CALIFORNIA
DEPARTMENT OF FISH AND GAME

FINDINGS OF FACT

under the
CALIFORNIA ENVIRONMENTAL QUALITY ACT
and the
NATURAL COMMUNITY CONSERVATION PLANNING ACT

AND

NATURAL COMMUNITY CONSERVATION PLAN

PERMIT
(2835-2008-001-06)

for the

Coachella Valley
Natural Community Conservation Plan

August 2008

FINDINGS AND NCCP PERMIT

Table of Contents

BACKGROUND 1

1.0 INTRODUCTION 1

1.1 The Natural Community Conservation Planning Act 1
1.2 Coachella Valley Multiple Species Habitat Conservation Plan/ Natural Community Conservation Plan 2
1.3 Implementing Agreement 5

ADMINISTRATIVE RECORD 6

2.0 ADMINISTRATIVE RECORD OF PROCEEDINGS 6

FINDINGS OF FACT 8

3.0 FINDINGS UNDER CEQA 8

3.1 Environmental Documents 8
3.2 CEQA Findings Requirements 11
3.3 Scope of CEQA Findings 12
3.4 Legal Effect of the CEQA Findings 13
3.5 CEQA Findings Regarding Potentially Significant Environmental Effects 13
3.6 Mitigation Monitoring and Reporting Program 61
3.7 Alternatives 61
3.8 Statement of Overriding Consideration 62

4.0 FINDINGS UNDER NCCPA 62

4.1 NCCPA of 2003 and Findings 62

5.0 OTHER FINDINGS 166

5.1 Fully Protected Covered Species 166

NCCP PERMIT 170

6.0 APPROVAL OF THE NCCP 170

6.1 Covered Activities 170
6.2 Covered Species 172
6.3 Limitations 175

7.0 AMENDMENTS 175

8.0 SUSPENSION AND TERMINATION 176

9.0 DURATION 176

DEFINITIONS FROM THE HCP/NCCP 177

LITERATURE CITED 187

BACKGROUND

1.0 INTRODUCTION

This document sets forth findings and the approval of the California Department of Fish and Game (CDFG) for the Coachella Valley Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP). In approving the HCP/NCCP as provided for in the California Natural Community Conservation Planning Act, California Fish and Game Code Sections 2800-2835[1] (NCCPA), CDFG is acting as a responsible agency under the California Environmental Quality Act, Public Resources Code Section 21000 et seq. (CEQA). Unless otherwise noted in this document, capitalized terms have the same definitions as in the NCCP.

1.1 The Natural Community Conservation Planning Act

The NCCPA provides for the preparation and implementation of large-scale natural resource conservation plans as an alternative to reviewing impacts of urban development on a project-by-project and species-by-species basis. A natural community conservation plan (NCCP) must provide for "the protection of habitat, natural communities, and species diversity on a landscape or ecosystem level" (§2820, subd. (a)(3)), while allowing "compatible and appropriate economic development, growth, and other human uses" (§2805, subd. (h)). When it approves an NCCP, CDFG may authorize the Take of species whose conservation and management is provided for in the NCCP, including species listed as endangered, threatened, or candidate under the California Endangered Species Act, Sections 2050-2116 (CESA).

The NCCPA was originally enacted in 1991;[2] and was amended in 1993,[3] 1994,[4] 1996[5] and 2000.[6] The NCCPA was repealed and replaced in 2002 by Senate Bill 107,[7] which codified a number of CDFG's administrative standards and practices for NCCP development and implementation and added some new requirements. It was amended again in 2003[8]. With the revisions, many of the substantive standards and mandatory elements for an NCCP formerly contained in guidelines prepared by CDFG are now found in Section 2820.

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[1] All further section references are to the Fish and Game Code, unless otherwise indicated.
[2] Statutes 1991, chapter 765, section 2, page 3424 (A.B. 2172).
[3] Statutes 1993, chapter 708, section 1, page 4034 (S.B. 755).
[4] Statutes 1994, chapter 220, section 1, page 1778 (S.B. 1352).
[5] Statutes 1996, chapter 593, sections 1 and 2, page 2702 (A.B. 3446).
[6] Statutes 2000, chapter 87, sections 1-3, page 1207 (S.B. 1679).
[7] Statutes 2002, chapter 4, sections 1 and 2, page 81 (S.B. 107). Minor housekeeping changes were subsequently enacted as part of S.B. 2052 (Stats. 2002, ch. 133, §§ 1 and 2, page 568).
[8] Statutes 2003, chapter 61, section 1, page 95 (S.B. 572)

1.2. Coachella Valley Habitat Conservation Plan/Natural Community Conservation Plan

The proposed HCP/NCCP is a comprehensive, multi-jurisdictional plan that provides for regional habitat and species conservation at an ecosystem scale while allowing local land use authorities to better manage anticipated growth and development. The HCP/NCCP provides a coordinated process for permitting and mitigating the Take of Covered Species as an alternative to the traditional project-by-project permitting approach. The HCP/NCCP has been prepared as an NCCP pursuant to the California Natural Community Conservation Planning Act, and as an HCP pursuant to Section 10(a)(1)(B) of the federal Endangered Species Act (ESA). Upon approval of the HCP/NCCP, the United States Fish and Wildlife Service (USFWS) and CDFG can authorize the Take of certain listed species and other species of concern, subject to the terms of coverage under the HCP/NCCP.

The external boundaries of the HCP/NCCP Area encompass approximately 1.2 million acres, or approximately 1,850 square miles, encompassing the Coachella Valley and the surrounding mountains up to the ridgeline (Figure 1-2:HCP/NCCP). Indian reservation lands within the HCP/NCCP Area, however, are not covered by the HCP/NCCP; therefore, the actual area covered by the HCP/NCCP is approximately 1.1 million acres. The HCP/NCCP Area extends westward to Cabazon where it is bounded by the range line common to Range 1 East and Range 2 East. This is approximately the limit of the Sonoran or Colorado Desert in the San Gorgonio Pass area. The easternmost extent of the HCP/NCCP Area is the range line common to Range 13 East and Range 14 East. Either the ridgeline of the Little San Bernardino Mountains or the boundary line with San Bernardino County where the ridgeline extends north of the county line bound the HCP/NCCP Area on the north. On the south, either the ridgeline of the San Jacinto and Santa Rosa Mountains or the boundary line with San Diego and Imperial Counties forms the southern HCP/NCCP Area boundary (Exhibit 1-2:EIR/EIS). The city of Desert Hot Springs is not participating in the HCP/NCCP and so is excluded from coverage. Conservation will occur within the city of Desert Hot Springs city limits as a result of HCP/NCCP obligations.

The proposed HCP/NCCP was prepared by the Coachella Valley Association of Governments (CVAG), a joint powers authority that is comprised of the Cities of Cathedral City, Coachella, Desert Hot Springs, Indian Wells, Indio, La Quinta, Palm Desert, Palm Springs, and Rancho Mirage, and the County of Riverside (County).

The County, CVAG, and the Cities of Cathedral City, Coachella, Indian Wells, Indio, La Quinta, Palm Desert, Palm Springs, and Rancho Mirage will be named as Permittees under the HCP/NCCP and will be responsible for implementing the proposed HCP/NCCP. The Coachella Valley Water District (CVWD), Imperial Irrigation District (IID), Riverside County Flood Control and Water Conservation District (County Flood Control), Riverside County Regional Park and Open Space District (County Parks), Riverside County Waste Resources Management District (County Waste), and the

Coachella Valley Conservation Commission (CVCC, known as the "Implementing Entity") will also be Permittees to cover their operations and maintenance of facilities and other activities. California Department of Transportation (Caltrans), Coachella Valley Mountains Conservancy (CVMC), and California Department of Parks and Recreation (State Parks) are state agencies which are also Permittees under the HCP/NCCP. Although not Permittees under the HCP/NCCP, the Bureau of Land Management (BLM), U.S. Forest Service (USFS), and National Park Service (NPS) participated in development of the HCP/NCCP.

The HCP/NCCP is based on development in the HCP/NCCP Area of 178,509 acres (Table 4-1:HCP/NCCP, Table 4-8:EIR) and the conservation of 723,480 acres (Table 4-1:HCP/NCCP), to create a Reserve System that will be protected and managed in perpetuity. The conservation will be achieved through management of 557,000 acres of existing conservation lands consistent with the HCP/NCCP, acquisition of 166,380 acres, and protection of ecological processes through land use tools. Funding for the HCP/NCCP will in part be generated through payment of a mitigation fee by developers prior to issuance of development permits from the cities and County. Funding will also come from other sources such as fees on the importation of waste into landfills in Riverside County, transportation project mitigation, new federal and state funding, mitigation for regional infrastructure projects and contributions from utility districts.

In addition to land acquisition, the conservation strategy includes measures to restore, enhance, and otherwise manage habitat for the Covered Species (Table 4-116:HCP/NCCP). These measures are designed to carry out the biological goals and objectives developed for the HCP/NCCP (Section 4:HCP/NCCP). The biological goals and objectives, as well as the HCP/NCCP implementation, are based on ecological function at three scales: landscape, natural community, and species. A monitoring and adaptive management framework was designed for the HCP/NCCP to assess the success of overall conservation efforts as well as specific conservation measures within six broad habitat associations at the three scales. Avoidance and minimization measures and other development guidelines are also described in the HCP/NCCP (Table 4-116). These measures are required of project proponents seeking coverage through the local Permittees under the HCP/NCCP. Management of the Reserve System will be coordinated and integrated across six Reserve Management Units.

The HCP/NCCP Area is diverse in character. The westernmost portion of the HCP/NCCP Area is the San Gorgonio Pass (Pass), which is the westernmost extension of the Sonoran Desert (also referred to as the Colorado Desert) and is a transition area between natural communities of the desert and those of the less arid interior valleys of southern California. The Pass is a narrow corridor between the San Jacinto Mountains and the San Bernardino Mountains. The I-10 freeway and a major rail line run through the Pass, and some regional commercial development occurs along the freeway. The area is entirely unincorporated, but does contain the small rural community of Cabazon. Portions of this area are within the Morongo Indian Reservation, and are not part of the HCP/NCCP. The Pass opens from the west into the Coachella Valley, a broad and long valley trending northwest to southeast between the San Jacinto and Santa Rosa Mountains on the

southerly side and the Little San Bernardino Mountains on the northerly side. The Indio Hills run parallel to the Little San Bernardino Mountains on the north side of the valley and north of I-10, which bisects the Coachella Valley.

The western portion of the HCP/NCCP Area consists of the San Jacinto and Santa Rosa Mountains, where elevations range up to 10,804 feet. In 2000, this area was designated as the Santa Rosa and San Jacinto Mountains National Monument. The majority of the mountains are in public ownership, principally USFS land, BLM land, State Park land, CDFG land, and University of California land. There are also significant Indian reservation lands in the mountains belonging to the Agua Caliente Band of Cahuilla Indians and the Santa Rosa Band of Cahuilla Indians. A small, rural residential community occurs off Hwy. 74 in the Santa Rosa Mountains. Much of the mountains are in Wilderness or Ecological Reserve status, although there are areas where there is a significant checkerboard of privately owned lands. The San Jacinto and Santa Rosa Mountains contain only a few acres above the toe of slope that may be considered urban. Most of the alluvial fans below the toe of slope in the cities along the San Jacinto and Santa Rosa Mountains have been developed or development is proposed on portions of the remaining alluvial fans.

On the south side of the valley, the cities of Palm Springs, Cathedral City, Rancho Mirage, Palm Desert, Indian Wells, and La Quinta occupy the area between the base of the San Jacinto and Santa Rosa Mountains and the I-10 freeway. The City of Desert Hot Springs (which is not a Permittee) lies well north of I-10 near the northwest edge of the valley at the foot of the Little San Bernardino Mountains. Also north of the freeway is the unincorporated community of Thousand Palms, and several other areas of scattered rural residential development, especially north of the Indio Hills in an alluvial plain between the Indio Hills and the Little San Bernardino Mountains, which form the northern border of the HCP/NCCP Area. Most of the Little San Bernardino Mountains are within Joshua Tree National Park. To the northeast of Thousand Palms lies the Coachella Valley Fringe-toed Lizard Preserve (CVFTL Preserve), established in 1986. It includes portions of the Indio Hills and a sand dune system south of the Indio Hills.

The cities of Indio and Coachella lie in the central portion of the Coachella Valley east of all the other cities. Southeast of these cities lies an extensive agricultural area. Major agricultural crops include grapes, citrus, and dates. Portions of this area are within the Torres-Martinez, Cabazon, Twenty-Nine Palms, and Augustine Indian Reservations. At the southern edge of the agricultural area is the northernmost section of the Salton Sea, part of an ancient lakebed again filled in 1905 and 1906 when Colorado River floodwaters broke through levees in Imperial and Riverside counties. On the east side of the Salton Sea are the Salton Sea State Recreation Area and the Dos Palmas Area of Critical Environmental Concern, bounded on the north by the Coachella Canal. North of the canal are the Mecca Hills and Orocopia Mountains Wilderness Areas, and farther north is Joshua Tree National Park. The area north of the canal is also within the Northern and Eastern Colorado Desert Plan (NECO Plan) area. The NECO Plan area extends well

beyond the HCP/NCCP Area to the east, southeast, and north. It is a multiple agency plan for federal lands. The HCP/NCCP was coordinated with the NECO Plan.

Natural Communities in the HCP/NCCP Area are shown in Figure 3-3 in the HCP/NCCP, and Table 4-115 lists the amount of each Natural Community in the HCP/NCCP Area. Natural Communities within the HCP/NCCP Area include: chaparral, desert alkali scrub, desert scrub, riparian, dry wash woodland and mesquite, sand dunes and sand fields, woodland and forests, irrigated agriculture, and developed areas.

CVAG is lead agency for purposes of CEQA. Conservation, management, and implementation responsibilities and guarantees for the HCP/NCCP are set forth in an Implementing Agreement signed by all the Permittees, and USFWS and CDFG (the "Wildlife Agencies"). All Permittees and the Wildlife Agencies will implement their respective responsibilities under the HCP/NCCP as described in the Implementing Agreement (IA).

The HCP/NCCP Reserve System will protect biodiversity, conserve important habitats, ecological processes, and sensitive species, increase recreational opportunities, enhance the quality of life in the Coachella Valley, and enhance the region's attractiveness as a location for business. The HCP/NCCP has been developed cooperatively by local jurisdictions, state and federal agencies, representatives of the development community, representatives of the environmental advocacy community, private citizens, landowners and special districts, with the goal of conserving native vegetation communities and associated species, rather than simply focusing preservation efforts on individual species. Historic loss of native vegetation and open space has resulted in many species of wildlife becoming increasingly rare, and in some cases threatened with extirpation or extinction. The HCP/NCCP provides direct economic benefits by streamlining future development outside the preserve, establishing a permanently protected reserve supporting sustainable populations of covered species through an assembly process within the HCP/NCCP Area, and decreasing the costs of compliance with federal and state laws that protect biological resources.

1.3 Implementing Agreement

CDFG plans to execute the HCP/NCCP Implementing Agreement ("Implementing Agreement" or "IA") concurrently with this NCCP Permit. The IA is an agreement among CVAG, CVCC, County of Riverside, County Flood Control, County Parks, County Waste, City of Cathedral City, City of Coachella, City of Indian Wells, City of Indio, City of La Quinta, City of Palm Desert, City of Palm Springs, City of Rancho Mirage, CVWD, IID, CVMC, Caltrans, State Parks, USFWS, and CDFG. These entities are signatories to the IA. Signatories of the IA include all Permittees of the HCP/NCCP and the USFWS and CDFG. Permittees under the HCP/NCCP are all the signatories to the IA except for the USFWS and CDFG.

The IA is designed to ensure the implementation of the HCP/NCCP, to bind each party to the terms of the HCP/NCCP, and to provide remedies and recourse for failure to adhere to

the terms of the HCP/NCCP. This NCCP Permit specifically applies to the HCP/NCCP as implemented pursuant to the IA.

CDFG finds that the HCP/NCCP and IA provide the necessary assurances that the HCP/NCCP will be carried out by the Permittees. By accepting their NCCP Permit, the County, County Flood Control, County Waste, County Parks, CVAG, CVCC, CVWD, IID, CVMC, Caltrans, State Parks, and the Cities of Cathedral City, Coachella, Indian Wells, Indio, La Quinta, Palm Desert, Palm Springs, and Rancho Mirage are bound to fully implement the provisions of the HCP/NCCP in accordance with the IA and the NCCP Permit.

ADMINISTRATIVE RECORD

2.0 ADMINISTRATIVE RECORD OF PROCEEDINGS

For purposes of these findings, the administrative record of proceedings for CDFG's discretionary issuance of this NCCP Permit consists, at a minimum, of the following documents:

- Any HCP/NCCP related materials prepared by CVAG and submitted to CDFG;
- Any staff reports and related non-privileged documents prepared by CDFG with respect to its compliance with CEQA and with respect to the issuance of an NCCP Permit for the HCP/NCCP;
- Any written testimony or documents submitted by any person to CDFG relevant to these findings and CDFG's discretionary actions with respect to the HCP/NCCP;
- Any notices issued to comply with CEQA, the NCCPA, or with any other law relevant to and governing the processing and approval of this NCCP Permit by CDFG;
- Any written comments received by CDFG in response to, or in connection with, environmental documents prepared for this project;
- All written evidence or correspondence submitted to, or transferred from, CDFG with respect to compliance with CEQA and with respect to the HCP/NCCP;
- Any proposed decisions or findings related to the HCP/NCCP submitted to CDFG by its staff, the CVAG, HCP/NCCP supporters and opponents, or other persons;
- The documentation of the final decision by CDFG, including all documents cited or relied on in these findings adopted pursuant to CEQA and the NCCPA;

- The documentation of the final decision by USFWS associated with Permit Number TE104604-0 including all documents adopted or approved pursuant to NEPA and the ESA;

- Any other written materials relevant to CDFG's compliance with CEQA or CDFG's decision on the merits with respect to the NCCP Permit for the HCP/NCCP, including any draft environmental documents that were released for public review, and copies of studies or other documents relied upon in any environmental document prepared for the project and either made available to the public during a public review period or included in CDFG's files on the HCP/NCCP, and all non-privileged internal agency communications, including staff notes and memoranda related to the HCP/NCCP or compliance with CEQA;

- Matters of common knowledge to CDFG, including but not limited to federal, state, and local laws and regulations; and

- Any other materials required to be in CDFG's administrative record of proceedings by Public Resources Code Section 21167.6, subdivision (e).

The custodian of the documents comprising the administrative record of proceedings is the California Department of Fish and Game, located at 1416 Ninth Street, Sacramento, California 95814. All related inquires should be directed to the Department's Office of the General Counsel at (916) 654-3821.

CDFG has relied on all of the documents listed in this section in exercising its independent judgment and reaching its decision with respect to the HCP/NCCP, even if every document was not formally presented to CDFG or its staff as part of the CDFG files generated in connection with the HCP/NCCP. Without exception, any documents set forth above not found in CDFG's files for the HCP/NCCP fall into one of two categories. Certain documents reflect prior planning or legislative decisions of which CDFG was aware in approving the HCP/NCCP. (See *City of Santa Cruz v. Local Agency Formation Comm.* (1978) 76 Cal.App.3d 381, 391-392; *Dominey v. Department of Personnel Administration* (1988) 205 Cal.App.3d 729, 738, fn. 6.) Other documents influenced the expert advice of CDFG staff, who then provided advice to the decision-makers at CDFG with respect to the NCCP Permit for the HCP/NCCP. For that reason, such documents form part of the underlying factual basis for CDFG's decision related to the HCP/NCCP. (See Pub. Resources Code, § 21167.6, subd. (e)(10); *Browning-Ferris Industries v. City Council of City of San Jose* (1986) 181 Cal.App.3d 852, 866; *Stanislaus Audubon Society, Inc. v. County of Stanislaus* (1995) 33 Cal.App.4th 144, 153, 155).

FINDINGS OF FACT

3.0 FINDINGS UNDER CEQA

3.1 Environmental Documents

The CVAG is the CEQA "lead agency" for purposes of the HCP/NCCP and has completed environmental review and approval of the HCP/NCCP. (See generally Pub. Resources Code, § 21067; CEQA Guidelines, § 15367.) CVAG analyzed the environmental effects of implementing the HCP/NCCP.

Pursuant to the California Environmental Quality Act, Public Resources Code Section 21000 *et seq*. (CEQA) and the CEQA Guidelines, California Code California Regulations, Title 14, Section 15000 *et seq*., CVAG determined that an Environmental Impact Report consisting of a Draft EIR, a Final EIR and all the appendices (EIR) would be prepared for the Proposed Project. CDFG concurs with that determination.

CVAG as lead agency has prepared a HCP/NCCP that was approved on September 10, 2007 and an EIR/EIS that was certified by CVAG on September 10, 2007. The documents prepared were the HCP/NCCP and the Final Environmental Impact Report /Environmental Impact Statement (EIR/EIS). The State Clearinghouse Number for the EIR is SCH #2000061079. In analyzing and approving the HCP/NCCP and certifying the EIR/EIS, CVAG, as the lead agency, "consider[ed] the effects, both individual and collective, of all activities involved in [the] project." (Pub. Resources Code, § 21002.1, subdivision (d)).

Approval dates (at each approval):

Agency	Action	Date
Riverside County Board of Supervisors	Approve HCP/NCCP and IA, certified the EIR	October 2, 2007
City of Palm Springs	Approve HCP/NCCP and IA, certified the EIR	October 3, 2007
City of Rancho Mirage	Approve HCP/NCCP and IA, certified the EIR	October 4, 2007
City of Indian Wells	Approve HCP/NCCP and IA, certified the EIR	October 4, 2007
Coachella Valley Water District	Approve HCP/NCCP and IA, certified the EIR	October 9, 2007

Imperial Irrigation District	Approve HCP/NCCP and IA, certified the EIR	October 9, 2007
City of Coachella	Approve HCP/NCCP and IA, certified the EIR	October 10, 2007
City of Cathedral City	Approve HCP/NCCP and IA, certified the EIR	October 10, 2007
City of Palm Desert	Approve HCP/NCCP and IA, certified the EIR	October 11, 2007
City of La Quinta	Approve HCP/NCCP and IA, certified the EIR	October 16, 2007
City of Indio	Approve HCP/NCCP and IA, certified the EIR	October 17, 2007
CVAG	Approve HCP/NCCP and IA, certified the EIR	September 11, 2007
CVCC	Approve HCP/NCCP and IA, certified the EIR	September 11, 2007
CVMC	Approve HCP/NCCP and IA, certified the EIR	November 5, 2007
Caltrans	Approve IA	March 28, 2008
State Parks	Approve IA	March 28, 2008

CVAG issued a Notice of Preparation (NOP), which was circulated to responsible agencies and interested groups and individuals for review and comment on June 30, 2003.

Upon completion of the Draft EIR, CVAG filed a notice of availability (NOA) in compliance with CEQA with the State Clearinghouse. CVAG distributed the NOA and the EIR to interested agencies, organizations, and individuals for review and comment and made the EIR available at public libraries for public review. CDFG thoroughly reviewed and commented on the Draft EIR. The public review period was from November 5, 2004, until February 2, 2005. This period was extended an additional 30 days until March 7, 2005, providing for more than a 90-day comment period.

A Final EIR/EIS was prepared in February 2006. In June 2006, the City of Desert Hot Springs voted not to approve the HCP/NCCP. The CVAG Executive Committee then rescinded its approval of the HCP/NCCP and EIR/EIS certification and directed that the

HCP/NCCP be revised to remove Desert Hot Springs as a Permittee and reflect other project description modifications that had been suggested during public review. CEQA Guidelines Section 15088.5 requires a lead agency to recirculate an EIR for further review and comment when significant new information is added to the EIR after public notice is given of the availability of the draft EIR but before certification. The revisions to the project description represented significant new information; therefore, a revised and Recirculated Draft EIR/Supplemental Final EIS was prepared and recirculated pursuant to Section 15088.5 of CEQA. As part of that Recirculated Draft EIR/Supplemental Final EIS preparation effort, the determination was made that a new Notice of Preparation and Notice of Intent were not necessary.

CVAG held a public meeting on the EIR on September 10, 2007. At this meeting, CVAG and the CVCC certified the EIR, adopted findings and a Mitigation Monitoring and Reporting Plan (MMRP), and approved the HCP/NCCP for submission to the City Councils of the Cities of Cathedral City, Coachella, Indian Wells, Indio, La Quinta, Palm Desert, Palm Springs, and Rancho Mirage, the Riverside County Board of Supervisors, the CVWD, IID, CVMC, Caltrans, and the State Parks. CVAG filed a Notice of Determination related to these actions on September 11, 2007.

At all public meetings during the preparation of the HCP/NCCP, CVAG staff and its consultants provided information about the Proposed Project, the potential environmental impacts, and the CEQA review process. At each meeting, members of the public had the opportunity to ask questions and express their concerns and interests for the Proposed Project.

CDFG has prepared these findings to comply with CEQA. CDFG is a "responsible agency" under CEQA with respect to the HCP/NCCP because of its authority under the NCCPA. (See generally Pub. Resources Code, §§ 21002.1, subd. (d) and 21069; CEQA Guidelines, § 15381; see also Cal. Code Regs., tit. 14, § 783.3, subd. (a).) CDFG accordingly makes the findings that appear in Section 3.5, below, under CEQA as part of its discretionary decision to approve the HCP/NCCP and authorize Take of species whose conservation and management is provided for in the HCP/NCCP.

These findings pertain to the Proposed Project and the EIR prepared for the Proposed Project (SCH #2000061079). The Draft EIR, the Final EIR, and all the appendices comprise the "EIR" referenced in these findings.

The purpose of the joint EIR/EIS is to evaluate the potential for environmental effects from the adoption and implementation of the HCP/NCCP and the issuance of Take permits for species pursuant to Section 2800, et seq., of the NCCPA. It also evaluates the potential for environmental effects of the issuance of Take Authorizations pursuant to Section 10(a)(1)(B) of ESA.

3.2 CEQA Findings Requirement

CEQA requires public agencies to adopt certain findings before approving a project for which an EIR was prepared. The findings that appear below are intended to comply with the CEQA mandate that no public agency shall approve or carry out a project for which an EIR has been certified which identifies one or more significant effects thereof unless the agency makes one or more of the following findings (Public Resources Code Section 21081, subdivision (a), CEQA Guidelines Section 15091, subdivision (a); see also CEQA Guidelines Section 15082, subdivision (b)(2)):

(1) Changes or alterations have been required in, or incorporated into, the project which mitigate or avoid the significant effects on the environment;

(2) Those changes or alterations are within the responsibility and jurisdiction of another public agency and have been, or can and should be, adopted by that other agency; or

(3) Economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the EIR.

These findings are also intended to comply with the requirement that each finding made by CDFG be supported by substantial evidence in the administrative record and be accompanied by a brief explanation of the rationale for each finding. (CEQA Guidelines, § 15091, subds. (a) and (b); see also Discussion following CEQA Guidelines, § 15091.) To that end, these findings provide the written, specific reasons supporting CDFG's decisions under CEQA as they relate to the approval of the HCP/NCCP under the NCCPA.

Because CDFG adopts these findings as a responsible agency, the scope of these findings and CDFG's analysis under CEQA are more limited than that of the lead agency. (Pub. Resources Code, §§ 21002.1(d) and 21167.2; CEQA Guidelines, § 15096, subds. (f)-(h); Cal. Code Regs., tit. 14, §§ 783.3, subd. (a) and 783.5, subd. (c)). In its capacity as a responsible agency, CDFG is also bound by the legal presumption that the EIR certified by the CVAG fully complies with CEQA. (CEQA Guidelines, § 15096, subd. (e)(1)-(2); *City of Redding v. Shasta County Local Agency Formation Comm.* (1989) 209 Cal.App.3d 1169, 1178-1181; see also Pub. Resources Code, § 21167.2; *Laurel Heights Improvement Association v. Regents of the University of California* (1993) 6 Cal.4th 1112, 1130.) In fact, CDFG is bound by the presumption of adequacy, except in extremely narrow circumstances. (Pub. Resources Code, § 21167.2; CEQA Guidelines, § 15096, subds. (e) and (f).) CDFG concludes such circumstances do not exist in the present case based on substantial evidence in its administrative record for the NCCP Permit.

3.3 Scope of CEQA Findings

CDFG is a responsible agency under CEQA for purposes of approving the HCP/NCCP because of its authority under NCCPA and the lead agency's prior actions with respect to the project. As a responsible agency, CDFG's CEQA obligations are "more limited" than those of the lead agency. (CEQA Guidelines, § 15096, subd. (g)(1).) CDFG, in particular, is "responsible for considering only the effects of those activities involved in [the] project which it is required by law to carry out or approve." (Pub. Resources Code, § 21002.1, subd. (d).) Thus, while CDFG must "consider the environmental effects" of the HCP/NCCP as disclosed in the environmental documents described above, CDFG "has responsibility for mitigating or avoiding only the direct or indirect environmental effects of those parts of the project which it decides to carry out, finance, or approve." (CEQA Guidelines, § 15096, subds. (f), (g)(1).) Accordingly, because CDFG's exercise of discretion is limited to approval of the HCP/NCCP and associated Take Authorizations, CDFG is responsible for considering only the environmental effects that fall within its authority under the NCCPA.

CDFG's more limited obligations as a responsible agency affect the scope of, but not the obligation to adopt, findings required by CEQA. Findings are required, in fact, by each "public agency" that approves a "project for which an environmental impact report has been certified which identifies one or more significant effects on the environment [.]" (Pub. Resources Code, § 21081, subd. (a); CEQA Guidelines, § 15091, subd. (a); see also Pub. Resources Code, § 21068 ("significant effect on the environment defined"); CEQA Guidelines, § 15382 (same).) Because the CVAG certified the EIR in approving the HCP/NCCP, the obligation to adopt findings under CEQA necessarily applies to CDFG as a responsible agency. (CEQA Guidelines, § 15096, subd. (h); *Resource Defense Fund v. Local Agency Formation Comm. of Santa Cruz County* (1987) 191 Cal.App.3d 886, 896-898.)

The specific provision of the CEQA Guidelines addressing the responsible agency findings obligation is Section 15096, subdivision (h). That section provides, in pertinent part, that a "responsible agency shall make the findings required by Section 15091 for each significant effect of the project and shall make the findings in Section 15093 if necessary." (CEQA Guidelines, § 15096, subd. (h).) The scope of this charge in the guidelines is governed by statutory language concerning the extent of responsible agency decision making authority under CEQA. As noted above, the controlling statute provides that a "responsible agency shall be responsible for considering only the effects of those activities involved in a project which it is required by law to carry out or approve." (Pub. Resources Code, § 21002.1, subd. (d).) The same section underscores that the more limited scope of review for responsible agencies necessarily "applies only to decisions by a public agency to carry out or approve a project [.]" (*Ibid.*)

3.4 Legal Effect of the CEQA Findings

These findings are not merely informational. To the extent CDFG relies on implementation of particular measures to make a necessary finding under NCCPA, those measures constitute a binding set of obligations that take effect when CDFG approves the NCCP Permit for the HCP/NCCP. CDFG believes that all mitigation and conservation measures that it has relied on for purposes of its findings are separately required under the HCP/NCCP or the IA, or are express conditions of this NCCP Permit. Consequently CDFG does not anticipate that as a practical matter these findings, in and of themselves, will increase obligations of those operating under authority of this NCCP Permit.

3.5 CEQA Findings Regarding Potentially Significant Environmental Effects

CVAG's Final EIR/EIS analyzed the following impacts. Environmental issues analyzed include Land Use Compatibility, Transportation, Mineral and Energy Resources, Agricultural Lands, Flooding, Water Resources, Biological and Cultural Resources, Air Quality, Noise, Visual/Scenic Resources, Utilities and Public Facilities, Socio-economic Resources, and Environmental Justice and Children and the Cumulative Impacts associated with the overall HCP/NCCP. Issues deemed to be not as significant and therefore not selected for detailed analysis included: Soils and Geology, Cultural Resources and Native American Concerns, Parks, Trails and Recreation, Air Quality, Noise, Visual/Scenic Resources, Utilities/Public Services and Facilities, Environmental Justice and Children, and Hazards and Hazardous Materials (Section 4:EIR/EIS).

The lead agency concluded that implementation of the HCP/NCCP will not have an adverse effect on geology or soils. The HCP/NCCP does not promote or in any way allow development that will otherwise not be permitted in areas where geologic hazards occur. These impacts will be evaluated for significance as project-specific environmental documents are prepared.

Under implementation of the HCP/NCCP the potential for impacts to cultural resources from the HCP/NCCP alternatives will not differ from the current condition, and will result in beneficial impacts, where protection and documentation of biological and cultural resources will be better coordinated as a result of the HCP/NCCP. There will be no adverse impacts to park, trails and recreational resources. Additionally, a variety of positive effects are expected to result from the substantial opportunities for a variety of additional trail and open space experiences that may be facilitated by the HCP/NCCP.

Implementation of the HCP/NCCP will not have a direct significant adverse impact on local or regional air quality, hamper or impede implementation of air quality management plans, or hamper the implementation of actions that protect sensitive receptors from impacts. No mitigation measures were required. The direct impacts to air quality are

determined to be less than significant. Potential indirect impacts are not quantifiable and will be addressed through project-specific reviews and applicable mitigation measures.

Implementation of the HCP/NCCP will not result in the generation of significant noise levels as set forth in the Thresholds of Significance/Criteria for Determining Significance (Section 4.3.2:EIR/EIS). Implementing the HCP/NCCP will result in very little construction or maintenance activities that will generate significant noise impacts.

The Final EIR/EIS identified several potentially significant environmental impacts that could result with implementation of the HCP/NCCP. CVAG concluded as the lead agency for the project under CEQA that these significant effects could be avoided through the adoption of feasible mitigation measures. CVAG found in the EIR/EIS that there will be no significant non-mitigable impacts from implementation of the HCP/NCCP in the areas of: Mineral, Energy, and Timber Resources, and Agricultural Resources. Regarding Land Use Compatibility, Biological Resources, Traffic and Circulation, Flooding and Hydrology and Socio-economic Resources, CVAG found that the measures in the HCP/NCCP will reduce identified impacts to a level below significance for all impacts.

The EIR/EIS reiterates some of the information found in the HCP/NCCP and does incorporate by reference the conservation, mitigation, and minimization and avoidance measures included with the HCP/NCCP. Section 4 of the HCP/NCCP discussed in detail specific incidental Take minimization measures designed to minimize the impacts by averting the actual mortality or injury of individuals of Covered Species. Avoidance and minimization measures required in Section 4.4 in the HCP/NCCP include, but are not limited to: (1) planning surveys; (2) pre-construction surveys; (3) construction monitoring; (4) specific conditions on Covered Activities (section 7.3); (5) species-specific Take avoidance and minimization measures (Section 4.4); and (6) required measures for the conservation areas (Section 4.3:HCP/NCCP).

The primary means of mitigating impacts and conserving Covered Species and natural communities is preservation of high-quality habitat in accordance with Conservation Goals and Objectives, and Required Measures for the Conservation Areas (Section 4.3:HCP/NCCP). However, habitat enhancement, restoration, and creation are important components of the conservation strategy. Some natural communities or land-cover types that will be lost to Covered Activities will be mitigated by conservation and/or management of the same or similar communities or land-cover types within the preserves. Habitat enhancement, restoration, and creation are intended to satisfy the goal of no net loss of certain resources (e.g., wetlands, breeding habitat for specific Covered Species). In other cases, restoration and enhancement will be used to supplement preservation to adequately mitigate the loss of natural communities or land-cover types.

Species-specific conservation will be accomplished by protecting, restoring, and managing habitat within each of 21 Conservation Areas. For some species, the management actions described in the overall landscape- and natural community-level

conservation measures are sufficient to maintain and enhance the Covered Species in the Reserve System. For those species, no additional conservation measures were developed. In other instances, additional measures have been created that are specific to individual Covered Species. These additional measures fill in small gaps in conservation in ways that were not specifically addressed through conservation of other species or at the natural-community level. Species-specific biological goals and objectives are listed within the requirements for each Conservation Area (Section 4.3:HCP/NCCP) and in the Species-specific descriptions (Sections 9, 10:HCP/NCCP).

Management measures will be implemented at the landscape, natural community, and species-specific levels. These management measures address the processes, threats and disturbances that affect habitat and species. Management measures will be periodically evaluated to ensure their effectiveness. These measures will benefit all species and habitats and are described in the Reserve System Management and Monitoring Program (Section 8:HCP/NCCP). The range of measures regarding habitat include natural regeneration, maintenance of existing or restored habitat, enhancement, revegetation, restoration and creation.

These management measures will also occur on BLM lands within the Reserve System. Pursuant to BLM's 2002 California Desert Conservation Area Plan for the Coachella Valley, BLM commits to conserving at least 99% of vegetation community types on lands it administers within the HCP/NCCP Reserve System.

Three wildlife species that occur in the HCP/NCCP Area are listed as fully protected (as defined under Sections 3511 (birds) and 4700 (mammals) of the California Fish and Game Code): Yuma clapper rail, California black rail and Peninsular bighorn sheep. CDFG cannot issue permits for Take of these species, except as provided in the Fish and Game Code for Take associated with necessary scientific research or Take attributable to the Quantification Settlement Agreement (QSA) as defined in Section 2081.7 of the Fish and Game Code. Covered Activities will avoid any Take of fully protected wildlife species as defined under the California Fish and Game Code, unless a separate permit is obtained for Take associated with necessary scientific research or it is an impact attributable to the QSA under Section 2081.7 of the California Fish and Game Code.

Against this backdrop, this section presents CDFG's responsible agency findings with respect to the potentially significant environmental effects authorized by CDFG pursuant to the NCCP Permit issued to the Permittees under NCCPA. The NCCP Permit includes the 27 listed and non-listed species referred to collectively as "Covered Species" in the HCP/NCCP (Table 3-1) and the EIR/EIS (Table 2.1). The Take of Covered Species is allowed upon permit issuance.

Based on the EIR/EIS, CDFG finds that the NCCP Approval may result in significant adverse effects on the environment. CDFG further finds that changes or alterations have been required in, or incorporated into, the project by CDFG and the Permittees that avoid or mitigate the significant environmental effects, as set forth in the EIR/EIS.

CDFG hereby makes the following findings under CEQA with respect to the effects of proposed Take on each species by the HCP/NCCP project as authorized under the NCCPA.

CEQA Findings for Covered Species - Plants

Impact 3.5.1 **Approval of the HCP/NCCP authorized under the NCCP Permit could result in potentially significant adverse impacts on Covered Plant Species. These species include: Coachella Valley milkvetch (*Astragalus lentiginosus var. coachellae*), Triple-ribbed milkvetch (*Astragalus tricarinatus*), Little San Bernardino Mountains linanthus (*Linanthus maculates*), and Orocopia Sage (*Salvia greatae*).**

Finding 3.5.1 **CDFG finds that conservation measures required in the HCP/NCCP will mitigate or avoid the potential significant impacts of the HCP/NCCP on Covered Plant Species to below a level of significance. (Pub. Resources Code, § 21081, subd. (a)(1); CEQA Guidelines, § 15091, subd. (a)(1).)**

Explanation 3.5.1:

Coachella Valley milkvetch (*Astragalus lentiginosus var. coachellae*)

Individuals occurring outside the Conservation Areas will be subject to habitat loss, including those occurring on the Big Dune (Palm Springs Sand Ridge). The habitat for this species on the Big Dune is shielded from replenishment by aeolian sand transport due to existing development in the wind corridor. Land values, fragmentation by existing roads and edge effects make this habitat impracticable to conserve or restore. Approximately 15,392 acres (42%) of habitat will be subject to loss to Development and other proposed Covered Activities under the HCP/NCCP. There will be approximately 928 acres (6%) of Core Habitat subject to loss under this HCP/NCCP (Section 9.2.2.4:HCP/NCCP). This plant is a Coachella Valley endemic, with the exception of one disjunct population north of Desert Center, outside the HCP/NCCP Area. Within the HCP/NCCP Area, the HCP/NCCP will conserve all the populations of this species where Essential Ecological Processes (sand replenishment) are intact (89 of the 122 known occurrences, 58% of the habitat). Though existing occurrences typically are widely scattered, the reserve design will tie different subpopulations together into larger blocks of conserved habitat, allowing for seed dispersal over long distances by fluvial and aeolian processes. For example, contiguous habitat will be provided across several Conservation Areas extending from the San Gorgonio Pass to locations east of Gene Autry Trail. Similarly, the milkvetch populations along Morongo Wash in Desert Hot

Springs will be connected across several Conservation Areas all the way to the Coachella Valley Preserve, and further east to the extent that suitable habitat may still remain along the base of the eastern Indio Hills. The plant is blowsand dependent, but adaptable to establishment in artificially disturbed situations such as road edges (Section 9.2.2.3:HCP/NCCP).

The primary threat to the Coachella Valley milkvetch is Habitat destruction due to continuing urban Development, including the direct effects of Habitat conversion. Many of the sand dune areas where this milkvetch occurs have now been developed, stabilized by adjacent Development, or fragmented by urbanization. Other impacts to the species are from increased human activity, including OHV use, trampling, and the introduction of non-native plants, including Russian thistle (*Salsola tragus*) and Saharan mustard (*Brassica tournefortii*). Development of wind energy parks appears to have a very limited impact; the plants can persist associated with wind parks as long as disturbance to the species' sandy Habitat is minimized. Each of the impacts described above relates to the sand dune ecosystem and the interference with the windblown sand transport system. These ecosystems require a source of new sand to be maintained over long periods of time and a wind corridor to maintain dune dynamics. Though Coachella Valley milkvetch does not necessarily occupy active blowsand Habitats, the species does appear to be dependent on sand dune ecosystems.

Mesquite hummocks trap sand and therefore may enhance conditions that provide some habitat for milkvetch, including mesquite found along fault-related vegetation scarps associated with the Banning Fault in the Willow Hole Conservation Area. Potential threats to mesquite in this area are associated with drawdown of the water table within the Mission Creek Subbasin. The loss of this mesquite could, to a limited degree, impact milkvetch. However, milkvetch are found in a variety of other substrates, including sandy areas associated with washes and creosote hummocks, which are common throughout the HCP/NCCP Area.

The HCP/NCCP will conserve all populations of this species where Essential Ecological Processes (sand replenishment) are intact. It will also conserve large connected habitat (Core Habitat) with the combination of the Cabazon, Snow Creek/Windy Point, and Whitewater Floodplain Conservation Areas. Disturbance allowed under this HCP/NCCP will be less than significant for CEQA analysis purposes and the benefits conferred by the HCP/NCCP will protect adequate unfragmented habitat, maintain Essential Ecological Processes to sustain the habitat, and protect Biological Corridors and Linkages, as appropriate (Section 9.2.2.1:HCP/NCCP).

Triple-ribbed milkvetch (*Astragalus tricarinatus*)

Individuals occurring outside the Conservation Areas will be subject to habitat loss to Development and other proposed Covered Activities, including those occurring in the vicinity of Bonnie Bell. Approximately 164 acres (5%) of all Habitat will be subject to

loss under the HCP/NCCP (approximately 88 acres (3%) of Core Habitat, 60 acres (2%) of Other Conserved Habitat and 17 acres of habitat outside Conservation Areas).

The HCP/NCCP will ensure Conservation of 2,838 acres (94%) of the total modeled Habitat, including 2,026 acres of Core Habitat (96% of total) and 812 acres (93%) of Other Conserved Habitat. Approximately 1,504 acres (50%) of the modeled Habitat are within Existing Conservation Lands and will be managed as part of the Reserve System. An additional 1,334 acres (44%) of the modeled Habitat for triple-ribbed milkvetch in the HCP/NCCP Area will be conserved (Tables 4-114, 9-6:HCP/NCCP).

All known occurrences of triple-ribbed milkvetch are conserved, along with the adjacent lands in Whitewater Canyon and Mission Creek (Sections 4.3.4, 4.3.7, 9.2.3.1:HCP/NCCP). The Wildlands Conservancy owns the land on which the Mission Creek population is located. The Wildlands Conservancy is a nonprofit organization dedicated to conservation of lands. The Wildlands Conservancy is not a signatory to the HCP/NCCP and as a result, the Implementing Entity will use its best efforts to enter into an agreement that affords permanent protection and coordinates management with the monitoring and management provisions under the HCP/NCCP. The upper drainages of Long Canyon, West Wide Canyon and East Wide Canyon are potential places where triple-ribbed milkvetch also may grow but have not yet been found.

Development pressures are a concern primarily in the Mission Creek drainage on private lands immediately west of Highway 62 and in the vicinity of Dry Morongo Wash near Highway 62 and Indian Avenue. One disturbance that may impact this species is flood control maintenance activities in the Whitewater Canyon and Mission Creek drainages. Sand and gravel mining is not a current threat, although there is some potential for mining in Whitewater Canyon. Road widening along Highway 62 could impact the Dry Morongo Canyon location in the future, although no widening is proposed. Grazing is not currently a threat in the locations where this species occurs. Illegal berming and drainage diversions are potential impacts that may, or might in the future, affect the structure and function of canyon Habitats.

Overall, disturbance allowed under this HCP/NCCP will be less than significant for CEQA analysis purposes and the benefits conferred by the HCP/NCCP will protect adequate unfragmented habitat, maintain Essential Ecological Processes to sustain the habitat, and protect Biological Corridors and Linkages, as appropriate.

Little San Bernardino Mountains linanthus (*Linanthus maculatus* (or *Gilia maculata*))

Individuals occurring outside the Conservation Areas will be subject to habitat loss to Development and other proposed Covered Activities including those occurring west of Hwy. 62. Approximately 429 acres (13%) of all habitat will be subject to habitat loss under the HCP/NCCP. There will be approximately 175 acres (7%) of Core Habitat and

59 acres of Other Conserved Habitat (8% of all Other Conserved Habitat) subject to habitat loss under this HCP/NCCP.

The HCP/NCCP will ensure Conservation of 2,955 acres (87%) of the total modeled Habitat, including 2,235 acres of Core Habitat (93%) and 720 acres (92%) of Other Conserved Habitat. The HCP/NCCP will conserve 97%, or 58 of the 60 known occurrences for this species. The Upper Mission Creek/Big Morongo Canyon Conservation Area which totals 1,397 acres includes large blocks of unfragmented habitat for linanthus. This Conservation Area has been designed to preserve the braided streams and associated micro-topographic features to which this plant is adapted (Section 4.3.7:HCP/NCCP). This robust reserve design incorporates large portions of the drainages of Mission Creek, Big Morongo and Dry Morongo Washes. The HCP/NCCP requires that the fluvial processes that provide habitat for the linanthus be maintained.

The Little San Bernardino Mountains linanthus currently has only 2% of the known occurrences on public or private Existing Conservation Lands in the Plan Area. This includes portions of the occurrences in Whitewater Canyon and in Mission Creek. The MSHCP Reserve System will provide protection for two Core Habitats: Whitewater Canyon and Upper Mission Creek/Big Morongo Canyon (which includes the Morongo Wash Special Provisions Area). Other Conserved Habitat from a range of environmental conditions within which this linanthus is known to or may occur will be protected in the following Conservation Areas: Willow Hole, Indio Hills/Joshua Tree National Park Linkage, and Joshua Tree National Park.

Disturbance allowed under this HCP/NCCP will be less than significant for CEQA analysis purposes and the benefits conferred by the HCP/NCCP will protect adequate unfragmented habitat, maintain Essential Ecological Processes (flooding regime) to sustain the habitat, and protect Biological Corridors and Linkages, as appropriate (Section 9.2.5.1:HCP/NCCP).

Mecca aster (*Xylorhiza cognata*)

Individuals occurring outside the Conservation Areas will be subject to habitat loss from OHV activity, illegal dumping, and sand and gravel mining. Approximately 6,328 acres (10%) of all habitat and 30% of non-federal lands will be subject to habitat loss under the HCP/NCCP. There will be approximately 1,339 acres (2%) of Core Habitat subject to habitat loss under this HCP/NCCP.

Mecca aster will benefit from this Plan, as 54,667 acres (86%) of modeled habitat and 16 of 21 known occurrences will be protected in five Conservation Areas (Sections 4.3.11, 4.3.14, 4.3.15, 4.3.17, 4.3.18, 9.2.1.1:HCP/NCCP). Two of these provide Wilderness level protection (Sections 4.3.17, 4.3.18:HCP/NCCP).

The HCP/NCCP relies on conserving a large acreage of modeled habitat for Mecca aster, a local endemic plant, much of which is on public land. However, the number of locations

defining the occupied habitat is not large, and the model may overestimate the actual range of the species. Threats to the species and its remote habitat are few, even within the 75-year time frame of the HCP/NCCP. Major threats are associated with mining and recreational use of the habitat, rather than Development (Section 9.2.1.2:HCP/NCCP).

Covered Activities listed in Section 7 of the HCP/NCCP that may impact this species include facility operation and maintenance by CVWD, IID, and maintenance of County roads, including Box Canyon Road and Painted Canyon Road. Given the limited potential effect of maintenance of these facilities on this species, this activity should not adversely impact Mecca aster.

The maximum amount of modeled habitat for Mecca Aster that will be lost within the HCP/NCCP Area is 9%. Within the Conservation Areas, 6% of habitat could be lost to Development (Section 9.2.1.1:HCP/NCCP). The remote locations and low potential for Development make it unlikely that these levels will ever be approached. Covered Activities and allowable Development will disturb a very low amount of acreage, resulting in enough conserved habitat to maintain the plant in perpetuity. Disturbance allowed under this HCP/NCCP will be less than significant for CEQA analysis purposes and the benefits conferred by the HCP/NCCP will protect adequate unfragmented habitat, and protect Biological Corridors and Linkages, as appropriate.

Orocopia sage (*Salvia greatae*)

Individuals occurring outside the Conservation Areas will be subject to habitat loss from limited Development and OHV use, including those occurring on the east side of the Mecca Hills. Approximately 6,933 acres (9%) of all habitat and 28% of non-federal lands will be subject to habitat loss under the HCP/NCCP. There will be approximately 1,847 acres (3%) of Core Habitat subject to habitat loss under this HCP/NCCP (Section 9.2.4.3:HCP/NCCP).

Approximately 50,664 acres (64%) of the modeled Habitat are within Existing Conservation Lands and will be managed as part of the Reserve System. As a result of the HCP/NCCP acquisitions, 18,286 acres (23%) of the modeled Habitat for Orocopia sage in the HCP/NCCP Area will be conserved. Orocopia sage will benefit as a result of this HCP/NCCP, as 68,950 acres (87%) of modeled habitat will be protected in two Conservation Areas. These provide Wilderness level of protection. The HCP/NCCP will provide connectivity to populations outside the HCP/NCCP Area in the Chocolate Mountains.

Covered Activities listed in Section 7 of the HCP/NCCP that may impact this species include facility maintenance by CVWD, IID, and maintenance of County roads, including Box Canyon Road and Painted Canyon Road. Given the limited potential effect of maintenance of these facilities on this species, this activity should not adversely impact Orocopia sage.

The HCP/NCCP relies on conserving a large acreage of modeled habitat (68,950 acres (87%)) for Orocopia sage, a local endemic plant, much of which is on public land. Covered Activities and allowable Development are considered to disturb a small amount of all habitat (6,933 acres (9%)), resulting in enough conserved habitat to maintain the plant in perpetuity. Disturbance to the habitat is quite different than Take of the species in this case, since the known occupied habitat is a very small fraction of the modeled habitat. However, the number of locations defining the occupied habitat is not large, and the model may overestimate the actual range of the species. Threats to the species and its remote habitat are few, even within the 75-year time frame of the HCP/NCCP. Existing threats are associated with recreational use of the habitat, rather than Development (Section 9.2.4.2:HCP/NCCP). Disturbance allowed under this HCP/NCCP will be less than significant for CEQA analysis purposes and the benefits conferred by the HCP/NCCP will protect adequate unfragmented habitat, and protect Biological Corridors and Linkages, as appropriate.

Summary of CEQA Findings for Covered Plant Species

CDFG finds that issuance of the HCP/NCCP permit could result in significant impacts on these Covered Plant Species primarily from development and other Covered Activities authorized by the NCCP/HCP. CDFG finds that all impacts on these species and their habitat associated with CDFG's issuance of the HCP/NCCP permit will be avoided or mitigated to below a level of significance under CEQA through adherence to and implementation of the HCP/NCCP. In so doing, CDFG's findings under CEQA with respect to these species are consistent with the findings of the lead agency on the same subject (Section 4.7:EIR/EIS). CDFG's findings are based on the overall conservation strategy, species-specific biological objectives, species-specific minimization and avoidance measures, and adaptive management and monitoring programs (Sections 4.3, 8:HCP/NCCP).

CEQA Findings for Covered Species - Insects

Impact 3.5.2 **Approval of the HCP/NCCP authorized under the NCCP Permit could result in potentially significant adverse impacts on Covered Insect Species. These species include: Coachella Valley giant sand-treader cricket (*Macrobaenetes valgum*), and Coachella Valley Jerusalem cricket (*Stenopelmatus cahuilaensis*).**

Finding 3.5.2 **CDFG finds that conservation measures required in the HCP/NCCP will mitigate or avoid the potentially significant impacts of the HCP/NCCP on these Covered Insect Species to below a level of significance. (Pub. Resources Code, § 21081, subd. (a)(1); CEQA Guidelines, § 15091, subd. (a)(1).)**

Explanation 3.5.2:

Coachella Valley giant sand-treader cricket (*Macrobaenetes valgum*)

Individuals occurring outside the Conservation Areas will be subject to Take, including those occurring on the Big Dune. The habitat for this species on the Big Dune is shielded from replenishment by aeolian sand transport due to existing development in the wind corridor. Land values, fragmentation by existing roads and edge effects make this habitat impracticable to conserve or restore. There could be up to 13,682 acres (51%) of habitat lost under the HCP/NCCP. This includes up to 533 acres (5%) of Core Habitat (Table 4-114:HCP/NCCP).

Nearly all (94%) of the habitat loss will be outside Conservation Areas, such as on Big Dune (Palm Springs Sand Ridge), where the blowsand habitat is shielded (Section 9.3.1.4:HCP/NCCP). This insect depends on active blowsand so will not likely persist for a long time on shielded habitat, and will be subject to severe fragmentation and edge effects. The potential for these Habitat areas to provide for the long-term Conservation of sand-treader cricket populations is low. The establishment of contiguous Conservation Areas is intended to create a preserve of sufficient size to conserve this species in perpetuity. The Conservation Areas benefit this species by securing the long-term sand source/transport systems for the active sand dune and sand fields upon which this species depends. The Permittees will protect and manage, in perpetuity, 12,997 acres of the modeled Habitat for this species; 5,999 acres of Existing Conservation Lands and 6,998 of Additional Conservation Lands. Take allowed under this HCP/NCCP will be less than significant for CEQA analysis purposes and the benefits conferred by the HCP/NCCP will protect adequate unfragmented habitat, maintain Essential Ecological Processes (sand replenishment) to sustain the habitat, and protect Biological Corridors and Linkages, as appropriate (Section 9.3.1.1:HCP/NCCP).

Coachella Valley Jerusalem cricket (*Stenopelmatus cahuilaensis*)

Individuals occurring outside the Conservation Areas will be subject to Take, including those occurring on the Big Dune. The habitat for this species on the Big Dune is shielded from replenishment by aeolian sand transport due to existing development in the wind corridor. Land values, fragmentation by existing roads and edge effects make this habitat impracticable to conserve or restore. There could be up to 9,889 acres (43%) of all habitat and 49% of non-federal lands lost under the HCP/NCCP, including up to 150 acres (9%) of Core Habitat (Table 4-114:HCP/NCCP). The Habitat outside the Conservation Areas is already highly fragmented, surrounded by existing Development, and has a compromised sand source/transport system. This fragmentation results in impacts to the Habitat that will reduce the potential for long-term Conservation of Jerusalem cricket populations (Section 9.3.2.4:HCP/NCCP).

The three Conservation Areas within the San Gorgonio and Whitewater River floodplains will ensure conservation of Core Habitat for the Jerusalem cricket, which will provide adequate protection into the future. The Conservation Areas benefit this species by securing the long-term sand source/transport systems for the sand dune and sand fields where it occurs. Collections of this species from vacant lots in Palm Springs (Ballmer 1993) indicate that this species can occur in small parcels of sand Habitat if the natural vegetation exists. However, protection of any individual lots as Habitat for this species will be problematic, as edge effects and unauthorized access will continue to reduce the long-term viability of these sites.

The HCP/NCCP will conserve a total of 12,049 acres (53%) of the modeled Habitat for Coachella Valley Jerusalem cricket in the HCP/NCCP Area, including Conservation of 1,540 acres (91%) of Core Habitat and 10,509 acres (89%) of Other Conserved Habitat for this cricket. The modeled habitat may overstate the number of acres occupied by this insect; hence, the Take figures are likely to represent the "worst case" scenario from a biological perspective.

Take allowed under this HCP/NCCP will be less than significant for CEQA analysis purposes and the benefits conferred by the HCP/NCCP will protect adequate unfragmented habitat, maintain Essential Ecological Processes (sand replenishment) to sustain the habitat, and protect Biological Corridors and Linkages, as appropriate (Section 9.3.2:HCP/NCCP)

Summary of CEQA Findings for Covered Insect Species

CDFG finds that issuance of the HCP/NCCP permit could result in significant impacts on these Covered Insect Species primarily from development and other Covered Activities authorized by the NCCP/HCP. CDFG finds that all impacts on these species and their habitat associated with CDFG's issuance of the HCP/NCCP permit will be avoided or mitigated to below a level of significance under CEQA through adherence to and implementation of the HCP/NCCP. In so doing, CDFG's findings under CEQA with respect to these species are consistent with the findings of the lead agency on the same subject (Section 4.7:EIR/EIS). CDFG's findings are based on the overall conservation strategy, species-specific biological objectives, species-specific minimization and avoidance measures, and adaptive management and monitoring programs (Sections 4.3.3, 8.4.1.3.2, 9.3.2:HCP/NCCP)

CEQA Findings for Desert Pupfish

Impact 3.5.3 **Approval of the HCP/NCCP authorized under the NCCP Permit could result in potentially significant adverse impacts on the Desert pupfish (*Cyprinodon macularius*).**

Finding 3.5.3 **CDFG finds that conservation measures required in the HCP/NCCP will mitigate or avoid the potentially significant**

impacts of the HCP/NCCP on the Desert Pupfish to below a level of significance. (Pub. Resources Code, § 21081, subd. (a)(1); CEQA Guidelines, § 15091, subd. (a)(1).)

Explanation 3.5.3:

Desert pupfish (*Cyprinodon macularius*)

Individuals occurring outside the Conservation Areas will be subject to Take, including those occurring in shoreline pools of the Salton Sea. In addition, individuals occurring in the drains will be subject to Take by CVWD for ongoing maintenance activities in the drains. The habitat will remain, but individuals may be taken as a result of the maintenance activities, which help to maintain pupfish habitat by not allowing it to become overgrown with aquatic vegetation.

To mitigate impacts from drain maintenance and other operations and maintenance activities, 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 input from the Wildlife Agencies. Ongoing maintenance and adjustments will be required, including vegetation control and dike and bank maintenance, to achieve desired Habitat characteristics. Water quality, including selenium concentrations, will be maintained at acceptable levels (Section 4.3.20:HCP/NCCP).

Within the HCP/NCCP Area there are 31 known occurrences mapped for desert pupfish. Only 7 of the desert pupfish locations occur within Existing Conservation Lands, primarily at the Dos Palmas Conservation Area. The remaining 24 mapped pupfish locations occur in agricultural drains which empty into the Salton Sea, and are included within the Conservation Areas. The HCP/NCCP 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 (Section 4.3.20:HCP/NCCP). Disturbance of the Habitat and potential Take will be permitted in the Salton Sea agricultural drains only as a result of operations and maintenance activities so long as the pupfish population is maintained.

The desert pupfish habitat is conserved in the existing Dos Palmas Conservation Area of Critical Environmental Concern (ACEC), but the species must be managed carefully. Exclusion of predatory bullfrogs and other fish will be important, as well as insuring that the pure strains are not subject to genetic mixing with artificially-established populations (Sections 8.4.5.2, 9.4.1.2:HCP/NCCP).

A Monitoring and Adaptive Management Plan for desert pupfish will be prepared by CVWD within two years of Permit issuance to assure long-term viability of pupfish in the agricultural drains leading into the Salton Sea (Sections 4.3.20, 8.4.5.2, 9.4.12:HCP/NCCP).

The HCP/NCCP's Monitoring Program will result in updated information on the existing pupfish populations in the Salton Sink (Section 8.4.5:HCP/NCCP). The desert pupfish has persisted within the HCP/NCCP Area despite apparent adverse habitat conditions, but its habitat is subject to sudden changes that could destroy or improve conditions for the species. Implementation of the HCP/NCCP will result in ongoing conservation actions and monitoring that will provide a significant benefit.

Consistency with Desert Pupfish Recovery Plan

The Desert Pupfish Recovery Plan (USFWS 1993) describes twelve natural populations of the desert pupfish in Arizona, California and Mexico, and 20 – 24 transplanted (non-aquarium) sites. Several of these are found in the HCP/NCCP Area. The natural populations are in upper Salt Creek and a few shoreline pools and irrigation drains of the Salton Sea. Transplanted populations are found at The Living Desert, Thousand Palms Reserve, Salton Sea State Recreation Area and Dos Palmas ACEC.

Criteria for downlisting from endangered to threatened include establishment of secure metapopulations at five general locations. One of these is the Salton Sink and includes upper Salt Creek and the shoreline pools and irrigation ditches of the Salton Sea. "Secure" means formal protection of the habitat and water rights and maintenance of a genetically pure, self-sustaining stable or increasing (viable) population. "Viable" means no fewer than 500 overwintering adults in a normal sex ratio with in-situ reproduction and recruitment sufficient to maintain that number. "Formal protection" is also provided with a specific definition pertaining to the longterm ability of the land and water rights owner to manage the pupfish well into the future.

The Recovery Plan calls for a complex program of maintaining genetic integrity of natural populations and promoting genetic interchange among re-introduced and artificial populations. The top priority is protection of natural populations in their native habitat, including prevention of interbreeding with other species or subspecies or populations of pupfish.

In addition, re-establishment of populations at former habitat or artificial refugia is specified in the Recovery Plan. Nine historically occupied and genetically pure locations (3 replications of each natural location) and 27 quasi-natural, genetically mixed sites (9 replications of each natural site) are the goal in California. The Recovery Plan recognizes that an adequate number of unaltered, natural habitats suitable for reestablishment may not exist. However, the target number of populations is necessary to insure against loss at one or more key sites.

The HCP/NCCP implements the provisions of re-establishment of populations in refugia through the requirement that CVWD establish 25 acres of artificial pupfish habitat (Section 4.3.20:HCP/NCCP). In addition, the HCP/NCCP focuses on conservation and maintenance of the known pupfish sites. Implementation of the HCP/NCCP will result in "formal protection" of habitat as defined in the Recovery Plan. Take allowed under this

HCP/NCCP will be less than significant for CEQA analysis purposes and the benefits conferred by the HCP/NCCP will protect adequate unfragmented habitat, maintain Essential Ecological Processes, including water supply, to sustain the habitat, and protect Biological Corridors and Linkages, as appropriate.

Summary of CEQA Findings for the Desert Pupfish

CDFG finds that issuance of the HCP/NCCP permit could result in significant impacts on this Covered Fish Species primarily from water delivery maintenance activities authorized by the NCCP/HCP. CDFG finds that all impacts on this species and habitat associated with CDFG's issuance of the HCP/NCCP permit will be avoided or mitigated to below a level of significance under CEQA through adherence to and implementation of the HCP/NCCP. In so doing, CDFG's findings under CEQA with respect to this species are consistent with the findings of the lead agency on the same subject (Section 4.7:EIR/EIS). CDFG's findings are based on the overall conservation strategy, species-specific biological objectives, species-specific minimization and avoidance measures, and adaptive management and monitoring programs (Sections 4.3.20, 8.4.5.2, 9.4:HCP/NCCP).

CEQA Findings for the Arroyo Toad

Impact 3.5.4 **Approval of the HCP/NCCP authorized under the NCCP Permit could result in potentially significant adverse impacts on the Arroyo toad (*Bufo californicus*).**

Finding 3.5.4 **CDFG finds that conservation measures required in the HCP/NCCP will mitigate or avoid the potential significant impacts of the HCP/NCCP on the Arroyo toad to below a level of significance. (Pub. Resources Code, § 21081, subd. (a)(1); CEQA Guidelines, § 15091, subd. (a)(1).)**

Explanation 3.5.4:

Arroyo toad (*Bufo californicus*)

Individuals occurring outside the Conservation Areas will be subject to Take, including those occurring in the Bonnie Bell area. There could be up to 88 acres (4%) of all habitat and 11% of non-federal lands lost to Development and other Covered Activities under the HCP/NCCP including up to 78 acres (4%) of Core Habitat (Table 4-114:HCP/NCCP). The HCP/NCCP Area is on the periphery of the rangewide distribution of the arroyo toad and the HCP/NCCP will conserve about 96% of available habitat in the Plan Area (Section 9.5.1.4:HCP/NCCP).

The Permittees will protect and manage, in perpetuity, 706 acres of the modeled Habitat for this species. The 1,301 acres of modeled Habitat within Existing Conservation Lands

will be monitored and managed to ensure that Conservation Objectives are met. The HCP/NCCP will thus ensure Conservation, through protection and management, of 2,007 acres of Habitat for arroyo toad (Section 9.5.1.1:HCP/NCCP).

The volume and quality of surface water also is vital to the HCP/NCCP's conservation strategy; therefore, diversion and use of water is not a Covered Activity, as described in Section 7.3 of the HCP/NCCP.

Consistency With Arroyo Toad Recovery Plan

The Arroyo Toad Recovery Plan (USFWS 1999) defined three recovery units, the northern, southern and desert slope. Ten subregions within these recovery units were delineated. The HCP/NCCP Area is part of the desert slope recovery unit, subregion 10, which includes only the Whitewater River. The Recovery Plan states that protection of the Whitewater basin population is essential for delisting the arroyo toad. Recommendations are made for management, ranging from restrictions on campgrounds, roads and trails to removing exotic vegetation in impacted streambeds.

The HCP/NCCP calls for acquisition and management of habitat in Whitewater Canyon. Issues such as road kill, recreational use of the habitat, discharge of pollutants, stream diversions and other factors that may impact the arroyo toad in Whitewater Canyon are identified in Section 9.5.1.2 of the HCP/NCCP and will be monitored and actions taken to reduce impacts through Adaptive Management (Section 8.4.3.3:HCP/NCCP).

Monitoring includes baseline data collection at the community level (amount and quality of riparian habitat and water levels) and at the species level (number of toads present). Take allowed under this HCP/NCCP will be less than significant for CEQA analysis purposes and the benefits conferred by the HCP/NCCP will protect adequate unfragmented habitat, maintain Essential Ecological Processes to sustain the habitat, and protect Biological Corridors and Linkages, as appropriate.

Summary of CEQA Findings for the Arroyo Toad

CDFG finds that issuance of the HCP/NCCP permit could result in significant impacts on the Arroyo toad primarily from development and other Covered Activities authorized by the NCCP/HCP. CDFG finds that all impacts on this species and its habitat associated with CDFG's issuance of the HCP/NCCP permit will be avoided or mitigated to below a level of significance under CEQA through adherence to and implementation of the HCP/NCCP. In so doing, CDFG's findings under CEQA with respect to this species is consistent with the findings of the lead agency on the same subject (Section 4.7:EIR/EIS). CDFG's findings are based on the overall conservation strategy, species-specific biological objectives, species-specific minimization and avoidance measures, and adaptive management and monitoring programs (Sections 4.3.4, 8.4.3.3, 9.5.1.2:HCP/NCCP).

CEQA Findings for Covered Species - Reptiles

Impact 3.5.5 **Approval of the HCP/NCCP authorized under the NCCP Permit could result in potentially significant adverse impacts on Covered Reptile Species. These species include: Coachella Valley fringe-toed lizard (*Uma inornata*), Desert tortoise (*Gopherus agassizii*), and Flat-tailed horned lizard (*Phrynosoma mcallii*).**

Finding 3.5.5 **CDFG finds that conservation measures required in the HCP/NCCP will mitigate or avoid the potentially significant impacts of the HCP/NCCP on these Covered Reptile Species to below a level of significance. (Pub. Resources Code, § 21081, subd. (a)(1); CEQA Guidelines, § 15091, subd. (a)(1).)**

Explanation 3.5.5:

Coachella Valley fringe-toed lizard (*Uma inornata*)

Individuals occurring outside the Conservation Areas will be subject to Take and habitat loss, including those occurring on the Big Dune. The habitat for this species on the Big Dune is shielded from replenishment by aeolian sand transport due to existing development in the wind corridor. Land values, fragmentation by existing roads and edge effects make this habitat impracticable to conserve or restore. There could be up to 13,681 acres (51%) of all habitat and 61% of non-federal lands lost under the HCP/NCCP including up to 606 acres (5%) of Core Habitat (Table 4-114, Section 9.6.2.1:HCP/NCCP).

Since 1985, an extensive conservation and mitigation program has been implemented for the Coachella Valley fringe-toed lizard. The Coachella Valley fringe-toed lizard Habitat Conservation Plan (Nature Conservancy 1985) established three preserves to protect this reptile near Thousand Palms in the Whitewater River floodplain and on Edom Hill. A mitigation fee area was established and was drawn to include all existing and former habitat. Fees collected are used to acquire and manage lands in the three reserves. DFG was not a signatory to the 1985 HCP for the fringe-toed lizard. However, in 2002 the state issued a consistency determination based upon modifications to the HCP. Upon Plan completion and Permit issuance, Take authority for the species will be provided by the newly-issued HCP/NCCP and permits.

Consistency with Fringe-Toed Lizard Recovery Plan

The Coachella Valley Fringe-toed Lizard Recovery Plan (USFWS 1984) recommended over 50 measures that could be taken to lead to recovery, ranging from increased enforcement to education to re-introduction of lizards into restored habitat. Its primary objective was to secure and protect suitable habitat in two or more large-scale areas, one

of which will be the critical habitat. The Recovery Plan acknowledged the preparation of an HCP, which was underway at the same time, and anticipated that the HCP will enact many of the recommended conservation actions. The HCP/NCCP will meet or exceed Recovery Plan standards by creating and implementing conservation measures in the Conservation Areas.

Impacts to Critical Habitat of the Fringe-Toed Lizard

Critical habitat for the fringe-toed lizard was designated at the time of listing as a Threatened species (USFWS 1980). It consists of 11,920 acres centered in the existing Coachella Valley Preserve north of I-10. Most of the critical habitat is within the preserve or the proposed Thousand Palms Conservation Area, but some remains outside the conserved lands near Thousand Palms in the sand transport area. This part of the critical habitat has existing dwellings and is not recognized as a sand transport area in the HCP/NCCP, although it was shown as such in the 1985 HCP. That document had a lengthy discussion of the practicability of acquiring or conserving the critical habitat land west of the preserve boundary. It concluded that strict preservation was infeasible, and that County regulation by zoning could suffice to maintain the aeolian sand transport. The prescription for use given in the HCP was "Develop (possibly)."

Fluvial sand transport was also considered in the 1985 HCP. Sand sources could not be definitively identified, though the majority of sand to the preserve was thought (by one author) to be transported via Thousand Palms Canyon.

The fluvial sources of sand to the Thousand Palms Preserve have been carefully studied since 1985, using hydrological modeling (Simons, Li and Associates 1996, 1997), aerial photography (Lancaster, Miller and Zonge 1993), geochemical composition (Meek and Wasklewicz 1993; Wasklewicz and Meek 1995), and enhanced satellite imagery (Barrows, no date). Drainages from the Indio Hills deposit the majority of the fluvial sand upwind of the blowsand deposits, the location being the designated critical habitat. However, the timing of fluvial deposition intervals has not been determined, but may exceed 100 years (USFWS 2000a).

The relative contribution and necessary frequency of fluvial sand transport and aeolian sand transport is unknown, despite the aforementioned studies. This is partially because of the episodic nature of the rainstorms and windstorms that move the sand. The most significant movement of sand occurs during very infrequent high intensity floods and windstorms. The wind patterns that move smaller amounts of sand every spring and fall are much more predictable than the infrequent strong windstorms. Strong rainfall is very unpredictable because it can occur from "El Nino" years in the winter or from tropical storms in the summer.

The Thousand Palms/Whitewater River Basin Flood Control Project has been approved by the Army Corps of Engineers. It is a Covered Activity for CVWD, the local sponsor, in the HCP/NCCP. The HCP/NCCP relies on preserving the fluvial movement in the

critical habitat inside the Conservation Area, utilizing the flood control plan of levees to direct floodwaters carrying sand into the reserve upwind from the blowsand deposits. The levees will then become the boundary of the reserve. They will be aligned parallel with the wind, and will have openings to function as a wind corridor. Sand deposited along the levees will be mechanically spread within the wind corridor every five years or after major flood events. This design was judged to have minimal impact to the aeolian transport system (USFWS 2000b). It will have the effect of providing flood protection to 472 acres of critical habitat outside the Conservation Area, which could then be developed. The project will place levees on 158 acres of critical habitat, which also represents a permanent loss. Acquisition or conservation by other means of 551 acres of critical habitat will take place and be dedicated to conservation. The Biological Opinion (BO) concluded that the Thousand Palms/Whitewater River Basin Flood Control Project will not jeopardize the continued existence of the fringe-toed lizard and will not result in destruction or adverse modification of critical habitat.

The HCP/NCCP addresses the aeolian and fluvial sand transport in the critical habitat inside portions of the Conservation Area by establishing Site Planning Standards for Sections 7 and 8 (T4S, R6E) (Section 4.3.11:HCP/NCCP). These standards for Development of individual parcels are intended to allow continued fluvial and aeolian sand transport at the west edge of the Conservation Area. Acquisition or conservation by other means of vacant parcels will be a priority. A 9:1 conservation to development ratio (90% conservation) will be maintained within Section 21 (T4S, R6E) south of Ramon Road, where acquisition will also be a high priority (Section 4.3.11:HCP/NCCP). These measures are designed to achieve the Conservation Objectives and they represent minimization and mitigation to the maximum extent practicable for impacts to this sand transport area.

Summary of Impacts to the Fringe-Toed Lizard

The HCP/NCCP's provisions will ensure conservation of the Coachella Valley fringe-toed lizard. These measures reduce the risk of extinction, even if lizards are extirpated or greatly reduced in numbers at one of the three preserves. The principal conservation measure is addition of occupied habitat into new Conservation Areas and expansion of existing preserves. The new Conservation Area at Snow Creek/Windy Point, additions to the Whitewater Floodplain Preserve, additions to the Willow Hole and Edom Hill Preserve, and protection of scattered habitat between Willow Hole and Edom Hill greatly enhance protection of occupied habitat, hence maintain larger numbers of lizards (Sections 4.3.3, 4.3.6, 4.3.8, 4.3.10:HCP/NCCP). Core Habitat is protected within the Snow Creek/Windy Point and Willow Hole Conservation Areas (Sections 4.3.3, 4.3.8:HCP/NCCP). The scattered blowsand deposits and occupied habitat in the Indio Hills also will be conserved. It is unlikely that all populations will be extirpated at once, so that some lizards will be left to re-introduce if a local population were extirpated.

The HCP/NCCP also employs measures to protect and maintain Essential Ecological Processes for sand transport to the new Conservation Areas with occupied habitat and

provides linkages between these regions. The HCP/NCCP provides for the Conservation of 90% of the private land in the Willow Hole Conservation Area, where the sand source is located, and specifies required measures of a 9:1 conservation to development ratio (90% conservation) in specified areas (Section 4.3.8:HCP/NCCP).

Adaptive Management includes several measures that will forestall or prevent extirpation in a Conservation Area. These include the establishment of "sand fences" to trap sand upwind in armored habitat and create blowsand hummocks for expansion of the extant population (Section 8.4.1.2:HCP/NCCP). Other possibilities are hauling of sand upwind, destabilizing armored deposits by physically removing vegetation and surface crusts, and controlling exotic plant species and feral animals. Though essentially termed experimental, some of these measures may be needed soon, as in the Whitewater River floodplain. Within the Thousand Palms Conservation Area, installation of blowsand monitoring devices, such as measuring poles or drift fences, could be used to determine the rates of deposition or depletion of sand deposits. This data may become important in the future and may shed light on the periodicity of sand movement on the west (upwind) part of the Conservation Area.

Expanding upon the existing HCP, the HCP/NCCP comprehensively addresses the needs of the Coachella Valley fringe-toed lizard. Adoption of this HCP/NCCP will be very beneficial to this species. Although habitat loss in the Big Dune area represents a large acreage of occupied habitat, this region is shielded from sand transport, as it was in 1985. Land values, fragmentation by existing roads and edge effects make this habitat impracticable to conserve or restore for the fringe-toed lizard. Take allowed under this HCP/NCCP will be less than significant for CEQA analysis purposes and the benefits conferred by the HCP/NCCP will protect adequate unfragmented habitat, maintain Essential Ecological Processes to sustain the habitat, and protect Biological Corridors and Linkages, as appropriate.

Desert tortoise (*Gopherus agassizii*)

Individuals occurring outside the Conservation Areas will be subject to Take, including those occurring east of Highway (Hwy.) 62 and east of Dillon Road to the boundary with Joshua Tree National Park. There could be up to 67,229 acres (12%) of all habitat and 28% of non-federal lands lost under the HCP/NCCP including up to 11,478 acres (3%) of Core Habitat (Tables 4-114, 9-15:HCP/NCCP).

The HCP/NCCP protects Core Habitat extending from the mesa on the west side of Whitewater Canyon through the Mission Creek drainage and into Joshua Tree National Park. Though portions of this area may not be occupied by desert tortoises, it provides a linkage from southwest to northeast in the HCP/NCCP Area that connects with a very large conserved habitat for the tortoise. This protection, as described in the Conservation Objectives and Required Measures for the Whitewater Canyon, Stubbe and Cottonwood Canyons, and Upper Mission Creek Conservation Areas will have a very beneficial impact to the desert tortoise within the HCP/NCCP Area. This protection, however,

includes only a very small portion of the desert tortoise range and is outside the major Conservation Areas recommended by the Recovery Plan, hence will have only a minor beneficial impact on the species as a whole. The tortoise habitat in the east portion of the HCP/NCCP Area is addressed below.

Consistency with Desert Tortoise Recovery Plan

The Desert Tortoise Recovery Plan (USFWS 1994) identified several recovery units for the desert tortoise. Portions of the West Mojave and the Eastern Colorado Desert recovery units are within the HCP/NCCP Area. Within these recovery units, the Recovery Plan further recommended establishment of Desert Wildlife Management Areas (DWMAs). Portions of the recommended Joshua Tree DWMA (in the West Mojave recovery unit) and the Chuckwalla DWMA (in the eastern Colorado Desert recovery unit) fall within the boundaries of the HCP/NCCP Area.

The remainder of the conserved habitat for the desert tortoise is not specifically addressed by the Recovery Plan and is not considered to be the highest-quality, highest-density tortoise habitat. The primary focus of the Recovery Plan is on the DWMAs. The BLM, through the Northern and Eastern Colorado Desert (NECO) Plan Amendment (BLM 2002), established boundaries for the DWMAs and restrictions on use to protect the tortoise. The NECO Plan was not a Habitat Conservation Plan and did not address conservation and management on private lands.

The HCP/NCCP will fill the planning gap by addressing private lands within the Joshua Tree National Park and Chuckwalla DWMAs. The HCP/NCCP designates Core Habitat for desert tortoise in the Desert Tortoise and Linkage Conservation Area, Joshua Tree National Park Conservation Area and Mecca Hills/Orocopia Mountains Conservation Area. The Conservation Objectives of acquisition or conservation by other means, combined with the Required Measures, particularly the Land Use Adjacency Guidelines, will protect the tortoise habitat within the DWMA in accordance with the Recovery Plan.

Impacts to Critical Desert Tortoise Habitat

Critical Habitat for the Mojave population of the desert tortoise was designated in 1994. None is found within the Coachella Valley, but the entire eastern part of the HCP/NCCP Area is designated, including most of the Desert Tortoise and Linkage Conservation Area, and portions of Joshua Tree National Park and the Mecca Hills/Orocopia Mountains Conservation Areas. The majority of the critical habitat within the HCP/NCCP Area is owned and managed for conservation by the NPS and by the BLM according to the NECO Plan, which established the DWMAs called for in the tortoise Recovery Plan. However, substantial blocks of private land are found south of I-10 on both sides of Box Canyon Road.

A total of 172,936 acres of critical habitat lies within the HCP/NCCP area. Approximately 55,000 acres are on private lands. Under the HCP/NCCP, at least 90%, or 49,501 acres, will be acquired and managed in the three Conservation Areas.

Under the HCP/NCCP, the majority of the critical habitat for this species lies within Conservation Areas. Given the objectives of acquisition or permanent conservation by other means of at least 90% of private lands in the Conservation Areas, and the Required Measures for surveys and minimization and mitigation measures, the HCP/NCCP will be very beneficial to desert tortoise critical habitat in the long term. Take allowed under this HCP/NCCP will be less than significant for CEQA analysis purposes and the benefits conferred by the HCP/NCCP will protect adequate unfragmented habitat, maintain Essential Ecological Processes to sustain the habitat, and protect Biological Corridors and Linkages, as appropriate.

Flat-tailed horned lizard (*Phrynosoma mcallii*)

Individuals occurring outside the Conservation Areas will be subject to Take, including those occurring on the Big Dune. The habitat for this species on the Big Dune is shielded from replenishment by aeolian sand transport due to existing development in the wind corridor. Land values, fragmentation by existing roads and edge effects make this habitat impracticable to conserve or restore.

This species is difficult to detect, thus the species distribution model for the flat-tailed horned lizard includes "predicted" habitat and also "potential" habitat. The development of the flat-tailed horned lizard model occurred through a coordinated effort involving members of the Scientific Advisory Committee (SAC), wildlife agency biologists, and other biologists with expertise on flat-tailed horned lizards. The team labeled habitat, where presence of the flat-tailed horned lizard was expected based on recent observations, as predicted habitat. All of the Core Habitat is in this category. Some outlying habitat, generally above 800 feet in elevation, where historical observations of this lizard are in the database but no recent observations are recorded, was labeled potential habitat. Statistics for this species presented in this section and elsewhere include both predicted and potential habitat.

Controversy over the possible listing of the flat-tailed horned lizard as a threatened or endangered species has existed for ten years. The Coachella Valley lies at the northern edge of its range, but is thought to have harbored a viable and perhaps extensive population in and adjacent to the blowsand habitats. With Development and the loss of Essential Ecological Processes for much of the blowsand habitat in the Valley, the flat-tailed horned lizard now is only known to be present in the Coachella Valley and Whitewater Floodplain Preserves, the East Indio Hills, and Dos Palmas. Innovative modeling using satellite imagery has refined the specific types of sand deposits used by this species.

Tables 4-114 and 9-17 of the HCP/NCCP note that 17,562 acres (54%) of all predicted habitat and an additional 33% of potential habitat (1,720 acres) could be lost to Development. This results in up to 65% and 41% of the non-federal lands habitat lost in each category of habitat. Up to 97 acres (2%) of Core Habitat could be lost. However, most of this loss will be on habitat shielded from sand transport processes, as on Big Dune. The larger Conservation Areas in the San Gorgonio and Whitewater floodplains and at Thousand Palms with protected Essential Ecological Processes provide for the conservation of the species (Sections 4.3.3, 4.3.6, 4.3.11:HCP/NCCP). The westernmost location for this species will be conserved in the Cabazon Conservation Area, and this region could become important in the future if climate change results in changes to the lizard's local distribution.

The interagency conservation plan for this species (Forman 1997) recommended establishment of at least one reserve in the Coachella Valley, which will protect populations at the extreme northwestern edge of its range. The HCP/NCCP will achieve this recommendation. Therefore, Take allowed under this HCP/NCCP will be less than significant for CEQA analysis purposes, and the benefits conferred by the HCP/NCCP will protect adequate unfragmented habitat, maintain Essential Ecological Processes to sustain the habitat, and protect Biological Corridors and Linkages, as appropriate.

Summary of CEQA Findings for Covered Species - Reptiles

CDFG finds that issuance of the HCP/NCCP permit could result in significant impacts on these Covered Reptile Species primarily from development and other Covered Activities authorized by the NCCP/HCP. CDFG finds that all impacts on these species and their habitat associated with CDFG's issuance of the HCP/NCCP permit will be avoided or mitigated to below a level of significance under CEQA through adherence to and implementation of the HCP/NCCP. In so doing, CDFG's findings under CEQA with respect to these species are consistent with the findings of the lead agency on the same subject (Section 4.7:EIR/EIS). CDFG's findings are based on the overall conservation strategy, species-specific biological objectives, species-specific minimization and avoidance measures, and adaptive management and monitoring programs (Sections 4.3, 4.4, 8.4.1, 8.4.6, 9.6.2, 9.6.3:HCP/NCCP).

CEQA Findings for Covered Species - Birds

Impact 3.5.6 **Approval of the HCP/NCCP authorized under the NCCP Permit could result in potentially significant adverse impacts on Covered Bird Species. These species include: Burrowing owl (*Athene cunicularia*), California black rail (*Laterallus jamaicensis coturniculus*), Le Conte's thrasher (*Toxostoma lecontei*), Crissal thrasher (*Toxostoma crissale*), Gray vireo (*Vireo vicinior*), Least Bell's vireo (*Vireo bellii pusillus*), Southwestern willow flycatcher (*Empidonax traillii extimus*), Summer tanager (*Piranga rubra*), Yellow warbler (*Dendroica***

petechia brewsteri), Yellow-breasted chat (*Icteria virens*), and Yuma clapper rail (*Rallus longirostris yumanensis*).

Finding 3.5.6 **CDFG finds that conservation measures required in the HCP/NCCP will mitigate or avoid the potentially significant impacts of the HCP/NCCP on these Covered Bird Species to below a level of significance. (Pub. Resources Code, § 21081, subd. (a)(1); CEQA Guidelines, § 15091, subd. (a)(1).)**

Explanation 3.5.6:

Burrowing owl (*Athene cunicularia*)

Impacts to burrowing owl are very difficult to predict, given the limited knowledge on their distribution and abundance in the HCP/NCCP Area and their ability to relocate when established nesting sites are lost. No species model was prepared because sufficiently precise habitat parameters could not be defined, since in the plan area their nest sites are often in agricultural and urban areas. The HCP/NCCP did not provide modeled habitat for the burrowing owl, but the reserve design of the HCP/NCCP focused on inclusion of areas of contiguous habitat around occurrences where burrowing owls were known to occur. This contiguous habitat provides adequate foraging areas. There are 129,520 acres within the Conservation Areas where there are known occurrences. Within this area there are known pairs as well as individuals. Because the burrowing owl conservation measures do not include the conservation of acres, but include the conservation of historical or known burrowing owl burrows, the avoidance and minimization measures are more detailed and specific to burrow occupancy and presence. The conservation measures for this species include: Conservation Objectives and Required Measures for the Conservation Areas (Section 4.3:HCP/NCCP), avoidance and minimization measures (Section 4.4:HCP/NCCP), the Conservation Objectives (Section 9.7.3:HCP/NCCP), and the Burrowing Owl Interim Conservation Strategy (Section 8.5.2:HCP/NCCP).

The HCP/NCCP will ensure Conservation of 55% of known occurrences for burrowing owls. The Conserved occurrences are of higher quality to the burrowing owl than the 45% of occurrences that will be Taken. An evaluation of the quality of the Habitat indicates that although the raw numbers appear to indicate that substantial burrowing owl occurrences could be lost within the next 75 years, the impacts to the species within the HCP/NCCP Area will be considerably less than indicated by the reduction in known occurrence numbers because:

1. Conserved Habitat areas are large enough to contain a self-sustaining metapopulation of burrowing owls and incorporate important Habitat elements such as burrows, foraging areas, and prey.
2. Take within the Conservation Areas would not eliminate or significantly impact any individual burrowing owls. Objectives require any approved development within Conservation Areas to conserve occupied burrows according to measures described in

Section 4.4. Take outside of Conservation Areas will be consistent with sections 3503 and 3503.5 of the Fish and Game Code.

3. Potential Development would not adversely impact the Essential Ecological Processes needed to maintain currently viable Habitat. Conservation Areas were carefully designed to incorporate the sand source and sand transport systems that provide suitable soils for burrow establishment and maintenance of prey.

4. Lands in the HCP/NCCP Reserve System will be managed and monitored to: address significant edge effect problems, control activities that degrade burrowing owl Habitat, control invasive species where necessary, and determine the potential for establishment of artificial burrows in the Reserve System.

The potential for the Habitat outside the Conservation Areas to provide for the long-term conservation of burrowing owls is low. The Habitat areas are marginal or already highly fragmented and are surrounded by existing development. These fragmented blocks are more susceptible to edge effects, including mortality on roads and predation by feral animals. Though the percentage of Conserved Habitat may appear low, the quality of the Conserved Habitat is high enough that it should provide for the long-term persistence of this species.

Throughout the HCP/NCCP Area, the protected known occurrences include those in the Snow Creek/Windy Point, Whitewater Floodplain, Upper Mission Creek/Big Morongo Canyon, Willow Hole, Edom Hill, the Thousand Palms, Indio Hills and Mecca Hills/Orocopia Mountains Conservation Areas (Sections 4.3.3, 4.3.6, 4.3.7, 4.3.8, 4.3.10, 4.3.11, 4.3.15, 4.3.18:HCP/NCCP). The HCP/NCCP identified 74 known occurrences in the HCP/NCCP Area of which 23 (31%) are within Existing Conservation Lands which will be managed as part of the Reserve System. Acquisition of additional Reserve Lands will protect another 18 known occurrences (24%). Overall, the HCP/NCCP will ensure Conservation of 41 of these known occurrences (55%) within the Reserve System (Table 9-20:HCP/NCCP).

The primary importance of the HCP/NCCP to the burrowing owl is that it provides Conservation of this species to the extent it occurs in the Coachella Valley. One of the goals is to protect Other Conserved Habitat, to provide sufficient area and variety of Habitat types to accommodate population fluctuations, allow for genetic diversity, and to conserve the range of environmental conditions within which this owl is known to occur. The HCP/NCCP ensures the long-term conservation of previously unprotected habitat, the associated Essential Ecological Processes, and connectivity between these habitat areas. Habitat areas are connected by virtue of how the Reserve System is designed. Most of the Conservation Areas are contiguous with one another, forming one large contiguous area of land. The Conservation Areas were divided into separate units to facilitate management and tracking. In addition, the Conservation Areas provide protection of currently unprotected burrow occurrences, foraging areas, and potential habitat areas. Unlike other covered species in the HCP/NCCP where Take is evaluated by the loss of modeled habitat (acres), burrowing owl Take is evaluated through the loss of known or historical occurrence locations. Following all laws applicable to migratory birds (discussed below), the pairs or individual will not be Taken, just the land around and including the burrows.

Within the Conservation Areas, the HCP/NCCP would ensure conservation of known burrow occurrences for burrowing owls. Throughout the HCP/NCCP Area, the protected known locations include those in the Whitewater Floodplain Preserve, Upper Mission Creek/Big Morongo Canyon area west of Highway 62, the Willow Hole-Edom Hill Preserve/ACEC area, and the Thousand Palms Preserve. With adaptive management, conserved populations would be protected from edge effects, from OHV impacts, and from any activities that may result in disturbance to owl burrows. Outside of the Conservation Areas, there are 33 known occurrences (habitat and burrows) identified in the HCP/NCCP to be authorized for Take. The HCP/NCCP does not authorize Take of nests and eggs as prohibited by Fish and Game Code sections 3503 and 3503.5 and therefore avoidance measures will have to be undertaken for all projects which have breeding burrowing owls present.

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 occurrences 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.

The HCP/NCCP has a Burrowing Owl Interim Conservation Strategy (Section 8.5.2:HCP/NCCP) which calls for systematic surveys of the Conservation Areas (where access is provided) during the first three years following Permit issuance. Management actions would be taken to eliminate potential threats and stressors to the burrowing owls such that a minimum of 16 pairs (in addition to the 41 known occurrences) can be sustained within the Conservation Areas during the Interim Conservation Strategy period. Projects subject to CEQA within Conservation Areas will be required to survey for and relocate owls as appropriate prior to construction (and this information would feed into the development of a long-term strategy). During the first 6 years post Permit issuance, research and monitoring will focus on gathering data to address specific questions (e.g., territory and home range size for burrowing owl pairs in the Conservation Areas, source population for burrowing owl dispersal/immigration into Conservation Areas, and reproductive success and recruitment of known burrowing owl pairs in Conservation Areas) through the hypothesis-based adaptive management approach. Information from the interim conservation strategy that occurs in the first 3 years shall be evaluated to guide the subsequent 3 years post Permit issuance. The data gathered during the first 6 years, together with other pertinent scientific information, will be used to develop a long-term conservation strategy for burrowing owls.

The HCP/NCCP will provide large, contiguous Habitat within the Reserve System for Burrowing owls to maintain self-sustaining populations. Management actions will be undertaken to assure that existing burrows are preserved and new pairs established.

Habitat will be protected from edge effects, from OHV impacts, and from any activities that may result in disturbance to owl burrows. Monitoring and research will be undertaken to increase the knowledge about Burrowing owls within the HCP/NCCP Area to guide management actions. Take allowed under this HCP/NCCP will be less than significant for CEQA analysis purposes and the benefits conferred by the HCP/NCCP will protect adequate unfragmented habitat, foraging habitat, maintain Essential Ecological Processes to sustain the habitat, and protect Biological Corridors and Linkages, as appropriate.

California black rail (*Laterallus jamaicensis coturniculus*)

Individuals occurring outside the Conservation Areas including any occurring in the Coachella Valley Stormwater Channel will be subject to take by CVWD during O&M activities as authorized by the Quantification Settlement Agreement (QSA) (Fish and Game Code Section 2081.7, Section 5.1.1:NCCP Permit). The California black rail occurs in the drains draining into the Salton Sea and at Dos Palmas. The drains are managed by CVWD as part of its O&M activities and are Covered Activities. The O&M activities are an impact attributable to the QSA and the only authorized Take for black rails under this HCP/NCCP. These activities are necessary to maintain functioning drains which is an impact attributable to the QSA. Take of rails as a result of these activities is allowed. There could be up to 59 acres (9%) of all habitat and 13% of non-federal lands lost under the HCP/NCCP (Table 4-114:HCP/NCCP). Core Habitat was not designated for this species.

The California black rail is a California fully protected species, and, under current law, incidental Take Permits cannot be issued for this species by CDFG, other than for Take resulting from impacts directly attributable to the implementation of the QSA, as permitted in Fish and Game Code Section 2081.7. For this Permit, the only authorized impacts are those associated with the Covered Activities listed in Sections 7.1, 7.3.1 and Table 7-6 of the HCP/NCCP. This bird is found only in the Dos Palmas and Coachella Valley Stormwater Channel and Delta Conservation Areas. Surveys will be required in all potential Habitat for this rail before any activity that will impact the Habitat takes place. If rails are found, the Habitat must be avoided or measures must be approved by the Wildlife Agencies to ensure that no Take of an individual occurs, other than projects where Fish and Game Code Section 2081.7 is applicable. Required Measures for Permittees other than CVWD will avoid Take of individuals (Sections 4.3.19, 4.3.20, 9.7.2.4:HCP/NCCP).

The HCP/NCCP will ensure Conservation of 616 acres (91%) of the Habitat for this rail: 230 acres of Existing Conservation Lands and 386 acres of Additional Conservation Lands. Given the level of conservation, which includes establishment of 44 acres of marsh habitat in the Coachella Valley Stormwater Channel and Delta Conservation Area within five years of permit issuance, the effects are considered beneficial. Take allowed under this HCP/NCCP will be less than significant for CEQA analysis purposes. The benefits conferred by the HCP/NCCP include the protection of unfragmented habitat in

the Coachella Valley Stormwater Channel and Delta and Dos Palmas Conservation Areas, the maintainance of Essential Ecological Processes to sustain the habitat, and the protection of Biological Corridors and Linkages (Sections 4.3.19, 4.3.20:HCP/NCCP).

Le Conte's thrasher (*Toxostoma lecontei*)

Individuals occurring outside the Conservation Areas will be subject to Take, including those occurring on the Big Dune and the east end of the Indio Hills. There could be up to 96,133 acres (40%) of all habitat and 53% of non-federal lands lost under the HCP/NCCP (Table 4-114:HCP/NCCP). The raw acreage and percentage numbers indicate a substantial acreage of Le Conte's thrasher modeled Habitat that could be lost to development within the next 75 years. Evaluation of the impacts of Take requires an assessment of the quality of this Habitat. Core Habitat was not designated for this species.

With so little data on the occurrence of Le Conte's thrashers in the Conservation Areas, the HCP/NCCP takes a conservative approach and provides for conservation of areas where suitable Habitat for this species is present. There are 243,242 acres of modeled Habitat for Le Conte's thrasher within the HCP/NCCP Area. Core Habitat was not designated for this species given the limited knowledge about its Habitat and distribution in the HCP/NCCP Area. The HCP/NCCP will ensure Conservation of approximately 132,456 acres (54%) of this modeled Habitat. Approximately 59,252 acres (24%) of the modeled Habitat are within Existing Conservation Lands and will be managed as part of the Reserve System. The HCP/NCCP will conserve an additional 73,204 acres (30%) of the modeled Habitat for Le Conte's thrasher in the HCP/NCCP Area. Of the 33 known locations for this species in the HCP/NCCP Area, 19 are within the Conservation Areas (Section 9.7.6.1:HCP/NCCP).

Within the Conservation Areas under the worst case scenario, 8,727 acres of Take of modeled Le Conte's thrasher Habitat (4%) could occur. Take of Le Conte's thrasher Habitat within the Conservation Areas must be consistent with the Conservation Objectives for this species to: 1) ensure Conservation of Habitat for Le Conte's thrasher across a range of environmental conditions; 2) ensure conservation of Le Conte's thrasher nest sites through avoidance, minimization, and mitigation measures; and 3) implement biological monitoring and Adaptive Management to ensure long-term Conservation of this species. Although some Take could occur within the Conservation Areas, the Conservation Objectives required by the HCP/NCCP will provide for protection of Habitat to ensure the long-term Conservation of this thrasher (Section 9.7.6.1:HCP/NCCP).

Outside of the Conservation Areas, there are 87,406 acres (36%) of modeled Habitat for Le Conte's thrasher that are authorized for Take. 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 Palm Springs. Roads and urban Development already fragment a significant portion of the Take area. The modeled Habitat for Le Conte's thrasher outside the Conservation Areas is east of Hwy. 62 and

surrounding Desert Hot Springs, in marginal patches of Habitat along I-10 throughout the HCP/NCCP Area, east of Dillon Road, along the eastern shore of Salton Sea, and in desert saltbush scrub interspersed with agriculture. These acres were not included in the Conservation Area because of the small patch size, high degree of fragmentation, and the associated edge effects.

Many of the remote lands are unlikely to be developed, even during the 75-year permit duration. The acreage conserved on the Valley floor, where the Le Conte's thrasher is most threatened, is considerable and of substantial benefit to the species. Take allowed under this HCP/NCCP will be less than significant for CEQA analysis purposes and the benefits conferred by the HCP/NCCP will protect adequate unfragmented habitat, maintain Essential Ecological Processes to sustain the habitat, and protect Biological Corridors and Linkages, as appropriate (Section 4.3, Table 9-23:HCP/NCCP).

Crissal thrasher (*Toxostoma crissale*)

The distribution of Habitat for the crissal thrasher is quite patchy, particularly in the vicinity of the Salton Sea where areas occupied by mesquite hummocks and desert saltbush scrub are highly fragmented. The Reserve System includes areas of contiguous mesquite hummocks Habitat at Willow Hole and at the Thousand Palms Preserve. Plus, mesquite hummocks, arrowweed scrub, and desert saltbush scrub Habitat are found at Dos Palmas and the Whitewater River delta area, which are included in modeled Habitat for the crissal thrasher. In addition, although not included as part of modeled Habitat, the crissal thrasher occupies areas that are dominated by vegetation characteristic of desert dry wash woodland (Shuford and Gardali 2008). Desert dry wash woodlands were once widespread on alluvial fans emanating from the Santa Rosa and San Jacinto Mountains where the communities of the Coachella Valley occur today. Extant stands of relatively undisturbed woodlands can still be found in the relatively undisturbed wash areas of the San Bernardino Mountains (Stubbe Canyon and Mission Creek), in the vicinity of the Thousand Palms Preserve and on alluvial fans emanating from the Indio Hills, in the eastern portion of the HCP/NCCP Area, and along alluvial fans at the east end of the Santa Rosa Mountains. The Planning Team included all large contiguous stands of desert dry wash woodland that remain in the HCP/NCCP Area in Conservation Areas.

The primary importance of the HCP/NCCP to the crissal thrasher is that it provides Conservation (including Habitat protection, management and monitoring) of the species across its entire range within the HCP/NCCP Area. The HCP/NCCP ensures the long-term conservation of Core Habitat (91%), the associated Essential Ecological Processes (as discussed below), and connectivity between these Habitat areas (Section 9.7.5.1:HCP/NCCP).

The HCP/NCCP allows for individuals occurring outside the Conservation Areas to be Taken, including those occurring on the highly fragmented lands in the southern portion of the valley near the Salton Sea. Based on the model and the inclusion of desert dry wash woodland there could be up to 13,682 acres (34%) of all Habitat lost under the

HCP/NCCP, including up to 125 acres (9%) of Core Habitat (Tables 4-114, 9-22:HCP/NCCP).

The Planning Team included all available Habitat for this species that was not highly fragmented into the Conservation Areas. To address specific impacts to mesquite hummocks, which could provide Habitat for crissal thrasher, the HCP/NCCP requires restoration of mesquite hummocks in the East Indio Hills Conservation Area. This restoration will result in a minimum of 40 acres, and as many as 80 acres, of additional mesquite hummocks. In addition, CVWD will restore 40 acres of permanent mesquite hummocks, if Feasible (Section 8.4.1.2:HCP/NCCP), on their lands in the East Indio Hills Conservation Area.

There are 6,852 acres of modeled Habitat and 40,549 acres of desert dry wash woodland that provides Habitat for the crissal thrasher within the HCP/NCCP Area, of which approximately 1,432 acres are identified as Core Habitat. The HCP/NCCP will ensure Conservation of 1,307 acres (91%) of the Core Habitat, 368 acres (92%) of the Other Conserved Habitat, and 30,716 acres of desert dry wash woodland for crissal thrasher. Each of the areas that contain Core Habitat will be greater than 400 acres. (Section 9.7.5.1:HCP/NCCP).

Within the Conservation Areas under the worst case scenario, 159 acres of Take of modeled crissal thrasher Habitat (2%) and 1,550 (4%) acres of desert dry wash woodland could occur. Take of crissal thrasher Habitat and desert dry wash woodland within the Conservation Areas must be consistent with the Conservation Objectives for this species and the associated natural communities to: 1) ensure Conservation of Core Habitat; 2) protect Essential Ecological Processes including hydrological regimes needed to maintain crissal thrasher Habitat; 3) maintain Biological Corridors and Linkages among conserved populations to provide for population fluctuation and enhance genetic diversity; and 4) implement biological monitoring and Adaptive Management to ensure long-term Conservation of this species. In addition, avoidance, minimization, and mitigation measures for crissal thrasher will be implemented. Although some incidental Take could occur within the Conservation Areas, the Conservation Objectives required by the HCP/NCCP will provide for protection of Habitat to ensure the long-term Conservation of crissal thrasher (Section 9.7.5.1,10.8.2:HCP/NCCP).

Outside of the Conservation Areas, Take is authorized within 5,013 acres (73%) of modeled Habitat and 6,960 acres (17%) of desert dry wash woodland. Although the raw acreage and percentage numbers indicate a substantial acreage of crissal thrasher modeled Habitat that could be lost to development within the next 75 years, an evaluation of the quality of this Habitat indicates that the modeled Habitat for crissal thrasher outside the Conservation Areas is poor, being primarily remnant patches of mesquite and desert saltbush scrub surrounded by agricultural areas in the eastern Coachella Valley. These mesquite patches and fragments of desert saltbush scrub were not included in the Conservation Area because of the high degree of fragmentation and the associated edge effects. The establishment of Conservation Areas where this species is protected is a

significant improvement over the piecemeal fragments of Habitat; only 4% of modeled Habitat is currently conserved. Take allowed under this HCP/NCCP will be less than significant for CEQA analysis purposes and the benefits conferred by the HCP/NCCP will protect adequate unfragmented habitat, maintain Essential Ecological Processes to sustain the habitat, and protect Biological Corridors and Linkages, as appropriate (Sections 4.3.2, 4.3.7, 4.3.8, 4.3.11, 4.3.14, 4.3.15, 4.3.16, 4.3.17, 4.3.18, 4.3.19, 4.3.20, 4.3.21:HCP/NCCP).

Gray vireo (*Vireo vicinior*)

Individuals occurring outside the Conservation Areas will be subject to Take, including those occurring in the Pinyon Flats area. There could be up to 3,913 acres (4%) of all habitat and 18% of non-federal lands lost under the HCP/NCCP (Table 4-114:HCP/NCCP). Core Habitat was not designated for this species (Section 9.7.8:HCP/NCCP).

With so little data on the occurrence of Gray vireos in the Conservation Areas, the HCP/NCCP takes a conservative approach and provides for conservation of all areas where suitable Habitat for this species is present. There are 105,562 acres of modeled Habitat for Gray vireo within the HCP/NCCP Area. Core Habitat was not designated for this species given the limited knowledge about its Habitat and distribution in the HCP/NCCP Area. The HCP/NCCP will ensure Conservation of approximately 101,544 acres (96%) of this modeled Habitat. Approximately 88,350 acres (84%) of the modeled Habitat are within Existing Conservation Lands and will be managed as part of the Reserve System. The HCP/NCCP will conserve an additional 13,194 acres (12%) of the modeled Habitat for the Gray vireo in the HCP/NCCP Area (Section 9.7.6.1:HCP/NCCP).

Within the Conservation Areas under the worst case scenario, 1,466 acres of modeled Habitat (1%) could be lost. Take of gray vireo Habitat within the Conservation Areas must be consistent with the Conservation Objectives for this species to: 1) ensure Conservation of occupied and potential Habitat; 2) evaluate the need for management prescriptions for pinyon-juniper woodland and chaparral Habitat; and 3) implement the Monitoring Program and Adaptive Management actions to ensure Conservation of this species. So, although some Take could occur within the Conservation Areas, the Conservation Objectives required by the HCP/NCCP will provide for protection of Habitat to ensure the long-term Conservation of the gray vireo (Section 9.7.8.2:HCP/NCCP).

Outside of the Conservation Areas, there are 2,447 acres (2%) of modeled Habitat that could be lost (Table 4-114:HCP/NCCP). The majority of the acreage is comprised of the undeveloped areas within the existing low density residential areas in the Pinyon Flat/Pinyon Crest communities along Hwy. 74, other developed areas along Hwy. 74, as well as an extensive road network in this area.

The primary importance of the HCP/NCCP to the gray vireo is that it provides Conservation (including Habitat protection, management, and monitoring) of Habitat where gray vireos are known to occur as well as additional potential Habitat. The HCP/NCCP ensures the long-term conservation and enhancement of breeding and migratory Habitat through implementation of management prescriptions. The HCP/NCCP provides for the conservation of this species. Additional censuses are needed in remote parts of the HCP/NCCP Area to detect all patches of occupied habitat. The pattern of wildland fires that may take place in the future during the duration of the permit will modify the habitat potentially both positively and negatively. Censuses and fire management will be undertaken under the HCP/NCCP (Sections 8.4.6.2, 8.4.6.3, 9.7.8.2:HCP/NCCP). Adaptive management may be important in habitat conservation for the gray vireo after more is learned of their local distribution. Take allowed under this HCP/NCCP will be less than significant for CEQA analysis purposes and the benefits conferred by the HCP/NCCP will protect adequate unfragmented habitat, maintain Essential Ecological Processes to sustain the habitat, and protect Biological Corridors and Linkages, as appropriate.

Least Bell's vireo (*Vireo bellii pusillus*)

Individuals occurring outside the Conservation Areas will be subject to Take, including those in migratory habitat east of the Coachella Canal and in a small portion of Dos Palmas. There could be up to 761 acres (21%) of all breeding habitat and 14,775 acres (26%) of migratory habitat lost under the HCP/NCCP (Table 4-114:HCP/NCCP). Core Habitat was not designated for this species. Temporary Habitat disturbance for flood control channel maintenance purposes will be permitted by the HCP/NCCP in the Coachella Valley Stormwater Channel (Sections 4.3.20, 8.4.5.2:HCP/NCCP). Where disturbance of a given number of acres of riparian natural communities is authorized, an equivalent number of acres will be replaced to ensure that no net loss occurs and the Conservation Objective is achieved (Sections 4.3.4, 4.3.7, 4.3.8, 4.3.11, 4.3.21, 9.7.7.4:HCP/NCCP).

To mitigate the Take and provide for the conservation of least Bell's vireos, the HCP/NCCP will protect and manage, in perpetuity, 1,282 acres of the modeled breeding Habitat and 19,301 acres of migratory Habitat for this species. The 1,629 acres of breeding Habitat and 21,209 acres of migratory modeled Habitat within Existing Conservation Lands will be monitored and managed to ensure that Conservation Objectives are met. Additionally, CVWD will establish permanent riparian Habitat, including at least 44 acres of Sonoran cottonwood-willow riparian forest in the Coachella Valley Stormwater Channel and Delta Conservation Area, to replace the Habitat that is periodically altered by flood control maintenance activities. The HCP/NCCP will thus ensure Conservation, through protection and management, of 2,911 acres of breeding Habitat and 40,510 acres of migratory Habitat for this species (Section 9.7.7.1:HCP/NCCP).

Existing Conservation Areas within the HCP/NCCP boundary currently protect 38% of the Habitat for the least Bell's vireo. The Conservation Areas in the HCP/NCCP will protect 79% of the occupied and potential breeding Habitat and 71% of the potential migratory Habitat for this species. The Conservation Areas include the potential breeding Habitat for least Bell's vireo in Whitewater Canyon, Chino Canyon, the Thousand Palms Preserve, the Whitewater River mouth near the Salton Sea, Cottonwood Springs in Joshua Tree National Park, and Dos Palmas. Other suitable Habitat for breeding sites in the HCP/NCCP Area occurs in Palm Canyon, Murray Canyon, and Andreas Canyon on the Agua Caliente Indian Reservation. Portions of these canyons are currently protected as part of the Indian Canyons Heritage Park. The Agua Caliente Band of Cahuilla Indians is preparing a separate Habitat Conservation HCP/NCCP for reservation lands.

The model for the least Bell's vireo, and other riparian birds, includes Habitat used in migration, including desert dry wash woodland and desert saltbush scrub. A complete list of the natural communities that may be used in migration is given in the description of model parameters in Appendix I of the HCP/NCCP. Other natural Habitat used by this vireo in migration or foraging will be conserved in Stubbe and Cottonwood Canyons, Oasis de los Osos, Snow Creek and Falls Creek in the Snow Creek/Windy Point Conservation Area, Mission Creek, the Thousand Palms Preserve, the Coachella Valley Stormwater Channel and Delta near the Salton Sea, Dos Palmas, and Cottonwood Spring in Joshua Tree National Park Conservation Area. Habitat disturbance, subject to the conditions of any required streambed alteration or Section 404 permits, will be allowed in those portions of these natural communities not conserved by the Plan.

Additionally, the HCP/NCCP calls for Management and Monitoring Programs to ensure the Conservation of this species, including control of activities that degrade least Bell's vireo Habitat, control of invasive species such as tamarisk and brown-headed cowbirds where necessary, and restoration and enhancement of degraded Habitat as necessary according to monitoring results (Section 8.4.3.3.3:HCP/NCCP). The HCP/NCCP also limits human access to vireo occupied Habitat during the breeding season (Section 9.7.7.2:HCP/NCCP).

Implementation of the HCP/NCCP is expected to maintain and enhance population viability of the least Bell's vireo by protecting Habitat for potential nesting and conserving Habitat known to be used in migration. The HCP/NCCP will also enhance riparian Habitat through implementation of management prescriptions to remove non-native tamarisk and other invasive species. 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 least Bell's vireo.

Take allowed under this HCP/NCCP will be less than significant for CEQA analysis purposes and the benefits conferred by the HCP/NCCP will protect adequate unfragmented habitat, maintain Essential Ecological Processes to sustain the habitat, and protect Biological Corridors and Linkages, as appropriate (Sections 4.3, 9.7.7:HCP/NCCP).

Southwestern willow flycatcher (*Empidonax traillii extimus*)

Individuals occurring outside the Conservation Areas will be subject to Take, including those in migratory habitat east of the Coachella Canal and in a small portion of Dos Palmas. There could be up to 168 acres (6%) of all breeding habitat (11% on non-federal lands) and 15,351 acres (27%) of migratory habitat (42% on non-federal lands) lost under the HCP/NCCP (Table 4-114:HCP/NCCP). Core Habitat was not designated for this species. Temporary Habitat disturbance for flood control channel maintenance purposes will be permitted by the HCP/NCCP in the Coachella Valley Stormwater Channel (Sections 4.3.20, 8.4.5.2:HCP/NCCP).

To mitigate the Take and provide for the conservation of southwest willow flycatcher, the HCP/NCCP will protect and manage, in perpetuity, 1,037 acres of the modeled breeding Habitat and 19,534 acres of migratory Habitat for this species. The 1,526 acres of breeding Habitat and 21,312 acres of migratory modeled Habitat within Existing Conservation Lands will be monitored and managed to ensure that Conservation Objectives are met. Additionally, CVWD will establish permanent riparian Habitat, including at least 44 acres of Sonoran cottonwood-willow riparian forest in the Coachella Valley Stormwater Channel and Delta Conservation Area, to replace the Habitat that is periodically altered by flood control maintenance activities. The HCP/NCCP will thus ensure Conservation, through protection and management, of 2,563 acres of breeding Habitat and 40,846 acres of migratory Habitat for this species (Section 9.7.4.1:HCP/NCCP).

Existing Conservation Areas within the HCP/NCCP boundary currently protect 38% of the Habitat for the southwestern willow flycatcher. The Conservation Areas in the HCP/NCCP will protect 94% of the occupied and potential breeding Habitat and 71% of the potential migratory Habitat for this species. The Conservation Areas include the potential breeding Habitat for southwestern willow flycatchers in Whitewater Canyon, Chino Canyon, the Thousand Palms Preserve, the Whitewater River mouth near the Salton Sea, Cottonwood Springs in Joshua Tree National Park, and Dos Palmas. The HCP/NCCP includes 100% of the known breeding locations for this flycatcher. Other suitable Habitat for breeding sites in the HCP/NCCP Area occurs in Palm Canyon, Murray Canyon, and Andreas Canyon on the Agua Caliente Indian Reservation. Portions of these canyons are currently protected as part of the Indian Canyons Heritage Park. Though nesting has not been confirmed in Andreas Canyons, southwestern willow flycatchers are known to occur in this location. The Agua Caliente Band of Cahuilla Indians is preparing a separate Habitat Conservation HCP/NCCP for reservation lands.

Additionally, the HCP/NCCP calls for Management and Monitoring Programs to ensure the Conservation of this species, including control of activities that degrade southwestern willow flycatcher Habitat, control of invasive species such as tamarisk and brown-headed cowbirds where necessary, and restoration and enhancement of degraded Habitat as necessary according to monitoring results (Section 8.4.3.3.3:HCP/NCCP). The HCP/NCCP also limits human access to flycatcher occupied Habitat during the breeding season (Section 9.7.4.2:HCP/NCCP).

Implementation of the HCP/NCCP 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 HCP/NCCP will also enhance riparian Habitat through implementation of management prescriptions to remove non-native tamarisk and other invasive species. 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.

Consistency with the Southwestern Willow Flycatcher Recovery Plan

The Southwestern Willow Flycatcher Recovery Plan (USFWS 2001) applies to the federally listed subspecies of willow flycatcher that nest in seven southwestern states. It does not address the other subspecies, which range across the United States, though all willow flycatchers are protected by the State endangered species designation. Within the HCP/NCCP Area, only the southwestern subspecies is likely to nest, though several subspecies migrate through in the spring and fall. The Recovery Plan designates five recovery units, each with 4 –7 management units. The HCP/NCCP is included within the Basin & Mojave Recovery Unit. This unit contains 69 flycatcher territories (7% of the total), and most breeding sites have less than 5 territories. Of fifteen sites identified, none are in the HCP/NCCP Area. Two territories are known within the Salton Basin management unit. Twenty-five territories in this management unit is the minimum number required for reclassification of the species to threatened. The Recovery Plan directs recovery actions towards the San Felipe Creek drainage in San Diego County, from San Felipe to Hwy. 78 (out of the HCP/NCCP area).

Per the Recovery Plan, recovery unit and management unit goals pertain to areas with a history of supporting breeding populations over at least a 3-year period. The only confirmed site for nesting flycatchers within the HCP/NCCP Area is at Mission Creek, which currently is under conservation protection. Several other sites contain potential breeding habitat.

Other measures cited in the Recovery Plan are pertinent to the HCP/NCCP. Minimization measures include protection of all occupied, suitable and potential habitat, i.e., riparian communities with surface water and sufficient tree and shrub cover. Protection of migration habitat is one of nine recovery actions included in the Recovery Plan, as is achieving agreements, such as Habitat Conservation Plans, that guarantee maintenance of suitable and potential breeding habitat. Research and monitoring are also specified recovery actions.

The HCP/NCCP conforms with the Southwestern Willow Flycatcher Recovery Plan by providing conservation and management of private lands in several of the Conservation Areas, most notably Whitewater Canyon, Coachella Valley Storm Channel and Delta and Thousand Palms, which are known migration stopover sites for the southwestern and other subspecies. Monitoring includes baseline data collection at the community level

(amount and quality of riparian habitat and water levels) and at the species level (number of birds present), though most of the measures to be performed are not specific to the flycatcher (Sections 8.4.3.3.2, 8.4.3.3.3:HCP/NCCP). None of the HCP/NCCP actions appear to conflict with the measures specified in the Recovery Plan.

Impacts to Critical Willow Flycatcher Habitat

Critical habitat designated in 1997 for the southwestern willow flycatcher did not include any locations within the HCP/NCCP Area. In May 2001, the U. S. Tenth District Court set aside the critical habitat designation and instructed the USFWS to issue a new proposal. Therefore, since critical habitat is not designated within the HCP/NCCP Area, it will not be affected by the HCP/NCCP.

Take allowed under this HCP/NCCP will be less than significant for CEQA analysis purposes and the benefits conferred by the HCP/NCCP will protect adequate unfragmented habitat, maintain Essential Ecological Processes to sustain the habitat, and protect Biological Corridors and Linkages, as appropriate (Sections 4.3, 9.7.4:HCP/NCCP).

Summer tanager (*Piranga rubra*)

Individuals occurring outside the Conservation Areas will be subject to Take, including those in migratory habitat east of the Coachella Canal and in a small portion of Dos Palmas. There could be up to 168 acres (6%) of all breeding habitat and 15,371 acres (27%) of migratory habitat lost under the HCP/NCCP (Table 4-114:HCP/NCCP). Core Habitat was not designated for this species. Temporary Habitat disturbance for flood control channel maintenance purposes will be permitted by the HCP/NCCP in the Coachella Valley Stormwater Channel (Sections 4.3.20, 8.4.5.2:HCP/NCCP). Where disturbance of a given number of acres of riparian natural communities is authorized, an equivalent number of acres will be replaced to ensure that no net loss occurs and the Conservation Objective is achieved (Sections 4.3.4, 4.3.7, 4.3.8, 4.3.11, 4.3.21, 9.7.11.4:HCP/NCCP).

To mitigate the Take and provide for the conservation of summer tanagers, the HCP/NCCP will protect and manage, in perpetuity, 1037 acres of the modeled breeding Habitat and 19,534 acres of migratory Habitat for this species. The 1,526 acres of breeding Habitat and 21,312 acres of migratory modeled Habitat within Existing Conservation Lands will be monitored and managed to ensure that Conservation Objectives are met. Additionally, CVWD will establish permanent riparian Habitat, including at least 44 acres of Sonoran cottonwood-willow riparian forest in the Coachella Valley Stormwater Channel and Delta Conservation Area, to replace the Habitat that is periodically altered by flood control maintenance activities. The HCP/NCCP will thus ensure Conservation, through protection and management, of 2,563 acres of breeding Habitat and 40,846 acres of migratory Habitat for this species (Section 9.7.11.1:HCP/NCCP).

Existing Conservation Areas within the HCP/NCCP boundary currently protect 38% of the Habitat for the summer tanager. The Conservation Areas in the HCP/NCCP will protect 94% of the occupied and potential breeding Habitat and 71% of the potential migratory Habitat for this species. The Conservation Areas include the potential breeding Habitat for summer tanagers in Whitewater Canyon, Chino Canyon, the Thousand Palms Preserve, the Whitewater River mouth near the Salton Sea, Cottonwood Springs in Joshua Tree National Park, and Dos Palmas. Other suitable Habitat for breeding sites in the HCP/NCCP Area occurs in Palm Canyon, Murray Canyon, and Andreas Canyon on the Agua Caliente Indian Reservation. Portions of these canyons are currently protected as part of the Indian Canyons Heritage Park. The Agua Caliente Band of Cahuilla Indians is preparing a separate Habitat Conservation HCP/NCCP for reservation lands.

The model for the summer tanager, and other riparian birds, includes Habitat used in migration, including desert dry wash woodland and desert saltbush scrub. A complete list of the natural communities that may be used in migration is given in the description of model parameters in Appendix I of the HCP/NCCP. Other natural Habitat used by this tanager in migration or foraging will be conserved in Stubbe and Cottonwood Canyons, Oasis de los Osos, Snow Creek and Falls Creek in the Snow Creek/Windy Point Conservation Area, Mission Creek, the Thousand Palms Preserve, the Coachella Valley Stormwater Channel and Delta near the Salton Sea, Dos Palmas, and Cottonwood Spring in Joshua Tree National Park Conservation Area. Habitat disturbance, subject to the conditions of any required streambed alteration or Section 404 permits, will be allowed in those portions of these natural communities not conserved by the Plan.

Additionally, the HCP/NCCP calls for Management and Monitoring Programs to ensure the Conservation of this species, including control of activities that degrade summer tanager Habitat, control of invasive species such as tamarisk and brown-headed cowbirds where necessary, and restoration and enhancement of degraded Habitat as necessary according to monitoring results (Section 8.4.3.3.3:HCP/NCCP). The HCP/NCCP also limits human access to summer tanagers occupied Habitat during the breeding season (Section 9.7.11.2:HCP/NCCP).

Implementation of the HCP/NCCP 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 HCP/NCCP will also enhance riparian Habitat through implementation of management prescriptions to remove non-native tamarisk and other invasive species. 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.

Take allowed under this HCP/NCCP will be less than significant for CEQA analysis purposes and the benefits conferred by the HCP/NCCP will protect adequate unfragmented habitat, maintain Essential Ecological Processes to sustain the habitat, and protect Biological Corridors and Linkages, as appropriate (Sections 4.3, 9.7.11:HCP/NCCP).

Yellow warbler (*Dendroica petechia brewsteri*)

Individuals occurring outside the Conservation Areas will be subject to Take, including those in migratory habitat east of the Coachella Canal and in a small portion of Dos Palmas. There could be up to 168 acres (6%) of all breeding habitat and 15,351 acres (27%) of migratory habitat lost under the HCP/NCCP (Table 4-114:HCP/NCCP). Core Habitat was not designated for this species. Temporary Habitat disturbance for flood control channel maintenance purposes will be permitted by the HCP/NCCP in the Coachella Valley Stormwater Channel (Sections 4.3.20, 8.4.5.2:HCP/NCCP). Where disturbance of a given number of acres of riparian natural communities is authorized, an equivalent number of acres will be replaced to ensure that no net loss occurs and the Conservation Objective is achieved (Sections 4.3.4, 4.3.7, 4.3.8, 4.3.11, 4.3.21, 9.7.9.4:HCP/NCCP).

To mitigate the Take and provide for the conservation of yellow warblers, the HCP/NCCP will protect and manage, in perpetuity, 1,037 acres of the modeled breeding Habitat and 19,534 acres of migratory Habitat for this species. The 1,526 acres of breeding Habitat and 21,312 acres of migratory modeled Habitat within Existing Conservation Lands will be monitored and managed to ensure that Conservation Objectives are met. Additionally, CVWD will establish permanent riparian Habitat, including at least 44 acres of Sonoran cottonwood-willow riparian forest in the Coachella Valley Stormwater Channel and Delta Conservation Area, to replace the Habitat that is periodically altered by flood control maintenance activities. The HCP/NCCP will thus ensure Conservation, through protection and management, of 2,911 acres of breeding Habitat and 40,510 acres of migratory Habitat for this species (Section 9.7.9.1:HCP/NCCP).

Existing Conservation Areas within the HCP/NCCP boundary currently protect 38% of the Habitat for the yellow warbler. The Conservation Areas in the HCP/NCCP will protect 93% of the occupied and potential breeding Habitat and 71% of the potential migratory Habitat for this species. The Conservation Areas include the potential breeding Habitat for yellow warblers in Whitewater Canyon, Chino Canyon, the Thousand Palms Preserve, the Whitewater River mouth near the Salton Sea, Cottonwood Springs in Joshua Tree National Park, and Dos Palmas. Other suitable Habitat for breeding sites in the HCP/NCCP Area occurs in Palm Canyon, Murray Canyon, and Andreas Canyon on the Agua Caliente Indian Reservation. Portions of these canyons are currently protected as part of the Indian Canyons Heritage Park. The Agua Caliente Band of Cahuilla Indians is preparing a separate Habitat Conservation HCP/NCCP for reservation lands.

The model for the yellow warbler, and other riparian birds, includes Habitat used in migration, including desert dry wash woodland and desert saltbush scrub. A complete list of the natural communities that may be used in migration is given in the description of model parameters in Appendix I of the HCP/NCCP. Other natural Habitat used by this warbler in migration or foraging will be conserved in Stubbe and Cottonwood Canyons, Oasis de los Osos, Snow Creek and Falls Creek in the Snow Creek/Windy Point

Conservation Area, Mission Creek, the Thousand Palms Preserve, the Coachella Valley Stormwater Channel and Delta near the Salton Sea, Dos Palmas, and Cottonwood Spring in Joshua Tree National Park Conservation Area. Habitat disturbance, subject to the conditions of any required streambed alteration or Section 404 permits, would be allowed in those portions of these natural communities not conserved by the Plan. Additionally, the HCP/NCCP calls for Management and Monitoring Programs to ensure the Conservation of this species, including control of activities that degrade yellow warbler Habitat, control of invasive species such as tamarisk and brown-headed cowbirds where necessary, and restoration and enhancement of degraded Habitat as necessary according to monitoring results (Section 8.4.3.3.3:HCP/NCCP). The HCP/NCCP also limits human access to vireo occupied Habitat during the breeding season (Section 9.7.9.2:HCP/NCCP).

Implementation of the HCP/NCCP is expected to maintain and enhance population viability of the yellow warbler by protecting Habitat for potential nesting and conserving Habitat known to be used in migration. The HCP/NCCP will also enhance riparian Habitat through implementation of management prescriptions to remove non-native tamarisk and other invasive species. 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.

Take allowed under this HCP/NCCP will be less than significant for CEQA analysis purposes and the benefits conferred by the HCP/NCCP will protect adequate unfragmented habitat, maintain Essential Ecological Processes to sustain the habitat, and protect Biological Corridors and Linkages, as appropriate (Sections 4.3, 9.7.9:HCP/NCCP).

Yellow-breasted chat (*Icteria virens*)

Individuals occurring outside the Conservation Areas will be subject to Take, including those in migratory habitat east of the Coachella Canal and in a small portion of Dos Palmas. There could be up to 180 acres (6%) of all breeding habitat and 15,358 acres (27%) of migratory habitat lost under the HCP/NCCP (Table 4-114:HCP/NCCP). Core Habitat was not designated for this species. Temporary Habitat disturbance for flood control channel maintenance purposes will be permitted by the HCP/NCCP in the Coachella Valley Stormwater Channel (Sections 4.3.20, 8.4.5.2:HCP/NCCP). Where disturbance of a given number of acres of riparian natural communities is authorized, an equivalent number of acres will be replaced to ensure that no net loss occurs and the Conservation Objective is achieved (Sections 4.3.4, 4.3.7, 4.3.8, 4.3.11, 4.3.21, 9.7.10.4:HCP/NCCP).

To mitigate the Take and provide for the conservation of yellow-breasted chats, the HCP/NCCP will protect and manage, in perpetuity, 2,829 acres of the modeled breeding Habitat and 40,583 acres of migratory Habitat for this species. The 1,669 acres of breeding Habitat and 21,169 acres of migratory modeled Habitat within Existing

Conservation Lands will be monitored and managed to ensure that Conservation Objectives are met. Additionally, CVWD will establish permanent riparian Habitat, including at least 44 acres of Sonoran cottonwood-willow riparian forest in the Coachella Valley Stormwater Channel and Delta Conservation Area, to replace the Habitat that is periodically altered by flood control maintenance activities. The HCP/NCCP will thus ensure Conservation, through protection and management, of 2,829 acres of breeding Habitat and 40,583 acres of migratory Habitat for this species (Section 9.7.10.1:HCP/NCCP).

Existing Conservation Areas within the HCP/NCCP boundary currently protect 38% of the Habitat for the yellow-breasted chat. The Conservation Areas in the HCP/NCCP will protect 93% of the occupied and potential breeding Habitat and 71% of the potential migratory Habitat for this species. The Conservation Areas include the potential breeding Habitat for yellow-breasted chats in Whitewater Canyon, Chino Canyon, the Thousand Palms Preserve, the Whitewater River mouth near the Salton Sea, Cottonwood Springs in Joshua Tree National Park, and Dos Palmas. Other suitable Habitat for breeding sites in the HCP/NCCP Area occurs in Palm Canyon, Murray Canyon, and Andreas Canyon on the Agua Caliente Indian Reservation. Portions of these canyons are currently protected as part of the Indian Canyons Heritage Park. The Agua Caliente Band of Cahuilla Indians is preparing a separate Habitat Conservation HCP/NCCP for reservation lands.

The model for the yellow-breasted chat, and other riparian birds, includes Habitat used in migration, including desert dry wash woodland and desert saltbush scrub. A complete list of the natural communities that may be used in migration is given in the description of model parameters in Appendix I of the HCP/NCCP. Other natural Habitat used by this chat in migration or foraging will be conserved in Stubbe and Cottonwood Canyons, Oasis de los Osos, Snow Creek and Falls Creek in the Snow Creek/Windy Point Conservation Area, Mission Creek, the Thousand Palms Preserve, the Coachella Valley Stormwater Channel and Delta near the Salton Sea, Dos Palmas, and Cottonwood Spring in Joshua Tree National Park Conservation Area. Habitat disturbance, subject to the conditions of any required streambed alteration or Section 404 permits, will be allowed in those portions of these natural communities not conserved by the Plan.

Additionally, the HCP/NCCP calls for Management and Monitoring Programs to ensure the Conservation of this species, including control of activities that degrade yellow-breasted chat Habitat, control of invasive species such as tamarisk and brown-headed cowbirds where necessary, and restoration and enhancement of degraded Habitat as necessary according to monitoring results (Section 8.4.3.3.3:HCP/NCCP). The HCP/NCCP also limits human access to yellow-breasted chat occupied Habitat during the breeding season (Section 9.7.10.2:HCP/NCCP).

Implementation of the HCP/NCCP 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 HCP/NCCP will also enhance riparian Habitat through implementation of management prescriptions to remove non-native tamarisk and other invasive species. 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.

Take allowed under this HCP/NCCP will be less than significant for CEQA analysis purposes and the benefits conferred by the HCP/NCCP will protect adequate unfragmented habitat, maintain Essential Ecological Processes to sustain the habitat, and protect Biological Corridors and Linkages, as appropriate (Sections 4.3, 9.7.10:HCP/NCCP).

Yuma clapper rail (*Rallus longirostris yumanensis*)

Individuals occurring outside the Conservation Areas including any occurring in the Coachella Valley Stormwater Channel will be subject to take by CVWD during Operations & Maintenance (O&M) activities as authorized by the Quantification Settlement Agreement (QSA) (Fish and Game Code Section 2081.7, Section 5.1.1:NCCP Permit). The Yuma clapper rail occurs in the drains draining into the Salton Sea and at Dos Palmas. The drains are managed by CVWD as part of its O&M activities and are Covered Activities. The O&M activities are an impact attributable to the QSA and the only authorized Take for Yuma clapper rails under this HCP/NCCP. These activities are necessary to maintain functioning drains which is an impact attributable to the QSA. Take of rails as a result of these activities is allowed. There could be up to 63 acres (8%) of all habitat and 13% of non-federal lands lost under the HCP/NCCP (Table 4-114:HCP/NCCP). Core Habitat was not designated for this species, although all known Habitat was considered as core.

Yuma clapper rail is a California fully protected species, and incidental Take permits cannot be issued for this species by CDFG, other than for Take resulting from impacts directly attributable to the implementation of the QSA. This bird is found only in the Dos Palmas and Coachella Valley Stormwater Channel and Delta Conservation Areas. Some temporary impacts to Yuma clapper rail Habitat will be permitted in the course of O&M activities by CVWD. The CVWD will establish 66 acres of permanent Habitat for the California black rail and Yuma clapper rail 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. As part of this restoration, a plan detailing the location, water supply, and monitoring and management responsibilities, including funding, will be developed within two years of permit issuance (Section 4.3.20:HCP/NCCP). Required Measures for Permittees other than CVWD will avoid Take altogether (Sections 4.3.19, 4.3.20, 9.7.2.4:HCP/NCCP). Surveys will be required in all potential Habitat for this rail before any activity that will impact the Habitat takes place. 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.

The HCP/NCCP will ensure Conservation of 697 acres (91%) of modeled Habitat for this rail (Tables 4-114, 9-18:HCP/NCCP). The Permittees will protect and manage, in perpetuity, 426 acres of the modeled Habitat for this species. The 271 acres of modeled

Habitat on Existing Conservation Lands will also be monitored and managed to ensure that Conservation Objectives are met.

Consistency with Yuma Clapper Rail Recovery Plan

The Recovery Plan (USFWS 1983) recommends protection and continued surveys of disjunct populations of the Yuma clapper rail in the Salton Basin. The HCP/NCCP (Section 8.4.5.3) will complete baseline species level monitoring to determine occupied habitat and population sizes, which is urgently needed. Combined with the protective measures of the marsh habitat at the Dos Palmas and Whitewater Storm Channel and Delta Conservation Areas, the HCP/NCCP is consistent with the Recovery Plan.

Given the level of conservation, which includes Conservation of 697 acres (91%) of modeled Habitat, the establishment of 66 acres of additional permanent marsh habitat, and avoidance of all Take other than that allowed under the QSA, the negative impacts to Yuma clapper rail habitat will be insignificant in relation to the long-term habitat protection and enhancement benefits. Loss of habitat allowed under this HCP/NCCP will be less than significant for CEQA analysis purposes and the benefits conferred by the HCP/NCCP will protect adequate unfragmented habitat, maintain Essential Ecological Processes to sustain the habitat, and protect Biological Corridors and Linkages, as appropriate.

Summary of CEQA Findings for Covered Species - Birds

CDFG finds that issuance of the HCP/NCCP permit could result in significant impacts on these Covered Bird Species primarily from development and other Covered Activities authorized by the HCP/NCCP. CDFG finds that all impacts on these species and their habitat associated with CDFG's issuance of the HCP/NCCP permit will be avoided or mitigated to below a level of significance under CEQA through adherence to and implementation of the HCP/NCCP. In so doing, CDFG's findings under CEQA with respect to these species are consistent with the findings of the lead agency on the same subject (Section 4.7:EIR/EIS). CDFG's findings are based on the overall conservation strategy, species-specific biological objectives, species-specific minimization and avoidance measures, and adaptive management and monitoring programs (Sections 4.3, 4.4, 8.4.2, 8.4.3, 8.4.4, 8.4.5, 8.4.6, 9.7:HCP/NCCP)

CEQA Findings for Covered Species - Mammals

Impact 3.5.7 **Approval of the HCP/NCCP authorized under the NCCP Permit could result in potentially significant adverse impacts on Covered Mammal Species. These species include: Peninsular bighorn sheep (*Ovis canadensis nelsoni*), Coachella Valley round-tailed ground squirrel (*Spermophilus tereticaudus chlorus*), Palm**

Springs pocket mouse (*Perognathus longimembris bangsi*), and Southern yellow bat (*Lasiurus xanthinus*).

Finding 3.5.7 **CDFG finds that conservation measures required in the HCP/NCCP will mitigate or avoid the potentially significant impacts of the HCP/NCCP on these Covered Mammal Species to below a level of significance. (Pub. Resources Code, § 21081, subd. (a)(1); CEQA Guidelines, § 15091, subd. (a)(1).)**

Explanation 3.5.7:

Peninsular bighorn sheep (*Ovis canadensis nelsoni*)

Habitat impacts outside the Conservation Areas will occur in the Pinyon Flats area under this HCP/NCCP. Habitat losses under the HCP/NCCP could be up to 6,533 acres (3%) inside and outside the Conservation Areas and 6% of non-federal lands (Table 4-114:HCP/NCCP). Core Habitat was not designated for this species.

Bighorn sheep are a California fully protected species (Fish and Game Code section 4700). All Covered Activities of the HCP/NCCP must avoid actions that will result in violations of the fully protected species provisions.

The HCP/NCCP provides a number of Required Measures for the Conservation Areas and special provisions in Section 4.4, Required Avoidance, Minimization, and Mitigation Measures, which protect bighorn from disturbance in the lambing season and from exposure to poisonous plants through the prohibition on planting them and the removal of them by Permittes at infrastructure facilities in bighorn sheep habitat. Prohibiting introductions of invasive plant species (Section 4.5, Table 4-113:HCP/NCCP) should also benefit bighorn and their habitat.

Major threats to bighorn sheep include the encroachment of development and associated edge effects into or near year-round, seasonal, and lamb rearing habitats, as well as essential hot weather water sources. Development proposed within Conservation Areas within bighorn sheep habitat will be subject to rigorous analysis by the Implementing Entity and Wildlife Agencies. Most areas are subject to the Habitat Evaluation and Acquisition Negotiation Strategy (HANS) process (Section 6.6.1.2:HCP/NCCP). Land Use Adjacency Guidelines (Section 4.5:HCP/NCCP) establish parameters by which potential impacts to sheep and their habitat will be judged. These include adverse alterations to natural drainages, introduction of toxic or hazardous materials, light and noise, and the introduction of toxic and invasive plants.

The Goals and Objectives applied to bighorn sheep in the HCP/NCCP provide for the continued acquisition of the full range of sheep habitat necessary to assure their Conservation and Recovery. The Permittees will protect and manage, in perpetuity, 30,226 acres of Essential Habitat for this species. The 134,819 acres of Essential Habitat

within Existing Conservation Lands will be monitored and managed to ensure that Conservation Objectives are met (Section 9.8.4.1:HCP/NCCP). The HCP/NCCP will thus ensure Conservation, through protection and management, of 166,207 acres of Essential bighorn sheep Habitat. The avoidance, minimization and mitigation measures set forth in the HCP/NCCP will also address potential future threats from development, as will the aforementioned Land Use Adjacency Guidelines of the HCP/NCCP. These measures are designed to avoid habitat fragmentation, maximize linkages to avoid genetic isolation, and provide for an Adaptive Management program.

Consistency with Peninsular Bighorn Sheep Recovery Plan

The Recovery Plan for Peninsular bighorn sheep (USFWS 2000) established nine recovery regions. Four of these regions are within the HCP/NCCP Area, and they extend across three Conservation Areas (Cabazon, Snow Creek/Windy Point and Santa Rosa and San Jacinto Mountains). The Recovery Plan explicitly states how the HCP/NCCP can contribute to conservation for certain objectives, including land acquisition, education and land use planning guidelines. The Recovery Plan also recommends a trails management plan, though not in the context of the HCP/NCCP. In addition, the Recovery Plan lists 45 recovery actions as they apply to each recovery unit. Nearly all (over 40) of these apply to the San Jacinto Mountains and the Santa Rosa Mountains north and south of Hwy. 74, and about 25 apply to the Santa Rosa Mountains south of Martinez Canyon.

The HCP/NCCP includes nearly all of the Essential Habitat for Peninsular bighorn sheep delineated by the Recovery Plan in the Conservation Areas. Habitat disturbance in these areas under the HCP/NCCP is limited to a maximum of approximately 4,050 acres out of approximately 169,900 acres in the three Conservation Areas where there is Essential Habitat for Peninsular bighorn sheep: Cabazon, Snow Creek/Windy Point, and Santa Rosa and San Jacinto Mountains Conservation Areas. This means that approximately 2.4% of the Essential Habitat in these Conservation Areas is subject to potential Take. Of the acres of potential habitat, 1,154 acres are in Special Provision Areas, which the HCP/NCCP through discussions with the Wildlife Agencies has identified as being areas with impacts that are minimized by mitigation measures and various site-specific characteristics (Section 4.3.21:HCP/NCCP). Development shall comply with Land Use Adjacency Guidelines contained in Section 4.5 of the HCP/NCCP.

The Species Objectives for bighorn sheep (Section 9.8.4.1:HCP/NCCP) include ensuring that implementation of the HCP/NCCP is consistent with the recovery strategy described in the Recovery Plan to the maximum extent Feasible. Conservation Objectives for two of the three Conservation Areas overlapping the recovery units address conservation of bighorn habitat (Sections 4.3.3, 4.3.21:HCP/NCCP). The HCP/NCCP imposes measures that help implement the recovery strategy in other ways. These include areas where special provisions are required and stipulations are placed on certain Permittees and projects such as CVWD and the widening of East Palm Canyon Drive (Sections 7.2.2, 7.3.1:HCP/NCCP).

The HCP/NCCP also clearly addresses the individual recovery units containing separate ewe bands in the discussion of the San Jacinto/Santa Rosa Mountains Conservation Area. This level of detail shows close consistency with the recovery strategies described in the Recovery Plan. The HCP/NCCP provides for conservation of Habitat by Recovery Zone within the Santa Rosa/San Jacinto Mountains Conservation Area.

Impacts to Critical Peninsular Bighorn Sheep Habitat

Critical Habitat is designated over a large area of the Santa Rosa and eastern San Jacinto Mountains, from the undeveloped alluvial fans and toe of slope up to the mid elevations. The final boundaries of critical habitat for Peninsular bighorn sheep were designated in 2001 (USFWS 2001a). It approximates the "essential habitat" of the Recovery Plan, but is aligned along legal parcel boundaries rather than topographic features.

Very little of the designated critical habitat for bighorn sheep in the HCP/NCCP will be lost. HCP/NCCP Table 4-114 indicates that less than 3% of the total habitat in the HCP/NCCP Area will be subject to loss. Of the remaining acres to be conserved, Complementary Conservation will account for a portion, as the state and Federal governments will acquire an additional 21,850 acres (Section 4.2.2.1:HCP/NCCP), many of which may be in bighorn habitat. No significant adverse impacts to critical habitat are anticipated from implementation of the HCP/NCCP for CEQA analysis purposes.

Summary of Impacts to Peninsular Bighorn Sheep

The Development potential for private lands in the mountainous habitat is limited by terrain, availability of utilities, road access and environmental considerations, including impacts to bighorn sheep. The BLM lands have received a non-jeopardy opinion and "not likely to adversely impact" concurrences for the California Desert Area Conservation Plan and the San Jacinto and Santa Rosa Mountains National Monument Management Plan. Use of existing trail alignments has also received non-jeopardy Biological Opinions. Adequate conservation of the private lands is the remaining link in permanent protection for the bighorn habitat in the HCP/NCCP Area. There are no significant impacts from a CEQA perspective.

Coachella Valley round-tailed ground squirrel (*Spermophilus tereticaudus chlorus*)

The primary importance of the HCP/NCCP to Coachella Valley round-tailed ground squirrel is that it provides Conservation (including Habitat protection, management and monitoring) of the species across its entire range. The HCP/NCCP ensures the long-term conservation of Core Habitat (94%), the associated Essential Ecological Processes, and connectivity between these Habitat areas (Section 9.8.2.1:HCP/NCCP). In addition, the Conservation Areas provide protection across an array of Habitat variables, including moisture, soil character, elevation, vegetation, within the entire range of this subspecies. The Conservation Areas are large enough to contain hundreds of animals and are adequately connected to each other to allow genetic exchange.

Within the Conservation Areas under the worst case scenario, up to 2,478 acres of modeled Habitat (2%) could be lost to Development which includes up to 1,319 acres (6%) of Core Habitat and 1,159 acres (6%) of Other Conserved Habitat lost (Table 4-114:HCP/NCCP). As is true for all covered species, any Development within Conservation Areas will undergo the Joint Project Review Process to assure that Take of ground squirrel Habitat will be consistent with the Conservation Objectives for this species to: 1) ensure Conservation of Core Habitat; 2) protect Essential Ecological Processes needed to maintain ground squirrel Habitat; and 3) maintain Biological Corridors and Linkages among conserved populations to provide for population fluctuation and enhance genetic diversity (Section 9.8.4.1:HCP/NCCP). Although some Take could occur within the Conservation Areas, the Conservation Objectives required by the HCP/NCCP will provide for adequate protection of Habitat to ensure the long-term conservation of this species.

Outside of the Conservation Areas, there are 58,765 (57%) acres of modeled Habitat authorized for Take. The Habitat outside the Conservation Areas is already highly fragmented, surrounded by existing Development, and has a compromised sand source/transport system. The potential for this compromised Habitat to provide for the long-term conservation of ground squirrel populations is low. These areas are primarily in the remnants of the Big Dune south of I-10, and in the area south of Desert Hot Springs and east of Hwy. 62. The Big Dune area no longer has a viable sand transport/wind corridor and is highly fragmented by major roads. These fragmented blocks are more susceptible to edge effects, including mortality on roads and predation by feral animals. Roads and low-density residential Development generally fragment the area near Desert Hot Springs. Modeled Habitat not included in the Conservation Areas in the area east of Hwy. 62 includes coarser soils and an apparently lower density of ground squirrels. Observations of Coachella Valley round-tailed ground squirrels in the area are limited to one observation (K. Barrows et al. 1997) of one individual south of Dillon Road, just west of Big Morongo Canyon wash and four individuals at the Mission Springs Water District water treatment facility.

The Coachella Valley round-tailed ground squirrel will benefit from the establishment of the HCP/NCCP Reserve System, which will include Core Habitat in the Snow Creek/Windy Point Conservation Area, Whitewater Floodplain Conservation Area, Willow Hole Conservation Area, and the Thousand Palms Conservation Area. The proposed Conservation Areas in the HCP/NCCP will protect 94% of the Core Habitat areas for this ground squirrel from Cabazon to Thousand Palms (Table 9-30:HCP/NCCP) including 77% of the known occurrences for the Coachella Valley round-tailed ground squirrel (Table 4-114:HCP/NCCP).

Additionally, the HCP/NCCP calls for Management and Monitoring Programs to ensure the Conservation of this species, including control of activities that degrade ground squirrel Habitat, control of invasive species where necessary, and restoration and enhancement of degraded Habitat as necessary according to monitoring results (Sections 8.4.1.2, 9.8.2.2:HCP/NCCP). The HCP/NCCP also calls for a research element that

addresses the distribution, abundance, and Habitat parameters of the Coachella Valley round-tailed ground squirrel throughout the HCP/NCCP Reserve System (Section 8.4.1.3.3:HCP/NCCP).

Coachella Valley round-tailed ground squirrel Habitat occupancy rates are substantially higher in mesquite hummocks than other Habitat types (University of California Riverside 2005). It is therefore desirable to preserve the mesquite hummock areas. Substantial stands of mesquite hummocks and dunes are conserved within the Willow Hole and Thousand Palms Conservation Areas. The HCP/NCCP includes provisions relative to Conservation of mesquite hummocks to: 1) monitor groundwater to determine whether substantial lowering of the water table occurs. Should monitoring detect such a substantial lowering, appropriate Adaptive Management actions will be taken (Section 8.4.1.2:HCP/NCCP); 2) monitor groundwater levels in the Willow Hole and Thousand Palms Conservation Areas and ameliorate the effects of substantial lowering of the water table on mesquite hummocks and associated Covered Species as a Changed Circumstance; 3) as a Permittee, 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 provide for the conservation of impacts to this species from CVWD's operation and management activities in the Coachella Valley Stormwater Channel and Delta Conservation Area. CVWD will restore and enhance mesquite and Coachella Valley round-tailed ground squirrel Habitat on site in the East Indio Hills Conservation Area if a study determines restoration to be Feasible (Sections 4.3.20, 8.4.1.2:HCP/NCCP); 4) the potential for mesquite hummock restoration and enhancement will be evaluated through monitoring and Adaptive Management and will be considered in the context of Conservation Objectives for all Covered Species and natural communities (Section 8.4.1.3.2:HCP/NCCP).

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 HCP/NCCP Reserve System will protect these areas (Section 4.3.3, 4.3.8, 4.3.11:HCP/NCCP). Potential Linkage areas will be protected between Hwy. 111 and I-10 near Snow Creek. From Willow Hole east, Habitat that typically supports this species along the south-facing slopes of Edom Hill will be protected, providing a Linkage with Habitat to the east on the Thousand Palms Preserve (Section 4.3.10:HCP/NCCP). Essential Ecological Processes, including wind corridors and sand sources for the Habitat named above, will be protected under the HCP/NCCP. Habitat at Dos Palmas will be conserved in the HCP/NCCP (Section 4.3.19:HCP/NCCP). Those areas where Take could be permitted for this species are primarily in the remnants of the Big Dune south of I-10, and in the area south of Desert Hot Springs and east of Hwy. 62. The Big Dune area no longer has a viable sand transport/wind corridor and is highly fragmented by major roads. These fragmented blocks are more susceptible to edge effects, including mortality on roads and predation by feral animals. Roads and low-density residential Development generally fragment the area near Desert Hot Springs.

Implementation of the HCP/NCCP is expected to provide for conservation of the Coachella Valley round-tailed ground squirrel within the HCP/NCCP Area, as currently unprotected portions of its Habitat and potential Habitat areas will be conserved. Take allowed under this HCP/NCCP will be less than significant for CEQA analysis purposes, and the benefits conferred by the HCP/NCCP will protect adequate unfragmented habitat, maintain Essential Ecological Processes to sustain the habitat, and protect Biological Corridors and Linkages, as appropriate.

Palm Springs pocket mouse (*Perognathus longimembris bangsi*)

The primary importance of the HCP/NCCP to Palm Springs pocket mouse is that it provides Conservation (including Habitat protection, management and monitoring) of the species across nearly all of its entire range. The HCP/NCCP ensures the long-term conservation of Core Habitat (93%), the associated Essential Ecological Processes, and connectivity between these Habitat areas. In addition, the Conservation Areas provide protection of lands with an array of Habitat variables, including moisture, soil character, elevation, and vegetation, from the northern, eastern, and western limits for this subspecies.

Within the Conservation Areas under the worst case scenario, 4,336 acres of Take of modeled Habitat (3%) could occur. There could be up to 1,993 acres of Core Habitat (7%) and 2,343 acres (7%) of Other Conserved Habitat lost under this HCP/NCCP (Tables 4-114, 9-32:HCP/NCCP). Loss of pocket mouse Habitat within the Conservation Areas must be consistent with the Conservation Objectives for this species to: 1) ensure Conservation of Core Habitat; 2) protect Essential Ecological Processes needed to maintain pocket mouse Habitat; and 3) maintain Biological Corridors and Linkages among conserved populations to provide for population fluctuation and enhance genetic diversity (Section 9.8.3.1:HCP/NCCP). So, although some loss could occur within the Conservation Areas, the Conservation Objectives required by the HCP/NCCP will provide for protection of Habitat to ensure the long-term conservation of the Palm Springs pocket mouse.

Outside of the Conservation Areas, there could be up to 70,968 acres (50%) of modeled Habitat lost. These areas are primarily in the remnants of the Big Dune south of I-10, in the area south of Desert Hot Springs, west and east of Hwy. 62, along Dillon Road north of the Indio Hills and east of Pushawalla Canyon, and south of the Mecca Hills and the Coachella Canal. The potential for pocket mouse populations to persist long-term in these areas is low. The Big Dune area no longer has a viable sand transport/wind corridor, is surrounded by existing Development, and is highly fragmented by major roads. These fragmented blocks are more susceptible to edge effects, including mortality on roads and predation by feral animals. Roads and low-density residential Development generally fragment the area near Desert Hot Springs. Modeled Habitat not included in the Conservation Areas in the area east of Hwy. 62 includes coarser soils although the density of Palm Springs pocket mouse in this area is not known. Other areas outside the Conservation Areas have an unknown density of Palm Springs pocket mouse and were not considered Core Habitat.

The Palm Springs pocket mouse will benefit from the establishment of the HCP/NCCP Reserve System, which will include Core Habitat in the Snow Creek/Windy Point Conservation Area, Whitewater Floodplain Conservation Area, Upper Mission Creek/Big Morongo Canyon Conservation Area, Willow Hole Conservation Area, and the Thousand Palms Conservation Area. The proposed Conservation Areas in the HCP/NCCP will protect 93% of the Core Habitat areas for this pocket mouse from Cabazon to Thousand Palms (Table 9-32:HCP/NCCP). This includes 77% of the known occurrences for the Palm Springs pocket mouse (Table 4-114:HCP/NCCP). Implementation of the HCP/NCCP is expected to provide for conservation of the Palm Springs pocket mouse within the HCP/NCCP Area, as currently unprotected portions of its Habitat and potential Habitat areas will be conserved. Take allowed under this HCP/NCCP will be less than significant for CEQA analysis purposes, and the benefits conferred by the HCP/NCCP will protect adequate unfragmented habitat, maintain Essential Ecological Processes to sustain the habitat, and protect Biological Corridors and Linkages, as appropriate.

Southern yellow bat (*Lasiurus xanthinus*)

Individuals occurring outside the Conservation Areas will be subject to Take, including those occurring in isolated palm oases scattered throughout the HCP/NCCP area. There could be up to 78 acres (6%) of all habitat and 9% of non-federal lands lost under the HCP/NCCP (Table 4-114:HCP/NCCP). Core Habitat was not designated for this species.

The HCP/NCCP will ensure Conservation of a total of 1,250 acres (94%) of the modeled Habitat or Other Conserved Habitat for southern yellow bat. Approximately 660 acres (50%) of the modeled Habitat are within Existing Conservation Lands and will be managed as part of the Reserve System. The HCP/NCCP will conserve an additional 590 acres (44%) of the modeled Habitat for southern yellow bat in the HCP/NCCP Area (Table 4-114:HCP/NCCP). There are three known locations for this species, two of which are on Existing Conservation Lands within the Conservation Areas. The third known location is in a palm oasis on land held for conservation by a non-profit land trust. The HCP/NCCP will thus ensure Conservation, through protection and management, of 1,250 acres of southern yellow bat Habitat in the HCP/NCCP Reserve System (Table 4-114:HCP/NCCP).

The favored habitat, desert fan palm oasis woodland, is very well conserved by the HCP/NCCP. However, actual use of the conserved habitat by the southern yellow bat will have to be validated by monitoring. If monitoring determines that these bats are not using the desert fan palm oasis woodland, then Adaptive Management measures will include preserving the plant community that this bat is actually using (Section 8.4.3.3.3:HCP/NCCP). Take allowed under this HCP/NCCP will be less than significant for CEQA analysis purposes, and the benefits conferred by the HCP/NCCP will protect adequate unfragmented habitat, maintain Essential Ecological Processes to sustain the habitat, and protect Biological Corridors and Linkages, as appropriate.

Summary of CEQA Findings for Covered Species - Mammals

CDFG finds that issuance of the HCP/NCCP permit could result in significant impacts on these Covered Mammal Species primarily from development and other Covered Activities authorized by the NCCP/HCP. CDFG finds that all impacts on these species and their habitat associated with CDFG's issuance of the HCP/NCCP permit will be avoided or mitigated to below a level of significance under CEQA through adherence to and implementation of the HCP/NCCP. In so doing, CDFG's findings under CEQA with respect to these species are consistent with the findings of the lead agency on the same subject (Section 4.7:EIR/EIS). CDFG's findings are based on the overall conservation strategy, species-specific biological objectives, species-specific minimization and avoidance measures, and adaptive management and monitoring programs (Sections 4.3, 4.4, 8.4.1, 8.4.2, 8.4.3, 9.8.2, 9.8.3, 9.8.4:HCP/NCCP).

3.6 Mitigation Monitoring and Reporting Program

Every agency that makes CEQA findings must adopt a Mitigation Monitoring and Reporting Program (MMRP) to ensure mitigation measures that have been required as conditions of approval are carried out. (CEQA Guidelines, § 15097, subd. (d).) CVAG has prepared the HCP/NCCP so that it incorporates monitoring and reporting requirements, and did not prepare a separate MMRP document. Those provisions in the Plan (Section 5, 8:HCP/NCCP) serve the needs of both CVAG and CDFG to ensure that the HCP/NCCP, especially the components of the plan designed to avoid and mitigate potentially significant impacts, are properly implemented in compliance with their conditions of approval. After reviewing the CVAG's HCP/NCCP and determining that this document meets CDFG's needs with respect to implementation of the HCP/NCCP, CDFG is adopting the monitoring and reporting elements of the HCP/NCCP as its own MMRP.

3.7 Alternatives

Where a lead agency has determined that, even after the adoption of all feasible mitigation measures, a project as proposed will still cause one or more significant environmental effects that cannot be substantially lessened or avoided, the lead agency, prior to approving the project as mitigated, must first determine whether, with respect to such impacts, there remain any project alternatives that are both environmentally superior and feasible within the meaning of CEQA. (See, e.g., *Citizens for Quality Growth v. City of Mt. Shasta* (1988) 198 Cal.App.3d 433, 445.)

CDFG faces a similar obligation as a responsible agency under CEQA. (CEQA Guidelines, § 15096, subd. (g); see also Pub. Resources Code, § 21081; CEQA Guidelines, § 15096, subd. (h).) As noted above, however, when considering alternatives and mitigation measures, CDFG "has the responsibility for mitigating or avoiding only

the direct or indirect environmental effects of those parts of the project which it decides to carry out, finance or approve" (*Id.*, § 15096, subd. (g)(1)). Those effects, in the present case, are limited to the environmental effects authorized by CDFG under NCCPA for the HCP/NCCP. In that regard, and consistent with CEQA Guidelines, issuance of the NCCP Permit is prohibited if there is "any feasible alternative or feasible mitigation measures within [CDFG's] powers that will substantially lessen or avoid any *significant* effect" associated with that decision (*Id.*, § 15096, subd. (g)(2) (emphasis added)).

As demonstrated above in Section 3.5, no significant environmental effects that fall within the responsibility and jurisdiction of CDFG remain unmitigated. That is to say, all potentially significant impacts associated with CDFG's authorization of the HCP/NCCP are mitigated to below a level of significance under CEQA, so no project alternatives were analyzed by CDFG. (See, e.g., *Laurel Hills Homeowners Assoc. v. City Council* (1978) 83 Cal.App.3d 515, 520-521.) In adopting findings under CEQA, agencies need not consider the feasibility of project alternatives if they adopt mitigation measures that "substantially lessen or avoid" a project's significant adverse impacts (*Laurel Heights Improvement Assoc. v. Regents of the University of California* (1988) 47 Cal.3d 376, 400-403).

3.8 Statement of Overriding Considerations

Because CDFG's approval of the HCP/NCCP will not result in any adverse environmental impacts that remain significant and unavoidable, CDFG need not adopt a Statement of Overriding Considerations under CEQA.

4.0 FINDINGS UNDER NCCPA

All NCCPs must contain certain substantive elements identified in current or former sections of the NCCPA.

4.1 NCCPA of 2003 and NCCP Findings

The Coachella Valley NCCP has been completed and will be implemented pursuant to the NCCPA of 2003, and CDFG will evaluate the adequacy of the NCCP by reference to that statute.

Finding 4.1.1 CDFG finds that the HCP/NCCP has been developed consistent with the process identified in the Planning Agreement as per Section 2820(a)(1).

Section 2820(a)(1) requires that the HCP/NCCP be developed consistent with the Planning Agreement. CDFG finds that as per Section 2820(a)(1), the HCP/NCCP has been developed consistent with the process identified in the Planning Agreement.

An MOU for the Preparation of a Coachella Valley Multiple Species Habitat Conservation Plan was approved by the CVAG on February 9, 1996 and signed by the Deputy Director of the California Department of Fish and Game on January 12, 1996. The MOU was amended to declare the intent of the parties that the Coachella Valley Multiple Species Plan will meet the provisions of the NCCP Act and was approved by CVAG on January 27, 1997, and signed by the Director of the California Department of Fish and Game on April 4, 1997. The original MOU and the amendment became the Planning Agreement for the HCP/NCCP. The terms of the Planning Agreement were implemented as per the roles and responsibilities assigned to the respective parties. Therefore, the Planning Agreement was entered into and is consistent with 2820(a)(1).

The Planning Agreement Identifies the Scope and Participating Parties

The Planning Agreement identifies the initial parties involved in the HCP/NCCP. Initial participating parties include: USFWS, CDFG, CVAG, the County of Riverside, and the cities of Cathedral City, Coachella, Desert Hot Springs, Indian Wells, Indio, La Quinta, Palm Desert, Palm Springs, and Rancho Mirage, BLM, and NPS. The HCP/NCCP, through the IA, identifies the Permittees which include most of the participating parties identified in the Planning Agreement and also include the County Flood Control, County Parks, County Waste, all three which have the same governing board as Riverside County. The Implementing Entity, IID, CVWD, Caltrans, CVMC, and State Parks will also be Permittees to cover their operations and maintenance of facilities and other activities.

The Planning Agreement (PA) also defines the scope of the HCP/NCCP in its Section 3 and the geographic scope in Exhibit A of the PA. The scope of the planning area remained the same from the original MOU (PA) to the final Plan.

Therefore, the HCP/NCCP was developed consistent with the Planning Agreement process regarding the scope of the HCP/NCCP and participating parties.

The Planning Agreement Identifies the Natural Communities and Species

Exhibit B of the Planning Agreement identifies the endangered, threatened, proposed, candidate, or other species known or reasonably expected to be found in those natural communities, and to be initially addressed by the HCP/NCCP. The Planning Agreement identifies 52 such species in 23 natural communities, namely, Desert Sink Scrub, Desert Dry Wash Woodland, Active Desert Dunes and sand source areas, Stabilized and Partially-Stabilized Desert Dunes Stabilized and Partially-Stabilized Desert Sand Fields, Mesquite Bosque, Sonoran Creosote Bush Scrub, Sonoran Mixed Woody and Succulent Scrub, Desert Fan Palms Oasis Woodland, Southern Cottonwood Willow Riparian Forest, Southern Sycamore Alder Riparian Forest, Freshwater Marsh, Semi-Desert Chaparral, Mesic North Slope Chaparral, Redshank Chaparral, Peninsular Juniper Woodland and Scrub, Peninsular Piñon Woodland, Jeffrey Pine Forest, Jeffery Pine-Fir

Forest, Southern California White Fir Forest , Lodegepole Pine Forest, Southern California Subalpine Forest, and Southern California Fell Field.

The HCP/NCCP planning team undertook a lengthy, detailed process to identify sensitive natural communities and plant and animal species to include in the HCP/NCCP. A total of 47 natural communities were identified in the HCP/NCCP Area on the basis of aerial photography and field investigations by scientists working on the HCP/NCCP. The landcover data were used to evaluate the natural communities proposed for coverage under the HCP/NCCP. The planning team continuously reviewed the list of species proposed for coverage. Other experts were consulted as well. The 52 species were evaluated according to a number of criteria, including status of the species, expected impacts, and availability of data, to select the species to be covered under the HCP/NCCP.

The HCP/NCCP addresses 27 natural community types, which provide habitat for the Covered Species and are the focal point for the establishment of Conservation Areas. The HCP/NCCP also addresses and covers 27 endangered, threatened, proposed, candidate, or other species known or reasonably expected to be found in those natural communities. Species listed in the Planning Agreement that are not included for coverage under the HCP/NCCP were eliminated due to lack of known locations in the HCP/NCCP Area or insufficient data to facilitate conservation planning.

Therefore, the HCP/NCCP has been developed consistent with the Planning Agreement process to identify natural communities and species in those communities, including endangered, threatened, proposed, candidate plants and animals.

The Planning Agreement Establishes a Process for the Collection of Data, Information, and Independent Guidance to Meet Scientifically Sound Principles for the Conservation of Species

Exhibit C of the Planning Agreement provides that the HCP/NCCP will be undertaken consistent with the provisions of the NCCP Act. This includes using the best available science.

The HCP/NCCP utilized an extensive data collection process and received input from scientific experts in various fields of biology and conservation biology. During development of the HCP/NCCP, the planning team assembled a detailed and comprehensive land cover map of the entire HCP/NCCP Area. They also assembled an array of other data layers valuable for conservation planning, including information on topography, hydrology, species sightings locations and soils. Using these raw data layers, research on the habitat needs of Covered Species, and their own expertise, the planning team developed habitat suitability models for 26 of the Covered Species. These models reflected the best available scientific information on the needs of Covered Species and were used extensively during HCP/NCCP development to guide critical tasks such as identifying biological goals and objectives and designing the Conservation Areas.

The NCCP Act also provides that HCP/NCCP development is guided by independent scientific input and analysis. During development of the HCP/NCCP, independent scientific input has been provided by the Science Advisory Committee, agency biologists and Independent Science Advisors (ISA). Throughout the planning process the input of independent scientists was sought. There were six workshops convened to bring in experts to provide review and recommendations for various elements of the HCP/NCCP including 'Reserve Design and Connectivity Criteria', 'Species Distribution and Conservation Needs', 'Gap Analysis and Reserve Design', Reserve Design and Conservation Planning', 'Essential Habitat Boundary for Peninsular bighorn sheep', and 'Ecological Monitoring and Adaptive Management' (Appendix I:HCP/NCCP). Individual members of the ISA were consulted at each of these workshops and convened to address several questions posed by the planning team. Their review is provided in Appendix I. The ISA consisted of Dr. Reed Noss, Conservation Biology Institute; Dr. Edith Allen, University of California, Riverside; Dr. Greg Ballmer, University of California, Riverside; Dr. Michael Soulé; Dr. Richard Tracy, University of Nevada, Reno; and Dr. Robert Webb, U.S. Geologic Survey.

Therefore, the HCP/NCCP has been developed consistent with the Planning Agreement process for the collection of data, information and independent guidance to meet scientifically sound principles for the conservation of species.

The Planning Agreement Establishes a Process for Public Participation

Section 5.2 of the Planning Agreement provides for a public participation program to involve affected stakeholders and the public during the development of the HCP/NCCP. This included workshops, forums, meetings and written materials being made available to the public.

CVAG formally constituted the Project Advisory Group (PAG) as part of the Planning Agreement. It was composed of representatives of the development community, environmental community, private landowners and agriculturalists, the Wildlife Agencies, CVAG member agencies and other governmental organizations. The PAG met monthly from 1996-2006 to review the HCP/NCCP work products and make recommendations to CVAG. The PAG was actively involved in nearly all aspects of the development of the HCP/NCCP, including selection of Covered Activities and Species, development of the conservation strategies and Conservation Areas, development of the funding program, development of the adaptive management program, and development of the assurances section. The PAG meetings were open to the public and advertised on CVAG's web site. In addition, CVAG established a comprehensive web site for the HCP/NCCP that included agendas for all public meetings, meeting packets for these meetings, and all publicly available HCP/NCCP work products. The role of the PAG was to incorporate the points of view of numerous and varied organizations which have a stake in the HCP/NCCP and to forward recommendations to the CVAG Executive Committee regarding the HCP/NCCP. The public had the opportunity to review and

comment on all draft work products provided to the PAG at least 10 days in advance of public meetings where the products were discussed. The public also had the opportunity to review and comment on the preliminary public review draft of the HCP/NCCP, the Draft HCP/NCCP, Draft EIR/EIS and Final HCP/NCCP and EIR/EIS. Numerous meetings were held and presentations made across the Coachella Valley on the development of the HCP/NCCP. In total there were at least 165 public meetings held.

Therefore, the HCP/NCCP was developed consistent with the Planning Agreement with regard to public participation.

The Planning Agreement Establishes a Process for Interim Project Review

Exhibit D of the Planning Agreement provides an interim process for the review of projects prior to HCP/NCCP approval. That process included CVAG, CVAG member agencies, USFWS and CDFG. The purpose of the interim project review process was to provide an opportunity for project-by-project review to continue while the HCP/NCCP was under development, to ensure that interim projects did not undermine the conservation objectives of the HCP/NCCP, and to provide an opportunity for coordination among agencies on these interim projects. CVAG held over 30 interim project reviews during the development of the HCP/NCCP.

Therefore, the HCP/NCCP was developed consistent with the Planning Agreement requirement for an interim review process.

The Planning Agreement Requires That Draft Documents Associated With the HCP/NCCP That Are Being Considered for Adoption Be Available for Review and Comment 60 Days Prior to Adoption

A notice of preparation for an EIR/EIS was circulated in June 2003. A Notice of Intent was published on June 5, 2003 in the Federal Register. Two public scoping meetings were held on July 17, 2003. The Draft HCP/NCCP and the Draft EIR/EIS for the HCP/NCCP were released on June 30, 2005. A Notice of Availability of the Draft EIR/EIS for the HCP/NCCP was published in the Federal Register on September 2, 2005. The review period was from September 2, 2005 to December 1, 2005. The first public meeting to consider approval of the Final HCP/NCCP and Certification of the EIR/EIS was held on September 11, 2007. The HCP/NCCP was approved for submission by CVAG Member Agencies, and the Final EIR was certified by CVAG on September 11, 2007, well after the 60 day notice period. Additionally, the IA is in Volume II of the HCP/NCCP and was available for review along with other volumes of the HCP/NCCP.

Therefore, the HCP/NCCP was developed consistent with the Planning Agreement regarding review of draft documents.

Finding 4.1.2 CDFG finds that the plan integrates adaptive management strategies that are periodically evaluated and modified based on information

from the monitoring program and other sources which will assist in the conservation of Covered Species and ecosystems within the plan area (Section 2820(a)(2)).

The HCP/NCCP Permittees have committed to a comprehensive, funded, adaptive management program to ensure that the needs of species and associated habitats are met. The primary goal of the HCP/NCCP regarding adaptive management is a flexible and inductive approach where ecological theory and field experimentation are combined to monitor the status of the system and respond accordingly. Through adaptive management, the conservation strategy of the HCP/NCCP will be adjusted in perpetuity, ensuring that the most up-to-date information is utilized in achieving the biological goals and objectives. The program will define the feedback process and incorporate feedback loops that link implementation and monitoring to decision-making. Incorporating new monitoring information will effect changes in management to achieve the biological goals and objectives.

Adaptive management will allow the Implementing Entity to address and respond to uncertainties over time. As discussed in Section 8 of the HCP/NCCP, designing a biological monitoring and adaptive management program will take some time to develop as the Reserve System is being acquired. Section 8 of the HCP/NCCP provides a framework, guidelines and specific suggestions that will enable the Implementing Entity to develop a detailed monitoring program beginning in the initial years of the HCP/NCCP.

Section 6.0 of the HCP/NCCP describes the organizational structure for implementation of the Management Program. Responsibilities for specific activities associated with reserve management are divided amongst the Reserve Management Oversight Committee (RMOC) (Section 6.1.3:HCP/NCCP), the Reserve Management Unit Committees (RMUC) (Section 6.1.4:HCP/NCCP), the Land Manager (Section 6.1.5:HCP/NCCP), and the Monitoring Program Administrator (MPA) (Section 6.1.6:HCP/NCCP). The organizational structure also provides for input and recommendations from Independent Science Advisors on specific issues concerning scientific aspects of the HCP/NCCP.

Section 8 (Figure 8-4:HCP/NCCP) of the HCP/NCCP outlines the organizational framework and decision-making process to evaluate monitoring, research and other data in order to adjust management actions, establish baseline conditions of biological resources, and incorporate hypothesis testing and experimental management. The HCP/NCCP establishes Reserve Management Units (RMUs) to ensure the coordinated management necessary to achieve the Conservation Goals and Objectives. Within three years of Permit issuance the RMUCs, Reserve Managers and the Land Manager will develop Reserve Management Unit Plans (RMUPs). The RMUPs will include ongoing management measures and adaptive management actions.

The HCP/NCCP's adaptive management provisions allow for incorporating new modified management strategies, such as those which may be included in recovery plans,

or gained from monitoring results in the HCP/NCCP area or from new peer-reviewed scientific information.

The Implementing Entity through the MPA is responsible for implementing the monitoring and adaptive management program. These responsibilities include, but are not limited to, designing the integrated adaptive management and monitoring programs, gathering data, maintaining databases, identifying the need to modify the monitoring program, defining implementation changes and determining how to make changes, developing annual work plans, and no less than every five years convening a panel of Independent Science Advisors (ISA) to evaluate the monitoring and adaptive management programs and provide recommendations for adjustments. The Implementing Entity will be advised by the Wildlife Agencies, RMOCs, RMUCs, and the ISAs.

The USFWS and CDFG will provide feedback on the implementation of the monitoring and adaptive management programs described in the annual work plans. All forms of input will be collected by the Implementing Entity and incorporated into management and monitoring practices, as appropriate (Section 8: HCP/NCCP).

Coordination of the monitoring and adaptive management activities in the various existing and new conservation areas will enable an ecosystem approach to monitoring and adaptive management and will assist in the conservation of Covered Species and ecosystems.

Details of the HCP/NCCP monitoring program are found in Finding 4.1.7 of this permit.

Finding 4.1.3 CDFG finds that the plan provides for the protection of habitat, natural communities, and species diversity on a landscape or ecosystem level through the creation and long-term management of habitat reserves (Section 2820(a)(3)).

The HCP/NCCP is designed as a multiple species conservation plan in accordance with the tenets of conservation biology and is designed to function on a landscape/ecosystem level. By the creation and long-term management of a landscape-level Reserve System, natural habitats, species and natural communities will be protected. The goal of the HCP/NCCP Management Program is to implement management actions and prescriptions that ensure conservation of the Covered Species and Natural Communities within the HCP/NCCP area. The Management Program will include ongoing Management and Adaptive Management efforts.

The HCP/NCCP Reserve System will be established from lands within 21 Conservation Areas. A small amount of Take is authorized for development within the Conservation Areas (22,420 acres of 745,900 acres), therefore the actual HCP/NCCP Reserve System will be proportionally 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 HCP/NCCP area. The Conservation Areas are further described in terms of Core

Habitat, Other Conserved Habitat, Conserved Natural Communities, Essential Ecological Processes, and Biological Corridors and Linkages (Section 4: HCP/NCP).

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.

The HCP/NCCP Reserve System will be assembled as shown in Table 4-1(HCP/NCCP). It will consist of existing state, federal, local Permittee, and non-profit lands (557,100 acres), lands to be acquired by Permittees, state and federal agencies (140,280 acres), and lands to be conserved through other means such as easements, MOUs, or management of fluvial sand transport areas (26,100 acres).

Conservation Area boundaries were determined on the basis of physical and biological features at the landscape level, such as watersheds, ridgelines, and major breaks in land cover types or natural communities. The boundaries and description of each Conservation Area are described in Sections 4.3.1 – 4.3.21 of the HCP/NCCP.

Land cover data, species distribution data, and species habitat models were used in the HCP/NCCP to estimate impacts of Covered Activities and to develop a sound conservation strategy within the HCP/NCCP area.

Conservation Objectives and Required Measures are provided for each Conservation Area. These establish how the Reserve System will be assembled and provide a numerical requirement for the each Covered Species and natural community.

The Reserve System will be conserved in perpetuity, and the HCP/NCCP includes monitoring and adaptive management programs, also in perpetuity, to ensure the ongoing health and long-term protection of the Reserve System (Section 8:HCP/NCCP).

The HCP/NCCP establishes Reserve Management Units (RMUs) to ensure the coordinated management necessary to achieve the Conservation Goals and Objectives. RMUs encompass one or more Conservation Areas, based on Habitat/natural community patterns, land ownership, and similar management needs. Within the RMUs, management obligations under the HCP/NCCP may vary depending on land ownership or administrating agency. Either a single agency (e.g., the NPS for Joshua Tree National Park Conservation Area) or a group of agencies will oversee these RMUs, working together as an RMUC.

Within three years of Permit issuance the RMUCs, Reserve Managers, and the Land Manager will develop RMUPs. The elements of the RMUP are described in Section 6.2 of the HCP/NCCP. The RMUPs will include ongoing management measures and Adaptive Management actions, schedules, and responsibilities for implementation. The RMUP will include recommendations for public access and uses based on assessment of compatibility with resource protection objectives.

Finding 4.1.4.A CDFG finds that the development of reserve systems and conservation measures in the HCP/NCCP area provide, as needed for the conservation of species: conservation, restoration, and management of representative natural and seminatural landscapes to maintain the ecological integrity of large habitat blocks, ecosystem function, and biological diversity (Section 2820(a)(4)(A)).

The Reserve System will be linked to existing protected lands (Figures 4-1 through 4-5: HCP/NCCP). The conservation strategy is designed to create a Reserve System that will:

- Preserve 723,480 acres for the benefit of Covered Species, natural communities, biological diversity, and ecosystem function.
- Preserve major habitat connections linking existing protected lands.
- Enable adaptive management of habitats to enhance populations of Covered Species and maintain ecosystem processes.
- Conserve 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.

The process for delineating and prioritizing land to include within the Conservation Areas corresponds to the scalar approach of the conservation measures (landscape, habitat, or species). Consideration was given first to connections with existing conserved areas within the HCP/NCCP area. Several areas that had already been established as reserves for Coachella Valley fringe-toed lizards and Peninsular Bighorn sheep could be expanded. In addition, state and federal lands will contribute to the conservation of the species. The BLM in its California Desert Conservation Area 2002 Amendment committed to conserving at least 99% of land it administers within the HCP/NCCP Conservation Areas. The next step was to gather information about the Covered Species and natural communities and develop models and a natural communities map and assure that they were included in the Conservation Areas. The HCP/NCCP area was divided into 21 Conservation Areas in order to be able to further refine conservation. Conservation Area boundaries were based on ecological and jurisdictional factors. Linkages between Conservation Areas and Core Habitats were then identified and delineated for inclusion in Conservation Areas. Finally, Conservation Objectives and Required Measures were developed for each Conservation Area and the species and natural communities present. The Reserve System will include the full representation of ecological diversity within natural communities in the HCP/NCCP area and will maintain sufficient habitat diversity

and species and population interactions to provide for the conservation of the Covered Species (Figures 2-2, 3-1, 4-1:HCP/NCCP).

The HCP/NCCP conservation strategy requires the implementation of objectives and measures to avoid and minimize incidental Take of species covered by the HCP/NCCP, in addition to the establishment, enhancement, management and monitoring of approximately 723,480 acres of Reserve System. The primary means of mitigating impacts on and conserving Covered Species is protection of high quality habitat. Habitat enhancement, restoration and creation are also important components (Section 4:HCP/NCCP).

The heart of the conservation strategy is a system of new preserves linked to existing protected lands to form a network of protected areas outside the area where new urban growth will be covered under the HCP/NCCP. In addition to supporting ecosystem processes, habitats, and species, the preserves will also support other uses such as recreation, avoidance of significant flooding impacts, and protection of cultural resources, as long as these uses are compatible with the biological goals and objectives of the HCP/NCCP.

The conservation strategy combines conservation measures at three ecological scales: landscape, natural community, and species.

Landscape-level conservation measures will be applied on a geographically broad scale (i.e., within Conservation Areas) to achieve multiple goals and objectives. These measures are related to overall design and assembly of the Reserve System and are structured to benefit all natural communities and Covered Species, as well as to foster the conservation of biodiversity. Landscape-level measures address such attributes as preserve location, size, shape, composition, and connectivity, and ecological processes. These landscape-level measures are determined by the spatial needs of natural communities and associated species and the management activities necessary to maintain a well-functioning Reserve System.

Natural community-level measures apply to each natural community and include such needs as vegetation management, habitat restoration, enhancement of ecosystem function, and control of exotics. These community-level measures are determined by the habitat requisites of Covered Species and by actions required to conserve natural communities. Measures at this level will conserve most Covered Species indirectly through conservation of their habitats.

Some Covered Species will also require direct (i.e., not habitat-related) population management and population augmentation. Species-level measures employed in these cases will provide additional conservation tailored specifically to each Covered Species that requires it at the individual or population level. These actions augment the landscape-level and natural community-level measures (Section 4: HCP/NCCP).

Finding 4.1.4.B CDFG finds that the development of reserve systems and conservation measures in the plan area provides, as needed for the conservation of species: establishment of one or more reserves or other measures that provide equivalent conservation of Covered Species within the plan area and linkages between them and adjacent habitat areas outside the HCP/NCCP Area (Section 2820(a)(4)(B)).

In order to maintain viable populations of Covered Species, multiple populations of Covered Species will be protected and linked through existing or new protected lands to reduce the risk of local extirpation and ensure the genetic connectivity of populations. This is especially important for species that may function as metapopulations or for species that naturally occur at low densities or small population sizes. The Reserve System configuration and management address the need for connectivity, and will ensure viable linkages within and among the lands within the Reserve System.

In addition, every effort will be made to ensure connectivity from the Reserve System to lands adjacent to the Reserve System. Adjacent lands have been assessed for their biological value for the Covered Species and for their potential to complement the conservation value and long-term goals of the HCP/NCCP.

The HCP/NCCP Area and Reserve System are adjacent to several other planning areas. The Cabazon Conservation Area is adjacent to the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP). One of the Conservation Objectives for the Cabazon Conservation Area is to coordinate with the Western Riverside County MSHCP Regional Conservation Authority to ensure that fluvial sand transport along the San Gorgonio River and the functionality of the river as a Biological Corridor is maintained.

The Mecca Hills/Orocopia Mountains Conservation Area links the HCP/NCCP Area with protected BLM lands to the east in the Chuckwalla Bench Area of Critical Environmental Concern.

The Whitewater Canyon and Stubbe and Cottonwood Canyons Conservation Areas provide Biological Corridors and Linkages between the Peninsular Range (San Jacinto and Santa Rosa Mountains) and the San Bernardino Mountains portion of the Transverse Range. The significance of these corridors is noted in California Wilderness Coalition (2001). The Biological Corridor in the Stubbe and Cottonwood Canyons Conservation Areas, which utilizes two culverts under the I-10, connects the San Bernardino Mountains to the San Jacinto Mountains through the Snow Creek/Windy Point Conservation Area. Whitewater Canyon Conservation Area provides for movement under the I-10 along the Whitewater River, which crosses under the I-10 freeway beneath a high bridge. Predators and large mammals, including coyotes, bobcats, mountain lions, and foxes, may use these Biological Corridors and Linkages. This connectivity will facilitate genetic flow and demographic dispersal among these species and help maintain predator-prey relationships.

Each of the Conservation Areas has at least one Conservation Objective for maintaining Biological Corridors and Linkages within and adjacent to the Conservation Area (Section 4.3.1-4.3.21:HCP/NCCP). The dimensions of culverts and bridges that function as Biological Corridors are described in Appendix I, Section 4:HCP/NCCP.

Finding 4.1.4.C CDFG finds that the development of reserve systems and conservation measures in the plan area provides, as needed for the conservation of species: protection and maintenance of habitat areas large enough to support sustainable populations of Covered Species (Section 2820(a)(4)(C)).

A key element of the Reserve System is acquiring land in large blocks. Large preserves provide greater viability as management units, maximize preserve capacity to support viable populations of Covered Species, maintain existing ecological functions, and preserve existing biodiversity. To achieve these beneficial outcomes, it is important to establish large, linked blocks of natural communities as well as a mosaic of these communities, where appropriate, within the Reserve System. Land cover types will be used as a primary unit for defining and assessing compliance with acquisition requirements.

The Reserve System conservation requirement is 723,480 acres (Section 4:HCP/NCCP). Tables 4-1 through 4-6 of the HCP/NCCP provide details on conservation requirements.

In order to maintain viable populations of Covered Species, multiple populations of Covered Species will need to be protected and linked through existing or new protected lands to reduce the risk of local extirpation and ensure the genetic connectivity of populations. This is especially important for species that may function as metapopulations or for species that naturally occur at low density or small population sizes. Preserves were designed to protect high-quality habitat for Covered Species and allow most impacts to occur on low-quality habitat.

Protecting suitable but unoccupied habitat for Covered Species allows for future shifts in population size and location in response to natural and anthropogenic environmental change.

The needs of Covered Species were considered at landscape and habitat levels, and then independently at the species level to ensure that each species' biological goals and objectives will be met.

Early in the development of the HCP/NCCP it was recognized that two Covered Species, Coachella Valley fringe-toed lizard and Peninsular bighorn sheep, will greatly influence the design of the Reserve System. Coachella Valley fringe-toed lizards were important because three preserves already existed for their conservation as a result of an HCP developed for them in the 1980s. Recent information indicated that additional

conservation was necessary to protect the sand source for these preserves and additional conservation was included in the HCP/NCCP. In addition, many of the Covered Species are sand dependent species that overlap in habitat with the fringe-toed lizard. The Peninsular bighorn sheep is a wide-ranging species in the mountains of the HCP/NCCP area. This species therefore exerts a substantial influence on the Reserve System design, because of the species' extensive range and movement which require large habitat blocks and habitat linkages throughout the Reserve System.

Finding 4.1.4.D CDFG finds that the development of reserve systems and conservation measures in the plan area provides, as needed for the conservation of species: incorporation of a range of environmental gradients and high habitat diversity to provide for shifting species distributions due to changed circumstances (Section 2820(a)(4)(D)).

The Reserve System includes the full representation of ecological diversity within natural communities in the HCP/NCCP area in order to maintain sufficient habitat diversity and species and population interactions. The need to include a range of environmental gradients and a diversity of habitats within each Conservation Area and throughout the Reserve System was a primary consideration in determining the value of areas considered for inclusion in the Reserve System (Section 3.4:HCP/NCCP). In addition, protecting suitable but unoccupied habitat for Covered Species allows for future shifts in population size and location in response to natural and anthropogenic environmental change.

Lands in the HCP/NCCP are defined by Conservation Areas. Conservation Area boundaries were based on ecological and jurisdictional factors. Conservation Area boundaries were determined on the basis of physical and biological features at the landscape level, such as watersheds, ridgelines, and major breaks in land cover types or natural communities. The boundaries of each Conservation Area are described in Section 4 of the HCP/NCCP. Within each Conservation Area a range of elevations, slopes, aspects, soil types and natural communities will be acquired. Together, the 21 Conservation Areas, which are dominated by different natural community types, elevations, slopes and aspects, encompass the full range of environmental gradients present in the HCP/NCCP area, as shown in Figures 2-2, 3-1, and 4-1 of the HCP/NCCP.

Finding 4.1.4.E CDFG finds that the development of reserve systems and conservation measures in the plan area provides, as needed for the conservation of species: for the effective movement and interchange of organisms between habitat areas and maintenance of the ecological integrity of the habitat areas within the plan area (Section 2820(a)(4)(E)).

In order to maintain viable populations of Covered Species, multiple populations of Covered Species will need to be protected and linked through existing or new protected lands to reduce the risk of local extirpation and ensure the genetic connectivity of

populations. This is especially important for species that may function as metapopulations or for species that naturally occur at low density or small population sizes. Preserves were designed to ensure the continuation of ecological processes that contribute to self-sustaining wildlife populations and natural communities, such as aeolian and fluvial transport of source sand to sand dune communities. Preserve design also intended to protect high-quality habitat for Covered Species, while allowing impacts to occur on low-quality habitat. Protecting suitable but unoccupied habitat for Covered Species will allow for future shifts in population size and location in response to natural and anthropogenic environmental change.

The HCP/NCCP Reserve System is intended to conserve and in many cases enhance populations of Covered Species. Ecological needs of Covered Species are summarized in the Species Accounts and Conservation Measures (Section 9:HCP/NCCP). The Reserve System design was intended to conserve multiple populations of, and high quality habitat for, Covered Species. The HCP/NCCP Reserve System builds on an extensive network of public lands and other conserved open space (e.g., private conservation easements) in the HCP/NCCP area. Existing public lands and other open space help to achieve the HCP/NCCP biological goals and objectives because they provide habitat linkages, source populations of Covered Species for HCP/NCCP reserves, and other important functions that contribute to population viability (Section 4, Appendix I:HCP/NCCP).

The needs of Covered Species will be addressed at landscape and habitat levels, and then independently at the species level to ensure that each species' biological goals and objectives will be met.

Early in the development of the HCP/NCCP it was recognized that two Covered Species, Coachella Valley fringe-toed lizard and Peninsular bighorn sheep, will greatly influence the design of the Reserve System. Coachella Valley fringe-toed lizards were important because three preserves already existed for their conservation as a result of an HCP developed for them in the 1980s. Recent information indicated that additional conservation was necessary to protect the sand source for these preserves and additional conservation was included in the HCP/NCCP. In addition, many of the Covered Species are sand dependent species that overlap in habitat with the fringe-toed lizard. Linkages and Biological Corridors were identified and incorporated into the Reserve System to provide for connection between populations of fringe-toed lizards and other sand dependent species. The Peninsular bighorn sheep is a wide-ranging species in the mountains of the HCP/NCCP area and therefore exerts a substantial influence on the Reserve System design because of the species' extensive range and movement which require large habitat blocks and habitat linkages throughout the Reserve System.

Other widely distributed species included the Palm Springs pocket mouse and the Coachella Valley round-tailed ground squirrel. Specific linkages were incorporated into the reserve design to assure connectivity between core populations of these species.

Finding 4.1.5 CDFG finds that the plan identifies activities, and any restriction on those activities, allowed within the reserve areas that are compatible with the conservation of species, habitats, natural communities, and their associated ecological functions (Section 2820(a)(5)).

Activities required to maintain and operate the new HCP/NCCP Reserve System include habitat and species management, habitat restoration or creation, habitat and species monitoring, and limited construction and maintenance of passive recreational facilities (e.g., staging areas, fencing, campgrounds, and signage). These are consistent with the Species Conservation Goals and the Conservation Objectives for the Conservation Areas. Low-impact recreational use (hiking, mountain biking, equestrians) is also consistent with the guidelines for trails and public access (Section 7.3.4.2: HCP/NCCP). Additional activities that are allowed in Conservation Areas include specific projects and operation and maintenance activities (Tables 7-1 through 7-11:HCP/NCCP). Each of these activities has required avoidance and minimization measures associated with them.

Conservation activities within HCP/NCCP preserves are expected to have a net benefit on all Covered Species (Section 4:HCP/NCCP). However, some conservation activities may have temporary or permanent adverse impacts on Covered Species that may result in Take. Activities that are designed to benefit one or several Covered Species may have the effect of harming another set of Covered Species. However, the HCP/NCCP Reserve System is designed to be large and diverse enough to ensure that the net effect of all preserve activities is beneficial across the system.

Certain activities associated with management in the Reserve System may result in Take of Covered Species (e.g., fuel modification, fire management, weed control, access control, and habitat enhancement). Such activities will only be undertaken as described in the Management Program or in Annual Work Plans approved by the Reserve Management Oversight Committee (RMOC) and under appropriate guidance by agents or employees of USFWS, CDFG, or the Implementing Entity.

Some activities undertaken during monitoring (e.g., capture, relocation to prevent injury or death, trapping, handling, enhancement or propagation, use of recorded vocalizations, marking) likely will result in the Take of Covered Species. Such activities will only be undertaken as described in the Management Program or in Annual Work Plans approved by the RMOC, and under appropriate guidance by agents or employees of USFWS, CDFG or the Implementing Entity. For desert tortoise and Peninsular bighorn sheep, regional consistency and specialized training and handling are required.

Recreational or management facilities built by the Implementing Entity to support the reserves could result in a small amount of habitat removal. Facilities will be sited and built to avoid or minimize their effects on Covered Species, but a small amount of Take may still occur. Impacts as a result of these activities must be consistent with the required Avoidance/Minimization Measures.

Recreational activities allowed in the Reserve System are expected to have little or no impact on Covered Species. Recreational uses will be limited to low-intensity activities

such as hiking and wildlife observation. Trails will be carefully sited and maintained to minimize their disturbance of habitat and potential disturbance to wildlife following the Criteria for the Siting and Design of Trails and Facilities (Sections 7.2, 7.3: HCP/NCCP) for areas outside of the Santa Rosa and San Jacinto Mountains Conservation Area. Peninsular bighorn sheep are sensitive to human disturbance and some unintentional harassment may occur. To minimize this potential, Public Use and Trail Management on Reserve Lands within the Santa Rosa and San Jacinto Mountains Conservation Area (Trails Plan) will be undertaken as described in Section 7.3.3.2:HCP/NCCP. The Trails Plan will focus on scientific data gathering to evaluate the effects of recreational trail use on Peninsular bighorn sheep health, behavior, habitat selection, and long-term population dynamics. This will provide empirical data to guide public use and trails management within this portion of the Reserve System.

Finding 4.1.6 CDFG finds that the plan contains specific conservation measures that meet the biological needs of Covered Species and that are based upon the best available scientific information regarding the status of Covered Species and the impacts of permitted activities on those species (Section 2820(a)(6)).

Collectively, the conservation strategy will contribute to the recovery of and mitigate for impacts to Covered Species. The conservation strategy is designed to achieve 133 biological objectives and implement 99 Required Measures for the Conservation Areas that will result in conservation of the Covered Species. Developed at the landscape, natural community and species scale, the conservation strategy involves the preservation and management of a Reserve System for the benefit of Covered Species. The Reserve System will conserve and manage Covered Species through restoration, enhancement, and management of natural communities and species. The conservation strategy is based on the best scientific data available at the time of its preparation and takes into account the limitations of the baseline data available for the inventory.

Independent scientific input early in the planning process was critical to the success of the HCP/NCCP. In early November 1996 a workshop was held with invited scientists who included members of the ISA to discuss reserve design and connectivity criteria. This workshop was focused on receiving input and direction from these conservation biologists with respect to the recommended approaches to reserve design, target species selection and habitat modeling, and a wide range of topics related to HCP development.

In September 1997, biologists with expertise on a given species or taxonomic group were invited to a workshop to provide input on the status and distribution of proposed target species. These experts reviewed known location maps and very preliminary species distribution maps. In April 1998, another workshop with a subset of the ISA discussed the reserve design and conservation planning. Altogether, there were seven workshops and meetings of independent scientists.

In addition to the above-mentioned workshops, there was a core group of local biologists established as the Scientific Advisory Committee (SAC). The SAC was established as a subcommittee to the Project Advisory Group (PAG) to provide biological and ecological oversight in the development of the HCP/NCCP. As a subcommittee to the PAG, all meetings of the group were open to the public.

Identification of Conservation Areas followed the process outlined in Section 3.1.4:HCP/NCCP and consisted of: 1) determining the species and natural communities to be included in the HCP/NCCP; 2) gathering information on the species and natural communities; 3) preparing accounts of individual species and natural communities; 4) gathering other pertinent information such as watersheds, ecological processes, roads, and lands uses; 5) preparing a natural communities map; 6) analyzing biological resource information to map species' distribution; 7) developing site identification maps; 8) delineating core habitat areas, and essential ecological process areas and biological corridors and linkages; 9) conducting ISA review; and 10) delineating conservation goals and objectives.

Based on the recommendations of the ISA after their review of the January 2001 Administrative Review Draft, the SITES model (SITES V.1.0: An Analytical Toolbox for Designing Ecoregional Conservation Portfolios, The Nature Conservancy (TNC)) was used to complete an analysis of the reserve design for the HCP/NCCP. It uses a heuristic method to choose a reserve system or "conservation portfolio" from a larger set of "planning units" within an ecoregion. Using the SITES V. 1.0 program, a reserve design very similar to the HCP/NNCP reserve system was modeled. Observed differences were minor, and primarily appeared related to the scale the program chose for planning units. High-priority natural types were selected preferentially even if they were only a small portion of the planning unit; i.e. an entire section (640 acres) was chosen when only a few acres of the desired natural type occurred in the section. For these reasons the reserve design was not modified based on the SITES analysis. The reserve design differences were minor enough to not warrant a change. The analysis verified the reserve design.

The evaluation of Covered Species was based on information from a variety of sources including: California Natural Diversity Database (CNDDB); California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California, 2001; CDFG's Special Animals and Special Plants lists; field data collected during surveys for the HCP/NCCP in 1995, 1996, 1997, 1998, 1999, 2002 and 2003; EIRs, Biological Assessments, and other environmental documents prepared throughout the HCP/NCCP area since 1979; CDFG, BLM, NPS, State Parks, USFWS, and other agency data; data collected from biologists and others knowledgeable about the HCP/NCCP Area and/or a given species; location data from voucher specimens held in museums, herbaria, and public trust institutions; and published records and species distribution information from peer-reviewed journal articles, where information on species or natural community distribution has been described at an appropriate scale.

Finding 4.1.7 CDFG finds that the plan contains a monitoring program (Section 2820(a)(7)).

Two separate types of monitoring will be required under the HCP/NCCP. First, compliance (implementation) monitoring documents the Permittees' activities and ensures that the Implementing Entity and the HCP/NCCP Permittees complete obligations as specified in the HCP/NCCP. Second, effectiveness monitoring measures the biological success of the conservation strategy (Section 8:HCP/NCCP).

Compliance (Implementation) Monitoring

Compliance monitoring is relatively straightforward and will be tracked by the Implementing Entity using a database that records land acquisitions and habitat losses, and implementation of the conditions on development (planning surveys, impact avoidance through project design, pre-construction surveys, and construction monitoring). The Implementing Entity will develop and maintain a comprehensive, centralized data repository to track implementation of all aspects of the HCP/NCCP. The data repository will be operating within 8 months of permit issuance (Section 8.6:HCP/NCCP). The Implementing Entity will either use the HabiTrak database developed by CDFG, or a Geographic Information System-based data repository that is consistent and can be used with HabiTrak. The Implementing Entity shall make the data repository accessible to the parties named in the IA, including the Wildlife Agencies.

To facilitate awareness of responsibilities and ensure consistency of implementation, an Implementation Manual will be prepared within 30 days of permit issuance. During the first three (3) years of implementation of the HCP/NCCP, the CVCC Executive Director and Wildlife Agencies' representatives shall meet every ninety (90) days, at a minimum, to review the status of HCP/NCCP implementation. Thereafter, the meetings shall occur every six months or as otherwise agreed upon.

Biological Monitoring

The monitoring program described in Section 8 (HCP/NCCP) focuses on effectiveness monitoring for the conservation strategy (as opposed to compliance monitoring). The monitoring program will evaluate whether the HCP/NCCP is achieving its biological goals and objectives. The Implementing Entity will be responsible for conducting the monitoring and will publish the results in its annual report.

The Monitoring Program will provide scientifically reliable data on: (1) the status of Covered Species; (2) spatial and temporal dynamics (amplitude and magnitude) of ecosystem components for the Covered plant and animal species and natural communities; (3) the threats to these species and natural communities; and (4) the results of research on the management of Covered Species. The Monitoring Program will establish baseline information on the status of Covered Species and natural communities;

use a tiered approach incorporating monitoring questions at different levels, including individual species (populations and metapopulations), natural communities (including Habitat quality for Covered Species), and landscapes (including multiple natural communities) as models indicate there is a biological relationship; describe the spatial and temporal variation (amplitude and magnitude) in populations of Covered Species; identify likely threats to each species or natural community; gather data on various measurable environmental factors identified in the conceptual models as having a measurable effect on Covered Species; develop and refine models describing species distributions relative to Habitat quality and other parameters with data; evaluate the extent to which integration of individual species/population and landscape/Habitat quality monitoring can occur; develop monitoring protocols to stay current with accepted methodology as technologies and analytic tools improve; identify, develop, and evaluate the extent to which management practices and policies are sustaining the plant and animal species and natural communities covered under the HCP/NCCP; establish thresholds for changing or modifying management and identify appropriate responses or management practices for statistically and biologically significant changes in populations, communities, and ecological processes; and identify, as part of ongoing monitoring efforts, any diseases that may be adversely affecting Covered Species.

Finding 4.1.8 CDFG finds that the plan contains an adaptive management program (Section 2820(a)(8)).

The HCP/NCCP contains an adaptive management program for which the acquisition of data through long-term monitoring is essential. Adaptive management allows the conservation strategy of the HCP/NCCP to be adjusted throughout the permit term, ensuring that the most up-to-date information is utilized and that the biological goals and objectives are achieved. The strategy will define the feedback process and incorporate feedback loops that link implementation and monitoring to decision-making. New monitoring results will be incorporated into management to achieve the biological goals and objectives.

The organizational structure of the adaptive management decision-making process is described in detail in the HCP/NCCP (Figure 8-1 and Section 8: HCP/NCCP). The Monitoring Program Administrator (MPA) is responsible for coordinating with reserve managers to facilitate the exchange of Monitoring Program data. Likewise, the Land Manager has the responsibility to facilitate the exchange of information regarding all completed and proposed management and Adaptive Management actions. Annual reports are prepared by the Land Manager and MPA and require review by the Implementing Entity, RMOC, and appropriate RMUCs. Section 8.7 of the HCP/NCCP describes the elements of the annual reports and the process for review and evaluation of these reports. The organizational structure also provides for input and recommendations from Independent Science Advisors on specific issues concerning scientific aspects of the HCP/NCCP. The HCP/NCCP establishes RMUs to ensure the coordinated management necessary to achieve the Conservation Goals and Objectives. RMUs encompass one or more Conservation Areas, based on Habitat/natural community patterns, land ownership, and similar management needs.

Pursuant to the Monitoring, Management, and Adaptive Management measures to be implemented under the HCP/NCCP, the Land Manager and RMUCs, in coordination with the MPA, will prepare annual work plans for management and adaptive management priorities and actions, and the funding necessary to conduct them (Sections 6.1.4, 6.1.5:HCP/NCCP).

Finding 4.1.9 CDFG finds that the plan includes a timeframe and process by which reserves or other conservation measures are to be implemented, including the obligations of landowners, signatories and consequences of the failure to acquire lands in a timely manner (Section 2820(a)(9)).

Milestones for HCP/NCCP implementation are outlined and responsible parties are identified in both the HCP/NCCP (Section 6) and the IA (Section 11). In addition, to facilitate awareness of responsibilities and ensure consistency of implementation, an Implementation Manual will be prepared.

The Implementing Entity is responsible for ensuring acquisition of land for the Reserve System in accordance with the Conservation Objectives for each Conservation Area, Covered Species, natural community, Essential Ecological Process, and Biological Corridor and Linkage (Sections 4.3.1-4.3.21:HCP/NCCP). The Implementing Entity will be assisting in implementing land acquisition by the Acquisition and Funding Coordinating Committee. The responsibilities and duties of the Acquisition and Funding Coordinating Committee are detailed in Section 6.1.2 (HCP/NCCP).

The NCCPA requires that conservation stay in "rough proportion" to development (Fish and Game Code sections 2820(b)(3)(B) and 2820(c).). The HCP/NCCP will maintain this through two separate means – Rough Step and Rough Proportionality. In order to assure Rough Step is maintained, there will be an annual Rough Step analysis conducted by the Implementing Entity for each Conservation Area. The Conservation Objectives for Core Habitats, Essential Ecological Process areas, Biological Corridors and Linkages, and conserved natural communities for each Conservation Area are provided in Section 6.1 of Appendix I:HCP/NCCP. The annual Rough Step analysis will be done for each Conservation Objective. In addition, a real-time Rough Step analysis will be prepared for a Conservation Area whenever a Development is proposed in that Conservation Area. This information shall be provided to the Permittee considering the proposed Development and to the Wildlife Agencies as part of the Joint Project Review Process described in Section 6.6.1.1 of the HCP/NCCP. Permittees will take this information into consideration as part of their project approval. It will allow them to better allocate Take. It will also provide information to the CVCC to help guide acquisition priorities. If it appears that the HCP/NCCP is getting close to being out of Rough Step, acquisition can be directed to those necessary areas. The Rough Step analysis ensures, on an annual basis, that the acquisition is within 10% of the level needed to stay in balance with the level of Development. If the Rough Step rule is not met during any analysis period, the

Implementing Entity must conserve appropriate lands necessary to meet a specific Conservation Objective within the Rough Step Analysis Unit to bring the HCP/NCCP back into the parameters of the rule prior to authorizing additional loss of the Core Habitat, Essential Ecological Process area, Biological Corridor or Linkage, or natural community for which the rule was not achieved.

The Permittees intend to complete land acquisition in the first 30 years of the permit. Over the 30-year "acquisition period," the following schedule shall be used to determine if additional Conservation is needed to keep Development in "rough proportion" to Conservation.

Year Conserved	Projected Development In HCP/NCCP area	% of Lands
5	17%	17%
10	33%	33%
15	50%	50%
20	67%	67%
25	83%	83%
30	100%	100%

If at the end of any five (5) year period the "rough proportionality" test has not been met, the Permittees and the Wildlife Agencies will meet within 90 days to begin to develop a strategy to address the need for a balance between Conservation and Development.

Finding 4.1.10 CDFG finds that the plan contains provisions that ensure adequate funding to carry out the conservation actions identified in the HCP/NCCP (Section 2820(a)(10)).

The cost of implementing the HCP/NCCP during the 75-year permit term is estimated at $2,038,540,000 (Sections 5.1.2 -5.1.6, Table 5-2a:HCP/NCCP). Funding to implement the HCP/NCCP will come from a variety of potential sources including, but not limited to, Local Development Mitigation Fees, fees on the importation of waste into landfills in Riverside County, transportation project mitigation, mitigation for regional infrastructure projects and the Eagle Mountain Landfill Environmental Mitigation Trust Fund.

The intent is to complete land acquisition in the first 30 years with loans from the Endowment Fund and revenues generated from Local Development Mitigation Fees. The loans, plus interest, will be repaid from the Land Acquisition and Improvement Fund to the Endowment Fund in the ensuing 20 years. Initial monies in the Endowment Fund will come from Regional Road Project Mitigation, Regional Infrastructure Mitigation, and the CVFTL HCP Endowment Fund (collectively approximately $16.5 million, Table 5-3d:HCP/NCCP). In addition, the annual costs for the Monitoring Program, the Management Program, and Adaptive Management, as well as general HCP/NCCP

administration will be funded for the 75-year term of the Permit with landfill tipping fees and loans from the Endowment Fund for the first 11 years.

The obligation of the Permittees is to conserve sufficient acreage to meet the Conservation Goals and Conservation Objectives and to fund the Management Program, and the Monitoring Program, including Adaptive Management, in perpetuity (Section 5.1:HCP/NCCP). Full funding during the permit term is guaranteed by the Permittees through the IA. In addition, Section 12.1.3 of the IA provides that the Implementing Entity, CVAG, County, Cities, County Flood Control, County Parks, County Waste, CVWD, and IID shall ensure that monitoring, reporting, and adaptive management measures are adequately funded in perpetuity. During the 75-year permit period, sufficient funds will be contributed to establish a non-wasting endowment sufficient in size at the end of Year 75 to fund the Monitoring Program, the Management Program, and Adaptive Management, as well as HCP/NCCP administration costs, in perpetuity with interest from the endowment (Table 5-3d:HCP/NCCP).

Local Development Mitigation Fee

The Local Development Mitigation Fee in the first year of HCP/NCCP implementation is estimated to be $5,730 per acre of Development. The fee ordinance adopted by the Cities and the County will provide for an annual CPI adjustment based upon the Consumer Price Index for "All Urban Consumers" in the Los Angeles-Anaheim-Riverside Area, measured as of the month of December in the calendar year which ends in the previous Fiscal Year. There will also be a provision for the fee to be reevaluated and revised should it be found insufficient to cover mitigation of new Development. The Implementing Entity will update the Local Development Mitigation Fee Nexus Study at least every five years, and more often if deemed necessary, to ensure that the Local Development Mitigation Fee is adequate over the life of the acquisition program to fund the necessary land acquisition and land improvement.

Fees on the Importation of Waste into Landfills and Transfer Stations (Conservation Trust Fund)

The County collects $1 per ton for all in-county waste deposited in County landfills. The funds are deposited in a Conservation Trust Fund. Based on tonnage generated in the HCP/NCCP area, the annual revenue from this is projected to be $520,000 in 2008/09 based on a Waste Tonnage Chart provided by Riverside County Waste. It is projected that funds from this source will be needed through Year 71 of HCP/NCCP implementation. The total revenue in that period will be $227,604,000 (Table 5-2b:HCP/NCCP).

Regional Road Projects Mitigation

Measure A, a one-half cent sales tax in Riverside County, provides that funds can be used to mitigate the direct, indirect, and cumulative effects of transportation projects on the Covered Species and the conserved natural communities in the HCP/NCCP. Fulfilling the

Permittees' mitigation obligation under the HCP/NCCP meets the mitigation needs for the transportation projects defined in Section 7.2.3 of the HCP/NCCP. Thirty million dollars ($30,000,000) of Measure A funds will be contributed to the HCP/NCCP implementation to help accomplish the Permittees' mitigation obligation. In addition, CVAG or Caltrans will contribute $1,077,000 to the Endowment Fund (Table 5-3d:HCP/NCCP). Thus, the total revenue from regional road projects is $31,077,000 (Table 5-2b:HCP/NCCP).

Regional Infrastructure Project Mitigation

Caltrans has an obligation to acquire 5,791 acres of land to mitigate its non-interchange projects identified in Section 7.2.2 (Section 7:HCP/NCCP). The projected cost for this is $27,875,000 (nominal dollars). These acquisitions must be accomplished in or by 2015. Caltrans must also contribute $7,600,000 towards the Endowment Fund in or by 2011.

The HCP/NCCP assumes that CVWD will acquire 550 acres in the Thousand Palms Conservation Area to mitigate for the Whitewater River Flood Control Project at a projected cost of $20,625,000. CVWD will also make a contribution of $3,583,400 to the Endowment Fund to ensure adequate monitoring and management of these lands and other lands CVWD is committing to Conservation under the HCP/NCCP. IID will make a contribution of $525,000 to the Endowment Fund to ensure that lands they commit to Conservation under the HCP/NCCP are adequately monitored and managed in perpetuity. The total revenue from Regional Infrastructure Project Mitigation, will, therefore, be $60,208,000, rounded to the nearest thousand (Table 5-2b:HCP/NCCP).

Eagle Mountain Landfill Environmental Mitigation Trust Fund

The total revenue from Eagle Mountain projected for the 75-year term of the Permit is $247,500,000 (Table 5-2b:HCP/NCCP).

Table 5-2a in Section 5 of the HCP/NCCP summarizes the estimated cost of HCP implementation. Table 5-2b provides a funding overview of the HCP/NCCP.

Finding 4.2.1 CDFG finds that the Implementing Agreement contains provisions defining species coverage, including conditions on coverage (Section 2820(b)(1)).

The IA identifies 27 species for coverage under the NCCP Permit. The list of Covered Species includes both listed and non-listed species. All of these species are proposed for Take pursuant to the NCCPA, with the following exceptions:

The IA and the HCP/NCCP specifically prohibit the Take of Yuma clapper rail, California black rail, and Peninsular bighorn sheep, which are fully protected species under California Fish and Game Code Sections 3511 and 4700. However, under Fish and Game Code section 2081.7, CDFG may authorize CVWD to Take Yuma clapper rail and California black rail, either under CESA or NCCPA, if the requirements of that section

are met (see Section 5.1 of this permit). Under the NCCP Permit, only CVWD is authorized to Take those fully protected species. All other Permittees and third party participants shall avoid Take of these species. As authorized by the Fish and Game Code, Permittees may apply for a separate permit for Take of fully protected species associated with necessary scientific research.

The IA specifies that all Permittees and third party participants must comply with the terms and conditions of species coverage detailed in the HCP/NCCP to avoid, minimize, and mitigate impacts on species and natural communities.

Finding 4.2.2 CDFG finds that the Implementing Agreement contains provisions for establishing the long-term protection of any habitat reserve or other measures that provide equivalent conservation of Covered Species (Section 2820(b)(2)).

The Implementing Entity shall create a Reserve System by acquiring land and dedicating it in perpetuity to the Reserve System through either a fee interest or conservation easement (Section 6.2:IA). The Implementing Entity may also include in the Reserve System existing Conservation Lands and lands that are considered Complementary Conservation in accordance with Sections 7.2 and 7.3 of the IA. For lands owned by an entity other than the Implementing Entity or the Wildlife Agencies, permanent protection shall be ensured through a Legal Instrument acceptable to the Wildlife Agencies.

All acquisitions shall be consistent with the Conservation Objectives for each of the 21 Conservation Areas.

As detailed in Table 4-1 of the HCP/NCCP, the Reserve System will contain 725,000 acres and will consist of Existing Conservation Lands, lands conserved through Complementary Conservation and Additional Conservation Lands (Section 7.4:IA).

In addition to acquiring lands for the Reserve System by fee title, the Implementing Entity may negotiate conservation easements. All conservation easements shall be recorded in perpetuity pursuant to Civil Code Section 815 *et seq.* (Section 4.2.2.2:HCP/NCCP and Exhibit H:IA).

Conservation easements shall be dedicated to the Implementing Entity, CDFG, or another entity approved by the Wildlife Agencies, including but not limited to land trusts, park agencies, and other qualified nonprofit organizations. A model conservation easement document that may be used for Reserve System lands is included in the IA (Exhibit H:IA).

Finding 4.2.3 CDFG finds that the Implementing Agreement contains specific terms and conditions, which, if violated, would result in the suspension or revocation of the permit, in whole or in part. CDFG shall include a provision requiring notification to the plan participant

of a specified period of time to cure any default prior to suspension or revocation of the permit in whole or in part (Section 2820(b)(3)).

As described in Section 23.5 of the IA, CDFG shall have the right to revoke or suspend all or portions of the Permit, in accordance with the laws and regulations in force at the time of such revocation or suspension. Such action may also be triggered by: 1) failure of a Permittee to implement the Implementation Mechanisms adopted by that agency; 2) approval of a proposed Development or public project that significantly compromises the viability of the HCP/NCCP Reserve System; 3) failure to comply with Rough Step requirements set forth in Section 6.5 of the HCP/NCCP; and/or 4) withdrawal of a Permittee. Such suspension or revocation may apply to the entire applicable Permit, or only to a portion such as specified Conservation Area, specified Covered Species, or specified Covered Activities. Such action may also be triggered if the Wildlife Agencies determine that land within the Conservation Areas is annexed to a non-participating public agency and thus, development of such land could significantly compromise the viability of the HCP/NCCP Reserve System.

Except as otherwise required by law, prior to taking action to revoke or suspend the Permit, CDFG, as applicable, shall: 1) provide thirty (30) day prior written notification to the relevant Permittee(s) and the Implementing Entity of the proposed revocation or suspension, and 2) meet and confer with the relevant Permittee(s) and the Implementing Entity to attempt to avoid the need to revoke or suspend all or a portion of the Permit. The Parties may rely upon the informal meet and confer process set forth in Section 23.6 of the IA for disputes concerning potential Permit revocation or suspension.

Finding 4.2.3A — CDFG finds that the Implementing Agreement specifies the action CDFG shall take if the participant fails to provide adequate funding (Section 2820(b)(3)(A)).

Section 12.3 of the IA provides that the Implementing Entity and the Wildlife Agencies will annually evaluate the performance of the funding mechanisms and, notwithstanding other provisions of the HCP/NCCP, will develop any necessary modifications to the funding mechanisms to address additional funding needs. Also, this annual evaluation will include an assessment of the funding plan and anticipate funding needs over the ensuing 18 months for the purpose of identifying any potential deficiencies in cash flow. If deficiencies are identified through this evaluation, then the Permittees and the Wildlife Agencies will develop strategies to address any additional funding needs consistent with the terms and conditions of the HCP/NCCP.

Finding 4.2.3B — CDFG finds that the Implementing Agreement specifies the action CDFG shall take if the participant fails to maintain rough proportionality between impacts on habitat or Covered Species and conservation measures (Section 2820(b)(3)(B)).

If the Local Permittees do not maintain "rough proportionality" between Development and Conservation, the Wildlife Agencies, the Implementing Entity and other applicable Local Permittees shall meet to discuss potential actions to meet the HCP/NCCP's rough proportionality requirements. In the event that these Parties do not reach agreement on such potential actions, the Wildlife Agencies may initiate revocation or suspension of all or part of the Permits as set forth in Section 23.5 of the IA.

Finding 4.2.3C — CDFG finds that the Implementing Agreement specifies the action CDFG shall take if the plan participant adopts, amends, or approves any plan or project without the concurrence of the wildlife agencies that is inconsistent with the objectives and requirements of the approved plan (Section 2820(b)(3)(C)).

If CDFG determines that a plan participant adopts, amends, or approves any plan or project without the concurrence of the wildlife agencies that is inconsistent with the objectives and requirements, and that proposed Development or public project significantly compromises the viability of the HCP/NCCP Reserve System, CDFG shall have the right to revoke or suspend all or portions of the Permits in accordance with the laws and regulations in force at the time of such revocation or suspension.

Under the Joint Project Review process, the Wildlife Agencies have an opportunity to provide input on projects within Conservation Areas. Based on CVCC's analysis and any Wildlife Agencies' comments, in the event CVCC identifies inconsistencies between the Conservation Area Conservation Objectives and the proposed project and/or failure to incorporate applicable Required Measures, CVCC staff and appropriate Local Permittee and project applicant representatives shall meet and confer to identify requirements necessary to achieve compliance. If the inconsistencies cannot be resolved, CVCC will provide written notice to the Local Permittee and the Wildlife Agencies of the Conservation Objectives and Required Measures with which the Development proposal is inconsistent within fourteen (14) calendar days of the meeting. Section 13 of the IA provides the Local Permittees' obligations under the HCP/NCCP and Section 23 of the IA provides potential remedies for failure to comply with the obligations.

Finding 4.2.3D — CDFG finds that the Implementing Agreement specifies the action CDFG shall take if the level of take exceeds that authorized by the Permit (Section 2820(b)(3)(D)).

Section 23.5 of the IA allows CDFG to suspend this NCCP Permit in whole or in part, in the event of any material violation of this NCCP Permit or material breach of the IA by the Permittees, provided, however, that it shall not suspend this NCCP Permit without first:1) providing thirty (30) day prior written notification to the relevant Permittee(s) and the CVCC of the proposed revocation or suspension, and 2) meeting and conferring with the relevant Permittee(s) and the CVCC to attempt to avoid the need to revoke or suspend all or a portion of the Permit. The Parties may rely upon the informal meet and confer

process set forth in Section 23.6 of the IA for disputes concerning potential Permit revocation or suspension.

Finding 4.2.4 CDFG finds that the Implementing Agreement contains provisions specifying procedures for amendment of the HCP/NCCP and the Implementing Agreement (Section 2820(b)(4)).

There are two types of amendments (Minor and Major) to the HCP/NCCP and IA that can be undertaken (Section 20:IA). Minor Amendments are amendments to the HCP/NCCP of a minor or technical nature where the effect on Covered Species, levels of Take and Permittees' ability to implement the HCP/NCCP are not significantly different than those described in the HCP/NCCP as originally adopted. Minor Amendments to the HCP/NCCP shall not require amendments to the IA or the Permit. Any Party may propose Minor Amendments to the HCP/NCCP or the IA by providing written notice to all other affected Parties.

Major Amendments are those proposed changes to the HCP/NCCP and the Permits that are not clerical or Minor Amendments. Major Amendments to the HCP/NCCP shall require a subsequent amendment to the IA and the Permits, and public notice as required by applicable laws and regulations. Major Amendments shall be processed as set forth in Section 6.12.4 of the HCP/NCCP and require the same process followed for the original HCP/NCCP approval. A Major Amendment will require an amendment to the HCP/NCCP and the IA addressing the new circumstances, subsequent publication and public notification, and CEQA/NEPA compliance. Major Amendments shall be subject to review and approval by the CVCC and other Permittees, as appropriate, at a noticed public hearing. The Wildlife Agencies will use reasonable efforts to process proposed Major Amendments within one hundred twenty (120) days after publication of the proposed Major Amendment in the Federal Register.

Finding 4.2.5 CDFG finds that the Implementing Agreement contains provisions ensuring implementation of the monitoring program and adaptive management program (Section 2820(b)(5)).

Section 9.1 of the IA requires that monitoring of the HCP/NCCP Reserve System will be instituted pursuant to Section 8.3 of the HCP/NCCP. The CVCC is responsible for Monitoring Program administration. Final responsibility will rest with the CVCC Executive Director. The Executive Director may appoint a staff member as his or her designee for purposes of overseeing Monitoring Program administration, but ultimate responsibility will remain with the Executive Director. Day-to-day responsibility for Monitoring Program administration will be part of the contract for the Monitoring Program, and a specific individual will be identified by the contractor as the Monitoring Program Administrator (MPA). The MPA shall be responsible for implementation of the Monitoring Program with oversight from the CVCC and the RMOC. To ensure that Monitoring Program administration is adequately addressed the CVCC shall consult with

the Wildlife Agencies regarding the provisions for the MPA in developing the Request for Proposals for the Monitoring Program contract.

Finding 4.2.6 CDFG finds that the Implementing Agreement contains provisions for oversight of HCP/NCCP implementation for purposes of assessing mitigation performance, funding, and habitat protection measures (Section 2820(b)(6)).

The HCP/NCCP and IA provide for the establishment of several committees and procedures for the purposes of oversight of mitigation performance, funding and habitat protection measures (Sections 6.1.2, 6.1.3, 6.1.4, 6.4, 6.5, 6.6.1.1:HCP/NCCP and Sections 10.1, 11.2.3, 11.2.4, 11.2.6, 11.2.7:IA). These include the RMOC, the Acquisition and Funding Coordinating Committee, RMUCs, the Rough Step Analysis, Joint Project Review, and Annual Reporting.

To ensure that the Permittees are in compliance with the HCP/NCCP, an Annual Report will be prepared by CVCC and submitted to the Wildlife Agencies and Permittees. The Annual Report for the preceding calendar year must be submitted by March 30. The report will be presented at a CVCC meeting, which will be a public workshop, and copies of the report will be made available to the public and posted on the website at www.cvmshcp.org.

Finding 4.2.7 CDFG finds that the Implementing Agreement contains provisions for periodic reporting to the Wildlife Agencies and the public for purposes of information and evaluation of plan progress (Section 2820(b)(7)).

As described in Section 6.4 of the HCP/NCCP, the CVCC will prepare an Annual Report that will be submitted to the Wildlife Agencies and Permittees. The Annual Report for the preceding calendar year shall be submitted by March 30. The Annual Report shall be presented at a CVCC public workshop, copies made available to the public, and posted on the website at www.cvmshcp.org. Each Annual Report shall address, at a minimum, the descriptions and analyses detailed in Section 6.4 of the HCP/NCCP (Section 10.1:IA).

By March 30 of each year following the Effective Date, the Implementing Entity shall prepare and submit an Annual Report to the Wildlife Agencies and the Permittees that summarizes the following:

- an overview of the status of the Conservation Areas;
- results of monitoring as described in Section 8.7 of the HCP/NCCP;
- identification of Adaptive Management actions indicated and whether or not such actions were implemented;
- a description of Reserve Management activities for the previous year;
- an accounting of the number of acres acquired, conserved through cooperative management agreements or otherwise protected during the previous year to quantify the progress achieved towards identified Conservation Objectives;

- an accounting of the number of acres of Core Habitat, Essential Ecological Processes, Biological Corridors and Linkages and natural communities conserved within each Conservation Area developed or impacted by Covered Activities during the previous year;
- an accounting of the number of acres of habitat for the species and natural communities outside the HCP/NCCP Conservation Areas in the HCP/NCCP Area developed during the previous year;
- an accounting of the status of each Covered Species with respect to the Species Conservation Goals and Objectives in Sections 4 and 9 of the HCP/NCCP;
- an evaluation of any significant issues encountered in HCP/NCCP implementation during the previous year and proposed resolution; expenditures for acquisition and HCP/NCCP Reserve System management over the previous year and applicable budgets for the upcoming fiscal year;
- summary of compliance activities required of Permittees;
- a copy of the audit of CVCC finances for the most recent fiscal year;
- summary of all unauthorized/unpermitted activities detected and enforcement actions taken during the previous year; and
- additional technical, commercial, and scientific information and/or data that are reasonably available and necessary to evaluate performance and compliance with the commitments and objectives of the HCP/NCCP. Data related to habitat losses and gains shall be provided to the Wildlife Agencies in GIS format consistent with HabiTrak methodology.

Finding 4.2.8 CDFG finds that the Implementing Agreement contains mechanisms to ensure adequate funding to carry out the conservation actions identified in the HCP/NCCP (Section 2820(b)(8)).

The Implementing Entity, County, Cities and County Flood Control District shall ensure that all required mitigation, conservation, monitoring, reporting and adaptive management measures are adequately funded throughout the term of the permits (Section 12:IA). In addition, after the Reserve System is assembled, monitoring, reporting and adaptive management measures are adequately funded in perpetuity. The Permittees do not intend to use funds from their respective general funds to implement the HCP/NCCP; rather, they intend to obtain sufficient funds through a comprehensive strategy further described in Section 5.2 of the HCP/NCCP, primarily depending on Local Development Mitigation Fees, fees on the importation of waste into landfills in Riverside County, transportation project mitigation, mitigation for regional infrastructure projects, interest on the Endowment Fund, and federal and state grants pursuant to Section 12 of the IA. The Permittees may use or establish other local funding measures, including, but not limited to, utility surcharges, special taxes or assessments, or bonds. Each of the Permittees is responsible to seek all feasible increases in revenues that are necessary to keep pace with rising costs, as described in Section 5.2 of the HCP/NCCP. On an annual basis, the Permittees and the Wildlife Agencies will evaluate the performance of the funding mechanisms and develop any necessary modifications to address possible shortfalls. Additionally, this annual evaluation will include an assessment of the funding

plan and anticipate funding needs over the next eighteen (18) months for the purpose of identifying any potential deficiencies in cash flow. If deficiencies are identified through this evaluation, the Permittees and the Wildlife Agencies will develop strategies to address any additional funding needs consistent with the terms and conditions of the HCP/NCCP. Additional funding needs will be addressed as set forth in Section 5.2.2 of the HCP/NCCP (Section 12:IA).

Finding 4.2.9 CDFG finds that the Implementing Agreement contains provisions to ensure that implementation of mitigation and conservation measures on a plan basis is roughly proportional in time and extent to the impact on habitat or Covered Species authorized under the HCP/NCCP. These provisions shall identify the conservation measures, including assembly of reserves where appropriate and implementation of monitoring and management activities, that will be maintained or carried out in rough proportion to the impact on habitat or Covered Species and the measurements that will be used to determine if this is occurring (Section 2820(b)(9)).

The HCP/NCCP will maintain a balance of conservation and development through two separate means – Rough Step and rough proportionality. Rough Step analysis ensures, on an annual basis, that Conservation of Additional Conserved Lands is within 10% of the level needed to stay in balance with the level of Development (Section 6.5:HCP/NCCP). In order to assure Rough Step is maintained, there will be an annual Rough Step analysis of the Conservation Objectives conducted by the Implementing Entity for each Conservation Area. As set forth in Section 6.4 of the HCP/NCCP, Annual Reports will be prepared in order to account for Habitat losses and gains associated with public and private Development projects. The Annual Reports will be used to demonstrate that Conservation is occurring in Rough Step with Development, reflect that the HCP/NCCP Reserve System is being assembled as contemplated in the HCP/NCCP, and ensure that Habitat Conservation Goals and Objectives and required measures are being implemented. Acquired lands must be managed in perpetuity according to the Reserve Management Unit Plans. For purposes of the HCP/NCCP, whether "rough proportionality" is met shall be determined pursuant to Section 5.2.2.3 of the HCP/NCCP which calls for an analysis on a plan basis every 5 years. Section 13 of the IA specifies the requirements of each of the Permittees, including carrying out all requirements of the HCP/NCCP, including rough proportionality and Rough Step.

Finding 4.3 CDFG finds that any required data and reports are available for public review and that the Implementing Entity shall also conduct public workshops annually to provide information and evaluate progress toward attaining the conservation objectives of the HCP/NCCP (Section 2820(d)).

By March 30 of each year following the Effective Date, the Implementing Entity shall prepare and submit an Annual Report to the Wildlife Agencies and the Permittees that summarizes the following:

- an overview of the status of the Conservation Areas;
- results of monitoring as described in Section 8.7 of the HCP/NCCP;
- identification of Adaptive Management actions indicated and whether or not such actions were implemented;
- a description of Reserve Management activities for the previous year;
- an accounting of the number of acres acquired, conserved through cooperative management agreements or otherwise protected during the previous year to quantify the progress achieved towards identified Conservation Objectives;
- an accounting of the number of acres of Core Habitat, Essential Ecological Processes, Biological Corridors and Linkages and natural communities conserved within each Conservation Area developed or impacted by Covered Activities during the previous year;
- an accounting of the number of acres of habitat for the species and natural communities outside the HCP/NCCP Conservation Areas in the HCP/NCCP Area developed during the previous year;
- an accounting of the status of each Covered Species with respect to the Species Conservation Goals and Objectives in Sections 4 and 9 of the HCP/NCCP;
- an evaluation of any significant issues encountered in HCP/NCCP implementation during the previous year and proposed resolution;
- expenditures for acquisition and HCP/NCCP Reserve System management over the previous year and applicable budgets for the upcoming fiscal year;
- summary of compliance activities required of Permittees;
- a copy of the audit of CVCC finances for the most recent fiscal year;
- summary of all unauthorized/ unpermitted activities detected and enforcement actions taken during the previous year; and
- additional technical, commercial, and scientific information and/or data that are reasonably available and necessary to evaluate performance and compliance with the commitments and objectives of the HCP/NCCP (Section 10:IA).

The report will be presented at a CVCC meeting, which will be a public workshop. Copies of the report will be made available to the public (Section 6.4:HCP/NCCP) and posted on the website at www.cvmshcp.org.

Finding 4.4 — CDFG finds that the level of assurances provided to the HCP/NCCP participants is commensurate with long-term conservation assurances and associated implementation measures pursuant to the approved HCP/NCCP (Section 2820(f)).

The HCP/NCCP is designed as a multiple species conservation plan in accordance with the tenets of conservation biology and is designed to function on a landscape/ecosystem level. By the creation and long-term management of a landscape-level reserve system,

habitats, species and natural communities will be protected in perpetuity. The goal of the HCP/NCCP is to create a self-sustaining, landscape-level reserve system.

The conservation strategy is based on the creation of a system of new preserves (the Reserve System) linked to existing protected lands. The conservation strategy is designed to create a Reserve System that will:

- Preserve and/or manage 723,480 acres for the benefit of Covered Species, natural communities, biological diversity, and ecosystem function.
- Preserve major habitat connections linking protected lands.
- Enable adaptive management of habitats to enhance populations of Covered Species and maintain ecosystem processes.
- Conserve 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.

These actions, plus the avoidance, minimization, and additional specific conservation measures in the HCP/NCCP, will offset the loss of 178,509 acres of developable land (Section 4.8:EIR, Table 4-1:HCP/NCCP).

As provided in the IA, CDFG shall not require any Permittee or third party participant to provide, without that Permittee's or party's consent, additional land, water or financial compensation, or additional restrictions on the use of land, water, or other natural resources, for the purpose of conserving Covered Species. This will be true even in the event of Unforeseen Circumstances, provided the Permittees are properly implementing the IA, the HCP/NCCP and the terms and conditions of the NCCP Permit. The provisions of the IA and the HCP/NCCP that address adaptive management and Changed Circumstances, including changes to the legal status of fully protected species and non-Covered Species, are not Unforeseen Circumstances and therefore are not subject to these assurances. However, CDFG acknowledges that such adaptive management and Changed Circumstances provisions are not intended to require modifications to the HCP/NCCP's mitigation program that will require additional funding or to impose significant additional burdens on Permittees or Third Party Participants. These assurances are commensurate with the long-term conservation assurances provided by the Permittees through the HCP/NCCP and IA.

Finding 4.4.1A — CDFG finds that the level of and time limits for assurances specified in the Implementing Agreement were based on the level of knowledge of the status of the Covered Species and natural communities (Section 2820(f)(1)).

The status of Covered Species in the HCP/NCCP area was based on information gathered on status, population trends, distribution, threats, and conservation and management

efforts. The following criteria were then applied to each species to determine whether it would be covered (i.e., authorized for Take in the final permits). To be covered:

- a species had to be known to occur or likely to occur within the HCP/NCCP area based on credible evidence;
- a species had to be currently listed under ESA or CESA or likely to become listed within the permit term based on existing information as well as professional judgment, knowledge of future listing packages, and input from species specialists and regulatory agencies;
- a species had to be likely to be adversely affected by Covered Activities; and
- there had to be sufficient data on the species' life history, habitat requirements, and occurrence in the HCP/NCCP area to adequately evaluate impacts on the species and to develop conservation measures to mitigate those impacts in accordance with regulatory standards (Section 3.2:HCP/NCCP).

The HCP/NCCP includes the following eight natural communities, corresponding to the major land cover types (excluding development): chaparral, desert alkali scrub, desert scrub, riparian, dry wash woodland and mesquite, sand dunes and sand fields, woodland and forests, and irrigated agriculture. Irrigated agriculture is included as a natural community despite its disturbed or artificial nature because it provides habitat for some Covered Species. The ecological function for Covered Species (i.e., value for forage, hunting, breeding, aestivating, movement, dispersal, etc.) of each natural community was considered to provide context for the impact analysis and the conservation strategies.

There is enough known about the status of each of the Covered Species and the natural communities to warrant provision of long-term assurances to the HCP/NCCP participants.

Finding 4.4.1B — CDFG finds that the level of and time limits for assurances specified in the Implementing Agreement were based on the adequacy of analysis of the impact of take on Covered Species (Section 2820(f)(1)(B)).

Implementation of the Covered Activities will result in Take of Covered Species. Where feasible, the level of Take has been identified. For most species, Take has been quantified on the basis of impacts on habitat assumed to be suitable for each species (Table 4-114:HCP/NCCP). Estimates of Take are based on the habitat models developed for the Covered Species. These estimates are likely to be inflated because (1) habitat models may overestimate the actual extent of suitable habitat, and (2) not all suitable habitat is occupied by the subject species.

The major direct effects to Covered Species will result from habitat loss associated with urban development. Because the HCP/NCCP utilizes a habitat-based approach, the determination of direct and indirect effects on Covered Species is based on the habitat disturbed for each species. Table 4-114 and the species profiles (Section 9:HCP/NCCP)

provide additional information on specific biological needs of each Covered Species. Overlays of habitat models with the permit area are shown in Figures 4-6 through 4-26 of the HCP/NCCP. Impacts are described for each taxonomic group.

There is enough known about the impacts to each of the Covered Species and the natural communities to warrant provision of long-term assurances to the HCP/NCCP participants.

Finding 4.4.1C — CDFG finds that the level of and time limits for assurances specified in the Implementing Agreement were based on the use of the best available science to make assessments about the impacts of take, the reliability of mitigation strategies, and the appropriateness of monitoring techniques (Section 2820(f)(1)(C)).

The HCP/NCCP was developed using the best currently available scientific information. The process for collecting data and information necessary for the HCP/NCCP, and for filling data gaps that were discovered during development of the HCP/NCCP, is described in Section 3 of the HCP/NCCP.

The HCP/NCCP utilized an extensive data collection process and received input from scientific experts in the various fields of biology and conservation biology. During development of the HCP/NCCP, the planning team, which consisted of staff from CVAG, the Wildlife Agencies, CVMC, Riverside County, the BLM, and the Scientific Advisory Committee, assembled a detailed and comprehensive land cover map of the entire HCP/NCCP area. They also assembled an array of other data layers valuable for conservation planning, including information on topography, hydrology, species occurrence locations and soils. Using these raw data layers, research on the habitat needs of Covered Species, and their own expertise, the planning team developed habitat suitability models for the Covered Species. These models reflected the best available scientific information on the needs of Covered Species and were used extensively during HCP/NCCP development to guide critical tasks such as designing the land acquisition strategy and estimating Take of Covered Species. These estimates are likely to be inflated because habitat models may overestimate the actual extent of suitable habitat and not all suitable habitat is occupied by the subject species.

Development of the HCP/NCCP was guided by independent scientific input and analysis (Section 3.1.3: HCP/NCCP). Independent scientific input early in the planning process was critical to the success of the HCP/NCCP. In early November of 1996 a workshop was held with invited scientists to discuss reserve design and connectivity criteria. Participants at the workshop included members of the Independent Science Advisors (ISA). The ISA consisted of Dr. Reed Noss, Conservation Biology Institute; Dr. Edith Allen, University of California, Riverside; Dr. Greg Ballmer, University of California, Riverside; Dr. Michael Soulé; Dr. Richard Tracy, University of Nevada, Reno; and Dr. Robert Webb, U.S. Geologic Survey. This workshop focused on receiving input and direction from these conservation biologists with respect to the recommended approaches

to reserve design, target species selection and habitat modeling, and a wide range of topics related to HCP/NCCP development.

In September 1997, biologists with expertise on a given species or taxonomic group were invited to a workshop to provide input on the status and distribution of proposed target species. These experts reviewed known location maps and very preliminary species distribution maps. In April 1998 at another workshop with a subset of the ISA, reserve design and conservation planning were discussed. Altogether, there were seven workshops and meetings of independent scientists.

In addition to the above-mentioned workshops, there was a core group of local biologists established as the Scientific Advisory Committee (SAC). The SAC was established as a subcommittee to the Project Advisory Group (PAG) to provide biological and ecological oversight in the development of the HCP/NCCP. As a subcommittee to the PAG, all meetings of the group were open to the public.

There is sufficient available scientific information about impacts, mitigation and conservation strategies, and monitoring methodology to warrant provision of long term assurances to the HCP/NCCP participants.

Finding 4.4.1D — CDFG finds that the level of and time limits for assurances specified in the Implementing Agreement were based on the appropriateness of the size and duration of the HCP/NCCP with respect to quality and amount of data (Section 2820(f)(1)(D)).

Identification of Conservation Areas followed the process outlined in Section 3.1.4:HCP/NCCP and consisted of: 1) determining the species and natural communities to be included in the HCP/NCCP; 2) gathering information on the species and natural communities; 3) preparing accounts of individual species and natural communities; 4) gathering other pertinent information such as watersheds, ecological processes, roads, and lands uses; 5) preparing a natural communities map; 6) analyzing biological resource information to map the distribution of species; 7) developing site identification maps; 8) delineating core habitat area, and essential ecological process area and biological corridors and linkages; 9) conducting ISA review; and 10) delineating conservation goals and objectives.

Based on the recommendations of the ISA after their review of the January 2001 Administrative Review Draft, the SITES model (SITES V.1.0: An Analytical Toolbox for Designing Ecoregional Conservation Portfolios, The Nature Conservancy) was used to complete an analysis of the reserve design for the HCP/NCCP. It uses a heuristic method to choose a reserve system or "conservation portfolio" from a larger set of "planning units" within an ecoregion. Using the SITES V. 1.0 program, a reserve design very similar to the HCP/NCCP reserve system was selected. Observed differences were minor, and primarily appeared related to the scale the program chose for planning units; high-priority natural types were selected preferentially even if they were only a small portion of

the planning unit; i.e., an entire section (640 acres) was chosen when only a few acres of the desired natural type occurred in the section. For these reasons the reserve design was not modified based on the SITES analysis. The reserve design differences were minor enough to not warrant a change. The analysis verified the reserve design.

The evaluation of Covered Species was based on information from a variety of sources including CNDDB; California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California, 2001; CDFG's Special Animals and Special Plants lists; field data collected during surveys for the HCP/NCCP in 1995, 1996, 1997, 1998, 1999, 2002 and 2003; EIRs, Biological Assessments, and other environmental documents prepared throughout the HCP/NCCP area since 1979; CDFG, BLM, NPS, State Parks, USFWS, and other agency data; data collected from biologists and others knowledgeable about the HCP/NCCP Area and/or a given species; location data from voucher specimens held in museums, herbaria, and public trust institutions; published records and species distribution information from peer-reviewed journal articles, where information on species or natural community distribution has been described at an appropriate scale.

The description of Covered Species in the HCP/NCCP area was based on information gathered on status, population trends, distribution, threats, and conservation and management efforts (Section 9:HCP/NCCP). Table 3-1 of the HCP/NCCP lists the 27 species proposed for coverage in the HCP/NCCP.

Size and duration of the HCP/NCCP was informed by abundant high-quality data about land use, ecological processes, Covered Species, natural communities, stressors, and management and monitoring techniques. This warrants the provision of long-term assurances to the HCP/NCCP participants.

Finding 4.4.1E — CDFG finds that the level of and time limits for assurances specified in the Implementing Agreement were based on the sufficiency of mechanisms for long-term funding of all components of the HCP/NCCP and contingencies (Section 2820(f)(1)(E)).

The cost of implementing the HCP/NCCP during the 75-year permit term is estimated at $2,038,540,000 (Sections 5.1.2 -5.1.6, Table 5-2a:HCP/NCCP). Funding to implement the HCP/NCCP will come from a variety of potential sources, including, but not limited to Local Development Mitigation Fees, fees on the importation of waste into landfills in Riverside County, transportation project mitigation, mitigation for regional infrastructure projects and the Eagle Mountain Landfill Environmental Mitigation Trust Fund. The intent is to complete land acquisition in the first 30 years with loans from the Endowment Fund and revenues generated from Local Development Mitigation Fees. The loans will be repaid from the Land Acquisition and Improvement Fund to the Endowment Fund in the ensuing 20 years plus interest. Initial monies in the Endowment Fund will come from Regional Road Project Mitigation, Regional Infrastructure Mitigation, and the CVFTL HCP Endowment Fund (collectively approximately $16.5 million, Table 5-3d:HCP/NCCP). In addition, the annual costs for the Monitoring Program, the

Management Program, and Adaptive Management, as well as general HCP/NCCP administration will be funded for the 75-year term of the Permit with landfill tipping fees and loans from the Endowment Fund for the first 11 years.

The obligation of the Permittees is to conserve sufficient acreage to meet the Conservation Goals and Conservation Objectives and to fund the Management Program, and the Monitoring Program, including Adaptive Management, in perpetuity (Section 5.1:HCP/NCCP). Full funding during the permit term is guaranteed by the Permittees through the IA. In addition, Section 12.1.3 of the IA provides that the Implementing Entity, CVAG, County, Cities, County Flood Control, County Parks, County Waste, CVWD, and IID shall ensure that monitoring, reporting, and adaptive management measures are adequately funded in perpetuity. During the 75-year permit period, sufficient funds will be contributed to establish a non-wasting endowment sufficient in size at the end of Year 75 to fund the Monitoring Program, the Management Program, and Adaptive Management as well as HCP/NCCP administration costs in perpetuity with interest from the endowment (Table 5-3d:HCP/NCCP).

There are sufficient mechanisms for long-term funding of the mitigation for impacts to and conservation of the Covered Species and the natural communities to warrant provision of long-term assurances to the HCP/NCCP participants.

Finding 4.4.1F — CDFG finds that the level of and time limits for assurances specified in the Implementing Agreement were based on the degree of coordination and accessibility of centralized data for analysis and evaluation of the effectiveness of the HCP/NCCP (Section 2820(f)(1)(F)).

The Implementing Entity will develop and maintain a comprehensive, centralized data repository to track implementation of all aspects of the HCP/NCCP. The data repository will be operating within 8 months of permit issuance (Section 8.6:HCP/NCCP).

The Implementing Entity will either use the HabiTrak database developed by CDFG, or a Geographic Information System-based data repository that is consistent and can be used with HabiTrak. The Implementing Entity shall make the data repository accessible to the parties named in the IA, including the Wildlife Agencies.

All data and reports associated with the monitoring program for this HCP/NCCP will be available to the public. Annually, the CVCC will report on the progress of implementation to the public. The Implementing Entity will summarize habitat losses and gains, habitat restoration and creation, and management and monitoring accomplishments for the previous year. The report will be presented at a CVCC meeting, which will be a public workshop, and copies of the report will be made available to the public (Section 6.4:HCP/NCCP) and will be posted on the website: www.cvmshcp.org.

There are sufficient mechanisms for coordination, centralized storage, and accessibility of data to warrant provision of long-term assurances to the HCP/NCCP participants.

Finding 4.4.1G — CDFG finds that the level of and time limits for assurances specified in the Implementing Agreement were based on the degree to which a thorough range of foreseeable circumstances are considered and provided for under the adaptive management program (Section 2820(f)(1)(G)).

The following foreseeable changed circumstances were recognized in the HCP/NCCP: drought, fire, invasion by new exotic species, lowering of the water table, and new Listings of Species Not Covered by the HCP/NCCP. Adequate mechanisms to respond to these changed circumstances, and funding to address them in an adaptive management context, were included in the HCP/NCCP (Section 6.8.3:HCP/NCCP).

A thorough range of foreseeable circumstances were considered and provided for in the HCP/NCCP. Therefore, provision of long-term assurances to the HCP/NCCP participants is warranted.

Finding 4.4.1H — CDFG finds that the level of and time limits for assurances specified in the Implementing Agreement were based on the size and duration of the HCP/NCCP (Section 2820(f)(1)(H)).

Riverside County has a land area of more than 4.7 million acres. The HCP/NCCP Area covers approximately one-quarter of the County, or 1.1 million acres in central Riverside County. The HCP/NCCP Area was defined as the area in which impacts will be evaluated and landscape-level conservation will occur and in which the Permittees expect to incur impacts to Covered Species. HCP/NCCP Area boundaries were based on a combination of watershed boundaries, political, ecological, and hydrologic factors (Section 2.1:HCP/NCCP).

The conservation strategy relies on assemblage of a system of new reserves linked to existing protected lands to form a network of lands. The Reserve System will be approximately 723,000 acres, and the total developable acres under the HCP/NCCP are 178,509 acres. The size and configuration of the Reserve System was based on a number of factors, including ecological needs of and opportunities for conserving Covered Species and natural communities; projected urbanization rates and boundaries; and extent of reasonable and expected growth. The size and configuration of the Reserve System relative to the impacts associated with Covered Activities in the HCP/NCCP Area is adequate to support the assurances as stated in the IA (Section 15.3:IA).

The Permittees are seeking permits from USFWS and CDFG that have terms of 75 years. Accordingly, all assessments in the HCP/NCCP are based on a 75-year time period. Prior to permit expiration, the Permittees may apply to renew or amend the HCP/NCCP and its associated permits and authorizations to extend their terms. Seventy-five years was

chosen as the permit duration because it is a reasonable timeframe over which to assemble the Reserves and fund the endowment in perpetuity. The Implementing Entity proposes to complete the acquisition program in 30 years to minimize costs and potential land use conflicts (Section 5.1.2:HCP/NCCP).

The size of the planning area, Reserve System, and duration of the permit are sufficient to warrant provision of long-term assurances to the HCP/NCCP participants.

Finding 4.5.1 CDFG finds that the following species are authorized for take under the plan and coverage is warranted based on regional or landscape level consideration, such as healthy population levels, widespread distribution throughout the plan area, and life history characteristics that respond to habitat-scale conservation and management actions (Section 2821(a)(1)).

No species covered by this HCP/NCCP were found to fit these criteria.

Finding 4.5.2 CDFG finds that the following species are authorized for take under the plan and coverage is warranted based on regional or landscape level considerations with site specific conservation and management requirements that are clearly identified in the plan for species that are generally well-distributed, but that have core habitats that must be conserved (Section 2821(a)(2)).

Adequate landscape level considerations, with additional species-specific conservation measures (management) and monitoring in an adaptive management framework will be implemented for the following species:

Desert Tortoise (Section 9.6.1:HCP/NCCP)

The desert tortoise ranges from southern Nevada and extreme southwestern Utah south through southeastern California and southwestern Arizona into northern Mexico. In California, desert tortoises occur in northeastern Los Angeles, eastern Kern, and southeastern Inyo counties, and over most of San Bernardino, Riverside, and Imperial counties. They inhabit a diverse array of desert Habitats including river washes, rocky hillsides and mountains, and flat expanses of creosote bush scrub. The desert tortoise is listed by the State of California and by the USFWS as a threatened species, and it is the official state reptile.

The HCP/NCCP Area represents a small, but biologically significant portion of the desert tortoise's overall range. Desert tortoises in the foothills of the southeastern San Bernardino Mountains (especially in the Whitewater Hills) represent the western-most reproductively active population of desert tortoises in the Colorado Desert ecosystem (Lovich et al. 1999). Desert tortoise are known to be found in the HCP/NCCP Area in the foothills of the San Bernardino and Little San Bernardino Mountains, the Painted and

Whitewater Hills (in the latter they are common), the San Jacinto and northern Santa Rosa Mountains, and in the eastern part of the HCP/NCCP Area in the Desert Tortoise and Linkage, Mecca Hills/Orocopia Mountains, and Dos Palmas Conservation Areas.

The Desert Tortoise Recovery Plan (USFWS 1994) was completed in 1994 and the USFWS has designated about six million acres as critical Habitat, most of which is in California, particularly in the Mojave Desert and the Northern and Eastern Colorado Desert. According to the Desert Tortoise Recovery Plan, maintenance of viable populations within each recovery unit, including the Eastern Colorado Recovery Unit, which is partially within the HCP/NCCP Area, is essential to this species.

The primary importance of the HCP/NCCP to desert tortoise is that it provides Conservation for this species at the western limits of its range. The Desert Tortoise and Linkage Conservation Area includes all the federally designated critical Habitat for desert tortoise within the HCP/NCCP Area. The HCP/NCCP ensures the long-term conservation of currently unprotected desert tortoise Habitat and provides for connectivity between Habitat areas throughout the HCP/NCCP Area. In addition, the Conservation Areas provide protection across an array of Habitat variables, including moisture gradients, soil character, elevation, and vegetation.

There are 571,098 acres of modeled Habitat for this species within the HCP/NCCP Area of which approximately 377,127 acres are identified as Core Habitat. The HCP/NCCP will ensure Conservation of 365,379 acres (97% of total) of the Core Habitat and 126,431 acres (93%) of the Other Conserved Habitat for the desert tortoise in 14 Conservation Areas (Sections 4.3.1, 4.3.2, 4.3.3, 4.3.4, 4.3.5, 4.3.6, 4.3.8, 4.3.9, 4.3.12, 4.3.15, 4.3.16, 4.3.17, 4.3.20, 4.3.21:HCP/NCCP). The conserved Core Habitat areas range in size from 89,178 to over 125,000 acres. Approximately 345,899 acres (67%) of the modeled Habitat are within Existing Conservation Lands and will be managed as part of the Reserve System. The HCP/NCCP will conserve an additional 145,911 acres (28%) of the modeled Habitat for desert tortoise in the HCP/NCCP Area (Table 4-114:HCP/NCCP).

Within the Conservation Areas under the worst case scenario, 16,957 acres of modeled Habitat (3%) could be Developed (Table 4-114:HCP/NCCP). There could be up to 11,748 acres (3% of total) of Core Habitat and 5,209 acres of Other Conserved Habitat (4% of total) lost. Loss of desert tortoise Habitat within the Conservation Areas must be consistent with the Conservation Objectives for this species in order to: 1) ensure Conservation of Core Habitat consistent with the Desert Tortoise Recovery Plan (USFWS 1994); 2) protect Other Conserved Habitat within a range of environmental conditions and conserve Essential Ecological Processes needed to maintain this Habitat; and 3) maintain Biological Corridors and Linkages among conserved populations to provide for population fluctuation and enhance genetic diversity (Section 9.6.1:HCP/NCCP). So, although some Habitat loss could occur within the Conservation Areas, the Conservation Objectives required by the HCP/NCCP will provide for protection of Habitat to ensure the long-term conservation of this species.

Outside of the Conservation Areas, there are 50,272 acres (9%) of modeled Habitat that could be lost (Table 4-114:HCP/NCCP). None of this modeled Habitat outside the Conservation Areas is designated critical Habitat for the desert tortoise. The density of desert tortoises in much of the Coachella Valley is very low. Modeled Habitat outside the Conservation Areas is primarily in two areas: 1) in the area east of Hwy. 62 and south of Desert Hot Springs, and 2) in the area around Dillon Road where it intersects with the I-10 freeway.

To conserve the desert tortoise, the Permittees will protect and manage, in perpetuity, 145,911 acres of the modeled Habitat for this species. The 345,899 acres of modeled Habitat within Existing Conservation Lands will be monitored and managed to ensure that Conservation Objectives are met. The HCP/NCCP will thus ensure Conservation, through protection and management, of 491,810 acres of Reserve Lands for this species (Section 9.6.1:HCP/NCCP).

Both inside and outside Conservation Areas, avoidance, minimization, and mitigation measures require relocation of individual tortoises if required surveys locate individuals on the site of Covered Activities (Section 4.4:HCP/NCCP).

The HCP/NCCP provides for protection of Biological Corridors and Linkages that will maintain connectivity for desert tortoise from the western limits to the eastern part of the HCP/NCCP Area. This connectivity will be maintained by existing Biological Corridors including Stubbe Canyon Wash, the Whitewater River, Hwy. 62, and I-10 between Joshua Tree National Park to the north and the Orocopia Mountains to the south (Sections 4.3.2, 4.3.3, 4.3.7, 4.3.18:HCP/NCCP).

Additionally, the HCP/NCCP provides for Management and Monitoring Programs to ensure the Conservation of this species, including control of activities that degrade desert tortoise Habitat, control of invasive species where necessary, and restoration and enhancement of degraded Habitat as necessary according to monitoring results (Section 8.4.6:HCP/NCCP). The HCP/NCCP also calls for various monitoring and management actions.

Implementation of the HCP/NCCP is expected to maintain and enhance population viability of the desert tortoise in the HCP/NCCP Area by protecting the populations and additional Habitat within a range of environmental conditions and by providing connectivity with populations outside the HCP/NCCP Area. Implementation of the HCP/NCCP should coordinate with implementation of the NECO Plan.

The desert tortoise will benefit from the establishment of the HCP/NCCP Reserve System wherein 86% of the Habitat for desert tortoise in the HCP/NCCP Area will be conserved (Table 4-114:HCP/NCCP). The conserved areas include 97% of the significant population in the Whitewater Hills (Section 4.3.4:HCP/NCCP), and 97% of the Critical Habitat designated in the area between the Mecca Hills and the Orocopia Mountains and Joshua Tree National Park (Sections 4.3.10, 4.3.18:HCP/NCCP). This Conservation Area is consistent with the Critical Habitat designation and with the NECO Plan. HCP/NCCP

implementation is expected to provide for Conservation of the desert tortoise within the HCP/NCCP Area, as currently unprotected portions of its Habitat and potential Habitat areas will be conserved. The combination of the overall Conservation measures, including species-specific measures such as management to minimize impacts in tortoise Habitat, monitoring to evaluate potential stressors to desert tortoise, and long-term protection, management, and enhancement of desert tortoise Habitat is expected to effectively compensate for potential adverse effects to this threatened species due to the covered activities in this Plan (Sections 4.4, 8.4.2, 8.4.6:HCP/NCCP). Therefore, coverage under the HCP/NCCP is warranted.

Flat-Tailed Horned Lizard (Section 9.6.3:HCP/NCCP)

The HCP/NCCP Area represents the northernmost and westernmost limits of flat-tailed horned lizard geographic range. The populations in the Coachella Valley are isolated from all other flat-tailed horned lizard populations by agriculture, urban Development, and by the Salton Sea. As a group, the Coachella Valley population can be viewed as a distinct population pursuant to FESA. To date, no analyses have been completed to determine if this distinct population differs genetically from the more southeastern populations.

The historic range of this species included suitable Habitat in southeastern California, southwestern Arizona, northwestern Sonora, Mexico, and northeastern Baja California, Mexico. In California, they occurred in the Lower Colorado River Basin and the Salton Basin (Coachella and Imperial Valleys) from Palm Springs south-southeast to the Mexican border - an area of about 3,462 square miles. Historically there were about 694 square miles of historic Habitat in the Coachella Valley Plan Area of Riverside County. Currently, less than 50% of the historic Habitat in California remains (Turner et al. 1980).

The primary importance of the HCP/NCCP to the flat-tailed horned lizard is that it provides for long-term Conservation (including Habitat protection, management and monitoring) of Core Habitat, the associated Essential Ecological Processes, and connectivity between these Habitat areas. In addition, the Conservation Areas provide protection across an array of Habitat variables, including moisture, soil character, elevation, and vegetation.

There are 32,426 acres of predicted modeled Habitat for this species within the HCP/NCCP Area of which approximately 4,148 acres are identified as Core Habitat. For predicted Habitat, the HCP/NCCP will ensure Conservation of 4,051 acres (98% of total) of the Core Habitat and 9,857 acres (93% of total) of the Other Conserved Habitat for the flat-tailed horned lizard. The conserved Core Habitat area in the Thousand Palms Conservation Area will be greater than 4,000 acres. Approximately 6,574 acres (20%) of the modeled Habitat are within Existing Conservation Lands and will be managed as part of the Reserve System. The HCP/NCCP will conserve an additional 7,334 acres (23%) of predicted modeled Habitat for the flat-tailed horned lizard in the HCP/NCCP Area (Tables 4-114, 9-17:HCP/NCCP).

For potential Habitat, there are 5,161 acres of modeled Habitat for this species within the HCP/NCCP Area. The HCP/NCCP will ensure Conservation of 3,203 acres (90% of total) of the potential Other Conserved Habitat for the flat-tailed horned lizard. Approximately 940 acres (26%) of the modeled potential Habitat are within Existing Conservation Lands and will be managed as part of the Reserve System. The HCP/NCCP will conserve an additional 2,263 acres (64%) of potential modeled Habitat for the flat-tailed horned lizard in the HCP/NCCP Area (Table 4-114:HCP/NCCP).

Within the Conservation Areas under the worst case scenario, there could be up to 830 acres (6%) of predicted Habitat and 247 acres of potential modeled Habitat (7%) lost. There could also be up to 97 acres (2%) of its Core Habitat, 733 acres of predicted Other Conserved Habitat (7% of total) and 247 acres (7%) of potential Other Conserved Habitat lost (Table 9-17:HCP/NCCP). Take of flat-tailed horned lizard Habitat within the Conservation Areas must be consistent with the Conservation Objectives for this species to: 1) ensure Conservation of Core Habitat; 2) protect Essential Ecological Processes needed to maintain horned lizard Habitat; and 3) maintain Biological Corridors and Linkages among conserved populations to provide for population fluctuation and enhance genetic diversity (Section 9.6.3.1:HCP/NCCP). Although some Take could occur within the Conservation Areas, the Conservation Objectives required by the HCP/NCCP will provide for protection of Habitat to ensure the long-term conservation of this species.

Outside of the Conservation Areas, there could be up to 16,735 acres (52%) of predicted modeled Habitat lost, and an additional 1,483 acres (29%) of potential Habitat (Table 4-114:HCP/NCCP). This potential Habitat is not known to be occupied by flat-tailed horned lizards (Section 9.6.3.3:HCP/NCCP). The Habitat outside the Conservation Areas is already highly fragmented, surrounded by existing Development, and has a compromised sand source/transport system. The potential for these areas to provide for the long-term conservation of flat-tailed horned lizard populations is low. These areas are primarily in the remnants of the Big Dune south of I-10. The Big Dune area no longer has a viable sand transport/wind corridor and is highly fragmented by major roads. These fragmented blocks are more susceptible to edge effects, including mortality on roads and predation by feral animals. The patches of Habitat outside the Conservation Areas occur primarily at the margins of potential Habitat, including south of the Whitewater Floodplain Preserve, east and west of the Thousand Palms Preserve, east of the Salton Sea, and southeast of Box Canyon Road (Section 9.6.3.3:HCP/NCCP).

The Permittees will protect and manage, in perpetuity, 7,334 acres of the predicted modeled Habitat for this species. The 6,574 acres of modeled Habitat within Existing Conservation Lands will be monitored and managed to ensure that Conservation Objectives are met (Section 8.4.1:HCP/NCCP). The HCP/NCCP will thus ensure Conservation through protection and management of 13,908 acres of Additional Conservation Lands for this species.

The HCP/NCCP includes a total of 37,587 acres of the predicted and potential Habitat for the flat-tailed horned lizard. Only one area was delineated as Core Habitat for this species, at the Thousand Palms Preserve. On the Thousand Palms Preserve, Foreman

(1997) estimated approximately 6,000 acres as suitable Habitat for the flat-tailed horned lizard. The Planning Team for this HCP/NCCP delineated approximately 4,148 acres as Core Habitat. Conservation Objectives ensure the conservation of at least 4,051 acres in the Thousand Palms Conservation Area (Section 4.3.11:HCP/NCCP).

The HCP/NCCP also includes protection of Other Conserved Habitat at the Whitewater Floodplain Preserve and on Flat Top Mountain as part of the Willow Hole Conservation Area. Additional potential Habitat west of Indian Avenue, potential Habitat at Willow Hole, and potential Habitat between Willow Hole, Edom Hill, and the Thousand Palms Preserve will also be conserved (Sections 4.3.6, 4.3.8, 4.3.10, 4.3.11:HCP/NCCP). Other Conserved Habitat is located within the East Indio Hills Conservation Area where this lizard is known to occur. Some Development has occurred in this area in the last two years within flat-tailed horned lizard Habitat, eliminating several known locations on the south side of the Indio Hills. The Habitat for this species that is not within the HCP/NCCP Reserve System is generally highly fragmented in the remnants of the Big Dune, from Palm Springs east to La Quinta and Indio. These are areas where Essential Ecological Processes are already altered and degraded.

Additionally, the HCP/NCCP calls for Management and Monitoring Programs to ensure the Conservation of this species, including control of activities that degrade horned lizard Habitat, evaluation and management of edge effects and other impacts through Adaptive Management, control of invasive species where necessary, and restoration and enhancement of degraded Habitat as necessary according to monitoring results (Section 8.4.1:HCP/NCCP).

Implementation of the HCP/NCCP 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 HCP/NCCP Reserve System, which will build on the existing Conservation of 20% of this species' Habitat. HCP/NCCP implementation will ensure Conservation of currently unprotected Core Habitat areas for this lizard. Therefore coverage under the HCP/NCCP is warranted.

Coachella Valley Fringe-Toed lizard (Section 9.6.2:HCP/NCCP)

The primary importance of the HCP/NCCP to Coachella Valley fringe-toed lizard is that it provides Conservation (including Habitat protection, management and monitoring) of the species across its entire range. The HCP/NCCP ensures the long-term conservation of Core Habitat and the associated Essential Ecological Processes including the sand transport and delivery system. The HCP/NCCP also ensures that connectivity between these Habitat areas will be maintained. In addition, the Conservation Areas provide protection across an array of Habitat variables, including moisture, soil character, elevation, and vegetation, within the entire range of this subspecies.

There are 27,070 acres of modeled Habitat for this lizard within the HCP/NCCP Area of which approximately 11,850 acres are identified as Core Habitat. The HCP/NCCP will ensure Conservation of 11,245 acres (95% of total) of the Core Habitat and 1,754 acres (91% of total) of the Other Conserved Habitat for the fringe-toed lizard. Each of the four conserved Core Habitat areas will be greater than 1,200 acres. Approximately 5,999 acres (22%) of the modeled Habitat are within Existing Conservation Lands and will be managed as part of the Reserve System. The HCP/NCCP will conserve an additional 6,999 acres (26%) of the modeled Habitat for Coachella Valley fringe-toed lizard in the HCP/NCCP Area (Tables 4-114, 9-16:HCP/NCCP).

Within the Conservation Areas under the worst case scenario, 778 acres of modeled Habitat (6%) could be lost. There could be approximately 606 acres (5% of total) of Core Habitat and 172 acres of Other Conserved Habitat (9% of all Other Conserved Habitat) lost (Table 9-16:HCP/NCCP). Take of fringe-toed lizard Habitat within the Conservation Areas must be consistent with the Conservation Objectives for this species to: 1) ensure Conservation of Core Habitat; 2) protect Essential Ecological Processes needed to maintain fringe-toed lizard Habitat; and 3) maintain Biological Corridors and Linkages among conserved populations to provide for population fluctuation and enhance genetic diversity (Section 9.6.2.1:HCP/NCCP).

Outside of the Conservation Areas, there are 12,903 acres (48%) of modeled Habitat which could be lost (Table 4-114:HCP/NCCP). The Habitat outside the Conservation Areas is already highly fragmented, surrounded by existing Development, and has a compromised sand source/transport system. The potential for this Habitat to provide for the long-term conservation of Coachella Valley fringe-toed lizard populations is low. These areas are primarily in the remnants of the Big Dune south of I-10 east to La Quinta and Indio. There are scattered areas in the vicinity of the Whitewater Floodplain Preserve, including south of the levee that is the preserve's southern boundary. These fragmented blocks are more susceptible to edge effects, including mortality on roads and predation by feral animals (Section 9.6.2.4:HCP/NCCP).

The Permittees will protect and manage in perpetuity 6,999 acres of the modeled Habitat for this species. The 5,999 acres of modeled Habitat within Existing Conservation Lands will be monitored and managed to ensure that Conservation Objectives are met (Section 8.4.1:HCP/NCCP). The HCP/NCCP will thus ensure Conservation, through protection and management, of 12,998 acres of Additional Conservation Lands for this species.

The proposed Conservation Areas will ensure that a minimum of 48% of the occupied and potential Habitat in the entire HCP/NCCP area will be conserved for the Coachella Valley fringe-toed lizard. Core Habitat was designated for this species in the Snow Creek/Windy Point, Whitewater Floodplain, Willow Hole, and Thousand Palms Conservation Areas (Sections 4.3.3, 4.3.6, 4.3.8, 4.3.11:HCP/NCCP), based primarily on the distribution of active blowsand areas. In the area from Fingal's Finger, at the west end of Snow Creek, to Windy Point, 1,374 acres of contiguous Core Habitat have been mapped; at least 1,244 of these acres will be conserved. In the Whitewater Floodplain

Conservation Area, 5,617 acres of Core Habitat have been mapped; a minimum of 5,309 of these acres will be conserved. In the Willow Hole Conservation Area, 897 acres of Core Habitat are present with a Conservation Objective to ensure conservation of at least 823 acres of this Habitat. On the Thousand Palms Preserve, 3,869 of the total 3,962 acres of Core Habitat will be conserved, for a total in the HCP/NCCP Area of 11,850 acres of Core Habitat for this lizard species. Those areas where Habitat could be lost for this species, including approximately 778 acres, are primarily in the remnants of the Big Dune south of I-10. The Big Dune area no longer has a viable sand transport/wind corridor. Active blowsand areas have been disturbed, and Essential Ecological Processes are already altered and degraded primarily by the I-10 freeway and four-lane roads that fragment the dune. This Big Dune area is also highly fragmented by major roads. These fragmented blocks are more susceptible to edge effects, including mortality on roads and predation by feral animals.

Additionally, the HCP/NCCP calls for Management and Monitoring Programs to ensure the Conservation of this species, including control of activities that degrade fringe-toed lizard Habitat such as fragmentation and OHV trespass, control of invasive species where necessary, and evaluation of lizard population parameters according to monitoring results (Sections 8.4.1.1, 9.6.2.2:HCP/NCCP). The HCP/NCCP also calls for refinement and updating of the model that addresses the distribution and Habitat parameters of the Coachella Valley fringe-toed lizard throughout the Reserve System (Section 8.4.1.3.3:HCP/NCCP).

Implementation of the HCP/NCCP will maintain and enhance population viability of the Coachella Valley fringe-toed lizard, as unprotected portions of its Habitat, potential Habitat, and Essential Ecological Processes for the aeolian sand system will be preserved. This HCP/NCCP builds on the protection established by the Coachella Valley Fringe-toed Lizard HCP (The Nature Conservancy 1985) by protecting significant additional Core Habitat and associated Essential Ecological Processes.

The fringe-toed lizard will benefit from the establishment of the HCP/NCCP 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 HCP/NCCP is expected to provide for conservation of the Coachella Valley fringe-toed lizard within the HCP/NCCP Area, where only 22% of the modeled Habitat is currently protected. Therefore coverage under the HCP/NCCP is warranted.

Burrowing Owl (Section 9.7.3:HCP/NCCP)

The burrowing owl has a broad distribution that includes open country in eastern Washington and Oregon, southern, central and eastern California, central and eastern Montana, southern Idaho, Utah, Nevada, Arizona, Wyoming, Colorado, New Mexico, North Dakota, South Dakota, Nebraska, western and central Kansas, western and central Oklahoma, western Minnesota, northwestern Iowa and western Texas (Klute et al. 2003), parts of central Canada, and into Mexico and the drier regions of Central and South

America. In Southern California, it is known from lowlands over much of the region, particularly in agricultural areas. The burrowing owl is a federal Species of Concern and a California Species of Special Concern.

According to a USFWS Status Report and Conservation Plan for Burrowing Owls (Klute et al. 2003), "California supports one of the largest resident and winter populations of burrowing owls within the United States. The distribution of burrowing owls has changed considerably since introduction of industrial agriculture and increased urbanization, reflecting both losses and gains in local populations. Surveys conducted during 1991 to 1993 reported greater than 9,000 breeding pairs. Most of the burrowing owls occurred in the Imperial and Central Valleys, primarily in agricultural areas." Research and surveys indicate that in California burrowing owl populations are declining in areas with the greatest urban growth, while increasing populations occur in designated open space or areas of intensive agriculture (e.g., Gervais et al. 2003, Rosenberg and Haley 2003). DeSante and Ruhlen (1995) determined that throughout their survey area within California nearly 60% of the breeding groups of owls mapped in the 1980s had disappeared by the early 1990s.

Within the HCP/NCCP Area, burrowing owls are scattered in low numbers on natural desert terrain throughout the lowlands. However, this species is greatly reduced in numbers throughout its range (DeSante et al. 1991, 1992), including the Coachella Valley. In a 2003 evaluation by CDFG, the 74 known locations for this HCP/NCCP were noted and an observation made that "an estimated 10 to 20 breeding pairs are scattered over the lower end of the valley and on some of the preserves . . ." (C. Barrows, pers. comm., in CDFG 2003). As a subset of the 9,000 breeding pairs reported by USFWS (2002), the Coachella Valley population is very low. The known locations in the database developed for this HCP/NCCP do not include any locations in the agricultural areas of the Coachella Valley. Breeding burrowing owls are known to occur in the Snow Creek/Windy Point Conservation Area, Whitewater Floodplain Conservation Area, the Upper Mission Creek/Big Morongo Canyon Conservation Area, the Willow Hole and Edom Hill Conservation Areas, and the Thousand Palms Conservation Area.

The primary importance of the HCP/NCCP to burrowing owl is that it provides Conservation (including Habitat protection, management and monitoring) of the species to the extent that it occurs in the Coachella Valley. The HCP/NCCP ensures the long-term Conservation of previously unprotected Habitat, the associated Essential Ecological Processes, and connectivity between these Habitat areas. In addition, the Conservation Areas provide protection of currently unprotected burrow sites, foraging areas, and potential Habitat areas (Section 9.7.3.1:HCP/NCCP).

A species Habitat distribution model was not developed for the burrowing owl. The effects of Take can be evaluated in part by analysis of the known occurrences within the HCP/NCCP Area. There are 74 known locations for this species within the HCP/NCCP Area. There are 23 known locations (31%) within Existing Conservation Lands, which will be managed as part of the Reserve System. Acquisition of additional Reserve Lands

will protect an additional 18 known locations (24%). Overall, the HCP/NCCP will ensure Conservation of 41 of these known locations (55%) within the Reserve System (Table 9-20:HCP/NCCP).

The HCP/NCCP did not provide modeled habitat for the burrowing owl, but the reserve design of the HCP/NCCP focused on inclusion of areas of contiguous habitat around locations where burrowing owls were known to occur. This contiguous habitat provides adequate foraging areas. Because the burrowing owl conservation measures do not include the conservation of acres, but include the conservation of historical or known burrowing owl burrows, the avoidance and minimization measures are more detailed and specific to burrow occupancy and presence. The conservation measures for this species include: Conservation Objectives and Required Measures for the Conservation Areas (Section 4.3:HCP/NCCP), avoidance and minimization measures (Section 4.4:HCP/NCCP), the Conservation Objectives (Section 9.7.3:HCP/NCCP), and the Burrowing Owl Interim Conservation Strategy (Section 8.5.2:HCP/NCCP).

The Permittees will protect and manage, in perpetuity, 41 of the 74 known locations within the HCP/NCCP Reserve System in five Conservation Areas (Sections 4.3.6, 4.3.7, 4.3.8, 4.3.10, 4.3.11, 4.4:HCP/NCCP). 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 will also provide adequate foraging areas.

The percentage of burrowing owl locations that could be lost to development within the next 75 years appears to be substantial, but an evaluation of the impacts of Take requires an assessment of the quality of this Habitat. The establishment of Conservation Areas where this species is protected is a significant improvement over the current situation of unprotected Habitat. The actual reduction in Habitat value is expected to be considerably less than indicated by the known location numbers because:

1. Conserved Habitat areas are large enough to contain a self-sustaining metapopulation of burrowing owls and incorporate key Habitat elements, including burrows and foraging areas.
2. Take within the Conservation Areas would not eliminate or significantly impact any individual burrowing owls. Objectives require any approved development within Conservation Areas to conserve occupied burrows according to measures described in Section 4.4 of the HCP/NCCP.
3. Potential Development would not adversely impact the Essential Ecological Processes needed to maintain currently viable Habitat. Conservation Areas were carefully designed to incorporate the sand source and sand transport systems.
4. Lands in the HCP/NCCP Reserve System will be managed and monitored to address significant edge effect problems, potential loss of Habitat from introduction of exotic species, and other stressors to this species.

The HCP/NCCP has a Burrowing Owl Interim Conservation Strategy (Section 8.5.2:HCP/NCCP) which calls for systematic surveys of the Conservation Areas (where

access is provided) during the first three years following Permit issuance. Management actions would be taken to eliminate potential threats and stressors to the burrowing owls such that a minimum of 16 pairs can be sustained within the Conservation Areas during the Interim Conservation Strategy period. Projects subject to CEQA within Conservation Areas will be required to survey for and relocate owls as appropriate prior to construction (and this information would feed into the development of a long-term strategy). During the first 6 years post Permit issuance, research and monitoring will focus on gathering data to address specific questions through the hypothesis-based adaptive management approach. Information from the interim conservation strategy that occurs in the first 3 years shall be evaluated to guide the subsequent 3 years post Permit issuance. The data gathered during the first 6 years, together with other pertinent scientific information, will be used to develop a long-term conservation strategy for burrowing owls.

The HCP/NCCP requires avoidance, minimization, and mitigation measures for burrowing owls (Sections 4.4, 8.4.7.4, 8.5.2:HCP/NCCP). For projects subject to CEQA, surveys for the presence of burrowing owls in the Conservation Areas, using an accepted protocol, are required. Occupied burrows will have to be avoided until the young owls are no longer dependent on the burrow. These measures also require County Flood, CVWD, and IID to inventory burrowing owls along levees, berms, and dikes and to develop measures to minimize impacts to any burrowing owls on their respective lands within the HCP/NCCP Area (Sections 4.4, 7.3.1:HCP/NCCP).

Additionally, the HCP/NCCP calls for Management and Monitoring Programs to ensure the Conservation of this species, including control of activities that degrade burrowing owl Habitat, control of invasive species where necessary, and potential for establishment of artificial burrows in Conservation Areas, based on analysis of impacts and current population status (Sections 8.4.2.3.3, 9.7.3.2:HCP/NCCP).

The HCP/NCCP will ensure Conservation of 55% of known burrow sites for burrowing owls. Throughout the HCP/NCCP Area, the protected known locations include those in the Snow Creek area, the Whitewater Floodplain Preserve, the Mission Creek area west of Hwy. 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 will be conserved in the Dos Palmas area, the Coachella Valley Stormwater Channel and Delta, and the Desert Tortoise and Linkage Conservation Areas. Burrowing owls will be protected from edge effects, from OHV impacts, and from any activities that may result in disturbance to owl burrows.

The burrowing owl will benefit from the establishment of the HCP/NCCP Reserve System, including valley floor Habitats where they occur. Implementation of the HCP/NCCP is expected to provide for conservation of the burrowing owl within the HCP/NCCP Area, as currently unprotected portions of its Habitat, burrow sites, foraging areas, and potential Habitat areas will be conserved. Therefore coverage under the HCP/NCCP is warranted.

Coachella Valley Round-Tailed Ground Squirrel (Section 9.8.2:HCP/NCCP)

The Coachella Valley round-tailed ground squirrel is a subspecies of the more widely distributed round-tailed ground squirrel (*Spermophilus tereticaudus)* that inhabits desert areas of the southwestern United States and northwestern Mexico

The HCP/NCCP Area includes all of the known range for the Coachella Valley subspecies of the more widely distributed round-tailed ground squirrel. This subspecies is endemic to the HCP/NCCP Area. The Coachella Valley round-tailed ground squirrel is a candidate for listing under FESA and is considered a species of special concern by the State of California. The Coachella Valley round-tailed ground squirrel is associated with sandy substrates, including sand areas within creosote bush and alkali sink scrub (Ingles 1965) and mesquite hummocks. The range for this subspecies essentially corresponds with the valley floor of the Coachella Valley. Within the HCP/NCCP Area, the current and historical distribution for the Coachella Valley round-tailed ground squirrel is from San Gorgonio Pass to the vicinity of the Salton Sea (Grinnell and Dixon 1918, Hall 1981). Individuals of this species have been observed at the south end of La Quinta near Jefferson Avenue and along the Coachella Canal near Box Canyon. The range of this species in the eastern part of the HCP/NCCP Area is not well known.

The primary importance of the HCP/NCCP to Coachella Valley round-tailed ground squirrel is that it provides Conservation (including Habitat protection, management and monitoring) of the species across its entire range. The HCP/NCCP ensures the long-term conservation of Core Habitat, the associated Essential Ecological Processes, and connectivity between these Habitat areas (Section 9.8.2.1:HCP/NCCP). In addition, the Conservation Areas provide protection across an array of Habitat variables, including moisture, soil character, elevation, and vegetation, within the entire range of this subspecies.

There are 101,723 acres of modeled Habitat for this species within the HCP/NCCP Area of which approximately 20,588 acres are identified as Core Habitat. The HCP/NCCP will ensure Conservation of 94% (19,269 acres) of the Core Habitat and 77% (14,557 acres) of the Other Conserved Habitat for this ground squirrel. Each of the conserved Core Habitat areas will be greater than 2,000 acres. Approximately 13,357 acres (13%) of the modeled Habitat are within Existing Conservation Lands and will be managed as part of the Reserve System. Overall, the HCP/NCCP will conserve an additional 33,826 acres (33%) of the modeled Habitat for Coachella Valley round-tailed ground squirrel in the HCP/NCCP Area (Table 4-114:HCP/NCCP).

Within the Conservation Areas under the worst case scenario, 2,478 acres of modeled Habitat (2%) could be lost. There will be approximately 1,319 acres (6%) of Core Habitat and 1,159 acres (6%) of Other Conserved Habitat lost (Table 9-30:HCP/NCCP). Take of ground squirrel Habitat within the Conservation Areas must be consistent with the Conservation Objectives for this species to: 1) ensure Conservation of Core Habitat; 2) protect Essential Ecological Processes needed to maintain ground squirrel Habitat; and 3)

maintain Biological Corridors and Linkages among conserved populations to provide for population fluctuation and enhance genetic diversity (Section 9.8.2.1:HCP/NCCP).

Outside of the Conservation Areas, there are 58,765 acres of modeled Habitat that could be lost (Table 4-114:HCP/NCCP). The Habitat outside the Conservation Areas is already highly fragmented, surrounded by existing Development, and has a compromised sand source/transport system. The potential for this compromised Habitat to provide for the long-term conservation of ground squirrel populations is low. These areas are primarily in the remnants of the Big Dune south of I-10, and in the area south of Desert Hot Springs and east of Hwy. 62. The Big Dune area no longer has a viable sand transport/wind corridor and is highly fragmented by major roads. These fragmented blocks are more susceptible to edge effects, including mortality on roads and predation by feral animals. Roads and low-density residential Development generally fragment the area near Desert Hot Springs. Modeled Habitat not included in the Conservation Areas in the area east of Hwy. 62 includes coarser soils and an apparently lower density of ground squirrels. Observations of Coachella Valley round-tailed ground squirrels in the area are limited to one observation (K. Barrows et al. 1997) of one individual south of Dillon Road, just west of Big Morongo Canyon wash and four individuals at the Mission Springs Water District water treatment facility (Section 9.8.6.2:HCP/NCCP).

The proposed Conservation Areas in the HCP/NCCP will protect the Core Habitat areas from Cabazon to Windy Point, including Snow Creek (Sections 4.3.1, 4.3.2, 4.3.3:HCP/NCCP); the Willow Hole area, including additional Habitat west of Palm Drive and on Flat Top Mountain (Section 4.3.8:HCP/NCCP); and all of the occupied and potential Habitat on the Thousand Palms Preserve (Section 4.3.11:HCP/NCCP). In addition, occupied Habitat that met the Core Habitat standard set by the Planning Team, and which provides significant Habitat for this ground squirrel, will be conserved at the Whitewater Floodplain Preserve (Section 4.3.6:HCP/NCCP). Other Conserved Habitat from a range of environmental conditions within which this ground squirrel is known to occur will be protected in the following Conservation Areas: Cabazon, Stubbe and Cottonwood Canyons, Whitewater Canyon, Hwy. 111/I-10, Upper Mission Creek/Big Morongo Canyon, Mission Creek/Morongo Wash, Edom Hill, Indio Hills/Joshua Tree National Park Linkage, Indio Hills Palms, East Indio Hills, Joshua Tree National Park, Desert Tortoise and Linkage, Mecca Hills/Orocopia Mountains, Dos Palmas, Coachella Valley Stormwater Channel and Delta, and the Santa Rosa and San Jacinto Mountains. Reserve Design criteria used to establish the Conservation Areas require Conservation of Essential Ecological Processes. The HCP/NCCP Reserve System will incorporate and protect additional sand source/sand transport areas for Snow Creek/Windy Point, the Whitewater Floodplain Conservation Area, Willow Hole and Flat Top Mountain, and the Thousand Palms Preserve.

Additionally, the HCP/NCCP calls for Management and Monitoring Programs to ensure the Conservation of this species, including control of activities that degrade ground squirrel Habitat, control of invasive species where necessary, and restoration and enhancement of degraded Habitat as necessary according to monitoring results (Sections 8.4.1.2, 9.8.2.2:HCP/NCCP). The HCP/NCCP also calls for a research element that

addresses the distribution, abundance, and Habitat parameters of the Coachella Valley round-tailed ground squirrel throughout the HCP/NCCP Reserve System (Section 8.4.1.3.3:HCP/NCCP).

Coachella Valley round-tailed ground squirrel Habitat occupancy rates are substantially higher in mesquite hummocks than other Habitat types (University of California Riverside 2005). It is therefore desirable to preserve the mesquite hummock areas. Substantial stands of mesquite hummocks and dunes are conserved within the Willow Hole and Thousand Palms Conservation Areas. The HCP/NCCP includes provisions relative to Conservation of mesquite hummocks to monitor groundwater to determine whether substantial lowering of the water table occurs. Should monitoring detect such a substantial lowering, appropriate Adaptive Management actions will be taken (Section 8.4.1.2:HCP/NCCP). The HCP/NCCP also includes provisions to monitor groundwater levels in the Willow Hole and Thousand Palms Conservation Areas and ameliorate the effects of substantial lowering of the water table on mesquite hummocks and associated Covered Species as a Changed Circumstance. As a Permittee, 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 provide for the conservation of impacts to this species from CVWD's operation and management activities in the Coachella Valley Stormwater Channel and Delta Conservation Area. CVWD will restore and enhance mesquite and Coachella Valley round-tailed ground squirrel Habitat on site in the East Indio Hills Conservation Area if a study determines restoration to be Feasible (Sections 4.3.20, 8.4.1.2:HCP/NCCP). The potential for mesquite hummock restoration and enhancement will be evaluated through monitoring and Adaptive Management and will be considered in the context of Conservation Objectives for all Covered Species and natural communities (Section 8.4.1.3.2:HCP/NCCP).

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 HCP/NCCP Reserve System will protect these areas (Section 4.3.3, 4.3.8, 4.3.11:HCP/NCCP). Potential Linkage areas will be protected between Hwy. 111 and I-10 near Snow Creek. From Willow Hole east, Habitat that typically supports this species along the south-facing slopes of Edom Hill will be protected, providing a Linkage with Habitat to the east on the Thousand Palms Preserve (Section 4.3.10:HCP/NCCP). Essential Ecological Processes, including wind corridors and sand sources for the Habitat named above, will be protected under the HCP/NCCP. Habitat at Dos Palmas will be conserved in the HCP/NCCP (Section 4.3.19:HCP/NCCP). Those areas where Take could be permitted for this species are primarily in the remnants of the Big Dune south of I-10, and in the area south of Desert Hot Springs and east of Hwy. 62. The Big Dune area no longer has a viable sand transport/wind corridor and is highly fragmented by major roads. These fragmented blocks are more susceptible to edge effects, including mortality on roads and predation by feral animals. Roads and low-density residential Development generally fragment the area near Desert Hot Springs.

Implementation of this HCP/NCCP will maintain and enhance population viability of the Coachella Valley round-tailed ground squirrel, as significant Habitat that is now unprotected will be conserved and Essential Ecological Process necessary to maintain habitat will be secured. Therefore coverage under the HCP/NCCP is warranted.

Palm Springs Pocket Mouse (Section 9.8.3:HCP/NCCP)

The HCP/NCCP Area contains the major portion of the range of the Palm Springs pocket mouse, including the western, northern, and eastern limits of the species' range. The southern boundary of the range extends out of the HCP/NCCP Area into Imperial and San Diego Counties. This subspecies occurs in the lower Sonoran life zone from the San Gorgonio Pass area east to the Little San Bernardino Mountains and south along the eastern edge of the Peninsular Range to Borrego Valley and the east side of San Felipe Narrows (Hall 1981). The Palm Springs pocket mouse has no federal status and is considered a Species of Special Concern by the State of California.

Within the HCP/NCCP Area, the east to west range of the Palm Springs pocket mouse does not appear to differ from what has been described in the past (Dodd 1996). This pocket mouse can be found in the Cabazon area as the western limits of the HCP/NCCP Area in suitable Habitat and has also been recorded in the Shaver's Valley area near the eastern limits of the HCP/NCCP Area. In the Coachella Valley, much of the Habitat for this species south of the I-10 freeway has been impacted by Development and fragmentation. Relatively undisturbed Habitat for the Palm Springs pocket mouse can still be found in the northern parts of the HCP/NCCP Area. Within its historic range Habitat for this pocket mouse has been greatly reduced by urbanization and agriculture in the Coachella Valley.

The primary importance of the HCP/NCCP to Palm Springs pocket mouse is that it provides Conservation (including Habitat protection, management and monitoring) of the species across nearly all of its entire range. The HCP/NCCP ensures the long-term conservation of Core Habitat (93%), the associated Essential Ecological Processes, and connectivity between these Habitat areas. In addition, the Conservation Areas provide protection of lands with an array of Habitat variables, including moisture, soil character, elevation, and vegetation, from the northern, eastern, and western limits for this subspecies.

Within the Conservation Areas under the worst case scenario, 4,336 acres of modeled Habitat (3%) could be lost. There could be up to 1,993 acres of Core Habitat (7%) and 2,343 acres (7%) of Other Conserved Habitat lost (Tables 4-114, 9-32:HCP/NCCP). Take of pocket mouse Habitat within the Conservation Areas must be consistent with the Conservation Objectives for this species to: 1) ensure Conservation of Core Habitat; 2) protect Essential Ecological Processes needed to maintain pocket mouse Habitat; and 3) maintain Biological Corridors and Linkages among conserved populations to provide for population fluctuation and enhance genetic diversity (Section 9.8.3.1:HCP/NCCP).

Outside of the Conservation Areas, there are 70,968 acres (50%) of modeled Habitat that could be lost (Table 4-114:HCP/NCCP). These areas are primarily in the remnants of the Big Dune south of I-10, in the area south of Desert Hot Springs, west and east of Hwy. 62, along Dillon Road north of the Indio Hills and east of Pushawalla Canyon, and south of the Mecca Hills and the Coachella Canal. The potential for pocket mouse populations to persist long-term in these areas is low. The Big Dune area no longer has a viable sand transport/wind corridor, is surrounded by existing Development, and is highly fragmented by major roads. These fragmented blocks are more susceptible to edge effects, including mortality on roads and predation by feral animals. Roads and low-density residential Development generally fragment the area near Desert Hot Springs. Modeled Habitat not included in the Conservation Areas in the area east of Hwy. 62 includes coarser soils although the density of Palm Springs pocket mouse in this area is not known. Other areas outside the Conservation Areas have an unknown density of Palm Springs pocket mouse and were not considered Core Habitat (Section 9.8.3.2:HCP/NCCP).

The Permittees will protect and manage, in perpetuity, 35,605 acres of the modeled Habitat for this species. The 21,251 acres of modeled Habitat within Existing Conservation Lands will be monitored and managed to ensure that Conservation Objectives are met. The HCP/NCCP will thus ensure Conservation, through protection and management, of 56,856 acres of Additional Conservation Lands for this species (Table 4-114:HCP/NCCP).

The proposed Conservation Areas in the HCP/NCCP will protect the Core Habitat areas for this pocket mouse from Cabazon to Thousand Palms (Sections 4.3.3, 4.3.6, 4.3.7, 4.3.8, 4.3.11:HCP/NCCP). This includes 77% of the known occurrences for the Palm Springs pocket mouse. The HCP/NCCP includes all five of the Core Habitat areas identified by the Planning Team, including the area with the highest known population density for the species, which occurs in the Snow Creek/Windy Point Conservation Area (Dodd, 1996). Other Core Habitat areas to be conserved include the Whitewater Floodplain Conservation Area, Upper Mission Creek/Big Morongo Canyon Conservation Area, and the Thousand Palms Conservation Area. In addition, Other Conserved Habitat from a range of environmental conditions within which this pocket mouse is known to occur will be protected in the following Conservation Areas: Cabazon, Stubbe and Cottonwood Canyons, Whitewater Canyon, Hwy. 111/I-10, Mission Creek/Morongo Wash, Willow Hole, Edom Hill, Indio Hills/Joshua Tree National Park Linkage, Indio Hills Palms, East Indio Hills, Joshua Tree National Park, Desert Tortoise and Linkage, Mecca Hills/Orocopia Mountains, Dos Palmas, Coachella Valley Stormwater Channel and Delta, and the Santa Rosa and San Jacinto Mountains. Reserve Design criteria used to establish the Conservation Areas require Conservation of Essential Ecological Processes (Section 9.8.3.4:HCP/NCCP).

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 (Sections 4.3.3, 4.3.8, 4.3.11:HCP/NCCP). The Conservation Areas will incorporate and protect additional sand source/sand transport areas for Snow Creek/Windy Point, the Whitewater Floodplain Conservation Area, Willow Hole and Flat Top Mountain, and the Thousand Palms Preserve. Potential Linkage areas will be protected between Hwy. 111 and I-10 near Snow Creek. From Willow Hole east, Habitat that could support this species along the south-facing slopes of Edom Hill will be protected, providing a Linkage with Habitat to the east on the Thousand Palms Preserve (Section 4.3.10:HCP/NCCP). Essential Ecological Processes, including wind corridors and sand sources for the Habitat named above, will be protected under the HCP/NCCP. Habitat at Dos Palmas will be conserved in the HCP/NCCP (Section 4.3.19:HCP/NCCP).

Additionally, the HCP/NCCP calls for Management and Monitoring Programs to ensure the Conservation of this species, including control of activities that degrade pocket mouse Habitat such as OHV trespass, control of invasive species where necessary, development of fire management guidelines where appropriate, and restoration and enhancement of degraded Habitat as necessary according to monitoring results (Sections 8.4.1.2, 8.4.1.3.3:HCP/NCCP). The HCP/NCCP also calls for data gathering on the distribution, Habitat parameters, and ecology of the Palm Springs pocket mouse as part of the Monitoring Program.

Implementation of the HCP/NCCP 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.

The Palm Springs pocket mouse will benefit from the establishment of the HCP/NCCP Reserve System which will include Core Habitat in the Snow Creek/Windy Point Conservation Area, Whitewater Floodplain Conservation Area, Upper Mission Creek/Big Morongo Canyon Conservation Area, Willow Hole Conservation Area, and the Thousand Palms Conservation Area. The proposed Conservation Areas in the HCP/NCCP will 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. Implementation of the HCP/NCCP is expected to provide for conservation of the Palm Springs pocket mouse within the HCP/NCCP Area, as currently unprotected portions of its Habitat and potential Habitat areas will be conserved. Therefore coverage under the HCP/NCCP is warranted.

Peninsular Bighorn Sheep (Section 9.8.4:HCP/NCCP)

The Peninsular bighorn sheep is restricted to the lower, east-facing desert slopes of the Peninsular Ranges in southern California and Mexico. The Peninsular Ranges extend from the San Jacinto Mountains south to the Jacumba Mountains near the California border, and south into Mexico, forming the backbone of Baja California. Bighorn sheep inhabit the eastern slopes of the Peninsular Ranges in Habitat characterized by steep slopes and cliffs, rugged canyons, washes, and alluvial fans. Current taxonomy places the

Peninsular bighorn sheep in the Nelson subspecies (*Ovis canadensis nelsoni).* The bighorn sheep occupying the Peninsular Ranges of southern California are listed as a distinct vertebrate population segment by the FWS.

The HCP/NCCP Area includes four of the eight subpopulations, or ewe groups, of the Peninsular bighorn sheep metapopulation. The ewe groups are designated by the area in which they occur. The four ewe groups in the HCP/NCCP Area are the San Jacinto Mountains group, the northern Santa Rosa Mountains (northwest of Hwy. 74) group, the Deep Canyon group (southeast of Hwy. 74 through Martinez Canyon), and the southern Santa Rosa Mountains group (south of Martinez Canyon). The territories of these ewe groups are the basis for the four recovery regions delineated in the Recovery Plan.

Essential Habitat for Peninsular bighorn sheep is present in three of the Conservation Areas within the HCP/NCCP Area. These Conservation Areas are Cabazon, Snow Creek/Windy Point and Santa Rosa and San Jacinto Mountains.

The primary importance of the HCP/NCCP Reserve System to Peninsular bighorn sheep is that it provides Conservation (including Habitat protection, management and monitoring) of the species across a substantial portion of its range. The HCP/NCCP ensures the long-term conservation of Essential Habitat and connectivity between these Habitat areas. In addition, the Conservation Areas provide protection of lands with an array of Habitat variables, including lamb rearing Habitat, escape terrain, access to water, and foraging areas for Peninsular bighorn sheep.

There are 172,811 acres of modeled Essential Habitat for this species within the HCP/NCCP Area as described in the *Recovery Plan for Bighorn Sheep in the Peninsular Ranges, California* (USFWS 2000). Core Habitat was not designated for this species. The HCP/NCCP will ensure Conservation of 165,856 (97%) of the Essential Habitat for Peninsular bighorn sheep. Approximately 135,630 acres (78%) of the Essential Habitat are within Existing Conservation Lands and will be managed as part of the Reserve System. The HCP/NCCP will conserve an additional 30,226 acres (19%) of the Essential Habitat for Peninsular bighorn sheep (Tables 4-114, 9-34:HCP/NCCP).

Within the Conservation Areas under the worst case scenario, 3,867 acres of loss of Essential Habitat (1%) could occur (Table 9-34:HCP/NCCP). Loss of bighorn sheep Essential Habitat within the Conservation Areas must be consistent with the Conservation Objectives for this species to: 1) ensure Conservation of Essential Habitat; 2) ensure connectivity by preventing fragmentation and maintaining Biological Corridors and Linkages within Essential Habitat to allow dispersal, provide for population fluctuation, and enhance genetic diversity; and 3) ensure Conservation of Habitat quality through biological monitoring and Adaptive Management (Section 9.8.4.1:HCP/NCCP). So, although some loss could occur within the Conservation Areas, the Conservation Objectives required by the HCP/NCCP will provide for protection of Habitat to ensure the long-term conservation of the Peninsular bighorn sheep.

Outside of the Conservation Areas, there are 2,666 acres (1%) of Essential Habitat authorized for loss (Table 4-114:HCP/NCCP). This Habitat occurs on lands previously approved for Development through specific plans that are still in effect. The Development potential for private lands in the mountainous Habitat is limited by terrain, availability of utilities, road access and environmental considerations.

The Permittees will protect and manage, in perpetuity, 30,226 acres of Essential Habitat for this species. The 134,819 acres of Essential Habitat within Existing Conservation Lands will be monitored and managed to ensure that Conservation Objectives are met (Section 9.8.4.1:HCP/NCCP). The HCP/NCCP will thus ensure Conservation, through protection and management, of 165,856 acres of Essential bighorn sheep Habitat.

To minimize the impacts to bighorn sheep Essential Habitat, Required Measures and special provisions apply within a zone generally defined as within 0.5 mile of the urban interface, the lower boundary of the Santa Rosa and San Jacinto Mountains Conservation Area (Section 4.3.21:HCP/NCCP). The exclusions from this zone are areas where lambing or water sources intersect that area. Within this half-mile zone, each of four recovery regions are delineated for each of the four ewe groups as identified in the *Recovery Plan for Bighorn Sheep of the Peninsular Ranges, California* (USFWS 2000). Within these recovery regions, conservation measures apply in five types of areas. Special provisions apply to some areas within the Santa Rosa and San Jacinto Mountains Conservation Area, including west of Chino Canyon, in Palm Hills, along Hwy. 74, and near the mouth of Martinez Canyon. Some areas will require a Minor Amendment and specific criteria to be met. Other areas will require the use of the Habitat Evaluation and Acquisition Negotiation Strategy (HANS) process or a Major Amendment to be processed before Development could occur (Sections 4.3.21, 6.6.1.2, 6.12.3, 6.12.4:HCP/NCCP).

Avoidance, minimization, and mitigation measures will be required for any approved loss within Essential bighorn sheep Habitat in the Conservation Areas (Section 4.4:HCP/NCCP). Construction 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 to June 30 lambing season unless otherwise authorized through a Minor Amendment to the HCP/NCCP with concurrence from the Wildlife Agencies (Sections 4.4, 6.12.3:HCP/NCCP). Operation and maintenance of Covered Activities, including but not limited to refinishing the inside of water storage tanks, may occur between January 1 and June 30, if necessary. These measures also address the threat of toxic or invasive plant species in or adjacent to bighorn sheep Habitat. 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, the Permittees will develop and implement a plan to remove or prevent access to toxic plants by Peninsular bighorn sheep (Section 4.4:HCP/NCCP). The Peninsular bighorn sheep is a California fully protected species (Section 4700 of the Fish and Game Code), and therefore, the NCCP permit does not authorize Take of an individual Peninsular bighorn sheep. All Covered Activities must implement actions to avoid take in

violation of Section 4700 of the Fish and Game Code (Sections 4.4, 7.3.3.2:HCP/NCCP, 15.5:IA). In Essential bighorn sheep Habitat, the Habitat must be avoided or measures must be approved by the Wildlife Agencies to ensure that no Take of an individual occurs.

To minimize the potential for disturbance to bighorn sheep as a result of trail use, a Santa Rosa and San Jacinto Mountains Trails Plan (Trails Plan) was developed as a Compatible Activity within the Santa Rosa and San Jacinto Mountains Conservation Area (Section 7.3.3.2:HCP/NCCP). Implementation of this Trails Plan will minimize the risk of potential adverse impacts to bighorn sheep from recreational activities, consistent with the Conservation Objectives.

Additionally, the HCP/NCCP calls for Management and Monitoring Programs to ensure the Conservation of this species, including control of activities that degrade Peninsular bighorn sheep Essential Habitat. This will include control of invasive species where necessary (tamarisk is already being removed from Essential Habitat areas), development of fire management guidelines where appropriate, and restoration and enhancement of degraded Habitat as necessary according to monitoring results (Section 9.8.4.2:HCP/NCCP).

Implementation of the HCP/NCCP will maintain and enhance population viability of the Peninsular bighorn sheep by acquiring Essential Habitat and helping to implement the Recovery Plan. The HCP/NCCP is neither the same as nor a substitute for the Recovery Plan for the Peninsular bighorn sheep. The goals of the HCP/NCCP for the Peninsular bighorn sheep are consistent with the Recovery Plan.

The Peninsular bighorn sheep will benefit from the establishment of the HCP/NCCP Reserve System which will include Essential Habitat in the Cabazon Conservation Area, Snow Creek/Windy Point Conservation Area, and Santa Rosa and San Jacinto Mountains Conservation Areas. The proposed Conservation Areas in the HCP/NCCP will protect 97% of the Essential Habitat for Peninsular bighorn sheep within the HCP/NCCP Area. Implementation of the HCP/NCCP is expected to provide for long-term Conservation of the Peninsular bighorn sheep within the HCP/NCCP area, as currently unprotected portions of its Habitat and potential Habitat areas will be conserved. Therefore coverage under the HCP/NCCP is warranted.

Finding 4.5.3 CDFG finds that the following species are authorized for take under the plan and coverage is warranted based on site specific considerations and the identification of specific conservation and management conditions for species within a narrowly defined habitat or limited geographic area within the plan area (2821(a)(3)).

Adequate landscape level considerations and species-specific conservation measures (management) within narrowly defined areas will be implemented for the following species:

Mecca Aster (Section 9.2.1:HCP/NCCP)

Mecca aster is an endemic species found in the Indio Hills and the Mecca Hills. Its known range is entirely within the HCP/NCCP Area. Mecca aster has no official state or federal status but is listed by the California Native Plant Society on List 1B (CNPS 2001). It typically occurs in fluvial mud hills in washes and along the lower slopes. It is known to occur from Macomber Palms and Biskra Palms on the Thousand Palms Preserve east along the base of the Indio Hills. The easternmost location in the Indio Hills is in the vicinity of Curtis Palms, east of the Granite Construction facility. In the Mecca Hills, it occurs in Painted Canyon, in Box Canyon along Hwy. 195, and in Hidden Spring Canyon as well as in other suitable Habitat in this area.

The HCP/NCCP Area includes 63,163 acres of modeled Habitat for Mecca aster, of which approximately 55,816 acres are identified as Core Habitat. The HCP/NCCP will ensure Conservation of 54,477 acres (98%) of the Core Habitat and 190 acres (90%) of the Other Conserved Habitat for this endemic plant. Each of the conserved Core Habitat areas will be greater than 1,000 acres. Approximately 42,436 acres (67%) of the modeled Habitat are within Existing Conservation Lands and will be managed as part of the Reserve System. The HCP/NCCP will conserve an additional 12,231 acres (19%) of the modeled Habitat for Mecca aster in the HCP/NCCP Area (Table 9-2:HCP/NCCP).

Potential adverse impacts could occur within the Conservation Areas, affecting 1,360 acres (2% of total) of modeled Mecca aster Habitat. Approximately 1,339 acres (2% of total) Core Habitat and 21 acres (10%) of Other Conserved Habitat will be subject to disturbance (Table 9-2:HCP/NCCP).

Outside of the Conservation Areas, there are 4,968 acres (8%) of modeled Mecca aster Habitat that could be subject to disturbance. The Habitat for this species that is not within the Conservation Areas is primarily at the margins of the modeled Habitat. In the Indio Hills it occurs on the north side of the Indio Hills where the Habitat was deemed potential, but the species has not been observed. A limited amount of potential Habitat occurs outside the East Indio Hills Conservation Area on the property known as Adams Ranch. This Habitat does not include known occurrences of Mecca aster. In the Mecca Hills potential Habitat outside the HCP/NCCP Reserve System occurs along the margins of the Mecca Hills and in an area south of Box Canyon Road where the species has not been recorded. The areas subject to Development provide only marginal Habitat for Mecca aster, and the impacts to this species as a result of the HCP/NCCP are insignificant.

Additionally, the HCP/NCCP calls for Management and Monitoring Programs to ensure the Conservation of this species, including control of activities that degrade Mecca aster, control of invasive species where necessary, and restoration and enhancement of degraded Habitat as necessary according to monitoring results (Sections 8.4.2.1, 9.2.1.2:HCP/NCCP). The Management and Monitoring Programs include a provision to

develop and test models to address the distribution, abundance, and ecological requirements of Mecca aster (Section 8.4.2.3.3:HCP/NCCP).

The Mecca aster will benefit from the establishment of the HCP/NCCP Reserve System which will include Habitat in the Indio Hills and Mecca Hills where they occur. Implementation of the HCP/NCCP is expected to provide for Conservation of the Mecca aster within the HCP/NCCP Area, as currently unprotected portions of its Habitat and potential Habitat areas will be conserved. The combination of the overall Conservation measures, species-specific measures such as management to minimize impacts in aster Habitat, monitoring to better understand the distribution and ecology of this species, and long-term protection, management, and enhancement of Mecca aster Habitat is expected to effectively compensate for potential adverse effects to this plant species. Therefore, coverage under the HCP/NCCP is warranted.

Coachella Valley Milkvetch (Section 9.2.2:HCP/NCCP)

The Coachella Valley milkvetch is a variety of the more widely distributed species, *Astragalus lentiginosus*. Other varieties of this species occur in Washington, Oregon, Idaho, Nevada, New Mexico, Arizona, northern Baja California, and Sonora, Mexico.

The Coachella Valley milkvetch is restricted to the HCP/NCCP Area between Cabazon and Indio, with the exception of six outlying occurrences within a 5-mile area along Rice Road in the Chuckwalla Valley north of Desert Center (BLM 2000, J. Dice, pers. comm.). The Coachella Valley milkvetch is a federal endangered species although it has no official status with the State of California. The current (and apparently historical) distribution is within a longitudinal, west to east range of approximately 33 miles. This species is known in locations from One Horse Spring near Cabazon to the sand dunes off Washington Avenue, north and west of Indio. Extensive dune systems at the base of the Santa Rosa Mountains in what are now the cities of Palm Springs, Cathedral City, Rancho Mirage, Palm Desert, Indian Wells, and La Quinta are now much reduced from what once occurred, but had provided suitable Habitat for the Coachella Valley milkvetch. While the overall range of this species may not be significantly reduced from the historical distribution, the number of extant occurrences has declined dramatically (K. Barrows 1987, USFWS 1996).

The HCP/NCCP Reserve System will provide for Habitat protection, management, and monitoring for currently unprotected Core Habitat and Other Conserved Habitat for the Coachella Valley milkvetch, from a range of environmental conditions within which it is known to occur. The important Essential Ecological Processes, including wind corridors and sand sources, will be protected under the HCP/NCCP. Potential Linkages will also be protected (Section 9.2.2.1:HCP/NCCP).

There are 36,398 acres of modeled Coachella Valley milkvetch Habitat in the HCP/NCCP area. The HCP/NCCP will ensure Conservation of 14,886 acres (94%) of the total 15,814 acres of Core Habitat and 4,471 acres (76%) of Other Conserved Habitat for the

Coachella Valley milkvetch. Each of the four Core Habitat areas conserved will be greater than 2,000 acres. Approximately 7,707 acres (21%) of the modeled Habitat are within Existing Conservation Lands and will be managed as part of the Reserve System (Table 9-4:HCP/NCCP). Overall, an additional 11,650 acres (32%) of the modeled Habitat for Coachella Valley milkvetch in the HCP/NCCP Area will be conserved (Section 9.2.2.1:HCP/NCCP).

Within the Conservation Areas, potential adverse effects could occur to a maximum of 1,306 acres (4%) of modeled Coachella Valley milkvetch Habitat. There will be approximately 928 acres (6%) of Core Habitat and 378 acres (6%) of Other Conserved Habitat subject to disturbance (Table 9-4:HCP/NCCP). The Reserve System will effectively compensate for potential adverse impacts to this species because it will: 1) ensure Conservation of Core Habitat; 2) protect Essential Ecological Processes needed to maintain milkvetch Habitat; and 3) maintain Biological Corridors and Linkages among conserved populations to provide for population fluctuation and enhance genetic diversity. Although some disturbance could occur within the Conservation Areas, the Conservation Objectives required by the HCP/NCCP will provide for protection of Habitat to ensure the long-term conservation of this species.

Outside of the Conservation Areas, there are 14,086 acres of modeled Habitat and 33 of the 122 known occurrences subject to Development and other proposed Covered Activities. To mitigate the impacts to Coachella Valley milkvetch, the Permittees will protect and manage, in perpetuity, 11,650 acres of Habitat for this species, including 89 of the 122 known occurrences. The 7,707 acres of modeled Habitat within Existing Conservation Lands will be monitored and managed to ensure that Conservation Objectives are met. The HCP/NCCP will thus ensure Conservation, through protection and management, of 19,357 acres of Reserve Lands for this species.

The proposed Conservation Areas in the HCP/NCCP will protect the Core Habitat areas from Cabazon to Windy Point, including Snow Creek; significant Habitat for this milkvetch in the Whitewater Floodplain area; the Willow Hole area, including additional Habitat west of Palm Drive and on Flat Top Mountain; and all of the occupied and potential Habitat on the Thousand Palms Preserve. Other Conserved Habitat from a range of environmental conditions within which this milkvetch is known to occur will be protected in the following Conservation Areas: Cabazon, Stubbe and Cottonwood Canyons, Whitewater Canyon, Hwy. 111/I-10, Upper Mission Creek/Big Morongo Canyon, Edom Hill, Indio Hills/Joshua Tree National Park Linkage, Indio Hills Palms, East Indio Hills, Joshua Tree National Park, Desert Tortoise and Linkage, Mecca Hills/Orocopia Mountains, Dos Palmas, Coachella Valley Stormwater Channel and Delta, and the Santa Rosa and San Jacinto Mountains (Sections 4.3.1, 4.3.2, 4.3.4, 4.3.5, 4.3.7, 4.3.10, 4.3.13, 4.3.14, 4.3.15, 4.3.16, 4.3.17, 4.3.18, 4.3.19, 4.3.20, 4.3.21, 9.2.2.1:HCP/NCCP). Reserve Design criteria used to establish the Conservation Areas require Conservation of Essential Ecological Processes. The HCP/NCCP Reserve System will incorporate and protect additional sand source/sand transport areas for Snow Creek/Windy Point, the Whitewater Floodplain Conservation Area, Willow Hole and Flat

Top Mountain, and the Thousand Palms Preserve (Sections 4.3.3, 4.3.6, 4.3.8, 4.3.11, 9.2.2.1:HCP/NCCP).

Additionally, the HCP/NCCP calls for Management and Monitoring Programs to ensure the Conservation of this milkvetch, including control of activities that degrade milkvetch Habitat, control of invasive species where necessary, and restoration and enhancement of degraded Habitat as necessary according to monitoring results (Sections 8.2.3, 9.2.2.2:HCP/NCCP).

Implementation of this HCP/NCCP is expected to conserve and enhance population viability of the Coachella Valley milkvetch, as unprotected portions of its Habitat will be conserved. The potential for impacts from human uses, including OHV activity, appears to be low, although edge effects should be monitored. Management and monitoring prescriptions will further enhance long-term Conservation of this species (Section 9.2.2.2:HCP/NCCCP).

The Coachella Valley milkvetch will benefit from the establishment of the HCP/NCCP Reserve System which will include conserved Habitat from Cabazon to the sand dunes of the Thousand Palms Conservation Area. Implementation of the HCP/NCCP is expected to provide for conservation of this endangered milkvetch within the HCP/NCCP Area, as currently unprotected portions of its Core Habitat and potential Habitat areas will be conserved. The combination of the overall Conservation measures, including species-specific measures such as management to minimize impacts from OHV trespass and invasive species, monitoring to better understand the ecology of this species and the potential impacts of invasive species, and long-term protection, management, and enhancement of Coachella Valley milkvetch Habitat is expected. Therefore, coverage under the HCP/NCCP is warranted.

Triple-Ribbed Milkvetch (Section 9.2.3:HCP/NCCP)

A significant portion of the total known range of triple-ribbed milkvetch is within the HCP/NCCP Area. This endemic species is found in a narrow range primarily from the northwestern portion of the Coachella Valley, from the vicinity of Whitewater Canyon, the type locality, in Mission Creek Canyon (where one of the largest populations was recently discovered) across Hwy. 62 to Dry Morongo Wash and Big Morongo Canyon. The species is also known from several locations outside the HCP/NCCP boundary in San Bernardino County, including the upper reaches of Big Morongo Canyon, Dry Morongo Canyon just north of the county line, near Key's Ranch in Joshua Tree National Park (Sanders 1999). These locations in San Bernardino County are within the boundaries of BLM's West Mojave Planning Area.

The preferred Habitat of the triple-ribbed milkvetch has been characterized as sandy and gravelly soils of dry washes or on decomposed granite or gravelly soils at the base of canyon slopes. Recent observations of the species have illustrated that its Habitat requirements are very poorly understood. Most, if not all, observations of the species are in disturbed areas, such that it may be require some disturbance, whether natural or man-

made. In Big Morongo Canyon, it is found on decomposed granite "slides" at the base of canyon slopes. Other disturbed sites include along washes, on canyon bottoms where slides or flooding occurs. In Mission Creek Canyon, the species was observed in 1998 growing along the rocky edge of the stream, in the middle of roads, in a "rip-rap" barrier above the USGS gauging station, in open soils in a recently burned willow thicket at the margins of the cienega, and on gravelly sandbars in the midst of the stream channel (K. Barrows, pers. comm.). In each of these locations, natural or man-made disturbance is a feature. In its wash Habitat, large-scale floods may be a necessary condition for the successful germination of many seeds of triple-ribbed milkvetch. These large, scouring flood events occur only infrequently in this arid desert climate. A question remains as to how this species can persist given the small size of most known populations and the relative level of disturbance that could, presumably, wipe out a substantial number of individuals.

The HCP/NCCP Reserve System will provide for Habitat protection, management, and monitoring for currently unprotected Core Habitat and Other Conserved Habitat for the triple-ribbed milkvetch, from a range of environmental conditions within which it is known to occur. Potential Linkages will also be protected. Large areas in Joshua Tree National Park and the Santa Rosa Mountains that may provide Habitat for this species will be protected.

There are 3,007 acres of modeled triple-ribbed milkvetch Habitat in the HCP/NCCP area. The HCP/NCCP will ensure Conservation of 2,838 acres (94%) of the total modeled Habitat, including 2,026 acres of Core Habitat (96% of total) and 812 acres (93%) of Other Conserved Habitat. Approximately 1,504 acres (50%) of the modeled Habitat are within Existing Conservation Lands and will be managed as part of the Reserve System. An additional 1,334 acres (44%) of the modeled Habitat for triple-ribbed milkvetch in the HCP/NCCP Area will be conserved (Tables 4-114, 9-6:HCP/NCCP).

Within the Conservation Areas disturbance could occur on a maximum of 148 acres (5%) of modeled triple-ribbed milkvetch Habitat. There will be approximately 88 acres (3%) of Core Habitat and 60 acres (7%) of Other Conserved Habitat subject to disturbance (Tables 4-114, 9-6:HCP/NCCP). The Reserve System will effectively compensate for potential adverse impacts to this species because it will: 1) ensure Conservation of Core Habitat; 2) protect Essential Ecological Processes needed to maintain milkvetch Habitat; and 3) maintain Biological Corridors and Linkages among conserved populations to provide for population fluctuation and enhance genetic diversity (Sections 9.2.3.1:HCP/NCCP).

Additionally, the HCP/NCCP calls for Management and Monitoring Programs to ensure the Conservation of this milkvetch, including control of activities that degrade milkvetch Habitat. The Monitoring and Management Programs also provide for determination of the conditions that favor germination and growth in this species to ensure that these conditions persist (e.g., scouring by large floods) (Sections 8.2.3, 8.4.3.3.3, 9.2.3.2:HCP/NCCP).

The population dynamics of this species are unknown. In the face of uncertainty about the preferred Habitat for this species, the Planning Team took the conservative approach and recommended inclusion of all known occurrences for this species and all occupied and potential Habitat. The proposed Conservation Areas in the HCP/NCCP Reserve System include those areas judged by the Planning Team to be the most viable known Habitat for this species. The viability of this Habitat was based on the inclusion of the known occurrences, absence of fragmentation and edge effects, and an intact watershed and flood regime. The protection of the flooding regime may be the most significant feature for conservation of this species' Habitat.

Implementation of the Plan is expected to protect Habitat and to maintain population viability of the triple-ribbed milkvetch, as significant Habitat on private land that is currently unprotected will be conserved. The Plan will also secure the Essential Ecological Processes and Linkages necessary to maintain this Habitat. Therefore, coverage under the HCP/NCCP is warranted.

Orocopia Sage (Section 9.2.4:HCP/NCCP)

The Orocopia sage is endemic to the Orocopia Mountains, Mecca Hills, and Chocolate Mountains in the eastern part of the HCP/NCCP Area. Its known range is entirely within the HCP/NCCP Area. Orocopia sage has no official state or federal status but is listed by the California Department of Fish and Game as a Species of Special Concern and by the California Native Plant Society (CNPS) on List 1B (CNPS 2001). Orocopia sage occurs in a longitudinal, west to east range of approximately 30 miles.

The HCP/NCCP Area includes 78,868 acres of modeled Habitat for Orocopia sage, of which approximately 66,959 acres are identified as Core Habitat. The HCP/NCCP will ensure Conservation of 65,112 acres (97%) of the Core Habitat and 95% (3,838 acres) of the Other Conserved Habitat for this endemic plant. Each of the conserved Core Habitat areas will be greater than 3,000 acres. Approximately 50,664 acres (64%) of the modeled Habitat are within Existing Conservation Lands and will be managed as part of the Reserve System. As a result of the HCP/NCCP acquisitions, 18,286 acres (23%) of the modeled Habitat for Orocopia sage in the HCP/NCCP Area will be conserved. A total of 68,950 acres (87%) of modeled Orocopia sage Habitat will be conserved (Tables 4-114, 9-7:HCP/NCCP).

Potential adverse impacts could occur within the Conservation Areas, affecting 2,032 acres of modeled Orocopia sage Habitat. Approximately 1,847 acres (3% of total) of Core Habitat and 185 acres (5%) of Other Conserved Habitat will be subject to disturbance, primarily from recreational activities.

The proposed Conservation Areas include 87% of the known modeled Habitat for Orocopia sage. Most of the Conserved Habitat is on BLM land within the Mecca Hills and Orocopia Mountains Wilderness Areas. This includes areas considered as Core Habitat in the Desert Tortoise and Linkage Conservation Area and in the Mecca

Hills/Orocopia Mountains Conservation Area. Other Conserved Habitat from a range of environmental conditions within which this sage is known to or may occur will also be protected in the Dos Palmas Conservation Area. This HCP/NCCP includes 100% of the occurrences for this plant on 70,981 acres of Core and Other Conserved Habitat within the Conservation Areas. Consequently, the amount of modeled Habitat for Orocopia sage that could be subject to Take within the Conservation Areas will be 2,032 acres or 3% of all the modeled Habitat.

Additionally, the HCP/NCCP calls for Management and Monitoring Programs to ensure the Conservation of this species, including control of activities that degrade Orocopia sage. This could include Adaptive Management of impacts as a result of future increases in OHV activity along the Bradshaw Trail, if they occur, and control of invasive species where necessary. The Management and Monitoring Programs include a provision to develop and test models to address the distribution, abundance, and ecological requirements of Orocopia sage (Sections 8.4.2.1, 8.4.2.3.3, 9.2.4.2:HCP/NCCP).

Implementation of this HCP/NCCP is expected to conserve and enhance population viability of the Orocopia sage, as unprotected portions of its Habitat will be conserved. The potential for impacts from human uses, including OHV activity, appears to be low. Management and monitoring prescriptions will further enhance long-term Conservation of this species.

The Orocopia sage will benefit from the establishment of the HCP/NCCP Reserve System which will include Habitat in the Orocopia Mountains where they occur. Implementation of the HCP/NCCP is expected to provide for conservation of this species within the HCP/NCCP 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, including 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. Therefore, coverage under the HCP/NCCP is warranted.

Little San Bernardino Mountains Linanthus (Section 9.2.5:HCP/NCCP)

The Little San Bernardino Mountains linanthus is a tiny endemic plant species found in a restricted range in the northwestern part of the HCP/NCCP Area. Although extensive populations occur outside the HCP/NCCP Area, the portion of its range within the HCP/NCCP Area is significant. This tiny annual plant has no official state or federal status although it is considered a Species of Concern by USFWS and is on CNPS List 1B (CNPS 2001). It occurs in the vicinity of the Little San Bernardino Mountains near Desert Hot Springs, in Mission Creek Canyon across Hwy. 62 to Dry Morongo Wash and Big Morongo Canyon and near the mouth of Dry Morongo Canyon in the northwestern portion of the Coachella Valley, in Whitewater Canyon in the eastern San Bernardino

Mountains, and from Whitewater to Palm Springs, the type locality. The most extensive populations of this species are outside the HCP/NCCP boundary, along washes at the northern edge of Joshua Tree National Park, in the vicinity of Joshua Tree, Yucca Valley, and Twentynine Palms. It seems likely that additional populations of this species may occur in the area of approximately 22 miles between Rattlesnake Canyon and Yucca Valley. There is one very recently described location in Rattlesnake Canyon on the north side of the San Bernardino Mountains.

The HCP/NCCP Reserve System will provide for Habitat protection, management, and monitoring for currently unprotected Core Habitat and Other Conserved Habitat for the Little San Bernardino Mountains linanthus, from a range of environmental conditions within which it is known to occur. Potential Linkages will also be protected. Large areas in Joshua Tree National Park and the Santa Rosa Mountains that may provide Habitat for this species will be protected.

There are 3,389 acres of modeled Little San Bernardino Mountains linanthus Habitat in the HCP/NCCP area. The HCP/NCCP will ensure Conservation of 2,955 acres (87%) of the total modeled Habitat, including 2,235 acres of Core Habitat (93%) and 720 acres (92%) of Other Conserved Habitat. The primary Core Habitat area for this species in Upper Mission Creek/Big Morongo Canyon Conservation Area will be greater than 1,500 acres. Approximately 363 acres (11%) of the modeled Habitat are within Existing Conservation Lands and will be managed as part of the Reserve System. An additional 2,592 acres (77%) of the modeled Habitat for Little San Bernardino Mountains linanthus in the HCP/NCCP Area will be conserved. Overall, 2,955 acres (87%) of modeled linanthus Habitat will be conserved and managed as a result of the HCP/NCCP (Tables 4-114, 9-8:HCP/NCCP).

Within the Conservation Areas and Morongo Wash Special Provisions Area, potential adverse effects could occur on a maximum of 234 acres (7%) of modeled Little San Bernardino Mountains linanthus Habitat. There will be approximately 175 acres (7%) of Core Habitat and 59 acres (8%) of Other Conserved Habitat subject to Take (Tables 4-114, 9-8:HCP/NCCP). The Reserve System will effectively compensate for potential adverse impacts to this species, because it will: 1) ensure Conservation of Core Habitat; 2) protect Essential Ecological Processes needed to maintain Little San Bernardino Mountains linanthus Habitat; and 3) maintain Biological Corridors and Linkages among conserved populations to provide for population fluctuation and enhance genetic diversity (Section 9.2.5.1:HCP/NCCP). Although some of loss of Habitat could occur within the Conservation Areas and Morongo Wash Special Provisions Area, the Conservation Objectives required by the HCP/NCCP will provide for protection of Habitat to ensure the long-term conservation of this species. The Planning Team, in consultation with local botanists, considered all available and occupied Habitat for this species and determined that only those areas within the proposed Conservation Areas will provide long-term protection for self-sustaining populations (Section 9.2.5.3:HCP/NCCP).

Outside of the Conservation Areas, there are only 195 acres (6%) of modeled Habitat subject to Development and other proposed Covered Activities (Table 4-114:HCP/NCCP). The modeled Habitat outside the HCP/NCCP Reserve System occurs at the margins of the Upper Mission Creek/Big Morongo Canyon Conservation Area, east of Indian Avenue in an area where the hydrological regime has been compromised by surrounding development. Habitat loss could occur primarily in the lower reaches of Mission Creek and Big Morongo Canyons, south of Indian Avenue. Other populations of this species that occur outside the HCP/NCCP Area in Joshua Tree National Park are not affected by this HCP/NCCP. The protection of Habitat and known occurrences of this species will require acquisition of private lands. Public lands in Whitewater Canyon will require management actions to conserve the Habitat for this linanthus and other target species.

Implementation of the HCP/NCCP is expected to protect Habitat and to maintain population viability of the Little San Bernardino Mountains linanthus, as significant Habitat on private land that is currently unprotected will be conserved. The HCP/NCCP will also secure the Essential Ecological Processes and Linkages necessary to maintain this Habitat (Section 4.3.7:HCP/NCCP).

The HCP/NCCP calls for Management and Monitoring Programs to ensure the Conservation of this species, including control of activities that degrade little San Bernardino Mountains linanthus Habitat. The Monitoring and Management Programs also provide for determination of the conditions that favor germination and growth in this species to ensure that these conditions persist (e.g., scouring by large floods) (Section 8.4.2.2:HCP/NCCP). It will also develop and test models through the Management and Monitoring Programs to address the distribution, abundance, and ecological requirements of the Little San Bernardino Mountains linanthus (Sections 8.4.2.3.3, 9.2.5.2:HCP/NCCP).

The Little San Bernardino Mountains linanthus currently has only 2% of the known occurrences on public or private Existing Conservation Lands in the HCP/NCCP Area. This includes portions of the occurrences in Whitewater Canyon and in Mission Creek. The HCP/NCCP Reserve System will provide protection for two Core Habitat areas identified by the SAC and the Planning Team: Whitewater Canyon and Upper Mission Creek/Big Morongo Canyon (which includes the Morongo Wash Special Provisions Area). Other Conserved Habitat from a range of environmental conditions within which this linanthus is known to or may occur will be protected in the following Conservation Areas: Willow Hole, Indio Hills/Joshua Tree National Park Linkage, and Joshua Tree National Park. The Conservation Area boundaries were delineated to include almost all the available and occupied Habitat for this species. The HCP/NCCP will conserve 97%, or 58 of the 60 known occurrences for this species.

Implementation of the HCP/NCCP will maintain and enhance population viability of the Little San Bernardino Mountains linanthus, as the significant populations and occurrences will be conserved. Equally important, the HCP/NCCP will ensure that the hydrological

regimes that maintain this Habitat, including meandering or braided washes, are maintained. The HCP/NCCP will also secure potential Habitat in each of the canyons and washes where this species persists, including Whitewater Canyon, Mission Creek, Big Morongo wash, and Dry Morongo Canyon. 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. Therefore, coverage under the HCP/NCCP is warranted.

Coachella Valley Giant Sand-Treader Cricket (Section 9.3.1:HCP/NCCP)

The Coachella Valley giant sand-treader cricket occurs exclusively in the active sand hummocks and dunes in the Coachella Valley. The historic range of this species is entirely within the HCP/NCCP Area, from Fingal's Finger east to the sand dune areas in the vicinity of Indio. This insect has no official state or federal status, although it is considered a Species of Concern by USFWS. The Coachella Valley giant sand-treader cricket is most abundant in the active dunes and ephemeral sand fields at the west end of the Coachella Valley, west of Palm Drive at least to Snow Creek Road, adjacent to the Whitewater River and San Gorgonio River washes. Suitable Habitat also occurs within the Whitewater Floodplain Preserve and at the Thousand Palms Preserve, on the main dunes and on the Simone Dunes. Its distribution has been described by Tinkham (1962) as extending to two miles west of Indio.

The primary importance of the HCP/NCCP to Coachella Valley giant sand-treader cricket is that it provides Conservation (including Habitat protection, management and monitoring) of the species across its entire range. The HCP/NCCP ensures the long-term conservation of Core Habitat, the associated Essential Ecological Processes, and connectivity between these Habitat areas. In addition, the Conservation Areas provide protection across an array of Habitat variables, including moisture, soil character, elevation, and vegetation, within the entire range of this subspecies (Section 9.3.1:HCP/NCCP).

Within the Conservation Areas under the worst case scenario, 779 acres of modeled Habitat (3%) could be lost. This is approximately 533 acres (5%) of Core Habitat and 246 acres (9%) of Other Conserved Habitat (Tables 4-114, 9-9:HCP/NCCP). Take of sand-treader cricket Habitat within the Conservation Areas must be consistent with the Conservation Objectives for this species to: 1) ensure Conservation of Core Habitat; 2) protect Essential Ecological Processes, including the sand source/sand transport system, needed to maintain sandtreader cricket Habitat; and 3) maintain Biological Corridors and Linkages among conserved populations to provide for population fluctuation and enhance genetic diversity (Section 9.3.1.1:HCP/NCCP).

Outside of the Conservation Areas, there are 12,903 acres (48%) of Habitat that could be lost (Table 4-114:HCP/NCCP). Within the Conservation Areas there are up to 779 acres (3%) that could be lost. The Habitat outside the Conservation Areas is already highly

fragmented, surrounded by existing Development, and has a compromised sand source/transport system. The potential for these Habitat areas to provide for the long-term conservation of sand-treader cricket populations is low. These areas are primarily in the remnants of the Big Dune south of I-10, and in the area south of Desert Hot Springs and east of Hwy. 62. The Big Dune area no longer has a viable sand transport/wind corridor and is highly fragmented by major roads. These fragmented blocks are more susceptible to edge effects, including mortality on roads. The Planning Team carefully considered all available and occupied Habitat for this species and determined that only those areas within the proposed Conservation Areas will provide long-term protection for self-sustaining populations of this cricket. Core Habitat was not delineated in the Big Dune area, as active blowsand areas have been disturbed, and Essential Ecological Processes are already altered and degraded by the I-10 freeway and roads that fragment the dune. The close association of this species with active sand dunes and active sand fields makes the long-term conservation of sand transport systems essential. It was determined that these sand transport systems were irrevocably altered or compromised in the Big Dune area south of I-10 (Section 9.3.1.4:HCP/NCCP).

The Permittees will protect and manage, in perpetuity, 12,997 acres of the modeled Habitat for this species. The 5,999 acres of modeled Habitat within Existing Conservation Lands will be monitored and managed to ensure that Conservation Objectives are met (Tables 4-114, 9-9:HCP/NCCP). The HCP/NCCP will thus ensure Conservation, through protection and management, of 6,998 acres of Additional Conservation Lands for this species.

The proposed Conservation Areas in the HCP/NCCP will protect the Core Habitat areas from Snow Creek to the Thousand Palms Preserve. Core Habitat was designated for this species in the Snow Creek area, the Whitewater Floodplain Preserve, and at the Thousand Palms Preserve, based primarily on the distribution of active blowsand areas. Other Conserved Habitat from a range of environmental conditions within which this cricket is known to occur will be protected in the following Conservation Areas: Willow Hole, Edom Hill, East Indio Hills, and sandy areas around Snow Creek that are within the Santa Rosa and San Jacinto Mountains Conservation Area. Reserve Design criteria used to establish the Conservation Areas require Conservation of Essential Ecological Processes. The HCP/NCCP Reserve System will incorporate and protect additional sand source/sand transport areas for Snow Creek/Windy Point, the Whitewater Floodplain Conservation Area, Willow Hole and Flat Top Mountain, and the Thousand Palms Preserve (Section 9.3:HCP/NCCP).

Additionally, the HCP/NCCP calls for Management and Monitoring Programs to ensure the Conservation of this species, including control of activities that degrade sand-treader cricket Habitat, control of OHV trespass, limits on disturbance during the emergence and breeding seasons, control of invasive species where necessary, and restoration and enhancement of degraded Habitat as necessary according to monitoring results. The HCP/NCCP also calls for baseline monitoring to better describe the distribution, abundance, and Habitat parameters of the Coachella Valley sand-treader cricket throughout the HCP/NCCP Reserve System (Sections 8.4.1.3.2, 9.3.1.2:HCP/NCCP).

The Coachella Valley sand-treader cricket will benefit from the establishment of the HCP/NCCP 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. The HCP/NCCP will ensure the Conservation of an additional 26% of Habitat areas. The combination of the overall Conservation measures, including species-specific measures such as management to minimize impacts from 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 species. Therefore, coverage under the HCP/NCCP is warranted.

Coachella Valley Jerusalem Cricket (Section 9.3.2:HCP/NCCP)

The known range for the Coachella Valley Jerusalem cricket is entirely within the HCP/NCCP Area. The Coachella Valley Jerusalem cricket has no official state or federal status. It is known from near the HCP/NCCP boundary in the Cabazon area west of Fingal's Finger to Snow Creek area and east to Windy Point, and from remnants of sand dune Habitat around the Palm Springs Airport. It has also been found in sandy soils on the ridgeline along the eastern side of Whitewater Canyon. The easternmost known occurrence is a record from the Thousand Palms area in the vicinity of Bob Hope Drive and I-10. Recent surveys by University of California Riverside biologists (Barrows 2005) within the potential Habitat area east of Windy Point have not yielded any crickets. They occur in sandy to somewhat gravelly sandy soils and have been called an obligate sand species (G. Ballmer, pers. comm.). Their abundance at the western edge of the Coachella Valley and their affiliation with cool, moist conditions, has led some to suggest their distribution is limited by temperature and moisture regimes (Tinkham 1968, Hawks 1995).

Implementation of the HCP/NCCP will maintain and increase long-term Conservation of the Coachella Valley Jerusalem cricket because unprotected portions of its Habitat, potential Habitat, Essential Ecological Processes for the sand dunes, and Biological Corridors and Linkages will be conserved. The Reserve System will provide protection across an array of Habitat variables, including moisture, soil character, elevation, and vegetation, within the entire range of this subspecies. The extent to which additional populations exist and could be conserved will need to be evaluated on a continuing basis as the HCP/NCCP progresses. Occurrences not within the proposed Conservation Areas are generally in small, highly fragmented locations, including the Palm Springs Airport (where the cricket may no longer be extant) and an undeveloped lot in Palm Springs. The HCP/NCCP also provides for management and monitoring of the species across its entire range.

There are 22,811 acres of modeled Habitat for this species within the HCP/NCCP Area of which approximately 1,690 acres are identified as Core Habitat. The HCP/NCCP will ensure Conservation of 1,540 acres (91%) of the Core Habitat and 10,509 acres (89%) of

the Other Conserved Habitat for this cricket. The conserved Core Habitat area at Snow Creek will be greater than 1,500 acres. Approximately 3,429 acres (15%) of the modeled Habitat are within Existing Conservation Lands and will be managed as part of the Reserve System. The HCP/NCCP will also require the long-term protection of 8,620 acres of Habitat for this species. There are 466 acres that fall within the fluvial sand transport areas. Overall, the HCP/NCCP will conserve a total of 12,049 acres (53%) of the modeled Habitat for Coachella Valley Jerusalem cricket in the HCP/NCCP Area (Tables 4-114, 9-11:HCP/NCCP).

Within the Conservation Areas under the worst case scenario, 955 acres (7%) of modeled Habitat could be lost. There will be approximately 150 acres (9%) of Core Habitat and 805 acres of Other Conserved Habitat (7%) lost (Table 4-114:HCP/NCCP). Take of Jerusalem cricket Habitat within the Conservation Areas must be consistent with the Conservation Objectives for this species to: 1) ensure Conservation of Core Habitat; 2) protect Essential Ecological Processes needed to maintain Jerusalem cricket Habitat; and 3) maintain Biological Corridors and Linkages among conserved populations to provide for population fluctuation and enhance genetic diversity (Section 9.3.2.:HCP/NCCP). Although some Take could occur within the Conservation Areas, the Conservation Objectives required by the HCP/NCCP will provide for protection of Habitat to ensure the long-term conservation of this species.

Outside of the Conservation Areas, there are 9,034 acres (40%) of modeled Habitat that could be lost. The Habitat outside the Conservation Areas is already highly fragmented, surrounded by existing Development, and has a compromised sand source/transport system. These areas are primarily in the area north of I-10 at the Hwy. 111 intersection, south of the Whitewater Floodplain Preserve, and in areas outside the Conservation Area boundary near the Whitewater recharge ponds. There are also remnants of the Big Dune area which no longer has a viable sand transport/wind corridor and is highly fragmented by major roads. These fragmented blocks will make the Jerusalem cricket more susceptible to edge effects, including mortality on roads and predation by feral animals. This fragmentation results in impacts to the Habitat that will reduce the potential for long-term Conservation of Jerusalem cricket populations (Section 9.3.2.4:HCP/NCCP).

Additionally, the HCP/NCCP calls for Management and Monitoring Programs to ensure the Conservation of this species, including control of activities that degrade Jerusalem cricket Habitat, control of invasive species where necessary, and restoration and enhancement of degraded Habitat as necessary according to monitoring results. The Monitoring Program also calls for data gathering to better describe the distribution, abundance, and Habitat parameters of the Coachella Valley Jerusalem cricket within the HCP/NCCP Area, including update and refinement of the species model (Sections 8.4.1.2.2, 9.3.2.1:HCP/NCCP).

The HCP/NCCP Reserve System includes 13 of the 18 (72%) known occurrences for the Coachella Valley Jerusalem cricket within Conserved Habitat. The HCP/NCCP will ensure the conservation of a minimum of 1,540 acres of Core Habitat for this species,

including Habitat from the vicinity of Fingal's Finger east to Windy Point, including the Snow Creek dune system. Other Conserved Habitat from a range of environmental conditions within which this cricket is known to occur will be protected in the following Conservation Areas: Cabazon, Hwy. 111/I- 10, Whitewater Floodplain, Upper Mission Creek/Big Morongo Canyon, Willow Hole, Edom Hill C, and Santa Rosa and San Jacinto Mountains.

The Coachella Valley Jerusalem cricket will benefit from the establishment of the HCP/NCCP 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. The combination of the overall Conservation measures, including 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. Therefore, coverage under the HCP/NCCP is warranted.

Desert Pupfish (Section 9.4.1:HCP/NCCP)

Although the HCP/NCCP Area does not include all of the known range for the desert pupfish, it includes a significant portion, including the known locations in upper and lower Salt Creek, the mouth of Salt Creek, shoreline pools and irrigation drains at the north end of the Salton Sea, and various artificial refugia. According to the Desert Pupfish Recovery Plan (USFWS 1993), naturally occurring populations of desert pupfish are now restricted in California to two streams tributary to, and a few shoreline pools and irrigation drains of, the Salton Sea. These naturally occurring populations are within the HCP/NCCP Area.

This historical distribution of desert pupfish is much reduced from the lower Colorado River in Arizona and California south to Baja and Sonora. Today, outside the HCP/NCCP Area, desert pupfish occur in San Felipe Creek, San Sebastian Marsh, and southern parts of the Salton Sea. Native populations are gone from Arizona. The desert pupfish is listed as endangered by both the state and federal government. Although it is remarkably tolerant of extremes of temperature, salinity, and dissolved oxygen, the species is threatened with extinction throughout its range primarily because of Habitat loss or modification, pollution, and introduced exotic fishes (USFWS 1986).

Within the HCP/NCCP Reserve System, significant known Habitat will be protected under Conservation ownership, including the Salt Creek population. The numerical evaluation of the acres of Habitat conserved for this species is a challenge. This is because the locations where pupfish occur are small pools and agricultural drains, usually much less than one acre in size. The actual number of acres of Habitat for this species has been estimated based on interpretation of aerial images of the conserved locations and refugia. Many of the known locations for desert pupfish are in agricultural drains that release agricultural runoff into the Salton Sea. Within the HCP/NCCP Area there are 31

known occurrences mapped for desert pupfish. Only 7 of the desert pupfish locations occur within Existing Conservation Lands, primarily at the Dos Palmas Conservation Area. The remaining 24 mapped pupfish locations occur in agricultural drains which empty into the Salton Sea, and are included within the Conservation Areas. The HCP/NCCP 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 (Section 4.3.20:HCP/NCCP). Disturbance of the Habitat and potential Take will be permitted in the Salton Sea agricultural drains only as a result of operations and maintenance activities so long as the pupfish population is maintained.

Implementation of the HCP/NCCP is expected to maintain and enhance population viability of the desert pupfish by helping to implement the Desert Pupfish Recovery Plan (USFWS 1993). The primary objective of the recovery plan is to eliminate threats to extant populations and successfully establish additional populations in secure Habitat, such that the species can be down-listed from endangered to threatened.

The Permittees will protect and manage, in perpetuity, 25.05 acres of the modeled Habitat for this species. There is a very small acreage of modeled Habitat, occurring at two refugia populations, within Existing Conservation Lands. In addition, there are approximately 25 acres of desert pupfish Habitat in the agricultural drains (Harza 2002). These locations will continue to be monitored and managed to ensure that Conservation Objectives are met. The HCP/NCCP will thus ensure Conservation, through protection, restoration, and management, of at least 25 acres of desert pupfish Habitat. In addition, agricultural drains will be managed to enhance the Habitat potential for desert pupfish (Section 4.3.20:HCP/NCCP).

Additionally, the HCP/NCCP calls for Management and Monitoring Programs to ensure the Conservation of desert pupfish. The Management Program will include control of activities that degrade their Habitat, control of invasive species where necessary, and restoration and enhancement of degraded Habitat as necessary according to monitoring results (Section 8.2.4.1:HCP/NCCP). The HCP/NCCP also provides that the Monitoring Program will address the distribution, abundance, and Habitat parameters of the desert pupfish throughout the HCP/NCCP Reserve System (Section 8.4.5.3.3:HCP/NCCP).

To mitigate impacts from drain maintenance and other operations and maintenance activities, 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 input from the Wildlife Agencies. Ongoing maintenance and adjustments will be required, including vegetation control and dike and bank maintenance, to achieve desired Habitat characteristics. Water quality, including selenium concentrations, will be maintained at acceptable levels (Section 4.3.20:HCP/NCCP).

Within the Conservation Areas, significant known Habitat will be permanently protected, including the Salt Creek population. Habitat for this species within the HCP/NCCP Area includes most of the known locations, which are in agricultural drains that release

agricultural runoff into the Salton Sea. The HCP/NCCP 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 (Section 4.3.20:HCP/NCCP). Disturbance of the Habitat and potential Take will 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 HCP/NCCP is expected to maintain and enhance population viability of the desert pupfish by helping to implement the Desert Pupfish Recovery Plan (USFWS 1993). The primary objective of the recovery plan is to eliminate threats to extant populations and successfully establish additional populations in secure Habitat, such that the species can be down-listed from endangered to threatened. Therefore, coverage under the HCP/NCCP is warranted.

Arroyo Toad (Section 9.5.1:HCP/NCCP)

The Arroyo toad is a federal Endangered Species and a state Species of Special Concern. It is also a California and Baja endemic. Historically, it occurred from the upper Salinas River in San Luis Obispo County south along the coast to the Rio Santo Domingo system in Baja California, Mexico. Within the HCP/NCCP Area, there are records for this species in the Whitewater River in Whitewater Canyon, and potential Habitat in Mission Creek and Stubbe Canyon. The Whitewater River population is one of the 15 self-sustaining populations identified in the Arroyo Toad Recovery Plan (USFWS 1999) as necessary for consideration of delisting the species. There are records from six desert side drainages. The species has disappeared from 76% of its historic range as of 1994 (Jennings and Hayes 1994). The northern, central, and eastern portions of the range have lost all of their populations. It is currently known from only a few scattered localities within its historic range. About 90% of the known extant populations occur in areas owned or managed by the USFS (1993a).

There are 2,095 acres of modeled Habitat for this species within the HCP/NCCP Area of which approximately 2,085 acres are within the Conservation Areas. Of the modeled Habitat within the Conservation Areas, 2,082 acres are identified as Core Habitat. The HCP/NCCP will ensure Conservation of 2004 acres (96%) of the Core Habitat and 3 acres (100%) of the Other Conserved Habitat for this toad. The conserved Core Habitat area in Whitewater Canyon is more than 2,000 acres. Approximately 1,301 acres (62%) of the modeled Habitat are within Existing Conservation Lands and will be managed as part of the Reserve System. The HCP/NCCP will also require the long-term protection of an additional 706 acres of Habitat for this species. Overall, the HCP/NCCP will conserve a total of 2,007 acres (96%) of the modeled Habitat for Arroyo toad in the HCP/NCCP Area (Tables 4-114, 9-14:HCP/NCCP).

Within the Conservation Areas under the worst case scenario, 78 acres of modeled Habitat (4%) could be lost. Take of Arroyo toad Habitat within the Conservation Areas must be consistent with the Conservation Objectives for this species to: 1) ensure Conservation of Core Habitat and existing populations as well as potential Habitat; 2)

protect Essential Ecological Processes needed to maintain toad Habitat, including hydrological regimes; and 3) maintain Biological Corridors and Linkages among conserved populations to provide for population fluctuation and enhance genetic diversity (Section 9.5.1:HCP/NCCP). Although some Take could occur within the Conservation Areas, the Conservation Objectives required by the HCP/NCCP will provide for protection of Habitat to ensure the long-term conservation of Arroyo toad.
Outside of the Conservation Areas, there are 10 acres of modeled Habitat that could be lost (Table 4-114:HCP/NCCP). The Habitat outside the Conservation Areas is modeled Habitat only that is on the periphery of suitable Habitat for this species.

The Permittees will protect and manage, in perpetuity, 706 acres of the modeled Habitat for this species. The 1,301 acres of modeled Habitat within Existing Conservation Lands will be monitored and managed to ensure that Conservation Objectives are met. The HCP/NCCP will thus ensure Conservation, through protection and management, of 2,007 acres of Habitat for Arroyo toad (Section 9.5.1.1:HCP/NCCP).

The Conservation Areas in the HCP/NCCP will protect the Core Habitat areas in Whitewater Canyon as well as locations where the species could occur in Mission Creek and Snow Creek.

Additionally, the HCP/NCCP calls for Management and Monitoring Programs to ensure the Conservation of this species, including control of activities that adversely impact water quality and the hydrological regime, disturbance from recreational activity in sensitive areas, control of invasive species where necessary, and restoration and enhancement of degraded Habitat as necessary according to monitoring results (Sections 8.2.4.1, 8.4.3.3.3, 9.5.1.2:HCP/NCCP). The HCP/NCCP also calls for an educational program for residents and visitors in Whitewater Canyon to inform them about the Arroyo toad and its Conservation needs (Section 9.5.1.2:HCP/NCCP).

Under the HCP/NCCP, 96 % of the modeled Habitat of Arroyo toad within the HCP/NCCP Area will be conserved. In addition, potential Habitat in Snow Creek and Mission Creek will be conserved. Potential Habitat in the Palm Canyon area is located on the Agua Caliente Indian Reservation, which is not included in this HCP/NCCP.

The Arroyo Toad Recovery Plan (USFWS 1999) identifies the conservation of 15 self-sustaining populations in addition to 19 primary populations in seven areas to secure genetic and phenotypic variation. The Whitewater River population is one of the 15 self-sustaining populations necessary for consideration of delisting the species. Implementation of the HCP/NCCP 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.

Implementation of the Plan will conserve and maintain Habitat for Arroyo toad in the Whitewater River and benefit this species as unprotected portions of its Habitat, potential

Habitat, Essential Ecological Processes including hydrological regimes, and Biological Corridors and Linkages will be conserved. The extent to which the Whitewater River and additional populations exist and could be conserved will need to be evaluated on a continuing basis as the Plan progresses. The Plan also provides for management and monitoring of Arroyo toad across its entire range. Therefore, coverage under the HCP/NCCP is warranted.

Yuma Clapper Rail (Section 9.7.1:HCP/NCCP)

The HCP/NCCP Area is at the northern edge of the Yuma clapper rail distribution. There are records of occurrences from the Whitewater River delta and upstream, in scattered locations, for approximately 10 miles along the Coachella Valley Stormwater Channel, two agricultural drains on the west side of the Salton Sea, at the mouth of Salt Creek, and in the Dos Palmas area. The Yuma clapper rail is a federally listed endangered species and is state listed as threatened and fully protected. Yuma clapper rails are now and have historically been restricted to the region of the lower Colorado River, the Colorado River delta, and appropriate Habitats surrounding the Salton Sea and in the Whitewater River north of the sea. There are rare records for this species in marshland Habitat along the eastern shore of the Sea of Cortez. Within this historic range, appropriate Habitat along the lower Colorado River and delta areas has been severely reduced through water diversions and tamarisk/salt cedar infestations.

There are 762 acres of modeled Habitat for this species within the HCP/NCCP Area. Core Habitat was not designated for this species, although all known Habitat was considered as core. The HCP/NCCP will ensure Conservation of 697 acres (91%) of modeled Habitat for this rail (Tables 4-114, 9-18:HCP/NCCP). Approximately 271 acres (36%) of the modeled Habitat are within Existing Conservation Lands and will be managed as part of the Reserve System. There are 6 known locations for Yuma clapper rail within the Dos Palmas Conservation Area, 5 of which are within Existing Conservation Lands.

Within the Conservation Areas under the worst case scenario, 47 acres of modeled Habitat (6%) could be lost (Table 4-114:HCP/NCCP). Loss of Yuma clapper rail Habitat within the Conservation Areas must be consistent with the Conservation Objectives for this species to: 1) ensure Conservation of Core Habitat; 2) protect Essential Ecological Processes including the hydrological regime needed to maintain rail Habitat; and 3) maintain Biological Corridors and Linkages among conserved populations to provide for population fluctuation and enhance genetic diversity (Section 9.7.1:HCP/NCCP). Although some loss could occur within the Conservation Areas, the Conservation Objectives required by the HCP/NCCP will provide for protection of Habitat to ensure the long-term conservation of this species.

Outside of the Conservation Areas, there are 16 acres of modeled Habitat authorized for loss. There are 14 known locations for this rail, 8 of which are outside the Conservation Areas. The Habitat outside the Conservation Areas occurs along the Coachella Valley Stormwater Channel, north of the Stormwater Channel and Delta Conservation Area

boundary. This Habitat is impacted by periodic flood control channel maintenance by CVWD.

The Permittees will protect and manage, in perpetuity, 426 acres of the modeled Habitat for this species. The 271 acres of modeled Habitat within Existing Conservation Lands will be monitored and managed to ensure that Conservation Objectives are met. The HCP/NCCP will thus ensure Conservation, through protection and management, of 697 acres (91%) of the clapper rail Habitat in the HCP/NCCP Area (Section 9.7.1.1:HCP/NCCP).

Some temporary impacts to Yuma clapper rail Habitat will be permitted in the course of Operations & Maintenance (O&M) activities by CVWD. The CVWD will establish 66 acres of permanent Habitat for the California black rail and Yuma clapper rail 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. As part of this restoration, a plan detailing the location, water supply, and monitoring and management responsibilities, including funding will be developed within two years of permit issuance (Section 4.3.20:HCP/NCCP).

Additionally, the HCP/NCCP calls for Management and Monitoring Programs to ensure the Conservation of this species, including control of activities that degrade rail Habitat, control of invasive species where necessary, and restoration and enhancement of degraded Habitat as necessary according to monitoring results (Sections 8.2.4.1, 8.4.5.2, 8.4.5.3.2, 9.7.1.2:HCP/NCCP).

The Yuma clapper rail is a state fully protected species. Surveys will be required in potential Habitat for this rail before any activity that will impact the Habitat takes place. 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 projects where Fish and Game Code Section 2081.7 is applicable (Section 4.3.19:HCP/NCCP).

Implementation of the HCP/NCCP is expected to maintain and enhance population viability of the Yuma clapper rail by protecting its existing Habitat in the HCP/NCCP Area and restoring and enhancing additional Habitat. The BLM and The Nature Conservancy prepared a Dos Palmas Ecosystem Management Plan in 1994. BLM and the Center for Natural Lands Management (CNLM) now manage the ACEC lands. A primary objective of the Dos Palmas plan is to provide for the protection and enhancement of desert pupfish and rail Habitat. HCP/NCCP implementation will coordinate with BLM and CNLM.

The Yuma clapper rail will benefit from the establishment of the HCP/NCCP 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. Implementation of the HCP/NCCP is expected to provide for Conservation of this threatened and endangered rail within the HCP/NCCP Area, as

currently unprotected portions of its Habitat and potential Habitat areas will be conserved. Therefore, coverage under the HCP/NCCP is warranted.

California Black Rail (Section 9.7.2:HCP/NCCP)

Historically, California black rails occurred along the Pacific coast from Bahia San Quintin in Baja California to San Diego, Los Angeles and north to San Francisco. Inland, these rails occurred from the delta of the Colorado River north to the central valley of California and on to eastern Oregon marshlands. Today, the coastal and inland wetlands are greatly reduced from their historic range.

A desert stronghold for this species appears to be along the lower Colorado River where over a hundred birds have repeatedly been observed during censuses in recent years. California black rails are known to occur within the Salt Creek watershed of the Dos Palmas region, both in the wetlands in the Dos Palmas Springs area and at the mouth of Salt Creek. No accurate numbers are available. There is also a record from the Whitewater delta area at the north end of the Salton Sea. Appropriate management of both Dos Palmas and the Whitewater delta could expand existing Habitat for this species. All of the four known locations within the HCP/NCCP Area are within the Coachella Valley Stormwater Channel and Delta or Dos Palmas Conservation Areas.

The primary importance of the HCP/NCCP to the California black rail is that currently unprotected Habitat will be conserved, additional Habitat will be created, and existing Habitat will be enhanced as a result of the Monitoring and Management Programs.

There are 675 acres of modeled Habitat for this species within the HCP/NCCP Area. Core Habitat was not designated for this species, although all known Habitat was considered as core. Approximately 230 acres (34%) of the modeled Habitat are within Existing Conservation Lands and will be managed as part of the Reserve System. Overall, the HCP/NCCP will conserve a total of 616 acres (91%) of the modeled Habitat for California black rail in the HCP/NCCP Area (Tables 4-114, 9-19:HCP/NCCP).

Within the Conservation Areas under the worst case scenario, 43 acres of modeled Habitat (7%) could be lost (Table 4-114:HCP/NCCP). Loss of California black rail Habitat within the Conservation Areas must be consistent with the Conservation Objectives for this species to: 1) ensure Conservation of Core Habitat; 2) protect Essential Ecological Processes including the hydrological regime needed to maintain rail Habitat; and 3) maintain Biological Corridors and Linkages among conserved populations to provide for population fluctuation and enhance genetic diversity (Section 9.7.2.1:HCP/NCCP). Although some Habitat loss could occur within the Conservation Areas, the Conservation Objectives required by the HCP/NCCP will provide for protection of Habitat to ensure the long-term conservation of black rails.

Outside of the Conservation Areas, there are 16 acres of modeled Habitat that could be lost (Table 4-114:HCP/NCCP). The Habitat outside the Conservation Areas is located

along the Coachella Valley Stormwater Channel in an area of potential Habitat where the occurrence of black rails has not been confirmed. Some temporary impacts to California black rail Habitat will be permitted in the course of O&M activities by CVWD. As with the Yuma clapper rail, the impacts to this Habitat as a result of flood control channel maintenance will be mitigated by the establishment of 66 acres of replacement permanent rail Habitat by CVWD in the Coachella Valley Stormwater Channel and Delta Conservation Area (Sections 4.3.20, 8.4.5.2:HCP/NCCP).
The California black rail is a state fully protected species. Surveys will be required in potential Habitat for this rail before any activity that will impact the Habitat takes place. If rails are found, the Habitat must be avoided or measures must be approved by the Wildlife Agencies to ensure that no Take of an individual occurs, other than projects where Fish and Game Code Section 2081.7 is applicable (Section 4.3.19:HCP/NCCP).

The Permittees will protect and manage, in perpetuity, 616 acres (91%) of the modeled Habitat for this species. The 230 acres of modeled Habitat within Existing Conservation Lands will be monitored and managed to ensure that Conservation Objectives are met. The HCP/NCCP will thus ensure Conservation, through protection and management, of 386 acres of Additional Conservation Lands for this species (Section 9.7.2.1:HCP/NCCP).

Additionally, the HCP/NCCP calls for Management and Monitoring Programs to ensure the Conservation of this species, including control of activities that degrade rail Habitat, control of invasive species where necessary, and restoration and enhancement of degraded Habitat as necessary according to monitoring results (Section 8.4.5.2:HCP/NCCP).

Implementation of the HCP/NCCP is expected to maintain and enhance population viability of the California black rail by protecting its existing Habitat in the HCP/NCCP Area and restoring and enhancing additional Habitat. The California black rail will benefit from the establishment of the HCP/NCCP 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. Implementation of the HCP/NCCP is expected to provide for Conservation of this threatened and endangered rail within the HCP/NCCP Area, as 58% of currently unprotected portions of its Habitat and potential Habitat areas will be conserved. Therefore, coverage under the HCP/NCCP is warranted.

Southwestern Willow Flycatcher (Section 9.7.4:HCP/NCCP)

The southwestern willow flycatcher occurs in the HCP/NCCP Area as a likely breeding bird, as well as a migrant. Given the limited availability of suitable riparian Habitat in the HCP/NCCP Area, their status in this region is described as part of a metapopulation. The extent of breeding in the HCP/NCCP Area is not known as only Mission Creek has been confirmed as a breeding location (R. McKernan, pers. comm.). Breeding Habitat is present in a number of the Conservation Areas, and the willow flycatcher is considered a

breeding species within the HCP/NCCP Area. Throughout its range, the majority of sites where this species occurs are comprised of small numbers of flycatchers (Marshall 2000). The significance of small populations which may be part of a larger metapopulation, as regional sources of colonizers at least in some years, is noted as a reason to ensure Conservation of these sites (Marshall 2000). The willow flycatchers in the Coachella Valley are likely part of such a metapopulation. This subspecies of the willow flycatcher is listed as endangered by both the state and federal governments. Within the HCP/NCCP Area it has been recorded in riparian Habitat from Whitewater Canyon and Mission Creek, Thousand Palms Oasis, Cottonwood Spring in Joshua Tree National Park, and Dos Palmas. Outside the HCP/NCCP Area their breeding range includes dense riparian forests and woodlands in Southern California, southern Nevada, Arizona, New Mexico, Utah, western Texas, and northern Baja California and Sonora, Mexico.

The primary importance of the HCP/NCCP to the southwestern willow flycatcher is that it provides Conservation (including Habitat protection, management and monitoring) of breeding Habitat and Habitat used by this species in migration. The HCP/NCCP ensures the long-term conservation of breeding and migratory Habitat as well as the associated Essential Ecological Processes, including the hydrological regimes that support riparian vegetation.

Breeding Habitat

There are 2,730 acres of modeled breeding Habitat for the southwestern willow flycatcher within the HCP/NCCP Area. Approximately 2,672 acres of this modeled breeding Habitat occur within the Conservation Areas and the HCP/NCCP will ensure Conservation of 2,563 of these acres (94%). Approximately 1,526 acres (56%) of the modeled Habitat are within Existing Conservation Lands and will be managed as part of the Reserve System. The HCP/NCCP will conserve an additional 1,037 acres (38%) of the modeled breeding Habitat for southwestern willow flycatcher (Tables 4-114, 9-21a:HCP/NCCP).

Within the Conservation Areas under the worst case scenario, 109 acres of modeled breeding Habitat (4%) could be lost (Tables 4-114, 9-21a:HCP/NCCP). Take of willow flycatcher breeding Habitat within the Conservation Areas must be consistent with the Conservation Objectives for this species to: 1) ensure Conservation of Core Habitat; 2) protect Essential Ecological Processes needed to maintain willow flycatcher Habitat; and 3) maintain Biological Corridors and Linkages among conserved populations to provide for population fluctuation and enhance genetic diversity (Section 9.7.4.2:HCP/NCCP). Although some Take could occur within the Conservation Areas, the Conservation Objectives required by the HCP/NCCP will provide for protection of Habitat to ensure the long-term conservation of this species.

Outside of the Conservation Areas, there are 59 acres (2%) of modeled breeding Habitat that could be lost (Table 4-114:HCP/NCCP). Some of this acreage occurs as small fragments of marginal Habitat at the margins of suitable riparian Habitat areas. Some of this acreage occurs along the Coachella Valley Stormwater Channel north of the Conservation Area boundary. Impacts to Habitat along this portion of the Stormwater channel will be mitigated by establishment of 44 acres of replacement permanent riparian forest by CVWD (Section 4.3.20:HCP/NCCP).

Migratory Habitat

There are 57,589 acres of modeled migratory Habitat for the southwestern willow flycatcher within the HCP/NCCP Area. Approximately 43,177 acres of this modeled migratory Habitat occur within the Conservation Areas and the HCP/NCCP will ensure Conservation of 40,846 of these acres (71%). Approximately 21,312 acres (37%) of the modeled migratory Habitat are within Existing Conservation Lands and will be managed as part of the Reserve System. The HCP/NCCP will conserve an additional 19,534 acres (34%) of the modeled migratory Habitat for southwestern willow flycatcher (Tables 4-114, 9-21b:HCP/NCCP).

Within the Conservation Areas under the worst case scenario, 2,331 acres of modeled migratory Habitat (4%) could be lost (Tables 4-114, 9-21b:HCP/NCCP). Take of willow flycatcher migratory Habitat within the Conservation Areas must be consistent with the Conservation Objectives for this species to: 1) ensure Conservation of riparian Habitat, and 2) protect Essential Ecological Processes including hydrological regimes needed to maintain riparian Habitat (Section 9.7.4.2:HCP/NCCP). Although some Take could occur within the Conservation Areas, the Conservation Objectives required by the HCP/NCCP will provide for protection of Habitat to ensure the long-term conservation of this species.

Outside of the Conservation Areas, there are 13,040 acres (23%) of modeled migratory Habitat that could be lost (Table 4-114:HCP/NCCP). The migratory Habitat outside the Conservation Areas consists of slivers of Habitat, including desert dry wash woodland, along various washes from Desert Hot Springs area to the margins of the Cathedral City and Rancho Mirage cove areas and around Deep Canyon in Palm Desert. Larger patches of migratory Habitat occur northwest of the Salton Sea in desert saltbush scrub, desert sink scrub, natural communities that are highly fragmented in a matrix of agriculture, and in the eastern part of the HCP/NCCP Area south of the I-10.

Existing Conservation Areas within the HCP/NCCP boundary currently protect 38% of the Habitat for the southwestern willow flycatcher. The Conservation Areas in the HCP/NCCP will protect 94% of the occupied and potential breeding Habitat and 71% of the potential migratory Habitat for this species. The Conservation Areas include the potential breeding Habitat for southwestern willow flycatchers in Whitewater Canyon, Chino Canyon, the Thousand Palms Preserve, the Whitewater River mouth near the

Salton Sea, Cottonwood Springs in Joshua Tree National Park, and Dos Palmas. The HCP/NCCP includes 100% of the known breeding locations for this flycatcher. Other suitable Habitat for breeding sites in the HCP/NCCP Area occurs in Palm Canyon, Murray Canyon, and Andreas Canyon on the Agua Caliente Indian Reservation. Portions of these canyons are currently protected as part of the Indian Canyons Heritage Park. Though nesting has not been confirmed in Andreas Canyons, southwestern willow flycatchers are known to occur in this location. The Agua Caliente Band of Cahuilla Indians is preparing a separate Habitat Conservation HCP/NCCP for reservation lands. The model for the southwestern willow flycatcher, and other riparian birds, includes Habitat used in migration, including desert dry wash woodland and desert saltbush scrub. Other natural Habitat used by southwestern willow flycatchers in migration or foraging will be conserved in Stubbe and Cottonwood Canyons, Oasis de los Osos, Snow Creek and Falls Creek in the Snow Creek/Windy Point Conservation Area, Mission Creek, the Thousand Palms Preserve, the Coachella Valley Stormwater Channel and Delta near the Salton Sea, Dos Palmas, and Cottonwood Spring in Joshua Tree National Park Conservation Area. Habitat disturbance, subject to the conditions of any required streambed alteration or Section 404 permits, will be allowed in those portions of these natural communities not conserved by the HCP/NCCP.

Where disturbance of a given number of acres of riparian natural communities is authorized, an equivalent number of acres will be replaced to ensure that no net loss occurs and the Conservation Objective is achieved.

CVWD will establish 44 acres of permanent Sonoran cottonwood-willow riparian forest in the Coachella Valley Stormwater Channel and Delta Conservation Area to replace riparian Habitat that is periodically altered by flood control maintenance activities. Temporary Habitat disturbance for flood control channel maintenance purposes will be permitted by the HCP/NCCP in the Coachella Valley Stormwater Channel (Sections 4.3.20, 8.4.5.2:HCP/NCCP).

Additionally, the HCP/NCCP calls for Management and Monitoring Programs to ensure the Conservation of this species, including control of activities that degrade southwestern willow flycatcher Habitat, control of invasive species such as tamarisk and brown-headed cowbirds where necessary, and restoration and enhancement of degraded Habitat as necessary according to monitoring results (Section 8.4.3.3.3:HCP/NCCP). The HCP/NCCP also limits human access to flycatcher occupied Habitat during the breeding season (Section 9.7.4.2:HCP/NCCP).

Implementation of the HCP/NCCP 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 HCP/NCCP will also enhance riparian Habitat through implementation of management prescriptions to remove non-native tamarisk and other invasive species. 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. Therefore, coverage under the HCP/NCCP is warranted.

Crissal Thrasher (Section 9.7.5:HCP/NCCP)

The crissal thrasher is found in the HCP/NCCP Area from the area around Dos Palmas and the Salton Sea. Throughout its range, crissal thrasher is known as a resident of dense thickets and woodlands of shrubs or low trees in desert riparian and desert wash Habitats. It ranges from southeastern California to southern Nevada, southwestern Utah, and western Texas southward. The crissal thrasher has no official state or federal status, although it is considered a Species of Special Concern in California. It also occurs in the eastern Mojave Desert and in the Imperial and Borrego Valleys, but its numbers have declined in recent decades (Grinnell and Miller 1944, Remsen 1978, Garrett and Dunn 1981).

Conservation of Habitat blocks of adequate size for this species is difficult, as the natural communities it depends on, including mesquite hummocks, desert saltbush scrub, and desert sink scrub, are highly fragmented in the HCP/NCCP Area, and its home range size and Habitat use are not well known. The Planning Team attempted to include all the available Habitat for this species that was not highly fragmented. The HCP/NCCP ensures the long-term Conservation including Habitat protection, management, and monitoring for crissal thrasher. It includes conservation of Essential Ecological Processes, including the hydrological regimes that support mesquite hummock and mesquite bosque vegetation. Since the model was developed and the HCP/NCCP EIR was certified the California Bird Species of Special Concern (Shuford and Gardali 2008) was published. According to this publication, the crissal thrasher occupies riparian scrub or woodland in the lower elevations of the desert, with predominant vegetation including mesquite, catclaw acacia, ironwood, palo verde, willows, sagebrush, saltbush, and tamarisk. This vegetation is indicative of desert dry wash woodland.

There are 6,852 acres of modeled Habitat for the crissal thrasher within the HCP/NCCP Area of which approximately 1,432 acres are identified as Core Habitat. The HCP/NCCP will ensure Conservation of 1,307 acres (91%) of the Core Habitat and 368 acres (92%) of the Other Conserved Habitat for crissal thrasher. Each of the conserved Core Habitat areas will be greater than 400 acres. Approximately 258 acres (4%) of the modeled Habitat are within Existing Conservation Lands and will be managed as part of the Reserve System. The HCP/NCCP will conserve an additional 1,418 acres (21%) of the modeled Habitat for crissal thrasher in the HCP/NCCP Area (Section 9.7.5.1:HCP/NCCP). The inclusion of desert dry wash woodland as Habitat results in the Conservation of an additional 30,716 acres (75%).

Within the Conservation Areas under the worst case scenario, 159 acres of modeled crissal thrasher Habitat (2%) could be lost (Table 4-114:HCP/NCCP). Take of crissal thrasher Habitat within the Conservation Areas must be consistent with the Conservation Objectives for this species to: 1) ensure Conservation of Core Habitat; 2) protect Essential Ecological Processes including hydrological regimes needed to maintain crissal

thrasher Habitat; 3) maintain Biological Corridors and Linkages among conserved populations to provide for population fluctuation and enhance genetic diversity; and 4) implement biological monitoring and Adaptive Management to ensure long-term Conservation of this species (Section 9.7.5.1:HCP/NCCP). In addition, avoidance, minimization, and mitigation measures for crissal thrasher will be implemented. Although some Take could occur within the Conservation Areas, the Conservation Objectives required by the HCP/NCCP will provide for protection of Habitat to ensure the long-term Conservation of crissal thrasher (Section 9.7.5.1:HCP/NCCP).

Outside of the Conservation Areas, there are 5,013 acres (73%) of modeled Habitat that could be lost (Table 4-114:HCP/NCCP). The raw acreage and percentage numbers indicate a substantial acreage of crissal thrasher modeled Habitat could be lost to development within the next 75 years. Evaluation of the impacts of Take requires an assessment of the quality of this Habitat. The modeled Habitat for crissal thrasher outside the Conservation Areas is primarily remnant patches of mesquite and desert saltbush scrub surrounded by agricultural areas in the eastern Coachella Valley. These mesquite patches and fragments of desert saltbush scrub were not included in the Conservation Area because of the high degree of fragmentation and the associated edge effects. The establishment of Conservation Areas where this species is protected is a significant improvement over the piecemeal fragments of Habitat.

The Permittees will protect and manage, in perpetuity, 1,418 acres of the modeled habitat. The 258 acres of modeled Habitat within Existing Conservation Lands will be monitored and managed to ensure that Conservation Objectives are met. The HCP/NCCP will thus ensure Conservation, through protection and management, of 1,676 acres of crissal thrasher Habitat in the HCP/NCCP Reserve System.

To address specific impacts to mesquite hummocks, which could provide Habitat for crissal thrasher, the HCP/NCCP requires restoration of mesquite Habitat in the East Indio Hills Conservation Area. This restoration will result in a minimum of 40 acres, and as many as 80 acres, of additional mesquite hummock Habitat. In addition, CVWD will restore 40 acres of permanent mesquite hummocks, if Feasible (Section 8.4.1.2:HCP/NCCP), on their lands in the East Indio Hills Conservation Area.

The HCP/NCCP calls for Management and Monitoring Programs to ensure the Conservation of this species, including control of activities that degrade crissal thrasher Habitat, control of invasive species if monitoring results indicate it is necessary, and restoration and enhancement of degraded Habitat as necessary according to monitoring results. The HCP/NCCP calls for evaluation of groundwater management on crissal thrasher Habitat in mesquite areas as described. The HCP/NCCP also provides for 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 HCP/NCCP Area (Section 9.7.5.4:HCP/NCCP).

The crissal thrasher will benefit from the establishment of the HCP/NCCP 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. Implementation of the HCP/NCCP is expected to provide for Conservation of the crissal thrasher within the HCP/NCCP Area, as currently unprotected portions of its Habitat and potential Habitat areas will be conserved. Therefore, coverage under the HCP/NCCP is warranted.

Le Conte's Thrasher (Section 9.7.6:HCP/NCCP)

The Le Conte's thrasher appears to occur at low densities in suitable Habitat throughout the HCP/NCCP Area. This species has no official federal or state status, although it is considered as a Species of Special Concern by the State of California. Le Conte's thrasher is an uncommon resident of the deserts of the American southwest and northwestern Mexico. It is found in the San Joaquin Valley and in the Mojave and Colorado Deserts of California and Nevada southward into northeastern Baja California, and farther south into central and coastal Baja California. It also occurs in the Sonoran Desert from extreme southwest Utah and western Arizona south into western Sonora, Mexico. Within this range, distribution is patchy. The elevational distribution is generally between sea level and 1,150 meters, though in Death Valley it occurs down to -81 meters, and in the Mojave Desert it is known up to approximately 1,600 meters. The species requires undisturbed substrate for foraging under desert shrubs. Agriculture and urban Development have eliminated considerable former Habitat in the San Joaquin Valley, portions of the Mojave Desert, Imperial and Coachella Valleys, the Las Vegas area, and south and west of Phoenix. Based on false-infrared satellite imagery of 243 historic localities in the U.S. as of 1993, at least 26% no longer had suitable Habitat patches within 3 km. Within the HCP/NCCP Area, Le Conte's thrashers are known to occur in the Upper Mission Creek/Big Morongo Canyon, Whitewater Floodplain, Willow Hole, Edom Hill, Thousand Palms, and Desert Tortoise and Linkage Conservation Areas.

There are 243,242 acres of modeled Habitat for Le Conte's thrasher within the HCP/NCCP Area. Core Habitat was not designated for this species given the limited knowledge about its Habitat and distribution in the HCP/NCCP Area. The HCP/NCCP will ensure Conservation of 132,456 acres (54%) of this modeled Habitat. Approximately 59,252 acres (24%) of the modeled Habitat are within Existing Conservation Lands and will be managed as part of the Reserve System. The HCP/NCCP will conserve an additional 73,204 acres (30%) of the modeled Habitat for Le Conte's thrasher in the HCP/NCCP Area. Of the 33 known locations for this species in the HCP/NCCP Area, 19 are within the Conservation Areas (Section 9.7.6.1:HCP/NCCP).

Within the Conservation Areas under the worst case scenario, 8,727 acres of modeled Le Conte's thrasher Habitat (4%) could be lost (Table 4-114:HCP/NCCP). Take of Le Conte's thrasher Habitat within the Conservation Areas must be consistent with the

Conservation Objectives for this species to: 1) ensure Conservation of Habitat for Le Conte's thrasher across a range of environmental conditions; 2) Ensure conservation of Le Conte's thrasher nest sites through avoidance, minimization, and mitigation measures; and 3) implement biological monitoring and Adaptive Management to ensure long-term Conservation of this species. Although some Take could occur within the Conservation Areas, the Conservation Objectives required by the HCP/NCCP will provide for protection of Habitat to ensure the long-term Conservation of this thrasher (Section 9.7.6.1:HCP/NCCP).

Outside of the Conservation Areas, there are 87,406 acres (36%) of modeled Habitat for Le Conte's thrasher that could be lost (Table 4-114:HCP/NCCP). These are areas 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. The modeled Habitat for Le Conte's thrasher outside the Conservation Areas is east of Hwy. 62 and surrounding Desert Hot Springs, in marginal patches of Habitat along I-10 throughout the HCP/NCCP Area, east of Dillon Road, along the eastern shore of Salton Sea, and in desert saltbush scrub interspersed with agriculture. These acres were not included in the Conservation Area because of the small patch size, high degree of fragmentation, and the associated edge effects (Section 9.7.6.4:HCP/NCCP).

As a result of this HCP/NCCP, 54% of the modeled Habitat for this species in the HCP/NCCP Area will be conserved. Habitat will also be conserved in a range of environmental conditions from Snow Creek in the west of the HCP/NCCP Area to the Shavers Valley area in the extreme east of the HCP/NCCP Area. The Conservation Areas, which provide Other Conserved Habitat for Le Conte's thrasher, are Stubbe and Cottonwood Canyons, Snow Creek/Windy Point, Whitewater Canyon, Hwy. 111/I-10, Whitewater Floodplain, Upper Mission Creek/Big Morongo Canyon, Mission Creek/Morongo Wash, Willow Hole, Edom Hill, Thousand Palms, Indio Hills/Joshua Tree National Park Linkage, Indio Hills Palms, East Indio Hills, Joshua Tree National Park, Desert Tortoise and Linkage, Mecca Hills/Orocopia Mountains, Dos Palmas, Coachella Valley Stormwater Channel and Delta, and the Santa Rosa and San Jacinto Mountains.

Additionally, the HCP/NCCP calls for Management and Monitoring Programs to ensure the Conservation of this species, including control of activities that degrade Le Conte's thrasher Habitat, control of invasive species if monitoring results indicate it is necessary, and restoration and enhancement of degraded Habitat as necessary according to monitoring results. The HCP/NCCP also provides for a research element as part of the Monitoring Program that addresses the distribution of this thrasher, its home range size, dispersal distances and barriers to dispersal, and its population density throughout the HCP/NCCP Area (Section 9.7.6.2:HCP/NCCP).

The Le Conte's thrasher will benefit from the establishment of the HCP/NCCP Reserve System, which will include Conservation of Habitat from the western to the eastern limits

of the HCP/NCCP Area. Only 24% of the modeled Habitat for this species is currently conserved. Implementation of the HCP/NCCP is expected to provide for Conservation of the Le Conte's thrasher within the HCP/NCCP Area, as currently unprotected portions of its Habitat and potential Habitat areas will be conserved. Therefore, coverage under the HCP/NCCP is warranted.

Least Bell's Vireo (Section 9.7.7:HCP/NCCP)

The least Bell's vireo was formerly known to inhabit dense willow thickets along streams throughout California's Sacramento and San Joaquin Valleys, from Red Bluff south, from coastal areas inland to the foothills of the Sierra Nevada, and in Owens and Death Valleys. This subspecies is endemic to California and northern Baja California. Currently, U.S. populations are known only from Santa Barbara County and Southern California. Major causes of the decline are cowbird parasitism and destruction of riparian Habitats. Breeding pairs have been observed in the counties of Monterey, San Benito, Inyo, Santa Barbara, San Bernardino, Ventura, Los Angeles, Orange, Riverside, and San Diego, with the highest concentration in San Diego County along the Santa Margarita River (Small 1996). In San Diego County, however, significant population increases in the period from 1986 to 1996 are primarily due to management of local cowbird populations (USFWS 1998).

Currently available census data indicate that most of the populations of this species have undergone tremendous growth. The population in southern California has increased from an estimated 300 pairs in 1986 to an estimated 1,346 pairs in 1996 (USFWS 1998).

Within the HCP/NCCP Area, the least Bell's vireo is known to occur as a breeding bird in Chino Canyon and in Andreas Canyon. Other suitable breeding Habitat may occur in Millard Canyon, Whitewater Canyon, Mission Creek, Palm Canyon, Murray Canyon, at Oasis de los Osos, at the Willow Hole-Edom Hill Preserve/ACEC, along the Whitewater River near the Salton Sea, and at Dos Palmas. As with other riparian bird species, least Bell's vireos within the Coachella Valley are probably part of a metapopulation and as such are an important element of the avian community.

The primary importance of the HCP/NCCP to the least Bell's vireo is that it provides Conservation (including Habitat protection, management, and monitoring) of breeding and migratory Habitat. The HCP/NCCP ensures the long-term conservation and enhancement of breeding and migratory Habitat as well as the associated Essential Ecological Processes, including the hydrological regimes that support riparian vegetation.

Breeding Habitat

There are 3,675 acres of modeled breeding Habitat for the least Bell's vireo within the HCP/NCCP Area. Approximately 3,046 acres of this modeled breeding

Habitat occur within the Conservation Areas and the HCP/NCCP will ensure Conservation of 2,911 of these acres (96%). Approximately 1,629 acres (44%) of the modeled Habitat are within Existing Conservation Lands and will be managed as part of the Reserve System. The HCP/NCCP will conserve an additional 1,282 acres (35%) of the modeled breeding Habitat for least Bell's vireo (Table 4-114:HCP/NCCP).

Within the Conservation Areas under the worst case scenario, 135 acres of modeled breeding Habitat (4%) could be lost. Take of least Bell's vireo breeding Habitat within the Conservation Areas must be consistent with the Conservation Objectives for this species to: 1) ensure Conservation of breeding and migratory Habitat; 2) protect Essential Ecological Processes, including hydrological regimes, needed to maintain vireo Habitat; and 3) implement the Monitoring Program and Adaptive Management actions to ensure Conservation of this species. Although some Take could occur within the Conservation Areas, the Conservation Objectives required by the HCP/NCCP will provide for protection of Habitat to ensure the long-term Conservation of this species (Section 9.7.7.1:HCP/NCCP).

Outside of the Conservation Areas, there are 626 acres (17%) of modeled breeding Habitat that could be lost (Table 4-114:HCP/NCCP). The area of breeding Habitat outside the Conservation Areas is primarily mesquite hummocks that remain as small fragments in a matrix of agriculture. Mesquite hummocks outside the Conservation Areas also occur west of Dos Palmas ACEC, and west of Dillon Road. These acres were not included in the Conservation Area because of the small patch size, high degree of fragmentation, and the associated edge effects.

Migratory Habitat

There are 56,643 acres of modeled migratory Habitat for the least Bell's vireo within the HCP/NCCP Area. Approximately 42,815 acres of this modeled migratory Habitat occur within the Conservation Areas and the HCP/NCCP will ensure Conservation of 40,510 of these acres (72%). Approximately 21,209 acres (37%) of the modeled Habitat are within Existing Conservation Lands and will be managed as part of the Reserve System. The HCP/NCCP will conserve an additional 19,301 acres (34%) of the modeled migratory Habitat for least Bell's vireo (Table 4-114:HCP/NCCP).

Within the Conservation Areas under the worst case scenario, 2,305 acres of modeled migratory Habitat (4%) could be lost (Table 4-114:HCP/NCCP). Take of least Bell's vireo migratory Habitat within the Conservation Areas must be consistent with the Conservation Objectives for this species as noted above.

Outside of the Conservation Areas, there are 12,470 acres (22%) of modeled migratory Habitat that could be lost. Portions of the natural communities included in the migratory Habitat model for least Bell's vireo in marginal or fragmented

areas of desert dry wash woodland, mesquite hummocks, desert saltbush scrub, and desert sink scrub. The desert saltbush scrub and desert sink scrub occur in patches in the agricultural areas north of the Salton Sea and along the west shore of the Sea.

The Permittees will protect and manage, in perpetuity, 1,282 acres of the modeled breeding Habitat and 19,301 acres of migratory Habitat for this species. The 1,629 acres of breeding Habitat and 21,209 acres of migratory modeled Habitat within Existing Conservation Lands will be monitored and managed to ensure that Conservation Objectives are met. The HCP/NCCP will thus ensure Conservation, through protection and management, of 2,911 acres of breeding Habitat and 40,510 acres of migratory Habitat for this species (Section 9.7.7.1:HCP/NCCP).

Existing Conservation Areas within the HCP/NCCP boundary currently protect 38% of the Habitat for the least Bell's vireo. The Conservation Areas in the HCP/NCCP will protect 79% of the occupied and potential breeding Habitat and 72% of the potential migratory Habitat for this species. The Conservation Areas include the known breeding Habitat for least Bell's vireo in Chino Canyon, and potential breeding Habitat at Whitewater Canyon, Mission Creek, the Thousand Palms Preserve, the Whitewater River mouth near the Salton Sea, Cottonwood Springs in Joshua Tree National Park, and Dos Palmas. The Reserve System will include 24 of the 37 known locations for this vireo. Other suitable Habitat for breeding sites in the HCP/NCCP Area occurs in Palm Canyon, Murray Canyon, and Andreas Canyon on the Agua Caliente Indian Reservation. Portions of these canyons are currently protected as part of the Indian Canyons Heritage Park.

The model for the least Bell's vireo, and other riparian birds, includes Habitat used in migration, including desert dry wash woodland and desert saltbush scrub. Other natural Habitat used by this vireo in migration or foraging will be conserved in Stubbe and Cottonwood Canyons, Oasis de los Osos, Snow Creek and Falls Creek in the Snow Creek/Windy Point Conservation Area, Mission Creek, the Thousand Palms Preserve, the Coachella Valley Stormwater Channel and Delta near the Salton Sea, Dos Palmas, and Cottonwood Spring in Joshua Tree National Park Conservation Area. Habitat disturbance, subject to the conditions of any required streambed alteration or Section 404 permits, will be allowed in those portions of these natural communities not conserved by the HCP/NCCP.

Where disturbance of a given number of acres of riparian natural communities is authorized, an equivalent number of acres will be replaced to ensure that no net loss occurs and the Conservation Objective is achieved (Sections 4.3.4, 4.3.7, 4.3.8, 4.3.11, 4.3.21, 9.7.7.4:HCP/NCCP).

CVWD will establish 44 acres of permanent Sonoran cottonwood-willow riparian forest in the Coachella Valley Stormwater Channel and Delta Conservation Area to replace riparian Habitat that is periodically altered by flood control maintenance activities. Temporary Habitat disturbance for flood control channel maintenance purposes will be

permitted by the HCP/NCCP in the Coachella Valley Stormwater Channel (Sections 9.7.7.1, 4.3.20, 8.4.3.2:HCP/NCCP).

Additionally, the HCP/NCCP calls for Management and Monitoring Programs to ensure the Conservation of this species, including control of activities that degrade vireo Habitat, control of invasive species such as tamarisk and brown-headed cowbirds where necessary, and restoration and enhancement of degraded Habitat as necessary according to monitoring results (Sections 8.2.4.1, 8.4.3.2:HCP/NCCP). The HCP/NCCP also limits human access to least Bell's vireo occupied Habitat during the breeding season (Section 4.3.20:HCP/NCCP).
The HCP/NCCP Reserve System will protect 84% of the potential and known breeding Habitat for this species. All of the known breeding locations for this species (with the exception of one limited precision record from Cabazon, reported by Grinnell in 1913) will be protected. The proposed Conservation Areas include the 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 Stubbe and Cottonwood Canyons, Oasis de los Osos, Snow/Falls Creek, Mission Creek, the Thousand Palms Preserve, the Whitewater River delta near the Salton Sea, Dos Palmas, and Cottonwood Spring in Joshua Tree National Park. In total, the HCP/NCCP will conserve 72% 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 will be permitted by the HCP/NCCP in the Coachella Valley Stormwater channel. CVWD will establish offsite replacement riparian Habitat.

Implementation of the HCP/NCCP is expected to maintain and enhance population viability of the least Bell's vireo by protecting its known breeding locations in the HCP/NCCP Area and conserving Habitats that may be used in migration. The HCP/NCCP 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 the Coachella Valley Stormwater channel. Therefore, coverage under the HCP/NCCP is warranted.

Gray Vireo (Section 9.7.8:HCP/NCCP)

Within the HCP/NCCP Area, the occurrence and status of the gray vireo is little known. The summer range of the gray vireo was formerly more widespread, with breeding birds recorded at many locations on the desert slopes of San Bernardino, Riverside and San Diego Counties, in the Walker Pass area of Kern County, in Joshua Tree National Park, and in the northern and western foothills of the San Gabriel Mountains. The gray vireo is also known as a migrant in Whitewater Canyon (McCaskie 1963, Garrett and Dunn 1981). This vireo has no official state or federal status, although it is considered a Species of Special Concern by the State of California.

Although territory size of gray vireo can be as small as 5 acres per pair in prime contiguous habitat, it ranges up to 25 acres per pair for isolated pairs in habitat patches (Barlow, Leckie, and Baril 1999). Weathers (1983) estimated 1.6 birds per 100 acres in the Santa Rosa Mountains. In all likelihood, gray vireos are found in higher densities in patches of suitable habitat in both the chaparral of the Santa Rosa Mountains and in the pinyon-juniper woodland of the San Bernardino and Little San Bernardino Mountains.

Gray vireos are found primarily in Arizona, New Mexico, Colorado and Utah, with smaller disjunct populations in Texas, California and Mexico. The populations in the mountains of southern California are isolated from each other by intervening desert. Gray vireos are short distance migrants (to Baja and Sonora, Mexico) and are capable of traveling between ranges. They may utilize the proposed Biological Corridors in the Stubbe and Cottonwood Canyons and Indio Hills/Joshua Tree National Park Linkage Conservation Areas. Suitable habitat is present on both sides of the former corridor, and occupied habitat is present within Joshua Tree National Park at the edge of the Conservation Area's corridor. No information is available about exchange between the small isolated populations in southern California.

The primary importance of the HCP/NCCP to the gray vireo is that it provides Conservation (including Habitat protection, management, and monitoring) of Habitat where gray vireos are known to occur as well as additional potential Habitat. The HCP/NCCP ensures the long-term conservation and enhancement of breeding and migratory Habitat through implementation of management prescriptions.

There are 105,562 acres of modeled Habitat for the gray vireo within the HCP/NCCP Area. Approximately 103,036 acres of this modeled Habitat occur within the Conservation Areas and the HCP/NCCP will ensure Conservation of 101,544 of these acres (96%). The two known occurrences for the gray vireo are both within the Santa Rosa and San Jacinto Mountains Conservation Area. Approximately 88,350 acres (84%) of the modeled Habitat are within Existing Conservation Lands and will be managed as part of the Reserve System. The HCP/NCCP will conserve an additional 13,194 acres (12%) of the modeled Habitat for the gray vireo (Table 4-114:HCP/NCCP).

Within the Conservation Areas under the worst case scenario, 1,466 acres of modeled Habitat (1%) could be lost. Take of gray vireo Habitat within the Conservation Areas must be consistent with the Conservation Objectives for this species to: 1) ensure Conservation of occupied and potential Habitat; 2) evaluate the need for management prescriptions for pinyon-juniper woodland and chaparral Habitat; and 3) implement the Monitoring Program and Adaptive Management actions to ensure Conservation of this species. So, although some Take could occur within the Conservation Areas, the Conservation Objectives required by the HCP/NCCP will provide for protection of Habitat to ensure the long-term Conservation of the gray vireo (Section 9.7.8.2:HCP/NCCP).

Outside of the Conservation Areas, there are 2,447 acres (2%) of modeled Habitat that could be lost (Table 4-114:HCP/NCCP). The majority of the acreage is comprised of the undeveloped areas within the existing low density residential areas in the Pinyon Flat/Pinyon Crest communities along Hwy. 74, other developed areas along Hwy. 74, as well as an extensive road network in this area.

The Permittees will protect and manage, in perpetuity, 13,194 acres of occupied and potential Habitat. The 88,350 acres of occupied and potential Habitat within Existing Conservation Lands will be monitored and managed to ensure that Conservation Objectives are met. The HCP/NCCP will thus ensure Conservation, through protection and management, of a total of 101,544 acres of modeled Habitat for this species (Table 4-114:HCP/NCCP).

Additionally, the HCP/NCCP calls for Management and Monitoring Programs to ensure the Conservation of this species, including control of activities that degrade vireo habitat, and control of invasive species, such as brown-headed cowbird, if they are determined through monitoring to be a threat. The Monitoring Program will also include data collection to determine the distribution and abundance of the gray vireo in suitable Habitat in the HCP/NCCP Area (Sections 8.4.6.2, 8.4.6.3.3, 9.7.8.2:HCP/NCCP).

The HCP/NCCP also provides for coordinated management efforts to maintain and enhance or restore gray vireo Habitat. The Habitat preferences of the gray vireo and the reasons for its apparent decline are not known. Additional data from the Monitoring Program will contribute to informed management efforts to enhance gray vireo Habitat areas (Section 8.4.6.2:HCP/NCCP).

The HCP/NCCP will protect 96% of the potential Habitat for this species. All of the known locations for this species will be protected under this HCP/NCCP. Habitat will also be conserved in a range of environmental conditions from Cabazon in the west end of the HCP/NCCP Area to the Joshua Tree National Park in the north and east ends of the HCP/NCCP Area. The Conservation Areas that provide significant acres of Habitat for gray vireo are Whitewater Canyon, Joshua Tree National Park, and the Santa Rosa and San Jacinto Mountains. Other Conservation Areas that contain very small acres of potential gray vireo Habitat are Cabazon, Stubbe and Cottonwood Canyons, Snow Creek/Windy Point, and Upper Mission Creek/Big Morongo Canyon. Those limited areas where incidental 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 HCP/NCCP will maintain and enhance population viability of the gray vireo by protecting additional potential Habitat for this species. The HCP/NCCP 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 HCP/NCCP Area and Habitat management needs. Therefore, coverage under the HCP/NCCP is warranted.

Yellow Warbler (Section 9.7.9:HCP/NCCP)

Within the HCP/NCCP Area, the yellow warbler is known or believed to occur as a breeding bird at Whitewater Canyon, Mission Creek, Chino Canyon, in the Whitewater River near the Salton Sea, and at Cottonwood Spring in Joshua Tree National Park. Many yellow warblers also migrate through the HCP/NCCP Area en route to other breeding areas. The yellow warbler occurs in riparian areas throughout Alaska, Canada, the United States, and parts of Mexico. The yellow warbler has no official federal status and is considered a Species of Special Concern by the State of California.

While the amount of Habitat in the HCP/NCCP Area is relatively small, it is part of a larger network of Habitat in the Colorado Desert. Even if the Habitat in the HCP/NCCP Area is not able to support a viable population, it contributes to the larger metapopulation. Populations in the southwest have declined dramatically in recent years in lowland areas of southern California, the Colorado River, the Sacramento, and San Joaquin Valleys (Lowther et al. 1999).

The primary importance of the HCP/NCCP to the yellow warbler is that it provides Conservation (including Habitat protection, management, and monitoring) of breeding Habitat and Habitat used by this species in migration. The HCP/NCCP ensures the long-term conservation of breeding and migratory Habitat as well as the associated Essential Ecological Processes, including the hydrological regimes that support riparian vegetation.

Breeding Habitat

There are 2,730 acres of modeled breeding Habitat for the yellow warbler within the HCP/NCCP Area. Approximately 2,672 acres of this modeled breeding Habitat occur within the Conservation Areas and the HCP/NCCP will ensure Conservation of 2,563 of these acres (94%). Approximately 1,526 acres (56%) of the modeled Habitat are within Existing Conservation Lands and will be managed as part of the Reserve System. The HCP/NCCP will conserve an additional 1,037 acres (38%) of the modeled breeding Habitat for yellow warbler (Table 4-114:HCP/NCCP).

Within the Conservation Areas under the worst case scenario, 109 acres of modeled breeding Habitat (4%) could be lost. Take of yellow warbler breeding Habitat within the Conservation Areas must be consistent with the Conservation Objectives for this species to: 1) ensure Conservation of Core Habitat; 2) protect Essential Ecological Processes needed to maintain yellow warbler Habitat; and 3) maintain Biological Corridors and Linkages among conserved populations to provide for population fluctuation and enhance genetic diversity. Although some Take could occur within the Conservation Areas, the Conservation Objectives required by the HCP/NCCP will provide for protection of Habitat to ensure the long-term Conservation of this species (Section 9.7.9.1:HCP/NCCP).

Outside of the Conservation Areas, there are 59 acres (2%) of modeled breeding Habitat that could be lost. As the species distribution model for the yellow warbler is the same as for the southwestern willow flycatcher, the areas affected are the same. Some of this acreage occurs as small slivers of Habitat at the margins of suitable riparian areas. Some of this acreage occurs along the Coachella Valley Stormwater Channel north of the Conservation Area boundary. Impacts to Habitat along this portion of the Stormwater channel will be mitigated by establishment of replacement permanent riparian forest by CVWD (Section 4.3.20:HCP/NCCP).

Migratory Habitat

There are 57,589 acres of modeled migratory Habitat for the yellow warbler within the HCP/NCCP Area. Approximately 43,177 acres of this modeled migratory Habitat occur within the Conservation Areas and the HCP/NCCP will ensure Conservation of 40,846 of these acres (71%). Approximately 21,312 acres (37%) of the modeled migratory Habitat are within Existing Conservation Lands and will be managed as part of the Reserve System. The HCP/NCCP will conserve an additional 19,534 acres (34%) of the modeled migratory Habitat for yellow warbler (Table 4-114:HCP/NCCP).

Within the Conservation Areas under the worst case scenario, 2,331 acres of modeled migratory Habitat (4%) could be lost. Take of yellow warbler migratory Habitat within the Conservation Areas must be consistent with the Conservation Objectives for this species to: 1) ensure Conservation of riparian Habitat, and 2) protect Essential Ecological Processes including hydrological regimes needed to maintain riparian Habitat. Although some Take could occur within the Conservation Areas, the Conservation Objectives required by the HCP/NCCP will provide for protection of Habitat to ensure the long-term Conservation of the yellow warbler (Section 9.7.9.1:HCP/NCCP).

Outside of the Conservation Areas, there are 13,040 acres (23%) of modeled migratory Habitat that could be lost (Table 4-114:HCP/NCCP). The modeled yellow warbler migratory Habitat outside the Conservation Areas includes: 1) desert dry wash woodland west of Thermal Canyon and east of Dillon Road in an area fragmented by the I-10 freeway; 2) small patches of desert saltbush scrub and mesquite hummocks surrounded by agriculture north and west of the Salton Sea; and 3) slivers of Habitat, including desert dry wash woodland, along various washes from Desert Hot Springs area to the margins of the Cathedral City and Rancho Mirage cove areas and around Deep Canyon in Palm Desert. These are areas with existing impacts from fragmentation, edge effects, and associated disturbance.

The model for the yellow warbler, and other riparian birds, includes Habitat used in migration, including desert dry wash woodland, mesquite bosque, mesquite hummocks, and desert saltbush scrub. Not all of the Habitat in these natural

communities will be protected in the proposed Conservation Areas. Habitat disturbance, subject to the conditions of any required streambed alteration or Section 404 permits, would be allowed in those portions of these natural communities not conserved by the HCP/NCCP.

The Permittees will protect and manage, in perpetuity, 1,037 acres of the modeled breeding Habitat and 19,534 acres of migratory Habitat for this species. The 1,526 acres of breeding Habitat and 21,312 acres of migratory modeled Habitat within Existing Conservation Lands will be monitored and managed to ensure that Conservation Objectives are met. The HCP/NCCP will thus ensure Conservation, through protection and management, of 2,563 acres of breeding Habitat and 40,846 acres of migratory Habitat for yellow warblers (Section 9.7.9.1:HCP/NCCP).

Existing Conservation Areas within the HCP/NCCP boundary currently protect 38% of the Habitat for the yellow warbler. The Conservation Areas in the HCP/NCCP will protect 94% of the occupied and potential breeding Habitat and 71% of the potential migratory Habitat for this species. The Conservation Areas include the potential breeding Habitat for yellow warblers in Whitewater Canyon, Chino Canyon, the Thousand Palms Preserve, the Whitewater River mouth near the Salton Sea, Cottonwood Springs in Joshua Tree National Park, and Dos Palmas. The HCP/NCCP includes 74% of the known occurrences for this warbler. Other suitable Habitat for breeding sites in the HCP/NCCP Area occurs in Palm Canyon, Murray Canyon, and Andreas Canyon on the Agua Caliente Indian Reservation. Portions of these canyons are currently protected as part of the Indian Canyons Heritage Park. The Agua Caliente Band of Cahuilla Indians is preparing a separate Habitat Conservation Plan for reservation lands.

The model for the yellow warbler, and other riparian birds, includes Habitat used in migration, including desert dry wash woodland and desert saltbush scrub. Other natural Habitat used by yellow warblers in migration or foraging will be conserved in Stubbe and Cottonwood Canyons, Oasis de los Osos, Snow Creek and Falls Creek in the Snow Creek/Windy Point Conservation Area, Mission Creek, the Thousand Palms Preserve, the Coachella Valley Stormwater Channel and Delta near the Salton Sea, Dos Palmas, and Cottonwood Spring in Joshua Tree National Park Conservation Area. Habitat disturbance, subject to the conditions of any required streambed alteration or Section 404 permits, will be allowed in those portions of these natural communities not conserved by the HCP/NCCP. However, where disturbance of a given number acres of riparian natural communities is authorized, an equivalent number of acres will be replaced to ensure that no net loss occurs and the Conservation Objective is achieved (Sections 4.3.4, 4.3.7, 4.3.8, 4.3.11, 4.3.21, 9.7.9.4:HCP/NCCP).

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 (HCP/NCCP) to replace riparian Habitat that is periodically altered by flood control maintenance activities. Temporary Habitat disturbance for flood control channel maintenance purposes will be permitted by the HCP/NCCP in the Coachella Valley Stormwater Channel (Sections 4.3.20, 8.4.3.2, 9.7.9.4:HCP/NCCP).

Additionally, the HCP/NCCP calls for Management and Monitoring Programs to ensure the Conservation of this species, including control of activities that degrade yellow warbler Habitat, control of invasive species such as tamarisk and brown-headed cowbirds where necessary, and restoration and enhancement of degraded Habitat as necessary according to monitoring results. The HCP/NCCP also limits human access to yellow warbler occupied Habitat during the breeding season (Sections 8.2.4.1, 8.4.3.2:HCP/NCCP).

The HCP/NCCP will protect potential Habitat for yellow warbler, including 94% of the potential breeding Habitat. All of the known locations for this species and 71% of the Habitat that may be used in migration will be protected. The proposed Conservation Areas include the important breeding Habitat for yellow warbler in riparian woodland and forest communities and desert fan palm oasis woodland. Proposed Conservation Areas include riparian Habitat in Whitewater Canyon, Mission Creek, Chino Canyon, the Whitewater River near the Salton Sea, and Cottonwood Spring in Joshua Tree National Park where the species has been known to breed. Other natural Habitat used by yellow warbler in migration or foraging will be conserved in Stubbe and Cottonwood Canyons, Oasis de los Osos, Snow/Falls Creek, Mission Creek, the Thousand Palms Preserve, the Whitewater River delta near the Salton Sea, Dos Palmas, and Cottonwood Spring in Joshua Tree National Park. Another known breeding site in the Coachella Valley is Andreas Canyon. This site is on the Agua Caliente Indian Reservation and is currently protected as part of the Indian Canyons Heritage Park.

Implementation of the Plan is expected to maintain and enhance 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 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 yellow warbler. Therefore, coverage under the HCP/NCCP is warranted.

Yellow-Breasted Chat (Section 9.7.10:HCP/NCCP)

The yellow-breasted chat occurs in the HCP/NCCP Area as a likely breeding bird and as a migrant. Given the limited availability of suitable riparian Habitat in the HCP/NCCP Area, their status in this region has been described as part of a metapopulation. The extent of breeding in the HCP/NCCP Area is not known, since only Mission Creek has been confirmed as a breeding location (R. McKernan, pers. comm.). This chat is considered a California Species of Special Concern but has no official federal status. Within the HCP/NCCP Area it has been recorded in riparian Habitat from Whitewater Canyon and

Mission Creek, Thousand Palms Oasis, Cottonwood Spring in Joshua Tree National Park, and Dos Palmas.

Outside the HCP/NCCP Area the yellow-breasted chat is found throughout most of the United States, southern Canada, parts of Mexico, and south to Panama in the appropriate Habitat. In southern California the species breeds locally on the coast, very locally inland, and at lower elevations nearly throughout the region (Garrett and Dunn 1981).

The primary importance of the HCP/NCCP to the yellow-breasted chat is that it provides Conservation (including Habitat protection, management and monitoring) of breeding Habitat and Habitat used by this species in migration. The HCP/NCCP ensures the long-term conservation of breeding and migratory Habitat as well as the associated Essential Ecological Processes, including the hydrological regimes that support riparian vegetation.

Breeding Habitat

There are 3,007 acres of modeled breeding Habitat for the yellow-breasted chat within the HCP/NCCP Area. Approximately 2,951 acres of this modeled breeding Habitat occur within the Conservation Areas, and the HCP/NCCP will ensure Conservation of 2,829 of these acres (94%). Approximately 1,669 acres (55%) of the modeled Habitat are within Existing Conservation Lands and will be managed as part of the Reserve System. The HCP/NCCP will conserve an additional 1,160 acres (38%) of the modeled breeding Habitat for yellow-breasted chat (Table 4-114:HCP/NCCP).

Within the Conservation Areas under the worst case scenario, 122 acres of modeled breeding Habitat (4%) could be lost. Take of yellow-breasted chat breeding Habitat within the Conservation Areas must be consistent with the Conservation Objectives for this species to: 1) ensure Conservation of Core Habitat; 2) protect Essential Ecological Processes needed to maintain chat Habitat; and 3) maintain Biological Corridors and Linkages among conserved populations to provide for population fluctuation and enhance genetic diversity. Although some Take could occur within the Conservation Areas, the Conservation Objectives required by the HCP/NCCP will provide for protection of Habitat to ensure the long-term Conservation of this species (Section 9.7.10.1:HCP/NCCP).

Outside of the Conservation Areas, there are 58 acres (2%) of modeled Habitat that could be lost. Some of this acreage occurs as small slivers of Habitat at the margins of suitable riparian areas. Some of this acreage occurs along the Coachella Valley Stormwater Channel north of the Conservation Area boundary. Impacts to Habitat along this portion of the stormwater channel will be mitigated by establishment of replacement permanent riparian forest by CVWD (Section 4.3.20:HCP/NCCP).

Migratory Habitat

There are 57,312 acres of modeled migratory Habitat for the yellow-breasted chat within the HCP/NCCP Area. Approximately 42,901 acres of this modeled migratory Habitat occur within the Conservation Areas and the HCP/NCCP will ensure Conservation of 40,583 of these acres (71%) of the total modeled Habitat. Approximately 21,169 acres (37%) of the modeled Habitat are within Existing Conservation Lands and will be managed as part of the Reserve System. The HCP/NCCP will conserve an additional 19,414 acres (34%) of the modeled migratory Habitat for yellow-breasted chat (Tables 4-114, 9-27b:HCP/NCCP).

Within the Conservation Areas under the worst case scenario, 2,318 acres of Take of modeled migratory Habitat (4%) could occur (Tables 4-114, 9-27b:HCP/NCCP). Take of yellow-breasted chat migratory Habitat within the Conservation Areas must be consistent with the Conservation Objectives for this species to: 1) ensure Conservation of riparian Habitat, and 2) protect Essential Ecological Processes including hydrological regimes needed to maintain riparian Habitat. Although some Take could occur within the Conservation Areas, the Conservation Objectives required by the HCP/NCCP will provide for protection of Habitat to ensure the long-term Conservation of this species (Section 9.7.10.1:HCP/NCCP).

Outside of the Conservation Areas, there are 13,040 acres (23%) of modeled migratory Habitat that could be lost. The migratory Habitat outside the Conservation Areas consists of slivers of Habitat, including desert dry wash woodland, along various washes from Desert Hot Springs area to the margins of the Cathedral City and Rancho Mirage cove areas and around Deep Canyon in Palm Desert. Larger patches of migratory Habitat occur northwest of the Salton Sea in desert saltbush scrub and desert sink scrub that is highly fragmented in a matrix of agriculture, and in the eastern part of the HCP/NCCP Area south of the I-10.

The Permittees will protect and manage, in perpetuity, 1,160 acres of the modeled breeding Habitat and 19,414 acres of migratory Habitat for this species. The 1,669 acres of breeding Habitat and 21,169 acres of migratory modeled Habitat within Existing Conservation Lands will be monitored and managed to ensure that Conservation Objectives are met. The HCP/NCCP will thus ensure Conservation, through protection and management, of 2,829 acres of breeding Habitat and 40,583 acres of migratory Habitat for this species (Section 9.7.10.1:HCP/NCCP).

Existing Conservation Areas within the HCP/NCCP boundary currently protect 38% of the Habitat for the yellow-breasted chat. The Conservation Areas in the HCP/NCCP will protect 94% of the occupied and potential breeding Habitat and 71% of the potential migratory Habitat for this species. The Conservation Areas include the potential breeding Habitat for yellow-breasted chat in Whitewater Canyon, Chino Canyon, the Thousand Palms Preserve, the Whitewater River mouth near the Salton Sea, Cottonwood Springs in Joshua Tree National Park, and Dos Palmas. The HCP/NCCP includes 100% of the

known breeding locations for this chat. Other suitable Habitat for breeding sites in the HCP/NCCP Area occurs in Palm Canyon, Murray Canyon, and Andreas Canyon on the Agua Caliente Indian Reservation. Portions of these canyons are currently protected as part of the Indian Canyons Heritage Park. The Agua Caliente Band of Cahuilla Indians is preparing a separate Habitat Conservation Plan for reservation lands.

The model for the yellow-breasted chat, and other riparian birds, includes Habitat used in migration, including desert dry wash woodland and desert saltbush scrub. Other natural Habitat used by yellow-breasted chat in migration or foraging will be conserved in Stubbe and Cottonwood Canyons, Oasis de los Osos, Snow Creek and Falls Creek in the Snow Creek/Windy Point Conservation Area, Mission Creek, the Thousand Palms Preserve, the Coachella Valley Stormwater Channel and Delta near the Salton Sea, Dos Palmas, and Cottonwood Spring in Joshua Tree National Park Conservation Area. Habitat disturbance, subject to the conditions of any required streambed alteration or Section 404 permits, will be allowed in those portions of these natural communities not conserved by the HCP/NCCP (Sections 4.3.4, 4.3.7, 4.3.8, 4.3.11, 4.3.21:HCP/NCCP).

Where disturbance of a given number of acres of riparian natural communities is authorized, an equivalent number of acres will be replaced to ensure that no net loss occurs and the Conservation Objective is achieved (Section 9.7.10.4:HCP/NCCP). CVWD will establish 44 acres of permanent Sonoran cottonwood-willow riparian forest in the Coachella Valley Stormwater Channel and Delta Conservation Area to replace riparian Habitat that is periodically altered by flood control maintenance activities. Temporary Habitat disturbance for flood control channel maintenance purposes will be permitted by the HCP/NCCP in the Coachella Valley Stormwater Channel (Sections 4.3.20, 8.4.3.2, 9.7.10.4:HCP/NCCP).

Additionally, the HCP/NCCP calls for Management and Monitoring Programs to ensure the Conservation of this species, including control of activities that degrade yellow-breasted chat Habitat, control of invasive species such as tamarisk and brown-headed cowbirds where necessary, and restoration and enhancement of degraded Habitat as necessary according to monitoring results (Sections 8.2.4.1, 8.4.3.2:HCP/NCCP). Implementation of the HCP/NCCP 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 HCP/NCCP will also enhance riparian Habitat through implementation of management prescriptions to remove non-native tamarisk and other invasive species. 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. Therefore, coverage under the HCP/NCCP is warranted.

Summer Tanager (Section 9.7.11:HCP/NCCP)

Within the HCP/NCCP Area, the summer tanager is known or believed to occur as a breeding bird at Whitewater Canyon and Mission Creek. Summer tanagers also migrate through the HCP/NCCP Area en route to other breeding areas. The summer tanager

breeds across the southern United States, from California along the Kern River valley east to Florida, and in the eastern United States, as far north as 40° N. Two subspecies are currently recognized. One, *P. r. cooperi*, breeds in the southwest from California to west Texas and northern Mexico and the other, *P. r. rubra*, occupies the remainder of the range to the east. The western subspecies inhabits riparian woodlands and, at higher elevations, woodlands dominated by mesquite and salt cedar. The summer tanager winters from central Mexico south through Central America to Bolivia and Brazil. It occurs in small numbers in winter in Southern California, southern Arizona and in southern Florida. The summer tanager has no federal status and is considered a California Species of Special Concern.

The primary importance of the HCP/NCCP to the summer tanager is that it provides Conservation (including Habitat protection, management, and monitoring) of breeding Habitat and Habitat used by this species in migration. The HCP/NCCP ensures the long-term conservation of breeding and migratory Habitat as well as the associated Essential Ecological Processes, including the hydrological regimes that support riparian vegetation.

Breeding Habitat

There are 2,730 acres of modeled breeding Habitat for the summer tanager within the HCP/NCCP Area. Approximately 2,672 acres of this modeled breeding Habitat occur within the Conservation Areas and the HCP/NCCP will ensure Conservation of 2,563 of these acres (94%). Approximately 1,526 acres (56%) of the modeled Habitat are within Existing Conservation Lands and will be managed as part of the Reserve System. The HCP/NCCP will conserve an additional 1,037 acres (38%) of the modeled breeding Habitat for summer tanager (Table 4-114:HCP/NCCP).

There are 23 known occurrences for the summer tanager in the HCP/NCCP Area and 17 of these locations are within the Conservation Areas. Within the Conservation Areas under the worst case scenario, 109 acres of Take of modeled breeding Habitat (4%) could occur. Take of summer tanager breeding Habitat within the Conservation Areas must be consistent with the Conservation Objectives for this species to: 1) ensure Conservation of Core Habitat; 2) protect Essential Ecological Processes needed to maintain summer tanager Habitat; and 3) maintain Biological Corridors and Linkages among conserved populations to provide for population fluctuation and enhance genetic diversity. Although some Take could occur within the Conservation Areas, the Conservation Objectives required by the HCP/NCCP will provide for protection of Habitat to ensure the long-term Conservation of this species (Section 9.7.11.1:HCP/NCCP).

Outside of the Conservation Areas, there are 59 acres (2%) of modeled Habitat authorized for Take. As the species distribution model for the summer tanager is the same as for the southwestern willow flycatcher, the areas affected are the same. Some of this acreage occurs as small slivers of Habitat at the margins of suitable riparian areas. Some of this acreage occurs along the Coachella Valley

Stormwater Channel north of the Conservation Area boundary. Impacts to Habitat along this portion of the Stormwater channel will be mitigated by establishment of replacement permanent riparian forest by CVWD (Section 4.3.20:HCP/NCCP).

Migratory Habitat

There are 57,589 acres of modeled migratory Habitat for the summer tanager within the HCP/NCCP Area. Approximately 43,177 acres of this modeled migratory Habitat occur within the Conservation Areas and the HCP/NCCP will ensure Conservation of 40,846 of these acres (71%). Approximately 21,312 acres (37%) of the modeled migratory Habitat are within Existing Conservation Lands and will be managed as part of the Reserve System. The HCP/NCCP will conserve an additional 19,534 acres (34%) of the modeled migratory Habitat for summer tanager (Table 4-114:HCP/NCCP).

Within the Conservation Areas under the worst case scenario, 2,331 acres of modeled migratory Habitat (4%) could be lost. Take of summer tanager migratory Habitat within the Conservation Areas must be consistent with the Conservation Objectives for this species to: 1) ensure Conservation of riparian Habitat, and 2) protect Essential Ecological Processes including hydrological regimes needed to maintain riparian Habitat. Although some Take could occur within the Conservation Areas, the Conservation Objectives required by the HCP/NCCP will provide for protection of Habitat to ensure the long-term Conservation of the summer tanager (Section 9.7.11.1:HCP/NCCP).

Outside of the Conservation Areas, there are 13,040 acres (23%) of modeled migratory Habitat that could be lost (Table 4-114:HCP/NCCP). The modeled summer tanager migratory Habitat outside the Conservation Areas includes desert dry wash woodland west of Thermal Canyon and east of Dillon Road in an area fragmented by the I-10 freeway. Additionally, small slivers of Habitat are modeled that include desert dry wash woodland, and along various washes from Desert Hot Springs area to the margins of the Cathedral City, Rancho Mirage cove areas and around Deep Canyon in Palm Desert. Larger patches of migratory Habitat occur northwest of the Salton Sea in desert saltbush scrub and desert sink scrub, as well as natural communities used by summer tanagers in migration that are highly fragmented in a matrix of agriculture, in addition to the eastern part of the HCP/NCCP Area south of I-10.

The model for the summer tanager, and other riparian birds, includes Habitat used in migration, including desert dry wash woodland, mesquite bosque, mesquite hummocks, and desert saltbush scrub. Not all of the Habitat in these natural communities will be protected in the proposed Conservation Areas. Habitat disturbance, subject to the conditions of any required streambed alteration or Section 404 permits, would be allowed in those portions of these natural communities not conserved by the HCP/NCCP.

The Permittees will protect and manage, in perpetuity, 1,037 acres of the modeled breeding Habitat and 19,534 acres of migratory Habitat for this tanager. The 1,526 acres of breeding Habitat and 21,312 acres of migratory modeled Habitat within Existing Conservation Lands will be monitored and managed to ensure that Conservation Objectives are met. The HCP/NCCP will thus ensure Conservation, through protection and management, of 2,563 acres of breeding Habitat and 40,846 acres of migratory Habitat for summer tanagers (Section 9.7.11:HCP/NCCP).

Existing Conservation Areas within the HCP/NCCP boundary currently protect 38% of the Habitat for the summer tanager. The Conservation Areas in the HCP/NCCP will protect 94% of the occupied and potential breeding Habitat and 71% of the potential migratory Habitat for this species. The Conservation Areas include the potential breeding Habitat for summer tanagers in Whitewater Canyon, Chino Canyon, the Thousand Palms Preserve, the Whitewater River mouth near the Salton Sea, Cottonwood Springs in Joshua Tree National Park, and Dos Palmas. The HCP/NCCP includes 71% of the known occurrences for the summer tanager. Other suitable Habitat for breeding sites in the HCP/NCCP Area occurs in Palm Canyon, Murray Canyon, and Andreas Canyon on the Agua Caliente Indian Reservation. Portions of these canyons are currently protected as part of the Indian Canyons Heritage Park. The Agua Caliente Band of Cahuilla Indians is preparing a separate HCP for reservation lands.

The model for the summer tanager, and other riparian birds, includes Habitat used in migration, including desert dry wash woodland and desert saltbush scrub. Other natural Habitat used by summer tanagers in migration or foraging will be conserved in Stubbe and Cottonwood Canyons, Oasis de los Osos, Snow Creek and Falls Creek in the Snow Creek/Windy Point Conservation Area, Mission Creek, the Thousand Palms Preserve, the Coachella Valley Stormwater Channel and Delta near the Salton Sea, Dos Palmas, and Cottonwood Spring in Joshua Tree National Park Conservation Area. Habitat disturbance, subject to the conditions of any required streambed alteration or Section 404 permits, will be allowed in those portions of these natural communities not conserved by the HCP/NCCP (Sections 4.3.4, 4.3.7, 4.3.8, 4.3.11, 4.3.21:HCP/NCCP). However, where disturbance of a given number acres of riparian natural communities is authorized, an equivalent number of acres will be replaced to ensure that no net loss occurs and the Conservation Objective is achieved (Section 9.7.11.4:HCP/NCCP).

CVWD will establish 44 acres of permanent Sonoran cottonwood-willow riparian forest in the Coachella Valley Stormwater Channel and Delta Conservation Area to replace riparian Habitat that is periodically altered by flood control maintenance activities. Temporary Habitat disturbance for flood control channel maintenance purposes will be permitted by the HCP/NCCP in the Coachella Valley Stormwater Channel (Sections 4.3.20, 8.4.3.2, 9.7.11.4:HCP/NCCP).

Additionally, the HCP/NCCP calls for Management and Monitoring Programs to ensure the Conservation of this species, including control of activities that degrade summer tanager Habitat, control of invasive species such as tamarisk and brown-headed cowbirds

where necessary, and restoration and enhancement of degraded Habitat as necessary according to monitoring results. The HCP/NCCP also limits human access to summer tanager occupied Habitat during the breeding season (Sections 8.2.4.1, 8.4.3.2:HCP/NCCP).

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 summer tanagers 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. Therefore, coverage under the HCP/NCCP is warranted.

Southern Yellow Bat (Section 9.8.1:HCP/NCCP)

The focus of Conservation efforts for the southern yellow bat is to ensure conservation of their primary Habitat area, the desert fan palm oases. The HCP/NCCP ensures the long-term Conservation including Habitat protection, management, and monitoring for the southern yellow bat. It includes Conservation of Essential Ecological Processes, including the hydrological regimes that support desert fan palm oases.

There are 1,329 acres of modeled Habitat for the southern yellow bat within the HCP/NCCP Area. Core Habitat was not designated for this species. The HCP/NCCP will ensure Conservation of a total of 1,250 acres (94%) of the modeled Habitat or Other Conserved Habitat for southern yellow bat. Approximately 660 acres (50%) of the modeled Habitat are within Existing Conservation Lands and will be managed as part of the Reserve System. The HCP/NCCP will conserve an additional 590 acres (44%) of the modeled Habitat for southern yellow bat in the HCP/NCCP Area (Table 4-114:HCP/NCCP). There are three known locations for this species, two of which are on Existing Conservation Lands within the Conservation Areas. The third known location is in a palm oasis on land held for conservation by a non-profit land trust.

Within the Conservation Areas under the worst case scenario, 66 acres of modeled southern yellow bat Habitat (5%) could be lost. Take of southern yellow bat Habitat within the Conservation Areas must be consistent with the Conservation Objectives for this species to: 1) ensure Conservation of existing occupied Habitat and additional potential Habitat; 2) protect Essential Ecological Processes including hydrological regimes needed to maintain desert fan palm oasis woodlands as southern yellow bat Habitat; 3) implement biological monitoring and Adaptive Management to ensure Conservation of Habitat quality and long-term Conservation of this species. Although some Take could occur within the Conservation Areas, the actual impacts to desert fan palm oases are likely to be minimal. The Conservation Objectives required by the

HCP/NCCP will provide for protection of Habitat to ensure the Conservation of southern yellow bat (Section 9.8.1.1:HCP/NCCP).

Outside of the Conservation Areas, there are 12 acres (<1%) of modeled Habitat authorized for Take. One of the known locations occurs on a privately held parcel near Thermal, California, which includes a planted oasis of *Washingtonia filifera* fan palms. This property is very near the Santa Rosa and San Jacinto Mountains Conservation Area, but is not within a proposed Conservation Area. Southern yellow bats were mist netted at this location in 1999. This oasis is currently held for conservation by a local land trust, the Friends of the Desert Mountains.

The Permittees will protect and manage, in perpetuity, 590 acres of the modeled Habitat. The 660 acres of modeled Habitat within Existing Conservation Lands will be monitored and managed to ensure that Conservation Objectives are met. The HCP/NCCP will thus ensure Conservation, through protection and management, of 1,250 acres of southern yellow bat Habitat in the HCP/NCCP Reserve System (Table 4-114:HCP/NCCP).

Additionally, the HCP/NCCP calls for Management and Monitoring Programs to ensure the Conservation of this species, including control of activities that degrade southern yellow bat Habitat, control of invasive species if monitoring results indicate it is necessary, and restoration and enhancement of degraded Habitat as necessary according to monitoring results. The HCP/NCCP calls for the protection of Essential Ecological Processes including hydrological regimes needed to maintain desert fan palm oasis woodlands as southern yellow bat Habitat (Section 9.8.1.2:HCP/NCCP). The HCP/NCCP also provides for data gathering as part of the Monitoring Program that addresses the distribution and Habitat parameters of this little known bat species throughout the HCP/NCCP Area.

Under the HCP/NCCP, 94% of the approximately 1,329 acres of naturally occurring Habitat of the species in the HCP/NCCP 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 HCP/NCCP. The Agua Caliente Band of Cahuilla Indians is preparing its own HCP, and potential conservation on reservation lands will be addressed in that plan. Under the HCP/NCCP, Take will be permitted on 82 acres (6%) of the naturally occurring Habitat outside the Conservation Areas.

Implementation of the HCP/NCCP 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. Therefore, coverage under the HCP/NCCP is warranted.

Finding 4.6 CDFG finds that the mitigation measures specified in the plan and imposed by the plan participants are consistent with subdivision (d) of Section 2801 (Section 2821(b)).

For the reasons set forth in the preceding findings, CDFG has determined that the HCP/NCCP specifies and imposes mitigation measures that meet the standards of Section 2801 (d) regarding coordination and cooperation (Finding 4.4.1F), conservation and management of unfragmented diverse habitat for multiple species (Findings 4.1.4A and 4.1.4C), options to ensure rough proportionality of impacts to conservation (Findings 4.2.9), and conservation of broad-based natural communities and species diversity (Finding 4.1.3). The HCP/NCCP also addresses cumulative impacts through measures that require conservation of the species in large unfragmented blocks (Section 4.3:HCP/NCCP), provides for protection of Essential Ecological Processes for the Habitats (Section 4.3:HCP/NCCP), and addresses Development throughout the Planning Area rather than on a project-by-project piecemeal basis. For these reasons CDFG has determined that the HCP/NCCP addresses cumulative impact concerns.

5.0 OTHER FINDINGS

5.1 Fully Protected Covered Species

Finding 5.1.1 CDFG finds that the Covered Activities authorized in this approval will not result in take of fully protected Covered Species, except as provided in Section 2081.7 of CESA.

Three fully protected species, Yuma clapper rail, California black rail and Peninsular bighorn sheep, are included in the HCP/NCCP list of Covered Species. To minimize indirect impacts and to avoid direct impacts on the Yuma clapper rail, California black rail and Peninsular bighorn sheep as a result of Covered Activities, the following procedures will be implemented:

- Surveys for the rails will be required in cismontane alkali marsh before any activity that will impact the Habitat. If rails are found, the Habitat must be avoided or measures must be approved by the Wildlife Agencies to ensure that no Take of an individual occurs, other than for projects where Fish and Game Code Section 2081.7 is applicable (see below).

- Prior to construction of the Hwy. 111 bridge widening over Salt Creek, Caltrans will conduct surveys to determine if Yuma clapper rails or California black rails are present. If present, the project will proceed in a manner so that no activities will occur that will 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.

- 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.

CDFG concurs that the measures in the HCP/NCCP are sufficient to avoid Take of fully protected species from Covered Activities.

Section 2081.7 Finding - Fully protected species

Section 2081.7 of the Fish and Game Code allows the Department to authorize the Take of fully protected species for impacts attributable to the Quantification Settlement Agreement if certain conditions are met:

"...

(b) The Quantification Settlement Agreement is executed by the appropriate parties on or before October 12, 2003;

(c) The department has determined that the appropriate agreements have been executed to address environmental impacts at the Salton Sea that include enforceable commitments requiring all of the following:

(1) Imperial Irrigation District to transfer 800,000 acre-feet of conserved water, by conservation methods selected by the Imperial Irrigation District, to the Department of Water Resources on a mutually agreed upon schedule in exchange for payment of one hundred seventy-five dollars ($175) per acre-foot. The price shall be adjusted for inflation on an annual basis.

(2) Imperial Irrigation District to transfer up to 800,000 additional acre-feet of conserved water, by conservation methods selected by the Imperial Irrigation District, to the Department of Water Resources during the first 15 years of the Quantification Settlement Agreement on the schedule established for the mitigation water that was previously to be transferred to the San Diego Water Authority, or on a mutually agreed upon schedule, at no cost for the water in addition to the payment for the water from the mitigation fund described in paragraph (1) of subdivision (b) of Section 3 of Senate Bill 654 of the 2003–04 Regular Session.

(3) As a condition to acquisition of the water described in paragraph (1), the Department of Water Resources shall be responsible for any environmental impacts, including Salton Sea salinity, related to use or transfer of that water. As a condition to acquisition of the water described in paragraph (2), the Department of Water Resources shall be responsible for environmental impacts related to Salton Sea salinity that are related to the use or transfer of that water.

(4) The Metropolitan Water District of Southern California (MWD) to purchase up to 1.6 million acre-feet of the water provided in accordance with paragraphs (1) and (2) from the Department of Water Resources at a price of not less than two hundred fifty dollars ($250) per acre-foot on a mutually agreed upon schedule. The price shall be adjusted for inflation on an annual basis. The Department of Water Resources shall deposit all proceeds from the sale of water pursuant to this paragraph, after deducting costs and reasonable administrative expenses, into the Salton Sea Restoration Fund.

(5) The Metropolitan Water District of Southern California to pay not less than twenty dollars ($20) per acre-foot for all special surplus water received by MWD as a result of reinstatement of access to that water under the Interim Surplus Guidelines by the United States Department of Interior subtracting any water delivered to Arizona as a result of a shortage. The money shall be paid into the Salton Sea Restoration Fund. The price shall be adjusted for inflation on an annual basis. Metropolitan Water District of Southern California shall receive a credit against future mitigation obligations under the Lower Colorado River Multi-Species Conservation Plan for any funds provided under this paragraph to the extent that those funds are spent on projects that contribute to the conservation or mitigation for species identified in the Lower Colorado River Multi-Species Conservation Plan and that are consistent with the preferred alternative for Salton Sea restoration.

(6) Coachella Valley Water District, Imperial Irrigation District, and San Diego County Water Authority to pay a total of thirty million dollars ($30,000,000) to the Salton Sea Restoration Fund as provided in paragraph (2) of subdivision (b) of Section 3 of Senate Bill 654 of the 2003-04 Regular Session.

(d) All of the following conditions are met:

(1) The requirements of subdivision (b) and (c) of Section 2081 are satisfied as to the species for which take is authorized.

(2) The take authorization provides for the development and implementation, in cooperation with federal and state agencies, of an adaptive management process for monitoring the effectiveness of, and adjusting as necessary, the measures to minimize and fully mitigate the impacts of the authorized take. The adjusted measures are subject to Section 2052.1.

(3) The take authorization provides for the development and implementation in cooperation with state and federal agencies of an adaptive management process that substantially contributes to the long-term conservation of the species for which take is authorized. . . ." (Fish & G. Code § 2081.7)

Pursuant to the above-referenced criteria governing the issuance of an incidental take permit which authorizes the take of a fully protected species, the Department hereby makes the findings set forth below for the HCP/NCCP:

1. The QSA was executed by October 12, 2003.

2. The following appropriate agreements have been entered into that satisfy the requirements of 2081.7(c):
   - Agreement between the Imperial Irrigation District and the Department of Water Resources for the Transfer of Colorado River Water (dated October 10, 2003)
   - Agreement between the Metropolitan Water District of Southern California and the Department of Water Resources for the Transfer of Colorado River Water (dated October 10, 2003)
   - Agreement between the Metropolitan Water District of Southern California and the California Department of Fish and Game for the Payment by Metropolitan of Twenty Dollars per Acre-Foot of Special Surplus Colorado River Water Received by Metropolitan (dated October 10, 2003)
   - Agreement among the California Department of Fish and Game, the Coachella Valley Water District, the Imperial Irrigation District, and the San Diego County Water Authority for Creation and Funding of a Quantification Settlement Agreement Joint Powers Authority Agreement (dated October 10, 2003)

3. The requirements of subdivision (b) and (c) of section 2081 have been met.

4. The take authorization provides for the development and implementation, in cooperation with federal and state agencies, of an adaptive management process for monitoring the effectiveness of, and adjusting as necessary, the measures to minimize and fully mitigate the impacts of the authorized take (Section 8:HCP/NCCP).

5. The take authorization provides for the development and implementation in cooperation with the state and federal agencies of an adaptive management process that substantially contributes to the long-term conservation of the species for which take is authorized (Section 8:HCP/NCCP).

The Yuma clapper rail and the California black rail occur in the drains draining into the Salton Sea and at Dos Palmas. The drains are managed by CVWD as part of its O&M activities and are Covered Activities. These activities are necessary to maintain functioning drains which is an impact attributable to the QSA. Take of rails as a result of these activities is allowed. This is the only authorized Take for fully protected species under this HCP/NCCP.

NCCP PERMIT

6.0 APPROVAL OF THE NCCP

Based on the foregoing findings, CDFG concludes that the HCP/NCCP meets all necessary requirements for approval as an NCCP. CDFG hereby approves the HCP/NCCP for implementation as an NCCP and authorizes the Permittees to Take the species identified below in Section 6.2 (subject to the limitations in this Permit) incidental to the activities described below in Section 6.1. This Permit is specifically conditioned on the Permittees' compliance with requirements of the HCP/NCCP and the IA.

6.1 Covered Activities

This Permit covers Take of Covered Species resulting from Covered Activities that are subject to and covered by the HCP/NCCP and the IA. Covered Activities consist of the activities defined and listed in Section 7 of the HCP/NCCP. Covered Activities in the HCP/NCCP fall into two categories.

1. Specific projects and activities outside the Conservation Areas.
2. Activities that occur inside the Conservation Areas.

Activities Outside the Conservation Areas

This category includes all ground-disturbing projects and activities that may occur outside Conservation Areas (Section 7.1:HCP/NCCP). This category is intended to be as inclusive as possible to accommodate urban growth. It includes the construction and maintenance of typical urban facilities, public and private, consistent with local general plans and local, state, and federal laws. This category includes, but is not limited to, the

construction, maintenance, and use of facilities as described in the HCP/NCCP (Section 7.1:HCP/NCCP) as described below:

Development permitted or approved by Local Permittees. This includes, but is not limited to, new projects approved pursuant to county and city general plans, including the circulation element of said general plans, transportation improvement plans for roads in addition to those addressed in Section 7.2 of the HCP/NCCP, master drainage plans, capital improvement plans, water and waste management plans, the County's adopted Trails Master Plan, and other plans adopted by the Permittees. Covered Activities include Development on agricultural lands.

Public facility construction, operations, and maintenance and safety activities by the Permittees for existing and future facilities, including both on and off site activities. Such facilities include, but are not limited to, publicly maintained roads and rights-of way; materials pits; maintenance yards; flood control facilities; landfills, transfer stations, and other solid waste related facilities, including those for the processing of organic materials; public buildings; water development, production, storage, treatment, and transmission facilities; sewage treatment and transmission facilities; reclaimed water storage and transmission facilities; public parks; substations and electric transmission facilities; and other public utility facilities providing services essential to the health, safety, and welfare of the public.

Emergency response activities by Permittees required to protect the public health, safety, and welfare. Such emergency response activities by Permittees include emergency response to wildfire, flooding, earthquakes, and other emergency situations.

Transportation Projects outside Conservation Areas. Transportation and Regional road projects identified in Tables 7-1 through 7-3 of the HCP/NCCP are Covered Activities.

Activities Inside the Conservation Areas

This category includes the following Covered Activities within the Conservation Areas:

Construction and maintenance of trails, public access facilities, and campground facilities, except on federal land, as provided for in this HCP/NCCP consistent with the Species Conservation Goals and the Conservation Objectives for the Conservation Areas, and consistent with the guidelines for trails and public access in Section 7.3.4.2 of the **HCP/NCCP**. As applicable, these activities are subject to the avoidance and minimization measures described in Section 4.4 of the HCP/NCCP.

Specific projects and operation and maintenance activities listed in Tables 7-1 through 7-11 of the HCP/NCCP. Where indicated in the tables, these activities are subject to applicable Required Measures listed in Sections 4.3.1 through 4.3.21 of the HCP/NCCP, and to the applicable avoidance and minimization measures described in

Section 4.4 of the HCP/NCCP. A list of operation and maintenance activities is found in Section 7.3.1.1 of the HCP/NCCP.

Development permitted or approved by Local Permittees. Development and the associated ground disturbance, consistent with the Conservation Goals and Conservation Objectives within Conservation Areas and Species Conservation Goals and Objectives are Covered Activities. These include the construction, operation, and maintenance of new flood control facilities and local roadways (less than 74 feet in width and no more than one through travel lane in each direction) which are either: (1) approved as part of a development proposal or (2) dedicated or offered for dedication for public use. As applicable, these activities are subject to the avoidance and minimization measures described in Section 4.4 of the HCP/NCCP. New ground disturbance associated with repowering or development of new wind energy facilities shall be treated as a Covered Activity similar to development projects permitted or approved by Local Permittees. Within each Permittee's jurisdiction, existing wind turbines may be replaced with new turbines. If old turbines are removed and the former impact area is restored to a natural condition, an equal new area may be disturbed without counting toward the calculation of net disturbance.

Expansion of mining operations on non-federal land. Expansion of mining operations holding a valid existing permit as of the date of Permit issuance must be consistent with the Conservation Objectives for the relevant Conservation Area.

Activities Not Covered

The following activities or projects are not covered by the HCP/NCCP or this Permit:

- Wind energy turbine operation
- Agricultural activities
- Any transportation or regional road project not listed in Tables 7-1 through 7-3 (Section 7:HCP/NCCP)

6.2 Covered Species

Table 4-116 of the HCP/NCCP shows the 27 Covered Species with six columns of information: species name, species conservation objectives, conservation analysis summary, measures to avoid, minimize and mitigate Take, management activities summary, and conservation and Take summary. Twenty-six of the 27 Covered Species are currently authorized for Take. One (1) Covered Species (Peninsular bighorn sheep) is fully protected in California and not authorized for Take as defined by CESA. Two (2) species are fully protected in California (Yuma clapper rail and California black rail), but can be Taken as described below.

6.2.1 List of 27 Covered Species

Plants
Mecca aster, *Xylorhiza cognata*
Coachella Valley milkvetch, *Astragalus lentiginosus* var. *coachellae*
Triple-ribbed milkvetch, *Astragalus tricarinatus*
Orocopia sage, *Salvia greatae*
Little San Bernardino Mountains linanthus, *Linanthus maculatus (*or *Gilia maculata)*

Invertebrates - Insects
Coachella Valley giant sand-treader cricket, *Macrobaenetes valgum*
Coachella Valley Jerusalem cricket, *Stenopelmatus cahuilaensis*

Fish
Desert pupfish, *Cyprinodon macularius*

Amphibians
Arroyo toad, *Bufo californicus*

Reptiles
Desert tortoise, *Gopherus agassizii*
Flat-tailed horned lizard, *Phrynosoma mcallii*
Coachella Valley fringe-toed lizard, *Uma inornata*

Birds
Yuma clapper rail, *Rallus longirostris yumanensis*
California black rail, *Laterallus jamaicensis*
Burrowing owl, *Athene cunicularia*
Southwestern willow flycatcher, *Empidonax traillii extimus*
Crissal thrasher, *Toxostoma crissale*
Le Conte's thrasher, *Toxostoma lecontei*
Least Bell's vireo, *Vireo bellii pusillus*
Gray vireo, *Vireo vicinior*
Yellow warbler, *Dendroica petechia brewsteri*
Yellow-breasted chat, *Icteria virens*
Summer tanager, *Piranga rubra*

Mammals
Southern yellow bat, *Lasiurus ega* or *xanthinus*
Coachella Valley round-tailed ground squirrel, *Spermophilus tereticaudus chlorus*
Palm Springs pocket mouse, *Perognathus longimembris bangsi*
Peninsular bighorn sheep, *Ovis canadensis nelsoni*

6.2.2 Species by Coverage Categories

The list of Covered Species is divided into two Take Authorization categories: 1) Species that can be taken upon permit issuance, and 2) California fully protected species.

Species that can be Taken upon permit issuance.

The Applicants are requesting Take coverage under this NCCP Permit for a total of twenty-seven species (Covered Species). This includes four endangered animal species: Desert pupfish, *Cyprinodon macularius*, Coachella Valley fringe-toed lizard, *Uma inornata,* Southwestern willow flycatcher, *Empidonax traillii extimus,* and least Bell's vireo, *Vireo bellii pusillus.* Additionally, this Permit allows incidental Take of four threatened animal species: Desert tortoise, *Gopherus agassizii,* Yuma clapper rail, *Rallus longirostris yumanensis,* California black rail, *Laterallus jamaicensis, and* Peninsular bighorn sheep, *Ovis canadensi.* This Permit also allows incidental Take of ten California Species of Special Concern: Arroyo toad, *Bufo californicus*, flat-tailed horned lizard, *Phrynosoma mcallii,* Burrowing owl, *Athene cunicularia,* Crissal thrasher, *Toxostoma crissale,*Le Conte's thrasher, *Toxostoma lecontei,* Gray vireo, *Vireo vicinior,* yellow warbler, *Dendroica petechia brewsteri,* yellow-breasted chat, *Icteria virens,* Coachella Valley round-tailed ground squirrel, *Spermophilus tereticaudus chlorus* and Palm Springs pocket mouse, *Perognathus longimembris bangsi.*

This Permit further authorizes incidental Take of four currently non-listed animal species: Coachella Valley giant sand-treader cricket, *Macrobaenetes valgum,* Coachella Valley Jerusalem cricket, *Stenopelmatus cahuilaensis,* summer tanager, *Piranga rubra,* and Southern yellow bat, *Lasiurus ega* or *xanthinus;* and five currently non-listed plant species: Mecca aster, *Xylorhiza cognate,* Coachella Valley milkvetch, *Astragalus lentiginosus* var. *coachellae,* Triple-ribbed milkvetch, *Astragalus tricarinatus,* Orocopia sage, *Salvia greatae,* and Little San Bernardino Mountains linanthus, *Linanthus maculatus (*or *Gilia maculata).*

This Permit allows for continuing incidental Take of currently non-listed species in the event that they become listed in the future.

California Fully Protected Species

As stated in Section 15.5 of the IA, three state fully protected species - Yuma clapper rail, *Rallus longirostris yumanensis;* California black rail, *Laterallus jamaicensis;* and Peninsular bighorn sheep, *Ovis canadensis nelsoni,* are included in the list of Covered Species. Take of Yuma clapper rail and California black rail must be avoided pursuant to Fish and Game Code Section 3511 and Take of Peninsular bighorn sheep must be avoided pursuant to Fish and Game Code section 4700. Those code sections prohibit CDFG from authorizing Take of these fully protected species, except as provided in the Fish and Game Code for Take associated with necessary scientific research or as specifically provided in section 2081.7 of that code. Consequently, only CVWD is

authorized to Take fully protected species by this NCCP Permit only for Covered Activities which have impacts attributable to implementation of the QSA. As authorized by the Fish and Game Code, Permittees may apply for a separate permit for Take of fully protected species associated with necessary scientific research. CDFG has determined that, as set forth in the NCCP findings above, the HCP/NCCP provides for the conservation and management of Yuma clapper rail, California black rail and Peninsular bighorn sheep and that activities covered by the HCP/NCCP can be carried out without causing Take of these state fully protected species (Finding 5.1.1, above, Required Measures 2 and 3 in Section 4.3.19:HCP/NCCP, and Required Measure 4 in Section 4.3.20:HCP/NCCP).

CDFG acknowledges and agrees that if the measures set forth in the HCP/NCCP are fully complied with, the Covered Activities are not likely to result in Take of these species, except as described above. If CDFG determines that such measures are not adequate to prevent Take of a state fully protected species, CDFG shall notify the Implementing Entity in writing of such discovery and propose new, additional, or different conservation measures that it believes are necessary to avoid Take of these species.

If at any time there is a change in state law such that CDFG may issue an NCCP Permit, other permit, or authorization allowing the Take of Yuma clapper rail, California black rail or Peninsular bighorn sheep, the Permittees may apply for an amendment of the NCCP Permit or for a new permit for such species. In processing any such application, CDFG shall give good faith consideration to Take avoidance and mitigation measures already provided in the HCP/NCCP and shall issue the amendment or Permit under the same terms and conditions as the existing NCCP Permit, to the extent permitted by law.

6.3 Limitations

This Take Authorization does not constitute or imply compliance with, or entitlement to proceed with, any project under laws and regulations beyond the authority and jurisdiction of CDFG. The Permittees have independent responsibility for compliance with any and all applicable laws and regulations.

7.0 AMENDMENTS

This NCCP Permit may be amended in a manner consistent with provisions in the HCP/NCCP and the IA. For example, an amendment will be considered in the event a species not identified in this NCCP Permit is listed as endangered or threatened pursuant to Fish and Game Code Section 2070 or becomes a candidate for such listing pursuant to Fish and Game Code Section 2074.2, provided the Permittees provide for the conservation and management of the species.

8.0 SUSPENSION AND TERMINATION

This Permit will be in effect for a period of 75 years. This Permit is subject to suspension or termination by action of the Director of CDFG in accordance with the terms of Section 23.5 of the IA.

Under Section 22 of the IA, should any or all of the Permittees request early termination of this Permit, the Permittee or Permitees will be required to fulfill their mitigation obligations for all authorized development approved, authorized, or carried out prior to termination. Mitigation obligations will be in accordance with the HCP/NCCP and the IA for any permitted activities that have been approved, authorized, or carried out.

Withdrawal by a Permittee shall not diminish or otherwise affect the obligations of the remaining Permittees under the IA, the HCP/NCCP, or the Permits. In the event of termination by any Permittee, the CVCC shall meet and confer with the Wildlife Agencies to determine to what extent, if any, Take Authorization may continue to be provided to the remaining Permittees. In making this determination, the Wildlife Agencies shall evaluate the benefits to Covered Species resulting from the participation of the remaining Permittees, the extent to which the withdrawing Permittee has outstanding obligations for compliance with Take minimization and mitigation measures, an evaluation of whether the Permits continue to meet issuance criteria pursuant to the NCCP Act, and any other relevant information. Such evaluation shall include an analysis of the viability of the Reserve System without the participation of the Permittee, including whether adequate funding will be available to implement the terms of the HCP/NCCP (Section 22.4:IA).

9.0 DURATION

This NCCP Permit shall remain effective for 75 (seventy-five) years from the effective date below, unless suspended, terminated or extended by earlier action of the Director of CDFG.

Approved by:

Ina Bartlett

Date: 9/9/08

for **Kevin Hunting, Deputy Director**
California Department of Fish and Game

Definitions

The following are defined terms in the HCP/NCCP. These terms are used in this Permit. Capitalization of the word denotes that the defined term is being used.

Acceptable Biologist - A biologist whose name is on a list maintained by CVCC of biologists who are acceptable to CVCC, CDFG, and USFWS for purposes of conducting surveys of Covered Species.

Acquisition and Funding Coordinating Committee - A committee formed by the CVCC that provides input on local funding priorities and Additional Conservation Land acquisitions.

Adaptive Management - To use the results of new information gathered through the monitoring program of the Plan and from other sources to adjust management strategies and practices to assist in providing for the Conservation of Covered Species.

Additional Conservation Lands - Conserved Habitat that will contribute to Reserve System Assembly, as described in Section 4.2.2 of the MSHCP.

Allowable Uses - Uses allowed within the MSHCP Reserve System, as defined in Section 7.3.2 of the MSHCP.

Annual Report (s) - The report(s) prepared pursuant to the requirements of Section 6.4 of the MSHCP.

Area Plan - A community planning area defined in the County of Riverside General Plan. Four County of Riverside Area Plans are located within the MSHCP Plan Area.

Biological Corridor - Wildlife movement area that is constrained by existing development, freeways, or other impediments. *[See also "Linkage."]*

California Department of Fish and Game ("CDFG") - A department of the California Resources Agency.

California Department of Parks and Recreation ("State Parks") - A department of the California Resources Agency.

California Department of Transportation ("Caltrans") - A department of the California Business, Transportation, and Housing Agency.

California Endangered Species Act ("CESA") - California Fish and Game Code, Section 2050 et seq. and all rules, regulations and guidelines promulgated thereunder, as amended.

California Environmental Quality Act (CEQA) - California Public Resources Code, Section 21000 et seq. and all guidelines promulgated thereunder, as amended. For the MSHCP, CVAG shall be the Lead Agency under CEQA, as defined under state CEQA Guidelines Section 15367.

Candidate Species - "Candidate Species" means both (1) a species formally noticed by the California Fish and Game Commission as under review for listing as threatened or endangered, or a species for which the Fish and Game Commission has published a notice of proposed regulation to add a species as threatened or endangered, and (2) a species which USFWS has identified as being a candidate for listing, but for which development of a listing regulation is precluded by other higher priority listing activities.

Certificate of Inclusion - The document attached as Exhibit "H" to the IA that would be required to be executed prior to a Participating Special Entity receiving Take Authorization pursuant to Section 11.7 of the IA or for other Covered Activities, as appropriate.

Changed Circumstances - Changes in circumstances affecting a Covered Species or geographic area covered by the MSHCP, that can reasonably be anticipated by the Parties and that can reasonably be planned for in the MSHCP. Changed Circumstances and the planned responses to those circumstances are more particularly described in Section 6.8.3 of the MSHCP. Changed Circumstances do not include Unforeseen Circumstances.

Cities - The cities of Cathedral City, Coachella, Indian Wells, Indio, La Quinta, Palm Desert, Palm Springs, and Rancho Mirage, collectively.

Coachella Valley Association of Governments ("CVAG") - A joint powers authority that functioned as Lead Agency for the preparation of the MSHCP.

Coachella Valley Conservation Commission ("CVCC") - A joint powers authority formed by the Local Permittees to provide primary policy direction for implementation of the MSHCP, as set forth in Section 6.1.1 of the MSHCP, and Section 11.2.2 of the IA.

Coachella Valley Fringe-toed Lizard Habitat Conservation Plan ("CVFTL HCP") - The CVFTL HCP in the Plan area, dated April 21, 1986, more particularly described in Section 16.2 of the IA.

Coachella Valley Mountains Conservancy ("CVMC") - A state agency within the California Resources Agency.

Complementary Conservation - The land projected to be acquired in the Conservation Areas for Conservation purposes independent of, but compatible with, the MSHCP, as described in Section 4.2.1 of the MSHCP.

Conservation - To use, and the use of, methods and procedures within the MSHCP Reserve System and within the Plan Area as set forth in the MSHCP Plan, that are necessary to bring any species to the point at which the measures provided pursuant to FESA and the California Fish and Game Code are no longer necessary. However, Permittees will have no duty to enhance, restore or revegetate MSHCP Reserve System lands unless required by the MSHCP, the IA, or agreed to through implementation of the Plan.

Conservation Areas - A system of lands described in Section 4.3 of the MSHCP that provides Core Habitat and Other Conserved Habitat for the Covered Species, conserves natural communities, conserves Essential Ecological Processes, and secures Biological Corridors and Linkages between major Habitat areas. There are 21 Conservation Areas from which the MSHCP Reserve System will be assembled.

Conservation Goal(s) - A broad statement of intent that describes how the Plan will accomplish the protection of Core Habitat, Essential Ecological Processes, Biological Corridors, and Linkages in the MSHCP Reserve System to ensure that the Covered Species are adequately conserved. Conservation Goals are also designed to ensure the persistence of natural communities.

Conservation Level - A numerical designation, as described in Section 2.4 of the MSHCP, assigned to all land within the Plan Area.

Conservation Objective(s) - Measurable statements of actions or measures that will lead to attainment of the Conservation Goals.

Conservation Strategy - The overall approach to assure Conservation of Covered Species within the Plan Area.

Conserved Habitat - Land that is permanently protected and managed for the benefit of the Covered Species under the institutional arrangements that provide for its ongoing management, and under the legal arrangements that prevent its conversion to other uses.

Core Habitat - The areas identified in the Plan for a given species that are composed of a Habitat patch or aggregation of Habitat patches that (1) are of sufficient size to support a self-sustaining population of that species, (2) are not fragmented in a way to cause separation into isolated populations, (3) have functional Essential Ecological Processes, and (4) have effective Biological Corridors and/or Linkages to other Habitats, where Feasible, to allow gene flow among populations and to promote movement of large predators.

County - County of Riverside

County Flood Control - Riverside County Flood Control and Water Conservation District

County Parks - Riverside County Regional Park and Open Space District

County Waste - Riverside County Waste Resources Management District

Covered Activities - Certain activities carried out or conducted by Permittees, Participating Special Entities, Third Parties Granted Take Authorization and others within the MSHCP Plan Area, as described in Section 7 of the MSHCP, that will receive Take Authorization under the Section 10(a) Permit and the NCCP Permit, provided these activities are otherwise lawful.

Covered Species - The species for which Take Authorization is provided through the Permits issued in conjunction with the IA. These species are discussed in Section 9 of the MSHCP, and listed in Exhibit C of the IA.

Critical Habitat - Habitat for species listed under FESA that has been designated pursuant to Section 4 of FESA and identified in 50 C.F.R., Sections 17.95 and 17.96.

Development - The uses to which land shall be put, including construction of buildings, structures, infrastructure, and all associated alterations of the land.

Discretionary Project - A proposed project requiring discretionary action by a Permittee, as that term is used in CEQA and defined in state CEQA Guidelines, Section 15357, including issuance of a grading permit for County projects.

Effective Date - Date on which the IA takes effect, as set forth in Section 19.1 of the IA.

Emergency - A sudden, unexpected occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate the loss of, or damage to, life, health, property, or essential public services. Emergency includes such occurrences as fire, flood, earthquake, or other soils or geologic movements, as well as such occurrences as riot, accident, or sabotage.

Endangered Species - Those species listed as endangered under FESA and/or CESA.

Essential Ecological Processes - Processes that maintain specific Habitat types and are necessary to sustain the Habitat (in a state usable by Covered Species). Essential Ecological Processes may include abiotic hydrological processes (both subsurface and surface), erosion, deposition, blowsand movement, substrate development and soil formation, and disturbance regimes such as flooding and fire; and biotic processes such as reproduction, pollination, dispersal, and migration.

Essential Habitat - Certain lands delineated in the Recovery Plan for Bighorn Sheep in the Peninsular Ranges, California (USFWS 2000).

Existing Conservation Lands - Subset of MSHCP Reserve System lands consisting of lands in public or private ownership and managed for Conservation and/or open space values that contribute to the Conservation of Covered Species, as generally depicted in Figure 4-2 of the MSHCP.

Existing Uses - An existing use, public or private, which is the primary use on the property.

Feasible - Capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.

Federal Endangered Species Act (FESA) - 16 U.S.C., Section 1531 et seq. and all rules and regulations promulgated thereunder, as amended.

Habitat - The combination of environmental conditions of a specific place providing for the needs of a species or a population of such species.

HabiTrak - A GIS application to provide data on Habitat loss and Conservation, which occurs under the Permits.

Implementing Agreement (IA) - The executed agreement that implements the terms and conditions of the MSHCP.

Independent Science Advisors (ISA) - The qualified biologists, Conservation experts and others that provide scientific input to assist in the planning and implementation of the MSHCP for the benefit of the Covered Species, as set forth in Section 3.1.2 of the MSHCP.

Joint Project Review Process - The review process described in Section 6.6.1.1 of the MSHCP for Development proposed in Conservation Areas.

Land Manager - The entity, or entities, which has the responsibility to manage land acquired by the Permittees as set forth in Section 6.1.5 of the MSHCP.

Land Use Adjacency Guidelines - Standards delineated in Section 4.5 of the MSHCP for land uses adjacent to or within the Conservation Areas that are necessary to avoid or minimize edge effects. "Adjacent" means that a parcel shares a common boundary with a parcel in a Conservation Area.

Legal Instrument - The term "Legal Instrument," as used within the Plan and/or IA, shall refer to recorded legal instruments acceptable to the Wildlife Agencies, which provide legal protection in perpetuity to conservation lands; this legal protection may consist of a conservation easement consistent with California Civil Code Section 815 et

seq. or a perpetual deed restriction that meets the requirements of a conservation easement under this statute.

Linkage - Habitat that provides for the occupancy of Covered Species and their movement between larger blocks of Habitat over time, potentially over a period of generations. In general, Linkages are large enough to include adequate Habitat to support small populations of the species and, thus, do not require that an individual of the species transit the entire Linkage to maintain gene flow between populations. What functions as a Linkage for one species may provide only a Biological Corridor or no value for other species. *[See also "Biological Corridor."]*

Listed Species - A species that is listed under FESA and/or CESA.

Local Development Mitigation Fee - The fee imposed by applicable Local Permittees on new Development pursuant to Government Code, Section 66000 et seq.

Local Permittees - CVCC, CVAG, County, County Flood Control, County Parks, County Waste, CVWD, IID, and the Cities.

Major Amendments - Those proposed amendments to the MSHCP and the IA, as described in Section 20.5 of the IA and Section 6.12.4 of the MSHCP.

Management Program - MSHCP management actions, as described in Section 8 of the MSHCP.

Migratory Bird Treaty Act (MBTA) - 50 C.F.R., Section 21 et seq. and all rules and regulations promulgated thereunder, as amended.

Migratory Bird Treaty Act (MBTA) Special Purpose Permit - A permit issued by the USFWS under 50 Code of Federal Regulations section 21.27, authorizing Take, in connection with Covered Activities, under the MBTA of the Covered Species listed in 50 Code of Federal Regulations Section 10.13 that are also listed as endangered or threatened under FESA.

Minor Amendments - Minor changes to the MSHCP and the IA, as defined in Section 20.4 of the IA and Section 6.12.3 of the MSHCP.

Mitigation Lands - A subset of Additional Conservation Lands as described in Sections 4.1 and 4.2.2.2 of the MSHCP.

Monitoring Program - The monitoring programs and activities set forth in Section 8 of the MSHCP.

Monitoring Program Administrator (MPA) - The individual or entity responsible for administering the monitoring program, as described in Section 6.1.6 of the MSHCP.

Monitoring Reports - Report(s) prepared pursuant to the requirements of Section 8.7 of the MSHCP.

MSHCP - Synonym for Plan, used in the text where needed for clarity.

MSHCP Reserve System - A reserve that will total approximately 745,900 acres. The MSHCP Reserve System will provide for the Conservation of the Covered Species.

NCCP Act - California Natural Community Conservation Planning Act of 2002 (California Fish and Game Code § 2800 et seq.) including all regulations promulgated thereunder, as amended.

NCCP Permit - The Permit issued under the NCCP Act for the MSHCP to permit the Take of identified species listed under CESA as threatened or endangered, a species that is a candidate for listing, and Non-listed Species.

NEPA - National Environmental Policy Act, (42 U.S.C., Section 4321-4335) and all rules, regulations promulgated thereunder, as amended. For the purposes of the MSHCP, USFWS is the Lead Agency under NEPA, as defined in 40 C.F.R., Section 1508.16.

Non-Listed Species - A species that is not listed under FESA and/or CESA.

No Surprises Assurance - The guarantee that, provided Permittees are properly implementing the terms and conditions of the MSHCP, the IA, and the Permit(s), the USFWS can only require additional mitigation for Covered Species beyond that provided for in the MSHCP as a result of Unforeseen Circumstances in accordance with the "No Surprises" regulations at 50 C.F.R., Sections 17.22(b)(5) and 17.32(b)(5) and as discussed in Section 6.8 of the MSHCP.

Operation and Maintenance Activities (O&M) - Those Covered Activities that include the ongoing operation and maintenance of public facilities, as described in Section 7.3.1.1 of the MSHCP.

Other Conserved Habitat - Part of a Conservation Area that does not contain Core Habitat for a given species, but which still has Conservation value. These values may include Essential Ecological Processes, Biological Corridors, Linkages, buffering from edge effects, enhanced species persistence probability in proximate Core Habitat, genetic diversity, recolonization potential, and flexibility in the event of long-term Habitat change.

Participating Special Entity - Any regional public service provider, such as a utility company or a public district or agency, that operates and/or owns land within the MSHCP Plan Area and that applies for Take Authorization pursuant to Section 11.7 of the IA.

Party and Parties - The signatories to the IA, namely CVAG, CVCC, County, County Flood Control, County Parks, County Waste, the Cities, CVWD, IID, Caltrans, CVMC, State Parks, USFWS, and CDFG and any other city within the Plan Area that incorporates after the Effective Date and complies with Section 11.5 of the IA.

Permit(s) - Collectively, the Section 10(a)(1) Permit and NCCP Permit issued by the Wildlife Agencies to Permittees for Take of Covered Species pursuant to FESA and the NCCP Act and in conformance with the MSHCP and the IA.

Permittees - CVAG, CVCC, County, County Flood Control, County Parks, County Waste, the Cities, CVWD, IID, Caltrans, CVMC, and State Parks.

Plan - Coachella Valley Multiple Species Habitat Conservation Plan, a comprehensive multiple species habitat conservation planning program that addresses multiple species' needs, including Habitat and the preservation of natural communities in the Coachella Valley area of Riverside County, California, as depicted in Figure 4-1 in Section 4.1 of the MSHCP and Exhibit "A" of the IA.

Plan Area - The boundaries of the MSHCP, consisting of approximately 1.2 million acres in the Coachella Valley area of Riverside County, as depicted in Figure 2-2 of the MSHCP Plan, and Exhibit B of the IA.

Planning Agreement - The Memorandum of Understanding prepared consistent with the NCCP Act to guide development of the MSHCP that is contained in Appendix II of the MSHCP.

Plan Participants - CVAG, CVCC, County, County Flood Control, County Parks, County Waste, the Cities, CVWD, IID, Caltrans, CVMC, State Parks, and others receiving Take Authorization under the Permits.

Private Conservation Land - Land owned by a non-governmental entity committed to Conservation in perpetuity through deed restriction, conservation easement, or other binding agreement satisfactory to CDFG and USFWS.

Reserve Lands - Existing Conservation Lands, Additional Conservation Lands, and Complementary Conservation.

Reserve Management Oversight Committee (RMOC) - The committee established by the CVCC to provide biological, technical and operational expertise for implementation of the MSHCP, including oversight of the MSHCP Reserve System, as described in Section 6.1.3 of the MSHCP.

Reserve Management Unit (RMU) -The units identified in Section 6.1.4 of the MSHCP.

Reserve Management Unit Plan (RMUP) - The plan setting forth management practices for identified portions of the MSHCP Reserve System Area, prepared and adopted as described in Section 6.2 of the MSHCP.

Reserve System - A synonym for MSHCP Reserve System.

Reserve System Assembly - The process of conserving lands within the Conservation Areas through acquisition or other means to assemble the MSHCP Reserve System.

Rough Step - A Conservation Area assembly accounting process to monitor Conservation and loss of specified Habitats within the Plan Area.

Rough Step Analysis Unit - A geographic unit within which Rough Step is tracked. The Conservation Areas are the Rough Step Analysis Units.

Scientific Advisory Committee (SAC) - The committee of scientists that provided scientific input into the development of the Plan, as described in Section 3.1.1.

Section 10(a) Permit - The permit issued by the USFWS to Permittees pursuant to 16 U.S.C., Section 1539(a), authorizing Take of Covered Species.

Special Provisions Area - Provisions that apply to a given location or area, identified by a location description or in a figure, which address specific conditions necessary to achieve Conservation in that location or area.

Species Conservation Goal(s) - Goals for the Conservation of each Covered Species described in Section 9 of the MSHCP.

State Assurances - Except as provided in Section 15.5 of the IA, provided Permittees are implementing the terms and conditions of the MSHCP, the IA, and the Permits, if there are Unforeseen Circumstances, CDFG shall not require additional land, water or financial compensation, or additional restrictions on the use of land, water, or other natural resources for the life of the NCCP Permit without the consent of the Permittees, unless CDFG determines that continued implementation of the IA, the MSHCP, and/or the Permits would jeopardize the continued existence of a Covered Species, or as required by law and would therefore lead to NCCP Permit revocation or suspension.

State Permittees - Caltrans, CVMC, and State Parks.

Take - The definition of such term in FESA and the California Fish and Game Code. Section 9 of FESA does not prohibit Take of Federally Listed plants.

Take Authorization - The ability to incidentally Take species pursuant to the Section 10(a)(1)(B) Permit and/or the NCCP Permit.

Third Party Take Authorization - Take Authorization received by a landowner, developer, or other public or private entity from the Permittees pursuant to Section 17 of the IA, thereby receiving Take Authorization for Covered Species pursuant to the Permits.

Threatened Species - Those species listed as threatened under FESA and/or CESA.

Unforeseen Circumstances - Changes in circumstances affecting a Covered Species or geographic area covered by the MSHCP that could not reasonably have been anticipated by the Parties at the time of the MSHCP's negotiation and development, and that result in a substantial and adverse change in the status of the Covered Species. As defined, the term is intended to have the same meaning as it is used: (1) to define the limit of the Permittees' obligation on the "No Surprises" regulations set forth in 50 C.F.R., Sections 17.22 (b)(5) and 17.32 (b)(5); and (2) in California Fish and Game Code, Section 2805(k).

United States Fish and Wildlife Service ("USFWS") - An agency of the United States Department of the Interior.

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