the MSHCP Reserve System.
- Participate in the Monitoring and Adaptive Management Program for the MSHCP Reserve System.

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Biological value, cost, vulnerability to Development, and proximity to existing state and federal lands will be considered in determining which lands are acquired. State and federal potential funding sources and programs for land acquisition are described in Section 5 of the Plan.

4.2.2.2 Permittees' Obligation in Assembly of the MSHCP Reserve System

As of 2006, the Permittees have an obligation to conserve approximately 115,340 acres in the Conservation Areas through:

- Conservation of 7,700 acres of currently non-conserved Local Permittee-owned lands. [See Section 4.2.2.2.1.]
- Conservation of 88,900 acres of Additional Conservation Lands by the Local Permittees and Caltrans through acquisition or other means, such as planning tools and land use regulation and the acquisition of 640 acres by State Parks, of which 100 acres can be developed for State Park facilities. [See Section 4.2.2.2.2.]
- Management of 18,200 acres of Local and State Permittee Existing Conservation Lands consistent with the MSHCP. [See Section 4.2.2.2.3.]

In addition, the Permittees will maintain the fluvial sand transport Essential Ecological Process in the Cabazon, Long Canyon, and West Deception Canyon Conservation Areas as described in Section 4.2.2.2.4.

4.2.2.2.1 Conservation of Non-Conserved Permittee Owned Lands in Conservation Areas

In addition to lands they have previously committed to conservation, the Local Permittees will cooperate with CVCC to conserve currently non-conserved Local Permittee lands shown in Table 4-6 as part of the Permittees' contribution of Additional Conservation Lands to Plan implementation. Figure 4-4 depicts the location of these lands. Some parcels contain public facilities that are Covered Activities under the Plan as identified in Section 7.3. These parcels will be conserved to the extent consistent with the Covered Activities. CVCC shall conserve the 7,700 acres through a recorded Legal Instrument. CVCC shall also enter into an agreement or MOU providing for management consistent with the MSHCP. Within three years of Permit issuance, CVCC will, in this manner, ensure the Conservation of the Cities, Riverside County, County Flood Control, County Parks, and County Waste lands within the Conservation Areas. The CVWD, IID, and MSWD lands totaling about 6,900 acres will be conserved incrementally over time as CVWD, IID, and MSWD mitigate Covered Activities, through a recorded Legal Instrument acceptable to the Wildlife Agencies. The Legal Instrument may include conveying fee title or conservation easements on these lands to CVCC. If before Year 50 of Plan implementation, either CVWD, IID, or MSWD still owns land in the Conservation Areas that has not been conserved by any of the foregoing methods, CVWD, IID, and/or MSWD shall cooperate with CVCC in the conservation of these lands through acquisition by CVCC or other means.

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4.2.2.2.2 Conservation of Additional Conservation Lands by Permittees through Acquisition or Other Means

One of the Permittees’ mitigation obligations is to conserve 88,900 acres through acquisition or other means after November 2006.

Table 4-6: Non-Conserved Permittee Owned Lands

Local Permittee	Acres¹	Conservation Area
City of La Quinta	100	Santa Rosa and San Jacinto Mountains
City of Palm Springs	100	Santa Rosa and San Jacinto Mountains
City of Desert Hot Springs	100	Upper Mission Creek/Big Morongo Canyon
Coachella Valley Water District (CVWD)	5,800	Whitewater Floodplain; CV Stormwater Channel & Delta; Santa Rosa/San Jacinto Mountains
Imperial Irrigation District	900	CV Stormwater Channel & Delta; Desert Tortoise & Linkage
Mission Springs Water District	100	Upper Mission Creek/Big Morongo Canyon; Willow Hole
Riverside County; County Flood Control; County Parks; County Waste	600	Cabazon; Stubbe & Cottonwood Canyons; Willow Hole; Edom Hill; Upper Mission Creek/Big Morongo Canyon; Mission Creek/Morongo Wash; Desert Tortoise & Linkage; CV Stormwater Channel & Delta; Santa Rosa and San Jacinto Mountains;
TOTAL	7,700	

¹ Acreage is rounded to the nearest 100 acres.

Acquisition priorities will be set by CVCC and will focus on areas with the greatest biological sensitivity and greatest risk of Development. CVCC will adjust priorities as needed to maintain Rough Step, which is described in Section 6.5, and respond to changing Development patterns. CVCC will seek to maintain a strategic cash reserve or line of credit with willing Local Permittees for high priority acquisitions.

In addition to acquisition, land in the MSHCP Reserve System may be conserved through dedication, deed restriction, or granting a conservation easement in conjunction with Development approvals and other conservation incentives used by the Permittees. A Permittee could, for example, use planning tools such as transfer of Development rights or cluster development to ensure that a Development in a Conservation Area is compatible with the Conservation Objectives and that a portion of the property is committed to Conservation. Jurisdictions may identify or develop additional incentives in exchange for Conservation commitments. For Plan purposes, it is assumed that a limited amount of land, not anticipated to exceed approximately 1,700 acres, may be conserved through planning tools and land use regulation. Because of the uncertainty of this, however, the Plan assumes for funding projection purposes that acquisition will be the method used to conserve land. If a Permittee approves Development in a Conservation Area, the jurisdiction will be responsible for reporting to CVCC the acreage approved for Development and the acreage of any land committed to Conservation in conjunction with the approval. (See Section 6.6.1.1 for a discussion of how Development proposals in a Conservation Area will be reviewed.)

Habitat Conservation through planning tools and land use regulation shall be ensured, prior to issuance of a grading permit, by fee title transfer, granting a conservation easement to CVCC or

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other approved entity, or recordation of a deed restriction. Regardless of the means by which Habitat Conservation occurs, rights of access for monitoring and management of the lands by CVCC, the Wildlife Agencies, or their designees shall be provided. The 88,900 acres of Permittee mitigation lands to be acquired or otherwise conserved will be protected by the CVCC with a Legal Instrument that guarantees conservation in perpetuity. Acquisitions that occurred prior to Permit issuance will be protected by a Legal Instrument within five years of Permit issuance; acquisitions that occur after Permit issuance shall be protected by a Legal Instrument within five years of acquisition. Such instruments may be removed from a parcel with Wildlife Agencies' concurrence if it is necessary to accomplish an exchange of lands that results in higher quality Conservation. A conservation easement shall be substantially in the form of the Model Conservation Easement included in the Final IA as Exhibit H.

The undeveloped portions of parcels in Conservation Areas on which Development is approved by a Permittee shall count toward meeting the MSHCP's Conservation Objectives only when the undeveloped portion of the parcel is legally described and permanently protected through an appropriate Legal Instrument, and provision is made for the land to be monitored and managed pursuant to the MSHCP's Monitoring Program and Management Program. Review of individual Development projects will occur in accordance with the Implementation Manual.

4.2.2.2.3 Management of Permittee Existing Conservation Land Consistent with the Plan

As previously described in Sections 4.1.1 and 4.1.2, certain Permittee-owned lands in the Conservation Areas will be managed by the Permittees consistent with the Conservation Area and Covered Species Goals and Objectives of the Plan as part of the Permittees' mitigation obligation. These lands consist of 6,800 acres of State Parks' land, 2,600 acres of CVMC land, and 8,800 acres of Local Permittee land as of November 2006.

4.2.2.2.4 Conservation of Fluvial Sand Transport Process within Conservation Areas

Also as part of their mitigation obligations, the Local Permittees will protect the fluvial sand transport Essential Ecological Process in the Cabazon, Long Canyon, and West Deception Canyon Conservation Areas to ensure no net reduction in fluvial sand transport in these areas. Figure 4-5 depicts these areas. The Permittees will require that natural flows onto parcels in the fluvial sand transport areas shall be conveyed offsite in the natural pre-disturbance direction of flow. This ensures that Development on the property shall not impede water-borne sand transport across the parcel in its natural direction of flow. In addition, water-borne sediments and floodwaters shall not be artificially retained onsite. Concentration of flows and increase in flow velocity offsite shall be minimized to avoid downstream erosion and scour. Alternatively, a flood control structure for the area that is designed to ensure no net reduction of sediment transport from the sand source area to the sand deposition area where aeolian sand transport processes are active may be used to achieve the Conservation Objective of fluvial sand transport. Construction of such flood control structures, unless identified as Covered Activities in Section 7.3, will require a Minor Amendment to the Plan with Wildlife Agencies' concurrence, as set forth in Section 6.12.3 of the Plan. Sections 4.3.1, 4.3.10, and 4.3.13 provide additional information on the protection of fluvial sand transport processes in the Cabazon, Long Canyon, and West Deception Canyon Conservation Areas. The fluvial sand transport processes occur on a total of 7,800 acres in these three

Conservation Areas. While there is Habitat (but not Core Habitat) for some of the Covered Species in these areas, it is already fragmented and subject to significant edge effects by existing Development. As a result, there are no Conservation Objectives for Habitat in the areas consisting of the 7,800 acres. The only Conservation Objective for these areas is to maintain fluvial sand transport as described above. Development consistent with ensuring no net loss of fluvial sand transport may occur in these areas, and such Development is a Covered Activity under the Plan and Permits.

4.2.2.3 Public and Quasi-Public Land in the Conservation Areas

Approximately 10,800 acres within the Conservation Areas (identified in the County of Riverside Assessor's parcel database and utilities databases) belong to public and quasi-public entities that are not Permittees. The Plan assumes that should a non-Permittee seek Take Authorization through the Participating Special Entity provisions of the Plan, Conservation would occur in conjunction with such Take Authorization such that 10,800 acres would ultimately be conserved or remain undeveloped, enabling the Conservation Area and Covered Species Goals and Objectives of the Plan to be achieved.

4.3 Conservation Areas

The Plan will result in the establishment and management of the MSHCP Reserve System from land within the Conservation Areas. The Conservation Goals of the MSHCP Reserve System are:

1. Represent native ecosystem types or natural communities across their natural range of variation in a system of conserved areas.
2. Maintain or restore self-sustaining populations or metapopulations of the species included in the Plan to ensure permanent Conservation so that Take Authorization can be obtained for currently Listed Species (animal species) and Non-listed Species can be covered in case they are listed in the future.
3. Sustain ecological and evolutionary processes necessary to maintain the functionality of the conserved natural communities and Habitats for the species included in the Plan.
4. Maximize connectivity among populations and avoid Habitat fragmentation within Conservation Areas to conserve biological diversity, ecological balance, and connected populations of Covered Species.
5. Minimize adverse impacts from OHV use, illegal dumping, edge effects, exotic species, and other disturbances in accordance with the Management and Monitoring Programs.
6. Manage the Conservation Areas adaptively to be responsive to short-term and long-term environmental change and new science.

The MSHCP Reserve System will be assembled from the Conservation Areas as described in Section 4.2. Avoidance, minimization, and mitigation measures as described in Section 4.4, and Land Use Adjacency Guidelines as described in Section 4.5 will minimize the impacts of

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Development in the Conservation Areas and adjacent to the Reserve System. The Monitoring Program, Management Program, and Adaptive Management, as described in Section 8.0, will ensure that Conservation Area and Covered Species Goals and Objectives continue to be met in perpetuity in the MSHCP Reserve System. The following section on each Conservation Area describes measures required in that specific Conservation Area to ensure that Conservation Objectives are met. The Conservation Objectives delineate the acres that need to be conserved as of 1996, when the Planning Agreement was signed. These acreages are in addition to Existing Conservation Lands in the Conservation Areas. Table 5-1 in Section 5.1.1 shows the acres in each Conservation Area that have been conserved since 1996.

For each Conservation Area, Conservation Objectives are articulated for conserving Core Habitat for Covered Species, Essential Ecological Processes necessary to maintain Habitat viability, Biological Corridors and Linkages as needed, and the less common conserved natural communities. Core Habitat has not been delineated for all species. Where it has not been delineated, Conservation Objectives are stated for either acres of Habitat or known occurrences. Specific Conservation Objectives for Other Conserved Habitat are generally not delineated because Other Conserved Habitat overlaps with and will be conserved in conjunction with attaining Conservation Objectives such as conserving Essential Ecological Process areas, Biological Corridors, Linkages, or Core Habitat for other Covered Species. An analysis of the Conservation achieved for Other Conserved Habitat through other Conservation Objectives is included in Section 4.1 of Appendix I. Specific Conservation Objectives are also not articulated for the more broadly distributed conserved natural communities because sufficient amounts of these communities in an appropriate configuration are conserved in conjunction with attaining Conservation Objectives for Core Habitat for Covered Species, Essential Ecological Processes, Biological Corridors and Linkages. This analysis is also found in Section 4.1 of Appendix I. Attainment of the Conservation Objectives in each Conservation Area will result in the establishment of the MSHCP Reserve System. It is anticipated that as Additional Conservation Lands are acquired in each Conservation Area, it may be appropriate to transfer acreage Conservation Goals associated with Conservation Objectives for both specific conserved natural communities and Covered Species between Conservation Areas. Section 6.12.2 of this document addresses this situation.

Table 4-7 summarizes the acres of various general plan land use designations on private, non-conserved lands in the Conservation Areas to provide a general overview of the existing land use designations.

Table 4-7: Land Use Designations for Non-conserved Lands in Conservation Areas

<i>Land Use Designation</i>	<i>Acres of Non-Conserved Lands</i>	<i>% of Non-Conserved Lands by Land Use Designation</i>
General Plan Designated as Open Space ¹	190,485	91.6%
General Plan Designated as Residential, allowing more than 1 unit per 10 acres ²	12,612	6.1%
General Plan Designated as Commercial, Industrial, Business Park ³	1,021	0.5%
General Plan Designated as Agriculture	2,954	1.4%
Other General Plan Designations ⁴	843	0.4%
TOTALS	207,915	100%

¹ General plan designated as open space generally indicates that the maximum land use intensity on the property is 1 unit per 10 acres. In the case of the Palm Springs General Plan designation "Desert", the minimum lot size ranges from 5 acres to 20 acres. This designation is considered "open space" in this table because of the additional requirement that 90% of the lot be left in open space.

² General plan Residential designations include all densities from Very Low to High, which encompass rural to urban residential land uses. Associated golf course lands are included.

³ These general plan designations include all types of commercial, business, industrial, and manufacturing land uses. Wind energy areas are also included.

⁴ "Other" general plan designations include Park, Specialized Park, Utility Substation, Public Use, Public Facilities, and School.

4.3.1 Cabazon Conservation Area

Location and Description. The Cabazon Conservation Area consists of the San Gorgonio River and several tributaries in the westernmost part of the Plan Area, and portions of the San Jacinto Mountains and the San Bernardino Mountains, which function as a sand source area. Portions of this Conservation Area are within the Morongo Indian Reservation, which is not a part of the Plan. This Conservation Area is depicted in Figure 4-6a. To the east is the Snow Creek/Windy Point Conservation Area. The Cabazon Conservation Area contains a total of approximately 12,470 acres.

Core Habitat. The Conservation Area does not provide Core Habitat for any of the Covered Species in the Plan Area; however, it does contain Essential Habitat for Peninsular bighorn sheep.

Other Conserved Habitat. The Conservation Area contains Other Conserved Habitat for Coachella Valley milkvetch, Coachella Valley Jerusalem cricket, desert tortoise, burrowing owl, gray vireo, least Bell's vireo, Le Conte's thrasher, southwestern willow flycatcher, summer tanager, yellow-breasted chat, yellow warbler, Coachella Valley round-tailed ground squirrel, Peninsular bighorn sheep, and Palm Springs pocket mouse. Most of the Habitat for the Coachella Valley milkvetch, Coachella Valley Jerusalem cricket, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse is in the floodplain area of the San Gorgonio River. Because of the extent of edge effects from existing Development and fragmentation in this area, the Conservation Objectives for this area do not include protecting the Habitat for these species except incidental to conserving the Biological Corridor in the Fornat Wash area. The riparian species' Habitat will be conserved. Table 4-8 shows the Covered Species occurring in this area. Figure 4-6b shows Essential Peninsular bighorn sheep Habitat in this Conservation Area.

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Table 4-8: Species Habitat – Cabazon Conservation Area
(All acreages are based on 1996 pre-Planning Agreement information.)

<i>Species</i>	<i>Total Acres of Habitat in the Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Habitat Not Currently Conserved</i>	<i>Habitat Designation</i>	<i>Acres of Core Habitat</i>
CV milkvetch	987	24	1 (962) ¹	Other Cons. Habitat	0
CV Jerusalem cricket	356	0	(356) ¹	Other Cons. Habitat	0
Desert tortoise	3,216	42	527 (2,647) ¹	Other Cons. Habitat	0
Gray vireo	26	0	(26) ¹	Other Cons. Habitat	0
Le Conte’s thrasher	4,083	42	(4,041) ¹	Other Cons. Habitat	0
Least Bell’s vireo ²	100	78	22	Breeding	N/A
Southwestern willow flycatcher	87 / 13 ³	78 / 0 ³	9 / 13 ³	Breeding/ Migratory	N/A
Summer tanager	87 / 13 ³	78 / 0 ³	9 / 13 ³	Breeding/ Migratory	N/A
Yellow-breasted chat	87 / 13 ³	78 / 0 ³	9 / 13 ³	Breeding/ Migratory	N/A
Yellow warbler	87 / 13 ³	78 / 0 ³	9 / 13 ³	Breeding/ Migratory	N/A
CV round-tailed ground squirrel	934	24	(910) ¹	Other Cons. Habitat	0
Palm Springs pocket mouse	934	24	(910) ¹	Other Cons. Habitat	0
Peninsular bighorn sheep – RZ1	264	0	92 (172) ¹	Essential ⁴	264

¹ Numbers within parentheses are acres of Habitat in fluvial sand transport areas where the only Conservation Objective is to maintain fluvial sand transport. Habitat conservation is not an objective.

² Least Bell’s vireo breeding acres includes mesquite; not included in other riparian species acreages.

³ The number preceding the slash is the acreage of breeding Habitat; the number following the slash is the acreage of Habitat used in migration.

⁴ Essential Habitat as described in the Recovery Plan for Peninsular bighorn sheep is the same as Core Habitat for purposes of this Plan.

Natural Communities. Table 4-9 shows the conserved natural communities occurring in this Conservation Area: mesquite hummocks, southern arroyo willow riparian forest, southern sycamore-alder riparian woodland, interior live oak chaparral, chamise chaparral, Sonoran creosote bush scrub, and semi-desert chaparral. All of the southern arroyo willow riparian forest within this Conservation Area occurs within Existing Conservation Lands. The Sonoran creosote bush scrub associated with the fluvial sand transport area is not proposed for conservation because

of the extent of edge effects from existing Development and fragmentation in this area. Figure 4-6c shows the conserved natural communities in this Conservation Area.

Table 4-9: Conserved¹ Natural Communities - Cabazon Conservation Area
(All acreages are based on 1996 pre-Planning Agreement information.)

<i>Natural Community</i>	<i>Total Acres in the Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres Not Currently Conserved</i>
Mesquite hummocks	13	0	13
Sonoran creosote bush scrub	3,027	42	347 (2,638) ²
Chamise chaparral	188	0	182 (6) ²
Semi-desert chaparral	26	0	(26) ²
Interior live oak chaparral	4,691	4,562	129
Southern arroyo willow riparian forest	78	78	0
Southern sycamore-alder riparian woodland	9	0	9

¹ Only natural communities to be conserved under the Plan are shown. Natural communities that are not included as described in Section 3.2.2 are not shown.

² Numbers within parentheses are acres of Habitat in fluvial sand transport areas. The Conservation Objective for these acres is to maintain fluvial sand transport. Habitat conservation is not an objective.

Essential Ecological Processes. The primary importance of the Conservation Area is that the San Gorgonio River and various tributaries function as a fluvial sand transport system for the Snow Creek/Windy Point Conservation Area and the Whitewater Floodplain Conservation Area. The portions of the San Bernardino Mountains and the San Jacinto Mountains included in this area are sand sources for this fluvial sand transport system. Figure 4-6d shows the Essential Ecological Process areas in this Conservation Area. The Western Riverside County MSHCP has determined that fluvial sand transport along the San Gorgonio River west of the Cabazon Conservation Area and functionality of the San Gorgonio River as a Biological Corridor are maintained as a result of public ownership along the river and flood control regulations.

Biological Corridors and Linkages. The San Gorgonio River and associated tributaries provide value as a Biological Corridor between the San Bernardino Mountains and the San Jacinto Mountains. The area on either side of the Fornat Wash culvert under I-10 is included in the Conservation Area to serve as a Biological Corridor. Within one mile of the culvert, on both the north and south sides of I-10, this corridor area borders on the Morongo Indian Reservation, which is not included in the Plan, and the Plan cannot control what might occur on the reservation and how it might impact this corridor. Figure 4-6d shows the Biological Corridors and Linkages in this Conservation Area.

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Conservation Objectives. The Conservation Objectives for this Conservation Area are:

1. In total, 2,340 acres of the Cabazon Conservation Area shall be conserved. (This may be less than the sum of acres indicated in the following objectives because there can be overlap among areas covered by the objectives. For example, Core Habitat for two or more species may overlap, or Core Habitat and an Essential Ecological Process area may overlap. The individual acreage figures will be used in compliance monitoring.)
2. Conserve at least 1,629 acres of the sand source areas.
3. Conserve at least 12 acres of mesquite hummocks natural community and 9 acres of southern sycamore-alder riparian woodland natural community, which provide Habitat for riparian birds and other Covered Species.
4. Conserve at least 83 acres of Essential Habitat for the Peninsular bighorn sheep.
5. Maintain the current capacity for fluvial (water-borne) sand transport along 4,496 acres of the San Gorgonio River and its tributaries.
6. Maintain functional Biological Corridors under I-10 by conserving at least 631 acres in the Fornat Wash Biological Corridor to maintain ecosystem function for Covered Species. Aside from the freeway culvert, which is an unavoidably narrow segment, the Biological Corridor shall be one mile wide, except where Existing Uses or Indian reservation lands not subject to the Plan preclude this width, to minimize edge effects. It should also be noted that portions of the corridor cross Indian reservation land, which is not a part of the Plan and over which the Plan exerts no control.
7. Coordinate with the Western Riverside County MSHCP Regional Conservation Authority to ensure that fluvial sand transport along the San Gorgonio River west of the Cabazon Conservation Area and functionality of the San Gorgonio River as a Biological Corridor are maintained.

Ownership and General Plan Land Use Designations. Table 4-10 shows the public versus private ownership within this Conservation Area.

***Table 4-10: Land Ownership - Cabazon Conservation Area
(rounded to nearest 10 acres)***

<i>Ownership¹</i>	<i>Acres</i>
<i>Existing Conservation Lands:</i>	<i>5,910</i>
BLM	40
USFS	5,870
<i>Lands Not Currently Conserved:</i>	<i>6,560</i>
County	30
County Flood Control	10
Private	6,200
Public, Quasi-public entities	320
TOTAL	12,470

¹ Based on 1996 pre-Planning Agreement land ownership information

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In this Conservation Area, the Essential Ecological Process of fluvial sand transport is to be maintained on 4,496 acres through flood control guidelines and land use regulation only. Of the remaining area in this Conservation Area, 47% of the land is currently in public or non-profit conservation organization ownership. Current conservation ranges from Level 1 to Level 3.

Table 4-11 identifies the existing general plan designation on currently non-conserved lands within the Conservation Area. Table 4-11, shows that 100% of the private land in the Conservation Area is under the jurisdiction of Riverside County. Figure 4-6e shows the Existing Conservation Lands and general plan land use designations on Level 4 lands for the area.

**Table 4-11: General Plan Land Use Designations¹
(Non-conserved lands only)² Cabazon Conservation Area**

General Plan Designation (Map symbol) - Riverside County	% of Private Non-conserved Land in Conservation Area²	Building Intensity Range
Rural Mountainous (RM)	94%	1 unit per 10 acres
Freeway (FWY)	2%	N/A
Very Low Density Residential ³ (VLDR)	---	0-2 units per acre
Low Density Residential (LDR)	4%	2-5 units per acre
Medium Density Residential ³ (MDR)	---	5-8 units per acre
Light Industrial ² (LI)	---	Industrial and related uses
TOTAL	100%	

¹ Based on 2003 general plan designations and 2003 parcel data.

² General Plan designations are shown only for lands outside the Fluvial Sand Transport areas.

³ Statistically insignificant (less than 1%)

Required Measures for the Conservation Area. Table 4-12 shows how many acres of Existing Conservation Lands are in this Conservation Area and how many acres of Additional Conservation Lands will need to be acquired or otherwise conserved through acquisition or other means. The following measures will be imposed to achieve the Conservation Objectives in this Conservation Area.

1. Conservation of the identified fluvial sand transport process areas will be achieved through application of the general plan land use designations and policies. In the fluvial sand transport areas, the Permittees will require that natural flows onto a parcel on which Development is proposed shall be conveyed offsite in the natural pre-disturbance direction of flow, and will require that Development on the property shall not impede water-borne sand transport across the parcel in its natural direction of flow. In addition, water-borne sediments and floodwaters shall not be artificially retained onsite. Concentration of flows and increase in flow velocity offsite shall be minimized to the maximum extent Feasible to avoid downstream erosion and scour. Alternatively, a flood control structure for the area that is designed to ensure no reduction in sediment transport from the sand source area to the sand deposition area where aeolian sand transport processes are active may be used to achieve the Conservation Objective of fluvial sand transport.

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2. The culvert conveying Fornat Wash under I-10 shall be maintained by Caltrans at no less than its current size, with a soft-bottom, to maintain current levels of sand transport and wildlife movement under I-10.
3. Outside of the fluvial sand transport Essential Ecological Process area, the Permittees shall comply with applicable avoidance, minimization, and mitigation measures described in Section 4.4 and the Land Use Adjacency Guidelines as described in Section 4.5.
4. New Development in Essential bighorn sheep Habitat shall adhere to the following criteria, in accordance with the guidelines in the Implementation Manual:
 - a. Development shall be clustered in one area of a site as close as possible to existing Development.
 - b. Development on alluvial fans shall be sited at the lowest possible elevation on the site and shall avoid the mouth of any canyon.
 - c. Development shall be sited a minimum of a quarter (0.25) mile from known bighorn sheep water sources identified on a reference map on file with CVCC (see Figure 4-26f), except where topographic features shield the view of the water source and access to it from proposed Development or trails, thereby minimizing potential impacts to the Peninsular bighorn sheep's ability to access water.
 - d. Development shall be conditioned to prohibit the construction of trails in Essential bighorn sheep Habitat unless approved through a Minor Amendment with Wildlife Agency concurrence.
 - e. Development shall not preclude Habitat connectivity or movement. Determination of whether Habitat connectivity or movement is precluded shall be made by the Lead Agency for the Development based on factual data provided by the RMOC, RMUC, Wildlife Agencies, or other source.
 - f. Development shall comply with Land Use Adjacency Guidelines as described in Section 4.5.
5. Within one year of Permit issuance, CVCC and the applicable Local Permittee will coordinate with the Western Riverside County MSHCP Regional Conservation Authority to ensure that fluvial sand transport along the San Gorgonio River west of the Cabazon Conservation Area and functionality of the San Gorgonio River as a Biological Corridor are maintained.

Table 4-12: Conservation and Take Authorization for Cabazon Conservation Area

(All acreages are based on 1996 pre-Planning Agreement information.)

<i>Conservation Objective</i>	<i>Total Acres in Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Disturbance Authorized</i>	<i>Remaining Acres to be Conserved</i>
Conserve Essential Habitat for Peninsular bighorn sheep	264	0	(181) ¹	83
Conserve mesquite hummocks	13	0	1	12 ²
Conserve southern sycamore-alder riparian woodland	9	0	(1) ²	9
Conserve sand source areas	7,683	5,873	181	1,629
Conserve fluvial sand transport areas	4,538	42	N/A	N/A ³
Conserve Fornat Wash Biological Corridor	641	0	10	631

¹ There are 264 acres of Essential bighorn sheep Habitat in the Conservation Area; 181 acres are within a fluvial sand transport area where there is no Conservation Objective other than maintaining fluvial sand transport.

² Disturbance of no more than one acre may occur, but it would be replaced to ensure that the no net loss occurs and the Conservation Objective is achieved.

³ Conservation of the identified fluvial sand transport process areas will be achieved through application of the general plan land use designations and policies, not through acquisition.

4.3.2 Stubbe and Cottonwood Canyons Conservation Area

Location and Description. The Stubbe and Cottonwood Canyons Conservation Area encompasses the area north of I-10 and west of Whitewater Canyon, including Stubbe Canyon and Cottonwood Canyon and portions of their alluvial fans down to I-10. This Conservation Area is depicted in Figure 4-7a. To the south is the Snow Creek/Windy Point Conservation Area. To the east and northeast is the Whitewater Canyon Conservation Area. To the west and northwest is the Cabazon Conservation Area and portions of the Morongo Indian Reservation, which is not part of the Plan. The Stubbe and Cottonwood Canyons Conservation Area contains a total of approximately 9,840 acres.

Core Habitat. The desert tortoise population in this Conservation Area centers on the mesas to the west of the Whitewater River. The desert tortoise population in this Conservation Area is potentially the most dense tortoise population within the Plan Area. A possible corridor exists connecting this area with tortoise Habitat in Joshua Tree National Park. Figure 4-7b depicts the Core Habitat, selected Other Conserved Habitat, and recorded burrowing owl locations.

Other Conserved Habitat. Stubbe Canyon and Cottonwood Canyon contain suitable migration and breeding Habitat for least Bell’s vireo, southwestern willow flycatcher, summer tanager, yellow-breasted chat, and yellow warbler. Given the scarcity of riparian Habitat in the desert, all riparian Habitat is considered important for these species, and is likely to contribute to the Conservation of these species in their respective ranges. There is also Other Conserved Habitat for Coachella Valley milkvetch, Coachella Valley Jerusalem cricket, desert tortoise, gray vireo, Le Conte’s thrasher, burrowing owl, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse. Table 4-13 shows the Covered Species occurring in this area.

Table 4-13: Species Habitat – Stubbe and Cottonwood Canyons Conservation Area
(All acreages are based on 1996 pre-Planning Agreement information.)

<i>Species</i>	<i>Total Acres of Habitat in the Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Habitat Not Currently Conserved</i>	<i>Habitat Designation</i>	<i>Acres of Core Habitat</i>
CV milkvetch	232	84	148	Other Cons. Habitat	0
CV Jerusalem cricket	12	8	4	Other Cons. Habitat	0
Desert tortoise	5,735 / 44	3,206 / 37	2,529 / 7	Core / Other Cons. Habitat	5,735
Gray vireo	9	9	0	Other Cons. Habitat	0
Le Conte’s thrasher	1,265	31	1,234	Other Cons. Habitat	0
Least Bell’s vireo	266 / 289	241 / 34	25 / 255	Breeding / Migratory	N/A
Southwestern willow flycatcher	266 / 289	241 / 34	25 / 255	Breeding / Migratory	N/A
Summer tanager	266 / 289	241 / 34	25 / 255	Breeding / Migratory	N/A
Yellow-breasted chat	266 / 289	241 / 34	25 / 255	Breeding / Migratory	N/A
Yellow warbler	266 / 289	241 / 34	25 / 255	Breeding / Migratory	N/A
CV round-tailed ground squirrel	421	21	400	Other Cons. Habitat	0
Palm Springs pocket mouse	1,210	26	1,184	Other Cons. Habitat	0

Natural Communities. Table 4-14 shows the conserved natural communities occurring in this area: Sonoran creosote bush scrub, Sonoran mixed woody and succulent scrub, Sonoran cottonwood-willow riparian forest, desert dry wash woodland, semi-desert chaparral, interior live oak chaparral, and chamise chaparral. Figure 4-7c depicts the conserved natural communities in this Conservation Area.

Table 4-14: Conserved¹ Natural Communities – Stubbe and Cottonwood Canyons Conservation Area
(All acreages are based on 1996 pre-Planning Agreement information.)

<i>Natural Community</i>	<i>Total Acres in the Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres Not Currently Conserved</i>
Sonoran creosote bush scrub	1,562	273	1,289
Sonoran mixed woody & succulent scrub	1,703	1,037	666
Chamise Chaparral	1,983	1,813	170
Semi-desert Chaparral	9	9	0
Interior live oak chaparral	1,220	1,220	0
Sonoran cottonwood-willow riparian forest	267	242	25
Desert dry wash woodland	289	34	255

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¹ Only natural communities to be conserved under the Plan are shown. Natural communities that are not included as described in Section 3.2.2 are not shown.

Essential Ecological Processes. The portions of the San Bernardino Mountains included in this area are a sand source for blowsand Habitat areas in the Snow Creek/Windy Point Conservation Area and Whitewater Floodplain Conservation Area. Stubbe Canyon Wash provides fluvial sand transport from the San Bernardino Mountains to the San Gorgonio River in the western portion of the Snow Creek/Windy Point Conservation Area. Figure 4-7d depicts the Essential Ecological Process areas in this Conservation Area.

Biological Corridors and Linkages. This area provides a Biological Corridor and Linkage between the Peninsular Range (San Jacinto and Santa Rosa Mountains) and the San Bernardino Mountains portion of the Transverse Range. The significance of this corridor is noted in *Missing Linkages: Restoring Connectivity to the California Landscape* (California Wilderness Coalition 2001). The Biological Corridor, which utilizes two culverts under I-10, connects the San Bernardino Mountains to the San Jacinto Mountains through the Snow Creek/Windy Point Conservation Area. Predators and large mammals, including coyotes, bobcats, mountain lions, and foxes, may use this Biological Corridor and Linkage. This connectivity would facilitate genetic flow and demographic dispersal among these species and help maintain predator-prey relationships. This corridor may be used by at least three of the Covered Species: desert tortoise, Palm Springs pocket mouse, and Coachella Valley round-tailed ground squirrel. Figure 4-7d depicts the Biological Corridors and Linkages in this Conservation Area. See Section 4.5.1 in Appendix I for details about the Stubbe Canyon Wash corridor.

Conservation Objectives. The Conservation Objectives for this Conservation Area are:

1. In total, 2,430 acres of the Stubbe and Cottonwood Canyons Conservation Area shall be conserved. (This may be less than the sum of acres indicated in the following objectives because there can be overlap among areas covered by the objectives. For example, Core Habitat for two or more species may overlap, or Core Habitat and an Essential Ecological Process area may overlap. The individual acreage figures will be used in compliance monitoring.)
2. Conserve at least 2,276 acres of Core Habitat for desert tortoise, allowing evolutionary processes and natural population fluctuations to occur. Minimize fragmentation, human-caused disturbance, and edge effects to Core Habitat by conserving contiguous Habitat and effective Linkages between patches of Core Habitat. Protect individual tortoises within the area when allowed Development does occur.
3. Conserve at least 1,111 acres of Other Conserved Habitat for Le Conte's thrasher. Conserve Le Conte's thrasher nesting sites as described in Section 4.4 for avoidance, minimization, and mitigation measures.
4. Conserve at least 1,241 acres of the sand source area in the San Bernardino Mountains to maintain the natural erosion processes that provide sediment for the blowsand ecosystem.
5. Conserve at least 1,129 acres in the fluvial (water-borne) sand transport area. Maintain the current capacity for fluvial sand transport in Stubbe Canyon Wash.
6. Conserve occupied burrowing owl burrows as described in Section 4.4 for burrowing owl avoidance, minimization, and mitigation measures.

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7. Conserve at least 25 acres of Sonoran cottonwood-willow riparian forest and at least 229 acres of desert dry wash woodland natural communities, which provide Habitat for riparian birds and other Covered Species. For the remaining acreage of the Sonoran cottonwood-willow riparian forest natural community where disturbance is authorized by the Plan, ensure no net loss.
8. Maintain functional Biological Corridors under I-10 by conserving at least 1,058 acres in the Stubbe Canyon Wash Biological Corridor north of the freeway to maintain potential Habitat connectivity for desert tortoise, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse, and a wildlife movement corridor to maintain ecosystem function for Covered Species. Aside from the freeway culverts and any Existing Use areas, which are unavoidably narrow segments, the Biological Corridor shall expand to one mile wide to minimize edge effects.

Ownership and General Plan Land Use Designations. Table 4-15 shows the public versus private land ownership in this Conservation Area.

***Table 4-15: Land Ownership - Stubbe and Cottonwood Canyons Conservation Area
(rounded to nearest 10 acres)***

<i>Ownership¹</i>	<i>Acres</i>
<i>Existing Conservation Lands:</i>	<i>7,140</i>
BLM	5,220
USFS	1,920
<i>Lands Not Currently Conserved:</i>	<i>2,700</i>
County Flood Control	100
Private	2,420
Public, Quasi-Public entities	180
TOTAL	9,840

¹ Based on 1996 pre-Planning Agreement land ownership information

As seen in Table 4-15, 73% of the land within this Conservation Area is currently in public or nonprofit conservation organization ownership. Current conservation status ranges from Level 1 to Level 3. Conservation management will be improved where needed through management prescriptions to be adopted by the relevant agency as Feasible.

As seen in Table 4-16, 100% of the private land in the Conservation Area is under the jurisdiction of Riverside County. The major general plan designations are Open Space Rural, which restricts land use to a maximum of 1 unit per 20 acres, and Rural Mountainous, which restricts land use to a maximum of 1 unit per 10 acres. Much of the area is within the 100-year floodplain of Stubbe Canyon wash.

**Table 4-16: General Plan Land Use Designations¹
(Non-conserved lands only)
Stubbe and Cottonwood Canyons Conservation Area**

<i>General Plan Designation/Map symbol - Riverside County</i>	<i>% of Private Non-conserved Land in Conservation Area</i>	<i>Building Intensity Range</i>
Open Space Rural (OS-RUR)	94%	1 unit per 20 acres
Rural Mountainous (RM)	6%	1 unit per 10 acres
Medium Density Residential ² (MDR)	--	5-8 units per acre
TOTAL	100%	

¹ Based on 2003 general plan designations and 2003 parcel data

² Statistically insignificant (less than 1%)

Figure 4-7e shows the Existing Conservation Lands and general plan land use designations on Level 4 lands for the area.

Required Measures for the Conservation Area. Table 4-17 shows how many acres of Existing Conservation Lands are in this Conservation Area and how many acres of Additional Conservation Lands will need to be conserved through acquisition or other means. The following measures will be imposed to achieve the Conservation Objectives in this Conservation Area.

1. Existing culverts under I-10 at West Stubbe and East Stubbe will be maintained by Caltrans at no less than their current size, with soft-bottoms, to maintain current levels of sand transport and wildlife movement under I-10.
2. A Conservation to Development ratio of 9:1 shall be maintained within the east half of Section 6, T3S R3E to maintain sand transport and the functionality of the Biological Corridor. Here and in other Conservation Areas as applicable, a Conservation to Development ratio is used in specific areas where even limited Development could impede attainment of a Conservation Objective. The ratio ensures that the Conservation Objective will be attained by requiring that for every acre of Development allowed in the specified area, 9 acres of Conservation will occur. The Local Permittee(s) shall incorporate feasible design, orientation, or other criteria in the Implementation Manual. These criteria would not apply to single-family homes, emergency response activities, or any non-commercial accessory uses and structures including but not limited to second units on an existing legal lot. If it appears that the ratio may not be met, the appropriate Local Permittees will meet with the Wildlife Agencies and identify additional means that will be implemented to maintain the functionality of the Biological Corridor, including an accelerated acquisition program and/or Development standards to restrict fencing that would impede wildlife movement. (See Figure 4-7f.)
3. The Permittees shall comply with applicable avoidance, minimization, and mitigation measures described in Section 4.4 and the Land Use Adjacency Guidelines as described in Section 4.5.

Table 4-17: Conservation and Take Authorization for Stubbe and Cottonwood Canyons Conservation Area
(All acreages are based on 1996 pre-Planning Agreement information.)

<i>Conservation Objective</i>	<i>Total Acres in Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Disturbance Authorized</i>	<i>Remaining Acres to be Conserved</i>
Conserve Core Habitat for desert tortoise	5,735	3,206	253	2,276
Conserve Other Conserved Habitat for Le Conte’s thrasher	1,265	31	123	1,111
Conserve Sonoran cottonwood-willow riparian forest	267	242	(3) ¹	25
Conserve desert dry wash woodland	289	34	26	229
Conserve sand source areas	8,402	7,023	138	1,241
Conserve fluvial sand transport areas	1,375	121	125	1,129
Conserve Stubbe Canyon Wash Bio. Corridor	1,181	6	117	1,058

¹ Disturbance of no more than three acres may occur, but it would be replaced to ensure that the no net loss occurs and the Conservation Objective is achieved.

4.3.3 Snow Creek/Windy Point Conservation Area

Location and Description. The Snow Creek/Windy Point Conservation Area encompasses the area between the toe-of-slope of the San Jacinto Mountains and Highway 111 or the Santa Fe Pacific railroad (whichever is farther south), and extends westward to the range line separating Range 2 East and Range 3 East, and eastward to Windy Point. This Conservation Area is depicted in Figure 4-8a. This area borders on the west with the Cabazon Conservation Area. To the north are the Stubbe and Cottonwood Canyons Conservation Area and the Highway 111/I-10 Conservation Area. To the south is the Santa Rosa and San Jacinto Mountains Conservation Area. The Snow Creek/Windy Point Conservation Area contains a total of approximately 2,940 acres.

Core Habitat. This area protects a significant blowsand ecosystem at the western edge of the Plan Area. Most of the Coachella Valley floor was once an extensive blowsand ecosystem; estimates from the CVFTL HCP (Nature Conservancy 1985) are that originally some 267 square miles of the Coachella Valley may have been covered with wind-blown sand. Three blowsand areas were set aside in the CVFTL HCP. This Plan adds Snow Creek as an additional blowsand area. It provides Core Habitat for the Coachella Valley milkvetch, Coachella Valley giant sand-treader cricket, Coachella Valley fringe-toed lizard, Coachella Valley Jerusalem cricket, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse. While there is insufficient data regarding the population density of the Coachella Valley Jerusalem cricket in the Plan Area, this area appears to be the center of the species distribution (Greg Ballmer, pers. comm.). This Conservation Area also provides some Essential Habitat for Peninsular bighorn sheep. Figure 4-8b (1-4) depicts the Core Habitat and recorded burrowing owl locations in this Conservation Area.

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Other Conserved Habitat. This Conservation Area provides Habitat for the burrowing owl that contributes to the protection of the burrowing owls. While a viable population of this species is not thought to exist within this Conservation Area, the Habitat is likely to contribute to the Conservation of this species in its range. There has been one documented sighting and at least two anecdotal reports of desert tortoise, and this area may serve as a connection between the desert tortoise population on the north side of I-10 and desert tortoise in the San Jacinto and Santa Rosa Mountains. Peninsular bighorn sheep Habitat extends from the adjacent mountains into the alluvial fan portion of this area. Protection of this Habitat is achieved through attainment of the Conservation Objectives for other Covered Species. There is also Other Conserved Habitat for Coachella Valley milkvetch, Coachella Valley Jerusalem cricket, Palm Springs pocket mouse, Le Conte's thrasher, and gray vireo. The area is also important for neotropical migrants (birds that breed in the U.S. and winter to the south of the U.S.) moving through the San Gorgonio Pass. Some of these, including least Bell's vireo, southwestern willow flycatcher, yellow warbler, yellow-breasted chat, and summer tanager, could nest in the adjacent canyons in the Santa Rosa and San Jacinto Mountains Conservation Area. Table 4-18 shows the Covered Species occurring in this area.

Natural Communities. Table 4-19 shows the conserved natural communities occurring in this area: active desert dunes, ephemeral desert sand fields, stabilized and partially stabilized desert sand fields, Sonoran creosote bush scrub, and semi-desert chaparral. Together with the active desert dunes in the Thousand Palms Conservation Area, the Snow Creek/Windy Point dunes constitute 90% of this natural community in the Plan Area. Figure 4-8c depicts the conserved natural communities in this Conservation Area.

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**Table 4-18: Species Habitat –
Snow Creek/Windy Point Conservation Area**
(All acreages are based on 1996 pre-Planning Agreement information.)

<i>Species</i>	<i>Total Acres in the Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Habitat Not Currently Conserved</i>	<i>Habitat Designation</i>	<i>Acres of Core Habitat</i>
CV milkvetch	2,610 / 90	359 / 0	2,251 / 90	Core / Other Cons. Habitat	2,610
CV giant sand-treader cricket	1,374	70	1,304	Core	1,374
CV Jerusalem cricket	1,690 / 283	187 / 0	1,503 / 283	Core / Other Cons. Habitat	1,690
CV fringe-toed lizard	1,374	70	1,304	Core	1,374
Flat-tailed horned lizard – Pred. / Potential	0 / 20	0 / 4	0 / 16	Pred. / Pot. ¹ Other Cons. Habitat	0
Desert tortoise	1,559	290	1,269	Other Cons. Habitat	0
Gray vireo	6	1	5	Other Cons. Habitat	0
Le Conte’s thrasher	2,788	312	2,476	Other Cons. Habitat	0
CV round-tailed ground squirrel	2,814	360	2,454	Core	2,814
Palm Springs pocket mouse	2,744 / 53	334 / 0	2,410 / 53	Core / Other Cons. Habitat	2,744
Peninsular bighorn sheep ²	705	53	652	Essential ³	705

¹ The species distribution model for the flat-tailed horned lizard includes predicted (“pred.”) Habitat and also potential (Pot.) Habitat. Predicted Habitat includes areas where presence of this species is known or expected based on recent observations. Potential Habitat includes areas where there are historical observations of this species but no recent observations are recorded. See Section 9.6.3.3 for additional information.

² This Peninsular bighorn sheep Habitat is contiguous and continuous with that in the Santa Rosa and San Jacinto Mountains Conservation Area. It is included in this area because it overlaps with Habitat for one or more of the other species listed above.

³ Essential Habitat as described in the Recovery Plan for Peninsular bighorn sheep is the same as Core Habitat for purposes of this Plan.

**Table 4-19: Conserved¹ Natural Communities –
Snow Creek/Windy Point Conservation Area**
(All acreages are based on 1996 pre-Planning Agreement information.)

<i>Natural Community</i>	<i>Total Acres in the Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres Not Currently Conserved</i>
Active desert dunes	69	0	69
Ephemeral desert sand fields	1,148	16	1,132
Stabilized & partially stabilized desert sand fields	157	54	103
Sonoran creosote bush scrub	1,351	88	1,263
Semi-desert chaparral	6	1	5

¹ Only natural communities to be conserved under the Plan are shown. Natural communities that are not included as described in Section 3.2.2 are not shown.

Essential Ecological Processes. The San Gorgonio River, which flows through this area, provides fluvial sand transport for the blowsand Habitats within this Conservation Area as well as for the Whitewater Floodplain Conservation Area, farther to the east. Aeolian sand transport is also important in this area. Figure 4-8d depicts the Essential Ecological Process areas in this Conservation Area.

Biological Corridors and Linkages. Connections would be maintained between areas south of I-10 (Snow Creek and the adjacent San Jacinto Mountains) and areas north of I-10 (the San Gorgonio Wilderness and Whitewater Canyon ACEC in the San Bernardino Mountains) through two Biological Corridors: Stubbe and Cottonwood Canyons, and the Whitewater River. The corridors would provide sand transport via Stubbe Canyon Wash and the Whitewater River, and retain connectivity to help maintain predator-prey relationships in the Snow Creek area and provide for large mammal movement between the San Jacinto and San Bernardino Mountains. There is the potential for desert tortoise to use the Stubbe Canyon Wash corridor. Figure 4-8d depicts the Biological Corridors and Linkages in this Conservation Area. See Section 4.4.1 in Appendix I for details about the Stubbe Canyon Wash corridor and Section 4.4.2 in Appendix I for details about the San Gorgonio River and Whitewater River corridors.

Conservation Objectives. The Conservation Objectives for this Conservation Area are:

1. In total, 2,340 acres of the Snow Creek/Windy Point Conservation Area shall be conserved. (This may be less than the sum of acres indicated in the following objectives because there can be overlap among areas covered by the objectives. For example, Core Habitat for two or more species may overlap, or Core Habitat and an Essential Ecological Process area may overlap. The individual acreage figures will be used in compliance monitoring.)
2. Conserve Core Habitat and associated Essential Ecological Processes (as set forth below) for Coachella Valley milkvetch, Coachella Valley giant sand-treader cricket, Coachella Valley Jerusalem cricket, Coachella Valley fringe-toed lizard, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse, allowing evolutionary processes and natural population fluctuations to occur. Minimize fragmentation, human-caused

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disturbance, and edge effects to Core Habitat by conserving contiguous Habitat and effective Linkages between patches of Core Habitat.

- a. Conserve at least 816 acres of Core Habitat for the Coachella Valley milkvetch in the City of Palm Springs portion of the area and at least 1,210 acres of Core Habitat in the unincorporated portion of the area.
 - b. Conserve at least 672 acres of Core Habitat for the Coachella Valley giant sand-treader cricket in the City of Palm Springs portion of the area and at least 501 acres of Core Habitat in the unincorporated portion of the area.
 - c. Conserve at least 815 acres of Core Habitat for the Coachella Valley Jerusalem cricket in the City of Palm Springs and at least 538 acres in the unincorporated portion of the area.
 - d. Conserve at least 672 acres of Core Habitat for the Coachella Valley fringe-toed lizard in the City of Palm Springs portion of the area and at least 501 acres of Core Habitat in the unincorporated portion of the area.
 - e. Conserve at least 838 acres of Core Habitat for the Coachella Valley round-tailed ground squirrel in the City of Palm Springs portion of the area and at least 1,371 acres of Core Habitat in the unincorporated portion of the area.
 - f. Conserve at least 838 acres of Core Habitat for the Palm Springs pocket mouse in the City of Palm Springs portion of the area and at least 1,331 acres of Core Habitat in the unincorporated portion of the area.
 - g. Conserve at least 838 acres of the fluvial and aeolian sand transport area in the City of Palm Springs portion of the area and at least 1,482 acres in the unincorporated portion of the area. Maintain the current capacity for fluvial sand transport in the San Gorgonio River floodplain
3. Conserve at least 775 acres of Other Conserved Habitat for Le Conte's thrasher in the City of Palm Springs portion of the area and at least 1,453 acres of Other Conserved Habitat in the unincorporated portion of the area. Conserve Le Conte's thrasher nesting sites as described in Section 4.4 for avoidance, minimization, and mitigation measures.
 4. Conserve at least 144 acres of Essential Habitat for the Peninsular bighorn sheep in the City of Palm Springs portion of the area, and at least 443 acres in the unincorporated portion of the area.
 5. Conserve individual desert tortoises as described in Section 4.4 for desert tortoise avoidance, minimization, and mitigation measures.
 6. Conserve occupied burrowing owl burrows as described in Section 4.4 for burrowing owl avoidance, minimization, and mitigation measures.
 7. Conserve at least 62 acres of the active desert dunes and at least 610 acres of the ephemeral desert sand fields in the City of Palm Springs portion of the area, and at least 409 acres of the ephemeral desert sand fields and at least 93 acres of the stabilized and partially stabilized desert sand fields in the unincorporated portion of the area to provide for the conservation of these natural communities. As these conserved natural communities are all part of the Core Habitat areas identified in Conservation Objective 2 for this area, attainment of that objective will also achieve this objective.

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8. Maintain functional Biological Corridors and Linkages under I-10 and Highway 111 by conserving at least 415 acres of identified Biological Corridor in the unincorporated portion of the Conservation Area and at least 247 acres identified Biological Corridor in the City of Palm Springs’ portion, such that the functionality of each individual Biological Corridor listed below is not compromised:
 - a. Conserve the Stubbe Canyon Wash Biological Corridor south of the I-10 to maintain potential Habitat connectivity for desert tortoise, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse, and to maintain ecosystem function for Covered Species. Aside from the freeway culverts and any Existing Use areas, which are unavoidably narrow segments, the Biological Corridor shall expand to one mile wide to minimize edge effects.
 - b. Conserve the Whitewater Floodplain Biological Corridor south of Highway 111 to maintain potential Habitat connectivity for Coachella Valley Jerusalem cricket, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse, and to maintain ecosystem function for Covered Species. Aside from the highway culverts and any Existing Use areas, which are unavoidably narrow segments, the Biological Corridor shall expand to one mile wide to minimize edge effects.

Ownership and General Plan Land Use Designations. As seen in Table 4-20, 12% of the land within this Conservation Area is currently in public or nonprofit conservation organization ownership. Current conservation status on public and Private Conservation Lands ranges from Level 1 to Level 3. Conservation management will be improved where needed through management prescriptions and/or changes in land classification to be adopted by the relevant agency as Feasible. As seen in Table 4-21, private land in the Conservation Area is partially under the jurisdiction of the City of Palm Springs, and partially under Riverside County.

***Table 4-20: Land Ownership Snow Creek/
Windy Point Conservation Area
(rounded to the nearest 10 acres)***

<i>Ownership¹</i>	<i>Acres</i>
<i>Existing Conservation Lands:</i>	<i>360</i>
BLM	360
<i>Lands Not Currently Conserved:</i>	<i>2,580</i>
Public, Quasi-Public entities	60
Private	2,520
TOTAL	2,940

¹ Based on 1996 pre-Planning Agreement land ownership information.

**Table 4-21: General Plan Land Use Designations¹
(Non-conserved lands only)
Snow Creek/Windy Point Conservation Area**

General Plan Designation (Map symbol) - Riverside County	% of Private Non-conserved Land in Conservation Area	Building Intensity Range
Open Space Rural (OS-RUR)	67%	1 unit per 20 acres
Open Space Water (OS-W)	12%	Bodies of water, floodplains, and natural drainage corridors
Rural Desert (RD)	21%	1 unit per 10 acres
TOTAL	100%	
General Plan Designation (Map symbol) - City of Palm Springs	% of Private Non-conserved Land in Conservation Area	Building Intensity Range
Desert (D)	3%	3.5 units per acre on a 5 acre minimum site
Watercourse (W)	97%	Flood control or drainage facilities
TOTAL	100%	

¹ Based on 2003 general plan designations and 2003 parcel data.

Figure 4-8e shows the Existing Conservation Lands and general plan land use designations on Level 4 lands for the Conservation Area.

Required Measures for the Conservation Area. Table 4-22 shows how many acres of Existing Conservation Lands are in this Conservation Area and how many acres of Additional Conservation Lands will need to be conserved through acquisition or other means. The following measures will be imposed to achieve the Conservation Objectives in this Conservation Area.

1. The culvert under Highway 111 west of Windy Point and the bridge over the San Gorgonio River at Windy Point will be maintained by Caltrans at no less than their current size, with soft-bottoms, to maintain current levels of sand transport and potential wildlife movement under Highway 111.
2. The Permittees shall comply with applicable avoidance, minimization, and mitigation measures described in Section 4.4 and the Land Use Adjacency Guidelines as described in Section 4.5.
3. New Development in Essential bighorn sheep Habitat shall adhere to the following criteria, in accordance with the guidelines in the Implementation Manual:
 - a. Development shall be clustered in one area of a site as close as possible to existing Development.
 - b. Development on alluvial fans shall be sited at the lowest possible elevation on the site and shall avoid the mouth of any canyon.
 - c. Development shall be sited a minimum of a quarter (0.25) mile from known bighorn sheep water sources identified on a reference map on file with CVCC (see Figure 4-26f), except where topographic features shield the view of the water source and access

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- to it from proposed Development or trails, thereby minimizing potential impacts to the Peninsular bighorn sheep's ability to access water.
- d. Development shall be conditioned to prohibit the construction of trails in Essential bighorn sheep Habitat unless approved through a Minor Amendment with Wildlife Agency concurrence.
 - e. Development shall not preclude Habitat connectivity or movement. Determination of whether Habitat connectivity or movement is precluded shall be made by the Lead Agency for the Development based on factual data provided by the RMO, RMUC, Wildlife Agencies, or other source.
 - f. Development shall comply with Land Use Adjacency Guidelines as described in Section 4.5.
4. For Development proposals on lands zoned for domestic stock animals on parcels within or adjacent to Conservation Areas with bighorn sheep habitat, the Permittees shall either (1) prohibit husbandry of domestic sheep and goats on such parcels or (2) require double fencing separated by a distance consistent with applicable disease transmission standards and as agreed to by the Wildlife Agencies, including an 8-foot outer fence or functional equivalent around all enclosures used to keep domestic sheep and goats or the parcel perimeter adjoining the Conservation Area if the double fence can be tied into features that would preclude bighorn sheep access around the ends of the fence.
 5. For Development proposals on lands within or adjacent to Conservation Areas with bighorn sheep habitat, the Local Permittee shall require construction of an 8-foot fence or functional equivalent, or granting of an easement to CVCC for future installation of a barrier separating the Development from adjoining habitat if (i) bighorn sheep are documented to begin foraging or watering on the project site or (ii) unauthorized trails, paths, routes, or ways (trails) are documented to proliferate from the project site into adjoining habitat. To ensure that the fence is an effective barrier, the CVCC shall determine the appropriate location of the fence in consultation with the Local Permittee. If fence construction is deferred and either condition (i) or (ii) is documented by the Wildlife Agencies, the CVCC shall incur the responsibility and cost for fence installation and maintenance on lands to which CVCC has access, unless at the time of project approval the Permittee assigns a legally responsible party to construct and maintain the fence, and requires establishment of a funding instrument for construction and maintenance of the fence. The subject fences shall be constructed within 2 years of documented sheep use or the proliferation of trails, as noted above. The location of this barrier (i.e., an 8-foot fence or functional equivalent) shall be determined by the CVCC based on its ability to obtain permission/access to the necessary lands. If placement of the barrier must occur on other public lands (e.g., BLM, CDFG), CVCC will coordinate with these other agencies as appropriate.

**Table 4-22a: Conservation and Take Authorization for Snow Creek/
Windy Point Conservation Area – City of Palm Springs Area**
(All acreages are based on 1996 pre-Planning Agreement information.)

<i>Conservation Objective</i>	<i>Total Acres in Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Disturbance Authorized</i>	<i>Remaining Acres to be Conserved</i>
Conserve Core Habitat for CV milkvetch	910	3	91	816
Conserve Core Habitat for CV giant sand-treader cricket	749	2	75	672
Conserve Core Habitat for CV Jerusalem cricket	908	3	90	815
Conserve Core Habitat for CV fringe-toed lizard	749	2	75	672
Conserve Other Conserved Habitat for Le Conte’s thrasher	864	3	86	775
Conserve Core Habitat for CV round-tailed ground squirrel	934	3	93	838
Conserve Core Habitat for Palm Springs pocket mouse	934	3	93	838
Conserve Essential Habitat for Peninsular bighorn sheep	180	20	16	144
Conserve active desert dunes	69	0	7	62
Conserve ephemeral desert sand fields	680	2	68	610
Conserve fluvial and aeolian sand transport	934	3	93	838
Conserve Hwy 111 – WWR Biological Corridor	276	2	27	247

**Table 4-22b: Conservation and Take Authorization for
Snow Creek/Windy Point Conservation Area – Riverside County Area**
(All acreages are based on 1996 pre-Planning Agreement information.)

<i>Conservation Objective</i>	<i>Total Acres in Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Disturbance Authorized</i>	<i>Remaining acres to be conserved</i>
Conserve Core Habitat for CV milkvetch	1,700	356	134	1,210
Conserve Core Habitat for CV giant sand-treader cricket	625	68	56	501
Conserve Core Habitat for CV Jerusalem cricket	782	184	60	538
Conserve Core Habitat for CV fringe-toed lizard	625	68	55	502

Table 4-22b (cont.)

<i>Conservation Objective</i>	<i>Total Acres in Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Disturbance Authorized</i>	<i>Remaining acres to be conserved</i>
Conserve Other Conserved Habitat for Le Conte’s thrasher	1,924	309	162	1,453
Conserve Core Habitat for CV round-tailed ground squirrel	1,880	357	152	1,371
Conserve Core Habitat for Palm Springs pocket mouse	1,810	331	148	1,331
Conserve Essential Habitat for Peninsular bighorn sheep	525	33	49	443
Conserve ephemeral desert sand fields	468	14	45	409
Conserve stabilized and partially stabilized desert sand fields	157	54	10	93
Conserve fluvial and aeolian sand transport	2,004	357	165	1,482
Conserve Stubbe Canyon Wash & Hwy 111-WWR Biological Corridors	474	13	46	415

4.3.4 Whitewater Canyon Conservation Area

Location and Description. The Whitewater Canyon Conservation Area encompasses the Whitewater River and its watershed north of I-10. This Conservation Area is depicted in Figure 4-9a. To the west and southwest of the Whitewater Canyon Conservation Area is the Stubbe and Cottonwood Canyons Conservation Area. To the east and northeast is the Upper Mission Creek/Big Morongo Canyon Conservation Area. To the south are the Highway 111/I-10 Conservation Area and the Whitewater Floodplain Conservation Area. The Whitewater Canyon Conservation Area contains a total of approximately 14,170 acres.

Core Habitat. This Conservation Area contains the only confirmed historic Habitat for the arroyo toad in the Plan Area. This Conservation Area provides Habitat for the riparian birds covered in the Plan that contributes to the Conservation of these species in their respective ranges. There is also some Habitat for the desert tortoise. The Habitat is considered as part of a larger Core Habitat area for this species, which includes Stubbe and Cottonwood Canyons Conservation Area and the Upper Mission Creek/Big Morongo Canyon Conservation Area. There is also Core Habitat for triple-ribbed milkvetch. Figure 4-9b depicts the Core Habitat and selected Other Conserved Habitat in this Conservation Area.

Other Conserved Habitat. This Conservation Area contains Other Conserved Habitat for the Coachella Valley milkvetch, Little San Bernardino Mountains linanthus, Coachella Valley Jerusalem cricket, desert tortoise, gray vireo, Le Conte’s thrasher, Coachella Valley round-tailed ground squirrel, southern yellow bat, and Palm Springs pocket mouse. Substantial potential Habitat for the gray vireo occurs, but it has not been surveyed to determine if the species is present. Table 4-23 shows the Covered Species occurring in this area.

Table 4-23: Species Habitat - Whitewater Canyon Conservation Area
(All acreages are based on 1996 pre-Planning Agreement information.)

<i>Species</i>	<i>Total Acres of Habitat in the Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Habitat not Currently Conserved</i>	<i>Habitat Designation</i>	<i>Acres of Core Habitat</i>
CV milkvetch	202	75	127	Other Cons. Habitat	0
Little San Bernardino Mtns. linanthus	579	192	387	Other Cons. Habitat	0
Triple-ribbed milkvetch	1,295	886	409	Core	1,295
CV Jerusalem cricket	2	1	1	Other Cons. Habitat	0
Arroyo toad	2,082	1,298	784	Core	2,082
Desert tortoise	4,494 / 85	3,290 / 53	1,204 / 32	Core / Other Cons. Habitat	4,494
Gray vireo	4,927	4,739	188	Other Cons. Habitat	0
Le Conte's thrasher	6	0	6	Other Cons. Habitat	0
Least Bell's vireo	167	60	107	Breeding	N/A
SW willow flycatcher	167	60	107	Breeding	N/A
Summer tanager	167	60	107	Breeding	N/A
Yellow-breasted chat	167	60	107	Breeding	N/A
Yellow warbler	167	60	107	Breeding	N/A
CV round-tailed ground squirrel	110	18	92	Other Cons. Habitat	0
Palm Springs pocket mouse	166	30	136	Other Cons. Habitat	0
Southern yellow bat	1	1	0	Other Cons. Habitat	0

Natural Communities. Table 4-24 shows the conserved natural communities occurring in this Conservation Area: Sonoran creosote bush scrub, Sonoran mixed woody and succulent scrub, Sonoran cottonwood-willow riparian forest, desert fan palm oasis woodland, semi-desert chaparral, chamise chaparral, and interior live oak chaparral. Figure 4-9c depicts the conserved natural communities.

Essential Ecological Processes. The Whitewater River is a fluvial sand transport system for the Whitewater Floodplain Preserve Conservation Area. The portions of the San Bernardino Mountains included in this area are a sand source for this fluvial sand transport system. Figure 4-9d depicts the Essential Ecological Process areas.

**Table 4-24: Conserved¹ Natural Communities –
Whitewater Canyon Conservation Area**
(All acreages are based on 1996 pre-Planning Agreement information.)

<i>Natural Community</i>	<i>Total Acres in the Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres Not Currently Conserved</i>
Sonoran creosote bush scrub	2,748	2,431	317
Sonoran mixed woody and succulent scrub	955	327	628
Chamise chaparral	569	407	162
Semi-desert Chaparral	4,927	4,739	188
Interior live oak chaparral	24	24	0
Sonoran cottonwood-willow riparian forest	166	59	107
Desert fan palm oasis woodland	1	1	0

¹ Only natural communities to be conserved under the Plan are shown. Natural communities that are not included as described in Section 3.2.2 are not shown.

Biological Corridors and Linkages. Whitewater Canyon serves as part of a Linkage and Biological Corridor linking the San Bernardino Mountains portion of the Transverse Ranges with the Peninsular Ranges (San Jacinto and Santa Rosa Mountains) through the Snow Creek/Windy Point Conservation Area. The corridor provides for movement under I-10 along the Whitewater River, which crosses under the I-10 freeway beneath a high bridge. See Section 4.5.3 in Appendix I for details about this bridge. Figure 4-9d depicts the Biological Corridor and Linkage.

Conservation Objectives. The Conservation Objectives for this Conservation Area are:

1. In total, 1,440 acres of the Whitewater Canyon Conservation Area shall be conserved. (This may be less than the sum of acres indicated in the following objectives because there can be overlap among areas covered by the objectives. For example, Core Habitat for two or more species may overlap, or Core Habitat and an Essential Ecological Process area may overlap. The individual acreage figures will be used in compliance monitoring.)
2. Conserve at least 1,084 acres of Core Habitat for desert tortoise in the unincorporated portion of the area, allowing evolutionary processes and natural population fluctuations to occur. Minimize fragmentation, human-caused disturbance, and edge effects to Core Habitat by conserving contiguous Habitat and effective Linkages between patches of Core Habitat. Protect individual tortoises within the area if allowed Development does occur.
3. Conserve at least 850 acres of the sand source area in the San Bernardino Mountains in the unincorporated portion of the area to maintain the natural erosion processes that provide sediment for the blowsand ecosystem.
4. Conserve at least 435 acres in the fluvial (water-borne) sand transport area in the Riverside County portion of the area. Maintain the current capacity for fluvial sand transport in the Whitewater River.

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5. Conserve at least 348 acres of Other Conserved Habitat for the Little San Bernardino Mountains linanthus in the Riverside County portion of the area.
6. Conserve at least 368 acres of Core Habitat for the triple-ribbed milkvetch in the Riverside County portion of the area.
7. Conserve at least 706 acres of modeled Habitat for the arroyo toad in the Riverside County portion of the area.
8. In the Riverside County portion of the area, conserve at least 107 acres of existing Sonoran cottonwood-willow riparian forest natural community, which provides Habitat for riparian birds and other Covered Species. For the remaining acreage of this natural community where disturbance is authorized by the Plan, ensure no net loss.
9. In the Riverside County portion of the area, maintain functional Biological Corridors under I-10 by conserving at least 201 acres in the Whitewater River Biological Corridor north of the freeway to maintain potential Habitat connectivity for desert tortoise, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse, and to maintain ecosystem function for Covered Species. Aside from the freeway bridge and any Existing Use areas, which are unavoidably narrow segments, the Biological Corridor shall expand to one mile wide to minimize edge effects.

Ownership and General Plan Land Use Designations. Table 4-25 shows the public versus private ownership of lands within this Conservation Area.

***Table 4-25: Land Ownership
Whitewater Canyon Conservation Area
(rounded to the nearest 10 acres)***

<i>Ownership¹</i>	<i>Acres</i>
<i>Existing Conservation Lands:</i>	<i>12,630</i>
BLM	10,190
USFS	2,440
<i>Lands Not Currently Conserved:</i>	<i>1,540</i>
Private	1,320
Public, Quasi-public entities	220
TOTAL	14,170

¹ Based on 1996 pre-Planning Agreement land ownership information.

As seen in Table 4-25, 89% of the land within this Conservation Area is currently in public or nonprofit conservation organization ownership. Current conservation status ranges from Level 1 to Level 3. Conservation management will be improved where needed through management prescriptions to be adopted by the relevant agency as Feasible.

As seen in Table 4-26, private land in the Conservation Area is under the jurisdiction of Riverside County. The major general plan designation is Open Space Rural, which restricts land use to a maximum of 1 unit per 20 acres. The Open Space Water designation does not have a building intensity range; this designation refers to natural bodies of water and natural or artificial

drainage corridors. Within this land use designation “Extraction of mineral resources . . . may be permissible provided that flooding hazards are addressed and long term habitat and riparian values are maintained” (Riverside County General Plan 2003). Much of the area is within the 100-year floodplain of the Whitewater River. Access is provided only by Whitewater Canyon Road, a two lane paved road. There is no flood control master plan for the area, and it is highly unlikely that Development could defray the costs of constructing a flood control system that would be needed to support significant Development.

Table 4-26: General Plan Land Use Designations¹
(Non-conserved lands only)
Whitewater Canyon Conservation Area

<i>General Plan Designation (Map symbol) - Riverside County</i>	<i>% of Private Non-conserved Land in Conservation Area</i>	<i>Building Intensity Range</i>
Open Space Conservation (OS-C)	9%	Protection of open space – natural hazards and resources
Open Space Rural (OS-RUR)	57%	1 unit per 20 acres
Open Space Water (OS-W)	34%	Bodies of water, floodplains, and natural or artificial drainage corridors
Rural Desert ² (RD)	---	1 unit per 10 acres
Commercial Retail ² (CR)	---	Retail and service uses
TOTAL	100%	

¹ Based on 2003 general plan designations and 2003 parcel data

² Statistically insignificant (less than 1%)

Figure 4-9e shows the Existing Conservation Lands and general plan land use designations on Level 4 lands for the area.

Required Measures for the Conservation Area. Tables 4-27a and 4-27b show how many acres of Existing Conservation Lands are in this Conservation Area and how many acres of the Additional Conservation Lands will need to be conserved through acquisition or other means. The following measures will be imposed to achieve the Conservation Objectives in this Conservation Area.

1. The existing bridge over the Whitewater River on I-10 will be maintained by Caltrans at no less than its current size, with a soft-bottom, to maintain at least current levels of sand transport and potential wildlife movement under I-10.
2. For proposed Development in Little San Bernardino Mountains linanthus modeled Habitat, Development in Essential Ecological Process fluvial sand transport areas shall not obstruct natural watercourses, and the rate of flow and sediment transport shall not be impeded.
3. The Permittees shall comply with applicable avoidance, minimization, and mitigation measures described in Section 4.4 and the Land Use Adjacency Guidelines as described in Section 4.5.

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4. Covered Activities in arroyo toad breeding Habitat in the Whitewater Canyon Conservation Area will be conducted outside of the March 1 - June 30 reproductive season unless otherwise authorized through a Minor Amendment to the Plan.
5. Activities and projects involving water diversions in arroyo toad Habitat are not Covered Activities. Take Authorization for Listed Species (animal species) for such activities requires a Minor Amendment with Wildlife Agency concurrence.

Table 4-27a: Conservation and Take Authorization for Whitewater Canyon Conservation Area – City of Desert Hot Springs Area
(All acreages are based on 1996 pre-Planning Agreement information.)

<i>Conservation Objective</i>	<i>Total Acres in Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Disturbance Authorized</i>	<i>Remaining Acres to be Conserved</i>
Conserve Core Habitat for desert tortoise	56	56	0	0
Conserve sand source areas	56	56	0	0

Table 4-27b: Conservation and Take Authorization for Whitewater Canyon Conservation Area – Riverside County Area
(All acreages are based on 1996 pre-Planning Agreement information.)

<i>Conservation Objective</i>	<i>Total Acres in Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Disturbance Authorized</i>	<i>Remaining Acres to be Conserved</i>
Conserve Core Habitat for arroyo toad	2,082	1,298	78	706
Conserve Core Habitat for desert tortoise	4,438	3,234	120	1,084
Conserve Other Cons. Habitat for Little San Bernardino Mountains. Linanthus	579	192	39	348
Conserve Core Habitat for triple-ribbed milkvetch	1,295	886	41	368
Conserve Sonoran cottonwood-willow riparian forest	166	59	(11) ¹	107
Conserve desert fan palm oasis woodland	1	1	0	0
Conserve sand source areas	12,616	11,672	94	850
Conserve fluvial sand transport areas	1,392	909	48	435
Conserve Biological Corridors	223	0	22	201

¹ Disturbance of no more than 11 acres may occur, but it would be replaced to ensure that the no net loss occurs and the Conservation Objective is achieved.

4.3.5 Highway 111/I-10 Conservation Area

Location and Description. The Highway 111/I-10 Conservation Area encompasses portions of the non-developed and non-Indian owned land between Highway 111 and I-10 west of the Whitewater River. This Conservation Area is depicted in Figure 4-10a. To the north of this Conservation Area is the Whitewater Canyon Conservation Area. To the south is the Snow Creek/Windy Point Conservation Area, and to the east is the Whitewater Floodplain Conservation Area. The Highway 111/I-10 Conservation Area contains a total of approximately 390 acres.

Core Habitat. This area does not provide Core Habitat for any species. There is, however, a probable connection between this Habitat and the Habitat in the Snow Creek/Windy Point Conservation Area via the Biological Corridor described below. This connection provides value to the Other Conserved Habitat in this area.

Other Conserved Habitat. This area contains Other Conserved Habitat for the Coachella Valley milkvetch, triple-ribbed milkvetch, Coachella Valley Jerusalem cricket, desert tortoise, Le Conte’s thrasher, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse. While the extent of Habitat in this Conservation Area is not enough to consider it Core Habitat, there is a probable connection between this Habitat and the Habitat in the Snow Creek/Windy Point Conservation Area via the Biological Corridor described below. Thus, the Habitat in the Highway 111/I-10 Conservation Area increases the level of protection for these species. The Highway 111/I-10 Conservation Area may provide a refugium for species in the Snow Creek/Windy Point Conservation Area (in addition to refugia areas within this area) in the event of a major flood event along the San Gorgonio River, or a population source for recolonization of the Snow Creek/Windy Point Conservation Area after a catastrophic event. The Highway 111/I-10 Conservation Area may also provide an area useful to species for adapting to potential future climatic change. The Habitat is similar to some of the Habitat in the Snow Creek/Windy Point Conservation Area; however, what may formerly have been active desert dunes have been partially stabilized as a result of the aeolian sand transport processes having been largely blocked by tamarisk windrows and other barriers established to protect Highway 111 and the railroad track north of the highway. Table 4-28 shows the Covered Species occurring in this area. Figure 4-10b depicts the Other Conserved Habitat and recorded burrowing owl locations.

Table 4-28: Species Habitat - Highway 111/I-10 Conservation Area
(All acreages are based on 1996 pre-Planning Agreement information.)

<i>Species</i>	<i>Total Acres of Habitat in the Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Habitat Not Currently Conserved</i>	<i>Habitat Designation</i>	<i>Acres of Core Habitat</i>
CV milkvetch	372	0	372	Other Cons. Habitat	0

Table 4-28 (cont.)

<i>Species</i>	<i>Total Acres of Habitat in the Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Habitat Not Currently Conserved</i>	<i>Habitat Designation</i>	<i>Acres of Core Habitat</i>
Triple-ribbed milkvetch	5	0	5	Other Cons. Habitat	0
CV Jerusalem cricket	372	0	372	Other Cons. Habitat	0
Desert tortoise	389	0	389	Other Cons. Habitat	0
Le Conte's thrasher	389	0	389	Other Cons. Habitat	0
CV round-tailed ground squirrel	389	0	389	Other Cons. Habitat	0
Palm Springs pocket mouse	389	0	389	Other Cons. Habitat	0

Natural Communities. Table 4-29 shows that this area contains Sonoran creosote bush scrub. Figure 4-10c depicts the natural community.

Table 4-29: Conserved Natural Communities – Highway 111/I-10 Conservation Area
(All acreages are based on 1996 pre-Planning Agreement information.)

<i>Natural Community</i>	<i>Total Acres in the Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres Not Currently Conserved</i>
Sonoran creosote bush scrub	389	0	389

Essential Ecological Processes. This area includes part of the historic sand transport system of the Whitewater River to the Snow Creek/Windy Point Conservation Area.

Biological Corridors and Linkages. This area is adjacent to a Biological Corridor between the San Jacinto Mountains and the San Bernardino Mountains. This corridor also connects the Snow Creek/Windy Point Conservation Area and the Whitewater Canyon Conservation Area. The actual corridor is contained within the Whitewater Floodplain Conservation Area.

Conservation Objectives. The Conservation Objective for this Conservation Area is:

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1. Conserve 350 acres in this Conservation Area. This will protect Other Conserved Habitat for the Coachella Valley milkvetch, Coachella Valley Jerusalem cricket, Coachella Valley round-tailed ground squirrel, Palm Springs pocket mouse, and Le Conte’s thrasher, allowing evolutionary processes and natural population fluctuations to occur. Minimize fragmentation, human-caused disturbance, and edge effects to Habitat by conserving contiguous Habitat patches and effective Linkages between them.

Ownership and General Plan Land Use Designations. Table 4-30 shows the public versus private ownership and conservation management levels of lands within this area.

**Table 4-30: Land Ownership Highway 111/I-10 Conservation Area
(rounded to nearest 10 acres)**

<i>Ownership¹</i>	<i>Acres</i>
<i>Existing Conservation Lands:</i>	<i>0</i>
<i>Lands Not Currently Conserved:</i>	<i>390</i>
Private	390
TOTAL	390

¹ Based on 1996 pre-Planning Agreement land ownership information

As seen in Table 4-30, none of the land within this Conservation Area is currently in public or non-profit conservation organization ownership.

As seen in Table 4-31, private land in the Conservation Area is under the jurisdiction of the City of Palm Springs. The general plan designation is Desert, which is an open space designation restricting land use to a minimum of 1 unit per 5 acres, or to 3 ½ units per acre if Development is clustered and 90% of the site is reserved for an open space use. Access is limited to Tipton Road, a two-lane road adjacent to the area, connecting Highway 111 with I-10. The road receives very limited use as there is no Development in the area served by the road, other than one wind energy facility on private land, and Highway 111 and I-10 provide more convenient routes of travel.

**Table 4-31: General Plan Land Use Designations¹
(Non-conserved lands only)
Highway 111/I-10 Conservation Area**

<i>General Plan Designation (Map symbol) - City of Palm Springs</i>	<i>% of Private Non-conserved Land in Conservation Area</i>	<i>Building Intensity Range</i>
Desert (D)	100%	1 to 3.5 units per acre on 5 acre minimum site
TOTAL	100%	

¹ Based on 2003 general plan designations and 2003 parcel data

Figure 4-10d shows the Existing Conservation Lands and general plan land use designations on Level 4 lands for the area.

Required Measures for the Conservation Area. Table 4-32 shows how many acres of Existing Conservation Lands are in this Conservation Area and how many acres of Additional Conservation Lands will need to be acquired or otherwise conserved through acquisition or other means. The following measures will be imposed to achieve the Conservation Objectives in this Conservation Area.

1. The Permittees shall comply with applicable avoidance, minimization, and mitigation measures described in Section 4.4 and Land Use Adjacency Guidelines as described in Section 4.5.

**Table 4-32: Conservation and Take Authorization
for Highway 111/I-10 Conservation Area
(All acreages are based on 1996 pre-Planning Agreement information.)**

<i>Conservation Objective</i>	<i>Total Acres in Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Disturbance Authorized</i>	<i>Remaining Acres to be Conserved</i>
Conserve Other Cons. Habitat for CV milkvetch	372	0	37	335
Conserve Other Cons. Habitat for CV Jerusalem cricket	372	0	37	335
Conserve Other Cons. Habitat for Le Conte’s thrasher	389	0	39	350
Conserve Other Cons. Habitat for CV round-tailed ground squirrel	389	0	39	350
Conserve Other Cons. Habitat for Palm Springs pocket mouse	389	0	39	350

4.3.6 Whitewater Floodplain Conservation Area

Location and Description. The Whitewater Floodplain Conservation Area encompasses portions of the Whitewater River floodplain south of I-10 eastward to the existing Whitewater Floodplain Preserve, established by the CVFTL HCP. This Conservation Area is depicted in Figure 4-11a. The Conservation Area includes additional Habitat east and southeast of the existing Preserve on the west and east sides of Gene Autry Trail, south and east of CVWD’s groundwater recharge basins, the Garnet Hill area north of the existing preserve, and Biological Corridor and sand transport areas south of I-10 along Mission Creek, and Willow washes, which connect this area to the Willow Hole Conservation Area north of I-10. To the northwest of this Conservation Area is the Whitewater Canyon Conservation Area. To the west is the Highway 111/I-10 Conservation Area. The Whitewater Floodplain Conservation Area connects to the Snow Creek/Windy Point Conservation Area near Windy Point, where the San Gorgonio River joins the Whitewater River. The Whitewater Floodplain Conservation Area contains a total of approximately 7,400 acres.

Core Habitat. This Conservation Area provides Core Habitat for the Coachella Valley milkvetch, Coachella Valley giant sand-treader cricket, Coachella Valley fringe-toed lizard,

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Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse. Figure 4-11b depicts the Core Habitat, Other Conserved Habitat, and burrowing owl locations.

Other Conserved Habitat. While there is modeled Habitat for the Coachella Valley Jerusalem cricket, it has not been found in this area based on limited surveys. The area also provides some Other Conserved Habitat for the Coachella Valley milkvetch, triple-ribbed milkvetch, desert tortoise, flat-tailed horned lizard, burrowing owl, Le Conte's thrasher, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse. Table 4-33 shows the Covered Species occurring in this area.

**Table 4-33: Species Habitat –
Whitewater Floodplain Conservation Area
(All acreages are based on 1996 pre-Planning Agreement information.)**

<i>Species</i>	<i>Total Acres of Habitat in the Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Habitat Not Currently Conserved</i>	<i>Habitat Designation</i>	<i>Acres of Core Habitat</i>
CV milkvetch	5,635 / 77	2,535 / 0	3,100 / 77	Core / Other Cons. Habitat	5,635
Triple-ribbed milkvetch	866	272	594	Other Cons. Habitat	0
CV giant sand-treader cricket	5,617	2,532	3,085	Core	5,617
CV Jerusalem cricket	5,646	2,532	3,114	Other Cons. Habitat	0
CV fringe-toed lizard	5,617	2,532	3,085	Core	5,617
Desert tortoise	1,110	307	803	Other Cons. Habitat	0
Le Conte's thrasher	7,308	2,893	4,415	Other Cons. Habitat	0
Flat-tailed horned lizard	3,369 / 2,120	1,598 / 909	1,771 / 1,211	Pred. / Pot. ¹ Other Cons. Habitat	0
CV round-tailed ground squirrel	6,115 / 40	2,655 / 0	3,460 / 40	Core / Other Cons. Habitat	6,115
Palm Springs pocket mouse	6,981 / 19	2,914 / 0	4,067 / 19	Core / Other Cons. Habitat	6,981

¹ The species distribution model for the flat-tailed horned lizard includes predicted ("pred.") Habitat and also potential (Pot.) Habitat. Predicted Habitat includes areas where presence of this species is known or expected based on recent observations. Potential Habitat includes areas where there are historical observations of this species but no recent observations are recorded. See Section 9.6.3.3 for additional information.

Natural Communities. Table 4-34 shows the conserved natural communities occurring in this Conservation Area: active desert sand fields, ephemeral desert sand fields, stabilized and partially stabilized desert sand fields, stabilized shielded desert sand fields, Sonoran creosote bush

scrub, and Sonoran mixed woody and succulent scrub. Figure 4-11c depicts the conserved natural communities.

**Table 4-34: Conserved¹ Natural Communities –
Whitewater Floodplain Conservation Area**
(All acreages are based on 1996 pre-Planning Agreement information.)

<i>Natural Community</i>	<i>Total Acres in the Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres Not Currently Conserved</i>
Active desert sand fields	485	1	484
Ephemeral desert sand fields	2,959	1,584	1,375
Stabilized shielded desert sand fields	1,591	806	785
Stabilized & partially stabilized desert sand fields	582	139	443
Sonoran creosote bush scrub	1,556	299	1,257
Sonoran mixed woody & succulent scrub	93	21	72

¹ Only natural communities to be conserved under the Plan are shown. Natural communities that are not included as described in Section 3.2.2 are not shown.

Essential Ecological Processes. The Whitewater River, after it joins the San Gorgonio River, provides fluvial sand transport to the existing Whitewater Floodplain Preserve. The groundwater recharge ponds west of Indian Avenue are in the path of the fluvial flows of the Whitewater River, and their presence has restricted flows to a narrower deposition area, which has affected the extent of suitable Habitat. The recharge ponds trap an unknown amount of sediment when water from the Colorado River Aqueduct, released into the Whitewater River approximately one mile north of I-10, flows down the river channel to the recharge ponds. Figure 4-11d depicts the Essential Ecological Process areas.

Biological Corridors and Linkages. The area along the Whitewater River provides a Linkage and Biological Corridor between the Snow Creek/Windy Point Conservation Area and the Core Habitat portion of the Whitewater Floodplain Conservation Area, as well as with the Whitewater Canyon Conservation Area. The area south of the recharge ponds may also function as a Biological Corridor to the Snow Creek/Windy Point Conservation Area. As two lane roads, Indian Avenue and Gene Autry Trail are not considered complete barriers to movement of the Covered Species. When constructed to full width, these roads will include wildlife underpasses to maintain connectivity. There is also potential connectivity between this area and the Willow Hole Conservation Area where Mission Creek and Willow Wash cross under the freeway. CVWD is in the process of designing a concrete and earth channel on the south side of I-10 to carry flows from Edom Wash and Willow Wash, as well as Salvia Wash from north of I-10 under a proposed railroad bridge to tie into an existing slope protection facility south of the railroad. This project is being designed to enhance sand transport and wildlife movement between the Willow Hole Conservation Area and the Whitewater Floodplain Conservation Area. Figure 4-11d depicts the Biological Corridors and Linkages.

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Conservation Objectives. The Conservation Objectives for this Conservation Area are:

1. In total, 4,140 acres of the Whitewater Floodplain Conservation Area shall be conserved. (This may be less than the sum of acres indicated in the following objectives because there can be overlap among areas covered by the objectives. For example, Core Habitat for two or more species may overlap, or Core Habitat and an Essential Ecological Process area may overlap. The individual acreage figures will be used in compliance monitoring.)
2. Conserve Core Habitat and associated ecological processes (as set forth below) for Coachella Valley milkvetch, Coachella Valley giant sand-treader cricket, Coachella Valley fringe-toed lizard, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse, allowing evolutionary processes and natural population fluctuations to occur. Minimize fragmentation, human-caused disturbance, and edge effects to Core Habitat by conserving contiguous Habitat and effective Linkages between patches of Core Habitat.
 - a. Conserve at least 2,671 acres of Core Habitat for the Coachella Valley milkvetch in the Palm Springs portion of the area, at least 61 acres in the Cathedral City portion of the area, and at least 58 acres in the unincorporated Riverside County portion of the area.
 - b. Conserve at least 2,659 acres of Core Habitat for the Coachella Valley giant sand-treader cricket in the Palm Springs portion of the area, at least 61 acres in the Cathedral City portion of the area, and at least 57 acres in the unincorporated Riverside County portion of the area.
 - c. Conserve at least 2,659 acres of Core Habitat for the Coachella Valley fringe-toed lizard in the Palm Springs portion of the area, at least 61 acres in the Cathedral City portion of the area, and at least 57 acres in the unincorporated Riverside County portion of the area.
 - d. Conserve at least 2,955 acres of Core Habitat for the Coachella Valley round-tailed ground squirrel in the Palm Springs portion of the area, at least 59 acres in the Cathedral City portion of the area, and at least 100 acres in the unincorporated Riverside County portion of the area.
 - e. Conserve at least 3,122 acres of Core Habitat for the Palm Springs pocket mouse in the Palm Springs portion of the area, at least 61 acres in the Cathedral City portion of the area, and at least 477 acres in the unincorporated Riverside County portion of the area.
 - f. Conserve at least 3,484 acres of the fluvial and aeolian sand transport area in the Palm Springs portion of the area, at least 61 acres in the Cathedral City portion of the area, and at least 481 acres in the unincorporated Riverside County portion of the area. Maintain the current capacity for fluvial sand transport in the Whitewater River floodplain.
3. Conserve occupied burrowing owl burrows as described in Section 4.4 for burrowing owl avoidance, minimization, and mitigation measures.
4. Conserve at least 3,433 acres of Other Conserved Habitat for Le Conte's thrasher in the Palm Springs portion of the area, at least 61 acres in the Cathedral City portion of the area, and at least 480 acres in the unincorporated Riverside County portion of the area. Conserve Le Conte's thrasher nesting sites as described in Section 4.4 for avoidance, minimization, and mitigation measures.

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5. Conserve at least 392 acres of the active desert sand fields in the Palm Springs portion of the area; at least 43 acres of the active desert sand fields in the Cathedral City portion of the area; at least 1,185 acres of the ephemeral desert sand fields in the Palm Springs portion of the area and at least 52 acres in the unincorporated Riverside County portion of the area for the conservation of these natural communities; at least 394 acres of the stabilized and partially stabilized desert sand fields in the Palm Springs portion of the area and at least 4 acres of the stabilized and partially stabilized desert sand fields in the unincorporated Riverside County portion of the area. As these conserved natural communities are all part of the Core Habitat areas identified in Conservation Objective 2 for this area, attainment of that objective will also achieve this objective.
6. Maintain functional Biological Corridors and Linkages by conserving at least 475 acres of identified Biological Corridor in the unincorporated portion of the Conservation Area, at least 809 acres of identified Biological Corridor in the City of Palm Springs' portion, and at least 18 acres of identified Biological Corridor in the City of Cathedral City portion, such that the functionality of each individual Biological Corridor listed below is not compromised:
 - a. Conserve the Whitewater River Biological Corridor south of I-10 in the unincorporated area to maintain potential Habitat connectivity for desert tortoise, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse, and to maintain ecosystem function for Covered Species. Aside from the freeway bridge and any Existing Use areas, which are unavoidably narrow segments, the Biological Corridor shall expand to one mile wide to minimize edge effects.
 - b. Conserve the Mission Creek Biological Corridor south of the freeway in the Palm Springs portion of the Conservation Area to maintain potential Habitat connectivity for Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse, and to maintain ecosystem function for Covered Species. Aside from the freeway culvert and any Existing Use areas, which are unavoidably narrow segments, the Biological Corridor shall expand to one mile wide to minimize edge effects.
 - c. Conserve the Willow wash area south of the I-10 in Palm Springs and in Cathedral City to maintain potential Habitat connectivity for Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse, and to maintain ecosystem function for Covered Species. Aside from the freeway culverts and any Existing Use areas, which are unavoidably narrow segments, the Biological Corridor shall expand to one mile wide to minimize edge effects.
 - d. Maintain the ability of wildlife to cross Indian Avenue and Gene Autry Trail by providing undercrossings for Coachella Valley fringe-toed lizard, flat-tailed horned lizard, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse if these roads are widened to six lanes or more.

Ownership and General Plan Land Use Designations. Table 4-35 shows the public versus private ownership of lands within this Conservation Area.

**Table 4-35: Land Ownership Whitewater
Floodplain Conservation Area
(rounded to nearest 10 acres)**

Ownership¹	Acres
<i>Existing Conservation Lands:</i>	2,930
BLM	1,770
CVWD	1,160
<i>Lands Not Currently Conserved:</i>	4,470
CVWD	2,040
Private	2,320
Public, Quasi-public entities	110
TOTAL	7,400

¹ Based on 1996 pre-Planning Agreement land ownership information.

As seen in Table 4-35, 40% of the land within this Conservation Area is currently in public or nonprofit conservation organization ownership. Current conservation status ranges from Level 1 to Level 3. Conservation management will be improved where needed through management prescriptions to be adopted by the relevant agency as Feasible.

As seen in Table 4-36, private land in the Conservation Area is under the jurisdiction of the City of Palm Springs, Cathedral City, and Riverside County. The main general plan designations are Rural Desert and Open Space Water in the County area, Open Space - Water and Open Space – Other in the City of Cathedral City area, and Conservation, Desert, and Watercourse in the City of Palm Springs area. These are considered open space designations in the respective jurisdictions’ general plans. Approximately 2% of the portion of the Conservation Area within the City of Palm Springs, in the Garnet Hill area, has a land use designation of Industrial. There are wind energy facilities in the sediment transport area west of Indian Avenue in this area.

**Table 4-36: General Plan Land Use Designations¹
(Non-conserved lands only)
Whitewater Floodplain Conservation Area**

<i>General Plan Designation (Map symbol)- Riverside County</i>	<i>% of Private Non-conserved Land in Conservation Area</i>	<i>Building Intensity Range</i>
Open Space Water (OS-W)	9%	Bodies of water, floodplains, and natural or artificial drainage corridors
Rural Desert (RD)	91%	1 unit per 10 acres
TOTAL	100%	
<i>General Plan Designation (Map symbol) - City of Palm Springs</i>	<i>% of Private Non-conserved Land in Conservation Area</i>	<i>Building Intensity Range</i>
Conservation (C)	35%	1 unit per 20 acres
<i>General Plan Designation (Map symbol) - City of Palm Springs</i>	<i>% of Private Non-conserved Land in Conservation Area</i>	<i>Building Intensity Range</i>
Desert (D)	27%	3.5 units per acre on 5 acre minimum site
Watercourse (W)	36%	Flood control or drainage facilities
Industrial (I)	2%	Various business & industrial uses
TOTAL	100%	
<i>General Plan Designation (Map symbol) - City of Cathedral City</i>	<i>% of Private Non-conserved Land in Conservation Area</i>	<i>Building Intensity Range</i>
Open Space –Water (OS-W)	72%	Bodies of water, floodplains, and natural or artificial drainage corridors
Open Space – Other (OS-O)	28%	Special resource or hazard areas
TOTAL	100%	

¹ Based on 2003 general plan designations and 2003 parcel data.

Figure 4-11e shows the Existing Conservation Lands and general plan land use designations on Level 4 lands for the area.

Required Measures for the Conservation Area. Tables 4-37a, 4-37b, and 4-37c show how many acres of Existing Conservation Lands are in this Conservation Area and how many acres of Additional Conservation Lands will need to be acquired or otherwise conserved through acquisition or other means. The following measures will be imposed to achieve the Conservation Objectives in this Conservation Area.

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1. The appropriate Local Permittee for the project will ensure that when Gene Autry Trail and Indian Avenue are widened to six lanes, or in 2038-39, whichever comes first, fluvial and aeolian sand transport capacity is not reduced. Roadway design will facilitate aeolian sand transport. Sand that accumulates upwind of either road will be deposited on the downwind side of the road to address potential impacts to aeolian sand transport. At the same time, the appropriate Local Permittee will also ensure that wildlife underpasses of sufficient size, to be determined in consultation with the Wildlife Agencies, are installed to provide for the movement of Coachella Valley round-tailed ground squirrel, Palm Springs pocket mouse, Coachella Valley fringe-toed lizard, and other species.
2. In the future, the Salvia Road (Micro Place) and Garnet Avenue Extension together may create a frontage road on the south side of I-10 connecting Indian Avenue and Gene Autry Trail. Where the road would cross Mission Creek it must provide for fluvial sand transport along Mission Creek. Additionally, the bridge structure or culvert must provide for the movement of wildlife under the road.
3. CVWD will deposit sand removed from the groundwater recharge basins during maintenance operations in the fluvial and aeolian sand transport area on available Reserve Lands in a manner that downwind habitat would receive appreciable inputs of aeolian sand from the deposits, as determined in consultation with the RMOC. It is understood that CVWD has a sediment relocation experiment underway and that the results of the experiment will be considered when they are available.
4. The Permittees shall comply with applicable avoidance, minimization, and mitigation measures described in Section 4.4 and the Land Use Adjacency Guidelines as described in Section 4.5.

**Table 4-37a: Conservation and Take Authorization for
Whitewater Floodplain Conservation Area –
City of Palm Springs Area**
(All acreages are based on 1996 pre-Planning Agreement information.)

Conservation Objective	Total Acres in Conservation Area	Existing Conservation Lands	Acres of Disturbance Authorized	Remaining Acres to be Conserved
Conserve Core Habitat for CV milkvetch	5,432	2,464	297	2,671
Conserve Core Habitat for CV giant sand-treader cricket	5,418	2,464	295	2,659
Conserve Core Habitat for CV fringe-toed lizard	5,418	2,464	295	2,659
Conserve Other Cons. Habitat for Le Conte’s thrasher	6,495	2,681	381	3,433
Conserve Core Habitat for CV round-tailed ground squirrel	5,825	2,542	328	2,955
Conserve Core Habitat for Palm Springs pocket mouse	6,173	2,704	347	3,122
Conserve active desert sand fields	436	0	44	392
Conserve ephemeral desert sand fields	2,873	1,556	132	1,185
Conserve stabilized & partially stabilized desert sand fields	577	139	44	394
Conserve fluvial & aeolian sand transport	6,590	2,719	387	3,484
Conserve Biological Corridors ¹	1,183	284	90	809

¹ Includes Whitewater River at Interstate 10, Mission Creek, and Willow Wash Biological Corridors

**Table 4-37b: Conservation and Take Authorization for
Whitewater Floodplain Conservation Area – City of Cathedral City Area
(All acreages are based on 1996 pre-Planning Agreement information.)**

<i>Conservation Objective</i>	<i>Total Acres in Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Disturbance Authorized</i>	<i>Remaining Acres to be Conserved</i>
Conserve Core Habitat for CV milkvetch	107	39	7	61
Conserve Core Habitat for CV giant sand-treader cricket	107	39	7	61
Conserve Core Habitat for CV fringe-toed lizard	107	39	7	61
Conserve Other Cons. Habitat for Le Conte’s thrasher	107	39	7	61
Conserve Core Habitat for CV round-tailed ground squirrel	105	39	7	59
Conserve Core Habitat for Palm Springs pocket mouse	107	39	7	61
Conserve active desert sand fields	49	1	5	43
Conserve fluvial & aeolian sand transport	107	39	7	61
Conserve Biological Corridors ¹	28	8	2	18

¹ Includes Willow Wash Biological Corridor

Table 4-37c: Conservation and Take Authorization for Whitewater Floodplain Conservation Area – Riverside County Area
(All acreages are based on 1996 pre-Planning Agreement information.)

<i>Conservation Objective</i>	<i>Total Acres in Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Disturbance Authorized</i>	<i>Remaining Acres to be Conserved</i>
Conserve Core Habitat for CV milkvetch	96	32	6	58
Conserve Core Habitat for CV giant sand-treader cricket	92	29	6	57
Conserve Core Habitat for CV fringe-toed lizard	92	29	6	57
Conserve Other Cons. Habitat for Le Conte’s thrasher	706	173	53	480
Conserve Core Habitat for CV round-tailed ground squirrel	185	74	11	100
Conserve Core Habitat for Palm Springs pocket mouse	701	171	53	477
Conserve ephemeral desert sand fields	86	28	6	52
Conserve stabilized & partially stabilized desert sand fields	5	0	1	4
Conserve fluvial & aeolian sand transport	707	173	53	481
Conserve Biological Corridors ¹	701	173	53	475

¹ Includes Whitewater River at Interstate 10, Mission Creek, and Willow Wash Biological Corridors.

4.3.7 Upper Mission Creek/Big Morongo Canyon Conservation Area

Location and Description. The Upper Mission Creek/Big Morongo Canyon Conservation Area encompasses the Mission Creek and Big Morongo Canyon watersheds and the portions of the Mission Creek flood control channel and Morongo Wash within the City of Desert Hot Springs. Portions of the Mission Creek flood control channel and Morongo Wash south of Desert Hot Springs are included in the Willow Hole Conservation Area. This Conservation Area is depicted in Figure 4-12a. The Upper Mission Creek/Big Morongo Canyon Conservation Area is bounded on the west by the Whitewater Canyon Conservation Area, on the north by portions of the San Gorgonio Wilderness and Morongo Canyon ACEC in San Bernardino County, and on the east by the Joshua Tree National Park Conservation Area. The Upper Mission Creek/Big Morongo Canyon Conservation Area contains a total of approximately 29,440 acres. In ___ 2013 the City of

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Desert Hot Springs and Mission Springs Water District became Permittees as a result of a Major Amendment. Private lands within the city limits of Desert Hot Springs are now included in the Upper Mission Creek/Big Morongo Canyon Conservation Area, including those lands necessary to provide for flood control as well as associated habitat conservation along Morongo Wash. Within the Conservation Area, the Morongo Wash Special Provisions Area has been subsumed into the Conservation Area. However, a minimum 1,200 foot wide Morongo Wash Flood Control Corridor will be maintained. The Riverside County Flood Control and Water Conservation District is developing a West Desert Hot Springs Master Drainage Plan (MDP). This Master Drainage Plan will address a potential Morongo Wash flood control facility and its associated mitigation. The proposed MDP will be required to be consistent with the CVMSHCP and will require a minor amendment. The Conservation Area along Morongo Wash includes conservation of a wildlife habitat corridor and additional habitat necessary to accomplish the Conservation Goals and Objectives of the Plan.

West of Highway 62, private lands within the city limits and the land use authority of Desert Hot Springs, are now included in the Upper Mission Creek/Big Morongo Canyon Conservation Area. Figure 4-12a depicts the inclusion of these private lands. These lands have important biological value as Core Habitat for desert tortoise. Portions of the lands also have important biological value as Other Conserved Habitat for Le Conte's thrasher and Palm Springs pocket mouse.

Core Habitat. On the east side of Highway 62 in this Conservation Area is the largest Habitat area in the Plan Area for Little San Bernardino Mountains linanthus. Mission Creek east of the highway, and both Dry Morongo Wash and Big Morongo Wash, which form meandering braided channels in this area, all contain linanthus Habitat. Additional Habitat for the linanthus occurs where these two washes meet to become the Morongo Wash area. Significant Core Habitat for the triple-ribbed milkvetch occurs in this area. There is also Core Habitat for the Palm Springs pocket mouse in this area, on both sides of Highway 62 and connected where the highway bridges Mission Creek. The population of desert tortoise is considered to be connected with a larger viable population stretching southwest into the Whitewater Canyon Conservation Area and eastward through the Little San Bernardino Mountains into the Joshua Tree National Park Conservation Area. Figure 4-12b depicts the Core Habitat, selected Other Conserved Habitat, and recorded burrowing owl locations.

Other Conserved Habitat. The riparian areas along Mission Creek contain suitable migration and breeding Habitat for the riparian species covered by the Plan. Given the scarcity of riparian Habitat in the desert, all riparian Habitat is considered important for these species, and is likely to contribute to the Conservation of these species in their respective ranges. There is also potential Habitat for the arroyo toad. Some Other Conserved Habitat for Coachella Valley milkvetch, Coachella Valley Jerusalem cricket, flat-tailed horned lizard, gray vireo, Le Conte's thrasher, Palm Springs pocket mouse, and Coachella Valley round-tailed ground squirrel also exists in this area. Table 4-38 shows the Covered Species occurring in this area.

**Table 4-38: Species Habitat – Upper Mission Creek/
Big Morongo Canyon Conservation Area**
(All acreages are based on 1996 pre-Planning Agreement information.)

<i>Species</i>	<i>Total Acres of Habitat in the Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Habitat Not Currently Conserved</i>	<i>Habitat Designation</i>	<i>Acres of Core Habitat</i>
CV milkvetch	829	256	573	Other Cons. Habitat	0
Little San Bernardino Mtns. linanthus	2,410	168	2,242	Core	2,410
Triple-ribbed milkvetch	819	346	473	Core	819
CV Jerusalem cricket	717	154	563	Other Cons. Habitat	0
Arroyo toad	3	3	0	Other Cons. Habitat	0
Desert tortoise	28,447	17,106	11,341	Core	28,447
Flat-tailed horned lizard	0 / 96	0 / 0	0 / 96	Pred. / Pot. ¹	0
Gray vireo	14	14	0	Other Cons. Habitat	0
Le Conte’s thrasher	3,898	537	3,361	Other Cons. Habitat	0
Least Bell’s vireo	204 / 278	62 / 112	142 / 166	Breeding / Migratory	N/A
SW willow flycatcher	204 / 278	62 / 112	142 / 166	Breeding / Migratory	N/A
Summer tanager	204 / 278	62 / 112	142 / 166	Breeding / Migratory	N/A
Yellow-breasted chat	204 / 278	62 / 112	142 / 166	Breeding / Migratory	N/A
Yellow warbler	204 / 278	62 / 112	142 / 166	Breeding / Migratory	N/A
CV round-tailed ground squirrel	2,773	160	2,613	Other Cons. Habitat	0
Palm Springs pocket mouse	3,806 / 392	498 / 85	3,308 / 307	Core / Other Cons. Habitat	3,806

¹ The species distribution model for the flat-tailed horned lizard includes predicted (“pred.”) Habitat and also potential (Pot.) Habitat. Predicted Habitat includes areas where presence of this species is known or expected based on recent observations. Potential Habitat includes areas where there are historical observations of this species but no recent observations are recorded. See Section 9.6.3.3 for additional information.

Natural Communities. Table 4-39 shows the conserved natural communities occurring in this area: Sonoran creosote bush scrub, Sonoran mixed woody and succulent scrub, Mojavean mixed woody scrub, Sonoran cottonwood-willow riparian forest, southern sycamore-alder riparian woodland, desert dry wash woodland, and Mojavean pinyon-juniper woodland. Figure 4-12c depicts the conserved natural communities.

Table 4-39: Conserved¹ Natural Communities – Upper Mission Creek/Big Morongo Canyon Conservation Area

(All acreages are based on 1996 pre-Planning Agreement information.)

<i>Natural Community</i>	<i>Total Acres in the Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres Not Currently Conserved</i>
Sonoran creosote bush scrub	5,369	4,370	999
Sonoran mixed woody & succulent scrub	7,527	2,306	5,221
Mojave mixed woody scrub	15,771	10,711	5,060
Sonoran cottonwood-willow riparian forest	100	16	84
Southern sycamore-alder riparian woodland	104	46	58
Desert dry wash woodland	280	112	168
Mojavean pinyon-juniper woodland	13	13	0

¹ Only natural communities to be conserved under the Plan are shown. Natural communities that are not included as described in Section 3.2.2 are not shown.

Essential Ecological Processes. This Conservation Area includes sand source and the upper part of the fluvial sand transport system that provides blowsand to the Willow Hole Preserve, and, to some extent, to the Whitewater Floodplain Preserve. Figure 4-12d depicts the Essential Ecological Process areas. Mission Creek and Morongo Wash, fed by Dry Morongo Canyon, Big Morongo Canyon, and Little Morongo Canyon, convey sediment from the San Bernardino and Little San Bernardino Mountains during storm events. The sediments are deposited in a broad area below the San Andreas Fault, where blowsand Habitat is formed and where strong winds carry the sediment eastward to the existing Willow Hole Preserve, which is described more fully in the section on the Willow Hole Conservation Area. Mission Creek is channelized between approximately Pierson Boulevard and Dillon Road. According to County Flood Control, the present channel does not have the capacity to convey sufficient flows to meet Federal Emergency Management Act (FEMA) requirements to eliminate the need for flood insurance in the 100 year floodplain area. At some point in the future, County Flood Control will need to widen the channel to protect significant Development.

Biological Corridors and Linkages. Within the area, two bridges on Highway 62 span Mission Creek and provide movement corridors under the highway. See Section 4.5.4 in Appendix I for details about these bridges. The area east of Morongo Wash, typically along the sandy eastern bank, provides Habitat connectivity for the Palm Springs pocket mouse between the Upper Mission Creek/Big Morongo Canyon Conservation Area and the Willow Hole Conservation Area. For the Morongo Wash area to function as a Biological Corridor between two Core Habitat areas for the Palm Springs pocket mouse, continuous Habitat must exist along the corridor so that, over time, genetic material will be transmitted between the two Core Habitat populations through the resident population in the Habitat connectivity area. It is assumed that Pierson Avenue, Two Bunch Palms Road, and Dillon Road (in the Willow Hole Conservation Area) do not currently constitute complete barriers to movement of pocket mice, although some mortality may occur when individuals attempt to cross the roads. It is also assumed that existing edge effects, including

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predation from domestic pets or feral animals, and Habitat degradation from OHV trespass, dumping, introduction of exotic plants, etc., are not sufficient to fragment the corridor. Additional edge effects in the future must be anticipated as Development continues in the area outside the Conservation Area. Figure 4-12d depicts the Biological Corridors and Linkages.

Conservation Objectives. The Conservation Objectives for this Conservation Area are:

1. In total, 10,810 acres of the Upper Mission Creek/Big Morongo Canyon Conservation Area shall be conserved. (This may be less than the sum of acres indicated in the following objectives because there can be overlap among areas covered by the objectives. For example, Core Habitat for two or more species may overlap, or Core Habitat and an Essential Ecological Process area may overlap. The individual acreage figures will be used in compliance monitoring.).
2. Conserve Core Habitat and associated Essential Ecological Processes (as set forth below) for Little San Bernardino Mountains linanthus, triple-ribbed milkvetch, desert tortoise, and Palm Springs pocket mouse, allowing evolutionary processes and natural population fluctuations to occur. Minimize fragmentation, human-caused disturbance, and edge effects to Core Habitat by conserving contiguous Habitat and effective Linkages between patches of Core Habitat.
 - a. Conserve at least 967 acres of Core Habitat for the Little San Bernardino Mountains linanthus in the Desert Hot Springs portion of the area, and at least 1,052 acres in the Riverside County portion, including the hydrologic processes upon which the plant depends.
 - b. Conserve at least 426 acres of Core Habitat for the triple-ribbed milkvetch in the Riverside County portion of the area.
 - c. Conserve at least 2,271 acres of Core Habitat for desert tortoise in the Desert Hot Springs portion of the area and at least 7,936 acres in the Riverside County portion. Protect individual tortoises within the area when allowed Development does occur. .
 - d. Conserve at least 1,865 acres of Core Habitat for the Palm Springs pocket mouse in the Desert Hot Springs portion of the area, at least 22 acres of Other Conserved Habitat for the Palm Springs pocket mouse in the Palm Springs portion of the area and at least 1,112 acres of Core Habitat in the Riverside County portion. Maintain potential Habitat connectivity between Core Habitat in the Upper Mission Creek/Big Morongo Canyon Conservation Area and the Willow Hole Conservation Area. Minimize fragmentation and human-disturbance of, and edge effects to, the Habitat connectivity area along Morongo Wash from any Development allowed within the Conservation Area.
 - e. Conserve at least 141 acres of the sand source areas in the Desert Hot Springs portion of the area and at least 6,488 acres in the Riverside County portion subject to natural erosion processes.
 - f. Conserve at least 1,949 acres of the fluvial sand transport areas in the Desert Hot Springs portion of the area, at least 22 acres in the Palm Springs portion, and at least 1,259 acres in the Riverside County portion. Maintain the current capacity for fluvial sand transport in Mission Creek and Morongo Wash.

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3. Conserve at least 1,931 acres of Other Conserved Habitat for Le Conte's thrasher in the Desert Hot Springs portion of the area, at least 22 acres in the Palm Springs portion, and at least 1,072 acres in the Riverside County portion of the area. Conserve Le Conte's thrasher nesting sites as described in Section 4.4 for avoidance, minimization, and mitigation measures.
4. Conserve at least 90 acres of Coachella Valley Jerusalem cricket Habitat in the Desert Hot Springs portion of the area, and at least 419 acres of Coachella Valley Jerusalem cricket Habitat in the Riverside County portion of the area.
5. Conserve occupied burrowing owl burrows as described in Section 4.4 for burrowing owl avoidance, minimization, and mitigation measures.
6. Conserve at least 76 acres of Sonoran cottonwood-willow riparian forest and at least 58 acres of Southern sycamore-alder riparian woodland in the Riverside County portion of the area; and at least 76 acres of desert dry wash woodland natural communities in the Desert Hot Springs portion, and at least 76 acres in the Riverside County portion, which provide Habitat for riparian birds and other Covered Species. For the remaining acreage of these conserved natural communities where disturbance is authorized by the Plan, ensure no net loss.
7. Maintain the two bridges on Highway 62 over Mission Creek so as not to affect the existing sediment transport and Biological Corridor. Maintain functional Biological Corridors under Highway 62 by conserving at least 88 acres in the Desert Hot Springs portion and at least 688 acres in the Riverside County portion to maintain potential Habitat connectivity for desert tortoise and Palm Springs pocket mouse, and to maintain ecosystem function for Covered Species. Aside from the highway bridges and any Existing Use areas, which are unavoidably narrow segments, the Biological Corridor shall expand to one mile wide to minimize edge effects.
8. Maintain the fluvial sand transport along the existing Mission Creek Channel.

Ownership and General Plan Land Use Designations. Table 4-40 shows the public versus private ownership of land within this Conservation Area.

As seen in Table 4-40, approximately 60% of the land in this Conservation Area is currently in public or nonprofit conservation organization ownership. Current Conservation ranges from Level 1 to Level 3. Conservation management will be improved where needed through management prescriptions to be adopted by the relevant agency as Feasible.

As seen in Table 4-41, the Conservation Area is partially under the jurisdiction of Riverside County and partially under the jurisdiction of the cities of Desert Hot Springs and Palm Springs. The general plan designations that restrict land use to 1 unit per 10 acres or to even more restrictive uses apply to approximately 74% of the private non-conservation land in the Conservation Area.

**Table 4-40: Land Ownership Upper Mission Creek/
Big Morongo Canyon Conservation Area¹**
(rounded to the nearest 10 acres)

<i>Ownership²</i>	<i>Acres</i>
<i>Existing Conservation Lands:</i>	<i>17,710</i>
BLM	17,530
County Parks	180
<i>Lands Not Currently Conserved:</i>	<i>11,730</i>
County Flood Control	190
Private	10,490
Public, Quasi-public entities	1,050
TOTAL	29,440

¹ Based on 1996 pre-Planning Agreement land ownership information.

**Table 4-41: General Plan Land Use Designations¹ (Non-conserved lands only)
Upper Mission Creek/ Big Morongo Canyon Conservation Area**

<i>General Plan Designation (Map symbol) - Riverside County</i>	<i>% of Private Non- conserved Land in Conservation Area</i>	<i>Building Intensity Range</i>
Open Space Rural (OS-RUR)	69%	1 unit per 20 acres
Open Space Water (OS-W)	6%	Bodies of water, floodplains, and natural or artificial drainage corridors
Rural Desert (RD)	20%	1 unit per 10 acres
Rural Mountainous (RM)	1%	1 unit per 10 acres
Rural Residential (RR)	4%	1 unit per 5 acres
Commercial Retail ² (CR)	---	Retail and service uses
TOTAL	100%	
<i>General Plan Designation (Map symbol) - City of Desert Hot Springs</i>	<i>% of Private Non- conserved Land in Conservation Area</i>	<i>Building Intensity Range</i>
Open Space Flood Ways (OS/FW)	6%	Floodways
Open Space Parks (OS/PP)	6%	Public parks
Open Space Mountain Reserve (OS/MR)	28%	1 unit per 10 acres
Residential Estates – 10 (R-E)	7%	1 unit per 10 acres
Energy-related Industrial (I-E)	5%	Energy producing facilities
Medium Density Residential (R-M)	7%	0 - 8 units per acre
Low density residential (R-L)	7%	0 – 5 units per acre
Low Density Residential, Specific Plan required (R-L/SP)	34%	0 – 5 units per acre
TOTAL	100%	
Watercourse (W)	67%	Flood control or drainage facilities
Energy/Industrial (I)	33%	Various business & industrial uses
Freeway ²	--	
TOTAL	100%	

¹ Based on 2003 general plan designations and 2003 parcel data.

² Statistically insignificant (less than 1%).

Figure 4-12e shows the Existing Conservation Lands and general plan land use designations on Level 4 lands for the area.

Required Measures for the Conservation Area. Tables 4-42a, 4-42b, and 4-42c show how many acres of Existing Conservation Lands are in this Conservation Area and how many acres of Additional Conservation Lands will need to be conserved through acquisition or other means for each jurisdiction. The following measures will be imposed to achieve the Conservation Objectives in this Conservation Area.

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1. For the widening of Mission Lakes Boulevard, Indian Avenue, Pierson Boulevard, Hacienda Avenue, Two Bunch Palms Road, and Cholla Drive to four or more lanes in the Conservation Area, the appropriate Local Permittee will ensure that the fluvial sand transport capacity of Mission Creek and Morongo Wash are maintained and that adequately sized culverts or wildlife undercrossings are provided for desert tortoise and Palm Springs pocket mouse in their respective Habitats. Widening projects will undergo the Joint Project Review Process set forth in Section 6.6.1.1 to determine the dimensions of the culverts or undercrossings based on site specific conditions and best available science.
2. Any improvements to Highway 62 by Caltrans will not reduce the size, openness, and existing natural character of the bridges over Mission Creek so as not to impede fluvial sand transport and wildlife movement.
3. For proposed Development in Little San Bernardino Mountains linanthus modeled Habitat, Development in Essential Ecological Process fluvial sand transport areas shall not obstruct natural watercourses, and the rate of flow and sediment transport shall not be impeded.
4. The Permittees shall comply with applicable avoidance, minimization, and mitigation measures described in Section 4.4 and the Land Use Adjacency Guidelines as described in Section 4.5.
5. The Morongo Wash Flood Control Corridor within the Upper Mission Creek/Big Morongo Canyon Conservation Area (depicted on Figure 4-12a) shall be subject to the following requirements:
 - a. Loss of functional connectivity for Palm Springs pocket mouse between Core Habitat in this Conservation Area and the Willow Hole Conservation Area shall be defined by a cumulative narrowing of Palm Springs pocket mouse habitat (defined below) to less than 600 feet wide for a length along Big Morongo Wash/Morongo Wash (Indian Avenue to Varner Avenue) of more than 2,000 feet, or any single narrowing or constriction of Palm Springs pocket mouse habitat to less than 300 feet wide for a length along Morongo Wash of more than 200 feet.
 - b. Section 7.3.1 lists further requirements of a proposed Morongo Wash flood control facility within the Morongo Wash Flood Control Corridor.

***Table 4-42a: Conservation and Take Authorization for
Upper Mission Creek/Big Morongo Canyon
Conservation Area – City of Desert Hot Springs Area
(All acreages are based on 1996 pre-Planning Agreement information.)***

<i>Conservation Objective</i>	<i>Total Acres in Conservation Area¹</i>	<i>Existing Conservation Lands</i>	<i>Acres of Disturbance Authorized</i>	<i>Remaining Acres to be Conserved</i>
Conserve Core Habitat for Little San Bernardino Mtns. linanthus	1,073	0	107	966
Conserve Other Cons. Habitat for CV Jerusalem cricket	100	0	10	90

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Conserve Core Habitat for desert tortoise	4,378	1,855	252	2,271
Conserve Other Cons. Habitat for Le Conte's thrasher	2,281	135	215	1,931
Conserve Core Habitat for Palm Springs pocket mouse	2,147	75	207	1,865
Conserve desert dry wash woodland	155	71	8	76
Conserve sand source Areas	494	337	16	141
Conserve fluvial sand transport areas	2,350	184	217	1,949
Conserve Hwy 62 Biological Corridor	98	0	10	88

Table 4-42b: Conservation and Take Authorization for Upper Mission Creek/Big Morongo Canyon Conservation Area – City of Palm Springs Area
(All acreages are based on 1996 pre-Planning Agreement information.)

Conservation Objective	Total Acres in Conservation Area	Existing Conservation Lands	Acres of Disturbance Authorized	Remaining Acres to be Conserved
Conserve Other Cons. Habitat for Le Conte's thrasher	24	0	2	22
Conserve Other Cons. Habitat for Palm Springs pocket mouse	24	0	2	22
Conserve fluvial sand transport	24	0	2	22

Table 4-42c: Conservation and Take Authorization for Upper Mission Creek/Big Morongo Canyon Conservation Area – Riverside County Area
(All acreages are based on 1996 pre-Planning Agreement information.)

Conservation Objective	Total Acres in Conservation Area²	Existing Conservation Lands	Acres of Disturbance Authorized	Remaining Acres to be Conserved
Conserve Core Habitat for Little San Bernardino Mtns. Linanthus	1,337	168	117	1,052

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<i>Conservation Objective</i>	<i>Total Acres in Conservation Area²</i>	<i>Existing Conservation Lands</i>	<i>Acres of Disturbance Authorized</i>	<i>Remaining Acres to be Conserved</i>
Conserve Core Habitat for triple-ribbed milkvetch	819	346	47	426
Conserve Other Cons. Habitat for CV Jerusalem cricket	620	154	47	419
Conserve Core Habitat for desert tortoise	24,069	15,251	882	7,936
Conserve Other Cons. Habitat for Le Conte's thrasher	1,593	402	119	1,072
Conserve Core Habitat for Palm Springs pocket mouse	1,659	423	124	1,112
Conserve Sonoran cottonwood-willow riparian forest	100	16	(8) ¹	76
Conserve southern sycamore-alder riparian woodland	104	46	6 ¹	52
Conserve desert dry wash woodland	125	41	8	76
Conserve sand source areas	19,789	12,580	721	6,488
Conserve fluvial sand transport areas	2,001	602	140	1,259
Conserve Hwy. 62 Biological Corridor	877	113	76	688

¹ Disturbance of no more than eight acres may occur, but it would be replaced to ensure that the no net loss occurs and the Conservation Objective is achieved.

4.3.8 Willow Hole Conservation Area

Location and Description. The Willow Hole Conservation Area includes the portions of the Mission Creek flood control channel and Morongo Wash; the Mission Creek and Morongo Wash sand depositional areas and aeolian sand transport areas, generally from Mission Creek on the west to Flattop Mountain on the east; and blowsand Habitat areas along the San Andreas Fault and at Stebbins' Dune south of Varner and west of Date Palm. The Conservation Area also includes the existing Willow Hole Preserve. This Conservation Area is depicted in Figure 4-13a. This area is bounded in part on the north by the Upper Mission Creek/Big Morongo Canyon Conservation Area and the Long Canyon Conservation Area. It is bounded on the east by the Edom Hill Conservation Area. To the south it is connected by culverts under I-10 to the Whitewater Floodplain Conservation Area. The Willow Hole Conservation Area contains a total of approximately 5,600 acres.

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Core Habitat. This Conservation Area contains Core Habitat for the Coachella Valley milkvetch, Coachella Valley fringe-toed lizard, the Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse. For the fringe-toed lizard, the long-term viability of the population in this area requires a movement corridor between the Willow Hole area north of Varner Road and the Stebbins’ dune area south of Varner Road. This Core Habitat area is a climatically moderate area between the wetter, cooler western portion of the Plan Area and the hotter, drier central and eastern portions. Figure 4-13b depicts the Core Habitat, selected Other Conserved Habitat, and recorded burrowing owl locations.

Other Conserved Habitat. This Conservation Area contains suitable migration and breeding Habitat for the riparian species covered by the Plan. Given the scarcity of riparian Habitat in the desert, all riparian Habitat is considered important for these species and is likely to contribute to the Conservation of these species in their respective ranges. This area provides some Other Conserved Habitat for Coachella Valley milkvetch, desert tortoise, Coachella Valley fringe-toed lizard, Coachella Valley giant sand-treader cricket, Coachella Valley Jerusalem cricket, flat-tailed horned lizard, crissal thrasher, Le Conte’s thrasher, Coachella Valley round-tailed ground squirrel, Palm Springs pocket mouse, and southern yellow bat. There are four known location records for burrowing owl. There is also some Other Conserved Habitat for the Little San Bernardino Mountains linanthus. Table 4-43 shows the Covered Species occurring in this area.

Table 4-43: Species Habitat - Willow Hole Conservation Area
(All acreages are based on 1996 pre-Planning Agreement information.)

<i>Species</i>	<i>Total Acres of Habitat in the Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Habitat Not Currently Conserved</i>	<i>Habitat Designation</i>	<i>Acres of Core Habitat</i>
CV milkvetch	3,166 / 168	351 / 37	2,815 / 131	Core / Other Cons. Habitat	3,166
Little San Bernardino Mtns. Linanthus	200	3	197	Other Cons. Habitat	0
CV giant sand-treader cricket	1,754	157	1,597	Other Cons. Habitat	0
CV Jerusalem cricket	2,632	245	2,387	Other Cons. Habitat	0
Desert tortoise	36	0	36	Other Cons. Habitat	0
CV fringe-toed lizard	897 / 857	157 / 0	740 / 857	Core / Other Cons. Habitat	897
Flat-tailed horned lizard	880 / 842	126 / 5	754 / 837	Pred. / Pot. / Other Cons. Habitat	0
Crissal thrasher	294	16	278	Other Cons. Habitat	0
Le Conte’s thrasher	5,396	749	4,647	Other Cons. Habitat	0
Least Bell’s vireo	126 / 169	17 / 0	109 / 169	Breeding / Migratory	N/A

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<i>Species</i>	<i>Total Acres of Habitat in the Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Habitat Not Currently Conserved</i>	<i>Habitat Designation</i>	<i>Acres of Core Habitat</i>
SW willow flycatcher	1 / 294	1 / 16	0 / 278	Breeding / Migratory	N/A
Summer tanager	1 / 294	1 / 16	0 / 278	Breeding / Migratory	N/A
Yellow-breasted chat	1 / 294	1 / 16	0 / 278	Breeding / Migratory	N/A
Yellow warbler	1 / 294	1 / 16	0 / 278	Breeding / Migratory	N/A
CV round-tailed ground squirrel	3,146 / 1,518	551 / 11	2,595 / 1,507	Core / Other Cons. Habitat	3,146
Palm Springs pocket mouse	4,610 / 217	564 / 13	4,046 / 204	Core / Other Cons. Habitat	4,610
Southern yellow bat	20	1	19	Other Cons. Habitat	0

¹ The species distribution model for the flat-tailed horned lizard includes predicted (“pred.”) Habitat and also potential (Pot.) Habitat. Predicted Habitat includes areas where presence of this species is known or expected based on recent observations. Potential Habitat includes areas where there are historical observations of this species but no recent observations are recorded. See Section 9.6.3.3 for additional information.

Natural Communities. Table 4-44 shows the conserved natural communities occurring in this Conservation Area: stabilized and partially stabilized desert dunes, active desert sand fields, ephemeral desert sand fields, stabilized and partially stabilized desert sand fields, mesquite hummocks, Sonoran creosote bush scrub, Sonoran mixed woody and succulent scrub, desert saltbush scrub, and desert fan palm oasis woodland. For stabilized and partially stabilized desert dunes, this area contains 93% of the occurrence of this natural community in the Plan Area. This area also protects the largest concentration of mesquite hummocks in the Plan Area. Figure 4-13c depicts the conserved natural communities.

Table 4-44: Conserved¹ Natural Communities - Willow Hole Conservation Area (All acreages are based on 1996 pre-Planning Agreement information.)

<i>Natural Community</i>	<i>Total Acres in the Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres Not Currently Conserved</i>
Stabilized & partially stabilized desert dunes	383	29	354
Active desert sand fields	37	0	37
Ephemeral desert sand fields	1,133	126	1,007
Stabilized & partially stabilized desert sand fields	201	2	199
Mesquite hummocks	125	16	109
Sonoran creosote bush	24	0	24

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scrub			
Sonoran mixed woody & succulent scrub	3,327	575	2,752
Desert saltbush scrub	169	0	169
Desert fan palm oasis woodland	1	1	0

¹ Only natural communities to be conserved under the Plan are shown. Natural communities that are not included as described in Section 3.2.2 are not shown.

Essential Ecological Processes. The report, *Long-term Sand Supply to Coachella Valley Fringe-toed Lizard (Uma inornata) Habitat in the Northern Coachella Valley, California* (United States Geological Survey, 2002) indicates that the primary sand flow into the Willow Hole and Stebbins' Dune blowsand Habitat areas comes from Mission Creek and Morongo Wash. Additional sand transport into the existing Willow Hole Preserve comes from Long Canyon to the north and an unnamed wash emanating from the Indio Hills to the northeast of Willow Hole. Although sand flow from these sources appears rare, maintaining the process corridor to allow for that sand flow is a critical design feature. During large-scale sand movement events (last known to have occurred in the late 1930s), a substantially greater areal extent and connectivity of aeolian sand Habitat can occur across this Conservation Area. An additional sand flow source, at least historically, was the Whitewater River. This source has been essentially blocked by I-10, the railroad, and the trees planted along these transportation corridors to prevent aeolian sand movement. Groundwater level north of the fault dunes plays an important role in maintaining the mesquite hummocks natural community in this Conservation Area. Figure 4-13d depicts the Essential Ecological Process areas.

Biological Corridors and Linkages. Five 36” culverts under Palm Drive provide a Biological Corridor for Coachella Valley fringe-toed lizard, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse. Future road widening of Mountain View Road and Varner Road could create a barrier to movement of these species absent adequately sized culverts or undercrossings. The Plan seeks to maintain a Linkage between this area and the Thousand Palms Conservation Area, through the Edom Hill Conservation Area; the Upper Mission Creek/Big Morongo Canyon Conservation Area for the Palm Springs pocket mouse; and the Whitewater Floodplain Conservation Area via the Mission Creek culvert under I-10, and the culvert where Willow Wash crosses under I-10. See Section 4.5.5 in Appendix I for details about these culverts. The area east of Morongo Wash, typically along the sandy eastern bank, provides Habitat connectivity for the Palm Springs pocket mouse between the Upper Mission Creek/Big Morongo Canyon Conservation Area and the Willow Hole Conservation Area. For the Morongo Wash area to function as a Biological Corridor between two Core Habitat areas for the Palm Springs pocket mouse, continuous Habitat must exist along the corridor so that, over time, genetic material will be transmitted between the two Core Habitat populations through the resident population in the Habitat connectivity area. It is assumed that Dillon Road and Pierson Avenue and Two Bunch Palms Road (in the Upper Mission Creek/Big Morongo Canyon Conservation Area) do not currently constitute complete barriers to movement of pocket mice, although some mortality may occur when individuals attempt to cross the roads. It is also assumed that existing edge effects, including predation from domestic pets or feral animals, and Habitat degradation from OHV trespass, dumping, introduction of exotic plants, etc., are not sufficient to fragment the corridor. Additional edge effects in the future must be anticipated as Development continues in the area outside the Conservation Area. Figure 4-13d depicts the Biological Corridors and Linkages.

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Conservation Objectives. The Conservation Objectives for this Conservation Area are:

1. In total, 4,920 acres of the Willow Hole Conservation Area shall be conserved. (This may be less than the sum of acres indicated in the following objectives because there can be overlap among areas covered by the objectives. For example, Core Habitat for two or more species may overlap, or Core Habitat and an Essential Ecological Process area may overlap. The individual acreage figures will be used in compliance monitoring.)
2. Conserve Core Habitat and associated ecological processes (as set forth below) for Coachella Valley milkvetch, Coachella Valley fringe-toed lizard, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse, allowing evolutionary processes and natural population fluctuations to occur. Minimize fragmentation, human-caused disturbance, and edge effects to Core Habitat by conserving contiguous Habitat patches and effective Linkages between patches of Core Habitat.
 - a. Conserve at least 782 acres of Core Habitat for the Coachella Valley milkvetch in the Cathedral City portion of the area, at least 863 acres in the Desert Hot Springs portion of the area, and at least 1,751 acres in the Riverside County portion.
 - b. Conserve at least 211 acres of Core Habitat for the Coachella Valley fringe-toed lizard in the Cathedral City portion of the area, at least 3 acres in the Desert Hot Springs portion of the area, and at least 452 acres in the Riverside County portion.
 - c. Conserve at least 1,256 acres of Core Habitat for the Coachella Valley round-tailed ground squirrel in the Cathedral City portion of the area, at least 3 acres in the Desert Hot Springs portion of the area, and at least 1,078 acres in the Riverside County portion.
 - d. Conserve at least 959 acres of Core Habitat for the Palm Springs pocket mouse in the Cathedral City portion of the area, at least 1,542 acres in the Desert Hot Springs portion of the area, and at least 1,142 acres in the Riverside County portion of the area. Maintain potential Habitat connectivity between Core Habitat in the Willow Hole Conservation Area and Upper Mission Creek/Big Morongo Canyon Conservation Area. Minimize fragmentation and human-disturbance of, and edge effects to, the Habitat connectivity area along Morongo Wash from any Development allowed within the Conservation Area.
 - e. Conserve at least 710 acres of the sand source area in the Cathedral City portion of the area and at least 17 acres in the Riverside County portion to maintain the natural erosion processes that provide sediment for the blowsand ecosystem.
3. Conserve at least 798 acres in the fluvial (water-borne) and aeolian (air-borne) sand transport area in the Cathedral City portion of the area, at least 1,542 acres in the Desert Hot Springs portion of the area, and at least 1,192 acres in the Riverside County portion. Maintain the current capacity for fluvial sand transport in Mission Creek and Morongo Wash for sand transport to the Willow Hole/Edom Hill Reserve.
4. Conserve at least 1,505 acres of Other Conserved Habitat for Le Conte's thrasher in the Cathedral City portion of the area, at least 1,499 acres in the Desert Hot Springs portion of the area, and at least 1,178 acres in the Riverside County portion. Conserve Le Conte's thrasher nesting sites as described in See Section 4.4 avoidance, minimization, and mitigation measures.

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5. Conserve at least 71 acres of mesquite hummocks natural community in the Riverside County portion of the area, and at least 27 acres in the Desert Hot Springs portion of the area, which provides Habitat for riparian birds and other Covered Species.
6. Conserve at least 194 acres of stabilized & partially stabilized desert dunes in the Riverside County portion and at least 125 acres in the Desert Hot Springs portion; at least 33 acres of active desert sand fields in the Cathedral City portion of the area; at least 178 acres of ephemeral desert sand fields in the Cathedral City portion of the area, at least 549 acres in the Desert Hot Springs portion, and at least 179 acres in the Riverside County portion; at least 51 acres of stabilized and partially stabilized desert sand fields in the Cathedral City portion of the area, at least 49 acres in the Desert Hot Springs portion, and at least 79 acres in the Riverside County portion; and at least 152 acres of desert saltbush scrub in the Riverside County portion of the area to conserve these natural communities.
7. Maintain functional Biological Corridors between this area and the Whitewater Floodplain Conservation Area by maintaining the culverts conveying Mission Creek and Willow Wash under I-10 at no less than their current size and character. Maintain functional Biological Corridors under I-10 by conserving at least 120 acres in the Riverside County portion and at least 277 acres in the Desert Hot Springs portion, such that the functionality of each individual Biological Corridor listed below is not compromised:
 - a. Conserve the Mission Creek Biological Corridor north of the freeway to maintain potential Habitat connectivity for Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse, and to maintain ecosystem function for Covered Species. Aside from the freeway culvert and any Existing Use areas, which are unavoidably narrow segments, the Biological Corridor shall expand to one mile wide to minimize edge effects.
 - b. Conserve the Willow Wash area north of the freeway in the City of Desert Hot Springs to maintain potential Habitat connectivity for Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse, and to maintain ecosystem function for Covered Species. Aside from the freeway culverts and any Existing Use areas, which are unavoidably narrow segments, the Biological Corridor shall expand to one mile wide to minimize edge effects.
8. Maintain the ability of wildlife to cross Mountain View Road, Varner Road, 18th Avenue, and Dillon Road by providing culverts or undercrossings for Coachella Valley fringe-toed lizard, Coachella Valley giant sand-treader cricket, Coachella Valley round-tailed ground squirrel, Palm Springs pocket mouse, and other species if these roads are widened beyond two lanes.
9. Maintain the fluvial sand transport along the existing Mission Creek Channel.
10. Conserve occupied burrowing owl burrows as described in Section 4.4 for burrowing owl avoidance, minimization, and mitigation measures.

Ownership and General Plan Land Use Designations. Table 4-45 shows the public versus private ownership of lands within this Conservation Area.

**Table 4-45: Land Ownership Willow Hole Conservation Area
(rounded to nearest 10 acres)**

<i>Ownership¹</i>	<i>Acres</i>
<i>Existing Conservation Lands:</i>	750
BLM	590
CVMC	160
<i>Lands Not Currently Conserved:</i>	4,850
County	10
County Flood Control	90
CVWD	10
Private	4,520
Public, Quasi-public entities	220
TOTAL	5,600

¹ Based on 1996 pre-Planning Agreement land ownership information

As seen in Table 4-45, 13% of the land in this Conservation Area is currently in public or nonprofit conservation organization ownership. Current Conservation ranges from Conservation Level 1 to Level 3. Conservation management will be improved where needed through management prescriptions to be adopted by the relevant agency as Feasible.

**Table 4-46: General Plan Land Use Designations¹
(Non-conserved lands only)
Willow Hole Conservation Area**

<i>General Plan Designation (Map symbol) - Riverside County</i>	<i>% of Private Non-conserved Land in Conservation Area</i>	<i>Building Intensity Range</i>
Open Space Water (OS-W)	14%	Bodies of water, floodplains, and natural or artificial drainage corridors
Rural Desert (RD)	68%	1 unit per 10 acres
Rural Residential (RR)	15%	1 unit per 5 acres
Light Industrial (LI)	3%	Industrial and related uses
TOTAL	100%	
<i>General Plan Designation (Map symbol) - City of Cathedral City</i>	<i>% of Private Non-conserved Land in Conservation Area</i>	<i>Building Intensity Range</i>
Open Space Water (OS-W)	8%	Floodways and drainage channels
Open Space – Other (OS-O)	8%	Special resource or hazard areas
Hillside Reserve (HR)	31%	1 unit per 20 acres
Parks and Public Open Space (OS-P)	31%	Public parks and open space lands with important natural resources
Estate Residential (RE)-	21%	0 – 2 units per acre
Industrial (I)	1%	Industrial uses
TOTAL	100%	

¹ Based on 2003 general plan designations and 2003 parcel data. Desert Hot Springs has annexed a portion of this Conservation Area but has retained the Riverside County general plan designations.

As seen in Table 4-46, the Conservation Area is partially under the jurisdiction of the City of Cathedral City, partially under the City of Desert Hot Springs, and partially under Riverside County. Portions of the area are within the 100-year floodplain of Mission Creek, Morongo Wash, or Long Canyon.

Figure 4-13e shows the Existing Conservation Lands and general plan land use designations on Level 4 lands for the area.

Required Measures for the Conservation Areas. Tables 4-47a and 4-47b show how many acres of Existing Conservation Lands are in this Conservation Area and how many acres of Additional Conservation Lands will need to be conserved through acquisition or other means. The following measures will be imposed to achieve the Conservation Objectives in this Conservation Area.

1. At such time as those portions of Little Morongo Road, Mountain View Road, Dillon Road, 18th Avenue, and Varner Road within the Conservation Area are widened to four or more lanes, the appropriate Local Permittee for the project will ensure that culverts or undercrossings of adequate size and design to maintain ecosystem function for Covered Species are constructed under the road. Widening projects will undergo the Joint Project Review Process set forth in Section 6.6.1.1 to determine the dimensions of the culverts or undercrossings based on site specific conditions and best available science.

Figure 4-13g Special Provisions Area



Table 4-47a: Conservation and Take Authorization for Willow Hole Conservation Area – City of Cathedral City Area
(All acreages are based on 1996 pre-Planning Agreement information.)

<i>Conservation Objective</i>	<i>Total Acres in Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Disturbance Authorized</i>	<i>Remaining Acres to be Conserved</i>
Conserve Core Habitat for CV milkvetch	938	69	87	782
Conserve Core Habitat for CV fringe-toed lizard	264	29	24	211
Conserve Other Cons. Habitat for Le Conte’s thrasher	1,799	123	168	1,508
Conserve Core Habitat for CV round-tailed ground squirrel	1,485	89	140	1,256
Conserve Core Habitat for Palm Springs pocket mouse	1,147	81	107	959
Conserve active desert sand fields	37	0	4	33
Conserve ephemeral desert sand fields	227	29	20	178

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Table 4-47a (cont.)

<i>Conservation Objective</i>	<i>Total Acres in Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Disturbance Authorized</i>	<i>Remaining Acres to be Conserved</i>
Conserve stabilized & partially stabilized desert dunes	1	0	0	1
Conserve stabilized & partially stabilized desert sand fields	57	0	6	51
Conserve sand source areas	833	44	79	710
Conserve fluvial & aeolian sand transport areas	966	79	89	798

Table 4-47b: Conservation and Take Authorization for Willow Hole Conservation Area – Riverside County Area
(All acreages are based on 1996 pre-Planning Agreement information.)

<i>Conservation Objective</i>	<i>Total Acres in Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Disturbance Authorized¹</i>	<i>Remaining Acres to be Conserved</i>
Conserve Core Habitat for CV milkvetch	1,269	282	99	888
Conserve Core Habitat for CV fringe-toed lizard	630	128	50	452
Conserve Other Cons. Habitat for Le Conte’s thrasher	1,935	626	131	1,178
Conserve Core Habitat for CV round-tailed ground squirrel	1,660	462	120	1,078
Conserve Core Habitat for Palm Springs pocket mouse	1,752	483	127	1,142
Conserve ephemeral desert sand fields	296	97	20	179
Conserve stabilized & partially stabilized desert dunes	244	29	21	194
Conserve stabilized & partially stabilized desert sand fields	90	2	9	79
Conserve mesquite Hummocks	95	16	8 ²	71
Conserve desert saltbush Scrub	169	0	17	152
Conserve desert fan palm oasis woodland	1	1	0	0
Conserve sand source Areas	186	167	2	17
Conserve fluvial & aeolian sand transport areas	1,787	462	133	1,193
Conserve Mission Creek (I-10), Willow Wash Biological Corridors	201	68	13	120

¹ The numbers in this table are calculated based on a change of jurisdictional boundaries. The City and the County are parties to a Memorandum of Understanding which states that they will negotiate the distribution of Authorized Disturbance after completion of the Major Amendment.

² Pursuant to the avoidance, minimization, and mitigation measures in Section 4.4, mesquite hummocks will be avoided to the maximum extent Feasible.

**Table 4-47c: Conservation and Take Authorization for Willow Hole
Conservation Area – City of Desert Hot Springs Area
(All acreages are based on 1996 pre-Planning Agreement information.)**

Conservation Objective	Total Acres in Conservation Area	Existing Conservation Lands	Acres of Disturbance Authorized¹	Remaining Acres to be Conserved
Conserve Core Habitat for CV milkvetch	959	0	96	863
Conserve Core Habitat for CV fringe-toed lizard	3	0	0	3
Conserve Other Cons. Habitat for Le Conte’s thrasher	1,666	0	167	1,499
Conserve Core Habitat for CV round-tailed ground squirrel	3	0	0	3
Conserve Core Habitat for Palm Springs pocket mouse	1,713	0	171	1,542
Conserve ephemeral desert sand fields	610	0	61	549
Conserve stabilized & partially stabilized desert dunes	139	0	14	125
Conserve stabilized & partially stabilized desert sand fields	54	0	5	49
Conserve mesquite Hummocks	30	0	3 ²	27
Conserve fluvial & aeolian sand transport areas	1,713	0	171	1,542
Conserve Mission Creek (I-10), Willow Wash Biological Corridors	308	0	31	277

¹ The numbers in this table are calculated based on a change of jurisdictional boundaries. The City and the County are parties to a Memorandum of Understanding which states that they will negotiate the distribution of Authorized Disturbance after completion of the Major Amendment.

² Pursuant to the avoidance, minimization, and mitigation measures in Section 4.4, mesquite hummocks will be avoided to the maximum extent Feasible.

2. The appropriate Local Permittee shall maintain existing 36” culverts under Palm Drive at no less than their current width to provide for movement of Coachella Valley fringe-toed lizard, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse.
3. Existing culverts under I-10 for Mission Creek, and Willow Wash will be maintained by Caltrans at no less than their current size, with soft-bottoms to maintain the potential for sand transport and biological connectivity.
4. A Conservation to Development ratio of 9:1 shall be maintained within the portion of the north half of Section 24, T3S R4E that is in the Conservation Area to maintain the functionality of the fluvial and aeolian sand transport systems. The Local Permittee(s) shall incorporate feasible design, orientation, or other criteria in the Implementation Manual. These criteria would not apply to single-family homes, emergency response activities, or any non-commercial accessory uses and structures including but not limited to second units on an existing legal lot. If it appears that the ratio may not be maintained, the appropriate Local Permittee(s) will meet with the Wildlife Agencies and identify additional means that

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will be implemented to achieve these goals and objectives, including an accelerated acquisition program and/or Development standards to maintain fluvial sand transport. The requirements for Development in floodplains also help ensure that sand transport capacity is maintained. (See Figure 4-13f.)

5. A Conservation to Development ratio of 9:1 shall be maintained within the north half of Section 19, T3S R5E; within the portion of the south half of the northwest quarter of Section 20, T3S R5E that is in the Conservation Area; and within a portion of the northwest quarter of Section 29, T3S R5E; to maintain the functionality of the fluvial and aeolian sand transport systems. The Local Permittee(s) shall incorporate feasible design, orientation, or other criteria in the Implementation Manual. These criteria would not apply to single-family homes, emergency response activities, or any non-commercial accessory uses and structures including but not limited to second units on an existing legal lot. If it appears that the ratio may not be maintained, the appropriate Local Permittee(s) will meet with the Wildlife Agencies and identify additional means that will be implemented to achieve these goals and objectives, including an accelerated acquisition program and/or Development standards to maintain fluvial and aeolian sand transport. The requirements for Development in floodplains also help ensure that sand transport capacity is maintained. (See Figure 4-13f.)
6. A Conservation to Development ratio of 9:1 shall be maintained within the south half of the south half of Section 28, T3S R5E to maintain the functionality of the aeolian sand transport system and the Biological Corridor. The Local Permittee(s) shall incorporate feasible design, orientation, or other criteria in the Implementation Manual. These criteria would not apply to single-family homes, emergency response activities, or any non-commercial accessory uses and structures including but not limited to second units on an existing legal lot. If it appears that the ratio may not be maintained, the appropriate Local Permittee(s) will meet with the Wildlife Agencies and identify additional means that will be implemented to achieve these goals and objectives, including an accelerated acquisition program and/or Development standards to maintain aeolian sand transport capacity and Development standards to restrict fencing that would impede wildlife movement. (See Figure 4-13f.)
7. The Permittees shall comply with applicable avoidance, minimization, and mitigation measures described in Section 4.4 and the Land Use Adjacency Guidelines as described in Section 4.5.
8. For construction of a frontage road north of and parallel to I-10, the appropriate Local Permittee shall ensure that project design provides for fluvial sand transport along Salvia, Edom, and Willow Washes to allow sand to be transported under I-10. Additionally, any future bridge structure over Willow Wash must provide for the movement of the Coachella Valley round-tailed ground squirrel under the road.
9. The appropriate Local Permittee for any Development or flood control structures along Long Canyon Wash south of Varner Road in the Conservation Area will ensure that the project does not impede fluvial and aeolian sand transport along the wash to provide sand to the Stebbins' dune area.
10. For proposed Development in Little San Bernardino Mountains linanthus modeled Habitat, Development in Essential Ecological Process fluvial sand transport areas shall not obstruct natural watercourses, and the rate of flow and sediment transport shall not be impeded.

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11. The portion of Section 3, T4S R5E, in the Conservation Area is a Special Provisions area as follows:
 - a. Take Authorization is provided for Development in the area depicted in Figure 4-13g. This Take Authorization becomes effective only upon the permanent Conservation of the area depicted in Figure 4-13g for Conservation.
 - b. The Local Development Mitigation Fee will not be assessed in the Take Authorization area delineated in Figure 4-13g.
 - c. At such time as the Take Authorization becomes effective, the Conservation Objectives for affected species, conserved natural communities, and ecological processes shall be adjusted to reflect the Take Authorization and Conservation in Section 2 provided through this measure. The Take Authorization does not count against the acres of Take/disturbance identified in the Plan prior to the implementation of these Special Provisions.

12. At such time as those portions of Long Canyon Channel within the Willow Hole Conservation Area are built, the appropriate Local Permittee for the project will design the facility to maintain the current sand transport process for the Conservation Area. The appropriate Local Permittee for the project will initiate a Joint Project Review Process set forth in Section 6.6.1.1 to maintain the current sand transport process for the Willow Hole Conservation Area.

4.3.9 Long Canyon Conservation Area

Location and Description. The Long Canyon Conservation Area encompasses the 100-year floodplain for Long Canyon Wash southwards from the termination of the existing Long Canyon flood control channel to the boundary of the existing Willow Hole Preserve at 20th Avenue, and is bounded on the west by Mountain View Road. The Long Canyon Conservation Area contains a total of approximately 810 acres. This Conservation Area is depicted in Figure 4-14a.

Core Habitat. This Conservation Area does not provide Core Habitat for any species.

Other Conserved Habitat. This Conservation Area contains Other Conserved Habitat for Coachella Valley milkvetch, Coachella Valley Jerusalem cricket, desert tortoise, burrowing owl, Le Conte’s thrasher, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse. There is also potential habitat for the flat-tailed horned lizard, None of it is considered essential to the Conservation of these species. Table 4-48 shows the Covered Species occurring in this area.

***Table 4-48: Species Habitat - Long Canyon Conservation Area
(All acreages are based on 1996 pre-Planning Agreement information.)***

<i>Species</i>	<i>Total Acres of Habitat in the Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Habitat Not Currently Conserved</i>	<i>Habitat Designation</i>	<i>Acres of Core Habitat</i>
CV milkvetch	113	2	(111) ^{1,2}	Other Cons. Habitat	0

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CV Jerusalem cricket	110	0	(110) ^{1,2}	Other Cons. Habitat	0
Desert tortoise	506	102	(404) ^{1,2}	Other Cons. Habitat	0
Flat-tailed horned lizard	110	0	(110) ^{1,2}	Potential Other Cons. Habitat	0
Le Conte's thrasher	712	12	(700) ^{1,2}	Other Cons. Habitat	0
CV round-tailed ground squirrel	769	101	(668) ^{1,2}	Other Cons. Habitat	0
Palm Springs pocket mouse	788	101	(687) ^{1,2}	Other Cons. Habitat	0

¹ All acres within Existing Conservation Lands are located in sand transport areas.

² A portion of this species Habitat model occurs within a fluvial sand transport area

Natural Communities. Table 4-49 shows the conserved natural communities occurring in this Conservation Area: Sonoran creosote bush scrub and Sonoran mixed woody and succulent scrub.

**Table 4-49: Conserved¹ Natural Communities –
Long Canyon Conservation Area**
(All acreages are based on 1996 pre-Planning Agreement information.)

<i>Natural Community</i>	<i>Total Acres in the Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres Not Currently Conserved</i>
Sonoran creosote bush scrub	99	90	(9) ²
Sonoran mixed woody & succulent scrub	689	11	(678) ²

¹ Only natural communities to be conserved under the Plan are shown. Natural communities that are not included as described in Section 3.2.2 are not shown.

² Numbers within parentheses are acres of Habitat in fluvial sand transport areas. The Conservation Objective for these acres is to maintain fluvial sand transport. Habitat conservation is not an objective.

Essential Ecological Processes. The function of this Conservation Area is to provide fluvial sand transport to the Willow Hole Preserve in flood events. Figure 4-14b depicts the Essential Ecological Process areas.

Biological Corridors and Linkages. This area is not a Biological Corridor.

Conservation Objectives. The Conservation Objective for this Conservation Area is:

1. Maintain the fluvial (water-borne) transport of sediment through the Long Canyon floodplain area. Maintain the current capacity for fluvial sand transport in Long Canyon wash.

Ownership and General Plan Land Use Designations. Table 4-50 shows the public versus private ownership of lands within this Conservation Area.

**Table 4-50: Land Ownership
Long Canyon Conservation Area**
(rounded to nearest 10)

<i>Ownership¹</i>	<i>Acres</i>
<i>Existing Conservation Lands:</i>	<i>100</i>
BLM	100
<i>Lands Not Currently Conserved:</i>	<i>710</i>
Private	700
Public, Quasi-public entities	10
TOTAL	810

¹ Based on 1996 pre-Planning Agreement land ownership information

As seen in Table 4-50, 12% of the land in this Conservation Area is currently in public or nonprofit conservation organization ownership. Figure 4-14c shows the Existing Conservation

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Lands and general plan land use designations on Level 4 lands for the area. Table 4-51 shows the general plan designations.

**Table 4-51: General Plan Land Use Designations¹
(Non-conserved lands only) Long Canyon Conservation Area**

<i>General Plan Designation (Map symbol) - Riverside County</i>	<i>% of Private Non-conserved Land in Conservation Area</i>	<i>Building Intensity Range</i>
Rural Residential (RR)	100%	1 unit per 5 acres
TOTAL	100%	-----

¹Based on 2003 general plan designations and 2003 parcel data

Required Measures for the Conservation Area. The following measures will be imposed to achieve the Conservation Objectives in this Conservation Area.

1. Development requirements imposed in floodplains will ensure that sand transport capacity is maintained.
2. If flood control structures are built in the Long Canyon Conservation Area, the appropriate Local Permittee for the project will ensure that such structures maintain the current fluvial sand transport process for the Willow Hole Conservation Area. The proposed flood control structures will undergo the Joint Project Review Process set forth in Section 6.6.1.1 to ensure current fluvial sand transport capacity is maintained.

4.3.10 Edom Hill Conservation Area

Location and Description. The Edom Hill Conservation Area encompasses the portion of the Indio Hills between the existing Willow Hole Preserve and the Thousand Palms Conservation Area. It extends northward from the Indio Hills to encompass an unnamed wash that flows out of the Indio Hills in a southwesterly direction to the existing Willow Hole Preserve. This area is depicted in Figure 4-15a. The Edom Hill Conservation Area contains a total of approximately 4,090 acres.

Core Habitat. This Conservation Area does not provide Core Habitat for any of the Covered Species.

Other Conserved Habitat. The Edom Hill Conservation Area contains patches of Other Conserved Habitat for the Coachella Valley milkvetch, Mecca aster, Coachella Valley giant sand-treader cricket, Coachella Valley Jerusalem cricket, Coachella Valley fringe-toed lizard, flat-tailed horned lizard, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse, but is not Core Habitat for any of these species. These patches of Other Conserved Habitat are important in maintaining connectivity between the Willow Hole Conservation Area and the Thousand Palms Conservation Area. The Edom Hill Conservation Area also provides Habitat for burrowing owl and Le Conte's thrasher. Table 4-52 shows the Covered Species occurring in this area. Figure 4-15b depicts the Other Conserved Habitat.

Table 4-52: Species Habitat - Edom Hill Conservation Area
(All acreages are based on 1996 pre-Planning Agreement information.)

<i>Species</i>	<i>Total Acres of Habitat in the Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Habitat Not Currently Conserved</i>	<i>Habitat Designation</i>	<i>Acres of Core Habitat</i>
CV milkvetch	1,788	298	1,490	Other Cons. Habitat	0
Mecca aster	28	2	26	Other Cons. Habitat	0
CV giant sand-treader cricket	120	58	62	Other Cons. Habitat	0
CV Jerusalem cricket	1,256	219	1,037	Other Cons. Habitat	0
CV fringe-toed lizard	120	58	62	Other Cons. Habitat	0
Flat-tailed horned lizard	0 / 276	0 / 0	0 / 276	Pred. / Pot. ¹ Other Cons. Habitat	0
Le Conte's thrasher	2,582	299	2,283	Other Cons. Habitat	0
CV round-tailed ground squirrel	1,835	254	1,581	Other Cons. Habitat	0
Palm Springs pocket mouse	1,342	189	1,153	Other Cons. Habitat	0

¹ The species distribution model for the flat-tailed horned lizard includes predicted ("pred.") Habitat and also potential (Pot.) Habitat. Predicted Habitat includes areas where presence of this species is known or expected based on recent observations. Potential Habitat includes areas where there are historical observations of this species but no recent observations are recorded. See Section 9.6.3.3 for additional information.

Natural Communities. Table 4-53 shows the conserved natural communities occurring in this area: active desert sand fields, stabilized and partially stabilized desert sand fields, Sonoran creosote bush scrub, and Sonoran mixed woody and succulent scrub. Figure 4-15c depicts the conserved natural communities.

**Table 4-53: Conserved¹ Natural Communities –
Edom Hill Conservation Area**
(All acreages are based on 1996 pre-Planning Agreement information.)

<i>Natural Community</i>	<i>Total Acres in the Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres Not Currently Conserved</i>
Active desert sand fields	73	32	41
Stabilized & partially stabilized desert sand fields	47	25	22
Sonoran creosote bush scrub	1,379	421	958
Sonoran mixed woody & succulent scrub	2,034	219	1,815

¹ Only natural communities to be conserved under the Plan are shown. Natural communities that are not included as described in Section 3.2.2 are not shown.

Essential Ecological Processes. An unnamed wash emanates from the north side of the Indio Hills in this area and provides sediment transport to portions of the existing Willow Hole Preserve and to Stebbins' Dune during flood events. The Indio Hills are a sand source area for the Willow Hole Preserve. Figure 4-15d depicts the Essential Ecological Process areas.

Biological Corridors and Linkages. This area provides a potential Linkage for Coachella Valley milkvetch, Coachella Valley giant sand-treader cricket, Coachella Valley fringe-toed lizard, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse between the Core Habitat at Willow Hole and the Core Habitat at the Thousand Palms Conservation Area. It also provides a Linkage for species such as coyote, bobcat, and gray fox, which may be important in maintaining predator-prey relationships and overall biodiversity in the Conservation Areas. Figure 4-15d depicts the Biological Corridors and Linkages.

Conservation Objectives. The Conservation Objectives for this Conservation Area are:

1. In total, 3,060 acres of the Edom Hill Conservation Area shall be conserved. (This may be less than the sum of acres indicated in the following objectives because there can be overlap among areas covered by the objectives. For example, Core Habitat for two or more species may overlap, or Core Habitat and an Essential Ecological Process area may overlap. The individual acreage figures will be used in compliance monitoring.)
2. To maintain connectivity, conserve the Other Conserved Habitat patches for the Coachella Valley milkvetch, Coachella Valley giant sand-treader cricket, Coachella Valley fringe-toed lizard, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse between the Thousand Palms Conservation Area and the Willow Hole Conservation Area. Maintain the Other Conserved Habitat patches, allowing evolutionary processes and natural population fluctuations to occur. Minimize fragmentation, human-caused disturbance, and edge effects to the Habitat by conserving effective Linkages between patches of Core Habitat.
3. Conserve ecological processes (as set forth below) for the Willow Hole Conservation Area and the Thousand Palms Conservation Area.

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- a. Conserve at least 310 acres of the sand source area for the Willow Hole Conservation Area in the Cathedral City portion of the area and at least 1,770 acres in the Riverside County portion to maintain the natural erosion processes that provide sediment for the blowsand ecosystem.
 - b. Conserve at least 565 acres in the fluvial sand transport area in the Riverside County portion of the area for the Willow Hole Conservation Area. Maintain the current capacity for fluvial sand transport in the washes emanating from the Indio Hills that carry sand to the Willow Hole Conservation Area.
 - c. Conserve that portion of the sand source area for the Thousand Palms Conservation Area in the Riverside County portion of the Conservation Area to maintain the natural erosion processes that provide sediment for the blowsand ecosystem.
4. Conserve occupied burrowing owl burrows as described in Section 4.4 avoidance, minimization, and mitigation measures.
 5. Conserve at least 310 acres of Other Conserved Habitat for Le Conte’s thrasher in the Cathedral City portion of the area and at least 1,745 acres in the Riverside County portion. Conserve individual Le Conte’s thrasher nesting sites as described in Section 4.4 avoidance, minimization, and mitigation measures.
 6. Conserve at least 3 acres of the stabilized and partially stabilized desert sand fields, and at least 37 acres of active desert sand fields in the Riverside County portion of the area to ensure the conservation of these conserved natural communities.

Ownership and General Plan Land Use Designations. Table 4-54 shows the public versus private ownership of lands within this Conservation Area.

***Table 4-54: Land Ownership
Edom Hill Conservation Area
(rounded to nearest 10 acres)***

<i>Ownership¹</i>	<i>Acres</i>
<i>Existing Conservation Lands:</i>	<i>700</i>
BLM	700
<i>Lands Not Currently Conserved:</i>	<i>3,390</i>
Private	3,380
Riverside County	10
TOTAL	4,090

¹Based on 1996 pre-Planning Agreement land ownership information

As seen in Table 4-54, 17% of the land in this Conservation Area is currently in public or nonprofit conservation organization ownership. Current Conservation ranges from Level 1 to Level 3. Conservation management will be improved where needed through management prescriptions to be adopted by the relevant agency as Feasible. Figure 4-15e shows the Existing Conservation Lands and general plan land use designations on Level 4 lands for the area.

**Table 4-55: General Plan Land Use Designations¹
(Non-conserved lands only) Edom Hill Conservation Area**

<i>General Plan Designation (Map symbol) - Riverside County</i>	<i>% of Private Non-conserved Land in Conservation Area</i>	<i>Building Intensity Range</i>
Open Space Rural (OS-RUR)	32%	1 unit per 20 acres
Rural Desert (RD)	42%	1 unit per 10 acres
Rural Mountainous (RM)	1%	1 unit per 10 acres
Rural Residential (RR)	4%	1 unit per 5 acres
Public Facilities (PF)	21%	Landfills, airports, utilities, etc.
TOTAL	100%	
<i>General Plan Designation (Map symbol) - City of Cathedral City¹</i>	<i>% of Private Non-conserved Land in Conservation Area</i>	<i>Building Intensity Range</i>
Hillside Reserve (HR)	21%	1 unit per 20 acres
Industrial (I)	71%	Industrial uses
Parks and Public Open Space (OS-P)	8%	Public parks and open space lands with important natural resources
TOTAL	100%	

¹Based on 2003 general plan designations and 2003 parcel data

Required Measures for the Conservation Area. Tables 4-56a and 4-56b show how many acres of Existing Conservation Lands are in this Conservation Area and how many acres of Additional Conservation Lands will need to be conserved through acquisition or other means. The following measures will be imposed to achieve the Conservation Objectives in this Conservation Area.

1. In its activities on the Edom Hill Landfill well parcel, County Waste will not significantly reduce fluvial sand transport along the wash that crosses the parcel and will not fence the property in a manner that prevents wildlife movement across the parcel.
2. The Permittees shall comply with applicable avoidance, minimization, and mitigation measures described in Section 4.4 and the Land Use Adjacency Guidelines as described in Section 4.5.

Table 4-56a: Conservation and Take Authorization for Edom Hill Conservation Area - City of Cathedral City Area
(All acreages are based on 1996 pre-Planning Agreement information.)

<i>Conservation Objective</i>	<i>Total Acres in Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Disturbance Authorized</i>	<i>Remaining Acres to be Conserved</i>
Conserve Other Cons. Habitat for CV milkvetch	151	0	15	136
Conserve Other Cons. Habitat for Le Conte's thrasher	344	0	34	310
Conserve Other Cons. Habitat for CV round-tailed ground squirrel	134	0	13	121
Conserve Other Cons. Habitat for Palm Springs pocket mouse	114	0	11	103
Conserve sand source areas	345	0	35	310

Table 4-56b: Conservation and Take Authorization for Edom Hill Conservation Area – Riverside County Area
(All acreages are based on 1996 pre-Planning Agreement information.)

<i>Conservation Objective</i>	<i>Total Acres in Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Disturbance Authorized</i>	<i>Remaining Acres to be Conserved</i>
Conserve Other Cons. Habitat for CV milkvetch	1,637	298	134	1,205
Conserve Other Cons. Habitat for CV giant sand-treader cricket	103	58	5	40
Conserve Other Cons. Habitat for CV fringe-toed lizard	103	58	5	40
Conserve Other Cons. Habitat for Le Conte’s thrasher	2,238	299	194	1,745
Conserve Other Cons. Habitat for CV round-tailed ground squirrel	1,701	254	145	1,302
Conserve Other Cons. Habitat for Palm Springs pocket mouse	1,228	189	104	935
Conserve active desert sand fields	73	32	4	37
Conserve stabilized & partially stabilized desert sand fields	29	25	1	3
Conserve sand source areas	2,665	698	197	1,770
Conserve fluvial sand transport areas	628	0	63	565

4.3.11 Thousand Palms Conservation Area

Location and Description. The Thousand Palms Conservation Area includes the existing CVFTL Preserve and the sand source/transport area to the west of it, emanating from the Indio Hills. All of the sand source/transport Essential Ecological Process area that has not been blocked by existing Development is included. The proposed Whitewater River Flood Control Project would further define the Essential Ecological Process area by constructing a system of levees along the western and southern boundaries of the Essential Ecological Process area. Several hundred acres immediately east of the existing preserve, below Pushawalla Canyon, are also included in this Conservation Area as additional Habitat for some of the species found on the preserve. This Conservation Area constitutes the largest unfragmented Habitat area on the Coachella Valley floor. It also represents the hot-dry end of the gradient of Habitat conditions found in the Coachella Valley. This Conservation Area is depicted in Figure 4-16a. The Thousand Palms Conservation Area contains a total of approximately 25,900 acres.

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Core Habitat. This Conservation Area provides Core Habitat for the Coachella Valley milkvetch, Coachella Valley giant sand-treader cricket (eastern most viable populations for both these species), Coachella Valley fringe-toed lizard, flat-tailed horned lizard, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse. This area contains Mecca aster Core Habitat, which in conjunction with contiguous Habitat in the Indio Hills Palms Conservation Area is presumed to be suitable for a self-sustaining population. Figure 4-16b depicts the Core Habitat, selected Other Conserved Habitat, and recorded burrowing owl locations.

Other Conserved Habitat. Le Conte's thrashers and burrowing owls occur in this Conservation Area. While a viable population for either of these species is not thought to exist within this Conservation Area, the Habitat is likely to contribute to the Conservation of these species in their respective ranges. There is also Other Conserved Habitat for the Coachella Valley Jerusalem cricket, Coachella Valley fringe-toed lizard, Coachella Valley giant sand-treader cricket, Coachella Valley milk vetch, Coachella Valley round-tailed ground squirrel, flat-tailed horned lizard, and Palm Springs pocket mouse. The mesquite hummocks, desert dry wash woodland, and desert fan palm oasis woodland areas contain suitable migration and breeding Habitat for the riparian bird species covered by the Plan. Given the scarcity of riparian Habitat in the desert, all riparian Habitat is considered important for these species, and is likely to contribute to the Conservation of these species in their respective ranges. The desert fan palm oasis woodlands provide the largest amount of natural Habitat for the southern yellow bat in the Plan Area. The existing preserve contains a refugium for the desert pupfish. This area also contains potential Habitat for crissal thrasher. Table 4-57 shows the Covered Species occurring in this area.

Table 4-57: Species Habitat - Thousand Palms Conservation Area
(All acreages are based on 1996 pre-Planning Agreement information.)

<i>Species</i>	<i>Total Acres of Habitat in the Conservation Area</i>	<i>Acres of Existing Conservation Lands</i>	<i>Acres of Habitat Not Currently Conserved</i>	<i>Habitat Designation</i>	<i>Acres of Core Habitat</i>
CV milkvetch	4,403 / 682	3,291 / 305	1,112 / 377	Core / Other Cons. Habitat	4,403
Mecca aster	11,745	8,772	2,973	Core	11,745
CV giant sand-treader cricket	3,962 / 3	3,035 / 2	927 / 1	Core / Other Cons. Habitat	3,962
CV Jerusalem cricket	197	51	146	Other Cons. Habitat	0
Desert pupfish	(15m ²)	(15m ²)	0	Refugium	0
CV fringe-toed lizard	3,962 / 3	3,035 / 2	927 / 1	Core / Other Cons. Habitat	3,962
Flat-tailed horned lizard	4,148 / 0	3,174 / 0	974 / 0	Pred. / Pot. ¹ Core Habitat	4,148
Flat-tailed horned lizard	98 / 81	61 / 21	37 / 60	Pred. / Pot. Other Cons. Habitat	0
Crissal thrasher	58	58	0	Other Cons. Habitat	0
Le Conte’s thrasher	11,058	6,627	4,431	Other Cons. Habitat	0
Least Bell’s vireo	198 / 748	198 / 710	0 / 38	Breeding / Migratory	N/A
SW flycatcher	141 / 805	141 / 767	0 / 38	Breeding / Migratory	N/A
Summer tanager	141 / 805	141 / 767	0 / 38	Breeding / Migratory	N/A
Yellow-breasted chat	141 / 805	141 / 767	0 / 38	Breeding / Migratory	N/A
Yellow warbler	141 / 805	141 / 767	0 / 38	Breeding / Migratory	N/A
CV round-tailed ground squirrel	8,513 / 532	5,071 / 275	3,442 / 257	Core / Other Cons. Habitat	8,513
Palm Springs pocket mouse	11,707 / 425	7,601 / 277	4,106 / 148	Core / Other Cons. Habitat	11,707
Southern yellow bat	137	137	0	Other Cons. Habitat	0

¹ The species distribution model for the flat-tailed horned lizard includes predicted (“pred.”) Habitat and also potential (Pot.) Habitat. Predicted Habitat includes areas where presence of this species is known or expected based on recent observations. Potential Habitat includes areas where there are historical observations of this species but no recent observations are recorded. See Section 9.6.3.3 for additional information.

Natural Communities. As shown in Table 4-58, conserved natural communities present are active desert dunes, active desert sand fields, mesquite hummocks, Sonoran creosote bush scrub, Sonoran mixed woody and succulent scrub, Sonoran cottonwood-willow riparian forest, desert dry wash woodland, and desert fan palm oasis woodland. Figure 4-16c depicts the conserved natural communities.

**Table 4-58: Conserved¹ Natural Communities –
Thousand Palms Conservation Area**
(All acreages are based on 1996 pre-Planning Agreement information.)

<i>Natural Community</i>	<i>Total Acres in the Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres Not Currently Conserved</i>
Active desert Dunes	421	405	16
Active desert sand Fields	3,543	2,632	911
Mesquite Hummocks	58	58	0
Sonoran creosote bush scrub	14,754	10,791	3,963
Sonoran mixed woody and succulent scrub	5,515	1,973	3,542
Sonoran cottonwood- willow riparian forest	4	4	0
Desert dry wash woodland	748	710	38
Desert fan palm oasis woodland	137	137	0

¹ Only natural communities to be conserved under the Plan are shown. Natural communities that are not included as described in Section 3.2.2 are not shown.

Essential Ecological Processes. This Conservation Area contains the Indio Hills sand source and sand transport system west and northwest of the existing CVFTL Preserve. Sand originating in the Little San Bernardino Mountains and Joshua Tree National Park is also delivered through Thousand Palms Canyon and other unnamed canyons to the west. A portion of Thousand Palms Canyon is within this area. The remaining portions of this system are conserved in the West Deception Canyon and Indio Hills/Joshua Tree National Park Linkage Conservation Areas. Figure 4-16d depicts the Essential Ecological Processes.

Biological Corridors and Linkages. This Conservation Area is linked to the Willow Hole Conservation Area to the west through the Edom Hill Conservation Area, to the East Indio Hills Conservation Area to the east through the Indio Hills Palms Conservation Area, and to Joshua Tree National Park to the north through the Indio Hills/Joshua Tree National Park Linkage Conservation Area. Bobcats, kit foxes, and other species occurring in the Indio Hills depend on that National Park connection. Desert bighorn sheep are also known to cross from the National Park into the Indio Hills, possibly for access to water. Figure 4-16d depicts the Biological Corridors and Linkages.

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Conservation Objectives. The Conservation Objectives for this Conservation Area are:

1. In total, 8,040 additional acres of the Thousand Palms Conservation Area shall be conserved. (This may be less than the sum of acres indicated in the following objectives because there can be overlap among areas covered by the objectives. For example, Core Habitat for two or more species may overlap, or Core Habitat and an Essential Ecological Process area may overlap. The individual acreage figures will be used in compliance monitoring.)
2. Conserve Core Habitat and associated ecological processes (as set forth below) for Coachella Valley milkvetch, Mecca aster, Coachella Valley giant sand-treader cricket, Coachella Valley fringe-toed lizard, flat-tailed horned lizard, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse, allowing evolutionary processes and natural population fluctuations to occur. Minimize fragmentation, human-caused disturbance, and edge effects to Core Habitat by conserving contiguous Habitat patches and effective Linkages between patches of Core Habitat. This will also help maintain connectivity with Habitat at Willow Hole through the Edom Hill Conservation Area.
 - a. Conserve at least 985 acres of Core Habitat for the Coachella Valley milkvetch.
 - b. Conserve at least 2,676 acres of Core Habitat for the Mecca aster.
 - c. Conserve at least 818 acres of Core Habitat for the Coachella Valley giant sand-treader cricket.
 - d. Conserve at least 818 acres of Core Habitat for the Coachella Valley fringe-toed lizard.
 - e. Conserve at least 860 acres of Core Habitat for the flat-tailed horned lizard. Conserve individual flat-tailed horned lizards as described in Section 4.4 avoidance, minimization, and mitigation measures.
 - f. Conserve at least 3,082 acres of Core Habitat for the Coachella Valley round-tailed ground squirrel.
 - g. Conserve at least 3,679 acres of Core Habitat for the Palm Springs pocket mouse.
 - h. Conserve at least 3,712 acres of the sand source area to maintain the natural erosion processes that provide sediment for the blowsand ecosystem. This also maintains Linkages for wildlife to the Edom Hill Conservation Area.
 - i. Conserve at least 4,206 acres in the fluvial and aeolian sand transport area to maintain the sand transport system. Maintain the current capacity for fluvial sand transport in the washes emanating from the Indio Hills that provide sand for the Thousand Palms Conservation Area. This also maintains Linkages for wildlife to the Edom Hill Conservation Area.
3. Conserve occupied burrowing owl burrows as described in Section 4.4 burrowing owl avoidance, minimization, and mitigation measures.
4. Conserve the refugia locations for the desert pupfish in accordance with the Desert Pupfish Recovery Plan.
5. Conserve at least 3,972 acres of Other Conserved Habitat for Le Conte's thrasher. Conserve Le Conte's thrasher nesting sites as described in Section 4.4 avoidance, minimization, and mitigation measures.

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6. Conserve at least 34 acres of the desert dry wash woodland natural community, which provides Habitat for riparian birds and other Covered Species. For the remaining acreage of this natural community where disturbance is authorized by the Plan, ensure no net loss.
7. Conserve at least 14 acres of active desert dunes and at least 804 acres of active desert sand fields to provide for the Conservation of these conserved natural communities. This goal will be attained through attaining Goal 2 for the species that inhabit these conserved natural communities.
8. Maintain the hydrologic groundwater regime necessary to maintain the pupfish refugium and the mesquite hummocks, Sonoran cottonwood-willow riparian woodland, desert dry wash woodland, and desert fan palm oasis woodland natural communities in this Conservation Area.
9. Maintain the ability of wildlife to cross Ramon Road, Washington Street, and Thousand Palms Canyon Road by providing undercrossings for Coachella Valley fringe-toed lizard, flat-tailed horned lizard, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse if these roads are widened. These undercrossings should also provide for seed dispersal.

Ownership and General Plan Land Use Designations. Table 4-59 shows the public and private ownership within this Conservation Area.

***Table 4-59: Land Ownership
Thousand Palms Conservation Area
(rounded to nearest 10 acres)***

<i>Ownership¹</i>	<i>Acres</i>
<i>Existing Conservation Lands:</i>	
BLM	10,600
CDFG	700
State Parks	1,010
TNC	880
USFWS	3,620
<i>Lands Not Currently Conserved:</i>	
CVWD	150
IID	0
Private	8,700
Public, Quasi-public entities	240
TOTAL	25,900

¹ Based on 1996 pre-Planning Agreement land ownership information

As seen in Table 4-59, 65% of the land in this Conservation Area is currently in public or nonprofit conservation organization ownership. Current conservation ranges from Level 1 to Level 3. Conservation management will be improved where needed through management prescriptions to be adopted by the relevant agency as Feasible. Figure 4-16e shows the Existing Conservation Lands and general plan land use designations on Level 4 lands for the area.

**Table 4-60: General Plan Land Use Designations¹
(Non-conserved lands only) Thousand Palms Conservation Area**

General Plan Designation (Map symbol) - Riverside County	% of Private Non-conserved Land in Conservation Area	Building Intensity Range
Open Space Recreation (OS-R)	1%	Active and passive recreational uses
Open Space Rural (OS-RUR)	63%	1 unit per 20 acres
Rural Residential (RR)	30%	1 unit per 5 acres
Very Low Density Residential (VLDR)	3%	0-2 units per acre
Low Density Residential ² (LDR)	---	2-5 units per acre
Medium Density Residential ² (MDR)	---	5-8 units per acre
Light Industrial (LI)	3%	Industrial and related uses
Public Facilities ² (PF)	---	Landfills, airports, utilities, etc.
TOTAL	100%	

¹ Based on 2003 general plan designations and 2003 parcel data

² Statistically insignificant (less than 1%)

Required Measures for the Conservation Area. Table 4-61 shows how many acres of Existing Conservation Lands are in this Conservation Area and how many acres of Additional Conservation Lands will need to be conserved through acquisition or other means. The following measures will be imposed to achieve the Conservation Objectives in this Conservation Area.

1. The planned Whitewater Flood Control Project in this area consists of a series of levees to provide flood protection for the Thousand Palms community and I-10 areas. A Section 7 consultation has been completed on this project and a No Jeopardy determination made through the Biological Opinion. The approved project's levees would define the southern edge of this Conservation Area. Final project design has not been completed, so the precise alignment has not been determined. The final alignment may cause a minor adjustment of the Conservation Area boundary such that the levees will not be in the Conservation Area, but will define the edge of the area. The project includes the protection of a 550 acre floodway within the Conservation Area. The levee system will help direct fluvial-borne sand into the depositional area where aeolian sand transport processes will sort and transport sand downwind. O&M of the levees will be in conformance with an O&M Manual to be developed with the U.S. Army Corps of Engineers in consultation with the Wildlife Agencies. Take associated with operation and maintenance by CVWD can be authorized pursuant to a Minor Amendment with Wildlife Agency concurrence.
2. If Ramon Road, Washington Street, and Thousand Palms Canyon Road are widened to four lanes or more, the County will install wildlife undercrossings for Coachella Valley fringe-toed lizard, flat-tailed horned lizard, Coachella Valley round-tailed ground squirrel, Palm Springs pocket mouse, and other species. Widening projects will undergo the Joint Project Review Process set forth in Section 6.6.1.1 to determine the dimensions of the culverts or undercrossings based on site-specific conditions and best available science.

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3. Special Site Planning Standards apply in those portions of Sections 7 and 8, T4S R6E, located in the Conservation Area and with a Rural Residential general plan land use designation as of June 2004. It is estimated that the implementation of the standards would conserve over 80% of the vacant parcels as of June 2004. The standards are described below.

Site Planning Standard 1: Development on the property shall not impede water-borne sand transport across the parcel in its natural direction of flow. A drainage plan for the site shall be required and demonstrate that natural flows onto the parcel shall be conveyed offsite in the natural pre-disturbance direction of flow. Water-borne sediments shall not be artificially retained onsite.

Site Planning Standard 2: Development shall be limited to 50% of the parcel for parcels smaller than 4 acres in size. Development shall be limited to 2 acres on parcels 4 acres or larger in size. The portion of each parcel that is not Developed shall be permanently conserved as natural open space through conveyance of fee title or conservation easement, or through deed restriction prior to issuance of any grading permit. The owner will be compensated by CVCC for the fair market value of the portion of the parcel required to be conserved. The Local Permittee(s) shall incorporate feasible design, orientation, or other criteria in the Implementation Manual. The portion of the site to be conserved shall be determined consistent with attainment of Site Planning Standard 1 and the maximization of aeolian sand transport relative to adjacent parcels to the extent Feasible. This portion of the property shall not be fenced.

Site Planning Standard 3: Onsite driveways shall be at grade, without gutters, curbs, berms, or other elevated areas that may impede or divert the passage of water-borne or wind-borne sand.

4. CVCC shall continue the acquisition of vacant parcels in those portions of Sections 7 and 8, T4S R6E, located in the Conservation Area at market value from willing sellers as a high priority so long as vacant parcels remain. CVCC shall maintain \$500,000 available at all times for acquisitions in Sections 7 and 8 until all vacant land has been acquired or Developed consistent with the Conservation Objectives and required measures.
5. CVCC and the County shall develop and implement a land exchange program within Sections 7 and 8, T4S R6E, which will maximize attainment of the Conservation Objectives by encouraging Development to occur in the least sensitive portions of the sections or outside the Conservation Area. CVCC and the County shall consult with the Wildlife Agencies and ISAs to determine the least sensitive portions of the area and the highest priority parcels for Conservation. As appropriate, the land exchange program will include incentives to encourage landowners to exchange parcels with high priority for Conservation for parcels in the least sensitive portions of the sections or outside the Conservation Area.
6. A Conservation to Development ratio of 9:1 shall be maintained within Section 21, T4S R6E, south of Ramon Road to maintain the functionality of the fluvial and aeolian sand transport systems. The Local Permittee(s) shall incorporate feasible design, orientation, or other criteria in the Implementation Manual. These criteria would not apply to single-family homes, emergency response activities, or any non-commercial accessory uses and structures including but not limited to second units on an existing legal lot. If it appears that the ratio may not be maintained, the appropriate Local Permittee(s) will meet with the

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Wildlife Agencies and identify additional means that will be implemented to achieve these objectives, including an accelerated acquisition program and/or Development standards to maintain fluvial and aeolian sand transport. The requirements for Development in floodplains also help ensure that sand transport capacity is maintained. See Figure 4-16f.

7. The alignment for Rio Del Sol from approximately Vista Chino to 20th Avenue in this Conservation Area identified in the Circulation Element of the Riverside County General Plan could create significant Habitat fragmentation, impact fluvial sand transport, and disrupt a Biological Corridor. Therefore, construction of Rio Del Sol through the Conservation Area from approximately Vista Chino to 20th Avenue would require a Major Amendment to the Plan.
8. The alignment for 22nd Avenue from Rio Del Sol to Sky Ridge in this Conservation Area identified in the Circulation Element of the Riverside County General Plan could create significant Habitat fragmentation, impact fluvial sand transport, and disrupt a Linkage between Conservation Areas. Therefore, construction of 22nd Avenue through the Conservation Area from Rio Del Sol to Sky Ridge would require a Major Amendment to the Plan.
9. If an extension of Chase School Road is constructed in the future, Riverside County will realign the proposed extension of Chase School Road, also known as Chocktaw Rd. and Vista del Pajaro, to an alignment outside the Conservation Area.
10. The Permittees shall comply with applicable avoidance, minimization, and mitigation measures described in Section 4.4 and the Land Use Adjacency Guidelines as described in Section 4.5.
11. If the Monitoring Program for the Conservation Area indicates that bird predation of Coachella Valley fringe-toed lizards or flat-tailed horned lizards is a problem because of the use of IID overhead power lines and poles, IID will consult with the Reserve Unit Management Committee to identify appropriate Adaptive Management measures for it to implement.
12. The refugia populations of the desert pupfish will be maintained in accordance with the Desert Pupfish Recovery Plan.

**Table 4-61: Conservation and Take Authorization
for Thousand Palms Conservation Area**
(All acreages are based on 1996 pre-Planning Agreement information.)

<i>Conservation Objective</i>	<i>Total Acres in Conservation Area</i>	<i>Acres of Existing Conservation Lands</i>	<i>Acres of Disturbance Authorized</i>	<i>Remaining Acres to be Conserved</i>
Conserve Core Habitat for CV milkvetch	4,403	3,291	111	1,001
Conserve Core Habitat for Mecca aster	11,745	8,772	297	2,676
Conserve Core Habitat for CV giant sand-treader cricket	3,962	3,035	93	834
Conserve refugia locations for desert pupfish	(15m ²)	(15m ²)	N/A	0
Conserve Core Habitat for CV fringe-toed lizard	3,962	3,035	93	834
Conserve Core Habitat for flat-tailed horned lizard (predicted)	4,148	3,174	97	877
Conserve Other Cons. Habitat for Le Conte’s thrasher	11,058	6,627	552 ¹	3,879
Conserve Core Habitat for CV round-tailed ground squirrel	8,513	5,071	468 ¹	2,974
Conserve Core Habitat for Palm Springs pocket mouse	11,707	7,601	518 ¹	3,588
Conserve active desert dunes	421	405	2	14
Conserve active desert sand fields	3,543	2,632	91	820
Conserve mesquite hummocks	58	58	0	0
Conserve Sonoran cottonwood - willow riparian forest	4	4	0	0
Conserve desert dry wash woodland	748	710	4	34
Conserve desert fan palm oasis woodland	137	137	0	0
Conserve sand source areas	13,056	8,932	412	3,712
Conserve fluvial & aeolian sand transport areas	12,550	7,877	573 ¹	4,100
Conserve Linkages	25,607	16,808	983 ¹	7,816

¹ Of this Authorized Take, 147 acres can be used only in Section 8, T4S R6E.

4.3.12 West Deception Canyon Conservation Area

Location and Description. The West Deception Canyon Conservation Area, north of the Indio Hills, encompasses the drainage area for West Deception Canyon, which transports sediment from the Little San Bernardino Mountains to Thousand Palms Canyon, and thereby to the existing CVFTL Preserve. While this Conservation Area is contiguous to the Indio Hills/Joshua Tree National Park Linkage Conservation Area, it is ecologically significant for sediment transport, but not as a Biological Corridor or for Habitat. Because of this difference in function, the West

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Deception Canyon Conservation Area can be conserved with different implementation mechanisms, and is, therefore, delineated as a separate Conservation Area. There are existing rural residential Development and a mobile-home park in this area. This Conservation Area is depicted in Figure 4-17a. The West Deception Canyon Conservation Area contains a total of approximately 4,150 acres.

Core Habitat. This Conservation Area does not provide Core Habitat for any Covered Species.

Other Conserved Habitat. This Conservation Area contains some Other Conserved Habitat for Coachella Valley milkvetch, desert tortoise, Le Conte’s thrasher, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse. Table 4-62 shows the Covered Species occurring in this area. The Other Conserved Habitat will be conserved only incidental to maintaining the fluvial sand transport system, which is the primary purpose of this Conservation Area.

***Table 4-62: Species Habitat –
West Deception Canyon Conservation Area
(All acreages are based on 1996 pre-Planning Agreement information.)***

<i>Species</i>	<i>Total Acres of Habitat in the Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Habitat Not Currently Conserved</i>	<i>Habitat Designation</i>	<i>Acres of Core Habitat</i>
CV milkvetch	115	15	56 (44) ¹	Other Cons. Habitat	0
Desert tortoise	2,028	132	1,181 (715) ¹	Other Cons. Habitat	0
Le Conte’s thrasher	1,393	0	(1,393) ¹	Other Cons. Habitat	0
CV round-tailed ground squirrel	1,533	10	(1,523) ¹	Other Cons. Habitat	0
Palm Springs pocket mouse	2,818	10	1 (2,807) ¹	Other Cons. Habitat	0

¹ Acres in parentheses are within the fluvial sand transport area. The only Conservation Objective in this area is to maintain fluvial sand transport. Habitat conservation is not an objective.

Natural Communities. Table 4-63 shows that the conserved natural communities occurring in this Conservation Area are Sonoran creosote bush scrub and Mojave mixed woody scrub.

**Table 4-63: Conserved¹ Natural Communities –
West Deception Canyon Conservation Area**
(All acreages are based on 1996 pre-Planning Agreement information.)

<i>Natural Community</i>	<i>Total acres in the Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres Not Currently Conserved</i>
Sonoran creosote bush scrub	1,467	0	26 (1,441) ²
Mojave mixed woody scrub	1,397	132	1,155 (110) ²

¹ Only natural communities to be conserved under the Plan are shown. Natural communities that are not included as described in Section 3.2.2 are not shown.

² Numbers within parentheses are acres of Habitat in fluvial sand transport areas. The Conservation Objective for these acres is to maintain fluvial sand transport. Habitat conservation is not an objective.

Essential Ecological Processes. The primary function of this Conservation Area is fluvial sand transport from the Little San Bernardino Mountains to Thousand Palms Canyon and the existing CVFTL Preserve. The area also contains some sand source area in the Little San Bernardino Mountains. Figure 4-17b depicts the Essential Ecological Process areas.

Biological Corridors and Linkages. The West Deception Canyon Conservation Area could provide some incidental wildlife movement opportunities between the Indio Hills and the Little San Bernardino Mountains; however, because major corridors will be conserved in the Indio Hills/Joshua Tree National Park Linkage Conservation Area to the east, the West Deception Canyon Conservation Area, which contains existing rural residential Development, is not proposed to be maintained as a Biological Corridor.

Conservation Objectives. The Conservation Objectives for this Conservation Area are:

1. Conserve at least 1,063 acres of the sand source area to maintain the natural erosion processes that provide sediment for the blowsand ecosystem.
2. Maintain the current capacity for fluvial sand transport in the West Deception Canyon fluvial sand transport system.

Ownership and General Plan Land Use Designations. Table 4-64 shows the public versus private ownership of lands within this Conservation Area.

**Table 4-64: Land Ownership –
West Deception Canyon Conservation Area
(rounded to nearest 10 acres)**

<i>Ownership¹</i>	<i>Acres</i>
<i>Existing Conservation Lands:</i>	<i>130</i>
BLM	130
<i>Lands Not Currently Conserved:</i>	<i>4,020</i>
Private	3,890
Public, Quasi-public entities	130
TOTAL	4,150

¹ Based on 1996 pre-Planning Agreement land ownership information.

**Table 4-65: General Plan Land Use Designations¹
(Non-conserved lands only)
West Deception Canyon Conservation Area**

<i>General Plan Designation (Map symbol) - Riverside County</i>	<i>% of Private Non-conserved Land in Conservation Area</i>	<i>Building Intensity Range</i>
Rural Residential (RR)	100%	1 unit per 5 acres
TOTAL	100%	

¹ Based on 2003 general plan designations and 2003 parcel data.

As seen in Table 4-64, 3% of the land in this Conservation Area is currently in public or nonprofit conservation organization ownership. Current conservation ranges from Level 1 to Level 3. Conservation management will be improved where needed through management prescriptions to be adopted by the relevant agency as Feasible. Figure 4-17c shows the Existing Conservation Lands and general plan land use designations on Level 4 lands for the area.

Required Measures for the Conservation Area. Table 4-66 shows how many acres of Existing Conservation Lands are in this Conservation Area and how many acres of Additional Conservation Lands will need to be conserved through acquisition or other means. The following measures will be imposed to achieve the Conservation Objectives in this Conservation Area.

1. Development requirements imposed in floodplains will ensure that sand transport capacity is maintained.
2. If flood control structures are built in the West Deception Canyon Conservation Area, the appropriate Local Permittee for the project will ensure that such structures avoid adverse impacts to the sand transport process for the Thousand Palms Conservation Area. A Major Plan Amendment will be required for such flood control structures, unless such a flood control structure is determined to be beneficial to the sand transport process. In that instance, a Minor Amendment to the Plan can be approved with Wildlife Agency concurrence.

**Table 4-66: Conservation and Take Authorization
for West Deception Canyon Conservation Area**
(All acreages are based on 1996 pre-Planning Agreement information.)

<i>Conservation Objective</i>	<i>Total Acres in Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Disturbance Authorized</i>	<i>Remaining Acres to be Conserved</i>
Conserve sand source areas	1,302	121	118	1,063

4.3.13 Indio Hills/Joshua Tree National Park Linkage Conservation Area

Location and Description. The Indio Hills/Joshua Tree National Park Linkage Conservation Area stretches from East Deception Canyon (adjacent to West Deception Canyon) to the eastern limits of the watershed for Fan Hill Canyon. All of this is watershed for Thousand Palms Canyon. The area also includes the upper Pushawalla Canyon area as a secondary Biological Corridor. The area is bounded on the north by the Joshua Tree National Park Conservation Area and on the south by the Thousand Palms Conservation Area. This Conservation Area is depicted in Figure 4-18a. The Indio Hills/Joshua Tree National Park Linkage Conservation Area contains a total of approximately 13,410 acres.

Core Habitat. This Conservation Area provides Core Habitat for the desert tortoise in conjunction with the Joshua Tree National Park Conservation Area and the Desert Tortoise and Linkage Conservation Area. Figure 4-18b depicts the Core Habitat and selected Other Conserved Habitat.

Other Conserved Habitat. This Conservation Area contains Other Conserved Habitat for Coachella Valley milkvetch, Mecca aster, Le Conte’s thrasher, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse, but the Habitat within the area is not regarded as large enough by itself to maintain a viable population of any of these species. Contiguity with other Conservation Areas, however, increases the value of the Habitat in this area for these species. Table 4-67 shows the Covered Species occurring in this area.

**Table 4-67: Species Habitat - Indio Hills/
Joshua Tree National Park Linkage Conservation Area**
(All acreages are based on 1996 pre-Planning Agreement information.)

<i>Species</i>	<i>Total Acres of Habitat in the Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Habitat Not Currently Conserved</i>	<i>Habitat Designation</i>	<i>Acres of Core Habitat</i>
CV milkvetch	17	10	7	Other Cons. Habitat	0
Mecca aster	166	4	162	Other Cons. Habitat	0
Desert tortoise ¹	10,308	1,714	8,594	Core	10,308
Le Conte's thrasher	6,396	333	6,063	Other Cons. Habitat	0
CV round-tailed ground squirrel	165	0	165	Other Cons. Habitat	0
Palm Springs pocket mouse	7,059	445	6,614	Other Cons. Habitat	0

¹ This is Core Habitat for the desert tortoise in conjunction with the contiguous Habitat in Joshua Tree National Park.

Natural Communities. Table 4-68 shows that the conserved natural communities occurring in this Conservation Area are Sonoran creosote bush scrub and Mojave mixed woody scrub. Figure 4-18c depicts the conserved natural communities.

**Table 4-68: Conserved¹ Natural Communities –
Indio Hills/Joshua Tree National Park Linkage Conservation Area**
(All acreages are based on 1996 pre-Planning Agreement information.)

<i>Natural Community</i>	<i>Total Acres in the Conservation Area</i>	<i>Existing Conservation Land</i>	<i>Acres Not Currently Conserved</i>
Sonoran creosote bush scrub	8,374	499	7,875
Mojave mixed woody scrub	4,380	1,219	3,161

¹ Only natural communities to be conserved under the Plan are shown. Natural communities that are not included as described in Section 3.2.2 are not shown.

Essential Ecological Processes. This area functions as a sand source and fluvial sand transport area for the existing CVFTL Preserve. This area is also part of the groundwater basin that provides water to the oases on the preserve. Figure 4-18d depicts the Essential Ecological Process areas.

Biological Corridors and Linkages. This Conservation Area provides a Biological Corridor between the Indio Hills and the Little San Bernardino Mountains, including Joshua Tree National Park. This area is also a contact zone between the Palm Springs pocket mouse (*Perognathus longimembris bangsi*) and another subspecies, *Perognathus longimembris longimembris*, or little pocket mouse, found to the north. The Indio Hills/Joshua Tree National Park Linkage Conservation Area also includes a separate Biological Corridor centered on Pushawalla Canyon and helps protect the watershed for this canyon. The Linkage between the

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Indio Hills and the National Park also contributes to biological diversity in the Indio Hills. The gradient between the lower CVFTL Preserve (near sea level) to the high portions of the National Park (5,000') constitutes one of the few remaining areas within this portion of the Coachella Valley where an unimpeded elevation transect such as this exists. As climate changes over time, the availability of this area may be vital for species to adjust to climate-induced shifts in Habitat. This area is also linked to the Desert Tortoise and Linkage Conservation Area to the east, and provides connectivity with desert tortoise populations in that area. It may also provide connectivity for the Palm Springs pocket mouse population in that area. It also provides a Linkage for species such as coyote, bobcat, and gray fox, which are important in maintaining predator-prey relationships and overall biodiversity in the Conservation Areas. Figure 4-18d depicts the Biological Corridors and Linkages in this Conservation Area.

Conservation Objectives. The Conservation Objectives for this Conservation Area are:

1. In total, 10,530 acres of the Indio Hills/Joshua Tree National Park Linkage Conservation Area shall be conserved. (This may be less than the sum of acres indicated in the following objectives because there can be overlap among areas covered by the objectives. For example, Core Habitat for two or more species may overlap, or Core Habitat and an Essential Ecological Process area may overlap. The individual acreage figures will be used in compliance monitoring.)
2. Conserve ecological processes for the Thousand Palms Conservation Area that occur in the Indio Hills/Joshua Tree National Park Linkage Conservation Area and Core Habitat for the desert tortoise as set forth below:
 - a. Conserve at least 7,735 acres of Core Habitat for desert tortoise, allowing evolutionary processes and natural population fluctuations to occur. Minimize fragmentation, human-caused disturbance, and edge effects to Core Habitat by conserving contiguous Habitat and effective Linkages between patches of Core Habitat. Protect individual tortoises within the area when allowed Development does occur.
 - b. Conserve at least 4,135 acres of the sand source area to maintain the natural erosion processes that provide sediment for the blowsand ecosystem.
 - c. Conserve at least 6,132 acres in the fluvial sand transport area. Maintain the current capacity for fluvial sand transport in the washes emanating from the Little San Bernardino Mountains that flow into Thousand Palms Canyon.
3. Maintain functional Biological Corridors and Linkages as set forth below.
 - a. Conserve at least 10,267 acres in the Indio Hills/Joshua Tree National Park Biological Corridor to maintain Habitat connectivity and ecosystem function between the Thousand Palms Conservation Area and the Joshua Tree National Park Conservation Area for Covered Species. The corridor shall be wide enough to minimize edge effects.
4. Conserve at least 5,457 acres of Other Conserved Habitat for Le Conte's thrasher. Conserve Le Conte's thrasher nesting sites as described in Section 4.4 avoidance, minimization, and mitigation measures.
5. Maintain the ability of wildlife to cross Dillon Road by providing undercrossings to maintain ecosystem function for Covered Species, if this road is widened.

Ownership and General Plan Land Use Designations. Table 4-69 shows the public versus private ownership of lands within this Conservation Area.

**Table 4-69: Land Ownership Indio Hills/
Joshua Tree National Park Linkage Conservation Area
(rounded to nearest 10 acres)**

<i>Ownership¹</i>	<i>Acres</i>
<i>Existing Conservation Lands:</i>	<i>1,720</i>
BLM	1,720
<i>Lands Not Currently Conserved:</i>	<i>11,690</i>
CVWD ²	0
Private	10,780
Public, Quasi-public entities	910
TOTAL	13,410

¹ Based on 1996 pre-Planning Agreement land ownership information

² CVWD owns approximately 1.1 acres in this Conservation Area.

**Table 4-70: General Plan Land Use Designations¹
(Non-conserved lands only) Indio Hills/
Joshua Tree National Park Linkage Conservation Area**

<i>General Plan Designation (Map symbol) - Riverside County</i>	<i>% of Private Non-conserved Land in Conservation Area</i>	<i>Building Intensity Range</i>
Open Space Conservation (OS-C)	5%	Protection of open space – natural hazards and resources
Open Space Rural (OS-RUR)	87%	1 unit per 20 acres
Rural Desert (RD)	1%	1 unit per 10 acres
Rural Residential (RR)	7%	1 unit per 5 acres
TOTAL	100%	

¹ Based on 2003 general plan designations and 2003 parcel data.

As seen in Table 4-69, approximately 13% of the land in this Conservation Area is currently in public or nonprofit conservation organization ownership. Current conservation ranges from Level 1 to Level 3. Conservation management will be improved where needed through management prescriptions to be adopted by the relevant agency as Feasible. Figure 4-18e shows the Existing Conservation Lands and general plan land use designations on Level 4 lands for the area.

Required Measures for the Conservation Area. Table 4-71 shows how many acres of Existing Conservation Lands are in this Conservation Area and how many acres of Additional Conservation Lands will need to be conserved through acquisition or other means. The following measures will be imposed to achieve the Conservation Objectives in this Conservation Area.

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1. If Dillon Road is widened to four or more lanes, the Appropriate Local Permittee for the project will ensure that adequately sized culverts or wildlife undercrossings are installed to maintain fluvial sand transport and provide for wildlife movement for Covered Species. Widening projects will undergo the Joint Project Review Process set forth in Section 6.6.1.1 to determine the dimensions of the culverts or undercrossings based on site specific conditions and best available science.
2. A Conservation to Development ratio of 9:1 shall be maintained within Section 30, T3S R7E to maintain the functionality of the fluvial sand transport systems. The Local Permittee(s) shall incorporate feasible design, orientation, or other criteria in the Implementation Manual. These criteria would not apply to single-family homes, emergency response activities, or any non-commercial accessory uses and structures including but not limited to second units on an existing legal lot. If it appears that the ratio may not be maintained, the appropriate Local Permittee(s) will meet with the Wildlife Agencies and identify additional means that will be implemented to achieve these goals and objectives, including an accelerated acquisition program and/or Development standards to maintain fluvial sand transport. The requirements for Development in floodplains also help ensure that sand transport capacity is maintained (See Figure 4-18f).
3. The Permittees shall comply with applicable avoidance, minimization, and mitigation measures described in Section 4.4 and the Land Use Adjacency Guidelines as described in Section 4.5.

***Table 4-71: Conservation and Take Authorization for
Indio Hills/Joshua Tree National Park Linkage Conservation Area
(All acreages are based on 1996 pre-Planning Agreement information.)***

<i>Conservation Objective</i>	<i>Total Acres in Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Disturbance Authorized</i>	<i>Remaining Acres to be Conserved</i>
Conserve Core Habitat for desert tortoise	10,308	1,714	859	7,735
Conserve Other Cons. Habitat for Le Conte’s thrasher	6,396	333	606	5,457
Conserve sand source areas	5,823	1,228	460	4,135
Conserve fluvial sand transport areas	7,304	491	681	6,132
Conserve Indio Hills/JTNP Biological Corridor	13,127	1,719	1,141	10,267

4.3.14 Indio Hills Palms Conservation Area

Location and Description. The Indio Hills Palms Conservation Area includes the portion of the Indio Hills to the east of the existing CVFTL Preserve that provides Habitat for the Mecca aster, a disjunct population from that in the Mecca Hills, and includes the desert fan palm oases and mesquite hummock areas along the base of the Indio Hills, associated with the San Andreas Fault. This Conservation Area is depicted in Figure 4-19a. It is bounded on the west and northwest

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by the Thousand Palms Conservation Area and on the south and southeast by the East Indio Hills Conservation Area. The Indio Hills Palms Conservation Area contains a total of approximately 6,230 acres.

Core Habitat. In conjunction with contiguous Habitat on the Thousand Palms Conservation Area, this Conservation Area provides Core Habitat for the Mecca aster. Figure 4-19b depicts the Core Habitat and selected Other Conserved Habitat.

Other Conserved Habitat. This Conservation Area contains Other Conserved Habitat for crissal thrasher, Le Conte’s thrasher, Coachella Valley round-tailed ground squirrel, Palm Springs pocket mouse, and southern yellow bat. The area contains suitable migration and breeding Habitat for the riparian species covered by the Plan. Given the scarcity of riparian Habitat in the desert, all riparian Habitat is considered important for these species, and is likely to contribute to the Conservation of these species in their respective ranges. Table 4-72 shows the Covered Species occurring in this area.

Table 4-72: Species Habitat – Indio Hills Palms Conservation Area
(All acreages are based on 1996 pre-Planning Agreement information.)

<i>Species</i>	<i>Total Acres of Habitat in the Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Habitat Not Currently Conserved</i>	<i>Habitat Designation</i>	<i>Acres of Core Habitat</i>
Mecca aster ¹	6,091	3,546	2,545	Core	6,091
Crissal thrasher	3	1	2	Other Cons. Habitat	0
Le Conte’s thrasher	106	98	8	Other Cons. Habitat	0
Least Bell’s vireo	97 / 79	47 / 42	50 / 37	Breeding / Migratory	N/A
SW willow flycatcher	93 / 83	46 / 43	47 / 40	Breeding / Migratory	N/A
Summer tanager	93 / 83	46 / 43	47 / 40	Breeding / Migratory	N/A
Yellow-breasted chat	93 / 83	46 / 43	47 / 40	Breeding / Migratory	N/A
Yellow warbler	93 / 83	46 / 43	47 / 40	Breeding / Migratory	N/A
CV round-tailed ground squirrel	145	59	86	Other Cons. Habitat	0
Palm Springs pocket mouse	458	264	194	Other Cons. Habitat	0
Southern yellow bat	93	46	47	Other Cons. Habitat	0

¹ An MOU with the City of Indio provides for a Like Exchange for Indio Water Authority that could result in removal of up to 20 acres of Mecca Aster habitat.

Natural Communities. Table 4-73 shows that the conserved natural communities occurring in this area are mesquite hummocks, Sonoran creosote bush scrub, Sonoran mixed woody and succulent scrub, desert dry wash woodland, and desert fan palm oasis woodland. Figure 4-19c depicts the conserved natural communities.

**Table 4-73: Conserved¹ Natural Communities –
Indio Hills Palms Conservation Area**
(All acreages are based on 1996 pre-Planning Agreement information.)

<i>Natural Community</i>	<i>Total Acres in the Conservation Area²</i>	<i>Existing Conservation Land</i>	<i>Acres Not Currently Conserved</i>
Mesquite Hummocks	3	1	2
Sonoran creosote bush scrub	5,718	3,246	2,472
Sonoran mixed woody & succulent scrub	216	210	6
Desert dry wash Woodland	79	42	37
Desert fan palm oasis woodland	93	46	47

¹ Only natural communities to be conserved under the Plan are shown. Natural communities that are not included as described in Section 3.2.2 are not shown.

² An MOU with the City of Indio provides for a Like Exchange for Indio Water Authority that could result in removal of up to 20 acres of land from this Conservation Area.

Essential Ecological Processes. The Indio Hills are part of the watershed for the desert fan palm oasis woodlands. These oases are also dependent on groundwater brought to or near the surface by the San Andreas Fault.

Biological Corridors and Linkages. This Conservation Area is linked to Joshua Tree National Park through the Indio Hills/Joshua Tree National Park Linkage Conservation Area. Figure 4-19d depicts the Biological Corridors and Linkages. This area provides potential Habitat connectivity between the Thousand Palms Conservation Area and the East Indio Hills Conservation Area.

Conservation Objectives. The Conservation Objectives for this Conservation Area are:

1. In total, 2,290 acres of the Indio Hills Palms Conservation Area shall be conserved. (This may be less than the sum of acres indicated in the following objectives because there can be overlap among areas covered by the objectives. For example, Core Habitat for two or more species may overlap, or Core Habitat and an Essential Ecological Process area may overlap. The individual acreage figures will be used in compliance monitoring.)
2. Conserve at least 2,290 acres of Core Habitat for Mecca aster, allowing evolutionary processes and natural population fluctuations to occur. Minimize fragmentation, human-caused disturbance, and edge effects to Core Habitat by conserving contiguous Habitat patches and effective linkages between patches of Core Habitat.
3. Conserve at least 7 acres of Other Conserved Habitat for Le Conte’s thrasher. Conserve Le Conte’s thrasher nesting sites as described in Section 4.4 avoidance, minimization, and mitigation measures.

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4. Conserve at least 33 acres of desert dry wash woodland natural community, which provides Habitat for riparian birds and other Covered Species.
5. Conserve at least 1 acre of the mesquite hummocks natural community, which provides Habitat for riparian birds and other Covered Species.
6. Conserve at least 42 acres of desert fan palm oasis woodland natural community, which provides Habitat for southern yellow bat.

Ownership and General Plan Land Use Designations. Table 4-74 shows the public versus private ownership of lands within this Conservation Area.

**Table 4-74: Land Ownership Indio Hills Palms Conservation Area
(rounded to the nearest 10 acres)**

<i>Ownership¹</i>	<i>Acres</i>
<i>Existing Conservation Lands:</i>	3,660
BLM	2,470
State Parks	1,190
<i>Lands Not Currently Conserved:</i>	2,570
Private ²	2,570
TOTAL	6,230

¹ Based on 1996 pre-Planning Agreement land ownership information.

² An MOU with the City of Indio provides for a Like Exchange for Indio Water Authority that could result in removal of up to 20 acres of private land from this Conservation Area.

**Table 4-75: General Plan Land Use Designations¹
(Non-conserved lands only) Indio Hills Palms Conservation Area**

<i>General Plan Designation (Map symbol) - Riverside County</i>	<i>% of Private Non-conserved Land in Conservation Area</i>	<i>Building Intensity Range</i>
Open Space Rural (OS-RUR)	79%	1 unit per 20 acres
Open Space Minerals (OS-MIN)	21%	Minerals extraction and processing facilities
TOTAL	100%	

¹ Based on 2003 general plan designations and 2003 parcel data

As seen in Table 4-74, approximately 59% of the land in this Conservation Area is currently in public or nonprofit conservation organization ownership. Current conservation ranges from Level 1 to Level 3. Conservation management will be improved where needed through management prescriptions to be adopted by the relevant agency as Feasible. Figure 4-19e shows the Existing Conservation Lands and general plan land use designations on Level 4 lands for the area.

Required Measures for the Conservation Area. Table 4-76 shows how many acres of Existing Conservation Lands are in this Conservation Area and how many acres of Additional

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Conservation Lands will need to be conserved through acquisition or other means. The following measures will be imposed to achieve the Conservation Objectives in this Conservation Area.

1. The Permittees shall comply with applicable avoidance, minimization, and mitigation measures described in Section 4.4 and the Land Use Adjacency Guidelines as described in Section 4.5.
2. All otherwise lawful activities undertaken by Granite Construction Company, or its successor, in the area belonging to Granite Construction in Sections 34 and 35, T4S, R7E, and Section 2, T5S R7E, including currently permitted activities and any subsequently permitted mining activities, implementation of approved mining reclamation plans, and future development activities outside the area depicted in Figure 4-20f in Section 4.3.15 are Covered Activities subject to the following Special Provisions:
 - (1) Upon cessation of mining activities and implementation of approved mining reclamation plans, the area depicted in Figure 4-20f shall be permanently conserved and added to the Reserve System through conveyance of fee title or a conservation easement to the CVCC, or through other means acceptable to the Wildlife Agencies. The area depicted lies between the west section line of Section 33, T4S R7E and a parallel line 1,320 feet to the east of that line. The purpose of conserving this area is to provide habitat connectivity for the Palm Springs pocket mouse and other species that may use this area.
 - (2) Granite Construction Company, or its successor, shall coordinate implementation of its approved mining reclamation plan(s) with CVCC and the appropriate RMUC to achieve the optimum Habitat restoration for the area to be conserved depicted in Figure 4-20f consistent with the approved mining reclamation plan(s).

[Note: a portion of the Granite Construction Company land is in this Conservation Area and a portion is in East Indio Hills Conservation Area. The map is shown only in Section 4.3.15.]

**Table 4-76: Conservation and Take Authorization
for Indio Hills Palms Conservation Area**
(All acreages are based on 1996 pre-Planning Agreement information.)

<i>Conservation Objective</i>	<i>Total Acres in Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Disturbance Authorized</i>	<i>Remaining Acres to be Conserved</i>
Conserve Core Habitat for Mecca aster ¹	6,091	3,546	255	2,290
Conserve Other Cons. Habitat for Le Conte's thrasher	106	98	1	7
Conserve mesquite hummocks	3	1	1	1
Conserve desert dry wash woodland	79	42	4	33
Conserve desert fan palm oasis woodland	93	46	5	42

¹ An MOU with the City of Indio provides for a Like Exchange for Indio Water Authority that could result in removal of up to 20 acres of Mecca aster habitat.

4.3.15 East Indio Hills Conservation Area

Location and Description. The East Indio Hills Conservation Area includes the portion of the Indio Hills east of the Indio Hills Palms Conservation Area and the alluvial fan area between toe of slope on the south side of the hills and the flood control berm north of the Coachella Canal. This area is depicted in Figure 4-20a. This area is bounded on the northwest by the Indio Hills Palms Conservation Area. The portion of this Conservation Area east of Dillon Road is also in the Northern and Eastern Colorado Desert (NECO) Plan Area. The East Indio Hills Conservation Area contains a total of approximately 4,060 acres.

Core Habitat. In conjunction with contiguous Habitat on the Thousand Palms Conservation Area and Core Habitat on the Indio Hills Palms Conservation Area, this Conservation Area provides Core Habitat for the Mecca aster. Figure 4-20b depicts the Core Habitat and selected Other Conserved Habitat.

Other Conserved Habitat. This Conservation Area contains Other Conserved Habitat for Coachella Valley giant sand-treader cricket, Coachella Valley fringe-toed lizard, desert tortoise, flat-tailed horned lizard, crissal thrasher, Le Conte's thrasher, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse that is valuable for these species to the extent connectivity can be maintained with populations on the Thousand Palms Conservation Area. The area contains suitable migration and breeding Habitat for the riparian bird species covered by the Plan. Given the scarcity of riparian Habitat in the desert, all riparian Habitat is considered important for these species, and is likely to contribute to the Conservation of these species in their respective ranges. Table 4-77 shows the Covered Species occurring in this area.

Table 4-77: Species Habitat - East Indio Hills Conservation Area
(All acreages are based on 1996 pre-Planning Agreement information.)

<i>Species</i>	<i>Total Acres of Habitat in the Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Habitat Not Currently Conserved</i>	<i>Habitat Designation</i>	<i>Acres of Core Habitat</i>
Mecca aster	1,594	433	1,161	Core	1,594
CV giant sand-treader cricket	824	123	701	Other Cons. Habitat	0
CV fringe-toed lizard	824	123	701	Other Cons. Habitat	0
Desert tortoise	397	0	397	Other Cons. Habitat	0
Flat-tailed horned lizard	645	67	578	Predicted Other Cons. Habitat	0
Crissal thrasher	47	0	47	Other Cons. Habitat	0
Le Conte's thrasher	2,142	571	1,571	Other Cons. Habitat	0
Least Bell's vireo	39 / 8	0 / 0	39 / 8	Breeding / Migratory	N/A
SW willow flycatcher	47	0	47	Migratory	N/A
Summer tanager	47	0	47	Migratory	N/A
Yellow-breasted chat	47	0	47	Migratory	N/A
Yellow warbler	47	0	47	Migratory	N/A
CV round-tailed ground squirrel	1,476	360	1,116	Other Cons. Habitat	0
Palm Springs pocket mouse	1,651	480	1,171	Other Cons. Habitat	0

Natural Communities. Table 4-78 shows that the conserved natural communities occurring in this area are active desert dunes, stabilized shielded desert sand fields, stabilized and partially stabilized desert sand fields, mesquite hummocks, Sonoran creosote bush scrub, Sonoran mixed woody and succulent scrub, and desert saltbush scrub. Figure 4-20c depicts the conserved natural communities.

**Table 4-78: Conserved¹ Natural Communities
East Indio Hills Conservation Area**
(All acreages are based on 1996 pre-Planning Agreement information.)

<i>Natural Community</i>	<i>Total Acres in the Conservation Area</i>	<i>Existing Conservation Land</i>	<i>Acres Not Currently Conserved</i>
Active desert dunes	5	0	5
Stabilized shielded desert sand fields	515	120	395
Stabilized & partially stabilized desert sand fields	331	3	328
Mesquite hummocks	43	0	43
Sonoran creosote bush scrub	2,882	874	2,008
Desert saltbush scrub	8	0	8
Sonoran mixed woody & succulent scrub	63	0	63

¹ Only natural communities to be conserved under the Plan are shown. Natural communities that are not included as described in Section 3.2.2 are not shown.

Essential Ecological Processes. The Indio Hills are part of the watershed for the mesquite hummocks.

Biological Corridors and Linkages. This area has potential Habitat connectivity with the Thousand Palms Conservation Area through the Indio Hills Palms Conservation Area. (See Figures 4-19d and 4-20e.)

Conservation Objectives. The Conservation Objectives for this Conservation Area are:

1. In total, 2,790 acres of the East Indio Hills Conservation Area shall be conserved. (This may be less than the sum of acres indicated in the following objectives because there can be overlap among areas covered by the objectives. For example, Core Habitat for two or more species may overlap, or Core Habitat and an Essential Ecological Process area may overlap. The individual acreage figures will be used in compliance monitoring.)
2. Conserve Habitat, as set forth below, for Mecca aster, flat-tailed horned lizard, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse, allowing evolutionary processes and natural population fluctuations to occur. Minimize fragmentation, human-caused disturbance, and edge effects by conserving contiguous Habitat patches and effective Linkages.
 - a. Conserve at least 1,045 acres of Other Conserved Habitat for the Mecca aster in the Riverside County portion of the area.
 - b. Conserve at least 415 acres of Other Conserved Habitat for the flat-tailed horned lizard in the Riverside County portion of the area, at least 5 acres in the City of Coachella

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portion, and at least 100 acres in the City of Indio portion. Conservation of species Habitat in the City of Indio is subject to the conditions in measure 1 of the Required Measures for the Conservation Area section below.

- c. Conserve at least 1,253 acres of Other Conserved Habitat for Le Conte's thrasher in the Riverside County portion of the area, at least 56 acres in the City of Coachella portion, and at least 105 acres in the City of Indio portion. Conserve Le Conte's thrasher nesting sites in the area as described in Section 4.4 for avoidance, minimization, and mitigation measures. Conservation of species Habitat in the City of Indio is subject to the conditions in measure 1 of the Required Measures for the Conservation Area section below.
 - d. Conserve at least 896 acres of Other Conserved Habitat for the Coachella Valley round-tailed ground squirrel in the Riverside County portion of the area, at least 5 acres in the City of Coachella portion, and at least 103 acres in the City of Indio portion. Conservation of species Habitat in the City of Indio is subject to the conditions in measure 1 of the Required Measures for the Conservation Area section below.
 - e. Conserve at least 944 acres of Other Conserved Habitat for the Palm Springs pocket mouse in the Riverside County portion of the area, at least 7 acres in the City of Coachella portion, and at least 103 acres in the City of Indio portion. Conservation of species Habitat in the City of Indio is subject to the conditions in measure 1 of the Required Measures for the Conservation Area section below.
3. Conserve at least 4 acres of active desert dunes in the Riverside County portion; at least 295 acres of stabilized and partially stabilized desert sand fields in the Riverside County portion of the area; at least 100 acres of stabilized shielded desert sand fields in the City of Indio portion of the area and at least 256 acres in the Riverside County portion; at least 2 acres of mesquite hummocks in the City of Indio portion of the area and at least 39 acres in the Riverside County portion; and at least 7 acres of desert saltbush scrub in the Riverside County portion of the area to conserve these natural communities. Conservation of natural communities in the City of Indio is subject to the conditions in measure 1 of the Required Measures for the Conservation Area section below.
 4. Consistent with the research program described in Section 8.4.1.2, restore 80 acres of mesquite hummocks if 80% of the mesquite hummocks natural community in the south half of Section 17, T5S, R8E, is not conserved under the Plan. If the 80% is conserved, the Conservation Objective shall be to restore 40 acres of mesquite hummocks.

Note that the preceding Conservation Objectives as they pertain to the 120 acres within the City of Indio are subject to revision without a Plan Amendment if the area identified in Required Measure 1 cannot be conserved.

Ownership and General Plan Land Use Designations. Table 4-79 shows the public versus private ownership of lands within this Conservation Area.

Table 4-79 shows that approximately 25% of the land within this area is under existing public or private conservation management. Current conservation ranges from Level 1 to Level 3. Figure 4-20d shows the Existing Conservation Lands and general plan land use designations on Level 4 lands for the area.

**Table 4-79: Land Ownership
East Indio Hills Conservation Area
(rounded to nearest 10 acres)**

<i>Ownership¹</i>	<i>Acres</i>
<i>Existing Conservation Lands:</i>	<i>1,030</i>
BLM	1,030
<i>Lands Not Currently Conserved:</i>	<i>3,030</i>
CVWD	620
Private	2,360
Public, Quasi-public entities	50
TOTAL	4,060

¹ Based on 1996 pre-Planning Agreement land ownership information

**Table 4-80: General Plan Land Use Designations¹
(Non-conserved lands only) East Indio Hills Conservation Area**

<i>General Plan Designation (Map symbol) - Riverside County</i>	<i>% of Private Non-conserved Land in Conservation Area</i>	<i>Building Intensity Range</i>
Open Space Conservation (OS-C)	2%	Protection of open space – natural hazards and resources
Open Space Rural (OS-RUR)	46%	1 unit per 20 acres
Open Space Water (OS-W)	37%	Bodies of water, floodplains, and natural or artificial drainage corridors
Estate Density Residential (EDR)	9%	1 unit per 10 acres
Open Space Recreation (OS-R)	6%	Active and passive recreational uses
TOTAL	100%	
<i>General Plan Designation (Map symbol) - City of Indio</i>	<i>% of Private Non-conserved Land in Conservation Area</i>	<i>Building Intensity Range</i>
Open Space (OS)	3%	1 unit per 20 acres
Residential Low (RL)	69%	Up to 5 units per acre
Public (P)	28%	Public facilities
TOTAL	100%	

¹ Based on 2003 general plan designations and 2003 parcel data.

Required Measures for the Conservation Area. Tables 4-81a, 4-81b, and 4-81c show how many acres of Existing Conservation Lands are in this Conservation Area and how many acres of Additional Conservation Lands will need to be conserved through acquisition or other means in each jurisdiction. The following measures will be imposed to achieve the Conservation Objectives in this Conservation Area.

1. Parcels north of the Coachella Canal in Sections 2 and 11, T5S R7E may be acquired from a willing seller. It is recognized that acquisition could occur through purchase of a fee

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simple or conservation easement interest, land exchange, dedication of land in exchange for density transfer, or dedication of land in exchange for the waiver of mitigation fees, up to the fair market value of the dedicated land, related to the Development of other land owned by the same person or entity in the City of Indio. Efforts to acquire any of these parcels for conservation purposes shall not be cause to impede an application to obtain Development entitlements consistent with the General Plan in effect at the time the Development is proposed and any entitlements so approved are a Covered Activity under the Plan.

2. In conjunction with its WRP recharge facility, CVWD will remove tamarisk from the site. In addition, if a study undertaken by the CVCC demonstrates the feasibility of mesquite restoration, CVWD will restore and enhance mesquite and Coachella Valley round-tailed ground squirrel Habitat on site pursuant to Required Measure 2 in Section 4.3.20. The process for evaluating the potential for mesquite hummock restoration and enhancement is described in Section 8.4.1.2. Within two years of Plan approval, a plan detailing the location, water requirements, and monitoring and management responsibilities, including funding, shall be provided to the Wildlife Agencies for review and approval. The Habitat will be established within three years of approval of this Plan by the Wildlife Agencies.
3. In addition to the CVWD requirement in Required Measure 2, CVCC will undertake additional mesquite hummocks restoration in this Conservation Area to ensure a total of 40 acres of mesquite Habitat is created. If 80% of the mesquite hummocks natural community in the south half of Section 17, T5S, R8E, is not conserved under the Plan, CVCC shall ensure the establishment of an additional 40 acres (80 acres total) of mesquite hummocks in this Conservation Area if Feasible. To the extent Feasible, the acreage to be established by CVCC will be sited on the CVWD land where CVWD establishes its required mesquite habitat. To the extent that the CVWD site does not accommodate the CVCC-required acres of mesquite hummocks restoration, CVCC will seek to establish the remaining requirement elsewhere in this Conservation Area. If establishment of the full acreage is not Feasible in this Conservation Area, establishment of acreage needed to reach the required total will occur in other appropriate Conservation Areas proximate to Coachella Valley round-tailed ground squirrel habitat.
4. The Permittees shall comply with applicable avoidance, minimization, and mitigation measures described in Section 4.4 and the Land Use Adjacency Guidelines as described in Section 4.5.
5. In order to be a Covered Activity under the Plan, any project in the south half of Section 17, T5S, R8E must provide for the permanent conservation of 80% of the mesquite natural community in an unfragmented manner in the above-described area. Take Authorization for Listed Species (animal species) would require a Minor Amendment with Wildlife Agency concurrence.
6. All otherwise lawful activities undertaken by Granite Construction Company, or its successor, in the area belonging to Granite Construction in Sections 34 and 35, T4S, R7E, and Section 2, T5S R7E, including currently permitted activities and any subsequently permitted mining activities, implementation of approved mining reclamation plans, and future development activities outside the area depicted in Figure 4-20f are Covered Activities subject to the following Special Provisions:

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- (1) Upon cessation of mining activities and implementation of approved mining reclamation plans, the area depicted in Figure 4-20f shall be permanently conserved and added to the Reserve System through conveyance of fee title or a conservation easement to the CVCC, or through other means acceptable to the Wildlife Agencies. The area depicted lies between the west section line of Section 33, T4S R7E and a parallel line 1,320 feet to the east of that line. The purpose of conserving this area is to provide habitat connectivity for the Palm Springs pocket mouse and other species that may use this area.
- (2) Granite Construction Company, or its successor, shall coordinate implementation of its approved mining reclamation plan(s) with CVCC and the appropriate RMUC to achieve the optimum Habitat restoration for the area to be conserved depicted in Figure 4-20f consistent with the approved mining reclamation plan(s).

[Note: a portion of the Granite Construction Company land is in this Conservation Area and a portion is in Indio Hills Palms Conservation Area. The map is shown only in Section 4.3.15.]

7. When the County issues discretionary approvals for the Adams Ranch project in Section 29, T4S R7E, it will ensure that the area within the transmission line corridor is conserved as permanent open space to maintain Habitat connectivity. This area is depicted in Figure 4-20e. If a new or amended specific plan is processed through the City of Indio after an annexation, the following language shall apply:

The Fiesta de Vida Specific Plan is a Covered Activity provided that the City requires and the landowner implements a functional biological corridor designed for small mammal movement between the East Indio Hills and Thousand Palms Conservation Areas. The biological corridor shall include the following components: (a) either the existing native plant community and/or mesquite hummocks restoration shall be maintained along the entire length and width of the utility corridor except where transportation access or golf course facilities cross the right-of-way; (b) wildlife undercrossings approved by the Wildlife Agencies shall be installed within the utility corridor along roadway crossings; and (c) mesquite hummocks creation consistent with the MSHCP, shall be interspersed throughout the golf course design and, if acceptable to the Bureau of Reclamation, in the Bureau of Reclamation floodway linking habitat to the east, as auxiliary connections.

**Table 4-81a: Conservation and Take Authorization
for East Indio Hills Conservation Area - City of Coachella Area
(All acreages are based on 1996 pre-Planning Agreement information.)**

<i>Conservation Objective</i>	<i>Total Acres in Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Disturbance Authorized</i>	<i>Remaining Acres to be Conserved</i>
Conserve Other Cons. Habitat for flat-tailed horned lizard (predicted)	6	0	1	5
Conserve Other Cons. Habitat for Le Conte’s thrasher	62	0	6	56
Conserve Other Cons. Habitat for CV round-tailed ground squirrel	6	0	1	5
Conserve Other Cons. Habitat for Palm Springs pocket mouse	8	0	1	7

**Table 4-81b: Conservation and Take Authorization
for East Indio Hills Conservation Area - City of Indio Area
(All acreages are based on 1996 pre-Planning Agreement information.)**

<i>Conservation Objective¹</i>	<i>Total Acres in Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Disturbance Authorized</i>	<i>Remaining Acres to be Conserved</i>
Conserve Other Cons. Habitat for flat-tailed horned lizard (predicted)	114	3	11	100 ¹
Conserve Other Cons. Habitat for Le Conte’s thrasher	120	3	12	105 ¹
Conserve Other Cons. Habitat for CV round-tailed ground squirrel	117	3	11	103 ¹
Conserve Other Cons. Habitat for Palm Springs pocket mouse	117	3	11	103 ¹
Conserve stabilized shielded desert sand fields	114	3	11	100 ¹
Conserve mesquite hummocks	2	0	0	2

¹ Conservation of this Habitat is subject to the conditions in measure 1 of the Required Measures for the Conservation Area section.

**Table 4-81c: Conservation and Take Authorization
for East Indio Hills Conservation Area – Riverside County Area
(All acreages are based on 1996 pre-Planning Agreement information.)**

<i>Conservation Objective</i>	<i>Total Acres in Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Disturbance Authorized</i>	<i>Remaining Acres to be Conserved</i>
Conserve Core Habitat for Mecca aster	1,594	433	116	1,045
Conserve Other Cons. Habitat for flat-tailed horned lizard (predicted)	525	64	46	415
Conserve Other Cons. Habitat for Le Conte’s thrasher	1,960	568	139	1,253
Conserve Other Cons. Habitat for CV round-tailed ground squirrel	1,353	357	100	896
Conserve Other Cons. Habitat for Palm Springs pocket mouse	1,526	477	105	944
Conserve active desert dunes	5	0	1	4
Conserve stabilized and partially stabilized desert sand fields	331	3	33	295
Conserve stabilized shielded desert sand fields	401	117	28	256
Conserve mesquite hummocks	43	0	4	39
Conserve desert saltbush scrub	8	0	1	7

4.3.16 Joshua Tree National Park Conservation Area

Location and Description. The Joshua Tree National Park Conservation Area encompasses those parts of Joshua Tree National Park in the Plan Area that provide Habitat for the desert tortoise, the riparian bird species, southern yellow bat, and potential Habitat for the gray vireo. This includes most of the National Park land in the Plan Area. A portion of this Conservation Area is also in the Northern and Eastern Colorado Desert (NECO) Plan Area. This Conservation Area is depicted in Figure 4-21a. The Joshua Tree National Park Conservation Area contains a total of approximately 161,290 acres.

Core Habitat. This Conservation Area provides Core Habitat for the desert tortoise. A portion of the Habitat in Joshua Tree National Park has been designated as Critical Habitat for the desert tortoise. Figure 4-21b depicts the Core Habitat and selected Other Conserved Habitat.

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Other Conserved Habitat. This Conservation Area contains suitable migration and breeding Habitat for the riparian species covered by the Plan. Given the scarcity of riparian Habitat in the desert, all riparian Habitat is considered important for these species, and is likely to contribute to the Conservation of these species in their respective ranges. This Conservation Area provides Other Conserved Habitat for the southern yellow bat. There is also potential Habitat for the gray vireo and Other Conserved Habitat for Coachella Valley milkvetch, desert tortoise, Le Conte’s thrasher, Coachella Valley round-tailed ground squirrel and Palm Springs pocket mouse. Table 4-82 shows the Covered Species occurring in this area.

**Table 4-82: Species Habitat –
Joshua Tree National Park Conservation Area
(All acreages are based on 1996 pre-Planning Agreement information.)**

<i>Species</i>	<i>Total Acres of Habitat in the Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Habitat Not Currently Conserved</i>	<i>Habitat Designation</i>	<i>Acres of Core Habitat</i>
CV milkvetch	4	0	4	Other Cons. Habitat	0
Desert tortoise	127,161 / 4	110,086 / 4	17,075 / 0	Core / Other Cons. Habitat	127,161
Gray vireo	30,653	29,311	1,342	Other Cons. Habitat	0
Le Conte’s thrasher	4,330	4,083	247	Other Cons. Habitat	0
Least Bell’s vireo	5 / 2,195	5 / 2,063	0 / 132	Breeding / Migratory	N/A
Southwestern willow flycatcher	5 / 2,195	5 / 2,063	0 / 132	Breeding / Migratory	N/A
Summer tanager	5 / 2,195	5 / 2,063	0 / 132	Breeding / Migratory	N/A
Yellow-breasted chat	5 / 2,195	5 / 2,063	0 / 132	Breeding / Migratory	N/A
Yellow warbler	5 / 2,195	5 / 2,063	0 / 132	Breeding / Migratory	N/A
CV round-tailed ground squirrel	2	0	2	Other Cons. Habitat	0
Palm Springs pocket mouse	35	0	35	Other Cons. Habitat	0
Southern yellow bat	5	5	0	Other Cons. Habitat	0

Natural Communities. Table 4-83 shows that the conserved natural communities occurring in this area are Sonoran creosote bush scrub, Mojave mixed woody scrub, desert dry wash woodland, desert fan palm oasis woodland, and Mojavean pinyon and juniper woodland. Figure 4-21c depicts the conserved natural communities.

**Table 4-83: Conserved¹ Natural Communities –
Joshua Tree National Park Conservation Area**
(All acreages are based on 1996 pre-Planning Agreement information.)

<i>Natural Community</i>	<i>Total Acres in the Conservation Area</i>	<i>Existing Conservation Land</i>	<i>Acres Not Currently Conserved</i>
Sonoran creosote bush scrub	70,498	62,891	7,607
Mojave mixed woody scrub	57,099	49,104	7,995
Desert dry wash woodland	2,195	2,063	132
Desert fan palm oasis woodland	5	5	0
Mojavean pinyon- juniper woodland	30,653	29,311	1,342

¹ Only natural communities to be conserved under the Plan are shown. Natural communities that are not included as described in Section 3.2.2 are not shown.

Essential Ecological Processes. Portions of this Conservation Area are also sand source and sand transport areas for the existing CVFTL Preserve. Figure 4-21d depicts the Essential Ecological Process areas.

Biological Corridors and Linkages. Joshua Tree National Park is linked to the Thousand Palms Conservation Area through the Indio Hills/Joshua Tree National Park Linkage Conservation Area. This connection contributes to protecting biodiversity in the Plan Area.

Conservation Objectives. The Conservation Objectives for this Conservation Area are:

1. In total, 35,600 acres of the Joshua Tree National Park Conservation Area shall be conserved. (This may be less than the sum of acres indicated in the following objectives because there can be overlap among areas covered by the objectives. For example, Core Habitat for two or more species may overlap, or Core Habitat and an Essential Ecological Process area may overlap. The individual acreage figures will be used in compliance monitoring.)
2. Conserve Core Habitat for desert tortoise, potential Habitat for gray vireo, and ecological processes for the Joshua Tree National Park Conservation Area (as set forth below), allowing evolutionary processes and natural population fluctuations to occur. Minimize fragmentation, human-caused disturbance, and edge effects to Core Habitat by conserving contiguous Habitat patches and effective Linkages between patches of Core Habitat.
 - a. Conserve at least 15,367 acres of Core Habitat for desert tortoise. Protect individual tortoises within the area when allowed Development does occur.
 - b. Conserve at least 1,208 acres of Other Conserved Habitat for the gray vireo.
 - c. Conserve at least 222 acres of Other Conserved Habitat for Le Conte’s thrasher. Conserve Le Conte’s thrasher nesting sites as described in Section 4.4 avoidance, minimization, and mitigation measures.

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- d. Maintain the current capacity for fluvial sand transport in the washes emanating from the Little San Bernardino Mountains that provide sand for the Thousand Palms Conservation Area.
- 3. Conserve at least 7,195 acres of the Mojave mixed woody scrub and at least 1,208 acres of the Mojavean pinyon and juniper woodland natural communities
- 4. Conserve at least 119 acres of the desert dry wash woodland natural community, which provides Habitat for riparian birds and other Covered Species.

Ownership and General Plan Land Use Designations. Table 4-84 shows the public versus private ownership of lands within this Conservation Area.

**Table 4-84: Land Ownership
Joshua Tree National Park Conservation Area
(rounded to nearest 10 acres)**

<i>Ownership¹</i>	<i>Acres</i>
<i>Existing Conservation Lands:</i>	<i>138,560</i>
BLM	40
NPS	138,000
State Lands Commission	520
<i>Lands Not Currently Conserved:</i>	<i>22,730</i>
CVWD	560
Public, Quasi-public entities	1,180
Private	20,990
TOTAL	161,290

¹ Based on 1996 pre-Planning Agreement land ownership information

**Table 4-85: General Plan Land Use Designations¹
(Non-conserved lands only)
Joshua Tree National Park Conservation Area**

<i>General Plan Designation (Map symbol) - Riverside County</i>	<i>% of Private Non-conserved Land in Conservation Area</i>	<i>Building Intensity Range</i>
Open Space Rural (OS-RUR)	100%	1 unit per 20 acres
TOTAL	100%	

¹ Based on 2003 general plan designations and 2003 parcel data

As seen in Table 4-84, approximately 77% of the land in this Conservation Area is currently in public or nonprofit conservation organization ownership. Current conservation ranges from Level 1 to Level 3. Conservation management will be improved where needed through management prescriptions to be adopted by the relevant agency as Feasible. Figure 4-21e shows the Existing Conservation Lands and general plan land use designations on Level 4 lands for the Conservation Area.

Required Measures for the Conservation Area. Table 4-86 shows how many acres of Existing Conservation Lands are in this Conservation Area and how many acres of Additional Conservation Lands will need to be conserved through acquisition or other means. The following measures will be imposed to achieve the Conservation Objectives in this Conservation Area.

1. The Permittees shall comply with applicable avoidance, minimization, and mitigation measures described in Section 4.4 and the Land Use Adjacency Guidelines as described in Section 4.5.

Table 4-86: Conservation and Take Authorization for Joshua Tree National Park Conservation Area

(All acreages are based on 1996 pre-Planning Agreement information.)

<i>Conservation Objective</i>	<i>Total Acres in Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Disturbance Authorized</i>	<i>Remaining Acres to be Conserved</i>
Conserve Core Habitat for desert tortoise	127,161	110,086	1,708	15,367
Conserve Other Cons. Habitat for gray vireo	30,653	29,311	134	1,208
Conserve Other Cons. Habitat Le Conte's thrasher	4,330	4,083	25	222
Conserve Mojave mixed woody scrub	57,099	49,104	800	7,195
Conserve desert dry wash woodland	2,195	2,063	13	119
Conserve desert fan palm oasis woodland	5	5	0	0
Conserve Mojavean pinyon-juniper woodland	30,653	29,311	134	1,208

4.3.17 Desert Tortoise and Linkage Conservation Area

Location and Description. The Desert Tortoise and Linkage Conservation Area encompasses most of the land between the Mecca Hills and Orocopia Mountains Wildernesses and Joshua Tree National Park in the eastern portion of the Plan Area. I-10 bisects this area. This area is depicted in Figure 4-22a. The Desert Tortoise and Linkage Conservation Area contains a total of approximately 89,900 acres.

Core Habitat. The Desert Tortoise and Linkage Conservation Area contains Core Habitat for the desert tortoise. For the Mecca aster and Orocopia sage, the Habitat is contiguous with that in the Mecca Hills/Orocopia Mountains Conservation Area and is functionally part of that Core Habitat. Figure 4-22b depicts the Core Habitat and selected Other Conserved Habitat.

Other Conserved Habitat. This area contains Other Conserved Habitat for Le Conte's thrasher, desert tortoise, Coachella Valley round-tailed ground squirrel, and the Palm Springs pocket mouse. While a viable population of Le Conte's thrasher is not thought to exist within this Conservation Area, the Habitat is likely to contribute to the conservation of this species in its range.

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The area contains suitable migration Habitat for the riparian bird species covered by the Plan. Given the scarcity of riparian Habitat in the desert, all riparian Habitat is considered important for these species, and is likely to contribute to the Conservation of these species in their respective ranges. Table 4-87 shows the Covered Species occurring in this area.

**Table 4-87: Species Habitat –
Desert Tortoise and Linkage Conservation Area**
(All acreages are based on 1996 pre-Planning Agreement information.)

<i>Species</i>	<i>Total Acres of Habitat in the Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Habitat Not Currently Conserved</i>	<i>Habitat Designation</i>	<i>Acres of Core Habitat</i>
Mecca aster	4,731	2,670	2,061	Core	4,731
Orocopia sage	779	337	442	Core	779
Desert tortoise	89,178 / 4	38,903 / 0	50,275 / 4	Core / Other Cons. Habitat	89,178
Le Conte’s thrasher	49,414	20,982	28,432	Other Cons. Habitat	0
Least Bell’s vireo	13,564	5,920	7,644	Migratory	N/A
SW willow flycatcher	13,564	5,920	7,644	Migratory	N/A
Summer tanager	13,564	5,920	7,644	Migratory	N/A
Yellow-breasted chat	13,564	5,920	7,644	Migratory	N/A
Yellow warbler	13,564	5,920	7,644	Migratory	N/A
CV round-tailed ground squirrel	43	1	42	Other Cons. Habitat	0
Palm Springs pocket mouse	2,122	436	1,686	Other Cons. Habitat	0

Natural Communities. Table 4-88 shows that the conserved natural communities occurring in this area are Sonoran creosote bush scrub, Sonoran mixed woody and succulent scrub, Mojave mixed woody scrub, and desert dry wash woodland. Figure 4-22c depicts the conserved natural communities.

**Table 4-88: Conserved¹ Natural Communities –
Desert Tortoise and Linkage Conservation Area**
(All acreages are based on 1996 pre-Planning Agreement information.)

<i>Natural Community</i>	<i>Total Acres in the Conservation Area</i>	<i>Existing Conservation Land</i>	<i>Acres Not Currently Conserved</i>
Sonoran creosote bush scrub	58,229	25,895	32,334
Sonoran mixed woody & succulent scrub	129	0	129
Mojave mixed woody scrub	17,264	7,090	10,174
Desert dry wash woodland	13,564	5,920	7,644

¹ Only natural communities to be conserved under the Plan are shown. Natural communities that are not included as described in Section 3.2.2 are not shown.

Essential Ecological Processes. Hydrological processes in this area maintain desert dry wash woodland and desert fan palm oasis woodland.

Biological Corridors and Linkages. This area provides Biological Corridors focused on large I-10 underpasses, linking the Mecca Hills and Orocopia Mountains Wildernesses with Joshua Tree National Park. North of I-10 and west of Thermal Canyon, this Conservation Area also includes the lower slopes of the Little San Bernardino Mountains and their associated canyon mouths and alluvial fans to provide a Linkage to the central part of the Plan Area. Desert tortoise and Palm Springs pocket mouse, which has scattered Habitat in this area, may use this corridor. Coyotes, bobcats, and other mammals may also use the Biological Corridors in this area. Figure 4-22d depicts the Biological Corridors and Linkages. See Section 4.5.6 in Appendix I for details about the culverts under I-10 in these Biological Corridors.

Conservation Objectives. The Conservation Objectives for this Conservation Area are:

1. In total, 46,350 acres of the Desert Tortoise Linkage Conservation Area shall be conserved. (This may be less than the sum of acres indicated in the following objectives because there can be overlap among areas covered by the objectives. For example, Core Habitat for two or more species may overlap, or Core Habitat and an Essential Ecological Process area may overlap. The individual acreage figures will be used in compliance monitoring.)
2. Conserve Core Habitat as set forth below for desert tortoise, allowing evolutionary processes and natural population fluctuations to occur. Minimize fragmentation, human-caused disturbance, and edge effects to Core Habitat by conserving contiguous Habitat and effective Linkages between patches of Core Habitat. In addition, conserve Habitat for the Mecca aster and Orocopia sage, for which this area provides Core Habitat in conjunction with that in the Mecca Hills/Orocopia Mountains Conservation Area.
 - a. Conserve at least 44,977 acres of Core Habitat for the desert tortoise in the Riverside County portion of the area, and at least 270 acres in the City of Coachella portion. Protect individual tortoises within the area when allowed Development does occur.

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Priority will be given to conserving Core Habitat in the Desert Wildlife Management Area for desert tortoise delineated in the NECO Plan.

- b. Conserve at least 1,855 acres of Core Habitat for the Mecca aster in the Riverside County portion of the Conservation Area.
- c. Conserve at least 398 acres of Core Habitat for the Orocopia sage in the Riverside County portion of the Conservation Area.
3. Conserve at least 25,319 acres of Other Conserved Habitat for Le Conte's thrasher in the Riverside County portion of the area, and at least 270 acres in the City of Coachella portion. Conserve Le Conte's thrasher nesting sites as described in Section 4.4 avoidance, minimization, and mitigation measures.
4. Conserve at least 6,771 acres of the desert dry wash woodland natural community in the Riverside County portion of the area, and at least 109 acres in the City of Coachella portion. Maintain the current capacity for flows in the washes that maintain desert dry wash woodland. This natural community provides Habitat for riparian birds and other Covered Species.
5. Conserve at least 14,143 acres, such that the functionality of each individual Biological Corridor listed below is not compromised, to maintain Linkages between the Joshua Tree National Park Conservation Area and the Mecca Hills/Orocopia Mountains Conservation Area and Biological Corridors under I-10 for desert tortoise, and to maintain ecosystem function for Covered Species.
 - a. Conserve Corridor 1, centered on Thermal Canyon.
 - b. Conserve Corridor 2 centered on the E. Cactus City Wash and Hazy Gulch culverts.
 - c. Conserve Corridor 3 centered on the Happy Gulch culvert.
 - d. Conserve Corridor 4 centered on the Desperation Arroyo culvert.
 - e. Conserve Corridor 5 centered on the Desperation Arroyo, West Buried Mountain Wash, Buried Mountain Wash, Resurrection Wash, West Saddle Gulch, Saddle Gulch, West Cotton Gulch, Cotton Gulch, East Cotton Gulch, and Paul Gulch culverts.

Aside from the freeway bridges and culverts and any Existing Use areas, which are unavoidably narrow segments, the Biological Corridors shall expand to one mile wide to minimize edge effects.

6. Maintain the bridges on I-10 and the culverts under I-10 associated with the aforementioned corridors so as not to affect the existing hydrological regime and Biological Corridors.

Ownership and General Plan Land Use designations. Table 4-89 shows the public versus private ownership of lands within this Conservation Area.

**Table 4-89: Land Ownership
Desert Tortoise and Linkage Conservation Area
(rounded to nearest 10 acres)**

<i>Ownership¹</i>	<i>Acres</i>
<i>Existing Conservation Lands:</i>	<i>38,720</i>
BLM	38,640
CVMC	80
<i>Lands Not Currently Conserved:</i>	<i>51,180</i>
CVWD	80
IID	80
Private	44,150
Public, Quasi-public entities	4,770
Riverside County	10
State Lands Commission	2,090
TOTAL	89,900

¹ Based on 1996 pre-Planning Agreement land ownership information

**Table 4-90: General Plan Land Use Designations¹
(Non-conserved lands only) Desert Tortoise and Linkage Conservation Area**

<i>General Plan Designation (Map symbol) - Riverside County</i>	<i>% of Private Non-conserved Land in Conservation Area</i>	<i>Building Intensity Range</i>
Open Space Rural (OS-RUR)	99%	1 unit per 20 acres
Freeway ² (FWY)	---	
Open Space Minerals ² (OS-MIN)	---	Minerals extraction and processing facilities
Rural Desert ² (RD)	---	1 unit per 10 acres
TOTAL	100%	
<i>General Plan Designation (Map symbol) - City of Coachella</i>	<i>% of Private Non-conserved Land in Conservation Area</i>	<i>Building Intensity Range</i>
Low Density Residential (LDR)	100%	0-6 units per acre
TOTAL	100%	

¹ Based on 2003 general plan designations and 2003 parcel data.

² Statistically insignificant (less than 1%).

As seen in Table 4-89, approximately 43% of the land in this Conservation Area is currently in public or nonprofit conservation organization ownership. Current conservation ranges from Level 1 to Level 3. Conservation management will be improved where needed through management prescriptions to be adopted by the relevant agency as Feasible. Figure 4-22e shows the Existing Conservation Lands and general plan land use designations on Level 4 lands for the area.

Required Measures for the Conservation Area. Tables 4-91a and 4-91b show how many acres of Existing Conservation Lands are in this Conservation Area and how many acres of

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Additional Conservation Lands will need to be conserved through acquisition or other means. The following measures will be imposed to achieve the Conservation Objectives in this Conservation Area.

1. The existing bridges on, and culverts under, I-10 listed below, and indicated on Figure 4-22d will be maintained by Caltrans at no less than their current size, with soft-bottoms for the culverts, to maintain hydrological process and Biological Corridor functions for desert tortoise and other species.
 - a. Corridor 1 centered on Thermal Canyon
 - b. Corridor 2 centered on the E. Cactus City Wash and Hazy Gulch culverts.
 - c. Corridor 3 centered on the Happy Gulch culvert.
 - d. Corridor 4 centered on the Desperation Arroyo culvert.
 - e. Corridor 5 centered on the Desperation Arroyo, West Buried Mountain Wash, Buried Mountain Wash, Resurrection Wash, West Saddle Gulch, Saddle Gulch, West Cotton Gulch, Cotton Gulch, East Cotton Gulch, and Paul Gulch culverts.
2. The Permittees shall comply with applicable avoidance, minimization, and mitigation measures described in Section 4.4 and the Land Use Adjacency Guidelines as described in Section 4.5.

***Table 4-91a: Conservation and Take Authorization
for Desert Tortoise and Linkage Conservation Area – City of Coachella Area
(All acreages are based on 1996 pre-Planning Agreement information.)***

<i>Conservation Objective</i>	<i>Total Acres in Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Disturbance Authorized</i>	<i>Remaining Acres to be Conserved</i>
Conserve Core Habitat for desert tortoise	300	0	30	270
Conserve Other Cons. Habitat for Le Conte’s thrasher	300	0	30	270
Conserve desert dry wash Woodland	121	0	12	109

**Table 4-91b: Conservation and Take Authorization
for Desert Tortoise and Linkage Conservation Area – Riverside County Area
(All acreages are based on 1996 pre-Planning Agreement information.)**

<i>Conservation Objective</i>	<i>Total Acres in Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Disturbance Authorized</i>	<i>Remaining Acres to be Conserved</i>
Conserve Core Habitat for Mecca aster	4,731	2,670	206	1,855
Conserve Core Habitat for Orocopia sage	779	337	44	398
Conserve Core Habitat for desert tortoise	88,878	38,903	4,998	44,977
Conserve Other Cons. Habitat for Le Conte’s thrasher	49,114	20,982	2,813	25,319
Conserve desert dry wash woodland	13,443	5,920	752	6,771
Conserve Biological Corridors ¹	26,122	10,407	1,572	14,143

¹ Includes Thermal Canyon Biological Corridor #1 and Biological Corridors #2, #3, and #4

4.3.18 Mecca Hills/Orocopia Mountains Conservation Area

Location and Description. The Mecca Hills/Orocopia Mountains Conservation Area consists predominantly of the Mecca Hills Wilderness and the Orocopia Mountains Wilderness. The area also includes non-Wilderness lands south of the Wilderness areas, to the west as part of a Biological Corridor along Thermal Canyon Wash, and to the east to the Plan Area boundary. A portion of the Chuckwalla Bench ACEC also occurs in this area. This Conservation Area is depicted in Figure 4-23a. The Mecca Hills/Orocopia Mountains Conservation Area contains a total of approximately 112,780 acres.

Core Habitat. This Conservation Area contains Core Habitat for the Mecca aster and Orocopia sage. The desert tortoise Habitat in this area, a portion of which has been designated Critical Habitat for the species, is contiguous with the Habitat in the Desert Tortoise and Linkage Conservation Area. These areas together constitute Core Habitat for the species. Figure 4-23b depicts the Core Habitat and selected Other Conserved Habitat.

Other Conserved Habitat. The Conservation Area contains suitable migration and breeding Habitat for the riparian bird species covered by the Plan. Given the scarcity of riparian Habitat in the desert, all riparian Habitat is considered important for these species, and is likely to contribute to the Conservation of these species in their respective ranges. There is Other Conserved Habitat for Mecca aster, Le Conte’s thrasher, Coachella Valley round-tailed ground squirrel, Palm Springs pocket mouse, and southern yellow bat. For the pocket mouse this area probably contains contact zones between the Palm Springs pocket mouse subspecies and other subspecies to the north and east. Table 4-92 shows the Covered Species occurring in this area.

**Table 4-92: Species Habitat – Mecca Hills/
Orocopia Mountains Conservation Area**
(All acreages are based on 1996 pre-Planning Agreement information.)

<i>Species</i>	<i>Total Acres of Habitat in the Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Habitat Not Currently Conserved</i>	<i>Habitat Designation</i>	<i>Acres of Core Habitat</i>
Mecca aster	31,655 / 17	27,009 / 0	4,646 / 17	Core / Other Cons. Habitat	31,655
Orocopia sage	66,180	48,150	18,030	Core	66,180
Desert tortoise ¹	112,575	86,334	26,241	Core	112,575
Le Conte’s thrasher	17,467	10,949	6,518	Other Cons. Habitat	0
Least Bell’s vireo	1 / 9,435	1 / 6,241	0 / 3,194	Breeding / Migratory	N/A
SW willow flycatcher	1 / 9,435	1 / 6,241	0 / 3,194	Breeding / Migratory	N/A
Summer tanager	1 / 9,435	1 / 6,241	0 / 3,194	Breeding / Migratory	N/A
Yellow-breasted chat	1 / 9,435	1 / 6,241	0 / 3,194	Breeding / Migratory	N/A
Yellow warbler	1 / 9,435	1 / 6,241	0 / 3,194	Breeding / Migratory	N/A
CV round-tailed ground squirrel	240	232	8	Other Cons. Habitat	0
Palm Springs pocket mouse	1,946	462	1,484	Other Cons. Habitat	0
Southern yellow bat	1	1	0	Other Cons. Habitat	0

¹ Acreage shown is in conjunction with the Desert Tortoise and Linkage Conservation Area.

Natural Communities. Table 4-93 shows that the conserved natural communities occurring in this area are Sonoran creosote bush scrub, desert dry wash woodland, and desert fan palm oasis woodland. Figure 4-23c depicts the conserved natural communities.

**Table 4-93: Conserved¹ Natural Communities –
Mecca Hills/Orocopia Mountains Conservation Area**
(All acreages are based on 1996 pre-Planning Agreement information.)

<i>Natural Community</i>	<i>Total Acres in the Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres Not Currently Conserved</i>
Sonoran creosote bush scrub	103,456	80,320	23,136
Desert dry wash woodland	9,317	6,138	3,179
Desert fan palm oasis woodland	1	1	0

¹ Only natural communities to be conserved under the Plan are shown. Natural communities that are not included as described in Section 3.2.2 are not shown.

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Essential Ecological Processes. Hydrological processes in this area maintain desert dry wash woodland and desert fan palm oasis woodland.

Biological Corridors and Linkages. This area provides a Linkage between Dos Palmas Conservation Area to the south and the Desert Tortoise and Linkage Conservation Area and Joshua Tree National Park to the north. This area also links the Plan Area with protected BLM lands to the east in the Chuckwalla Bench ACEC. Figure 4-23d depicts the Biological Corridors and Linkages.

Conservation Objectives. The Conservation Objectives for this Conservation Area are:

1. In total, 23,670 acres of the Mecca Hills/Orocopia Mountains Conservation Area shall be conserved. (This may be less than the sum of acres indicated in the following objectives because there can be overlap among areas covered by the objectives. For example, Core Habitat for two or more species may overlap, or Core Habitat and an Essential Ecological Process area may overlap. The individual acreage figures will be used in compliance monitoring.)
2. Conserve Core Habitat for Mecca aster, Orocopia sage, and desert tortoise (as set forth below), allowing evolutionary processes and natural population fluctuations to occur. Minimize fragmentation, human-caused disturbance, and edge effects to Core Habitat by conserving contiguous Habitat patches and effective Linkages between patches of Core Habitat.
 - a. Conserve at least 4,181 acres of Core Habitat for the Mecca aster.
 - b. Conserve at least 16,227 acres of Core Habitat for the Orocopia sage.
 - c. Conserve at least 23,617 acres of Core Habitat for the desert tortoise. Protect individual tortoises within the area when allowed Development does occur.
3. Conserve at least 5,866 acres of Other Conserved Habitat for Le Conte's thrasher. Conserve Le Conte's thrasher nesting sites as described in Section 4.4 avoidance, minimization, and mitigation measures.
4. Conserve at least 2,861 acres of the desert dry wash woodland natural community, which provides Habitat for the riparian birds and other Covered Species.

Ownership and General Plan Land Use Designations. Table 4-94 shows the public versus private ownership of lands within this Conservation Area.

As seen in Table 4-94, approximately 77% of the land in this Conservation Area is currently in public ownership. Current conservation ranges from Level 1 to Level 3. Conservation management will be improved where needed through management prescriptions to be adopted by the relevant agency as Feasible. Figure 4-23e shows the Existing Conservation Lands and general plan land use designations on Level 4 lands for the area.

**Table 4-94: Land Ownership Mecca Hills/
Orocopia Mountains Conservation Area
(rounded to nearest 10 acres)**

<i>Ownership¹</i>	<i>Acres</i>
<i>Existing Conservation Lands:</i>	86,460
BLM	86,460
<i>Lands Not Currently Conserved:</i>	26,320
CVWD	20
Private	23,980
State Lands Commission	2,320
TOTAL	112,780

¹ Based on 1996 pre-Planning Agreement land ownership information

**Table 4-95: General Plan Land Use Designations¹
(Non-conserved lands only) Mecca Hills/
Orocopia Mountains Conservation Area**

<i>General Plan Designation (Map symbol) - Riverside County</i>	<i>% of Private Non-conserved Land in Conservation Area</i>	<i>Building Intensity Range</i>
Open Space Rural (OS-RUR)	98%	1 unit per 20 acres
Open Space Minerals (OS-MIN)	2%	Minerals extraction and processing facilities
TOTAL	100%	

¹ Based on 2003 general plan designations and 2003 parcel data

Required Measures for the Conservation Area. Table 4-96 shows how many acres of Existing Conservation Lands are in this Conservation Area and how many acres of Additional Conservation Lands will need to be acquired or otherwise conserved through acquisition or other means. The following measure will be imposed to achieve the Conservation Objectives in this Conservation Area.

1. The Permittees shall comply with applicable avoidance, minimization, and mitigation measures described in Section 4.4 and the Land Use Adjacency Guidelines as described in Section 4.5.

**Table 4-96: Conservation and Take Authorization for
Mecca Hills/Orocopia Mountains Conservation Area
(All acreages are based on 1996 pre-Planning Agreement information.)**

<i>Conservation Objective</i>	<i>Total Acres in Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Disturbance Authorized</i>	<i>Remaining Acres to be Conserved</i>
Conserve Core Habitat for Mecca aster	31,655	27,009	465	4,181
Conserve Core Habitat for Orocopia sage	66,180	48,150	1,803	16,227
Conserve Core Habitat for desert tortoise	112,575	86,334	2,624	23,617
Conserve Other Cons. Habitat for Le Conte's thrasher	17,467	10,949	652	5,866
Conserve desert dry wash woodland	9,317	6,138	318	2,861
Conserve desert fan palm oasis woodland	1	1	0	0

4.3.19 Dos Palmas Conservation Area

Location and Description. The Dos Palmas Conservation Area lies south of the Mecca Hills and Orocopa Mountains Conservation Area, on the south side of the Coachella Canal, and east of the Salton Sea. The Dos Palmas Conservation Area consists of the existing Dos Palmas ACEC, the existing Oasis Springs Ecological Reserve, and a portion of the existing Salton Sea State Recreation Area. To these existing areas, the Conservation Area adds lands to the east of the ACEC to conserve all the Habitat to the Plan Area boundary with the Chocolate Mountains Aerial Gunnery Range. The Conservation Area also adds lands to the south to connect the ACEC with the adjacent potential Habitat in Imperial County, and to the north to improve the connectivity with the Mecca Hills/Orocopia Mountains Conservation Area. This Conservation Area is depicted in Figure 4-24a. The Dos Palmas Conservation Area contains a total of approximately 25,380 acres.

Core Habitat. This Conservation Area contains Core Habitat for desert pupfish (both natural Habitat in Salt Creek and three refugia populations), and crissal thrasher. Figure 4-24b depicts the Core Habitat and selected Other Conserved Habitat.

Other Conserved Habitat. The Conservation Area also protects one of the two known Habitat areas in the Plan Area for Yuma clapper rail and California black rail. The Conservation Area also provides Other Conserved Habitat for Orocopa sage, desert tortoise, flat-tailed horned lizard, Le Conte’s thrasher, Coachella Valley round-tailed ground squirrel, Palm Springs pocket mouse, and southern yellow bat. The flat-tailed horned lizard Habitat connects with additional Habitat for this species to the south in Imperial County. The Conservation Area contains suitable migration and breeding Habitat for the riparian species covered by the Plan. Given the scarcity of riparian Habitat in the desert, all riparian Habitat is considered important for these species, and is likely to contribute to the Conservation of these species in their respective ranges. Table 4-97 shows the species occurring in this Conservation Area.

Table 4-97: Species Habitat - Dos Palmas Conservation Area
(All acreages are based on 1996 pre-Planning Agreement information.)

<i>Species</i>	<i>Total Acres of Habitat in the Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Habitat Not Currently Conserved</i>	<i>Habitat Designation</i>	<i>Acres of Core Habitat</i>
Orocopia sage	4,022	2,177	1,845	Other Cons. Habitat	0
Desert Pupfish ¹	(30m ²)	(30m ²)	0	Core	(30m ²)
Desert tortoise	334	317	17	Other Cons. Habitat	0
Flat-tailed horned lizard	5,537	1,503	4,034	Pred. Other Cons. Habitat	0
California black rail	597	226	371	Other Cons. Habitat	0
Crissal thrasher	536	155	381	Core	536

Table 4-97 (cont.)

<i>Species</i>	<i>Total Acres of Habitat in the Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Habitat Not Currently Conserved</i>	<i>Habitat Designation</i>	<i>Acres of Core Habitat</i>
Le Conte's thrasher	14,882	7,450	7,432	Other Cons. Habitat	0
Least Bell's vireo	182 / 10,129	98 / 3,716	84 / 6,413	Breeding / Migratory	N/A
Southwestern willow flycatcher	125 / 10,184	69 / 3,745	56 / 6,439	Breeding / Migratory	N/A
Summer tanager	125 / 10,184	69 / 3,745	56 / 6,439	Breeding / Migratory	N/A
Yellow-breasted chat	404 / 9,908	212 / 3,602	192 / 6,306	Breeding / Migratory	N/A
Yellow warbler	125 / 10,184	69 / 3,745	56 / 6,439	Breeding / Migratory	N/A
Yuma clapper rail	682	267	415	Other Cons. Habitat	0
CV round-tailed ground squirrel	4,490	2,631	1,859	Other Cons. Habitat	0
Palm Springs pocket mouse	8,147	4,617	3,530	Other Cons. Habitat	0
Southern yellow bat	125	69	56	Other Cons. Habitat	0

¹ The acreage refers to the non-refugia population.

Natural Communities. Table 4-98 shows that the conserved natural communities occurring in this Conservation Area are mesquite hummocks, Sonoran creosote bush scrub, desert sink scrub, cismontane alkali marsh, desert dry wash woodland, desert fan palm oasis woodland, arrowweed scrub, and mesquite bosque. This Conservation Area includes 100% of the arrowweed scrub, 62% of the desert sink scrub, 100% of the cismontane alkali marsh, and 100% of the mesquite bosque in the Plan Area. This Conservation Area affords important Habitat restoration opportunities because of the prevalence of tamarisk. Figure 4-24c depicts the conserved natural communities.

**Table 4-98: Conserved¹ Natural Communities –
Dos Palmas Conservation Area
(All acreages are based on 1996 pre-Planning Agreement information.)**

<i>Natural Community</i>	<i>Total Acres in the Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres Not Currently Conserved</i>
Mesquite hummocks	55	29	26
Sonoran creosote bush scrub	12,177	5,939	6,238
Desert sink scrub	7,195	2,327	4,868

Table 4-98 (cont.)

<i>Natural Community</i>	<i>Total Acres in the Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres Not Currently Conserved</i>
Arrowweed scrub	277	143	134
Cismontane alkali marsh	321	93	228
Mesquite bosque	482	127	355
Desert dry wash woodland	1,856	1,027	829
Desert fan palm oasis woodland	125	69	56

¹ Only natural communities to be conserved under the Plan are shown. Natural communities that are not included as described in Section 3.2.2 are not shown.

Essential Ecological Processes. The ecological processes for this area have been somewhat impacted by the Coachella Canal, which has blocked some of the natural drainage patterns from the Orocopia Mountains. The drainage for Salt Creek, however, is largely intact. Leakage from the canal has also created some wetlands areas. For water conservation purposes, the canal is being lined to prevent leakage.

Biological Corridors and Linkages. While the Coachella Canal has disrupted connectivity with the Orocopia Mountains to the north to some extent, there are sufficient "siphon" areas where the canal runs underground, providing areas where wildlife may freely move from one side of the canal to the other.

Conservation Objectives. The Conservation Objectives for this Conservation Area are:

1. In total, 12,870 acres of the Dos Palmas Conservation Area shall be conserved. (This may be less than the sum of acres indicated in the following objectives because there can be overlap among areas covered by the objectives. For example, Core Habitat for two or more species may overlap, or Core Habitat and an Essential Ecological Process area may overlap. The individual acreage figures will be used in compliance monitoring.)
2. Conserve Core Habitat for crissal thrasher; and Habitat for the California black rail and Yuma clapper rail as set forth below, allowing evolutionary processes and natural population fluctuations to occur. Minimize fragmentation, human-caused disturbance, and edge effects to Core Habitat by conserving contiguous Habitat patches and effective Linkages between patches of Core Habitat.
 - a. Conserve at least 343 acres of Core Habitat for the crissal thrasher.
 - b. Conserve at least 334 acres of Other Conserved Habitat for the California black rail.
 - c. Conserve at least 374 acres of Other Conserved Habitat for the Yuma clapper rail.
3. Conserve at least 6,689 acres of Other Conserved Habitat for Le Conte's thrasher. Conserve Le Conte's thrasher nesting sites as described in Section 4.4 avoidance, minimization, and mitigation measures.

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4. Conserve at least 3,631 acres of Other Conserved Habitat for the flat-tailed horned lizard.
5. Conserve all known locations for the desert pupfish. Conserve newly found locations of this species in the area.
6. Maintain the refugium populations of the desert pupfish in accordance with the Desert Pupfish Recovery Plan.
7. Conserve at least 23 acres of the mesquite hummocks, at least 205 acres of the cismontane alkali marsh, at least 746 acres of the desert dry wash woodland, at least 134 acres of the arrowweed scrub, and at least 320 acres of the mesquite bosque natural communities, which provide Habitat for the riparian birds and other Covered Species. Where disturbance is authorized for cismontane alkali marsh and arrowweed scrub, ensure no net loss.
8. Conserve at least 50 acres of the desert fan palm oasis woodland for the conservation of the southern yellow bat.
9. Conserve at least 4,381 acres of the desert sink scrub natural community.
10. Remove tamarisk to improve Habitat values.

Ownership and General Plan Land Use Designations. Table 4-99 shows the public versus private ownership of lands within this Conservation Area.

***Table 4-99: Land Ownership
Dos Palmas Conservation Area
(rounded to nearest 10 acres)***

<i>Ownership¹</i>	<i>Acres</i>
<i>Existing Conservation Lands:</i>	<i>11,070</i>
BLM	9,800
Bureau of Reclamation	620
CDFG	490
State Parks	160
<i>Lands Not Currently Conserved:</i>	<i>14,310</i>
Private	13,360
Public, Quasi-public entities	60
State Lands Commission	890
TOTAL	25,380

¹Based on 1996 pre-Planning Agreement land ownership information

**Table 4-100: General Plan Land Use Designations¹
(Non-conserved lands only) Dos Palmas Conservation Area**

<i>General Plan Designation (Map symbol) - Riverside County</i>	<i>% of Private Non-conserved Land in Conservation Area</i>	<i>Building Intensity Range</i>
Open Space Rural (OS-RUR)	99%	1 unit per 20 acres
Open Space Water (OS-W)	1%	bodies of water, floodplains, and natural or artificial drainage corridors
TOTAL	100%	

¹ Based on 2003 general plan designations and 2003 parcel data

As seen in Table 4-99, approximately 44% of the land in this Conservation Area was in public or non-profit conservation organization ownership in 1996. Conservation management will be improved where needed through management prescriptions to be adopted by the relevant agency as Feasible. Figure 4-24d shows the Existing Conservation Lands and general plan land use designations on Level 4 lands for the Conservation Area.

Required Measures for the Conservation Area. Table 4-101 shows how many acres of Existing Conservation Lands are in this Conservation Area and how many acres of Additional Conservation Lands will need to be acquired or otherwise conserved through acquisition or other means. The following measures will be imposed to achieve the Conservation Objectives in this Conservation Area.

1. The refugia populations of the desert pupfish on CDFG lands will be maintained in accordance with the Desert Pupfish Recovery Plan.
2. The Yuma clapper rail and the California black rail are Fully Protected Species. As long as the Yuma clapper rail and the California black rail are Fully Protected Species, surveys for the rails will be required in cismontane alkali marsh before any activity that would impact the Habitat. If rails are found, the Habitat must be avoided or measures approved by the Wildlife Agencies taken to ensure that no Take of an individual occurs, other than for projects where Fish and Game Code Section 2081.7 is applicable. If legislation removes Fully Protected status for the rails, the establishment of the permanent Habitat for the rails pursuant to Required Measure 1 in Section 4.3.20 will be adequate mitigation for the loss of Habitat for CVWD Covered Activities. For other authorized Take, establishment of new Habitat at a 2:1 ratio will be undertaken by the entity impacting the species to achieve a net loss of wetlands Habitat in the MSHCP Reserve System.
3. For Highway 111 bridge widening over Salt Creek, prior to construction Caltrans will conduct surveys to determine if Yuma clapper rails or California black rails are present. If present, no activities will occur that would result in Take under CESA. If legislation removes the rails from the list of Fully Protected Species, activities could occur only outside of the breeding season if rails are present.
4. For Highway 111 bridge widening over Salt Creek, Caltrans will limit working in the wetted portions of the stream. When working in the wetted portions of the stream, Caltrans will place 1/8” or smaller mesh block seines 50 meters upstream and downstream of the work area. Any pupfish found will be removed from the area utilizing the best method

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available and placed outside of the blocked section. Once pupfish have been removed, work may occur in the area. The block seines will be checked a minimum of two times a day to assure that they are intact. If any method of egress is observed, work will stop and a survey will be done to determine if a significant number of pupfish have entered the work area. If this occurs, pupfish will again be removed prior to commencing work. Alternatively methods of avoidance may be proposed by Caltrans prior to the construction activity. Changes to this avoidance and minimization measure may occur with concurrence of the Wildlife Agencies.

5. Develop and implement a tamarisk removal and Habitat restoration program as part of the Management Program.
6. Where non-native fish populations are established in pupfish habitat, the RMUC shall develop and submit for review and approval by the Wildlife Agencies an interim plan within 6 months of Permit issuance that includes measures to control the non-native fish species in these areas present in the ponds at Dos Palmas and/or the surface waters of the Salt Creek watershed consistent with Section 9.4.1.2.
7. The Permittees shall comply with applicable avoidance, minimization, and mitigation measures described in Section 4.4 and the Land Use Adjacency Guidelines as described in Section 4.5.

***Table 4-101: Conservation and Take Authorization
for Dos Palmas Conservation Area
(All acreages are based on 1996 pre-Planning Agreement information.)***

<i>Conservation Objective</i>	<i>Total Acres in Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Disturbance Authorized</i>	<i>Remaining Acres to be Conserved</i>
Conserve Other Cons. Habitat for flat-tailed horned lizard (predicted)	5,537	1,503	403	3,631
Conserve Core Habitat for crissal thrasher	536	155	38	343
Conserve Other Cons. Habitat for California black rail	597	226	37	334
Conserve Other Cons. Habitat for Le Conte's thrasher	14,882	7,450	743	6,689
Conserve Other Cons. Habitat for Yuma clapper rail	682	267	42	374

Table 4-101 (cont.)

<i>Conservation Objective</i>	<i>Total Acres in Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Disturbance Authorized</i>	<i>Remaining Acres to be Conserved</i>
Conserve known occurrences for the desert pupfish ¹	(30m ²)	(30m ²)	N/A	0
Conserve mesquite hummocks	55	29	3 ²	23
Conserve cismontane alkali marsh	321	93	(23) ³	205
Conserve desert dry wash woodland	1,856	1,027	83	746
Conserve desert fan palm oasis woodland	125	69	6	50
Conserve arrowweed scrub	277	143	(13) ⁴	121
Conserve mesquite bosque	482	127	36 ²	320
Conserve desert sink scrub	7,195	2,327	487	4,381

¹ Non-refugia desert pupfish Habitat occurs in a very limited area of much less than 1 acre; this describes an estimate of the Habitat area of 30 square meters.

² Pursuant to the avoidance, minimization, and mitigation measures in Section 4.4, mesquite hummocks and mesquite bosque will be avoided to the maximum extent Feasible.

³ Disturbance of no more than 23 acres may occur, but it would be replaced to ensure that the no net loss occurs and the Conservation Objective is achieved.

⁴ Disturbance of no more than 13 acres may occur, but it would be replaced to ensure that the no net loss occurs and the Conservation Objective is achieved.

4.3.20 Coachella Valley Stormwater Channel and Delta Conservation Area

Location and Description. The Coachella Valley Stormwater Channel and Delta Conservation Area includes the Coachella Valley Stormwater Channel from Monroe Avenue to the Salton Sea, those agricultural drains emptying into the Salton Sea which contain desert pupfish Habitat (see list below), and areas in the Whitewater River delta area and along the west edge of the Sea that contain sensitive natural communities. This Conservation Area is depicted in Figure 4-25a. Note that Indian reservation land within this Conservation Area is not subject to this Plan. The Coachella Valley Stormwater Channel and Delta Conservation Area contains a total of approximately 4,390 acres.

Core Habitat. This Conservation Area contains Core Habitat for the desert pupfish and the crissal thrasher. Figure 4-25b depicts Core Habitat, selected Other Conserved Habitat, and known occurrences of the burrowing owl.

Other Conserved Habitat. The Conservation Area also protects one of the two known Habitat areas in the Plan Area for Yuma clapper rail and California black rail. The area contains suitable migration and breeding Habitat for the riparian species covered by the Plan. Given the

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scarcity of riparian Habitat in the desert, all riparian Habitat is considered important for these species, and is likely to contribute to the Conservation of these species in their respective ranges. The Conservation Area also provides Other Conserved Habitat for Le Conte’s thrasher Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse. Table 4-102 shows the Covered Species occurring in this area. The Conservation Area also provides suitable burrowing owl Habitat.

**Table 4-102: Species Habitat –
Coachella Valley Stormwater Channel
and Delta Conservation Area**
(All acreages are based on 1996 pre-Planning Agreement information.)

<i>Species</i>	<i>Total Acres of Habitat in the Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Habitat Not Currently Conserved</i>	<i>Habitat Designation</i>	<i>Acres of Core Habitat</i>
Desert pupfish	25	0	25	Core	25
California black rail	62	4	58	Other Cons. Habitat	0
Crissal thrasher	896	28	868	Core	896
Le Conte’s thrasher	784	0	784	Other Cons. Habitat	0
Least Bell’s vireo	82 / 1,983	0 / 214	82 / 1,769	Breeding / Migratory	N/A
Southwestern willow flycatcher	8 / 2,047	0 / 214	8 / 1,833	Breeding / Migratory	N/A
Summer tanager	8 / 2,047	0 / 214	8 / 1,833	Breeding / Migratory	N/A
Yellow-breasted chat	8 / 2,047	0 / 214	8 / 1,833	Breeding / Migratory	N/A
Yellow warbler	8 / 2,047	0 / 214	8 / 1,833	Breeding / Migratory	N/A
Yuma clapper rail	62	4	58	Other Cons. Habitat	0
CV round-tailed ground squirrel	211	20	191	Other Cons. Habitat	0
Palm Springs pocket mouse	172	20	152	Other Cons. Habitat	0

Natural Communities. Table 4-103 shows that the conserved natural communities occurring in this Conservation Area are mesquite hummocks, desert saltbush scrub, desert sink scrub, Sonoran cottonwood-willow riparian forest, and coastal and valley freshwater marsh. Figure 4-25c depicts the conserved natural communities.

**Table 4-103: Conserved¹ Natural Communities –
Coachella Valley Stormwater Channel and Delta Conservation Area
(All acreages are based on 1996 pre-Planning Agreement information.)**

<i>Natural Community</i>	<i>Total Acres in the Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres Not Currently Conserved</i>
Mesquite hummocks	74	0	74
Desert saltbush Scrub	713	0	713
Desert sink Scrub	1,206	209	997
Coastal & valley freshwater marsh	61	4	57
Sonoran cottonwood-willow riparian forest	8	0	8

¹ Only natural communities to be conserved under the Plan are shown. Natural communities that are not included as described in Section 3.2.2 are not shown.

Essential Ecological Processes. The riparian and aquatic Habitat in this Conservation Area is sustained largely by agricultural runoff, the discharge of treated water into the Whitewater Stormwater Channel, and runoff from infrequent storm events. Maintenance of the flood control channel and the agricultural drains periodically modifies the Habitat.

Biological Corridors and Linkages. This area does not function as a Biological Corridor.

Conservation Objectives. The Conservation Objectives for this Conservation Area are:

1. In total, 3,870 acres of the Coachella Valley Stormwater Channel and Delta Conservation Area shall be conserved. (This may be less than the sum of acres indicated in the following objectives because there can be overlap among areas covered by the objectives. For example, Core Habitat for two or more species may overlap, or Core Habitat and an Essential Ecological Process area may overlap. The individual acreage figures will be used in compliance monitoring.)
2. Conserve at least 781 acres of Core Habitat for crissal thrasher, allowing evolutionary processes and natural population fluctuations to occur. Minimize fragmentation, human-caused disturbance, and edge effects to Core Habitat by conserving contiguous Habitat patches and effective Linkages between patches of Core Habitat.
3. Conserve at least 706 acres of Other Conserved Habitat for Le Conte’s thrasher.
4. Establish 66 acres of permanent Habitat for California black rail and Yuma clapper rail in this area to replace the Habitat that is periodically altered by flood control and drain maintenance activities.

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5. Establish permanent riparian Habitat including at least 44 acres of Sonoran cotton-wood-willow riparian forest in this area to replace the Habitat that is periodically altered by flood control maintenance activities.
6. Restore and enhance wetlands Habitat as Feasible.
7. Conserve occupied burrowing owl burrows as described in Section 4.4 burrowing owl avoidance, minimization, and mitigation measures.
8. Establish 25 acres of permanent replacement Habitat for pupfish and maintain a desert pupfish population in the agricultural drains.
9. Conserve at least 67 acres of mesquite hummocks, at least 713 acres of the desert saltbush scrub, at least 1,026 acres of desert sink scrub, and at least 51 acres of coastal and valley freshwater marsh natural communities, which provide Habitat for riparian birds and other Covered Species. For the remaining acreage of the coastal and valley freshwater marsh natural community where disturbance is authorized by the Plan, ensure no net loss.
10. Remove tamarisk to improve Habitat values.

Ownership and General Plan Land Use Designations. Table 4-104 shows the public versus private ownership of lands within this Conservation Area.

***Table 4-104: Land Ownership
Coachella Valley Stormwater Channel
and Delta Conservation Area
(rounded to nearest 10 acres)***

<i>Ownership¹</i>	<i>Acres</i>
<i>Existing Conservation Lands:</i>	<i>240</i>
BLM	240
<i>Lands Not Currently Conserved:</i>	<i>4,150</i>
CVWD	530
IID	830
Private	2,760
Public, Quasi-public entities	10
Riverside County	20
TOTAL	4,390

¹ Based on 1996 pre-Planning Agreement land ownership information

**Table 4-105: General Plan Land Use Designations¹
(Non-conserved lands only) Coachella Valley
Stormwater Channel and Delta Conservation Area**

General Plan Designation (Map symbol) - Riverside County	% of Private Non-conserved Land in Conservation Area	Building Intensity Range
Open Space Water (OS-W)	62%	Bodies of water, floodplains, and natural or artificial drainage corridors
Very Low Density Residential (VLDR)	1%	0 - 2 units per acre
Commercial Tourist (CT)	1%	Hotels, golf courses, recreation facilities
Rural Residential (RR)	7%	1 unit per 5 acres
Public Facilities ² (PF)	---	Landfills, airports, utilities, etc.
Open Space Recreation (OS-R)	3%	Active and passive recreational uses
Medium Density Residential (MDR)	2%	5 – 8 units per acre
Agriculture (AG)	15%	Agricultural production
Business Park (BP)	9%	Business uses
TOTAL	100%	

¹ Based on 2003 general plan designations and 2003 parcel data

² Statistically insignificant (less than 1%)

As seen in Table 4-104, 5% of the land in this Conservation Area is currently in public ownership. Current conservation ranges from Level 1 to Level 3. Conservation management will be improved where needed through management prescriptions to be adopted by the relevant agency as Feasible. Figure 4-25d shows the existing conservation lands and general plan land use designations on Level 4 lands for the Conservation Area.

Required Measures for the Conservation Area. Table 4-106 shows how many acres of Existing Conservation Lands are in this Conservation Area and how many acres of Additional Conservation Lands will need to be acquired or otherwise conserved through acquisition or other means. The following measures will be imposed to achieve the Conservation Objectives in this Conservation Area.

1. CVWD will establish 66 acres of permanent Habitat for the California black rail and Yuma clapper rail in this Conservation Area to replace the 41 acres of Habitat in the Coachella Valley Stormwater Channel and the 25 acres of Habitat in the drains that is periodically altered by flood control and drain maintenance activities. CVWD will ensure that the water used to support the managed marsh Habitat is irrigation water from the Lower Colorado River (LCR) or is other water with the same selenium concentration as water from the LCR or that meets an EPA selenium standard for protection of aquatic life that has received a No Jeopardy determination from USFWS, whichever is greatest. Within two years of Permit issuance, a plan detailing the location, water supply, and monitoring and management responsibilities, including funding, shall be prepared by CVWD and submitted to the Wildlife Agencies for review and approval. The Habitat will be established within three years of approval by the Wildlife Agencies of this plan to establish the Habitat.

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As part of its Water Management Plan, CVWD will conduct monitoring of selenium concentrations in the drains and the Coachella Valley Stormwater Channel.

2. The Yuma clapper rail and the California black rail are Fully Protected Species. Surveys will be required in potential Habitat for the rails before any activity that would impact the Habitat. If rails are found, the Habitat must be avoided or measures approved by the Wildlife Agencies taken to ensure that no Take of an individual occurs, other than for projects where Fish and Game Code Section 2081.7 is applicable. If legislation removes Fully Protected status for the rails, the establishment of permanent Habitat for the rails will be adequate mitigation for the loss of Habitat.
3. CVWD will establish permanent riparian Habitat including at least 44 acres of Sonoran cottonwood-willow riparian forest in this Conservation Area to replace the Habitat that is periodically altered by flood control maintenance activities. The 44 acres address impacts to 37 acres of Sonoran cottonwood-willow riparian forest and 46 acres (at a 1:7 ratio) of primarily tamarisk scrub interspersed with occasional cottonwoods and willows. This Habitat will provide for the conservation of this natural community and the riparian birds covered by the Plan. Within two years of Permit issuance, a plan detailing the location, water supply, and monitoring and management responsibilities, including funding, shall be prepared by CVWD and submitted to the Wildlife Agencies for review and approval. The Habitat will be established within three years of approval by the Wildlife Agencies of this plan to establish the Habitat.
4. CVWD will enhance and manage Coachella Valley round-tailed ground squirrel Habitat on land it owns in the East Indio Hills Conservation Area to mitigate and minimize impacts to this species from CVWD's operation and management activities in the Coachella Valley Stormwater Channel and Delta Conservation Area. (See Section 4.3.15 for additional details).
5. CVWD will establish at least 25 acres of managed replacement Habitat for desert pupfish, on a 1:1 ratio at a site or sites to be determined with concurrence from the Wildlife Agencies. A plan detailing the 25-acre habitat restoration requirement for desert pupfish mitigation shall be reviewed and approved by the Wildlife Agencies. The pond will use irrigation water from the LCR or other water with the same or better water quality as water from the LCR. For selenium concentrations the water can either be water from the LCR, or water that meets an EPA selenium standard for protection of aquatic life that has received a No Jeopardy determination from USFWS, whichever is greatest. It is estimated that approximately 325 acre-ft/yr of water would be required to maintain 25 acres of replacement Habitat, replacing evaporation and maintaining appropriate flow-through rate. Ongoing maintenance and adjustments will be required, including vegetation control and dike and bank maintenance, to achieve desired Habitat characteristics. This Habitat will replace the 25 acres of Habitat that is periodically altered by maintenance activities in drains and flood control channels that contain pupfish Habitat. CVWD will also develop a study to evaluate the potential effect of routine drain maintenance on pupfish occupying the drains to determine the feasibility of modifying maintenance practices to avoid or minimize potential Take. The study will include methods of surveying for pupfish, effects of the direction in which drains are cleaned (upstream or downstream), the manner in which the drains are cleaned (one side at a time or both sides at a time), and the timing of sediment and vegetation removal. The study proposal will be prepared and submitted to the Wildlife Agencies within two years of Permit issuance. The study will be initiated in the field season

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immediately following approval by the Wildlife Agencies. If the findings indicate that modification of the maintenance practices would significantly minimize impacts to pupfish, CVWD will modify its maintenance practices. As part of its Water Management Plan, CVWD will conduct monitoring of selenium concentrations in the drains and the Coachella Valley Stormwater Channel.

6. The Permittees shall comply with applicable avoidance, minimization, and mitigation measures described in Section 4.4 and the Land Use Adjacency Guidelines as described in Section 4.5.
7. Develop and implement a tamarisk removal and Habitat restoration program as part of the Management Program.

***Table 4-106: Conservation and Take Authorization
for Coachella Valley Stormwater Channel and Delta Conservation Area
(All acreages are based on 1996 pre-Planning Agreement information.)***

<i>Conservation Objective</i>	<i>Total Acres in Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Take Authorized</i>	<i>Remaining Acres to be Conserved</i>
Conserve Core Habitat for desert pupfish	25	0	N/A	25 ¹
Conserve Other Cons. Habitat for California black rail	62	4	6	52
Conserve Core Habitat for crissal thrasher	896	28	87	781
Conserve Other Cons. Habitat for Le Conte’s thrasher	784	0	78	706
Conserve Other Cons. Habitat for Yuma clapper rail	62	4	6	52
Conserve mesquite hummocks	74	0	7 ²	67
Conserve desert saltbush scrub	792	0	79	713
Conserve desert sink scrub	1,349	209	114	1,026
Conserve coastal & valley freshwater marsh	61	4	(6) ³	51

¹ See required measure #5 above for explanation of Conservation Objective.

² Pursuant to the avoidance, minimization, and mitigation measures in Section 4.4, mesquite hummocks will be avoided to the maximum extent Feasible.

³ Disturbance of no more than 6 acres may occur, but it would be replaced to ensure that the no net loss occurs and the Conservation Objective is achieved.

4.3.21 Santa Rosa and San Jacinto Mountains Conservation Area

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Location and Description. The Santa Rosa and San Jacinto Mountains Conservation Area encompasses virtually all of the desert slopes of the Santa Rosa and San Jacinto Mountains below the upper elevation limit of Peninsular bighorn sheep Habitat, as well as much of the higher elevation areas of the Santa Rosa Mountains where there is known and potential Habitat for the gray vireo. This Conservation Area is depicted in Figure 4-26a. Indian reservation lands in the mountains are not subject to this Plan. The Agua Caliente Band of Cahuilla Indians is preparing a Tribal MSHCP on its reservation land, and efforts are being made to coordinate the Tribal MSHCP with the Coachella Valley MSHCP/NCCP. This Conservation Area is linked to the south with Anza Borrego Desert State Park and to the west with San Bernardino National Forest areas and Mt. San Jacinto State Park. To the north, this Conservation Area is contiguous with the Snow Creek/Windy Point Conservation Area, which includes two Biological Corridors to the San Bernardino Mountains. The Santa Rosa and San Jacinto Mountains Conservation Area contains a total of approximately 211,070 acres.

Core Habitat. This Conservation Area provides Essential Habitat for the Peninsular bighorn sheep. Figure 4-26b depicts Essential Habitat, selected Other Conserved Habitat, and recorded burrowing owl locations.

Other Conserved Habitat. This Conservation Area contains nearly 70,000 acres of potential Habitat for the gray vireo; however, it is not known how much of this Habitat is occupied. Low-density desert tortoise Habitat is also spread throughout the mountains, but it is not known whether the population density is such that this Conservation Area can be considered Core Habitat for the tortoise. The Conservation Area contains suitable migration and breeding Habitat for the riparian species covered by the Plan. Given the scarcity of riparian Habitat in the desert, all riparian Habitat is considered important for these species, and is likely to contribute to the Conservation of these species in their respective ranges. The desert fan palm oasis woodlands also provide nearly 1,000 acres of Habitat for the southern yellow bat. There is one known occurrence of triple-ribbed milkvetch in the Santa Rosa Mountains. This occurrence appears to be disjunct with the other known occurrences in the Plan Area. The Conservation Area also contains a small amount of Habitat for Coachella Valley milkvetch, Coachella Valley giant sand-treader cricket, Coachella Valley Jerusalem cricket, Coachella Valley fringe-toed lizard, flat-tailed horned lizard, burrowing owl, Le Conte’s thrasher, Coachella Valley round-tailed ground squirrel, and Palm Springs pocket mouse. This Conservation Area also contributes to the Plan Area’s biodiversity and provides Habitat for an array of predators that may also use adjoining areas such as the Snow Creek/Windy Point Conservation Area. Table 4-107 shows the Covered Species occurring in this area.

***Table 4-107: Species Habitat –
Santa Rosa and San Jacinto Mountains Conservation Area
(All acreages are based on 1996 pre-Planning Agreement information.)***

<i>Species</i>	<i>Total Acres of Habitat in the Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Habitat Not Currently Conserved</i>	<i>Habitat Designation</i>	<i>Acres of Core Habitat</i>
CV milkvetch ¹	292	65	227	Other Cons. Habitat	0
Triple-ribbed milkvetch ²	<1	0	<1	Other Cons. Habitat	0

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CV giant sand-treader cricket ¹	122	22	100	Other Cons. Habitat	0
CV Jerusalem cricket ¹	199	32	167	Other Cons. Habitat	0
CV fringe-toed lizard ¹	122	22	100	Other Cons. Habitat	0
Desert tortoise	125,694	83,976	41,718	Other Cons. Habitat	0
Flat-tailed horned lizard	61 / 15	45 / 1	16 / 14	Pred. / Pot. ³ Other Cons. Habitat	0
Gray vireo	67,401	54,276	13,125	Other Cons. Habitat	0
Le Conte's thrasher	11,093	3,284	7,809	Other Cons. Habitat	0
Least Bell's vireo	1,579 / 3,958	822 / 2,157	757 / 1,801	Breeding/ Migratory	N/A
Southwestern willow flycatcher	1,574 / 3,963	822 / 2,157	752 / 1,806	Breeding/ Migratory	N/A
Summer tanager	1,574 / 3,963	822 / 2,157	752 / 1,806	Breeding/ Migratory	N/A
Yellow-breasted chat	1,574 / 3,963	822 / 2,157	752 / 1,806	Breeding/ Migratory	N/A
Yellow warbler	1,574 / 3,963	822 / 2,157	752 / 1,806	Breeding/ Migratory	N/A
CV round-tailed ground squirrel ¹	1,328	543	785	Other Cons. Habitat	0
Palm Springs pocket mouse ¹	5,565	1,869	3,696	Other Cons. Habitat	0
Peninsular bighorn sheep	168,935	135,577	33,358	Essential Habitat	N/A
Southern yellow bat	934	400	534	Other Cons. Habitat	0

¹ This Habitat is contiguous with Habitat in the Snow Creek/Windy Point Conservation Area and is effectively part of that Core Habitat.

² There is one known occurrence for this species in Agua Alta Canyon within this Conservation Area.

³ The species distribution model for the flat-tailed horned lizard includes predicted ("pred.") Habitat and also potential (Pot.) Habitat. Predicted Habitat includes areas where presence of this species is known or expected based on recent observations. Potential Habitat includes areas where there are historical observations of this species but no recent observations are recorded. See Section 9.6.3.3 for additional information.

Natural Communities. Table 4-108 shows that the conserved natural communities occurring in this Conservation Area are principally Sonoran creosote bush scrub, Sonoran mixed woody and succulent scrub, southern arroyo willow riparian forest, Sonoran cottonwood-willow riparian forest, southern sycamore-alder riparian woodland, desert dry wash woodland, desert fan palm oasis woodland, mesquite hummocks, semi-desert chaparral, red shank chaparral, interior live oak chaparral, and peninsular juniper woodland and scrub. There are also incidental occurrences of active desert dunes, ephemeral desert sand fields, stabilized and partially stabilized desert sand fields, and stabilized shielded desert sand fields. This Conservation Area includes 68% of the Sonoran mixed woody and succulent scrub in the Plan Area, 83% of the southern sycamore-alder riparian woodland in the Plan Area, 71% of the desert fan palm oasis woodland in the Plan

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Area, 99% of the red shank chaparral in the Plan Area, and 99% of the peninsular juniper woodland and scrub in the Plan Area. Figure 4-26c depicts the conserved natural communities.

**Table 4-108: Conserved¹ Natural Communities –
Santa Rosa and San Jacinto Mountains Conservation Area
(All acreages are based on 1996 pre-Planning Agreement information.)**

<i>Natural Community</i>	<i>Total Acres in the Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres Not Currently Conserved</i>
Active desert dunes	57	0	57
Ephemeral desert sand fields	38	22	16
Stabilized & partially stabilized desert sand fields	20	0	20
Stabilized shielded desert sand fields	7	0	7
Mesquite hummocks	5	0	5
Sonoran creosote bush scrub	44,230	23,243	20,987
Sonoran mixed woody & succulent scrub	89,999	65,893	24,106
Peninsular juniper woodland & scrub	37,229	30,382	6,847
Redshank chaparral	12,514	9,987	2,527
Semi-desert chaparral	17,602	14,654	2,948
Interior live oak chaparral	2,738	1,954	784
Southern arroyo willow riparian forest	32	17	15
Sonoran cottonwood-willow riparian forest	58	0	58
Southern sycamore-alder riparian woodland	548	407	141
Desert dry wash woodland	3,958	2,157	1,801
Desert fan palm oasis woodland	934	400	534

¹ Only natural communities to be conserved under the Plan are shown. Natural communities that are not included as described in Section 3.2.2 are not shown.

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Essential Ecological Processes. The desert dry wash woodland, desert fan palm oasis woodland, and riparian Habitats in this Conservation Area are maintained by hydrological processes such as flooding, groundwater from springs, and the availability of perennial water. Protection of these hydrological processes is achieved through the Conservation Objectives for this area. Portions of the San Jacinto Mountains above Snow Creek and westward are sand source for the blowsand ecosystems in the Snow Creek/Windy Point Conservation Area.

Biological Corridors. No specific areas have been delineated as Biological Corridors. Within the Conservation Area, Peninsular bighorn sheep move between ewe group areas, but these movement areas are not specifically defined, except as indicated in Required Measure 5, and are considered part of Peninsular bighorn sheep Habitat in this Plan.

Conservation Objectives. The Conservation Objectives for this Conservation Area are:

1. In total, 55,890 acres of Santa Rosa and San Jacinto Mountains Conservation Area shall be conserved. (This may be less than the sum of acres indicated in the following objectives because there can be overlap among areas covered by the objectives. For example, Core Habitat for two or more species may overlap, or Core Habitat and an Essential Ecological Process area may overlap. The individual acreage figures will be used in compliance monitoring.)
2. As of June 2003, conserve at least 19,205 acres of Essential Habitat for Peninsular bighorn sheep in the Riverside County portion of the Conservation Area, at least 97 acres in the City of Cathedral City portion, at least 1,158 acres in the City of Indian Wells portion, at least 2,545 acres in the City of La Quinta portion, at least 130 acres in the City of Palm Desert portion, at least 7,211 acres in the City of Palm Springs portion, and at least 450 acres in the City of Rancho Mirage portion. Ensure that any Development allowed does not fragment Core Habitat, and that edge effects from such Development are minimized.
3. As of June 2003, conserve at least 7,930 acres of known and potential gray vireo Habitat in the unincorporated portion of the Conservation Area, and at least 3,883 acres in the City of Palm Springs portion. Minimize fragmentation, human-caused disturbance, and edge effects to Core Habitat by conserving contiguous Habitat patches and effective Linkages between them.
4. As of June 2003, conserve at least 5,508 acres of Other Conserved Habitat for Le Conte's thrasher in the unincorporated portion of this Conservation Area, at least 11 acres in the City of Cathedral City portion, at least 206 acres in the City of Indian Wells portion, at least 387 acres in the City of La Quinta portion, at least 33 acres in the City of Palm Desert portion, at least 560 acres in the City of Palm Springs portion, and at least 17 acres in the City of Rancho Mirage portion.
5. As of June 2003, conserve at least 23,856 acres of Other Conserved Habitat for desert tortoise in the unincorporated portion of this Conservation Area, at least 95 acres in the City of Cathedral City portion, at least 999 acres in the City of Indian Wells portion, at least 1,409 acres in the City of La Quinta portion, at least 436 acres in the City of Palm Desert portion, at least 8,856 acres in the City of Palm Springs portion, and at least 1,326 acres in the City of Rancho Mirage portion.

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6. Conserve occupied burrowing owl burrows as described in Section 4.4 burrowing owl avoidance, minimization, and mitigation measures.
7. As of June 2003, conserve at least 15 acres of southern arroyo willow riparian forest in the unincorporated portion of the Conservation Area; for the remaining acreage of this natural community where disturbance is authorized by the Plan, ensure no net loss. Conserve at least 117 acres of southern sycamore-alder riparian woodland in the unincorporated portion of the Conservation Area and at least 24 acres of southern sycamore-alder riparian woodland in the City of Palm Springs portion of this Conservation Area; for the remaining acreage of this natural community where disturbance is authorized by the Plan, ensure no net loss. Conserve at least 58 acres of Sonoran cottonwood-willow riparian forest in the City of Palm Springs portion of the Conservation Area; for the remaining acreage of this natural community where disturbance is authorized by the Plan, ensure no net loss. Conserve at least 1,244 acres of the desert dry wash woodland natural community in the unincorporated portion of the Conservation Area, at least 18 acres in the City of Cathedral City portion, at least 66 acres in the City of Indian Wells portion, at least 76 acres in the City of La Quinta portion, at least 29 acres in the City of Palm Desert portion, at least 36 acres in the City of Palm Springs portion, and at least 9 acres in the City of Rancho Mirage portion.
8. As of June 2003, conserve at least 404 acres of the known desert fan palm oasis woodland natural community, which provides Habitat for the southern yellow bat, in the unincorporated portion of the Conservation Area; and at least 76 acres in the City of Palm Springs portion.
9. As of June 2003, conserve at least 2,093 acres of semi-desert chaparral in the unincorporated portion of the Conservation Area and at least 571 acres in the City of Palm Springs portion. Conserve at least 2,274 acres of red shank chaparral in the unincorporated portion of the Conservation Area. Conserve at least 2,899 acres of peninsular juniper woodland and scrub natural community in the unincorporated portion of this Conservation Area and at least 3,177 acres in the City of Palm Springs portion. Attainment of Goal 2 will also achieve this goal.

Ownership and General Plan Land Use Designations. Table 4-109 shows the public versus private ownership of lands within this Conservation Area.

***Table 4-109: Land Ownership
Santa Rosa and San Jacinto Mountains Conservation Area
(rounded to nearest 10 acres)***

<i>Ownership¹</i>	<i>Acres</i>
<i>Existing Conservation Lands:</i>	<i>151,210</i>
BLM	73,900
CDFG	20,700
State Parks	1,000
City of Indian Wells	630
City of Palm Springs	2,100
County Parks	230

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Table 4-109 (cont.)

<i>Ownership¹</i>	<i>Acres</i>
CVMC	100
University of California	6,330
USFS	46,220
<i>Lands Not Currently Conserved:</i>	<i>59,860</i>
County Flood Control	30
CVWD	1,930
Public, Quasi-public Entities	710
Private	57,190
TOTAL	211,070

¹ Based on 1996 pre-Planning Agreement land ownership information

**Table 4-110: General Plan Land Use Designations¹
(Non-conserved lands only) Santa Rosa
and San Jacinto Mountains Conservation Area**

<i>General Plan Designation (Map symbol) - Riverside County</i>	<i>% of Private Non-conserved Land in Conservation Area</i>	<i>Building Intensity Range</i>
Open Space Rural (OS-RUR)	78%	1 unit per 20 acres
Open Space Water ² (OS-W)	---	Bodies of water, floodplains, and natural or artificial drainage corridors
Rural Desert (RD)	1%	1 unit per 10 acres
Rural Mountainous (RM)	3%	1 unit per 10 acres
Rural Residential (RR)	8%	1 unit per 5 acres
Very Low Density Residential (VLDR)	1%	0-2 units per acre
Very Low Density Residential, Rural Community (VLDR-RC)	6%	0-2 units per acre
Agriculture (AG)	2%	Agricultural production
Public Facilities ² (PF)	---	Landfills, airports, utilities, other civic use
Medium Density Residential (MDR)	1%	5-8 units per acre
TOTAL	100%	
<i>General Plan Designation (Map symbol) - City of Cathedral City</i>	<i>% of Private Non-conserved Land in Conservation Area</i>	<i>Building Intensity Range</i>
Open Space Watercourse ² (OS-W)	---	Floodways and drainage channels
Open Space – Private (OS-PV)	42%	Golf courses, etc.
Hillside Reserve (HR)	57%	1 unit per 20 acres
TOTAL	100%	
<i>General Plan Designation – City of Indian Wells</i>	<i>% of Private Non-conserved Land in Conservation Area</i>	<i>Building Intensity Range</i>
Natural Preserve	9%	Residential, 1 unit per 40 acres maximum
Open Space	84%	Publicly-owned open space lands
Watercourse	7%	Areas subject to flood hazards
Very Low Density Residential ²	---	1-3 units per acre
TOTAL	100%	

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Table 4-110 (cont.)		
General Plan Designation (Map symbol) - City of La Quinta	% of Private Non-conserved Land in Conservation Area	Building Intensity Range
Open Space (OS)	76%	Public or quasi-public land on hillsides
Park (P)	2%	Municipal and regional park facilities
Golf Course Open Space (G)	3%	Golf course
Low Density (LDR)	16%	1-4 units per acre
Watercourse/Flood Control (W)	3%	
TOTAL	100%	
General Plan Designation (Map symbol) – City of Palm Desert	% of Private Non-conserved Land in Conservation Area	Building Intensity Range
Open Space	78%	
Hillside Planned Residential	15%	1-2 units per acre
Low Density Residential	2%	3-5 units per acre
Medium Density Residential	4%	5-7 units per acre
Regional Commercial ²	---	Commercial uses
TOTAL	100%	
General Plan Designation (Map symbol) - City of Palm Springs	% of Private Non-conserved Land in Conservation Area	Building Intensity Range
Conservation (C)	43%	1 unit per 20 acres
Desert (D)	2%	3.5 units per acre on 5 acre minimum site
Watercourse (W)	1%	Flood control or drainage facilities
Residential L1 (Palm Hills I SP)	9%	Residential
Residential L2 ²	---	Residential
Residential L4 ²	---	Residential
Palm Hills II SP	12%	Specific Plan required
Palm Hills III SP	32%	Specific Plan required
Parks and Recreation	---	Park and recreation facilities
TOTAL	100%	
General Plan Designation - City of Rancho Mirage	% of Private Non-conserved Land in Conservation Area	Building Intensity Range
Open Space - Floodway	7%	Floodways and drainage channels
Private Open Space	7%	Golf courses and other facilities within planned residential Developments
Hillside Reserve	80%	1 unit per 640 acres
Low Density Residential	6%	0-2 units per acre
TOTAL	100%	

¹ Based on 2003 general plan designations and 2003 parcel data

² Statistically insignificant (less than 1%)

As seen in Table 4-109, 72% of the land in this Conservation Area is currently in public or nonprofit conservation organization ownership. Current conservation ranges from Level 1 to Level 3. Conservation management will be improved where needed through management prescriptions to be adopted by the relevant agency as Feasible.

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Figures 4-26d(1) through 4-26d(4) show the Existing Conservation Lands and general plan land use designations on Level 4 lands for the Conservation Area, according to recovery region or zone.

Required Measures for the Conservation Area. Table 4-111 shows how many acres of Existing Conservation Lands are in this Conservation Area and how many acres of Additional Conservation Lands will need to be conserved through acquisition or other means. The following measures will be imposed to achieve the Conservation Goals and Objectives in this Conservation Area. This includes the Covered Species Conservation Goals and Objectives in Section 9.

1. Figures 4-26e(1) through 4-26e(4) depict Plan provisions for Habitat loss for the Peninsular bighorn sheep. Each figure depicts one recovery region as identified in the Recovery Plan for Bighorn Sheep in the Peninsular Ranges, California (USFWS 2000). Each recovery region is associated with the range of one of the four ewe groups in the Plan Area. New Development shall adhere to the following criteria, in accordance with the guidelines in the Implementation Manual:
 - a. Development shall be clustered in one area of a site as close as possible to existing Development.
 - b. Development on alluvial fans shall be sited at the lowest possible elevation on the site and shall avoid the mouth of any canyon.
 - c. Development shall be sited a minimum of a quarter (0.25) mile from known bighorn sheep water sources identified on a reference map on file with CVCC (see Figure 4-26f), except where topographic features shield the view of the water source and access to it from proposed development or trails, thereby minimizing potential impacts to the Peninsular bighorn sheep's ability to access water.
 - d. Development shall be conditioned to prohibit the construction of unauthorized trails in essential bighorn sheep Habitat unless approved through a Minor Amendment with Wildlife Agency concurrence.
 - e. Development shall not preclude Habitat connectivity or movement. Determination of whether Habitat connectivity or movement is precluded shall be made by the Lead Agency for the Development based on factual data provided by the RMOC, RMUC, Wildlife Agencies, or other source.
 - f. Development shall comply with Land Use Adjacency Guidelines as described in Section 4.5.

Five types of areas are designated on the maps. These areas are depicted on Figures 4-26e(1) through 4-26e(4):

- (1) Areas within which a maximum of 10% of the private land under the jurisdiction of a Local Permittee may be developed in accordance with the general plan land use designation in effect at the time of MSHCP Plan approval.
- (2) Areas where special provisions apply. These are described in #2 below.

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- (3) Areas where the Habitat Evaluation and Acquisition Negotiation Strategy (HANS) will be used to meet the Conservation Objectives. Additional information is provided in #3 below.
 - (4) Areas where a Major Amendment is required to provide Authorization for Acres of Disturbance of Habitat. Additional information is provided in #4 below.
 - (5) Areas where Authorization for Acres of Disturbance of Habitat is provided for Covered Activities described in Section 7.3 on CVWD and County Flood Control land.
2. Special provisions apply in the areas shown in the figures indicated below:
- a. In Figure 4-26e(1), in the special provisions area west of Chino Canyon along Highway 111, the area below toe of slope on a parcel can be developed if the area above toe of slope is permanently conserved through conveyance of a conservation easement or fee title to the CVCC or other appropriate conservation entity. This reflects the greater Conservation value of the area above toe-of-slope, and the edge effects of Highway 111 on the Habitat below toe-of-slope.
 - b. In Figure 4-26e(1), in the special provisions area in Chino Canyon that apply to an approximately 506 acre parcel in Section 7, T4S R4E, one single-family residence and ancillary structures may be built within a Development envelope not to exceed 2.5 acres, plus an additional maximum of 2.5 acres for an access road and minor improvements within a larger area of 40 acres to be retained by the project proponent, the balance of which shall have a conservation easement recorded on it to ensure its permanent conservation. Additionally, the balance of the approximately 506-acre parcel shall also be permanently conserved through an appropriate mechanism, which may include sale to a conservation entity or recordation of a conservation easement.
 - c. In the special provisions area south of Highway 111 in the Palm Hills area, the following measures shall apply if a Permit is obtained through the MSHCP rather than a Section 7 consultation:
 - (1) Development or land disturbance will be limited to the area indicated in Figure 4-26e(2)A. Specific design features that apply are:
 - (a) Grading details will provide for berming of Fairway 7 to restrict view of golfers from the south.
 - (b) Fairway #6 will be graded in a manner that the tee is lowered to elevation 805' and the green is lowered to elevation 785'. The southerly edge of golf improvement will include berming to minimize visibility from the south.
 - (c) Fairway # 8 will be graded in a manner that the Tee area is bermed on the south to avoid or minimize visibility from the south.
 - (d) The golf cart path between Hole #6 and Tee #7 will be relocated to the rear of the knoll and will follow the north side of Fairway #7.

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- (e) Prior to initiation of grading, a sheep exclusion fence shall be installed around the perimeter of the project site. The developer shall submit for review and approval by the Wildlife Agencies final plans for the sheep exclusion fence, including a description and illustration of fence design, fence location, and means of removing sheep from the project site if necessary. A gate/barrier system to preclude unauthorized access into Peninsular bighorn sheep Habitat shall also be installed. The final plans shall be reviewed and approved by the City of Palm Springs and the Wildlife Agencies prior to issuance of any grading permit for the project. If, after further consultation, it is determined that a fence is not necessary or could be deferred to a later time or event, this measure may be accordingly modified. If a fence is not required, no tall shrubs or dense cover shall be allowed within 50 yards of the southern boundary of the project to avoid providing approach and hiding cover for Peninsular bighorn sheep predators.
- (f) All exterior lighting shall be low intensity and hooded to direct light away from natural open space areas, and there shall be no perimeter lighting of the golf course, except where required for human safety.
- (g) All natural open space within the area depicted in Figure 4-26e(2)A shall be conserved through dedication, deed restriction, or other permanent conservation to be conveyed to the CVCC or other appropriate entity in perpetuity, on or before the approval of the first grading permit.
- (h) Dedication of Habitat within the Palm Hills Land Corp. ownership shall be required to offset the direct loss of Peninsular bighorn sheep Essential Habitat on the property and the contribution to cumulative loss of Peninsular bighorn sheep Habitat in the project area. The developer shall dedicate 1,233 (411 acres x 3 = 1,233 acres) of comparable or better quality Habitat within the Palm Hills Land Corp. ownership that is located in the north Santa Rosa ewe group Recovery Region (SR-N74). This acreage shall be in addition to the contiguous open space on the parcel south of the perimeter fence. The location of this Habitat shall be approved by the City of Palm Springs, in consultation with CVCC. The replacement Habitat shall be deeded to the CVCC or other appropriate conservation entity in perpetuity before the approval of the first grading permit. This land dedication shall be provided *in lieu* of any fees that otherwise may be assessed as mitigation for the project.
- (i) The project proponent shall cooperate with CVCC to facilitate acquisition of additional private lands within the north Santa Rosa ewe group Recovery Region (SR-N74).
- (j) The developer shall contribute an amount to the Endowment Fund for Monitoring and Management maintained by CVCC sufficient to fund the special monitoring management needs of the portion of the Conservation Area that may be affected by the Development.

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- (k) The developer will install new linkage trails to replace existing trails that are no longer available for public use within the property. The following links are provided to approximate the existing level of trail access on site in substantial conformance with Figure 4-26e(2)A:
- Links between the project access road and the Araby Trail along the northern project boundary; a safe passageway for pedestrians and bicyclists alongside the road will be provided from East Palm Canyon Drive to the link trail.,
 - Link between the Clara Burgess Trail and the Wildhorse and Araby trails along the southern and western property boundaries.
- (l) An easement shall be granted along the north side of the property east of the road that provides access from East Palm Canyon Drive. This easement will accommodate future construction of a perimeter trail linking the proposed Cathedral City Cove perimeter trail with the access road.
- (m) The extension of the Dunn Road is not a covered activity.
- (n) Access into the incised portion of Eagle Canyon shall be controlled during project construction, except that required to protect, enhance and maintain the desert fan palm oasis woodland. The developer shall retain a qualified desert ecologist to clean-up the palm oases prior to conveyance of the land to CVCC or other appropriate entity. Prior to the clean-up, the ecologist will confer with the Wildlife Agencies regarding the work to be undertaken.
- d. In Figures 4-26e(2) and 4-26e(3), in the special provisions area along Highway 74, Riverside County shall work with landowners to transfer density from the east side of the highway to the west side of the highway to the maximum extent Feasible. Development in the special provisions area west of the highway may exceed the density allowed by the 2003 General Plan land use designation by transferring density from the special provisions area east of the highway. The amount of density transferred shall be the density allowed by the 2003 General Plan for the acreage east of the highway from which density is transferred. To transfer density, land east of the highway must be permanently conserved by conveyance of fee simple interest or a conservation easement to CVCC or its designee or to another conservation organization.
- e. The Travertine Specific Plan has initiated a Section 7 consultation with USFWS. If a Permit for specified endangered or threatened species is issued through the Biological Opinion, then no Permit will be provided through the MSHCP for those species. Any provisions listed below for those species will not apply unless incorporated within the Section 7 Biological Opinion. If no Section 7 Permit is provided, and, in any event, as pertains to non-listed Covered Species, Travertine Specific Plan is a Covered Activity with the following special provisions:

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- (1) The portion of the Travertine Specific Plan property for which Acres of Disturbance are authorized is outside the Conservation Area, as depicted in Figure 4-26e(3)A.
 - (2) The remainder of the Travertine Specific Plan property is inside the Conservation Area, as depicted in Figure 4-26e(3)A, and shall be dedicated to Conservation in perpetuity.
 - (3) Prior to the issuance of grading permits, the project proponent will provide a no-interest \$2,000,000 loan to the CVCC or its designee upon mutually agreeable terms to acquire Essential bighorn sheep Habitat in the project area. This provision may be revised or substituted for in a manner of equal or greater benefit to the Plan upon mutual agreement of CVCC, the Wildlife Agencies, and the project proponent.
 - (4) The project proponent will provide \$500,000 for bighorn sheep monitoring and research, with \$100,000 due prior to the issuance of grading permits, and an additional \$400,000 provided during the succeeding eight years.
- f. In Figure 4-26e(3), Development in the designated area in Section 25, Township 7 South, Range 7 East, north of Martinez Canyon, requires mitigation for impacts by providing off site mitigation at a 3:1 ratio in the same Recovery Unit.
- g. The Shadowrock Project (City of Palm Springs Planning Area 2) may obtain Take under FESA in one of two ways: (1) through a section 7 consultation with USFWS prior to the issuance of the MSHCP permit, or (2) through the MSHCP. If a Take Permit for endangered and threatened species is issued through the Section 7 Biological Opinion, then no Take will be provided through the MSHCP for those species. If no Section 7 Take is obtained, and, in any event, as pertains to non-listed Covered Species, the Shadowrock Project may be a Covered Activity through the MSHCP by complying with special provisions (1) through (10) below. The Peninsular Bighorn Sheep is a Fully Protected Species under Fish and Game Code Section 4700. Take of this species is prohibited under the California Fish and Game Code. CDFG acknowledges and agrees that if the measures set forth in the MSHCP are fully complied with, the Covered Activities are not likely to result in Take of this Fully Protected Species. Notwithstanding any language to the contrary in this Plan, the City of Palm Springs, Shadowrock Ventures and CDFG have an existing settlement agreement (included in the Final MSHCP as Appendix IV), which is still in existence even after the Plan is approved, and is binding on the parties that executed the settlement agreement. All special provisions (Sections 4.3.21(g) (1-10)) must be implemented in a manner to ensure compliance with the terms and conditions of the settlement agreement among the California Department of Fish and Game, the City of Palm Springs, and Shadowrock Ventures. The settlement agreement cannot be amended except by an instrument signed by Shadowrock Ventures, the City of Palm Springs, and CDFG. Compliance with the special provisions must be in a manner that is consistent with the Conservation Area Conservation Objectives and Required Measures, and with

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the Species Conservation Goals and Objectives. Any funds generated through a Section 7 consultation will be managed by USFWS, and funds generated through the Plan will be managed by the CVCC. The City of Palm Springs will be responsible for the implementation of the funding mechanism(s). As a Permittee, the City of Palm Springs is responsible for ensuring implementation of the following special provisions.

- (1) A wildlife corridor across Chino Canyon, as depicted in Figure 4-26e(1)A (the exact description of the corridor is on file with the USFWS and the City of Palm Springs), must be conserved as described in “a” through “d”. The corridor will include constructed escape terrain to help facilitate PBS movement through the movement corridor. Permanent protection of the movement corridor requires that the following be implemented prior to issuance of grading permits for the Shadowrock project.
 - a. That portion of the southwest ¼ of Section 5, Township 4 South, Range 4 East that is within the wildlife movement corridor depicted in Figure 4-26e(1)A must be conserved for PBS conservation in perpetuity through a conservation easement to the CVCC, in a form substantially similar to the Model Conservation Easement attached as Exhibit H, as that form may be amended.
 - b. That portion of the southeast ¼ of Section 6, Township 4 South, Range 4 East that is within the wildlife movement corridor depicted in Figure 4-26e(1)A must be conserved for PBS conservation through a conservation easement or other Legal Instrument that is acceptable to the USFWS and the Tribe.
 - c. That portion of the northeast ¼ of Section 7, Township 4 South, Range 4 East that is within the wildlife movement corridor depicted in Figure 4-26e(1)A must be conserved for PBS conservation in perpetuity through a conservation easement to the CVCC, in a form substantially similar to the Model Conservation Easement attached as Exhibit H, as that form may be amended.
 - d. That portion of the northwest ¼ of Section 8, Township 4 South, Range 4 East that is within the wildlife movement corridor depicted in Figure 4-26e(1)A must be conserved for PBS conservation in perpetuity through a conservation easement to the CVCC, in a form substantially similar to the Model Conservation Easement attached as Exhibit H, as that form may be amended.
 - e. If the conservation easements described in “a” through “d” above are not obtained prior to issuance of grading permits, the line demarcating the area within which Take Authorization is provided will revert to the original Reasonable and Prudent Alternative (RPA) line in the January 12, 1998 conference opinion as depicted in Figure 4-26e(1)A. The portion of the Shadowrock project depicted in Figure 4-26e(1)A as outside the RPA line must be conserved for PBS conservation in perpetuity through a conservation easement or other Legal Instrument

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that is acceptable to the Wildlife Agencies prior to issuance of grading permits.

- (2) An easement for the purpose of constructing a wildlife overpass will be obtained by the City of Palm Springs for the possible future construction of an overpass and road through the wildlife movement corridor. Said road will be a public road (for the purpose of obtaining public funds for the construction of a wildlife overpass). Any security gates for the Palm Springs Aerial Tramway facility will be installed outside of the designated corridor.
- (3) Prior to issuance of grading permits for the Shadowrock project, all land in Sections 5, 8, and 9 owned by the City of Palm Springs and/or the City of Palm Springs' Parks, Open Space, and Trails (POST) fund as of October 22, 2005, including the land in the Mountain Falls area lease, must be permanently protected for PBS conservation purposes through a conservation easement to the CVCC, in a form substantially similar to the Model Conservation Easement attached as Exhibit H, as that form may be amended, that guarantees conservation in perpetuity and precludes the possibility of constructing golf courses, new trails, or other facilities.
- (4) A vegetation management plan for the riparian area in the wildlife movement corridor, depicted in Figure 4-26e(1)A on Shadowrock land and on the land described in (1)c must be developed by the City of Palm Springs and approved by the Wildlife Agencies prior to issuance of grading permits. The small cliff along the edge of the riparian area will be modified to facilitate sheep movement.
- (5) Toxic plants such as oleander and nightshade species (Solanaceae family) will be prohibited along the perimeter of the project.
- (6) Any artificial water features (e.g. ponds) will be designed to preclude shallow, vegetated edges that provide breeding habitat for *Culicoides* midges, an invertebrate disease vector for bluetongue virus which affects PBS.
- (7) The entire Shadowrock development will be fenced to exclude PBS from entering the project site. The fence will be 8' high and should not contain gaps larger than 4 inches, in which PBS may become entangled.
- (8) If the project is redesigned, it will incorporate design features to minimize impacts to PBS, such as placing golf holes adjacent to the PBS movement corridor and lining the edge of the golf course with dense vegetation (preferably mesquite or other native vegetation) or earthen berms that will visually screen PBS habitat from human activity associated with the development. Any project redesign must be in compliance with the terms and conditions of the settlement agreement among the California Department of Fish and Game, the City of Palm Springs, and Shadowrock Ventures, and all conditions of approval required by the City of Palm Springs in the Final EIR for the Shadowrock project in 1993.

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- (9) Shadowrock, or other responsible party, will host an annual golf tournament fundraiser to provide funding for PBS monitoring, research, and management that may include a corridor effectiveness study, involving GPS collaring of PBS. If Shadowrock is a Covered Activity under the MSHCP, the funds will be provided to the CVCC and would be for a minimum of 10 years and totaling no less than \$500,000. If Take Authorization is provided through Section 7, the funds will be provided to USFWS. Additional funds may be needed in the post-10 year period for the activity described in (10) below.
- (10) Funding will be obtained from a fund consisting of 1% of the gross proceeds of the sale of all retail goods within the Hotel stores at Shadowrock. This fund will be set aside for PBS management, which may include PBS augmentation. If Shadowrock is a Covered Activity under the MSHCP, the funds will be provided to the CVCC. If Take Authorization is provided through Section 7, the funds will be provided to USFWS.
3. In areas where the HANS process will be used to meet the Conservation Objectives, at least 90% of the private land as of June 2003 within the relevant Recovery Unit and jurisdiction must be conserved. In evaluating whether a portion of a property subject to the HANS process may be Developed, the Local Permittee and the Wildlife Agencies will consider whether the Development would significantly adversely impact the Conservation of the Peninsular bighorn sheep with respect to the Covered Species Conservation Goals and Objectives in Section 9. June 2003 is used because that is the most recent date for which data is available.
4. In Major Amendment areas, the process for Major Amendments described in Section 6.12.3 shall apply.
5. Protection of a Biological Corridor for Peninsular bighorn sheep in Chino Canyon and one in Palm Canyon will be coordinated with the Agua Caliente Tribal HCP to ensure that a functional corridor is maintained.
6. CVWD and County Flood Control will adhere to the avoidance, minimization, and mitigation measures for Peninsular bighorn sheep described in Section 4.4 for the construction, operation, and maintenance of their facilities in this Conservation Area.
7. See Section 7.5 for a discussion of new facilities proposed by CVWD in or adjacent to the Conservation Area that will require a Minor Amendment if specified criteria are met.
8. The Permittees shall comply with applicable avoidance, minimization, and mitigation measures described in Section 4.4 and the Land Use Adjacency Guidelines as described in Section 4.5.
9. Prior to widening East Palm Canyon Drive adjacent to the Santa Rosa and San Jacinto Mountains Conservation Area, Cathedral City will consult with the Wildlife Agencies and the CVCC to obtain appropriate monitoring information to determine if Peninsular bighorn sheep are using the adjacent Habitat. In this event, Cathedral

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City will install fencing to prevent Peninsular bighorn sheep from straying on to East Palm Canyon Drive.

10. For Development proposals on lands zoned for domestic stock animals on parcels within or adjacent to Conservation Areas with bighorn sheep habitat, the Permittees shall either (1) prohibit husbandry of domestic sheep and goats on such parcels or (2) require double fencing separated by a distance consistent with applicable disease transmission standards and as agreed to by the Wildlife Agencies, including an 8-foot outer fence or functional equivalent around all enclosures used to keep domestic sheep and goats or the parcel perimeter adjoining the Conservation Area if the double fence can be tied into features that would preclude bighorn sheep access around the ends of the fence.
11. For Development proposals on lands within or adjacent to Conservation Areas with bighorn sheep habitat, the Local Permittee shall require construction of an 8-foot fence or functional equivalent, or granting of an easement to CVCC for future installation of a barrier separating the Development from adjoining habitat, if (i) bighorn sheep are documented to begin foraging or watering on the project site, or (ii) unauthorized trails, paths, routes, or ways (trails) are documented to proliferate from the project site into adjoining habitat. To ensure that the fence is an effective barrier, the CVCC shall determine the appropriate location of the fence in consultation with the Local Permittee. If fence construction is deferred and either condition (i) or (ii) is documented by the Wildlife Agencies, the CVCC shall incur the responsibility and cost for fence installation and maintenance on lands to which CVCC has access, unless at the time of project approval the Permittee assigns a legally responsible party to construct and maintain the fence and requires establishment of a funding instrument for construction and maintenance of the fence. The subject fence shall be constructed within 2 years of documented sheep use or the proliferation of trails, as noted above. The location of this barrier (i.e., an 8-foot fence or functional equivalent) shall be determined by CVCC based on its ability to obtain permission/access to the necessary lands. If placement of the barrier must occur on other public lands (e.g., BLM, CDFG), CVCC will coordinate with these other agencies as appropriate.

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**Table 4-111a: Conservation and Take Authorization
for Santa Rosa and San Jacinto Mountains
Conservation Area – Riverside County Area**

<i>Conservation Objective</i>	<i>Total Acres in Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Disturbance Authorized</i>	<i>Remaining Acres to be Conserved</i>
Conserve Essential Habitat for Peninsular bighorn sheep - Recovery Zone 1	24,840	16,758	830 ¹	7,252
Conserve Essential Habitat for Peninsular bighorn sheep - Recovery Zone 2	14,558	9,642	647 ²	4,269
Conserve Essential Habitat for Peninsular bighorn sheep - Recovery Zone 3	50,972	44,930	683 ³	5,359
Conserve Essential Habitat for Peninsular bighorn sheep - Recovery Zone 4	34,597	32,014	258 ⁴	2,325
Conserve Other Cons. Habitat for gray vireo	58,985	50,174	881	7,930
Conserve known locations for triple-ribbed milkvetch ⁵	< 1	0	< 1	< 1
Conserve Other Cons. Habitat for Le Conte's thrasher	9,123	2,704	911 ⁶	5,508
Conserve Other Cons. Habitat for desert tortoise	86,875	60,069	2,950 ⁷	23,856
Conserve southern arroyo willow riparian forest	16	1	(2) ⁸	15
Conserve southern sycamore-alder riparian woodland	518	401	(12) ⁹	117
Conserve desert dry wash woodland	3,566	2,024	298 ¹⁰	1,244
Conserve desert fan palm oasis woodland	716	267	45	404
Conserve semi-desert chaparral	16,869	14,543	233	2,093
Conserve redshank chaparral	12,514	9,987	253	2,274
Conserve peninsular juniper woodland and scrub	29,547	26,230	418 ¹¹	2,899

¹ The acreage shown includes 772 Acres of Disturbance allocated for projects that may be approved in HANS areas, and 58 acres that may be used only in conjunction with the Special Provisions area described in Required Measure 2a.

² The acreage shown includes 447 Acres of Disturbance allocated for projects that may be approved in HANS areas, and 200 acres that may be used only in conjunction with the Special Provisions area described in Required Measure 2d.

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- ³ The acreage shown includes 387 Acres of Disturbance allocated for projects that may be approved in HANS areas, 1 acre that may be used only in conjunction with the 10 percent Take area shown in Figure 4-26e(3), and 295 acres that may be used only in conjunction with the Special Provisions area described in Required Measure 2f.
- ⁴ The acreage shown includes 66 Acres of Disturbance allocated for projects that may be approved in HANS areas, and 201 acres that may be used only in conjunction with the 10 percent Take area shown in Figure 4-26e(4).
- ⁵ There is one known occurrence for this species in Agua Alta Canyon within this Conservation Area. This Conservation Objective would ensure that the location is conserved.
- ⁶ The acreage shown includes 612 Acres of Disturbance allocated for projects that may be approved in HANS areas; 47 acres that may be used only in conjunction with the “special provisions” area described in Required Measure 2a; and 252 acres that may be used only in conjunction with the “special provisions” area described in Required Measure 2f.
- ⁷ The acreage shown includes 2,515 Acres of Disturbance allocated for projects that may be approved in HANS areas; 59 acres that may be used only in conjunction with the “special provisions” area described in Required Measure 2a; 81 acres that may be used only in conjunction with the “special provisions” area described in Required Measure 2d; and 295 acres that may be used only in conjunction with the “special provisions” area described in Required Measure 2f.
- ⁸ Disturbance of no more than 2 acres may occur, but it would be replaced to ensure that the no net loss occurs and the Conservation Objective is achieved.
- ⁹ Disturbance of no more than 12 acres may occur, but it would be replaced to ensure that the no net loss occurs and the Conservation Objective is achieved.
- ¹⁰ The acreage shown includes 157 Acres of Disturbance allocated for projects that may be approved in HANS areas or in 10 percent “take” areas; and 141 acres that may be used only in conjunction with the “special provisions” area described in Required Measure 2f.
- ¹¹ The acreage shown includes 302 Acres of Disturbance allocated for projects that may be approved in HANS areas; and 116 acres that may be used only in conjunction with the “special provisions” area described in Required Measure 2d.

***Table 4-111b: Conservation and Take Authorization
for Santa Rosa and San Jacinto Mountains
Conservation Area – City of Cathedral City Area***

<i>Conservation Objective</i>	<i>Total Acres in Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Disturbance Authorized</i>	<i>Remaining Acres to be Conserved</i>
Conserve Other Cons. Habitat for Le Conte’s thrasher	13	1	1	11
Conserve Other Cons. Habitat for desert tortoise	107	1	11	95
Conserve Essential Habitat for Peninsular bighorn sheep – Recovery Zone 2	112	4	11 ¹	97
Conserve desert dry wash woodland	20	0	2	18

¹ The acreage shown consists of 11 acres of Acres of Disturbance allocated for projects that may be approved in HANS areas.

***Table 4-111c: Conservation and Take Authorization
for Santa Rosa and San Jacinto Mountains
Conservation Area – City of Indian Wells Area***

<i>Conservation Objective</i>	<i>Total Acres in Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Disturbance Authorized</i>	<i>Remaining Acres to be Conserved</i>
Conserve Other Cons. Habitat for Le Conte’s thrasher	419	190	23	206
Conserve Other Cons. Habitat for desert tortoise	4,375	3,265	111	999
Conserve Essential Habitat for Peninsular bighorn sheep – Recovery Zone 3	4,617	3,345	114 ¹	1,158
Conserve desert dry wash woodland	128	55	7	66

¹ The acreage shown consists of Acres of Disturbance allocated for projects that may be approved in HANS areas.

***Table 4-111d: Conservation and Take Authorization
for Santa Rosa and San Jacinto Mountains
Conservation Area – City of La Quinta Area***

<i>Conservation Objective</i>	<i>Total Acres in Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Disturbance Authorized</i>	<i>Remaining Acres to be Conserved</i>
Conserve Other Cons. Habitat for Le Conte’s thrasher	683	253	43	387
Conserve Other Cons. Habitat for desert tortoise	5,936	4,370	157	1,409
Conserve Essential Habitat for Peninsular bighorn sheep – Recovery Zone 3	6,185	3,481	159 ¹	2,545
Conserve desert dry wash woodland	147	63	8	76

¹ This acreage does not include the Take Authorization for the Travertine Special Provisions development area, which is outside the Conservation Area, nor for any other development outside the Conservation Area. Take Authorization for projects outside the Conservation Area is provided by the Permits as described in Section 7.1. The acreage shown consists of 109 Acres of Disturbance Authorized that may be allocated for projects that may be approved in HANS areas, and 5 Acres of Disturbance Authorized that may be allocated for projects subject to the 10 percent take area depicted on Figure 4-26e(3).

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**Table 4-111e: Conservation and Take Authorization
for Santa Rosa and San Jacinto Mountains
Conservation Area – City of Palm Desert Area**

<i>Conservation Objective</i>	<i>Total Acres in Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Disturbance Authorized</i>	<i>Remaining Acres to be Conserved</i>
Conserve Other Cons. Habitat for Le Conte’s thrasher	43	6	4	33
Conserve Other Cons. Habitat for desert tortoise	581	97	48	436
Conserve Essential Habitat for Peninsular bighorn sheep – Recovery Zone 2	492	420	7 ¹	65
Conserve Essential Habitat for Peninsular bighorn sheep – Recovery Zone 3	78	6	7 ²	65
Conserve desert dry wash woodland	38	6	3	29

¹ The acreage shown includes 5 Acres of Disturbance Authorized allocated for projects that may be approved in HANS areas and 2 acres of Take for projects in the 10 percent take area depicted on Figure 4-26e(2).

² The acreage shown consists of Acres of Disturbance allocated for projects that may be approved in HANS areas.

**Table 4-111f: Conservation and Take Authorization
for Santa Rosa and San Jacinto Mountains
Conservation Area – City of Palm Springs Area**

<i>Conservation Objective</i>	<i>Total Acres in Conservation Area</i>	<i>Existing Conservation Lands</i>	<i>Acres of Disturbance Authorized</i>	<i>Remaining Acres to be Conserved</i>
Conserve Other Cons. Habitat for Le Conte’s thrasher	793	130	103 ¹	560
Conserve Other Cons. Habitat for desert tortoise	22,571	12,398	1,317 ²	8,856
Conserve Essential Habitat for Peninsular bighorn sheep – Recovery Zone 1	9,195	6,458	226 ³	2,511
Conserve Essential Habitat for Peninsular bighorn sheep – Recovery Zone 2	18,426	12,860	866 ⁴	4,700
Conserve Other Cons. Habitat for gray vireo	8,416	4,102	431	3,883
Conserve southern arroyo willow riparian forest	16	16	0	0

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Table 4-111f (cont.)

Conservation Objective	Total Acres in Conservation Area	Existing Conservation Lands	Acres of Disturbance Authorized	Remaining Acres to be Conserved
Conserve Sonoran cottonwood-willow riparian forest	58	0	0 (0) ⁵	58
Conserve southern sycamore-alder riparian woodland	30	6	(2) ⁶	24
Conserve desert dry wash woodland	40	0	4	36
Conserve desert fan palm oasis woodland	218	133	9	76
Conserve semi-desert chaparral	733	111	51	571
Conserve peninsular juniper woodland and scrub	7,682	4,152	353	3,177

¹ The acreage shown includes 62 Acres of Disturbance Authorized allocated for projects that may be approved in HANS areas, and 41 acres that may be used only in conjunction with the “special provisions” area described in Required Measure 2a.

² The acreage shown includes 768 Acres of Disturbance Authorized allocated for projects that may be approved in HANS areas, 59 acres that may be used only in conjunction with the “special provisions” area described in Required Measure 2a, and 490 acres that may be used only in conjunction with the “special provisions” area described in Required Measure 2c.

³ The acreage shown includes 129 Acres of Disturbance Authorized allocated for projects that may be approved in HANS areas, 92 acres that may be used only in conjunction with the “special provisions” area described in Required Measure 2a, and 5 acres that may be used only in conjunction with the “special provisions” area described in Required Measure 2b.

⁴ The acreage shown includes 362 Acres of Disturbance Authorized allocated for projects that may be approved in HANS areas, and 504 acres that may be used only in conjunction with the “special provisions” area described in Required Measure 2c.

⁵ No disturbance is authorized because all 58 acres of this community occurs in an area to be conserved pursuant to the Special Provisions area described in Required Measure 2b.

⁶ Disturbance of no more than 2 acres may occur, but it would be replaced to ensure that the no net loss occurs and the Conservation Objective is achieved.

**Table 4-111g: Conservation and Take Authorization
for Santa Rosa and San Jacinto Mountains
Conservation Area – City of Rancho Mirage Area**

Conservation Objective	Total Acres in Conservation Area	Existing Conservation Lands	Acres of Disturbance Authorized	Remaining Acres to be Conserved
Conserve Other Cons. Habitat for Le Conte’s thrasher	19	0	2	17
Conserve Other Cons. Habitat for desert tortoise	5,249	3,776	147	1,326
Conserve Essential Habitat for Peninsular bighorn sheep – Recovery Zone 2	5,262	4,770	42 ¹	450
Conserve desert dry wash woodland	19	9	1	9

¹ The acreage shown includes 38 Acres of Disturbance Authorized allocated for projects that may be approved in HANS areas and 4 acres of Take for projects in the 10 percent take area designated on Figure 4-26e(2).

4.4 Required Avoidance, Minimization, and Mitigation Measures

This section describes certain avoidance, minimization, and mitigation requirements for Covered Activities within the Conservation Area, in addition to Conservation Area specific measures described in the Conservation Area subsections in Section 4.3. The measures described in this section do not apply to single-family homes, emergency response activities, and any non-commercial accessory uses and structures including but not limited to second units on an existing legal lot. To assist Permittees with implementation of these measures, CVCC will maintain maps of modeled Habitat and a natural communities map and will provide them to each of the Permittees. CVCC will also maintain a list of Acceptable Biologists who may be used to conduct surveys for specified Covered Species identified in this section. Any Permittee may submit the names of biologists for inclusion in the initial list of Acceptable Biologists. The list shall be updated at least annually. CVCC will develop procedures for individual biologists to submit their name for inclusion on the list. Individuals conducting survey activities for listed endangered or threatened species or species for which a state or federal protocol exists must have the appropriate permit (i.e., in accordance with the federal Endangered Species Act, Section 10(a)(1)(A), or state Endangered Species Act, California Fish and Game Code, Section 2081(a)) to conduct such surveys. Annually, or whenever the list is revised, CVCC shall submit the list to the Wildlife Agencies for review. The Wildlife Agencies shall have thirty (30) days to provide input on the qualifications of any biologists on the list. If the Wildlife Agencies have not responded within thirty days (30) of receipt of the list from CVCC, the biologists on the list shall be deemed acceptable.

In the event that a survey of a parcel is required pursuant to the MSHCP, it will be conducted by an Acceptable Biologist. The survey shall be conducted in the appropriate season, in accordance with established accepted protocols if they exist. Within one (1) year of Permit issuance, the Wildlife Agencies and the MPA, in consultation with CVCC, shall develop survey protocols for those species for which a protocol is required. CVCC will maintain a list of accepted survey protocols. For those species for which protocols do not exist at the time surveys are needed, the Acceptable Biologist shall use a survey protocol generally accepted by biologists familiar with the species. Survey results shall be documented in both mapped and text form and shall be presented for review by the appropriate Permittee and CVCC. Wildlife Agencies' concurrence or acceptance of the surveys and/or the results contained therein is not required by the MSHCP.

Biological Corridors. Specific roads in Conservation Areas, where culverts or undercrossings are required to maintain Biological Corridors, are delineated in the Section 4.3 subsections on individual Conservation Areas.

Burrowing Owl. This measure does not apply to single-family residences and any non-commercial accessory uses and structures including but not limited to second units on an existing legal lot, or to O&M of Covered Activities other than levees, berms, dikes, and

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similar features that are known to contain burrowing owl burrows. O&M of roads is not subject to this requirement. For other projects that are subject to CEQA, the Permittees will require burrowing owl surveys in the Conservation Areas using an accepted protocol (as determined by the CVCC in coordination with the Permittees and the Wildlife Agencies). Prior to Development, the construction area and adjacent areas within 500 feet of the Development site, or to the edge of the property if less than 500 feet, will be surveyed by an Acceptable Biologist for burrows that could be used by burrowing owl. If a burrow is located, the biologist will determine if an owl is present in the burrow. If the burrow is determined to be occupied, the burrow will be flagged and a 160-foot buffer during the non-breeding season and a 250-foot buffer during the breeding season, or a buffer to the edge of the property boundary if less than 500 feet, will be established around the burrow. The buffer will be staked and flagged. No Development or O&M activities will be permitted within the buffer until the young are no longer dependent on the burrow.

If the burrow is unoccupied, the burrow will be made inaccessible to owls, and the Covered Activity may proceed. If either a nesting or escape burrow is occupied, owls shall be relocated pursuant to accepted Wildlife Agency protocols. A burrow is assumed occupied if records indicate that, based on surveys conducted following protocol, at least one burrowing owl has been observed occupying a burrow on site during the past three years. If there are no records for the site, surveys must be conducted to determine, prior to construction, if burrowing owls are present. Determination of the appropriate method of relocation, such as eviction/passive relocation or active relocation, shall be based on the specific site conditions (e.g., distance to nearest suitable habitat and presence of burrows within that habitat) in coordination with the Wildlife Agencies. Active relocation and eviction/passive relocation require the preservation and maintenance of suitable burrowing owl habitat determined through coordination with the Wildlife Agencies.

Within one (1) year of Permit issuance, CVCC will cooperate with County Flood Control, CVWD and IID to conduct an inventory of levees, berms, dikes, and similar features in the Plan Area maintained by those Permittees. Burrowing owl burrow locations will be mapped and each of these Permittees will incorporate the information into its O&M practices to avoid impacts to the burrowing owl to the maximum extent Feasible. CVCC in cooperation with County Flood Control, CVWD, and IID will prepare a manual for maintenance staff, educating them about the burrowing owl and appropriate actions to take when owls are encountered to avoid impacts to the maximum extent Feasible. The manual will be submitted to the Wildlife Agencies for review and comment within two (2) years of Permit issuance. In conjunction with the Monitoring Program, the maps of the burrowing owl locations along the above-described levees, berms, dikes, and similar features will be periodically updated.

Covered Riparian Bird Species. This measure does not apply to single-family residences and any non-commercial accessory uses and structures including but not limited to second units on an existing legal lot. Riparian Habitat here refers to the following natural communities: southern arroyo willow riparian forest, Sonoran cottonwood-willow riparian forest, desert fan palm oasis woodland, and southern sycamore-alder riparian woodland in the Cabazon, Stubbe and Cottonwood Canyons, Whitewater Canyon, Upper Mission

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Creek/Big Morongo Canyon, Thousand Palms, Indio Hills Palms, Joshua Tree National Park, Mecca Hills and Orocopia Mountains, Dos Palmas, Coachella Valley Stormwater Channel and Delta, and Santa Rosa and San Jacinto Mountains Conservation Areas. Covered Activities, including O&M of facilities and construction of permitted new projects, in riparian Habitat will be conducted to the maximum extent Feasible outside of the March 15 – September 15 nesting season for least Bell's vireo, and the May 1 – September 15 nesting season for southwestern willow flycatcher, summer tanager, yellow warbler, and yellow-breasted chat. If Covered Activities must occur during the nesting season, surveys shall be conducted to determine if any active nests are present. If active nests are identified, the Covered Activity shall not be conducted within 200 feet of an active nest. If surveys conducted during the nesting season document that Covered nesting riparian bird Species are not present, the Covered Activity may proceed.

Crissal Thrasher. This measure does not apply to single-family residences and any non-commercial accessory uses and structures including but not limited to second units on an existing legal lot, or to O&M of Covered Activities. In modeled crissal thrasher Habitat in the Willow Hole, Thousand Palms, Indio Hills Palms, East Indio Hills, Dos Palmas, and Coachella Valley Stormwater Channel and Delta Conservation Areas, surveys will be conducted by an Acceptable Biologist prior to the start of construction activities during the nesting season, January 15 – June 15, to determine if active nest sites for this species occur on the construction site and/or within 500 feet of the construction site, or to the edge of the property boundary if less than 500 feet. If nesting crissal thrashers are found, a 500-foot buffer, or a buffer to the edge of the property boundary if less than 500 feet, will be established around the nest site. The buffer will be staked and flagged. No construction activities will be permitted within the buffer during the breeding season of January 15 – June 15 or until the young have fledged.

Desert tortoise. This measure does not apply to single-family residences and any non-commercial accessory uses and structures, including but not limited to second units on an existing legal lot, or to O&M of Covered Activities for Permittee infrastructure facilities. Within Conservation Areas, the Permittees will require surveys for desert tortoise for Development in modeled desert tortoise Habitat. Prior to Development, an Acceptable Biologist will conduct a presence/absence survey of the Development area and adjacent areas within 200 feet of the Development area, or to the property boundary if less than 200 feet and permission from the adjacent landowner cannot be obtained, for fresh sign of desert tortoise, including live tortoises, tortoise remains, burrows, tracks, scat, or egg shells. The presence/absence survey must be conducted during the window between February 15 and October 31. Presence/absence surveys require 100% coverage of the survey area. If no sign is found, a clearance survey is not required. A presence/absence survey is valid for 90 days or indefinitely if tortoise-proof fencing is installed around the Development site.

If fresh sign is located, the Development area must be fenced with tortoise-proof fencing and a clearance survey conducted during the clearance window. Desert tortoise clearance surveys shall be conducted during the clearance window from February 15 to June 15 and September 1 to October 31 or in accordance with the most recent Wildlife Agency protocols. Clearance surveys must cover 100% of the Development area. A

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clearance survey must be conducted during different tortoise activity periods (morning and afternoon). All tortoises encountered will be moved from the Development site to a specified location. Prior to issuance of the Permits, CVCC will either use the *Permit Statement Pertaining to High Temperatures for Handling Desert Tortoises* and *Guidelines for Handling Desert Tortoises During Construction Projects*, revised July 1999, or develop a similar protocol for relocation and monitoring of desert tortoise, to be reviewed and approved by the Wildlife Agencies. Thereafter, the protocol will be revised as needed based on the results of monitoring and other information that becomes available.

For O&M activities in the Conservation Areas, the Permittees shall ensure that personnel conducting such activities are instructed to be alert for the presence of desert tortoise. If a tortoise is spotted, activities adjacent to the tortoise's location will be halted and the tortoise will be allowed to move away from the activity area. If the tortoise is not moving, it will be relocated by an Acceptable Biologist to nearby suitable Habitat and placed in the shade of a shrub. To the maximum extent Feasible, O&M activities will avoid the period from February 15 and October 31.

Utility development protocols have been developed to avoid or minimize potential adverse impacts to the desert tortoise in the Conservation Areas from utility and road right-of-way projects, such as the installation and maintenance of water, sewer, and electric lines and roadway maintenance. The objectives of these protocols are to provide reliable and consistent direction on utility development within the Conservation Areas. Two utility development protocols, inactive and active season, provide specific direction on site preparation and construction phases of utility projects in the Conservation Areas. The protocols include steps to be followed during the desert tortoise active and/or inactive season. The inactive season protocol must be used for utility maintenance or development within the November 1 to February 14 time frame; the active season protocol must be used for utility maintenance or development within the February 15 to October 31 time frame. Deviations from these time frames must be presented to the RMOC.

Inactive Season Protocol. This protocol is applicable to pre-construction and construction phases of utility Covered Activity projects occurring between November 1 and February 14. These protocols apply only to the site preparation and construction phases of projects. The project proponent must follow the eight pre-construction protocol requirements listed below.

1. A person from the entity contracting the construction shall act as the contact person with the representative of the appropriate RMUC. He/she will be responsible for overseeing compliance with the protective stipulations as stated in this protocol.
2. Prior to any construction activity within the Conservation Areas, the contact person will meet with the representative of the appropriate RMUC to review the plans for the project. The representative of the appropriate RMUC will review alignment, pole spacing, clearing limits, burrow locations, and other specific project plans which have the potential to affect the desert tortoise. He or she may recommend modifications to the contact person to further avoid or minimize potential impacts to desert tortoise.

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3. The construction area shall be clearly fenced, marked, or flagged at the outer boundaries to define the limits of construction activities. The construction right-of-way shall normally not exceed 50 feet in width for standard pipeline corridors, access roads and transmission corridors, and shall be minimized to the maximum extent Feasible. Existing access roads shall be used when available, and rights-of-way for new and existing access roads shall not exceed 20 feet in width unless topographic obstacles require greater road width. Other construction areas including well sites, storage tank sites, substation sites, turnarounds, and laydown/staging sites which require larger areas will be determined in the pre-construction phase. All construction workers shall be instructed that their activities shall be confined to locations within the fenced, flagged, or marked areas.
4. An Acceptable Biologist shall conduct pre-construction clearance surveys of all areas potentially disturbed by the proposed project. Any winter burrows discovered in the Conservation Areas during the pre-construction survey shall be avoided or mitigated. The survey shall be submitted to the representative of the appropriate RMUC as part of plan review.
5. All site mitigation criteria shall be determined in the pre-construction phase, including but not limited to seeding, barrier fences, leveling, and laydown/staging areas, and will be reviewed by the representative of the appropriate RMUC prior to implementation.
6. A worker education program shall be implemented prior to the onset of each construction project. All construction employees shall be required to read an educational brochure prepared by the representative of the appropriate RMUC and/or the RMOC and attend a tortoise education class prior to the onset of construction or site entry. The class will describe the sensitive species which may be found in the area, the purpose of the MSHCP Reserve System, and the appropriate measures to take upon discovery of a sensitive species. It will also cover construction techniques to minimize potential adverse impacts.
7. All pre-construction activities which could Take tortoises in any manner (e.g., driving off an established road, clearing vegetation, etc.) shall occur under the supervision of an Acceptable Biologist.
8. If there are unresolvable conflicts between the representative of the appropriate RMUC and the contact person, then the matter will be arbitrated by the RMOC and, if necessary, by CVCC.

The following terms are established to protect the desert tortoise during utility-related construction activities in the Conservation Areas and are to be conducted by an Acceptable Biologist.

- An Acceptable Biologist shall oversee construction activities to ensure compliance with the protective stipulations for the desert tortoise.
- Desert tortoises found above ground inside the project area during construction shall be moved by an Acceptable Biologist out of harm's way and placed in a winter

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den (at a distance no greater than 250 feet). If a winter den cannot be located, the USFWS or CDFG shall determine appropriate action with respect to the tortoise. Tortoises found above ground shall be turned over to the Acceptable Biologist

- No handling of tortoises will occur when the air temperature at 15 centimeters above ground exceeds 90 degrees Fahrenheit.
- Desert tortoise burrows shall be avoided to the maximum extent Feasible. An Acceptable Biologist shall excavate any burrows which cannot be avoided and will be disturbed by construction. Burrow excavation shall be conducted with the use of hand tools only, unless the Acceptable Biologist determines that the burrow is unoccupied immediately prior to burrow destruction.
- Only burrows within the limits of clearing and surface disturbance shall be excavated. Burrows outside these limits, but at risk from accidental crushing, shall be protected by the placement of deterrent barrier fencing between the burrow and the construction area. Installation and removal of such barrier fencing shall be under the direction and supervision of an Acceptable Biologist.
- For electrical transmission line and road construction projects, only burrows within the right-of-way shall be excavated. Burrows outside the right-of-way, but at risk from accidental crushing, shall be protected by the placement of deterrent barrier fencing between the burrow and the right-of-way. Installation and removal of such barrier fencing shall be under the direction and supervision of an Acceptable Biologist.
- Tortoises in the Conservation Areas are not to be removed from burrows until appropriate action is determined by USFWS or CDFG with respect to the tortoise. The response shall be carried out within 72 hours.
- Blasting is not permissible within 100 feet of an occupied tortoise burrow.

During construction, contractors will comply with the mitigation and minimization measures contained within this protocol. These measures are:

- All trenches, pits, or other excavations shall be inspected for tortoises by an Acceptable Biologist prior to filling.
- All pipes and culverts stored within desert tortoise Habitat shall have both ends capped to prevent entry by desert tortoises. During construction, all open ended pipeline segments that are welded in place shall be capped during periods of construction inactivity to prevent entry by desert tortoises.
- Topsoil removed during trenching shall be re-spread on the pipeline construction area following compaction of the backfill. The area shall be restored as determined during the environmental review.
- All test pump water will be routed to the nearest wash or natural drainage. The route will be surveyed by an Acceptable Biologist. If tortoises are found in the drainage area the Acceptable Biologist will remove the tortoises.
- Powerlines associated with water development, such as to provide power for

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pumps, should be buried underground adjacent to the pipe. All above ground structures deemed to be necessary shall be equipped with functional anti-perching devices that would prevent their use by ravens and other predatory birds, and shall adhere to the electrical distribution protocol which follows.

- In order to perform routine O&M of the water systems such as wells, pumps, water lines and storage tanks, etc., employees are to be trained in the area of desert tortoise education. This training will be performed on a regular basis by an Acceptable Biologist for those personnel not previously trained. The training will include at a minimum the following: identification of tortoises, burrows, and other sign; and instructions on installing tortoise barrier fencing. During the course of basic O&M, desert tortoise will be avoided. Untrained employees shall not perform maintenance operations within the reserve.
- All disturbance areas around poles or concrete pads will be reduced to a size just large enough for the construction activity.
- Areas disturbed around poles or construction pads will be restored as determined during the pre-construction process.
- Poles or other above ground structures necessary for electrical distribution development shall be minimized as much as possible. All above ground structures shall be equipped with functional anti-perching devices that would prevent their use by ravens and other predatory birds.
- In order to perform routine O&M of the electrical distribution systems such as transmission lines and poles, substations, etc., employees are to be trained in the area of desert tortoise education. This training will be performed on a regular basis by a qualified biologist for those personnel not previously trained. The training will include at a minimum the following: identification of tortoises, burrows, and other sign; and instructions on installing tortoise barrier fencing. During the course of basic O&M, desert tortoise will be avoided. Untrained employees shall not perform maintenance operations within the non-Take areas.
- All trash and food items shall be promptly contained and removed daily from the project site to reduce the attractiveness of the area to common ravens and other desert tortoise predators.
- Construction activities which occur between dusk and dawn shall be limited to areas which have already been cleared of desert tortoises by the Acceptable Biologist and graded or located in a fenced right-of-way. Construction activities shall not be permitted between dusk and dawn in areas not previously graded.

Active Season Protocol. This protocol is applicable to pre-construction and construction phases of utility development projects occurring between February 15 and November 1. It is identical to the Inactive Season Protocol with the following additions:

- Work areas shall be inspected for desert tortoises within 24 hours of the onset of construction. To facilitate implementation of this condition, burrow inspection and excavation may begin no more than seven (7) days in advance of construction

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activities, as long as a final check for desert tortoises is conducted at the time of construction.

- All pre-construction activities which could Take tortoises in any manner (e.g., driving off an established road, clearing vegetation, etc.) shall occur under the overall supervision of an Acceptable Biologist. Any hazards to tortoises created by this activity, such as drill holes, open trenches, pits, other excavations, or any steep-sided depressions, shall be checked three times a day for desert tortoises. These hazards shall be eliminated each day prior to the work crew leaving the site, which may include installing a barrier that will preclude entry by tortoises. Open trenches, pits or other excavations will be backfilled within 72 hours, whenever possible. A 3:1 slope shall be left at the end of every open trench to allow trapped desert tortoises to escape. Trenches not backfilled within 72 hours shall have a barrier installed around them to preclude entry by desert tortoises. All trenches, pits, or other excavations shall be inspected for tortoises by a biological monitor trained and approved by the Acceptable Biologist prior to filling.
- If a desert tortoise is found, the biological monitor shall notify the Acceptable Biologist who will remove the animal as soon as possible.
- Only burrows within the limits of clearing and surface disturbance shall be excavated. Burrows outside these limits, but at risk from accidental crushing, shall be protected by the placement of deterrent barrier fencing between the burrow and the construction area. The barrier fence shall be at least 20 feet long and shall be installed to direct the tortoise leaving the burrow away from the construction area. Installation and removal of such barrier fencing shall be under the direction and supervision of the biological monitor.
- If blasting is necessary for construction, all tortoises shall be removed from burrows within 100 feet of the blast area.

Disposition of Sick, Injured, or Dead Specimens. Upon locating dead, injured, or sick desert tortoises under any utility or road project, initial notification by the contact representative or Acceptable Biologist must be made to the USFWS or CDFG within three (3) working days of its finding. Written notification must be made within five (5) calendar days with the following information: date; time; location of the carcass; photograph of the carcass; and any other pertinent information. Care must be taken in handling sick or injured animals to ensure effective treatment and care. Injured animals shall be taken care of by the Acceptable Biologist or an appropriately trained veterinarian. Should any treated tortoises survive, USFWS or CDFG should be contacted regarding the final disposition of the animals.

Fluvial Sand Transport. Activities, including O&M of facilities and construction of permitted new projects, in fluvial sand transport areas in the Cabazon, Stubbe and Cottonwood Canyons, Snow Creek/Windy Point, Whitewater Canyon, Whitewater Floodplain, Upper Mission Creek/Big Morongo Canyon, Mission Creek/Morongo Wash, Willow Hole, Long Canyon, Edom Hill, Thousand Palms, West Deception Canyon, and

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Indio Hills/Joshua Tree National Park Linkage Conservation Areas will be conducted in a manner to maintain the fluvial sand transport capacity of the system.

Le Conte's Thrasher. This measure does not apply to single-family residences and any non-commercial accessory uses and structures including but not limited to second units on an existing legal lot, or to O&M of Covered Activities. In modeled Le Conte's thrasher Habitat in all the Conservation Areas, during the nesting season, January 15 - June 15, prior to the start of construction activities, surveys will be conducted by an Acceptable Biologist on the construction site and within 500 feet of the construction site, or to the property boundary if less than 500 feet. If nesting Le Conte's thrashers are found, a 500 foot buffer, or to the property boundary if less than 500 feet, will be established around the nest site. The buffer will be staked and flagged. No construction will be permitted within the buffer during the breeding season of January 15 - June 15 or until the young have fledged.

Mesquite Hummocks and Mesquite Bosque Natural Communities. This measure does not apply to single-family residences and any non-commercial accessory uses and structures including but not limited to second units on an existing legal lot, or to O&M of Covered Activities. Construction activities in the Cabazon, Willow Hole, Thousand Palms, Indio Hills Palms, East Indio Hills, Dos Palmas, Coachella Valley Stormwater Channel and Delta, and Santa Rosa and San Jacinto Mountains Conservation Areas will avoid mesquite hummocks and mesquite bosque to the maximum extent Feasible.

Peninsular Bighorn Sheep Habitat. Completion of Covered Activities in Peninsular bighorn sheep Habitat in the Cabazon, Snow Creek/Windy Point, and Santa Rosa and San Jacinto Mountains Conservation Areas will be conducted outside of the January 1 - June 30 lambing season unless otherwise authorized through a Minor Amendment to the Plan with concurrence from the Wildlife Agencies. O&M of Covered Activities, including but not limited to refinishing the inside of water storage tanks, shall be scheduled to avoid the lambing season, but may extend into the January 1 – June 30 period if necessary to complete the activity, upon concurrence with the Wildlife Agencies.

For new projects in the above listed Conservation Areas, no toxic or invasive plant species may be used for landscaping. For existing public infrastructure facilities which have landscaping in Peninsular bighorn sheep Habitat in the Cabazon, Snow Creek/Windy Point, and Santa Rosa and San Jacinto Mountains Conservation Areas, the Permittees who have such facilities will, with respect to those facilities, develop and implement a plan and schedule to remove or prevent access to oleander and any other plants known to be toxic to Peninsular bighorn sheep. The plan and schedule will be prepared within one (1) year of Permit issuance.

Triple-ribbed milkvetch. This measure does not apply to single-family residences and any non-commercial accessory uses and structures including but not limited to second units on an existing legal lot, or to O&M of Covered Activities. It is understood that O&M for infrastructure developed as part of a private development approved in compliance with the MSHCP that is later transferred to a public entity is included as a Covered Activity. For

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Covered Activities within modeled triple-ribbed milkvetch Habitat in the Whitewater Canyon, Whitewater Floodplain, Upper Mission Creek/Big Morongo Canyon, and Santa Rosa and San Jacinto Mountains Conservation Areas, surveys by an Acceptable Biologist will be required for activities during the growing and flowering period from February 1 - May 15. Any occurrences of the species will be flagged and public infrastructure projects shall avoid impacts to the plants to the maximum extent Feasible. In particular, known occurrences on a map maintained by CVCC shall not be disturbed.

Palm Springs Pocket Mouse. To avoid impacts to the Palm Springs pocket mouse and its habitat in the Upper Mission Creek/Big Morongo Canyon and Willow Hole Conservation Areas, Flood Control-related construction activities will comply with the following avoidance and minimization measures.

- **Clearing:** For construction that would involve disturbance to Palm Springs pocket mouse habitat, activity should be phased to the extent feasible and practicable so that suitable habitat islands are no farther than 300 feet apart at any given time to allow pocket mice to disperse between habitat patches across non-suitable habitat (i.e., unvegetated and/or compacted soils). Prior to project construction, a biological monitor familiar with this species should assist construction crews in planning access routes to avoid impacts to occupied habitat as much as feasible (i.e., placement of preferred routes on project plans and incorporation of methods to avoid as much suitable habitat/soil disturbance as possible). Furthermore, during construction activities, the biological monitor will ensure that connected, naturally vegetated areas with sandy soils and typical native vegetation remain intact to the extent feasible and practicable. Finally, construction that involves clearing of habitat should be avoided during the peak breeding season (approximately March to May), and activity should be limited as much as possible during the rest of the breeding season (January to February and June to August).
- **Revegetation:** Clearing of native vegetation (e.g., creosote, rabbitbrush, burrobush, cheesebush) should be followed by revegetation, including natural reestablishment and other means, resulting in habitat types of equal or superior biological value for Palm Springs pocket mouse.
- **Trapping/Holding:** All trapping activity should be conducted in accordance with accepted protocols and by a qualified biologist who possesses a Memorandum of Understanding with CDFG for live-trapping of heteromyid species in Southern California.
- **Translocation:** Should translocation between distinct population groups be necessary, as determined through the Adaptive Management and Monitoring Program, activity should be conducted by a qualified biologist who possesses a Memorandum of Understanding with CDFG for live-trapping of heteromyid species in Southern California. Trapping and subsequent translocation activity should be conducted in accordance with accepted protocols. Translocation programs should be coordinated by or conducted by the CVCC and/or RMOC to determine the appropriate trapping, holding, marking, and handling methods and potential translocation sites.

Little San Bernardino Mountains Linanthus. This measure does not apply to single-family residences and any non-commercial accessory uses and structures, including but not limited to second units on an existing legal lot, or to O&M of Covered Activities. To avoid and minimize impacts to this species as much as possible, the following avoidance and minimization effort shall occur:

- **Salvage:** Salvage of top soil and/or seeds should occur prior to ground disturbance in accordance with Section 6.6.1. Salvage should be conducted by or in cooperation with the CVCC.

4.5 Land Use Adjacency Guidelines

The purpose of Land Use Adjacency Guidelines is to avoid or minimize indirect effects from Development adjacent to or within the Conservation Areas. Adjacent means sharing a common boundary with any parcel in a Conservation Area. Such indirect effects are commonly referred to as edge effects, and may include noise, lighting, drainage, intrusion of people, and the introduction of non-native plants and non-native predators such as dogs and cats. Edge effects will also be addressed through reserve management activities such as fencing. The following Land Use Adjacency Guidelines shall be considered by the Permittees in their review of individual public and private Development projects adjacent to or within the Conservation Areas to minimize edge effects, and shall be implemented where applicable.

4.5.1 Drainage

Proposed Development adjacent to or within a Conservation Area shall incorporate plans to ensure that the quantity and quality of runoff discharged to the adjacent Conservation Area is not altered in an adverse way when compared with existing conditions. Stormwater systems shall be designed to prevent the release of toxins, chemicals, petroleum products, exotic plant materials or other elements that might degrade or harm biological resources or ecosystem processes within the adjacent Conservation Area.

4.5.2 Toxics

Land uses proposed adjacent to or within a Conservation Area that use chemicals or generate bioproducts such as manure that are potentially toxic or may adversely affect wildlife and plant species, Habitat, or water quality shall incorporate measures to ensure that application of such chemicals does not result in any discharge to the adjacent Conservation Area.

4.5.3 Lighting

For proposed Development adjacent to or within a Conservation Area, lighting shall be shielded and directed toward the developed area. Landscape shielding or other appropriate methods shall be incorporated in project designs to minimize the effects of lighting adjacent to or within the adjacent Conservation Area in accordance with the guidelines to be included in the Implementation Manual.

4.5.4 Noise

Proposed Development adjacent to or within a Conservation Area that generates noise in excess of 75 dBA L_{eq} hourly shall incorporate setbacks, berms, or walls, as appropriate, to minimize the effects of noise on the adjacent Conservation Area in accordance with the guidelines to be included in the Implementation Manual.

4.5.5 Invasives

Invasive, non-native plant species shall not be incorporated in the landscape for land uses adjacent to or within a Conservation Area. Landscape treatments within or adjacent to a Conservation Area shall incorporate native plant materials to the maximum extent Feasible; recommended native species are listed in Table 4-112. The plants listed in Table 4-113 shall not be used within or adjacent to a Conservation Area. This list may be amended from time to time through a Minor Amendment with Wildlife Agency Concurrence.

**Table 4-112: Coachella Valley Native Plants
Recommended for Landscaping¹**

BOTANICAL NAME	COMMON NAME
Trees	
<i>Washingtonia filifera</i>	California Fan Palm
<i>Cercidium floridum</i>	Blue Palo Verde
<i>Chilopsis linearis</i>	Desert Willow
<i>Olneya tesota</i>	Ironwood Tree
<i>Prosopis glandulosa var. torreyana</i>	Honey Mesquite
Shrubs	
<i>Acacia greggii</i>	Cat's Claw Acacia
<i>Ambrosia dumosa</i>	Burro Bush
<i>Atriplex canescens</i>	Four Wing Saltbush
<i>Atriplex lentiformis</i>	Quailbush
<i>Atriplex polycarpa</i>	Cattle Spinach
<i>Baccharis sergiloides</i>	Squaw Water-weed
<i>Bebia juncea</i>	Sweet Bush
<i>Cassia (Senna) covesii</i>	Desert Senna
<i>Condalia parryi</i>	Crucillo
<i>Crossosoma bigelovii</i>	Crossosoma
<i>Dalea emoryi</i>	Dye Weed
<i>Dalea (Psorothamnus) schottii</i>	Indigo Bush
<i>Datura meteloides</i>	Jimson Weed
<i>Encelia farinosa</i>	Brittle Bush
<i>Ephedra aspera</i>	Mormon Tea
<i>Eriogonum fasciculatum</i>	California Buckwheat
<i>Eriogonum wrightii membranaceum</i>	Wright's Buckwheat
<i>Fagonia laevis</i>	(No Common Name)
<i>Gutierrezia sarothrae</i>	Matchweed
<i>Haplopappus acradenius</i>	Goldenbush
<i>Hibiscus denudatus</i>	Desert Hibiscus
<i>Hoffmannseggia microphylla</i>	Rush Pea
<i>Hymenoclea salsola</i>	Cheesebush
<i>Hyptis emoryi</i>	Desert Lavender
<i>Isomeris arborea</i>	Bladder Pod
<i>Juniperus californica</i>	California Juniper
<i>Krameria grayi</i>	Ratany
<i>Krameria parvifolia</i>	Little-leaved Ratany
<i>Larrea tridentate</i>	Creosote Bush
<i>Lotus rigidus</i>	Desert Rock Pea
<i>Lycium andersonii</i>	Box Thorn
<i>Petalonyx linearis</i>	Long-leaved Sandpaper Plant
<i>Petalonyx thurberi</i>	Sandpaper Plant
<i>Peucephyllum schottii</i>	Pygmy Cedar
<i>Prunus fremontii</i>	Desert Apricot
<i>Rhus ovata</i>	Sugar-bush
<i>Salazaria mexicana</i>	Paper-bag Bush

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Table 4-112 (cont.)

BOTANICAL NAME	COMMON NAME
<i>Salvia apiana</i>	White Sage
<i>Salvia eremostachya</i>	Santa Rosa Sage
<i>Salvia vaseyi</i>	Wand Sage
<i>Simmondsia chinensis</i>	Jojoba
<i>Sphaeralcea ambigua</i>	Globemallow (Desert Mallow)
<i>Sphaeralcea ambigua rosacea</i>	Apricot Mallow
<i>Trixis californica</i>	Trixis
<i>Zauschneria californica</i>	California Fuchsia
Groundcovers	
<i>Mirabilis bigelovii</i>	Wishbone Bush (Four O'Clock)
<i>Mirabilis tenuiloba</i>	White Four O'Clock (Thin-lobed)
Vines	
<i>Vitis girdiana</i>	Desert Grape
Accent	
<i>Muhlenbergia rigens</i>	Deer Grass
Herbaceous Perennials²	
<i>Adiantum capillus-veneris</i>	Maiden-hair Fern (w)
<i>Carex alma</i>	Sedge (w)
<i>Dalea parryi</i>	Parry Dalea
<i>Eleocharis montevidensis</i>	Spike Rush (w)
<i>Equisetum laevigatum</i>	Horsetail (w)
<i>Juncus bufonis</i>	Toad Rush (w)
<i>Juncus effuses</i>	Juncus (w)
<i>Juncus macrophyllus</i>	Juncus (w)
<i>Juncus mexicanus</i>	Mexican Rush (w)
<i>Juncus xiphioides</i>	Juncus (w)
<i>Notholaena parryi</i>	Parry Cloak Fern
<i>Pallaea mucronata</i>	Bird-foot Fern
Cacti and Succulents	
<i>Agave deserti</i>	Desert Agave
<i>Asclepias albicans</i>	Desert Milkweed (Buggy-whip)
<i>Asclepias subulata</i>	Ajamete
<i>Dudleya arizonica</i>	Live-forever
<i>Dudleya saxosa</i>	Rock Dudleya
<i>Echinocereus engelmannii</i>	Calico Hedgehog Cactus
<i>Ferocactus acanthodes</i>	Barrel Cactus
<i>Fouquieria splendens</i>	Ocotillo
<i>Mamillaria dioica</i>	Nipple Cactus
<i>Mamillaria tetrancistra</i>	Corkseed Cactus
<i>Nolina parryi</i>	Parry Nolina
<i>Opuntia acanthocarpa</i>	Stag-horn or Deer-horn Cholla
<i>Opuntia bigelovii</i>	Teddy Bear or Jumping Cholla
<i>Opuntia basilaris</i>	Beavertail Cactus
<i>Opuntia echinocarpa</i>	Silver or Golden Cholla
<i>Opuntia ramosissima</i>	Pencil Cholla, Darning Needle Cholla

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Table 4-112 (cont.)

BOTANICAL NAME	COMMON NAME
<i>Yucca schidigera</i>	Mojave Yucca, Spanish Dagger
<i>Yucca whipplei</i>	Our Lord's Candle

¹ Source: "Coachella Valley Native Plants, Excluding Annuals (0 ft. to approximately 3,000 ft. elevation)." Compiled by Dave Heveron, Garden Collections Manager, and Kirk Anderson, Horticulturist, The Living Desert, May, 2000, for the Coachella Valley Mountains Conservancy.

² Common names for herbaceous perennials that are followed by "(w)" indicate a water or riparian species.

Table 4-113: Prohibited Invasive Ornamental Plants¹

BOTANICAL NAME	COMMON NAME
<i>Acacia</i> spp. (all species except <i>A. greggii</i>)	Acacia (all species except native catclaw acacia)
<i>Arundo donax</i> (✓)	Giant Reed or Arundo Grass
<i>Atriplex semibaccata</i> (✓)	Australian Saltbush
<i>Avena barbata</i>	Slender Wild Oat
<i>Avena fatua</i>	Wild Oat
<i>Brassica tournefortii</i> (✓✓)	African or Saharan Mustard
<i>Bromus madritensis</i> ssp. <i>rubens</i> (✓)	Red Brome
<i>Bromus tectorum</i> (✓✓)	Cheat Grass or Downy Brome
<i>Cortaderia jubata</i> [syn. <i>C. atacamensis</i>]	Jubata Grass or Andean Pampas Grass
<i>Cortaderia dioica</i> [syn. <i>C. selloana</i>]	Pampas Grass
<i>Descurainia sophia</i>	Tansy Mustard
<i>Eichhornia crassipes</i>	Water Hyacinth
<i>Elaeagnus angustifolia</i>	Russian Olive
<i>Foeniculum vulgare</i>	Sweet Fennel
<i>Hirschfeldia incana</i>	Mediterranean or Short-pod Mustard
<i>Lepidium latifolium</i>	Perennial Pepperweed
<i>Lolium multiflorum</i>	Italian Ryegrass
<i>Nerium oleander</i>	Oleander
<i>Nicotiana glauca</i> (✓)	Tree Tobacco
<i>Oenothera berlandieri</i> (#)	Mexican Evening Primrose
<i>Olea europea</i>	European Olive Tree
<i>Parkinsonia aculeata</i> (✓)	Mexican Palo Verde
<i>Pennisetum clandestinum</i>	Kikuyu Grass
<i>Pennisetum setaceum</i> (✓✓)	Fountain Grass
<i>Phoenix canariensis</i> (#)	Canary Island Date Palm
<i>Phoenix dactylifera</i> (#)	Date Palm
<i>Ricinus communis</i> (✓)	Castorbean
<i>Salsola tragus</i> (✓)	Russian Thistle
<i>Schinus molle</i>	Peruvian Pepper Tree or California Pepper
<i>Schinus terebinthifolius</i>	Brazilian Pepper Tree
<i>Schismus arabicus</i>	Mediterranean Grass
<i>Schismus barbatus</i> (✓✓)	Saharan Grass, Abu Mashi
<i>Stipa capensis</i> (✓✓)	No Common Name
<i>Tamarix</i> spp. (all species) (✓✓)	Tamarisk or Salt Cedar
<i>Taeniatherum caput-medusae</i>	Medusa-head

Table 4-113 (cont.)

BOTANICAL NAME	COMMON NAME
<i>Tribulus terrestris</i>	Puncturevine
<i>Vinca major</i>	Periwinkle
<i>Washingtonia robusta</i>	Mexican fan palm
<i>Yucca gloriosa</i> (#)	Spanish Dagger

¹ Sources: California Exotic Pest Plant Council, United States Department of Agriculture-Division of Plant Health and Pest Prevention Services, California Native Plant Society, Fremontia Vol. 26 No. 4, October 1998, The Jepson Manual; Higher Plants of California, and County of San Diego Department of Agriculture.

Key to Table 4-113:

- # indicates species not on CalEPPC October 1999 “Exotic Pest Plants of Greatest Ecological Concern in California” list
- ✓ indicates species known to be invasive in the Plan Area
- ✓✓ indicates particularly troublesome invasive species

4.5.6 Barriers

Land uses adjacent to or within a Conservation Area shall incorporate barriers in individual project designs to minimize unauthorized public access, domestic animal predation, illegal trespass, or dumping in a Conservation Area. Such barriers may include native landscaping, rocks/boulders, fencing, walls and/or signage.

4.5.7 Grading/Land Development

Manufactured slopes associated with site Development shall not extend into adjacent land in a Conservation Area.

4.6 Impact and Anticipated Levels of Take and Habitat Loss

This section summarizes anticipated Take levels. The information is necessary to assess the Plan's impacts on the Covered Species and the conserved natural communities and to delineate the extent of Take authorized under the permits. A full discussion of the Plan's effects on the Covered Species and conserved natural communities is found in the EIR/EIS accompanying the Plan.

In the Plan, anticipated Take for Listed Species (animal species) for which Habitat distribution models have been developed is measured in terms of Habitat acres affected by the Covered Activities both outside and within the Conservation Areas. For purposes of this calculation, it is assumed that all non-federal lands outside the Conservation Areas may be subject to Take. This represents a worst-case scenario, and Take or Habitat loss at that level is not likely to occur within the 75-year term of the Take Permits. The acres of Take or Habitat loss were determined by overlaying Habitat maps with the Plan Area map, and

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calculating the Habitat areas outside the Conservation Areas. In addition, a small percentage of Take can occur within the Conservation Areas under the Plan. The amount of such Take or Habitat loss has been calculated for each species and natural community and included in Tables 4-114, and 4-115.

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Table 4-114: Potential Acres of Impact and Conservation of Covered Species with a Habitat Distribution Model ¹

Species ²	Total Acres of Habitat in the Plan Area (incl. federal lands)	Acres of Habitat in the Plan Area Subject to the Permit ³	Acres Authorized for Impact Outside the Conservation Areas⁴	Acres Authorized for Impact Inside the Conservation Areas⁵	Total Acres Authorized for Impact in the Plan Area⁶	Acres of Habitat within Existing Conservation Lands (ECL)⁷	Remaining Acres to be Conserved ⁸	Total Acres To be Conserved in MSHCP Reserve System⁹	Total Known Occurrences in the Plan Area/ Occurrences Conserved/ Total ECL/ Take¹⁰	Total Acres of modeled Habitat on federal land Outside the Conservation Areas
Mecca aster	63,163	21,070	4,968	1,360	6,328	42,436	12,231	54,667	21 / 16 / 10 / 5	2,146
CV milkvetch	36,398	30,210	14,084	1,306	15,390	7,707	11,652 (1,117) ¹	19,359	122 / 89 / 45 / 33	532
Triple-ribbed milkvetch	3,007	1,500	17	147	164	1,504	1,334	2,838	34 / 33 / 23 / 1	5
Orocopia sage	78,868	25,228	4,901	2,032	6,933	50,664	18,286	68,950	15 / 15 / 11 / 0	2,986
Little San Bernardino Mtns. linanthus	3,389	3,029	195	283	478	363	2,543	2,906	60 / 58 / 1 / 2	0
CV giant sand-treader cricket	27,070	22,500	12,903	779	13,682	5,999	6,998	12,997	20 / 14 / 10 / 6	355
CV Jerusalem cricket	22,811	20,209	9,032	959	9,991	3,429	8,618 (466) ¹	12,047	18 / 13 / 2 / 5	348
Desert pupfish	25.06	25.03	0.43	N/A	N/A	(45m ²)	25	25.05	31 / 31 / 6 / 0	0.002
Arroyo toad	2,095	759	10	78	88	1,301	706	2,007	1 / 1 / 0 / 0	0
Desert tortoise	571,098	240,247	49,501	17,120	66,621	345,899	146,519 (3,766) ¹	492,418	200 / 186 / 165 / 14	8,239
CV fringe-toed lizard	27,070	22,500	12,903	778	13,681	5,999	6,999	12,998	N/A	355
Flat-tailed horned lizard– predicted	32,426	26,966	16,735	830	17,565	6,574	7,334	13,908	24 / 18 / 12 / 6	972
Flat-tailed horned lizard– potential	5,161	4,053	1,483	247	1,730	940	2,263 (110) ¹	3,203	1/1	120
Yuma clapper rail	762	475	16	47	63	271	426	697	14 / 6 / 5 / 8	0
California black rail	675	475	16	43	59	230	386	616	4 / 4 / 1 / 0	0

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Table 4-114 (cont.)

Species ²	Total Acres of Habitat in the Plan Area (incl. federal lands)	Acres of Habitat in the Plan Area Subject to the Permit ³	Acres Authorized for Impact Outside the Conservation Areas ⁴	Acres Authorized for Impact Inside the Conservation Areas ⁵	Total Acres Authorized for Impact in the Plan Area ⁶	Acres of Habitat within Existing Conservation Lands (ECL) ⁷	Remaining Acres to be Conserved ⁸	Total Acres To be Conserved in MSHCP Reserve System ⁹	Total Known Occurrences in the Plan Area/ Occurrences Conserved/ Total ECL/ Take ¹⁰	Total Acres of modeled Habitat on federal land Outside the Conservation Areas
SW willow flycatcher - breeding	2,730	1,627	59	109	168	1,526	1,037	2,563	18 / 12 / 5 / 6	0
SW willow flycatcher - migratory	57,589	35,407	13,000	2,331	15,331	21,312	19,534	40,846	See breeding above ¹¹	1,358
Crissal thrasher	6,852	6,700	5,013	159	5,172	258	1,418	1,676	15 / 5 / 2 / 5	1
Le Conte's thrasher	243,242	179,174	87,235	8,639	95,979	59,252	73,463 (6,134) ¹	132,715	33 / 19 / 8 / 14	8,557
Least Bell's vireo - breeding	3,675	2,488	626	135	761	1,629	1,282	2,911	37 / 24 / 8 / 13	0
Least Bell's vireo - migratory	56,643	34,648	12,450	2,307	14,757	21,209	19,319	40,528	See breeding above ¹¹	1,358
Gray Vireo	105,562	22,336	2,447	1,466	3,913	88,350	13,194 (26)	101,544	2 / 2 / 1 / 0	75
Yellow warbler--breeding	2,730	1,627	59	109	168	1,526	1,037	2,563	23 / 17 / 7 / 6	0
Yellow warbler-- migratory	57,589	35,510	13,020	2,333	15,353	21,312	19,552	40,864	See breeding above ¹¹	1,352
Yellow-breasted chat - breeding	3,007	1,762	58	122	180	1,669	1,160	2,829	15 / 13 / 6 / 2	0
Yellow breasted chat - migratory	57,312	35,375	13,020	2,320	15,340	21,169	19,432	40,601	See breeding above ¹¹	1,358
Summer tanager - breeding	2,730	1,627	59	109	168	1,526	1,037	2,563	7 / 5 / 3 / 2	0
Summer tanager - migratory	57,589	35,510	13,020	2,333	15,353	21,312	19,552	40,864	See breeding above ¹¹	1,358

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Table 4-114 (cont.)

Species²	Total Acres of Habitat in the Plan Area (incl. federal lands)	Acres of Habitat in the Plan Area Subject to the Permit³	Acres Authorized for Impact Outside the Conservation Areas⁴	Acres Authorized for Impact Inside the Conservation Areas⁵	Total Acres Authorized for Impact in the Plan Area⁶	Acres of Habitat within Existing Conservation Lands (ECL)⁷	Remaining Acres to be Conserved⁸	Total Acres To be Conserved in MSHCP Reserve System⁹	Total Known Occurrences in the Plan Area/ Occurrences Conserved/ Total ECL/ Take¹⁰	Total Acres of modeled Habitat on federal land Outside the Conservation Areas
Southern yellow bat	1,329	887	12	66	78	660	590	1,250	3 / 2 / 2 / 1	1
CV round-tailed ground squirrel	101,723	87,516	58,628	2,491	61,119	13,357	20,593 (3,101) ¹	33,950	319 / 290 / 190 / 29	3,568
Palm Springs pocket mouse	142,539	119,256	70,808	4,339	75,147	21,251	35,762 (4,404) ¹	57,013	52 / 40 / 12 / 12	5,933
Peninsular bighorn sheep	172,811	75,999	2,666 ¹²	3,867	6,533	135,630	30,226 (181)	165,856	N/A	352

¹ Based on 1996 pre-MOU land ownership information.

² There is no Habitat model for the burrowing owl and, therefore, no estimate of acreage was made. See Section 9.7.3.

³ Column (C) excludes all federal land.

⁴ Column (D) Total is from modeled Habitat outside the Conservation Area subject to the permit.

⁵ Column (E) Total is the sum of Take in each Conservation Area. See Section 9.0.

⁶ Column (F) Total is the sum of Column D+E (It should be noted that the Habitat outside the Conservation Areas is compromised (e.g., does not include Core Habitat, Essential Ecological) and may not support self-sustaining populations of Covered Species).

⁷ Column (G) Total is from the sum of all Existing Conservation Land for each species. See Section 9.0.

⁸ Column (H) Total is from the total acres in Conservation Area less Take (Column E) and Existing Conservation Land (Column G). Numbers within parentheses are acres of habitat in fluvial sand transport areas where the only Conservation Objective is to maintain fluvial sand transport. Habitat conservation is not an objective.

⁹ Column (I) is the Total of Columns G+H.

¹⁰ Column (J) includes known locations for each species. The number of locations within the Conservation Areas, the locations within the Existing Conservation Land (ECL), and the number of locations subject to Take outside the Conservation Areas.

¹¹ Known locations for this species are not separated by breeding and migratory Habitat.

¹² This habitat occurs on lands outside the Conservation Areas previously approved for development.

Note: Every effort was made to ensure accuracy in the data presented in this table. However, the "data error" includes mapping errors (e.g., when different GIS coverages overlap but do not match exactly, resulting in "sliver polygons"). Error for all of the data presented here amounts to a fraction of 1%.

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Table 4-115: Conservation and Potential Loss of Conserved Natural Communities

Natural Community	Total Acres in the Plan Area (including federal lands)	Acres in the Plan Area Subject to the Permit ²	Total Acres Subject to Impact Outside the Conservation Areas ³	Total Acres Subject to Impact Inside the Conservation Areas ⁴	Total Acres Subject to Impact in the Plan Area ⁵	Acres Within Existing Conservation Lands ⁶	Remaining Acres to be Conserved ⁷	Total Acres To be Conserved in MSHCP Reserve System ⁸	Total Acres on federal land outside the Conservation Areas
Active Desert Dunes						4			
Stabilized & Partially Stabilized Desert Sand Dunes							5		
Active Desert Sand Fields			5		5	5	5		
Ephemeral Desert Sand Fields			4		4	3	5		
Stabilized & Partially Stabilized Desert Sand Fields			4		4	2	0		
Stabilized Shielded Desert Sand Fields			13		13	9	0		
Mesquite Hummocks			5		5	1	2	348	
Sonoran Creosote Bush Scrub	4	0	40	13	44	272	106	32	3
Sonoran Mixed Woody & Succulent Scrub	3	0	15	4	19	72	36	10	1
Mojave Mixed Woody Scrub	2	0	9	0	9	65	20	9	5
Desert Saltbush Scrub			3		3		3		
Desert Sink Scrub			0		0	0	0		
Chamise Chaparral						0	4		
Redshank Chaparral	2		7	2	9	0	2	1	
Semi-Desert Chaparral	2					0	0	2	
Interior Live Oak Chaparral	0		0		0	0	0		7

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Table 4-115 (cont.)

Natural Community	Total Acres in the Plan Area (including federal lands)	Acres in the Plan Area Subject to the Permit²	Total Acres Subject to Impact Outside the Conservation Areas³	Total Acres Subject to Impact Inside the Conservation Areas⁴	Total Acres Subject to Impact in the Plan Area⁵	Acres Within Existing Conservation Lands⁶	Remaining Acres to be Conserved⁷	Total Acres To be Conserved in MSHCP Reserve System⁸	Total Acres on federal land outside the Conservation Areas
Cismontane Alkali Marsh ⁹								3	
Coastal & Valley Freshwater Marsh ⁹									
So. Arroyo Willow Riparian Forest ⁹								1	
Sonoran Cottonwood-Willow Riparian Forest ⁹						3		6	
Southern Sycamore-Alder Riparian Woodland ⁹						4		6	
Arrowweed Scrub ⁹						1		2	
Desert Fan Palm Oasis Woodland						6		1,2	
Mesquite Bosque ⁹						1		4	
Desert Dry Wash Woodland	0	2	0	2	2	0	2	0	
Mojavean Pinyon-Juniper Woodland	0			1	1	0	0	0	
Peninsular Juniper Woodland And Scrub	0	2	3	7	0	0	0	0	

¹ Based on 1996 pre-MOU land ownership information.

² Column (C) excludes all federal land.

³ Column (D) total is from natural community outside the Conservation Area subject to impact.

⁴ Column (E) total is the sum of acres of natural community subject to impact in each Conservation Area. See Section 10.0.

⁵ Column (F) total is the sum of Column D+E

⁶ Column (G) total is acres of each natural community within Existing Conservation Land. See Section 10.0.

⁷ Column (H) total is from the total acres in Conservation Area less acres subject to impact (Column E) and Existing Conservation Land (Column G). Numbers within parentheses are acres of natural community in fluvial sand transport areas where the only Conservation Objective is to maintain fluvial sand transport. Natural community conservation is not an objective.

⁸ Column (I) is the Total of Columns G+H.

⁹ For the remaining acreage of this natural community where disturbance is authorized by the Plan, ensure no net loss; disturbance may occur, but habitat loss would need to be replaced to ensure that the Conservation Objective is achieved.

Note: Every effort was made to ensure accuracy in the statistics presented in this table. However, "data error" includes mapping errors (when different GIS coverages overlap but do not match exactly, resulting in "sliver polygons"). Data error for all of the statistics presented here amounts to a fraction of 1%.

Table 4-116: Summary of Covered Species Conservation and Take Table

Species Common Name Scientific Name	Species Conservation Objectives	Conservation Analysis Summary	Measures to Avoid, Minimize, and Mitigate Take	Management Activities Summary	Conservation and Take Summary
PLANTS					
Mecca Aster <i>Xylorhiza cognata</i>	<ul style="list-style-type: none"> ➤ Ensure conservation of Core Habitat within five Conservation Areas. ➤ Protect Other Conserved Habitat in two Conservation Areas from a range of environmental conditions within which this species occurs. ➤ Implement biological monitoring and adaptive management to ensure long-term persistence of this species 	<ul style="list-style-type: none"> ➤ The Mecca aster will benefit from the establishment of the Reserve System to include Habitat in the Indio Hills and Mecca Hills. ➤ Implementation of the Plan to provide for persistence of this aster within the Plan Area, as currently unprotected areas of its Habitat and potential Habitat areas will be conserved. ➤ The combination of the overall Conservation measures; species-specific measures such management to minimize impacts in aster Habitat, monitoring to better understand the distribution and ecology of this species; enhancement, protection, and management of Mecca aster Habitat is expected to compensate for potential adverse impacts to this plant species. 	<ul style="list-style-type: none"> ➤ Permittees will protect and manage 12,238 acres of modeled habitat including 12,054 acres of Core Habitat. ➤ Conservation Areas in the Plan include approximately 90% of the occupied and potential habitat for Mecca aster. ➤ Management and Monitoring activities to ensure Conservation of this species, including control of activities that degrade its habitat. 	<ul style="list-style-type: none"> ➤ Control and manage activities that degrade Mecca aster Habitat. In the Indio Hills, edge effects and OHV activity could be a concern. ➤ Identify actions to reduce impacts from, and control where feasible, invasive species monitoring results indicate an impact. ➤ Develop and test models to address the distribution, abundance, and ecology of Mecca aster. 	<ul style="list-style-type: none"> ➤ 98% of the Core Habitat for this plant is conserved and 86% of the occupied or potential habitat is conserved under the Plan. ➤ 10% of all Habitat would be subject to take in areas of marginal Habitat, areas subject to edge effects, or in potential Habitat where habitat quality is compromised ➤ 3% of all habitat is on federal land outside the Conservation Areas.
CV milkvetch <i>Astragalus</i> <i>lentiginosus</i> <i>var. coachellae</i>	<ul style="list-style-type: none"> ➤ Ensure conservation of Core Habitat within four Conservation Areas. ➤ Protect Other Conserved Habitat in 10 Conservation Areas from a range of environmental conditions within which this species occurs. ➤ Ensure conservation of Essential Ecological 	<ul style="list-style-type: none"> ➤ In addition to conserving currently unprotected habitat, the Conservation Areas benefit this species by securing the long-term sand transport-delivery systems for the Core Habitat and Other Conserved Habitat. At the present time, the sand transport corridors for the Snow Creek area, the Willow Hole area, and for the Thousand Palms Preserve are unprotected; the 	<ul style="list-style-type: none"> ➤ Permittees will protect and manage, in perpetuity, 11,652 acres of the modeled Habitat for this species, together with Existing Conservation Land for a total of 19,359 acres conserved, including 14,886 acres of Core Habitat. The conserved habitat includes 89 of the 122 known occurrences. 	<ul style="list-style-type: none"> ➤ <i>Control and manage activities that degrade this milkvetch Habitat, such as sand compaction and/or vegetation destruction, including OHV travel within Core or Other Conserved Habitat; vegetation manipulation or clearing; and other human disturbance.</i> ➤ Control invasive species if it is determined from monitoring results that there are impacts to the milkvetch or its Habitat. 	<ul style="list-style-type: none"> ➤ 94% of the Core Habitat for this milkvetch is conserved and 53% of the total occupied or potential habitat is conserved under the Plan. ➤ 42% would be subject to take in areas where habitat quality is compromised by fragmentation, loss of

Table 4-116: Summary of Covered Species Conservation and Take Table

Species Common Name Scientific Name	Species Conservation Objectives	Conservation Analysis Summary	Measures to Avoid, Minimize, and Mitigate Take	Management Activities Summary	Conservation and Take Summary
<p>Coachella Valley milkvetch (cont.)</p>	<p>Processes including sand source/transport systems.</p> <ul style="list-style-type: none"> ➤ Maintain Linkages among all conserved populations. ➤ Implement biological monitoring and adaptive management to ensure long-term persistence of this species 	<p>MSHCP Reserve Systems would protect these areas.</p> <ul style="list-style-type: none"> ➤ Within the Conservation Areas, the goal is to conserve all of the Core Habitat; disturbance to these areas will be avoided to the maximum extent feasible. The important Essential Ecological Processes, including wind corridors and sand sources, and Linkages would be protected under the Plan. 	<ul style="list-style-type: none"> ➤ Areas of modeled habitat for this species that are subject to take are those that are highly fragmented and/or where sand transport systems are compromised. These areas are primarily south of Interstate 10 in the area known as the Big Dune. ➤ All available and occupied habitats for this species were carefully considered. It was determined that only those areas within proposed Conservation Areas would provide long-term protection for self-sustaining populations of this species. ➤ Plan would protect the Core Habitat areas from Cabazon to Windy Point, to the Thousand Palms Preserve. 	<ul style="list-style-type: none"> ➤ Address the maintenance of the aeolian sand transport system through the Monitoring and Management Programs. 	<p>Essential Ecological Processes or other impacts.</p>
<p>Triple-ribbed milkvetch <i>Astragalus tricarinatus</i></p>	<ul style="list-style-type: none"> ➤ Ensure conservation of Core Habitat within two Conservation Areas. ➤ Protect Other Conserved Habitat in 3 Conservation Areas from a range of environmental conditions within which this milkvetch is known to occur. ➤ Protect Essential Ecological Processes, including hydrological 	<ul style="list-style-type: none"> ➤ Implementation of this Plan is expected to conserve and enhance population viability of the triple-ribbed milkvetch, as unprotected portions of its Habitat will be conserved. The potential for impacts from human uses appears to be very low, primarily related to occupied and potential habitat in the lower reaches of the Whitewater River and Mission Creek which may be affected by flood control maintenance activities 	<ul style="list-style-type: none"> ➤ Permittees will protect and manage 1,334 acres of modeled habitat including 33 of the 34 known locations. ➤ Conservation Areas include approximately 94% of the occupied and potential habitat for this species. ➤ Protection of flooding regime which appears to be important for this species. 	<ul style="list-style-type: none"> ➤ Control and manage activities that degrade triple-ribbed milkvetch Habitat, such as vehicular travel within washes and flood control maintenance activities that could result in damage to plants and their Habitat outside of the flood control channel itself. ➤ Identify actions to reduce impacts from, and control where feasible, invasive species if monitoring results so indicate. 	<ul style="list-style-type: none"> ➤ 96% of the Core Habitat for this plant is conserved and 94% of the occupied or potential habitat is conserved under the Plan. ➤ 5% would be subject to take in areas compromised by fragmentation, loss of Essential Ecological

Table 4-116: Summary of Covered Species Conservation and Take Table

Species Common Name Scientific Name	Species Conservation Objectives	Conservation Analysis Summary	Measures to Avoid, Minimize, and Mitigate Take	Management Activities Summary	Conservation and Take Summary
	<p>regimes, necessary to maintain Habitat for this species.</p> <ul style="list-style-type: none"> ➤ Implement biological monitoring and Adaptive Management to ensure long-term persistence of this species. ➤ Maintain Biological Corridors and Linkages among all conserved populations to provide for seed dispersal and shifts in species distribution over time. 	<p>that alter the wash and could disturb triple-ribbed milkvetch populations.</p> <ul style="list-style-type: none"> ➤ The Plan will also secure potential habitat in each of the canyons where this species persists, including Whitewater, Mission Creek, Big Morongo, Dry Morongo, and Martinez/Aqua Alta Canyons. It is possible that the species could occur in canyons east of Big Morongo Canyon, including Long Canyon; the portion of this canyon where this species could occur is within Existing Conservation Land in Joshua Tree National Park Conservation Area. ➤ Management and monitoring prescriptions will further enhance long-term Conservation of this species. 	<ul style="list-style-type: none"> ➤ Management and Monitoring activities to ensure Conservation of this species, including control of activities that degrade its habitat. 	<ul style="list-style-type: none"> ➤ Determine the conditions that favor germination and growth in this species and insure that these conditions persist (e.g. scouring by large floods). ➤ In Mission Creek, coordinate with the Wildlands Conservancy to achieve Species Conservation Goals. 	<p>Processes or other impacts.</p>

Table 4-116: Summary of Covered Species Conservation and Take Table

Species Common Name Scientific Name	Species Conservation Objectives	Conservation Analysis Summary	Measures to Avoid, Minimize, and Mitigate Take	Management Activities Summary	Conservation and Take Summary
<p>Orocopia Sage <i>Salvia greatae</i></p>	<ul style="list-style-type: none"> ➤ Ensure Conservation of Core Habitat within two Conservation Areas. ➤ Protect Other Conserved Habitat in Dos Palmas Conservation Area from a range of environmental conditions within which this species occurs. ➤ Implement biological monitoring and Adaptive Management to ensure long-term persistence of this species. 	<ul style="list-style-type: none"> ➤ The Orocopia sage will benefit from the establishment of the MSHCP Reserve System which will include Habitat in the Orocopia Mountains where they occur. ➤ Implementation of the Plan is expected to provide for persistence of this species within the Plan Area, as currently unprotected portions of its Habitat and potential Habitat in the Mecca Hills area will be conserved. ➤ The combination of the overall Conservation measures; species-specific measures such as management to minimize impacts in Orocopia sage Habitat, monitoring to better understand the distribution and ecology of this species, and long-term protection, management, and enhancement of Orocopia sage Habitat is expected to effectively compensate for potential adverse effects to this plant species. 	<ul style="list-style-type: none"> ➤ Permittees will protect and manage 18,286 acres of modeled habitat including 16,625 acres of Core Habitat. ➤ Conservation Areas in the Plan include approximately 96% of the occupied and potential habitat for this sage. ➤ Management and Monitoring activities to ensure Conservation of this species, including control of activities that degrade its habitat. 	<ul style="list-style-type: none"> ➤ Control and manage activities that degrade Orocopia sage Habitat. Edge effects and OHV activity could be a concern. ➤ Identify actions to reduce impacts from, and control where feasible, invasive species monitoring results indicate an impact. ➤ Develop and test models that will address the distribution, abundance, and ecology of Orocopia sage. 	<ul style="list-style-type: none"> ➤ 97% of the Core Habitat for this plant is conserved and 87% of the occupied or potential habitat is conserved under the Plan. ➤ 3% would be subject to take in areas compromised by fragmentation, loss of Essential Ecological Processes or other impacts.

Table 4-116: Summary of Covered Species Conservation and Take Table

Species Common Name Scientific Name	Species Conservation Objectives	Conservation Analysis Summary	Measures to Avoid, Minimize, and Mitigate Take	Management Activities Summary	Conservation and Take Summary
<p>Little San Bernardino Mountains Linanthus <i>Linanthus maculatus</i> (<i>Gilia maculata</i>)</p>	<ul style="list-style-type: none"> ➤ Ensure Conservation of Core Habitat within two Conservation Areas. ➤ Protect Other Conserved Habitat in two Conservation Areas through adherence to other Conservation Objectives. ➤ Ensure Conservation of Essential Ecological Processes including hydrological regimes. ➤ Maintain Linkages among all conserved populations. ➤ Implement biological monitoring and Adaptive Management to ensure long-term persistence of this species 	<ul style="list-style-type: none"> ➤ The Plan includes in Conservation Areas as much of the known habitat for this species as feasible, incorporating all known occurrences and all available and occupied habitat for populations in Whitewater Canyon and the Mission Creek/Big Morongo Canyon area. ➤ The network of drainages and interlaced washes that occur in the Mission Creek and Morongo Wash area, mostly east of Highway 62 are included in the MSHCP Reserve System. ➤ The Plan ensures that Essential Ecological Processes that maintain this species' habitat, including flooding events, can continue to occur. 	<ul style="list-style-type: none"> ➤ Permittees will protect and manage 2,543 acres of modeled habitat together with Existing Conservation Land for a total of 2,906 acres conserved, including 2,186 acres of Core Habitat. ➤ At present, only one known occurrence, located east of Mission Lakes Country Club, is identified as subject to potential take. Take could occur primarily in the lower reaches of Mission Creek and Big Morongo Canyons, south of Indian Avenue. 	<ul style="list-style-type: none"> ➤ Control and manage activities that degrade linanthus Habitat, such as vehicular travel within washes and other activities that could damage plants and their Habitat. ➤ Identify actions to reduce impacts from, and control where feasible, invasive species if it is determined from monitoring results that there are impacts to linanthus or its Habitat. ➤ Develop and test models through the Management and Monitoring Program to address the distribution, abundance, and ecological requirements of the Little San Bernardino Mountains linanthus. ➤ Determine the conditions that favor germination and growth in this species and insure that these conditions can continue to occur (e.g. scouring by large floods). ➤ In Mission Creek, coordinate with the Wildlands Conservancy to achieve Species Conservation Goals. 	<ul style="list-style-type: none"> ➤ The Plan conserves 97%, or 58 of the 60 known occurrences for this species. ➤ 91% of the Core Habitat for this plant is conserved and 86% of the entire modeled potential habitat is conserved under the Plan. ➤ 8% of all linanthus habitat would be subject to take in Conservation Areas; 6% subject to Take outside Conservation Areas in areas compromised by fragmentation, loss of Essential Ecological Processes or other impacts.

Table 4-116: Summary of Covered Species Conservation and Take Table

Species Common Name Scientific Name	Species Conservation Objectives	Conservation Analysis Summary	Measures to Avoid, Minimize, and Mitigate Take	Management Activities Summary	Conservation and Take Summary
<p>Coachella Valley Giant sand-treader cricket <i>Macrobaenetes valgum</i></p>	<ul style="list-style-type: none"> ➤ Ensure conservation of Core Habitat within three Conservation Areas. ➤ Protect Other Conserved Habitat in four Conservation Areas from a range of environmental conditions within which this species occurs. ➤ Ensure conservation of Essential Ecological Processes including sand source/transport systems. ➤ Implement biological monitoring and Adaptive Management to ensure Conservation of this species 	<ul style="list-style-type: none"> ➤ The Coachella Valley sand-treader cricket will benefit from the establishment of the Reserve System which will include Core Habitat from Snow Creek to the Thousand Palms Preserve and Other Conserved Habitat from Willow Hole to the East Indio Hills. Implementation of the Plan is Habitat is currently protected. The Plan will ensure the Conservation of an additional 26% of Habitat and potential Habitat areas; only 22% of the modeled Habitat is currently conserved. ➤ The combination of the overall Conservation measures: species-specific measures such as management to minimize impacts such as OHV trespass and disturbance during the emergence and breeding seasons, fragmentation and edge effects, monitoring to better understand the effects of these impacts on the species, and long-term protection, management, and enhancement of sand-treader cricket Habitat is expected to effectively compensate for potential adverse effects to this threatened and endangered species. 	<ul style="list-style-type: none"> ➤ Permittees will protect and manage 6,998 acres of modeled habitat together with Existing Conservation Land for a total of 12,997 acres conserved, including 10,421 acres of Core Habitat. ➤ The Conservation Areas would protect the Core Habitat areas from Snow Creek to the Thousand Palms Preserve. Other Conserved Habitat from a range of environmental conditions for this cricket will be protected from Willow Hole to Snow Creek and Cabazon. ➤ The Reserve System will incorporate additional sand source/sand transport areas for Snow Creek/ Windy Point, Willow Hole, Whitewater Floodplain, Flat Top Mountain, and the Thousand Palms area. ➤ Management and Monitoring activities to ensure Conservation of this species. Describe distribution, abundance, and habitat of the species. 	<ul style="list-style-type: none"> ➤ Control and manage activities that degrade giant sand-treader cricket Habitat. In particular, control and manage those activities that result in sand compaction or may crush burrows, which may include OHV travel within Core Habitat; vegetation manipulation or clearing, and other human disturbance. ➤ Restrict human access to occupied habitat during the emergence period in the winter months and during the breeding season in the spring. ➤ Identify actions to reduce impacts from, and control where feasible, invasive species if it is determined from monitoring results that there are impacts such as stabilization of sand dunes and sand fields or other impacts to sand-treader cricket habitat. 	<ul style="list-style-type: none"> ➤ 95% of the Core Habitat for this species is conserved and 48% of the occupied or potential habitat is conserved under the Plan. ➤ 6% would be subject to Take in Conservation Areas; 47% would be subject to take outside Conservation Areas in areas compromised by fragmentation, loss of Essential Ecological Processes or other impacts.

Table 4-116: Summary of Covered Species Conservation and Take Table

Species Common Name Scientific Name	Species Conservation Objectives	Conservation Analysis Summary	Measures to Avoid, Minimize, and Mitigate Take	Management Activities Summary	Conservation and Take Summary
<p>Coachella Valley Jerusalem cricket <i>Stenopelmatus cahuiensis</i></p>	<ul style="list-style-type: none"> ➤ Ensure conservation of Core Habitat within the Snow Creek/Windy Point Conservation Area. ➤ Protect Other Conserved Habitat, to provide for population fluctuation, in six Conservation Areas from a range of environmental conditions within which this species occurs. ➤ Ensure conservation of Essential Ecological Processes including sand source/transport systems. ➤ Maintain Biological Corridors and Linkages to allow connectivity and shifts in distribution over time. ➤ Implement biological monitoring and Adaptive Management to ensure Conservation of this species 	<ul style="list-style-type: none"> ➤ The Coachella Valley Jerusalem cricket will benefit from the establishment of the MSHCP Reserve System which will conserve essential Core Habitat for this species in the Snow Creek/Windy Point area which appears to be the center of their distribution. ➤ Implementation of the Plan is expected to provide for Conservation of this rare cricket within the Plan Area, as currently unprotected portions of its Habitat and potential Habitat areas will be conserved. Currently, only 15% of this Habitat is conserved. ➤ The combination of the overall Conservation measures; species-specific measures such as management to minimize impacts in Core Habitat, monitoring and niche modeling to better describe the distribution and ecology of this species, and long-term protection, management, and enhancement of Jerusalem cricket Habitat is expected to effectively compensate for potential adverse effects to this species. 	<ul style="list-style-type: none"> ➤ Permittees will protect and manage 8,618 acres of modeled habitat together with Existing Conservation Land for a total of 12,047 acres conserved, including 1,540 acres of Core Habitat. ➤ The Conservation Areas would protect the Core Habitat areas from Snow Creek to Windy Point and Whitewater Canyon. Other Conserved Habitat from a range of environmental conditions for this cricket will be protected from Willow Hole east toward Thousand Palms area. ➤ The Plan will require Conservation of Essential Ecological Processes, including the sand source /sand transport areas for Snow Creek/Windy Point. ➤ Management and Monitoring to ensure Conservation of this species, including control of activities that degrade its habitat. Describe the distribution and abundance of the species. 	<ul style="list-style-type: none"> ➤ Control and manage activities that degrade Coachella Valley Jerusalem cricket Habitat, including activities that result in sand compaction or may crush burrows, vegetation manipulation or clearing, and other disturbance. ➤ Restrict human access to occupied habitat during the emergence period in the winter months and during the breeding season in the spring. ➤ Identify actions to reduce impacts from, and control where feasible, invasive species if it is determined from monitoring results that there are impacts to Jerusalem cricket Habitat. ➤ Through the Monitoring Program, better describe the distribution and Habitat for this species. 	<ul style="list-style-type: none"> ➤ 91% of the Core Habitat for this cricket is conserved and 53% of the occupied or potential habitat is conserved under the Plan. ➤ 4% would be subject to take within Conservation Areas; 39% subject to Take outside Conservation Areas in habitat that is compromised by fragmentation, loss of Essential Ecological Processes or other impacts. For this species habitat outside Conservation Areas is less likely to be occupied.

Table 4-116: Summary of Covered Species Conservation and Take Table

Species Common Name Scientific Name	Species Conservation Objectives	Conservation Analysis Summary	Measures to Avoid, Minimize, and Mitigate Take	Management Activities Summary	Conservation and Take Summary
<p>Desert Pupfish <i>Cyprinodon macularius</i></p>	<ul style="list-style-type: none"> ➤ Ensure conservation of occupied Habitat within two Conservation Areas. ➤ Ensure maintenance of refugia populations in the Thousand Palms and Dos Palmas Conservation Areas. ➤ Protect Essential Ecological Processes including hydrological regimes necessary to maintain Core Habitat and agricultural drain Habitat. ➤ Implement biological monitoring and Adaptive Management to ensure long-term persistence of this species. 	<ul style="list-style-type: none"> ➤ Significant known habitat would be protected under conservation ownership, including the Salt Creek population. The numerical evaluation of the acres of habitat conserved is a challenge in that the actual acres of habitat for this species within the Plan Area do not include most of the known locations, which are in agricultural drains that release agricultural runoff into the Salton Sea. The Plan requires that the agricultural drain population be conserved through a Management Program that ensures maintenance of agricultural drains in a manner that maintains viable habitat. Disturbance of the habitat and potential Take would be permitted in the Salton Sea agricultural drains as a result of operations and maintenance activities so long as the pupfish population is maintained. ➤ Implementation of the Plan is expected to maintain and enhance population viability of the species by helping to implement the Desert Pupfish Recovery Plan (USFWS 1993). The primary objective of the plan is to eliminate threats to extant populations and establish additional populations in secure habitat, so that the species can be downlisted from endangered to threatened. 	<ul style="list-style-type: none"> ➤ Plan will ensure that existing desert pupfish Habitat and refugia populations are protected and managed. ➤ CVWD will establish 25.05 acres of managed replacement Habitat for desert pupfish. ➤ Water quality and other important elements of pupfish Habitat will be monitored and maintained. ➤ Management and Monitoring activities to ensure Conservation of this species, including control of activities that degrade its habitat. 	<ul style="list-style-type: none"> ➤ Complete hydrology studies for the Salt Creek area to determine if the water sources for Salt Creek are adequately protected or if additional water sources may be needed and are available. ➤ Ensure agricultural drain maintenance and water supply. CVWD will develop a study to include surveys for pupfish presence in the agricultural drains. ➤ Control and manage, in cooperation with implementation of the recovery plan, exotic or invasive species in pupfish habitat, including tamarisk and other species, if monitoring identifies them as a threat. ➤ Maintain water levels, water quality, and proper functioning condition of ponds, springs, and drains, to the extent these activities are under Plan authority. ➤ Restore and enhance degraded habitat as necessary according to monitoring results. Conduct experiments on the timing and mechanics of drain cleaning that would minimize impacts to desert pupfish. ➤ Estimate and describe the distribution, abundance, and habitat parameters of desert pupfish in the Plan Area and survey contaminant levels in the water and in pupfish. 	<ul style="list-style-type: none"> ➤ The Plan conserves 100%, or 31 of the 31 known locations for this species. This includes Conservation of agricultural drains and shoreline pools.

Table 4-116: Summary of Covered Species Conservation and Take Table

Species Common Name Scientific Name	Species Conservation Objectives	Conservation Analysis Summary	Measures to Avoid, Minimize, and Mitigate Take	Management Activities Summary	Conservation and Take Summary
<i>Amphibians</i>					
<p>Arroyo Toad <i>Bufo microscaphus californicus</i></p>	<ul style="list-style-type: none"> ➤ Ensure conservation of significant populations, consistent with Arroyo Toad Recovery Plan. ➤ Conserve potential Habitat for this toad in Snow Creek and Upper Mission Creek areas. ➤ Protect Essential Ecological Processes including hydrological regimes necessary to maintain arroyo toad Habitat. ➤ Implement biological monitoring and adaptive management to ensure Conservation of this species. 	<ul style="list-style-type: none"> ➤ Under the Plan, 96% of the modeled habitat of the species within the Plan Area will be conserved. In addition, potential habitat in Snow Creek and Mission Creek will be conserved. The Plan requires avoidance and mitigation measures for Covered Activities in arroyo toad habitat (see Section 4.3.4). ➤ The Arroyo Toad Recovery Plan (USFWS 1999) identifies conserving 15 self-sustaining populations. The Whitewater River population is one of the 15 self-sustaining populations necessary for consideration of delisting the species. Implementation of the Plan is thus expected to maintain and enhance population viability of the arroyo toad by conserving and managing habitat in the Whitewater Canyon and protecting a Snow Creek and/or a Mission Creek population should one be located in these areas. 	<ul style="list-style-type: none"> ➤ Permittees will protect and manage 706 acres of modeled habitat together with Existing Conservation Land for a total of 2,007 acres conserved, including 2,004 acres of Core Habitat. ➤ Plan will ensure that existing arroyo toad Habitat and known locations are protected and managed. ➤ Management and Monitoring activities to ensure Conservation of this species, including maintenance of hydrological regimes and control of activities that degrade its habitat. 	<ul style="list-style-type: none"> ➤ Control and manage activities that adversely impact water quality and the hydrological regime in habitat. ➤ Control and manage activities, such as removal of boulders, OHV use, picnicking in sensitive areas, and alteration or disturbance of streamside gravel bars and terraces that impact arroyo toad habitat. ➤ Avoid activities that may disturb arroyo toad habitat, during March 1 to June 30 breeding season. ➤ Conduct an educational program about the arroyo toad and its Conservation needs for residents and visitors in Whitewater Canyon. ➤ Coordinate with the trout fishing facility to evaluate stream flow and water quality issues associated with arroyo toad habitat. ➤ Restore degraded habitat as deemed necessary from the results of the Monitoring Program. Identify actions to reduce impacts from, and control where feasible, invasive species if it is determined from monitoring results that there are impacts to the arroyo toad and its habitat. 	<ul style="list-style-type: none"> ➤ 96% of the Core Habitat for this toad is conserved and 96% of the occupied or potential habitat is conserved under the Plan. ➤ 4% would be subject to take within Conservation Areas; <1% subject to Take outside Conservation Areas in marginal habitat.

Table 4-116: Summary of Covered Species Conservation and Take Table

Species Common Name Scientific Name	Species Conservation Objectives	Conservation Analysis Summary	Measures to Avoid, Minimize, and Mitigate Take Reptiles	Management Activities Summary	Conservation and Take Summary
<p>Desert Tortoise <i>Gopherus agassizii</i></p>	<ul style="list-style-type: none"> ➤ Ensure Conservation of Core Habitat, consistent with Desert Tortoise Recovery Plan, in seven Conservation Areas, from western to eastern part of Plan Area. ➤ Conserve potential and occupied Habitat for desert tortoise in seven Conservation Areas. ➤ Maintain Biological Corridors and Linkages to ensure connectivity for desert tortoise to move between Conservation Areas. ➤ Implement biological monitoring and Adaptive Management to ensure Conservation of desert tortoise and desert Habitat quality. 	<ul style="list-style-type: none"> ➤ Implementation of the Plan is expected to maintain and enhance population viability of the desert tortoise in the Plan Area by protecting the populations and additional habitat within a range of environmental conditions, and by providing connectivity with populations outside the Plan Area. Implementation of the Plan should coordinate with implementation of the NECO Plan. ➤ Reserve System conserved areas include 97% of the significant population in the Whitewater Hills, and 97% of the Critical Habitat designated in the area consistent with the Critical Habitat designation and with the NECO Plan. Plan implementation is expected to provide for Conservation of the desert tortoise within the Plan Area, as currently unprotected portions of its Habitat and potential Habitat areas will be conserved. The combination of overall Conservation measures, such as management to minimize impacts, monitoring to evaluate potential stressors, protection, management, and enhancement of desert tortoise Habitat is expected to compensate for potential adverse effects to this species. 	<ul style="list-style-type: none"> ➤ Permittees will protect and manage 146,519 acres of modeled habitat together with Existing Conservation Land for a total of 492,418 acres conserved, including 365,987 acres of Core Habitat. ➤ Avoidance, minimization, and mitigation measures would be required for covered projects. ➤ Protection of Biological Corridors and Linkages that will maintain connectivity for desert tortoise from the western limits to the eastern part of the Plan Area. ➤ Management and Monitoring activities to ensure Conservation of this species, including control of activities that degrade its habitat. 	<ul style="list-style-type: none"> ➤ Control of invasive plant species or impacts from domestic animals if monitoring indicates such control is appropriate. ➤ Control of raven predation on desert tortoises in the area if monitoring determines it to be a problem to the growth and maintenance of the tortoise population. ➤ Control activities that may result in poaching, illegal collection, crushing of or disturbance to tortoises and tortoise burrows. ➤ Develop and implement fire management plans for Conservation Areas where desert tortoise habitat may be impacted by fire, such as the significant population in the Whitewater Hills area. ➤ Determine the need for tortoise fencing along the Interstate 10 corridor in Critical Habitat and install tortoise fencing where deemed necessary in conjunction with new projects. 	<ul style="list-style-type: none"> ➤ 97% of the Critical Habitat in the eastern Plan Area is conserved for desert tortoise and 86% of the occupied or potential habitat is conserved under the Plan. ➤ 3% would be subject to take within Conservation Areas, consistent with Conservation Objectives; 9% subject to Take outside Conservation Areas in marginal habitat.

Table 4-116: Summary of Covered Species Conservation and Take Table

Species Common Name Scientific Name	Species Conservation Objectives	Conservation Analysis Summary	Measures to Avoid, Minimize, and Mitigate Take	Management Activities Summary	Conservation and Take Summary
<p>Coachella Valley Fringe-toed Lizard <i>Uma notata</i></p>	<ul style="list-style-type: none"> ➤ Ensure conservation of Core Habitat within four Conservation Areas. ➤ Protect Other Conserved Habitat in three Conservation Areas from a range of environmental conditions within which this species occurs, to provide for population fluctuation and genetic diversity. ➤ Ensure conservation of Essential Ecological Processes including sand source/transport systems, necessary to maintain Core Habitat for this lizard. ➤ Maintain Biological Corridors and Linkages to ensure connectivity for fringe-toed lizard to move between Conservation Areas. ➤ Implement biological monitoring and Adaptive Management to ensure Conservation of this species. 	<ul style="list-style-type: none"> ➤ The fringe-toed lizard will benefit from the establishment of the MSHCP Reserve System which will include Core Habitat at Snow Creek, Whitewater Floodplain, Willow Hole, and the Thousand Palms Preserve and Other Conserved Habitat from Willow Hole to the East Indio Hills. Implementation of the Plan is expected to provide for persistence of the Coachella Valley fringe-toed lizard within the Plan Area, where only 22% of the modeled Habitat is currently protected. The Plan will ensure the Conservation an additional 26% of Habitat and potential Habitat areas. ➤ The combination of the overall Conservation measures; species-specific measures such as management to minimize impacts such as OHV trespass, fragmentation, and edge effects, monitoring to better understand the effects of these impacts on the species, and long-term protection, management, and enhancement of fringe-toed lizard Habitat is expected to effectively compensate for potential adverse effects to this threatened and endangered species. 	<ul style="list-style-type: none"> ➤ Permittees will protect and manage 6,999 acres of modeled habitat together with Existing Conservation Land for a total of 12,998 acres conserved, including 11,245 acres of Core Habitat. ➤ The Conservation Areas would protect the Core Habitat areas from Snow Creek to the Thousand Palms Preserve. Other Conserved Habitat from a range of environmental conditions within which this lizard is known to occur will be protected in from Willow Hole to the East Indio Hills Cabazon. ➤ The Reserve System will incorporate and protect additional sand source /sand transport areas for Snow Creek/Windy Point, Willow Hole, the White-water Floodplain, Flat Top Mountain, and the Thousand Palms area. ➤ Management and Monitoring activities to ensure Conservation of this species, including control of activities that degrade its habitat and data to describe distribution, abundance, and habitat of this species. 	<ul style="list-style-type: none"> ➤ Control and manage impacts that degrade Coachella Valley fringe-toed lizard habitat, including fragmentation by roads, OHV use in protected habitat (except on designated routes of travel, if any), and other human disturbance. ➤ Control human access to occupied habitat as necessary. ➤ Evaluate the need as determined by monitoring for perimeter fencing to keep lizards inside Conservation Areas and away from roadways. ➤ Identify actions to reduce impacts from, and control where feasible, invasive species if it is determined from monitoring results that there are impacts to fringe-toed lizard habitat or populations. ➤ Include measures to reduce the impacts to the lizards' food source, harvester ants, including aerial pesticide spraying (in coordination with the California Department of Food and Agriculture) or introduction of exotic species (e.g. fire ants). 	<ul style="list-style-type: none"> ➤ 95% of the Core Habitat for the fringe-toed lizard is conserved and 48% of the occupied or potential habitat is conserved under the Plan. ➤ 6% of modeled habitat subject to Take in Cons. Areas, consistent with Conservation Objectives; 47% would be subject to take outside Cons. Areas, in areas compromised by fragmentation, loss of Essential Ecological Processes or other impacts.

Table 4-116: Summary of Covered Species Conservation and Take Table

Species Common Name Scientific Name	Species Conservation Objectives	Conservation Analysis Summary	Measures to Avoid, Minimize, and Mitigate Take	Management Activities Summary	Conservation and Take Summary
<p>Flat-tailed horned lizard <i>Phrynosoma mcalli</i></p>	<ul style="list-style-type: none"> ➤ Ensure conservation of Core Habitat within the Thousand Palms Conservation Area. ➤ Protect Other Conserved Habitat in 5 Conservation Areas from a range of environmental conditions within which this species occurs. ➤ Ensure conservation of Essential Ecological Processes including sand source/transport systems. ➤ Maintain Biological Corridors and Linkages among conserved populations or Habitats. ➤ Implement biological monitoring and Adaptive Management to ensure Conservation of this species. 	<ul style="list-style-type: none"> ➤ Implementation of the Plan is expected to maintain and enhance population viability of the flat-tailed horned lizard as unprotected portions of its habitat, potential habitat areas, and Essential Ecological Processes for the sand dunes and fields will be conserved. ➤ The flat-tailed horned lizard will benefit from the establishment of the MSHCP Reserve System which will build on the existing Conservation of 20% of this species Habitat. Plan implementation will ensure Conservation of currently unprotected Core Habitat areas for this lizard. The combination of the overall Conservation measures; species-specific measures such as management to minimize edge effects, fragmentation, and other impacts in flat-tailed horned lizard Habitat, monitoring to better understand the distribution and ecology of this species and the impacts of stressors on this species, and long-term protection, management, and enhancement of its Habitat is expected to effectively compensate for potential adverse effects to the flat-tailed horned lizard. 	<ul style="list-style-type: none"> ➤ Permittees will protect and manage 7,340 acres of modeled habitat together with Existing Conservation Land for a total of 13,914 acres conserved, including 4,051 acres of Core Habitat. ➤ Core Habitat in the Thousand Palms and other Conserved Habitat from Snow Creek to Dos Palmas will be protected as a result of the Plan. ➤ The Plan will require Conservation of Essential Ecological Processes, including currently unprotected source /sand transport areas. ➤ Management and Monitoring activities to ensure conservation of this lizard, including control of activities that degrade its Habitat and data to describe distribution, abundance, and habitat of this species. 	<ul style="list-style-type: none"> ➤ Control and manage impacts that degrade flat-tailed horned lizard Habitat, such as, edge effects, OHV trespass, and other disturbance. ➤ Evaluate the need for perimeter fencing to keep lizards away from roadways. ➤ Identify actions to reduce impacts from, and control where feasible, invasive species if it is determined from monitoring results that there are impacts to lizards and their Habitat. ➤ Control human access to occupied habitat as necessary. 	<ul style="list-style-type: none"> ➤ 98% of the predicted Core Habitat for this lizard is conserved and 45% of the predicted or potential Habitat is conserved under the Plan. ➤ 6% of modeled habitat subject to Take in Cons. Areas, consistent with Conservation Objectives; 52% of predicted Habitat would be subject to Take outside Cons. Areas where habitat is compromised by fragmentation, loss of Essential Ecological Processes or other impacts.

Table 4-116: Summary of Covered Species Conservation and Take Table

Species Common Name Scientific Name	Species Conservation Objectives	Conservation Analysis Summary	Measures to Avoid, Minimize, and Mitigate Take	Management Activities Summary	Conservation and Take Summary
<p>Yuma Clapper Rail <i>Longirostris yumanensis</i></p>	<ul style="list-style-type: none"> ➤ Conserve existing populations, restore degraded Habitat, and establish additional Habitat in Dos Palmas and Coachella Valley Stormwater Channel and Delta Conservation Areas. ➤ Protect Essential Ecological Processes including hydrological regimes necessary to maintain rail Habitat. ➤ Implement biological monitoring and Adaptive Management to ensure Conservation of this endangered bird. 	<ul style="list-style-type: none"> ➤ Implementation of the Plan is expected to maintain and enhance population viability of the Yuma clapper rail by protecting its existing habitat in the Plan Area and restoring and enhancing additional habitat. At Dos Palmas, the Plan will coordinate with BLM and CNLM. ➤ The Yuma clapper rail will benefit from the establishment of the MSHCP Reserve System which will include Habitat in the Dos Palmas and Coachella Valley Stormwater Channel and Delta Conservation Areas. Only 36% of the modeled Habitat for this species is currently conserved. The combination of the overall Conservation measures; species-specific measures such as management to minimize impacts to rails and their Habitat, monitoring to better understand the distribution and population status of this species in the Plan Area, and long-term protection, management, and enhancement of Yuma clapper rail Habitat is expected to effectively compensate for potential adverse effects to this bird species. 	<p style="text-align: center;">Birds</p> <ul style="list-style-type: none"> ➤ Permittees will protect and manage 426 acres of modeled habitat together with Existing Conservation Land for a total of 697 acres conserved. ➤ CVWD will establish 66 acres of permanent replacement rail Habitat. ➤ Water quality and other important elements of rail Habitat will be monitored and maintained. ➤ Management and Monitoring activities to ensure Conservation of this species, including control of activities that degrade its habitat. ➤ Surveys required in potential Habitat for this Fully Protected Species. 	<ul style="list-style-type: none"> ➤ Control invasive species, including plant species such as tamarisk and animal species such as non-native ants, brown-headed cowbirds, bullfrogs, and other species that threaten rail habitat. ➤ Complete hydrologic studies for the Salt Creek area to determine if the water sources for the clapper rail's habitat are adequately protected or if additional water sources may be needed. ➤ To the extent under Plan authority, maintain water levels, water quality, and condition of seeps, springs, marshes, and wetlands. Research the potential impacts of these activities on yuma clapper rails. ➤ Estimate population size or patch occupancy of the Yuma clapper rails in the Plan Area. ➤ Restore and enhance habitat for Yuma clapper rails. This may include enhancing specific features in marshes, such as nesting sites. ➤ Evaluate management actions for black rails as to affects on Yuma clapper rails. Research methods of drain maintenance that minimize impacts to Yuma clapper rails. 	<ul style="list-style-type: none"> ➤ 91% of the modeled clapper rail Habitat is conserved under the Plan. ➤ 6% of Habitat would be subject to Take in Conservation Areas if consistent with Conservation Objectives. Less than 2% of Habitat outside Conservation Areas subject to Take, compromised by fragmentation or other impacts.

Table 4-116: Summary of Covered Species Conservation and Take Table

Species Common Name Scientific Name	Species Conservation Objectives	Conservation Analysis Summary	Measures to Avoid, Minimize, and Mitigate Take	Management Activities Summary	Conservation and Take Summary
California Black Rail <i>Laterallus jamaicensis</i>	<ul style="list-style-type: none"> ➤ Conserve existing populations, restore degraded Habitat, and establish additional Habitat in Dos Palmas and Coachella Valley Stormwater Channel and Delta Conservation Areas. ➤ Establish 66 acres of permanent rail Habitat. ➤ Protect Essential Ecological Processes including hydrological regimes necessary to maintain rail Habitat. ➤ Implement biological monitoring and adaptive management to ensure Conservation of this rare bird. 	<ul style="list-style-type: none"> ➤ Implementation of the Plan is expected to maintain and enhance population viability of the California black rail by protecting its existing habitat in the Plan Area and restoring and enhancing additional habitat. ➤ The California black rail will benefit from the establishment of the MSHCP Reserve System which will include Habitat in the Dos Palmas and Coachella Valley Stormwater Channel and Delta Conservation Areas. Only 33% of the modeled Habitat for this species is currently conserved. Species-specific measures such as management to minimize impacts to rails and their Habitat, monitoring to better understand the distribution and population status of this species in the Plan Area, and long-term protection, management, and enhancement of California black rail Habitat will benefit this species. 	<ul style="list-style-type: none"> ➤ Permittees will protect and manage 386 acres of modeled habitat together with Existing Conservation Land for a total of 616 acres conserved. ➤ CVWD will establish 66 acres of permanent replacement rail Habitat. Water quality and other important elements of rail Habitat will be monitored and maintained. ➤ Management a Monitoring activities to ensure Conservation of this species, including control of activities that degrade its habitat. ➤ Surveys required in potential Habitat for this Fully Protected Species. 	<ul style="list-style-type: none"> ➤ Control invasive species, including plant species such as tamarisk and animal species such as non-native ants, brown-headed cowbirds, bullfrogs, crayfish, and other species that threaten black rail habitat. ➤ As part of the Monitoring Program, complete hydrologic studies for the Salt Creek area to determine if the water sources for the black rail's habitat are adequately protected or if additional water sources may be needed. ➤ To the extent activities are under Plan authority, maintain water levels, water quality, and proper functioning condition of seeps, springs, marshes, and wetlands. 	<ul style="list-style-type: none"> ➤ 91% of the modeled black rail Habitat is conserved under the Plan. ➤ 7% of Habitat would be subject to Take in Conservation Areas, consistent with Conservation Objectives; less than 2% of Habitat outside Conservation Areas compromised by fragmentation or other impacts.
Burrowing Owl <i>Athene cucularia</i>	<ul style="list-style-type: none"> ➤ Ensure conservation of burrowing owl burrows within nine Conservation Areas. ➤ Protect Other Conserved Habitat in ten Conservation Areas to allow for population fluctuation and genetic diversity. ➤ Implement Avoidance, minimization, and 	<ul style="list-style-type: none"> ➤ The Plan would ensure Conservation of known burrow sites for burrowing owls. Throughout the Plan Area, the protected known locations include those in the Snow Creek area, the Whitewater Floodplain Preserve, the Mission Creek area west of Highway 62, the Willow Hole-Edom Hill Preserve/ACEC area, the Thousand Palms Preserve, including the sand source area, and significant portions of the Indio Hills and the Mecca Hills. Other potential Habitat areas would 	<ul style="list-style-type: none"> ➤ Permittees will protect and manage 41 of the 74 known locations. Although modeled habitat was not described for the burrowing owl, the reserve design process focused on inclusion of areas of contiguous habitat in areas where burrowing owls are known to occur. This contiguous Habitat would 	<ul style="list-style-type: none"> ➤ Control and manage activities that degrade burrowing owl habitat. In particular, those activities that result in frightening birds away from their nests or that may crush burrows, including OHV travel in their habitat, and other human disturbance, will be controlled through fencing and patrolling. ➤ Consider whether a restriction on human access to occupied habitat during the breeding season is appropriate, from monitoring 	<ul style="list-style-type: none"> ➤ 55% of the known locations for burrowing owls would be conserved under the Plan. ➤ Conserved Habitat for other Covered Species will provide habitat and foraging areas for burrowing owl. ➤ 45% of known locations for burrowing owl would be subject to Take in

Table 4-116: Summary of Covered Species Conservation and Take Table

Species Common Name Scientific Name	Species Conservation Objectives	Conservation Analysis Summary	Measures to Avoid, Minimize, and Mitigate Take	Management Activities Summary	Conservation and Take Summary
	<p>mitigation measures for burrowing owl.</p> <ul style="list-style-type: none"> ➤ Implement biological monitoring and Adaptive Management to ensure Conservation of this species. 	<p>be conserved. Burrowing owls would be protected from edge effects, from OHV impacts, and from any activities that may result in disturbance to owl burrows.</p> <ul style="list-style-type: none"> ➤ Implementation of the Plan is expected to provide for persistence of the burrowing owl within the Plan Area, as currently unprotected portions of its habitat, burrow sites, foraging areas, and potential Habitat areas will be conserved. The combination of the overall Conservation measures; species-specific measures such as avoidance of active burrows during the breeding season; efforts by flood control and water districts to inventory and minimize impacts to burrowing owls; and long-term protection, management, and enhancement of burrowing owl Habitat is expected to benefit burrowing owls. 	<p>also provide adequate foraging areas.</p> <ul style="list-style-type: none"> ➤ The Plan will ensure Conservation of known burrow sites including foraging areas. ➤ Avoidance, minimization, and mitigation measures to limit disturbance to owls and burrows. ➤ Management and Monitoring activities to ensure Conservation of the burrowing owl, including control of activities that degrade its Habitat and data to describe distribution, abundance, and habitat of this species. 	<p>information. Burrowing owls, especially those in “colonies” during the breeding season, are vulnerable to disturbance (Haug, Millsap, and Martell 1993).</p> <ul style="list-style-type: none"> ➤ Identify actions to reduce impacts from, and control where feasible, invasive species if it is determined from monitoring results that there are impacts to burrowing owls. ➤ Encourage the presence of burrowing owls in agricultural areas by allowing them to remain at burrows established in levees and dikes. Avoid maintenance during the breeding season from March to July. Caution in use of pesticides in the vicinity of burrowing owl burrows is also important. Other measures that may enhance potential habitat in agricultural areas should be evaluated. ➤ Evaluate the need and potential for, and impacts of, establishment of artificial burrows in Conservation Areas after more information on current population status is obtained. 	<p>areas compromised by fragmentation, Development, and associated impacts.</p>

Table 4-116: Summary of Covered Species Conservation and Take Table

Species Common Name Scientific Name	Species Conservation Objectives	Conservation Analysis Summary	Measures to Avoid, Minimize, and Mitigate Take	Management Activities Summary	Conservation and Take Summary
<p>Southwestern Willow Flycatcher <i>Empidonax traillii extimus</i></p>	<ul style="list-style-type: none"> ➤ Conserve existing breeding Habitat and an assemblage of native Habitats important for migration. ➤ Ensure that CVWD will establish at least 44 acres of riparian forest in the Coachella Valley Stormwater Channel and Delta Conservation Area. ➤ Protect Essential Ecological Processes including hydrological regimes necessary to maintain riparian Habitat. ➤ Implement biological monitoring and Adaptive Management to ensure Conservation of this flycatcher. 	<ul style="list-style-type: none"> ➤ Implementation of the Plan is expected to maintain and enhance population viability of the southwestern willow flycatcher by protecting habitat for potential nesting and conserving habitat known to be used in migration. The Plan will also enhance riparian habitat through implementation of management prescriptions to remove non-native tamarisk and other invasive species. An agreement with CVWD regarding creation of riparian vegetation along the Whitewater River could result in enhanced habitat for flycatchers as well. Another benefit is the focus of attention on the presence of brown-headed cowbirds, including Adaptive Management activities to control their impacts to riparian birds such as the southwestern willow flycatcher. 	<ul style="list-style-type: none"> ➤ Breeding: Permittees will protect and manage 1,037 acres of modeled breeding Habitat together with Existing Conservation Land for a total of 2,563 acres of breeding Habitat conserved. ➤ Migratory: Permittees will protect and manage 19,534 acres of modeled migratory Habitat together with Existing Conservation Land for a total of 40,846 acres of migratory Habitat conserved. ➤ The Conservation Areas in the Plan would protect 96% of the occupied and potential breeding habitat and 95% of the potential migratory habitat for this species. ➤ Where disturbance of a given number of acres of a riparian natural community is authorized, an equivalent number of acres would be replaced to ensure that the no net loss occurs. ➤ CVWD will establish 44 acres of permanent Sonoran cottonwood-willow riparian forest in the Coachella Valley Stormwater Channel and Delta Conservation area as described in Section 4.3.20. 	<ul style="list-style-type: none"> ➤ Control and manage activities that degrade southwestern willow flycatcher habitat in conserved areas. These activities include brown-headed cowbird nest parasitism, clearing or alteration of riparian vegetation, persistence or invasion of exotic plant species, human disturbance, edge effects, and predation of adults and nests by domestic animals. ➤ Restrict human access to southwestern willow flycatcher-occupied habitat during the breeding season, from May 1 to September 15. ➤ Enhance habitat through the restoration of disturbed habitats or the creation of new habitat where feasible. In particular, removal of tamarisk from existing riparian areas would enhance habitat for southwestern willow flycatcher and other riparian birds. Any habitat restoration should balance management of southwestern willow flycatcher habitat with management actions for other riparian-dependent species by ensuring a mix of vegetation successional stages in riparian habitats. ➤ Maintain upland buffers for all occupied habitat. Buffers should be a minimum of 50 feet wide. Access to surface water is important for this species within the habitat area. 	<p>Breeding:</p> <ul style="list-style-type: none"> ➤ 94% of the modeled willow flycatcher breeding Habitat is conserved under the Plan. ➤ 4% of Habitat would be subject to Take in Conservation Areas, consistent with Conservation Objectives; less than 2% of Habitat outside Conservation Areas, compromised by fragmentation or other impacts. <p>Migratory:</p> <ul style="list-style-type: none"> ➤ 71% of the modeled willow flycatcher migratory Habitat is conserved under the Plan. ➤ 4% of Habitat would be subject to Take in Conservation Areas and less than 23% of Habitat outside Conservation Areas in areas compromised by fragmentation or other impacts.

Table 4-116: Summary of Covered Species Conservation and Take Table

Species Common Name Scientific Name	Species Conservation Objectives	Conservation Analysis Summary	Measures to Avoid, Minimize, and Mitigate Take	Management Activities Summary	Conservation and Take Summary
			<ul style="list-style-type: none"> ➤ Management and Monitoring will ensure the Conservation of this species. 		

Table 4-116: Summary of Covered Species Conservation and Take Table

Species Common Name Scientific Name	Species Conservation Objectives	Conservation Analysis Summary	Measures to Avoid, Minimize, and Mitigate Take	Management Activities Summary	Conservation and Take Summary
<p>Crissal thrasher <i>Toxostoma crissale</i></p>	<ul style="list-style-type: none"> ➤ Protect at least two Core Habitat areas including occupied Habitat in Dos Palmas and Coachella Valley Stormwater Channel and Delta Conservation Areas. Ensure implementation of avoidance, mitigation, and minimization measures as described in Section 4.4. ➤ Protect Other Conserved Habitat to provide for population fluctuations within a range of environmental conditions. ➤ Protect Essential Ecological Processes including hydrological regimes necessary to maintain thrasher Habitat. ➤ Maintain Biological Corridors and Linkages for habitat connectivity. ➤ Implement biological monitoring and Adaptive Management to ensure Conservation of this thrasher. 	<ul style="list-style-type: none"> ➤ The crissal thrasher will benefit from the establishment of the MSHCP Reserve System which will include Conservation of Habitat in the Dos Palmas and Coachella Valley Stormwater Channel and Delta Conservation Areas where they are known to occur. Only 4% of the modeled Habitat for this species is currently conserved. Plan will provide for Conservation of the crissal thrasher unprotected portions of its Habitat and potential Habitat areas will be conserved. Because much of its Habitat was already fragmented and reduced to small patches, the potential for Habitat Conservation for this species was already compromised prior to this Plan. The combination of the overall Conservation measures; species-specific measures such as management to minimize impacts to thrashers and their Habitat, monitoring to better understand the distribution and population status of this species in the Plan Area, and long-term protection, management, and enhancement of crissal thrasher Habitat is expected to effectively compensate for potential adverse effects to this bird species. 	<ul style="list-style-type: none"> ➤ Permittees will protect and manage 1,418 acres of modeled habitat together with Existing Conservation Land for a total of 1,676 acres conserved. ➤ Avoidance, minimization, and mitigation measures require avoidance of mesquite as habitat for crissal thrashers. ➤ Occupied and potential Habitat conserved across range of conditions in Plan Area; only 4% currently protected. ➤ Management a Monitoring activities to ensure Conservation of this species, including control of activities that degrade its habitat. 	<ul style="list-style-type: none"> ➤ Control invasive species, if monitoring results indicate an impact on crissal thrashers. ➤ Avoid disturbance to nesting crissal thrashers to avoid the breeding season from January 15 through June 15 or until the young have fledged. ➤ Evaluate the impacts of groundwater management on crissal thrasher Habitat, particularly mesquite areas, to determine if the water sources for this Habitat are adequately protected or if additional water sources may be needed. ➤ Establish a research element as part of the Monitoring Program that addresses the distribution of the species, its home range size, dispersal distances and barriers to dispersal, and its population density throughout the Plan Area. 	<ul style="list-style-type: none"> ➤ 91% of the Core Habitat for is conserved under the Plan. ➤ 9% of Habitat would be subject to Take in Conservation Areas, consistent with Conservation Objectives; 72% of Habitat outside Conservation Areas would be subject to Take in areas that are highly fragmented, surrounded by development or agriculture, or other impacts.
<p>Le Conte's thrasher <i>Toxostoma lecontei</i></p>	<ul style="list-style-type: none"> ➤ Conserve Habitat across a range of environmental conditions in 20 Conservation Areas. 	<ul style="list-style-type: none"> ➤ 54% of the modeled Habitat for this species in the Plan Area will be conserved. Habitat from Snow Creek in the west of the Plan Area to the Shavers Valley area in the extreme 	<ul style="list-style-type: none"> ➤ Permittees will protect and manage 73,463 acres of modeled habitat together with Existing Conservation 	<ul style="list-style-type: none"> ➤ Control and manage activities that degrade Le Conte's thrasher Habitat. In particular, OHV activity can destroy nesting substrate and creosote bushes used for nesting. 	<ul style="list-style-type: none"> ➤ 90% of the predicted Other Conserved Habitat for Le Conte's thrasher is conserved and 54% of the

Table 4-116: Summary of Covered Species Conservation and Take Table

Species Common Name Scientific Name	Species Conservation Objectives	Conservation Analysis Summary	Measures to Avoid, Minimize, and Mitigate Take	Management Activities Summary	Conservation and Take Summary
	<ul style="list-style-type: none"> ➤ Protect Essential Ecological Processes including hydrological regimes necessary to maintain thrasher Habitat. ➤ Maintain Biological Corridors and Linkages for habitat connectivity. ➤ Implement biological monitoring and Adaptive Management to ensure Conservation of this rare bird. 	<p>east of the Plan Area. Those areas where Take could be permitted for this species are primarily locations in the area west of Desert Hot Springs and scattered locations in the urbanized areas of Indio and Palms Springs. Roads and urban Development already fragment a significant portion of the Take area. Thus, implementation of the Plan will maintain and enhance population viability of the species by protecting large Habitat areas that otherwise would be subject to conversion to other uses. Only 24% of the modeled Habitat for this species is currently conserved.</p> <ul style="list-style-type: none"> ➤ The combination of the overall Conservation measures; species-specific measures such as management to minimize impacts to thrashers and their Habitat, monitoring to better understand the distribution and population status of this species in the Plan Area, and long-term protection, management, and enhancement of Le Conte's thrasher Habitat is expected to effectively compensate for potential adverse effects to this bird species. 	<p>Land for a total of 132,715 acres conserved.</p> <ul style="list-style-type: none"> ➤ Avoidance, minimization, and mitigation measures require avoidance of Le Conte's thrasher nests. ➤ Occupied and potential Habitat conserved across range of conditions in Plan Area; only 24% currently protected. ➤ Management and Monitoring activities to ensure Conservation of this species, including control of activities that degrade its habitat. 	<p>Similarly, shooting should not be allowed, as the Le Conte's thrasher is the largest and most conspicuous species in creosote scrub Habitat at certain times of the year.</p> <ul style="list-style-type: none"> ➤ Control invasive species if it is determined from the monitoring results that they impact thrasher Habitat. Although brood parasitism by the brown-headed cowbird has not been documented in the literature, 11 of 11 Le Conte's thrasher pairs accepted artificially introduced cowbird eggs in a study. Cowbird control should be considered if monitoring indicates it is a problem. ➤ As part of the Monitoring Program, establish a research element that addresses the distribution of the species, its home range size, dispersal distances and barriers to dispersal, and its population density throughout the Plan Area. 	<p>modeled Habitat is conserved under the Plan.</p> <ul style="list-style-type: none"> ➤ 4% of Habitat would be subject to Take in Conservation Areas, consistent with Conservation Objectives; 36% of Habitat outside Conservation Areas in areas that are highly fragmented, surrounded by development or agriculture, or other impacts.
<p>Least Bell's vireo <i>Empidonax bellii pusillus</i></p>	<ul style="list-style-type: none"> ➤ Conserve existing breeding Habitat and an assemblage of native Habitats important for migration. ➤ Ensure that CVWD will establish at least 44 acres 	<ul style="list-style-type: none"> ➤ The MSHCP Reserve System would protect 79% of the potential and known breeding Habitat for this species. All of the known breeding locations for this species would be protected. The proposed Conservation Areas include the 	<ul style="list-style-type: none"> ➤ Breeding: Permittees will protect and manage 1,282 acres of modeled breeding Habitat together with Existing Conservation Land for a total of 2,911 acres of 	<ul style="list-style-type: none"> ➤ Control and manage activities that degrade least Bell's vireo habitat, such as brown-headed cowbird nest parasitism, clearing or alteration of riparian vegetation, persistence or invasion of exotic plant species, human disturbance, 	<p>Breeding:</p> <ul style="list-style-type: none"> ➤ 79% of the modeled vireo breeding Habitat is conserved under the Plan. ➤ 4% of Habitat would be subject to Take in

Table 4-116: Summary of Covered Species Conservation and Take Table

Species Common Name Scientific Name	Species Conservation Objectives	Conservation Analysis Summary	Measures to Avoid, Minimize, and Mitigate Take	Management Activities Summary	Conservation and Take Summary
	<p>of riparian forest in the Coachella Valley Stormwater Channel and Delta Conservation Area.</p> <ul style="list-style-type: none"> ➤ Protect Essential Ecological Processes including hydrological regimes necessary to maintain riparian Habitat. ➤ Implement biological monitoring and Adaptive Management to ensure Conservation of this vireo. 	<p>important breeding Habitat for least Bell's vireo in riparian woodland and forest communities and desert fan palm oasis woodland. Proposed Conservation Areas include riparian Habitat in Whitewater Canyon, Chino Canyon, and Willow Hole/Edom Hill ACEC where the species has been known to breed. Other natural Habitat used by least Bell's vireo in migration or foraging will be conserved. In total, the Plan would conserve 71% of the Habitat potentially used in migration by least Bell's vireo, according to the model. Temporary Habitat disturbance for flood control channel maintenance purposes would be permitted by the Plan in the Coachella Valley Stormwater channel. CVWD will establish offsite replacement riparian Habitat as described in Section 4.3.21.</p> <ul style="list-style-type: none"> ➤ Implementation of the Plan is expected to maintain and enhance population viability of the least Bell's vireo by protecting its known breeding locations in the Plan Area and conserving Habitats that may be used in migration. The Plan will also enhance riparian Habitat through implementation of management prescriptions to remove non-native tamarisk and other invasive species from riparian areas. An agreement with CVWD will result in creation of additional riparian vegetation along 	<p>breeding Habitat conserved.</p> <ul style="list-style-type: none"> ➤ Migratory: Permittees will protect and manage 19,319 acres of modeled migratory Habitat together with Existing Conservation Land for a total of 40,528 acres of migratory Habitat conserved. ➤ The Conservation Areas in the Plan would protect 79% of the occupied and potential breeding habitat and 71% of the potential migratory habitat for this species. ➤ Where disturbance of a given number of acres of a riparian natural community is authorized, an equivalent number of acres would be replaced to ensure that the no net loss occurs. ➤ CVWD will establish 44 acres of permanent Sonoran cottonwood-willow riparian forest in the Coachella Valley Stormwater Channel and Delta Conservation area as described in Section 4.3.20. Management and Monitoring will ensure the Conservation of this species. 	<p>edge effects, and predation of adults and nests by domestic animals.</p> <ul style="list-style-type: none"> ➤ Restrict human access to vireo habitat during the breeding season, from March 15 to September 15. ➤ Enhance habitat through the restoration of disturbed habitats or the creation of new habitat where feasible. In particular, removal of tamarisk from existing riparian areas would enhance habitat for least Bell's vireo and other riparian birds. ➤ Maintain upland buffers for all occupied habitat. Buffers should be a minimum of 50 feet wide. Access to surface water is important for this species within the habitat area. 	<p>Conservation Areas and less than 17% of Habitat outside Conservation Areas, compromised by fragmentation or other impacts.</p> <p>Migratory:</p> <ul style="list-style-type: none"> ➤ 71% of the modeled vireo migratory Habitat is conserved under the Plan. ➤ 4% of Habitat would be subject to Take in Conservation Areas, consistent with Conservation Objectives and less than 22% of Habitat outside Conservation Areas, compromised by fragmentation or other impacts.

Table 4-116: Summary of Covered Species Conservation and Take Table

Species Common Name Scientific Name	Species Conservation Objectives	Conservation Analysis Summary	Measures to Avoid, Minimize, and Mitigate Take	Management Activities Summary	Conservation and Take Summary
		the Coachella Valley Stormwater channel.			
Gray vireo <i>Vireo vicinior</i>	<ul style="list-style-type: none"> ➤ Conserve occupied or potential Habitat in three Conservation Areas. ➤ Implement biological monitoring and Adaptive Management to ensure Conservation of this vireo. 	<ul style="list-style-type: none"> ➤ As shown in Table 9-25, the Plan would protect 96% of the potential Habitat for this species. All of the known locations for this species would be protected under this Plan. Habitat would also be conserved in a range of environmental conditions from Cabazon in the west end of the Plan Area to the Joshua Tree National Park in the north and east ends of the Plan Area. Those limited areas where Take could be permitted for this species are primarily locations in the already developed area around Pinyon Flat in the Santa Rosa Mountains. ➤ Implementation of the Plan will maintain and enhance population viability of the gray vireo by protecting additional potential Habitat for this species. The Plan will also enhance gray vireo Habitat through implementation of management prescriptions, which could include control of brown-headed cowbird parasitism and prescribed burning to revitalize Habitat. Implementation for this species will include research to determine the extent of its occurrence within the Plan Area and Habitat management needs. 	<ul style="list-style-type: none"> ➤ Permittees will protect and manage 13,194 acres of modeled habitat together with Existing Conservation Land for a total of 101,544 acres conserved. ➤ Occupied and potential Habitat conserved across range of conditions in Plan Area; 84% currently protected. ➤ Management a Monitoring activities to ensure Conservation of this species, including control of activities that degrade its habitat. 	<ul style="list-style-type: none"> ➤ Determine the distribution and abundance of the gray vireo throughout the Plan Area. This would include coordination with Joshua Tree National Park biologists to conduct surveys for this species in appropriate Habitat within the park. ➤ Control brown-headed cowbird nest parasitism if it is deemed to be a significant factor in the decline of this species. Any sign of parasitism or regular observations of cowbirds in breeding Habitat may warrant a cowbird control effort. Control invasive species if it is determined from the monitoring results that they impact gray vireo Habitat. ➤ Coordinate with USFS, BLM, and NPS regarding appropriate management prescriptions for Pinyon-juniper woodland and chaparral Habitats. Consideration should be given to the use of prescribed fire and/or standards for controlling wildfires to maintain or restore gray vireo Habitat. 	<ul style="list-style-type: none"> ➤ 96% of the occupied or potential habitat is conserved under the Plan. ➤ 1% would be subject to take within Conservation Areas, consistent with Conservation Objectives; 2% subject to Take outside Conservation Areas in habitat that is compromised by fragmentation, loss of Essential Ecological Processes or other impacts.
Yellow warbler <i>Dendroica</i>	<ul style="list-style-type: none"> ➤ Conserve existing breeding Habitat and an 	<ul style="list-style-type: none"> ➤ Implementation of the Plan is expected to maintain and enhance 	Breeding:	<ul style="list-style-type: none"> ➤ Control and manage activities that degrade yellow warbler habitat in 	Breeding:

Table 4-116: Summary of Covered Species Conservation and Take Table

Species Common Name Scientific Name	Species Conservation Objectives	Conservation Analysis Summary	Measures to Avoid, Minimize, and Mitigate Take	Management Activities Summary	Conservation and Take Summary
<i>petechia brewsteri</i>	<p>assemblage of native Habitats important for migration.</p> <ul style="list-style-type: none"> ➤ Ensure that CVWD will establish at least 44 acres of riparian forest in the Coachella Valley Stormwater Channel and Delta Conservation Area. ➤ Protect Essential Ecological Processes including hydrological regimes necessary to maintain riparian Habitat. ➤ Implement biological monitoring and Adaptive Management to ensure Conservation of this warbler. 	<p>population viability of the yellow warbler by protecting habitat for potential nesting and conserving habitat known to be used in migration. The Plan will also enhance riparian habitat through implementation of management prescriptions to remove non-native tamarisk and other invasive species. An agreement with CVWD regarding creation of riparian vegetation along the Whitewater River could result in enhanced habitat for yellow warblers as well. Another benefit is the focus of attention on the presence of brown-headed cowbirds, including Adaptive Management activities to control their impacts to riparian birds such as the yellow warbler.</p>	<ul style="list-style-type: none"> ➤ Permittees will protect and manage 1,037 acres of modeled breeding Habitat together with Existing Conservation Land for a total of 2,563 acres of breeding Habitat conserved. <p>Migratory:</p> <ul style="list-style-type: none"> ➤ Permittees will protect and manage 19,552 acres of modeled migratory Habitat together with Existing Conservation Land for a total of 40,864 acres of migratory Habitat conserved. ➤ The Conservation Areas in the Plan would protect 94% of the occupied and potential breeding habitat and 71% of the potential migratory habitat for this species. ➤ Where disturbance of a given number of acres of a riparian natural community is authorized, an equivalent number of acres would be replaced to ensure that the no net loss occurs. ➤ CVWD will establish 44 acres of permanent Sonoran cottonwood-willow riparian forest as described in Section 4.3.20. ➤ Management and Monitoring will ensure the 	<p>conserved areas. These activities include brown-headed cowbird nest parasitism, clearing or alteration of riparian vegetation, persistence or invasion of exotic plant species, human disturbance, edge effects, and predation of adults and nests by domestic animals.</p> <ul style="list-style-type: none"> ➤ Restrict human access to yellow warbler-occupied habitat during the breeding season, from May 1 to September 15. ➤ Enhance habitat through the restoration of disturbed habitats or the creation of new habitat where feasible. In particular, removal of tamarisk from existing riparian areas would enhance habitat for yellow warbler and other riparian birds. ➤ Maintain upland buffers for all occupied habitat. Buffers should be a minimum of 50 feet wide. Access to surface water is important for this species within the habitat area. 	<ul style="list-style-type: none"> ➤ 94% of the modeled yellow warbler breeding Habitat is conserved under the Plan. ➤ 4% of Habitat would be subject to Take in Conservation Areas and less than 2% of Habitat outside Conservation Areas, compromised by fragmentation or other impacts. <p>Migratory:</p> <ul style="list-style-type: none"> ➤ 71% of the modeled yellow warbler migratory Habitat is conserved under the Plan. ➤ 4% of Habitat would be subject to Take in Conservation Areas and less than 23% of Habitat outside Conservation Areas, compromised by fragmentation or other impacts.

Table 4-116: Summary of Covered Species Conservation and Take Table

Species Common Name Scientific Name	Species Conservation Objectives	Conservation Analysis Summary	Measures to Avoid, Minimize, and Mitigate Take	Management Activities Summary	Conservation and Take Summary
<p>Yellow breasted chat <i>Icteria virens</i></p> <p>Yellow breasted chat <i>(cont.)</i></p>	<ul style="list-style-type: none"> ➤ Conserve existing breeding Habitat and an assemblage of native Habitats important for migration. ➤ Ensure that CVWD will establish at least 44 acres of riparian forest in the Coachella Valley Stormwater Channel and Delta Conservation Area. ➤ Protect Essential Ecological Processes including hydrological regimes necessary to maintain riparian Habitat. ➤ Implement biological monitoring and Adaptive Management to ensure Conservation of this chat. 	<ul style="list-style-type: none"> ➤ Implementation of the Plan is expected to maintain and enhance population viability of the yellow-breasted chat by protecting Habitat for potential nesting and conserving Habitat known to be used in migration. The Plan will also enhance riparian Habitat through implementation of management prescriptions to remove non-native tamarisk and other invasive species. An agreement with CVWD regarding creation of riparian vegetation along the Whitewater River could result in enhanced Habitat for chats as well. Another benefit is the focus of attention on the presence of brown-headed cowbirds, including Adaptive Management activities to control their impacts to riparian birds such as the yellow-breasted chat. 	<p>Conservation of this species.</p> <p>Breeding:</p> <ul style="list-style-type: none"> ➤ Permittees will protect and manage 1,160 acres of modeled breeding Habitat together with Existing Conservation Land for a total of 2,829 acres of breeding Habitat conserved. <p>Migratory:</p> <ul style="list-style-type: none"> ➤ Permittees will protect and manage 19,432 acres of modeled migratory Habitat together with Existing Conservation Land for a total of 40,601 acres of migratory Habitat conserved. ➤ Where disturbance of a given number of acres of a riparian natural community is authorized, an equivalent number of acres would be replaced to ensure that the no net loss occurs. ➤ CVWD will establish 44 acres of permanent Sonoran cottonwood-willow riparian forest as described in Section 4.3.20. ➤ Management and Monitoring will ensure the Conservation of this species. 	<ul style="list-style-type: none"> ➤ Control and manage activities that degrade yellow-breasted chat habitat in conserved areas. These activities include brown-headed cowbird nest parasitism, clearing or alteration of riparian vegetation, persistence or invasion of exotic plant species, human disturbance, edge effects, and predation of adults and nests by domestic animals. ➤ Restrict human access to yellow-breasted chat-occupied habitat during the breeding season, from May 1 to September 15. ➤ Enhance habitat through the restoration of disturbed habitats or the creation of new habitat where feasible. In particular, removal of tamarisk from existing riparian areas would enhance habitat for this chat and other riparian birds. Any habitat restoration should ensure a mix of vegetation successional stages in riparian habitats. ➤ Maintain upland buffers for all occupied habitat. Buffers should be a minimum of 50 feet wide. Access to surface water is important for this species within the habitat area. 	<p>Breeding:</p> <ul style="list-style-type: none"> ➤ 94% of the modeled chat breeding Habitat is conserved under the Plan. ➤ 4% of Habitat would be subject to Take in Conservation Areas and less than 2% of Habitat outside Conservation Areas, compromised by fragmentation or other impacts. <p>Migratory:</p> <ul style="list-style-type: none"> ➤ 71% of the modeled yellow-breasted chat migratory Habitat is conserved under the Plan. ➤ 4% of Habitat would be subject to Take in Conservation Areas and less than 23% of Habitat outside Conservation Areas, compromised by fragmentation or other impacts.

Table 4-116: Summary of Covered Species Conservation and Take Table

Species Common Name Scientific Name	Species Conservation Objectives	Conservation Analysis Summary	Measures to Avoid, Minimize, and Mitigate Take	Management Activities Summary	Conservation and Take Summary
<p>Summer Tanager <i>Piranga rubra</i></p>	<ul style="list-style-type: none"> ➤ Conserve existing breeding Habitat and an assemblage of native Habitats important for migration. ➤ Ensure that CVWD will establish at least 44 acres of riparian forest in the Coachella Valley Stormwater Channel and Delta Conservation Area. ➤ Protect Essential Ecological Processes including hydrological regimes necessary to maintain riparian Habitat. ➤ Implement biological monitoring and Adaptive Management to ensure Conservation of this tanager. 	<ul style="list-style-type: none"> ➤ Implementation of the Plan is expected to maintain and enhance population viability of the summer tanager by protecting Habitat for potential nesting and conserving Habitat known to be used in migration. The Plan will also enhance riparian Habitat through implementation of management prescriptions to remove non-native tamarisk and other invasive species. An agreement with CVWD regarding creation of riparian vegetation along the Whitewater River could result in enhanced Habitat for warblers and other riparian birds as well. Another benefit is the focus of attention on the presence of brown-headed cowbirds, including Adaptive Management activities to control their impacts to riparian birds such as the summer tanager. 	<p>Breeding:</p> <ul style="list-style-type: none"> ➤ Permittees will protect and manage 1,037 acres of modeled breeding Habitat together with Existing Conservation Land for a total of 2,563 acres of breeding Habitat conserved. <p>Migratory:</p> <ul style="list-style-type: none"> ➤ Permittees will protect and manage 19,552 acres of modeled migratory Habitat together with Existing Conservation Land for a total of 40,864 acres of migratory Habitat conserved. ➤ Where disturbance of a given number of acres of a riparian natural community is authorized an equivalent number of acres would be replaced to ensure that the no net loss occurs. ➤ CVWD will establish 44 acres of permanent Sonoran cottonwood-willow riparian forest as described in Section 4.3.20. ➤ Management and Monitoring will ensure the Conservation of this species. 	<ul style="list-style-type: none"> ➤ Control and manage activities that degrade summer tanager habitat in conserved areas. These activities include brown-headed cowbird nest parasitism, clearing or alteration of riparian vegetation, persistence or invasion of exotic plant species, human disturbance, edge effects, and predation of adults and nests by domestic animals. <p>Restrict human access to tanager-occupied habitat during the breeding season, from May 1 to September 15.</p> <ul style="list-style-type: none"> ➤ Enhance habitat through the restoration of disturbed habitats or the creation of new habitat where feasible. In particular, removal of tamarisk from existing riparian areas would enhance habitat for summer tanager and other riparian birds. ➤ Maintain upland buffers for all occupied habitat. Buffers should be a minimum of 50 feet wide. Access to surface water is important for this species within the habitat area. 	<p>Breeding:</p> <ul style="list-style-type: none"> ➤ 94% of the modeled summer tanager breeding Habitat is conserved under the Plan. ➤ 4% of Habitat would be subject to Take in Conservation Areas and less than 2% of Habitat outside Conservation Areas, compromised by fragmentation or other impacts. <p>Migratory:</p> <ul style="list-style-type: none"> ➤ 71% of the modeled summer tanager migratory Habitat is conserved under the Plan. ➤ 4% of Habitat would be subject to Take in Conservation Areas and less than 23% of Habitat outside Conservation Areas, compromised by fragmentation or other impacts.
Mammals					

Table 4-116: Summary of Covered Species Conservation and Take Table

Species Common Name Scientific Name	Species Conservation Objectives	Conservation Analysis Summary	Measures to Avoid, Minimize, and Mitigate Take	Management Activities Summary	Conservation and Take Summary
<p>Southern yellow bat <i>Lasiurus ega or xanthinus</i></p>	<ul style="list-style-type: none"> ➤ Conserve occupied and potential habitat in native fan palm oases. ➤ Protect Essential Ecological Processes including hydrological regimes necessary to maintain fan palm oases. ➤ Implement biological monitoring and adaptive management to ensure Conservation of yellow bat habitat. 	<ul style="list-style-type: none"> ➤ Under the Plan, 94% of the approximately 1,329 acres of naturally occurring Habitat of the species in the Plan Area will be conserved. The conserved area includes the entire known occupied, naturally-occurring Habitat. It should be noted that a significant amount of potential Habitat occurs on the Agua Caliente Indian Reservation and is not part of this Plan. The Agua Caliente Band of Cahuilla Indians is preparing its own MSHCP, and potential conservation on reservation lands will be addressed in that plan. Under the Plan, Take would be permitted on 12 acres, or less than 1%, of the naturally occurring Habitat outside the Conservation Areas. ➤ Implementation of the Plan will maintain and enhance population viability of the southern yellow bat by conserving its palm oasis Habitat, providing increased study of the ecology of the species, and by encouraging private landowners to manage potential Habitat in landscaped areas to maintain Habitat values. 	<ul style="list-style-type: none"> ➤ Permittees will protect and manage 590 acres of modeled habitat together with Existing Conservation Land for a total of 1,250 acres conserved. Occupied and potential Habitat conserved across range of conditions in Plan Area; 44% currently protected. ➤ Management and Monitoring activities to ensure Conservation of this species, including control of activities that degrade its Habitat. 	<ul style="list-style-type: none"> ➤ Control and manage activities that degrade yellow bat Habitat, such as activities that result in disturbance or alteration to the vegetation structure of desert fan palm oases and the skirts of dead fronds on individual palm trees. ➤ Control invasive species if it is determined from the monitoring results that they impact yellow bat Habitat. ➤ Assess, as part of the Monitoring and Management Programs, whether a fire management plan is needed to reduce or avoid the impact of fire on this species. The Plan must also recognize that fire may be part of the ecology of <i>Washingtonia filifera</i> and may be beneficial. ➤ Restore and enhance degraded Habitat as necessary according to monitoring results. ➤ As part of the Monitoring Program, gather data on the distribution and Habitat parameters of the southern yellow bat throughout the MSHCP Reserve System. 	<ul style="list-style-type: none"> ➤ 94% of the occupied or potential yellow bat Habitat is conserved under the Plan. ➤ 5% of modeled habitat would be subject to Take within Conservation Areas; Less than 1% of modeled Habitat is subject to Take outside Conservation Areas in Habitat that is compromised by fragmentation, loss of Essential Ecological Processes or other impacts. For this species Habitat outside Conservation Areas is less likely to be occupied.
<p>Coachella Valley round-tailed ground squirrel <i>Spermophilus tereticaudus chlorus</i></p>	<ul style="list-style-type: none"> ➤ Ensure conservation of Core Habitat within four Conservation Areas. ➤ Protect Other Conserved Habitat in 16 Conservation Areas through adherence to other Conservation Objectives. 	<ul style="list-style-type: none"> ➤ The Conservation Areas benefit this species by securing the long-term sand transport-delivery systems for the Core Habitat and Other Conserved Habitat. At the present time, the sand transport corridors for the Snow Creek area, the Willow Hole area, and for the Thousand 	<ul style="list-style-type: none"> ➤ Permittees will protect and manage 20,593 acres of modeled habitat together with Existing Conservation Land for a total of 33,950 acres conserved. ➤ Occupied and potential Habitat conserved across 	<ul style="list-style-type: none"> ➤ Control and manage activities that degrade ground squirrel Habitat, such as activities that result in sand compaction and vegetation destruction, or which may crush their burrows, including OHV travel within Core Habitat; vegetation manipulation or clearing; and other human 	<ul style="list-style-type: none"> ➤ 94% of the Core Habitat for this ground squirrel is conserved and 33% of the occupied or potential habitat is conserved under the Plan.

Table 4-116: Summary of Covered Species Conservation and Take Table

Species Common Name Scientific Name	Species Conservation Objectives	Conservation Analysis Summary	Measures to Avoid, Minimize, and Mitigate Take	Management Activities Summary	Conservation and Take Summary
	<ul style="list-style-type: none"> ➤ Ensure conservation of Essential Ecological Processes including sand source/sand transport systems. ➤ Maintain Linkages among all conserved populations. ➤ Implement biological monitoring and Adaptive Management to ensure long-term persistence. 	<p>Palms Preserve are unprotected; the MSHCP Reserve System would protect these areas. Potential Linkage areas would be protected between Highway 111 and Interstate 10 near Snow Creek. From Willow Hole east, Habitat that typically supports this species along the south-facing slopes of Edom Hill would be protected, providing a Linkage with Habitat to the east on the Thousand Palms Preserve. Essential Ecological Processes, including wind corridors and sand sources for the Habitat named above, would be protected under the Plan. Habitat at Dos Palmas would be conserved in the proposed Plan. Those areas where Take could be permitted are in areas that no longer have a viable sand transport/wind corridor and are highly fragmented by major roads. These fragmented blocks are more susceptible to edge effects, including mortality on roads and predation by feral animals.</p>	<p>range of conditions in Plan Area; 13% currently protected.</p> <ul style="list-style-type: none"> ➤ Management a Monitoring activities to ensure Conservation of this species, including control of activities that degrade its habitat. ➤ The Plan will ensure Conservation of mesquite hummocks as a significant habitat for Coachella Valley round-tailed ground squirrels. This will include monitoring of existing mesquite, groundwater levels, and restoration and enhancement of additional mesquite hummocks. 	<p>disturbance. Fencing, patrol and enforcement may be necessary to accomplish this goal.</p> <ul style="list-style-type: none"> ➤ Control invasive species if it is determined from the monitoring results that there are impacts to the ground squirrel or its Habitat. ➤ Restore and enhance degraded Habitat as necessary according to monitoring results. This may include restoration of mesquite hummocks if research and monitoring results indicate restoration is warranted. ➤ As part of the Monitoring Program, establish a research element that addresses the distribution, abundance, and Habitat parameters of the Coachella Valley round-tailed ground squirrel throughout the Plan Area. 	<ul style="list-style-type: none"> ➤ 2% would be subject to take within Conservation Areas; 58% subject to Take outside Conservation Areas in habitat that is compromised by fragmentation, loss of Essential Ecological Processes or other impacts. For this species habitat outside Conservation Areas is less likely to be occupied.
<p>Palm Springs pocket mouse <i>Perognathus longimembris bangsi</i></p>	<ul style="list-style-type: none"> ➤ Ensure conservation of Core Habitat within five Conservation Areas. ➤ Protect Other Conserved Habitat in sixteen Conservation Areas through adherence to other Conservation Objectives. ➤ Ensure conservation of Essential Ecological 	<ul style="list-style-type: none"> ➤ Implementation of the Plan will maintain and enhance population viability of the Palm Springs pocket mouse, which currently receives no protection outside of the existing CVFTL Preserve system. Management and monitoring prescriptions will further enhance long-term Conservation of this species. 	<ul style="list-style-type: none"> ➤ Permittees will protect and manage 35,762 acres of modeled habitat together with Existing Conservation Land for a total of 57,013 acres conserved. ➤ Occupied and potential Habitat conserved across range of conditions in Plan Area; 15% currently protected. 	<ul style="list-style-type: none"> ➤ Control and manage activities that degrade pocket mouse Habitat, such as activities that adversely affect this species, which may include OHV travel within Core Habitat (except on designated routes of travel, if any); vegetation manipulation or clearing; and other human disturbance. Fencing, patrol and enforcement may be necessary to accomplish this goal. 	<ul style="list-style-type: none"> ➤ 93% of the Core Habitat for this pocket mouse is conserved and 40% of the occupied or potential habitat is conserved under the Plan. ➤ 3% would be subject to take within Conservation

Table 4-116: Summary of Covered Species Conservation and Take Table

Species Common Name Scientific Name	Species Conservation Objectives	Conservation Analysis Summary	Measures to Avoid, Minimize, and Mitigate Take	Management Activities Summary	Conservation and Take Summary
	<p>Processes including sand source/sand transport system.</p> <ul style="list-style-type: none"> ➤ Maintain Linkages among all conserved populations. ➤ Implement biological monitoring and Adaptive Management to ensure long-term persistence. 	<ul style="list-style-type: none"> ➤ The Palm Springs pocket mouse will benefit from the establishment of the MSHCP Reserve System which will include Core Habitat. The proposed Conservation Areas in the Plan would protect 93% of the Core Habitat areas for this pocket mouse from Cabazon to Thousand Palms. This includes 77% of the known occurrences for the Palm Springs pocket mouse. The combination of the overall Conservation measures; species-specific Conservation Objectives and measures such as management to minimize OHV impacts in pocket mouse Habitat, monitoring to better understand the distribution and ecology of this species, and long-term protection, management, and enhancement of Palm Springs pocket mouse Habitat is expected to effectively compensate for potential adverse effects to this species. 	<ul style="list-style-type: none"> ➤ Management and Monitoring activities to ensure Conservation of this species, including control of activities that degrade its habitat. 	<ul style="list-style-type: none"> ➤ Identify actions to reduce impacts from, and control where feasible, invasive species if it is determined from monitoring results that there are impacts to pocket mouse Habitat or populations. ➤ Restore and enhance degraded Habitat as necessary according to monitoring results. ➤ Where necessary, develop fire management guidelines within conserved areas to protect populations from fires and disturbances associated with fire suppression. ➤ Complete studies to determine where Habitat interfaces occur between <i>P.I. bangsi</i> and other subspecies. 	<p>Areas; 50% subject to Take outside Conservation Areas in habitat that is compromised by fragmentation, loss of Essential Ecological Processes or other impacts. For this species habitat outside Conservation Areas is less likely to be occupied.</p>
<p>Peninsular bighorn sheep <i>Ovis Canadensis nelsoni</i></p>	<ul style="list-style-type: none"> ➤ Ensure species persistence in the Plan area by securing Essential Habitat and alleviating threats to the Plan Area population. ➤ Ensure implementation of avoidance, minimization, and mitigation measures as described in Section 4.4, and Land Use Adjacency Guidelines as described in Section 4.5. 	<ul style="list-style-type: none"> ➤ Implementation of the Plan will maintain and enhance population viability of the Peninsular bighorn sheep by acquiring Essential Habitat and helping to implement the Recovery Plan. The goals of the Plan for the Peninsular bighorn sheep are consistent recovery strategy for the Peninsular bighorn sheep. ➤ The Peninsular bighorn sheep will benefit from the establishment of the MSHCP Reserve System which will include Essential Habitat in the 	<ul style="list-style-type: none"> ➤ Permittees will protect and manage 30,226 acres of modeled habitat together with Existing Conservation Land for a total of 165,856 acres conserved. ➤ Occupied and potential Habitat conserved across range of conditions in Plan Area; 78% currently protected. 	<ul style="list-style-type: none"> ➤ Protect Essential Habitat for the peninsular bighorn sheep as delineated in the final <u>Recovery Plan for Bighorn Sheep in the Peninsular Ranges, California</u> (USFWS 2000). ➤ Control and manage activities that degrade peninsular bighorn sheep Essential Habitat within the Conservation area. This could include human disturbance, Habitat fragmentation, and edge effects. ➤ Identify actions to reduce impacts from, and control where feasible, 	<ul style="list-style-type: none"> ➤ 96% of the Essential Habitat is conserved under the Plan. ➤ 2% would be subject to take within Conservation Areas, consistent with Conservation Objectives; 1% subject to Take outside Conservation Areas

Table 4-116: Summary of Covered Species Conservation and Take Table

Species Common Name Scientific Name	Species Conservation Objectives	Conservation Analysis Summary	Measures to Avoid, Minimize, and Mitigate Take	Management Activities Summary	Conservation and Take Summary
	<ul style="list-style-type: none"> ➤ Ensure that implementation of the MSHCP is consistent with the recovery strategy delineated in the <u>Recovery Plan for Bighorn Sheep in the Peninsular Ranges, California</u> (USFWS, 2000). ➤ Ensure that any Development allowed does not fragment Essential Habitat, and that edge effects from such Development are minimized. ➤ Maintain connectivity by preventing Habitat fragmentation within and between the four recovery regions within Essential Habitat areas to allow dispersal and movement of bighorn sheep. ➤ Include Habitat Linkages and Biological Corridors within Essential Habitat areas to allow dispersal and movement of bighorn sheep. ➤ Ensure conservation of Habitat quality through biological monitoring and Adaptive Management actions to ensure Conservation of this 	<p>Cabazon Conservation Area, Snow Creek/Windy Point Conservation Area, and Santa Rosa and San Jacinto Mountains Conservation Area. The proposed Conservation Areas in the Plan would protect 96% of the Essential Habitat for Peninsular bighorn sheep within the Plan Area. Implementation of the Plan is expected to provide for long-term Conservation of the Peninsular bighorn sheep within the Plan Area, as currently unprotected portions of its Habitat and potential Habitat areas will be conserved. The combination of the overall Conservation measures; species-specific Conservation Objectives and measures such as management to minimize disturbance in bighorn sheep Habitat, monitoring to better understand the distribution and ecology of this species, and long-term protection, management, and enhancement of Peninsular bighorn sheep Habitat is expected to effectively compensate for potential adverse effects to this species.</p>	<ul style="list-style-type: none"> ➤ Avoidance, minimization, and mitigation measures will reduce impacts. ➤ Management and Monitoring activities to ensure Conservation of this species, including control of activities that degrade its habitat. 	<p>invasive species if it is determined from monitoring results that there are impacts to the bighorn sheep or to its Habitat. Tamarisk is an identified threat to this species' Habitat and a control program is underway.</p> <ul style="list-style-type: none"> ➤ Limit human access to lambing areas from January 15 to June 30 and from water source areas from July 1 to September 30. ➤ Restore and enhance degraded Habitat as necessary according to monitoring results. ➤ Where necessary, develop fire management guidelines within conserved areas to protect populations from fires and disturbances associated with fire suppression. Fire management is primarily an issue in the western, more mesic, portion of the Plan area where alien annual grasses may facilitate the spread of fire. 	<p>in areas previously approved for Development.</p>

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Table 4-116: Summary of Covered Species Conservation and Take Table

Species Common Name Scientific Name	Species Conservation Objectives	Conservation Analysis Summary	Measures to Avoid, Minimize, and Mitigate Take	Management Activities Summary	Conservation and Take Summary
	species in the Plan Area. ➤ Implement monitoring and Adaptive Management actions.				

Note: Table 4-116 summarizes the Take analyses described in Section 9.

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