State of California - The Resources Agency ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF FISH AND GAME
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August 10, 2007

Mr. Dennis Barry
East Contra Costa County Habitat Conservancy
651 Pine Street, 4th floor
Martinez, CA 94553

Dear Mr. Barry:

East Contra Costa NCCP Permit

The Department of Fish and Game is pleased to convey to you the final Natural Community Conservation Planning Permit for the East Contra Costa County Natural Community Conservation Plan. All of the participants should be congratulated on completing this important planning process with success. Their efforts will ensure the long-term conservation of sensitive species and natural communities in eastern Contra Costa County.

We look forward to continuing our partnership as we move forward into implementation. If you have any questions, please contact Mr. Chuck Armor, Bay Delta Regional Manager, at (707) 944-5517.

Sincerely,

FOR Gail L. Presley
Acting Branch Chief
Habitat Conservation Branch

Enclosures

cc: Mr. Chuck Armor
Department of Fish and Game
Yountville, California 94599

U.S. Fish and Wildlife Service
Ms. Sheila Larson
2800 Cottage Way, W-2605
Sacramento, Ca 95825

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
(2835-2007-001-03)

for the

East Contra Costa County
Natural Community Conservation Plan

August 2007

FINDINGS AND NCCP PERMIT

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BACKGROUND

1.0 INTRODUCTION

This document sets forth findings and the approval of the California Department of Fish and Game ("CDFG") for the East Contra Costa County 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, 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. East Contra Costa County 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 of 2003, 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 HCP/NCCP inventory area is located in the eastern portion of Contra Costa County, California (Figure 1-1:HCP/NCCP) and covers approximately one-third of the County, or 174,018 acres. The inventory area was defined as the area in which impacts would be evaluated and conservation would occur. The inventory area is approximately bounded on the south by the Alameda–Contra Costa County line; on the east by the westernmost Delta sloughs between Oakley and the Alameda–Contra Costa County line; on the north by the San Joaquin River shoreline; and on the southwest and west by the western edges of the watersheds of Kellogg and Marsh Creeks, the Mount Diablo Meridian, and the Clayton sphere of influence. The inventory area encompasses all or most of five incorporated cities: Brentwood, Clayton, Oakley, Pittsburg, and Antioch (however, Antioch is not a Permittee; see description below). Three-quarters of the land in the inventory area, approximately 128,908 acres, is in unincorporated areas of Contra Costa County.

The *permit area* is the area within the inventory area where the Permittees are requesting authorization for activities and projects (i.e., Covered Activities) that may result in take of species covered by this HCP/NCCP. The permit area is land within the inventory area defined by the following parameters:

- The Urban Limit Line (ULL) of Contra Costa County or the city limits of the participating Cities of Pittsburg, Clayton, Oakley, and Brentwood, whichever is largest.
- The footprint of specific rural infrastructure projects or activities outside the ULL described in this HCP/NCCP.
- The boundary of any land acquired in fee title or conservation easement and managed under this HCP/NCCP (i.e., the HCP/NCCP Preserve System ("Preserve System")).

The city of Antioch is not participating in the HCP/NCCP and so is excluded from the permit area. A limited number of rural infrastructure projects outside the ULL will be included in the permit area, as will management and restoration activities in the Preserve System.

The HCP/NCCP has been designed to accommodate reasonable and expected growth of the participating jurisdictions based on current General Plans. However, participating jurisdictions have differing positions on where and how much future growth will occur. To respond to potential changes in land use policy among the participating jurisdictions, the HCP/NCCP permit area could expand or contract as a result of local land use decisions made independently of the HCP/NCCP, provided that the revised permit area boundary is consistent with goals of the HCP/NCCP conservation strategy.

To address this issue, two urban development areas were defined for the purpose of impacts analysis. The initial urban development area ("IUDA") is most of the area within the current County ULL. Urban development within the IUDA is expected to result in 8,670 acres of impact to land-cover types that may support Covered Species. The maximum urban development area ("MUDA") is the largest area to which urban development could expand under the terms of this HCP/NCCP. Urban development within the MUDA is expected to result in 11,853 acres of impact to land cover types that may support Covered Species. With either urban development area, another 1,126 acres of impact are expected from rural infrastructure projects and activities within HCP/NCCP preserves. In addition, another 50 acres of impacts are expected from recreational facilties outside the UDA and outside of Preserves. Thus, total impacts allowed under the HCP/NCCP are 9,796 acres and 13,029 acres within the IUDA and MUDA, respectively.

The size of the urban development area covered under the HCP/NCCP at the end of the permit term could fall anywhere in the range defined by the IUDA and the MUDA, depending on local land use decisions that occur during the permit term.

The proposed HCP/NCCP was prepared by the ECCC Habitat Conservation Plan Association ("HCPA"), a joint powers authority that is comprised of the Cities of Brentwood, Clayton, Oakley, and Pittsburg; Contra Costa County; the Contra Costa Water District ("CCWD"); and the East Bay Regional Park District ("EBRPD"). The County and the Cities of Brentwood, Clayton, Oakley, and Pittsburg are the local land use agencies that will be named as Permittees under the HCP/NCCP and will be responsible for implementing the proposed HCP/NCCP. The Contra Costa County Flood Control and Water Conservation District ("County Flood Control District"), East Bay Regional Parks and the East Contra Costa County Habitat Conservancy (known as the "Implementing Entity") will also be Permittees to cover their operations and maintenance of facilities and other activities.

The HCP/NCCP is based on development in East Contra Costa County of between 9,796 and 13,029 acres and the acquisition and conservation of between 23,800 and 30,300 acres of land,

respective of initial or maximum UDA, to create a Preserve System that will be protected and managed in perpetuity. 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 rural infrastructure, fees from wetland impacts, new federal and state funding, and contributions of land from local conservation organizations already active in land acquisition.

In addition to land acquisition, the conservation strategy includes measures to restore, enhance, and otherwise manage habitat for the Covered Species (Table ES-3:HCP/NCCP). These measures are designed to carry out the 33 biological goals and 91 biological objectives developed for the HCP/NCCP (Table 5-1: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 natural community types at the three scales. Avoidance and minimization measures and other development guidelines are also described in the HCP/NCCP. These measures are required of project proponents seeking coverage through the local Applicants under the HCP/NCCP.

East Contra Costa County can be characterized by rural and suburban development intermixed with agricultural operations and large blocks of undeveloped lands. Large blocks of land within and adjacent to the inventory area consist of State and regional parks and watershed lands for Los Vaqueros Reservoir. Precipitation in the area falls mostly as rain during the late fall, winter, and early spring months, although the highest elevations can receive infrequent snowfalls during the winter months. The eastern part of the inventory area is not influenced by marine air to the same extent as the western part and is generally warmer. Elevations in the inventory area range from Delta islands that are at or below sea level near Brentwood and Oakley to the 3,849-foot peak of Mount Diablo, the highest point in the inventory area (Figure 3-1 HCP NCCP).

The area contains all or portions of 6 major watersheds (Figure 3-2 HCP/NCCP). Because of the Mediterranean climate and its characteristic lack of rainfall during the summer months, ephemeral and intermittent streams are the dominant hydrologic features in the inventory area. Outside the urbanized areas, most drainages remain relatively natural and occupy at least a portion of their historic floodplains. Most of these features are ephemeral or intermittent, however, and generally support narrow floodplains with limited riparian habitat.

Land-cover types in the inventory area are shown in Figure 3-3 in the HCP/NCCP and Table 3-3 lists the amount of each land-cover type in the inventory area. Habitat communities within the HCP/NCCP area include: grassland, chaparral and scrub, oak savannah, oak woodland, riparian woodland scrub, mixed evergreen forest, wetlands, aquatic, rock outcrop, irrigated agriculture, and developed areas.

East Contra Costa County Habitat Conservation Plan Association 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.

The HCP/NCCP preserve will protect biodiversity, conserve important habitats, ecological processes, and sensitive species, increase recreational opportunities, enhance the quality of life in East Contra Costa County, 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 through an assembly process within the HCP/NCCP inventory 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 Implementing Agreement is an agreement among Contra Costa County, the Cities of Brentwood, Clayton, Oakley, and Pittsburg, County Flood Control and Water Conservation District, East Bay Regional Parks District (EBRPD), East Contra Costa County Habitat Conservancy (the Implementing Entity), USFWS, and CDFG. These entities are signatories to the IA and are referred to as Permittees under the HCP/NCCP.

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 Implementing Agreement.

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 District, East Bay Regional Parks District, Implementing Entity, and the Cities of Brentwood, Clayton, Oakley, and Pittsburg 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 the HCPA 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 HCPA, 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 TE160958-0 (7/25/2007), 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 East Contra Costa County Habitat Conservation Plan Association (HCPA) 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.) The HCPA 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, Code of California Regulations, Title XIV, Section 15000 *et seq.*, the HCPA 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.

The HCPA as lead agency has prepared a HCP/NCCP that was approved on November 8, 2006 and an EIR/EIS that was certified by the HCPA on November 8, 2006. The documents prepared by the HCPA were: Volumes I-II of the HCP/NCCP and Volumes I-II of the EIR/EIS, which is a Final Environmental Impact Report ("EIR") and Environmental Impact Statement ("EIS"). The State Clearinghouse Number for the EIR is SCH #2005092129. In analyzing and approving the HCP/NCCP and certifying the EIR/EIS, the HCPA, 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**
HCPA	Approve HCP; Certify EIR	November 8, 2006
Contra Costa County	Approve HCP	December 19, 2006
CCC Flood Control and Water Conservation District	Approve HCP	December 19, 2006
City of Clayton	Approve HCP	December 19, 2006
East Bay Regional Park District	Approve HCP and IA	January 9, 2007
City of Oakley	Approve HCP and IA and JPA	January 22, 2007
City of Brentwood	Approve HCP and IA and JPA	January 23, 2007
Contra Costa County	Approve IA and JPA	February 6, 2007
CCC Flood Control and Water Conservation District	Approve IA and JPA	February 6, 2007
City of Clayton	Approve IA and JPA	February 20, 2007
City of Pittsburg	Approve HCP and IA and JPA	April 16, 2007
East Contra Costa County Habitat Conservancy	Approve HCP and IA	May 9, 2007

The HCPA 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, the HCPA filed a notice of availability (NOA) in compliance with CEQA with the State Clearinghouse. The HCPA 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. The public review period was September 2, 2005, to December 1, 2005; however, both the Draft HCP/NCCP and the Draft EIR were made available in June 2005. CDFG reviewed the Draft EIR in detail.

The HCPA received written comments on the Draft EIR during the public review period. The HCPA prepared responses to comments on environmental issues, and made changes to the Draft EIR. The responses to comments, changes to the Draft EIR and additional information were published in the Final EIR on October 10, 2006. 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 HCPA found that the Final EIR does not contain significant new information and that recirculation of the EIR therefore is not required. CDFG reviewed the Final EIR in detail.

The Executive Governing Committee of the HCPA held a public meeting on the EIR on November 8, 2006. At this meeting, the HCPA 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 Brentwood, Clayton, Oakley, and Pittsburg, the Contra Costa County Board of Supervisors, and the East Bay Regional Park District Board of Directors. The HCPA filed a Notice of Determination related to these actions on November 9, 2006.

At all public meetings during the preparation of the HCP/NCCP, the HCPA 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 #2005092129). 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 federal Endangered Species Act.

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. (*Id.*, § 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, §§ 21102.1, subd. (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 HCPA fully complies with CEQA. (CEQA Guidelines, § 15096, subd. (e)(1)-(2); *City of Redding, v. Shasta County Local Agency Formation Com (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 HCPA 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 Implementing Agreement, 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

The East Contra Costa County HCPA's Final EIR/EIS analyzed the following impacts: biological resources, land use and housing, agricultural, public services, hydrology and water quality, socioeconomics and environmental justice, geology soils and seismicity, cultural resources, transportation and circulation, noise, air quality and mineral resources 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: visual resources, population and housing, public services, public hazards and hazardous materials, utilities and services systems, and energy resources. (Chapter 3, Volume I: Final EIR/EIS).

It has been determined that impacts to visual resources could not be adequately evaluated and are speculative, based on the currently available information. These impacts will be evaluated for significance as project specific environmental documents are prepared. All determinations or approval regarding the type, size, location, intensity, or configuration of future development in Subzone 1a, which would be speculative to address at this point, and mitigation for the environmental impacts of such development will be determined solely through the local land use entitlement and environmental review process.

The Final EIR/EIS identified several potentially significant environmental impacts that would result with implementation of the HCP/NCCP. The HCPA concluded as the lead agency for the project under CEQA that these significant effects could be avoided through the adoption of feasible mitigation measures. The HCPA found in the EIR/EIS that there would be no significant non-mitigable impacts from implementation of the HCP/NCCP in the areas of: land use, agricultural resources, public services, and socioeconomics. Regarding hydrology and water quality, cultural resources, noise, air quality, geology and soils transportation and circulation,

mineral resources, and biological resources, the HCPA found that the measures in the HCP/NCCP would 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. Chapter 6 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 the HCP/NCCP include, but are not limited to: (1) planning surveys (Section 6.2.1.); (2) pre-construction surveys (Section 6.2.2); (3) construction monitoring (Section 6.2.3); (4) specific conditions on Covered Activities (section 6.3); (5) species-specific take avoidance and minimization measures (Section 6.3.3); and (6) land preservation according to priority zones (Section 5.3.1, Ch5: HCP/NCCP).

The primary means of mitigating impacts and conserving Covered Species and natural communities is preservation of high-quality habitat in accordance with preserve design criteria outlined in Chapter 5 of the HCP/NCCP. However, habitat enhancement, restoration, and creation are important components of the conservation strategy. Some vegetation 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 vegetation communities or land-cover types. Definitions of enhancement, restoration, and creation can be found in Chapter 5 of the HCP/NCCP.

Most species-specific conservation will be accomplished by protecting, restoring, and managing habitat at the natural community level. 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 Preserve 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 at the natural-community level. If species-specific biological goals and objectives were developed, they are listed at the beginning of each species narrative.

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 Conservation Measures in Chapter 5 of the HCP/NCCP. The range of measures regarding

habitat include natural regeneration, maintenance of existing or restored habitat, enhancement, revegetation, restoration and creation (Table 5-1 HCP/NCCP).

These management measures will also occur on EBRPD lands that are formally credited toward the obligations in Conservation Measure 1.1 and added to the Preserve System (Ch 5, HCP/NCCP). In addition, EBRPD shall ensure that long-term (i.e., beyond the 30-year initial term of the IA, the Permit, and the HCP/NCCP) management of its lands within the HCP/NCCP area meets HCP/NCCP standards provided it receives the required incremental funding for that purpose (Section 10.2: IA).

These actions will benefit non-covered species as well. Covered Activities in the HCP/NCCP will avoid all impacts on plant species that are considered "no-take" plants. These plants are considered extinct or extirpated from the HCP/NCCP area and the likelihood of discovering new populations is extremely unlikely. However, if a new population of these plants is found, the protection of that plant or population will be of highest importance to the conservation of that species. Plants that are considered no-take are as follows: large-flowered fiddleneck; alkali milkvetch; Mount Diablo buckwheat; diamond-petaled poppy; Contra Costa goldfields; and caper-fruited tropidocarpum. If a no-take plant is found on a project site, it is the responsibility of the project applicant to prepare permanent management and monitoring programs and fund the implementation of those programs. If the applicant transfers ownership and management responsibilities to the Implementing Entity, the applicant may be required to provide additional funds to offset additional management costs (Table 6.5:HCP/NCCP).

Several wildlife species that occur in the inventory area are listed as fully protected (as defined under Sections 3511 (birds) and 4700 (mammals) of the California Fish and Game Code): white-tailed kite, peregrine falcon, golden eagle, and ringtail (Table 6-5:HCP/NCCP). 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. 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.

All three fully protected raptor species forage widely throughout the inventory area but nest in discrete locations. Activities covered under the HCP/NCCP must not disturb or destroy nests of these fully protected species, pursuant to Sections 3511 and 3503.5 of the California Fish and Game Code). These species are expected to benefit from the HCP/NCCP, through protection and management of additional foraging and nesting habitat (Conservation Measure 1.11, Ch 6: HCP/NCCP).

Ringtail is likely common in woodlands in the inventory area. Ringtails will benefit from the preservation and restoration of riparian areas.

Planning surveys will establish whether suitable habitat is present for any of these species and projects will be designed to avoid take should any such species be found on the property.

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 28 listed and non-listed species referred to collectively as "Covered Species" in the HCP/NCCP and the EIR/EIS. The take of Covered Species, with the exception of one Fully Protected Species, is allowed upon permit issuance. The list of 28 Covered Species is found in Table 3-8 of the HCP/NCCP.

CDFG finds that conservation measures as set forth in the EIR/EIS, the IA, and the HCP/NCCP will mitigate or avoid the potential significant impacts of the HCP/NCCP on Covered Species.

CDFG hereby makes the following findings under CEQA with respect to the effects of proposed take on each species (organized by their primary natural community association) by the HCP/NCCP project as authorized under the NCCPA.

CEQA Findings for Covered Species Primarily Associated With Wetlands And Other Aquatic Habitats

Impact 3.5.1 **Approval of the HCP/NCCP authorized under the NCCP Permit could result in potentially significant adverse impacts on the Covered Species primarily associated with wetlands and other aquatic habitats.** These species include: tricolored blackbird (*Agelaius tricolor*), California red-legged frog (*Rana aurora draytonii*), California tiger salamander (*Ambystoma californiense*), giant garter snake (*Thamnophis gigas*), western pond turtle (*Clemmys marmorata marmorata*), vernal pool fairy shrimp (*Branchinecta lynchi*), midvalley fairy shrimp (*Branchinecta mesovallensis*), longhorn fairy shrimp (*Brachinecta longiantenna*), vernal pool tadpole shrimp (*Lepidurus packardi*), and adobe navarretia (*Navarretia nigelliformis* ssp. *nigelliformis*).

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 Species primarily associated with wetlands and other aquatic habitat to below a level of significance. (Pub. Resources Code, § 21081, subd. (a)(1); CEQA Guidelines, § 15091, subd. (a)(1).)**

Explanation 3.5.1:

Tricolored Blackbird

Tricolored blackbirds are sporadic residents within the HCP/NCCP area, with two breeding colony occurrences along the northern border of the Los Vaqueros watershed. A portion of the potential nesting and foraging habitat will be lost under the HCP/NCCP, however, significant amounts of such habitat will remain available to the species, minimizing the level of take resulting from conversion of its habitat. The Preserve System will protect approximately 126 or 164 acres of suitable core habitat and 16,747 or 20,138 acres of primary foraging habitat under the IUDA or MUDA, respectively (Table 5-13: HCP/NCCP).

The Preserve System will also protect at least seven of the 13 ponds in subzone 2c, all of which provide potential breeding habitat for tricolored blackbird. Wetland and pond creation and restoration will provide additional habitat for tricolored blackbird. These managed habitats will be of higher quality than exists now. The impacts of take on this species due to the HCP/NCCP are expected to be low and will be offset by the creation of high quality habitat in the Preserves. The species will benefit from the HCP/NCCP, as management of wetlands and pond creation in the Preserve will create high quality nesting habitat where little currently exists. In addition to land preservation, Conservation Measures 2.2 and 2.3 (Ch 5: HCP/NCCP) will benefit tricolored blackbirds by enhancing, restoring, and creating suitable breeding habitat adjacent to suitable foraging habitat (annual grassland). At least 25% of the estimated 85 acres of perennial wetlands restored will provide suitable breeding habitat for tricolored blackbirds.

Development guidelines ensure that impacts on this species from Covered Activities are avoided or minimized (Conservation Measures 1.6, 1.9, and 1.10, Section 6.4.1, Ch 6: HCP/NCCP). Project approvals must require avoidance of occupied nests during the breeding season.

Based on the measures described above, permanent management and protection of tricolored habitat will provide critical ecological requisites and the environmental components needed to support the species' essential behavioral patterns, and along with the avoidance and minimization measures, will reduce impacts to below a level of significance.

California Red-Legged Frog

The California red-legged frog is known from 81 documented occurrences in the HCP/NCCP area. California red-legged frog requires aquatic breeding sites in the form of ponds and streams with dense, shrubby riparian or emergent vegetation. During dry periods, red-legged frogs may retreat into burrows or other areas that provide appropriate moisture and opportunities for thermoregulation. During wet weather they may disperse overland for distances up to 2 miles.

Impacts of up to three acres of non-stream breeding habitat, 0.6 miles of stream breeding habitat and 7,785 acres of upland movement habitat (7%) are estimated to occur from Covered Activities under the HCP/NCCP. Implementation of the HCP/NCCP will conserve between 29–38% of non-stream breeding habitat, 39–45% of stream breeding habitat, and 35–42% of upland movement habitat outside of existing parks and conserved open space. Additionally, breeding habitat will be created and restored and upland movement/aestivation habitat will be enhanced. The Preserve System will protect an estimated 28 or 36 acres of suitable non-stream breeding (pond) habitat, 85 or 98 miles of stream breeding habitat, and 24,455 or 29,467 acres of upland movement habitat with the IUDA or MUDA, respectively (Table 5-13 and Conservation Measure 1.1, Section 5.3.1, Ch 5: HCP/NCCP). New linkages will be created in blocks of suitable habitat to facilitate dispersal and colonization throughout the HCP/NCCP area.

To compensate for loss of habitat for red-legged frog, perennial wetland habitats will be acquired at a ratio of 1:1 and ponds will be acquired at a ratio of 2:1. Up to 16 acres of ponds will be created to both mitigate for impacts and to contribute to the recovery of red-legged frog by managing these ponds to enhance populations of red-legged frogs. Ponds will be designed to support the life-history requirements of red-legged frog, where appropriate. Stream restoration will also enhance habitat for red-legged frog, where appropriate. The measures incorporated into the HCP/NCCP to minimize and mitigate effects on California red-legged frogs will provide an overall benefit and effectively offset the impacts of any future take under the HCP/NCCP. Development guidelines, including stream setbacks, ensure that impacts on this species from Covered Activities are avoided or minimized (Conservation Measures 1.6, 1.7, 1.9, and 1.10, Ch 6: HCP/NCCP). Planning surveys for suitable breeding habitat will be conducted prior to submission of application packages for coverage under the HCP/NCCP. USFWS and CDFG will be notified of any suitable breeding habitat to be filled prior to construction to allow salvage of individuals (Section 6.3, Chapter 6: HCP/NCCP).

Conservation Measure 2.2 will manage wetlands and ponds to increase hydrogeomorphic and ecological functions and improve habitat for California red-legged frog. Conservation Measure 2.3 will restore wetlands and ponds according to the ratios described in Tables 5-16 and 5-17 in the HCP/NCCP. This measure provides a net increase in wetland and pond area, function and value (CH 5: HCP/NCCP).

Long-term management and protection of red-legged frog habitat, in perpetuity, will provide the aquatic and upland components needed to support the frog's essential behavioral patterns and with the avoidance and minimization measures will reduce impacts to below a level of significance.

California Tiger Salamander

The California tiger salamander is endemic to California and although it still occurs in much of its range, it has been extirpated from many historic localities, particularly at elevations below 200

feet. California tiger salamanders need aquatic habitat for breeding, but spend a significant portion of their life aestivating in underground retreats or in the grassy understory of open woodlands.

Covered activities will cause the loss of an estimated 50-68 acres of breeding habitat and 4,002-5,571 acres of migration/aestivation habitat. The Preserve System will protect an estimated 96–111 acres of breeding habitat and 24,047–28,751 acres of migration/aestivation habitat (Table 5-13: HCP/NCCP). Between 37–43% of breeding habitat and 40–51% of migration/aestivation habitat outside existing parks and conserved open space will be conserved, breeding habitat will be created and restored, and migration/aestivation habitat will be enhanced. The Implementing Entity will acquire aquatic habitats in kind within preserves at the ratios shown in Table 5-5 in the HCP/NCCP.

A network of core preserves will protect large blocks of aestivation/migration habitat. New linkages will be created in blocks of suitable habitat to facilitate dispersal and colonization throughout the HCP/NCCP area and movement between breeding sites. An estimated 15-16 acres of pond habitat will be created or restored, as well as 84–85 acres of perennial wetland complex, to both mitigate for impacts and to contribute to recovery. Ponds will be designed to support the life-history requirements of tiger salamanders, where appropriate.

Conservation Measure 2.2 will manage wetlands and ponds to increase hydrogeomorphic and ecological functions and improve habitat for California tiger salamander. Conservation Measure 2.3 will restore wetlands and ponds according to the ratios described in Tables 5-16 and 5-17 in the HCP/NCCP. This measure provides a net increase in wetland and pond area, function and values (Ch 5: HCP/NCCP).

To further minimize impacts on tiger salamanders, development guidelines will ensure that indirect impacts on this species from Covered Activities that occur adjacent to the Preserve System and other open space are minimized (Conservation Measures 1.6, 1.9, and 1.10). Surveys for suitable breeding habitat will be conducted prior to submission of application for coverage under the HCP/NCCP. USFWS and CDFG will be notified of any suitable breeding habitat to be filled prior to construction to allow salvage of individuals (Section 3.6.6, Ch 6: HCP/NCCP). The proposed action will enhance the viability of the species in the HCP/NCCP area through the protection of extensive breeding and aestivation habitat, and the creation and management of up to 16 acres of ponds and 85 acres of perennial wetlands which will be suitable for tiger salamanders.

The measures incorporated into the HCP/NCCP to minimize and mitigate impacts should provide an overall benefit to tiger salamanders and effectively offset the effects of any future take under the HCP/NCCP. The permanent management and protection of tiger salamander habitat will provide the aquatic and upland components needed to support the salamander's essential behavioral patterns and reduce impacts to below a level of significance.

Giant Garter Snake

The giant garter snake is endemic to the valley floor of the Sacramento and San Joaquin Valleys of California. Its historic distribution extended from Sacramento and Contra Costa Counties southward to Buena Vista Lake near Bakersfield in Kern County. Some experts consider Contra Costa County outside the range of the giant garter snake and it is only known from the HCP/NCCP area through one historic record near Antioch. However, that may be due to a lack of survey effort. Areas west of Marsh Creek are not considered within the range of the giant garter snake.

Garter snake habitat exists in the form of sloughs and adjacent upland areas. Up to 0.4-mile of impacts to suitable core habitat will occur as a result of the proposed action. The Implementing Entity will acquire and permanently conserve at least 250 acres of cropland or pasture within Zone 6. The conservation strategy will protect an estimated 1 or 3 miles of suitable core habitat for giant garter snake in the HCP/NCCP area under the IUDA or the MUDA, respectively (Table 5-13: HCP/NCCP), and approximately 72 acres of slough/channel habitat will be created or restored. The HCP/NCCP requires that suitable upland and aquatic habitat that are removed as a result of Covered Activities be replaced at a ratio of 1:1 to 3:1 according to USFWS guidelines. The restoration of slough/channel habitats on Dutch Slough and in other areas will also benefit giant garter snake (Conservation Measure 3.6 and 2.3, Ch 5: HCP/NCCP).

Development guidelines ensure that impacts on this species from Covered Activities are avoided or minimized (Conservation Measures 1.6, 1.9, and 1.10, Ch 6: HCP/NCCP). Planning and preconstruction surveys are required in areas with giant garter snake habitat. Seasonal restrictions or buffer zones are required (Section 6.3.3, Ch 6: HCP/NCCP) to minimize impacts on giant garter snake.

The Implementing Entity will acquire agricultural lands in fee title or in easements, restore sloughs and channel habitat as compensation for impacts, otherwise mitigate through land acquisition for impacts, and avoid impacts to occupied habitat through seasonal restrictions. Therefore, this species will benefit from the HCP/NCCP because the managed Preserve will provide higher quality habitat than currently exists and habitat will be managed in perpetuity. The permanent management and protection of giant garter snake habitat will provide the aquatic and upland components needed to support the snakes' essential behavioral patterns. These actions, along with avoidance and minimization measures, will reduce impacts to this species to below a level of significance

Western Pond Turtle

The western pond turtle is a wide ranging species that occurs within the HCP/NCCP area. Up to an estimated 498 acres of non-stream core habitat and 0.1 mile of stream core habitat will be impacted. To mitigate impacts on habitat for western pond turtle and other aquatic species, the

Implementing Entity will acquire aquatic habitats in kind within preserves at the ratios in Table 5-5 of the HCP/NCCP. Mitigation also includes creation, restoration, or enhancement of aquatic land-cover types, including creation of habitat for juvenile turtles, as described in Conservation Measures 2.2 and 2.3 (Ch 5: HCP/NCCP). Because western pond turtles require both aquatic and upland habitats, enhancement of wetlands or ponds to compensate for loss of habitat will occur adjacent to suitable and accessible upland habitat (extending at least 300 feet from the edge of wetlands or ponds), which will be protected.

The Preserve System will protect and manage, in perpetuity, an estimated 675–873 acres of core non-stream habitat and 6–7 miles of core stream habitat under the IUDA and MUDA, respectively. Between 21–27% of core non-stream habitat and 18–21% of core stream habitat outside existing parks and protected open space will be conserved, breeding habitat will be created or restored, and basking habitat will be enhanced.

A network of core preserves will protect 1,715–1,956 acres of upland breeding and movement habitat for western pond turtle (Table 5-13: HCP/NCCP). New preserves will be established adjacent to existing protected land to maintain contiguous wetland-upland complexes, and, an estimated 15-16 acres of pond habitat will be created or restored. Approximately 0.6–0.8-mile of stream habitat will be restored. Pond creation and stream restoration will incorporate habitat requirements for western pond turtles, where appropriate. Basking substrate and woody debris will be added to ponds that otherwise lack suitable basking sites to enhance habitat for western pond turtles (Conservation Measure 3.7, Ch 5: HCP/NCCP). Bullfrog and warm water fish removal from ponds as part of the management of Preserves will likely increase the survival of juvenile turtles whose survival is considered a limiting factor in recruitment.

The level of take of this species will be low, and given the broad distribution of this species, impacts are expected to be small. Development guidelines, including stream setbacks, ensure that impacts on this species from Covered Activities will be avoided or minimized (see Conservation Measures 1.6, 1.7, 1.9, and 1.10, Ch 6: HCP/NCCP).

The implementation of the HCP/NCCP will likely improve conditions for the pond turtle by providing and improving the aquatic, basking, and upland habitat components needed to support the pond turtles' essential behavioral patterns and reduce impacts to below a level of significance.

Longhorn Fairy Shrimp, Vernal Pool Fairy Shrimp, Midvalley Fairy Shrimp, Vernal Pool Tadpole Shrimp

The distribution of vernal pool crustacean ("shrimp") species within the HCP/NCCP area is poorly known due to a lack of surveys for the species and their habitats. Seasonal wetlands and vernal pools provide core habitat for all the covered shrimp species except longhorn fairy shrimp (see below). Although 121 acres of seasonal wetland complexes were mapped within the area, an additional 484 acres of undetermined wetlands were identified, many of which may be

suitable for covered vernal pool crustacean species. Because these habitat features are difficult to identify from air photos and because access to private lands for field verification was restricted, habitat models for covered vernal pool crustaceans were not developed.

Most vernal pools in the area are thought to be located either on public lands such as Los Vaqueros Watershed, Cowell Ranch State Park, or near the Byron Airport. Most of the seasonal wetlands around the Byron Airport, including vernal pools, are within the Byron Airport Habitat Management Lands. Small, scattered pools may occur in unsurveyed areas of the lower-elevation grassland habitat south of Antioch and Brentwood. Areas in which additional vernal pools could be found are expected to experience limited impacts both in absolute acreage and relative to the overall proportion of available vernal pool habitat. Of the 604 acres of seasonal wetland complexes and undetermined wetlands identified in the HCP/NCCP area, an estimated 117 acres (19%) would be lost to Covered Activities under the IUDA and 131 acres (22%) under the MUDA (Tables 4-2,4-3:HCP/NCCP). This represents the maximum amount of habitat loss for all covered shrimp.

The HCP/NCCP will conserve approximately 129-168 acres of seasonal wetland complexes outside of existing parks and conserved open space. Ponds will be managed within the Preserve System to benefit Covered Species, and 104-163 acres of seasonal wetland complexes will be created or restored, some complexes of which will be suitable for midvalley fairy shrimp, vernal pool fairy shrimp, and vernal pool tadpole shrimp (Tables 5-16 and 5-17 and Conservation Measures 2.2 and 2.3, Ch 5: HCP/NCCP). Restored vernal pools will be evaluated to determine if covered vernal pool crustaceans are present at frequencies similar to those in natural vernal pool complexes. If not, efforts will be made to establish new populations.

The HCP/NCCP ensures that impacts on these species from Covered Activities will be avoided or minimized (Conservation Measure 2.12, Ch 5: HCP/NCCP). Preconstruction surveys will be required in areas with suitable habitat. Applicants who fill vernal pools must determine if the pools provide suitable habitat for covered shrimp. If surveys show absence of covered shrimp (Section 6.3.3, Ch 6: HCP/NCCP), applicants will mitigate for impacts according to Conservation Measure 2.3 for seasonal wetlands (Ch 5: HCP/NCCP). Project proponents are required to conduct USFWS protocol surveys in one year (rather than two) to determine presence or absence of listed shrimp species. If occupied sites are identified, buffer zones or seasonal restrictions are required. If vernal pools are occupied by covered shrimp, applicants must compensate for impacts to these wetlands by creating, preserving, and restoring suitable vernal pool habitat either within the HCP/NCCP area or through purchasing an appropriate number of credits at an approved vernal pool mitigation bank that serves the HCP/NCCP area. Applicants have the option of assuming presence of covered shrimp in lieu of conducting presence/absence surveys and compensating accordingly.

Implementation of the minimization and avoidance measures and long term protection and management proposed by the HCP/NCCP will mitigate for take of midvalley fairy shrimp, vernal

pool fairy shrimp and vernal pool tadpole shrimp and reduce impacts to below a level of significance.

Longhorn Fairy Shrimp

Longhorn fairy shrimp occurs in ephemeral pools in sandstone rock outcrops, and within the HCP/NCCP inventory area longhorn fairy shrimp is known only from the Vasco Caves Regional Preserve and an adjacent privately owned parcel. Accordingly, no direct impacts on longhorn fairy shrimp habitat are expected unless additional occupied areas are discovered within the permit area outside the Vasco Caves Regional Preserve. To mitigate take of these crustaceans, approximately 129-168 acres of seasonal wetland complexes outside of existing parks and conserved open space will be acquired and managed in perpetuity. In addition, 104-163 acres of seasonal wetland complexes will be created or restored. Because longhorn fairy shrimp are associated only with rock outcrops in this area, it is unknown whether protection and restoration of wetland complexes will be of any benefit to the species. To minimize impacts to longhorn fairy shrimp, prior to submission of an application package, planning surveys will identify suitable habitat. Preconstruction surveys are required in areas with habitat. If additional occupied sites are identified, buffer zones or seasonal restrictions are required. If seasonal wetlands are occupied by longhorn fairy shrimp, applicants must preserve 3 acres of occupied habitat and restore 2 acres within the Preserve System or dedicate an equivalent amount of vernal pool credits in a USFWS-approved mitigation bank. Applicants have the option of assuming presence of longhorn fairy shrimp in lieu of conducting presence/absence surveys and then compensating accordingly.

Based on this species' limited distribution within the HCP/NCCP area, and the avoidance, minimization and conservation measure required by the HCP/NCCP, impacts to longhorn fairy shrimp will be negligible and impacts will be below a level of significance.

Adobe Navarretia

Adobe navarretia occurs in the Sierra Nevada foothills, the Central Valley, and the inner South Coast Ranges between 325 and 3,300 feet elevation. Within the HCP/NCCP area, it has been collected historically in the vicinity of Antioch and reported from the Los Vaqueros area. One of the three known occurrences of adobe navarretia in the inventory area outside public lands will be brought under protection by the Preserve System (Table 5-20 and Conservation Measure 1.1, Ch 5: HCP/NCCP).

Covered activities within the urban development area could result in the removal of one out of three known occurrences of adobe navarretia outside public lands in the Byron Hot Springs and Sand Creek area. To offset the loss of 2471-4,103 acres of annual grassland and 43-56 acres of seasonal wetland under the IUDA or MUDA, respectively, that may provide habitat for adobe navarretia, the HCP/NCCP proposes to acquire 13,000–16,500 acres of grassland and 129-

168 acres of seasonal wetland, and an additional 104–163 acres of seasonal wetland complexes will be created or restored (Tables 5-16 and 5-17: HCP/NCCP). This protected land constitutes 40-54% of the species range available for preservation. The loss of the one occurrence of this species will be compensated by the conservation of one occurrence (Horse Valley), and additional take will only be permitted as described in the HCP/NCCP as additional occurrences are protected by the Preserve System.

Preserve management will enhance habitat quality for this species. Many of the landscape-level and community-level conservation measures will directly benefit adobe navarretia, if it is found in HCP/NCCP preserves. Conservation Measure 1.4 ensures that exotic plants will be controlled within preserves. Vegetation management and enhancement within native grassland (Conservation Measures 2.1 and 2.4) and wetlands (Conservation Measure 2.2) will benefit adobe navarretia (Ch 5: HCP/NCCP). The conservation measures noted above call for the introduction of grazing to some areas to reduce exotic plant cover, and the reduction of grazing in other areas to allow for the development of seasonal wetland vegetation. Feral pigs, which have been noted as a threat to vernal pool plant species, will be excluded from seasonal wetlands where they appear to be damaging native vegetation. In addition to restoration of seasonal wetlands for mitigation of impacts to this habitat type, 20 additional acres of seasonal wetlands will be restored to contribute to recovery of adobe navarretia and other Covered Species (Conservation Measure 2.3, Ch 5: HCP/NCCP).

Completion of planning surveys will ensure that botanical surveys will be conducted in potential impact areas and that high-quality populations will be avoided. Impacts on covered plants will be tracked by population (Table 4-6 and 5-48 and Ch 4: HCP/NCCP). Likewise, the Implementing Entity must ensure that an adequate number of populations of adobe navarretia are included in the Preserve System. If the Implementing Entity cannot preserve the necessary plant populations, then applicants causing impacts to adobe navarretia will be required to preserve populations of this species in order to receive take authorization under this HCP/NCCP. Site-specific surveys for adobe navarretia in impact areas (planning surveys) and preacquisition surveys in new preserves will be conducted to avoid and minimize take and to identify appropriate conservation areas.

The avoidance and minimization measures and permanent management and protection proposed by the HCP/NCCP will mitigate impacts to this species to below a level of significance.

Summary of CEQA Findings for Covered Species Primarily Associated With Wetlands and Other Aquatic Habitats

CDFG finds that issuance of the NCCP permit could result in significant impacts on these Covered Species primarily associated with wetlands and other aquatic habitat from development and other Covered Activities contemplated by the HCP/NCCP. Likewise, CDFG finds that all impacts on these species and their habitat associated with CDFG's issuance of the 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 (Final EIR/EIS Sections 4.2.2, Table 4.2-1 and 4.2-2). 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 5.3 , 6.3, Conservation Measures 1.2, 1.6. 1.9 1.7, 1.1.0, 2.2, 2.3, 2.12, 3.2, 3.7, Tables 5-5, 5-13, 5-16, 5-17, and Volume 2: Appendix D Species Accounts: HCP/NCCP).

CEQA Findings for Covered Species Primarily Associated With Grassland

Impact 3.5.2 **Approval of the HCP/NCCP authorized under the NCCP Permit could result in potentially significant adverse impacts on Covered Species primarily associated with Grassland.** These species include: San Joaquin kit fox (*Vulpes macrotus mutica*), Townsend's western big-eared bat (*Corynorhinus townsendii townsendii*), Golden eagle (*Aquila chrysaetos*), Western burrowing owl (*Athene cunicularia hypugea*), silvery legless lizard (*Anniella pulchra pulchra*), recurved larkspur (*Delphinium recurvatum*), round-leaved filaree (*Erodium macrophyllum*), brittlescale (*Atriplex depressa*), San Joaquin spearscale (*Atriplex joanquiniana*), and big tarplant (*Blepharizonia plumosa*).

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 primarily Grassland associated species to below a level of significance. (Pub. Resources Code, § 21081, subd. (a)(1); CEQA Guidelines, § 15091, subd. (a)(1).)**

Explanation 3.5.2:

San Joaquin Kit Fox

San Joaquin kit fox is distributed from southern Kern County north to Black Diamond Regional Preserve in Contra Costa County, the most northern portion of its range that is within the HCP/NCCP area. Low-lying grasslands with short grass and mammalian prey are its preferred habitat.

HCP/NCCP Covered Activities will remove an estimated 2,530 acres (7%) or 4,576 acres (11%) of core habitat outside existing parks and conserved open space under the IUDA or MUDA, respectively. The southward expansion of Pittsburg and Brentwood would affect small portions

of suitable core habitat for kit fox, while growth of Byron and infill in Brentwood would affect small portions of habitat defined as low use in the HCP/NCCP habitat model. The expansion of the Byron Airport would affect core habitat for this species. The westward expansion of Pittsburg would affect areas suitable as core habitat for kit fox, but this area may be outside the species' current range. However, as this core habitat is contiguous with areas that are known to be used by kit fox, it is reasonable to assume that this area may also be used by kit fox. In addition, the expansion of Vasco Road will remove core habitat and will impede the ability of kit fox to travel between Alameda and Contra Costa Counties. Other rural road projects may also fragment grassland habitat.

The HCP/NCCP will mitigate the above impacts by protecting and managing, in perpetuity, an estimated 17,164–20,465 acres of core habitat for kit fox in the HCP/NCCP area under the IUDA or MUDA, respectively, resulting in an additional 43–51% of lands that will be managed as foraging habitat outside of existing parks and conserved open space (Table 5-13: HCP/NCCP). Specifically, within subzones 2e, 2f, and 2h, 2, 400 acres will be acquired to preserve a continuous band of suitable core and/or low-use habitat for kit fox between Cowell Ranch State Park and Black Diamond Regional Preserve (Section 5.3.1: HCP/NCCP). In Subzone 2h, at least 600 acres of habitat will be preserved to enhance movement opportunities for kit fox through this area, and to provide a wide buffer zone between future development in the Sand Creek area (Antioch) and the movement routes in Horse and Deer Valleys. In addition, to further minimize the indirect effects of new development on the Preserves, the boundary will be designed to be as straight as possible to minimize edge effects. Covered Activities will also utilize wildlife-friendly designs, such as vegetation, greenbelts, or appropriate fencing separating the Preserve land from urban development, to minimize edge effects (Conservation Measure 1.9, Ch 6 and Appendix E: HCP/NCCP).

Kit fox prefer low-lying flat areas in which to forage and den. They can use steeper terrain; however, studies have shown that in areas with more vegetation, which is typical of the steeper terrain in this area, they are more likely to be killed by coyotes and bobcats. In order to preserve the best available habitat, five valleys were identified that provided habitat and functional corridors that would enable kit fox to utilize the HCP/NCCP area to the maximum extent possible. Round Valley, the westernmost valley, extends from the Los Vaqueros Reservoir watershed north to Black Diamond Mines Regional Preserve. Round Valley is very narrow, becoming less than 0.25-mile wide in spots. The northwestern end becomes very steep and rugged with dense vegetation. In addition, the functionality of this corridor may be reduced or completely lost if the expansion of Los Vaqueros Reservoir is realized, as the increase in the water levels would flood the mouth of the corridor and force kit fox into grassland and shrub on steeper terrain (Section 5.3.1, Ch 5: HCP/NCCP).

Briones Valley, the next valley to the east, is also very narrow in spots and the development of rural ranchettes may fragment the annual grassland. The southern end is relatively wide and connects to the Los Vaqueros watershed. However, the northwestern end becomes very narrow

(0.1-mile) and kit fox would have to pass through oak woodland, which is not considered suitable habitat. To the east of Briones Valley lies Deer Valley. Deer Valley is considered suitable habitat and a viable corridor (Figure 5-7: HCP/NCCP). Although the northern end may support vegetation that would constrain movement further to the north, there is a low saddle that connects to the Roddy Ranch golf course, which was designed not to impede kit fox from crossing (Section 5.3.1, Ch 5: HCP/NCCP).

Horse and Lone Tree valleys, the easternmost valleys, form the widest and most suitable movement route for kit fox to travel between the Los Vaqueros watershed and Black Diamond Regional Preserve. The movement route through these valleys is considered to have the highest long-term viability of any of the routes suitable for San Joaquin kit fox movement in the most northern extent of its range. However, parts of these valleys lie within the City of Antioch's boundaries and outside of the HCP/NCCP permit area, but within the HCP/NCCP conservation area. Their viability for San Joaquin kit fox is threatened by the future development of 4,870 housing units in the Sand Creek area and the recent expansion of the City of Antioch's city limit to encompass Roddy Ranch (2,100 acres) and the Ginnochi property (1,070 acres). These impacts were anticipated and considered during the design of the Preserve System. To mitigate for the taking that will result from Covered Activities and in consideration of anticipated impacts in adjacent critical areas, the HCP/NCCP will establish in perpetuity a network of core preserves which will protect a critical linkage for San Joaquin kit fox between its range outside Contra Costa County and known locations in Contra Costa County, based on past sightings. The Preserve System will include 2,400 acres in Horse, Lone Tree and Deer valleys to protect two important movement routes for kit fox between Black Diamond Mines Regional Preserve and Cowell Ranch State Park (Section 5.3.3, Ch 5: HCP/NCCP).

The HCP/NCCP will also preserve an important kit fox movement route between Alameda County and Contra Costa County by protecting habitat in Zone 5 between the County line, the Byron Airport Habitat Mitigation lands, and the Los Vaqueros watershed. It will preserve between 5,300 and 8,100 acres of grassland to compensate for the impacts to 2,530 acres and 4,576 acres of grassland from the IUDA or MUDA. In addition, between 750 and 900 acres of alkali grassland will be preserved as suitable core habitat (Table 5-11, Ch 5:HCP/NCCP). There are 379 acres of alkali grassland already protected in existing parks and open space. Preserve management will also increase the small mammal prey base for kit fox (Conservation Measure 2.5, Ch 5: HCP/NCCP). The existing protected habitat, combined with remaining habitat that will be protected, will offset any take that results from the HCP/NCCP. Minimization measures (Table 6-1, Conservation Measure 1.6, 1.9, Section 6.4.3, Ch 6: HCP/NCCP) include actions (i.e., discouraging use of dens that will likely be destroyed, and removing unoccupied dens) that would make it less likely that kit foxes would be killed as a result of Covered Activities.

Take of kit fox and its associated habitat due to Covered Activities, and the contribution of this take to cumulative impacts, will be mitigated to below a level of significance by the avoidance, minimization, and permanent conservation required by the HCP/NCCP. The potential expansion

of Los Vaqueros Reservoir is not a Covered Activity under the HCP/NCCP, and thus take of kit fox caused by Reservoir expansion would be authorized through separate permitting processes. Mitigation for the contribution of Reservoir expansion to cumulative impacts on the kit fox would be the responsibility of the project proponent(s) in compliance with federal and state endangered species act requirements and as defined through the reservoir project's separate NEPA and CEQA compliance processes.

Townsend's Big-Eared Bat

Townsend's big-eared bats are not known from published records to reside within Contra Costa County. However, the species likely roosts in the HCP/NCCP area in suitable abandoned mines, abandoned buildings, and caves, and forages widely throughout the HCP/NCCP area in a variety of land-cover types. Covered activities are not anticipated to directly affect the habitat features important to bats. Planning and preconstruction surveys are required in areas with suitable roosting habitat. If occupied sites are identified, seasonal restrictions on construction are required (Section 6.3.3, Ch 6: HCP/NCCP). Recreational access to caves within the Preserve System will be prohibited.

The conservation strategy will preserve an estimated 13,000 or 16,500 acres of annual grassland that is expected to benefit Townsend's big-eared bat under the IUDA or the MUDA, respectively. In addition, the conservation strategy will preserve suitable microhabitats for roosting bats, such as caves, mines, or other structures. Lands supporting maternity roosts or hibernacula are prioritized for acquisition, as are lands that support large trees that provide cave-like night-roosting habitat (Fellers and Pierson 2002).

Preserve management will also benefit Townsend's western big-eared bat. For example, several measures will (1) increase watering habitat by restoring streams, wetlands, and associated riparian habitat in habitat preserves and (2) increase the bat's prey base by controlling the use of insecticides in preserves (see Conservation Measures 1.8, 2.12, 2.2, 2.3, and 2.9, Ch 5: HCP/NCCP). Roost locations within the Preserve System will be documented and mapped, and results will be shared with USFWS and CDFG but otherwise kept confidential. Abandoned mines within the Preserve System will be stabilized, if feasible, and gated, when practicable, to enhance roosting habitat for these bats. In addition, the creation of artificial hibernacula will be investigated and implemented, if appropriate, in an adaptive management context.

The absence or rarity in the HCP/NCCP area, combined with take avoidance, minimization and mitigation measures incorporated into the HCP/NCCP, renders the potential for take of this species to be non-existent or low. The measures incorporated into the HCP/NCCP to minimize and mitigate effects on western big-eared bat will offset the impacts of any future take under the HCP/NCCP and reduce impacts to this species to below a level of significance.

Golden Eagle

Golden Eagle is a State of California fully protected species. Golden eagle occurs in high numbers in the HCP/NCCP area as a resident breeder and migrant. Wind turbines present the biggest adverse impact to this species, however, wind turbines are not a covered activity and, therefore, the greatest impact resulting from the HCP/NCCP is the loss of 13,491 acres of foraging habitat that are not currently encumbered by wind turbines (Table 4-5: HCP/NCCP).

The Preserve System will protect an estimated 24,321 or 29,267 acres of suitable foraging habitat for golden eagle under the IUDA or MUDA, respectively (Table 5-13: HCP/NCCP), including a network of large blocks of high-quality grassland habitat. Occupied habitat that is considered threatened is a high priority for acquisition and management (Conservation Measure 3.3, Ch 5; HCP/NCCP). Preserves will be managed to enhance the prey base for all covered raptors, including golden eagles (Conservation Measure 2.5, Ch 5: HCP/NCCP). Furthermore, wind turbine leases will be retired at the end of the lease, if feasible, when Preserve land is acquired.

Conservation Measures 1.6, 1.9, and 1.10 (Ch 6: HCP/NCCP) ensure that impacts on this species from Covered Activities are avoided. Conservation Measure 1.11 (Ch 5: HCP/NCCP) prohibits the take of individual golden eagles. Project approvals must avoid occupied nests during the breeding season. A 0.5-mile buffer will be established around active nest sites. A smaller buffer could be implemented should site-specific conditions warrant. The Implementing Entity will coordinate with USFWS and CDFG to determine the appropriate buffer size.

The overall conservation proposed by the HCP/NCCP will benefit this species by maintaining suitable foraging habitat and protecting nests. CDFG believes that the species will persist in the HCP/NCCP area over the long-term, and the permanent protection and management minimizes and mitigates the impacts to this species.

Take of this state fully protected species is not authorized by this NCCP Permit and is prohibited by the CDFG Code except in certain limited situations (Fish and Game Code Section 3511).

Western Burrowing Owl

Western burrowing owl ("burrowing owl") is a wide-ranging species that occurs throughout the western United States, extending north into southern Canada and south into northern Mexico. Burrowing owls within the HCP/NCCP area include migratory individuals and non-migratory residents. Burrowing owls are present in open, arid habitats throughout the HCP/NCCP area. The growth of Oakley into the northeastern portion of the HCP/NCCP area and growth within Contra Costa County towards the northwestern portion of the HCP/NCCP area would affect primary foraging or breeding habitat for burrowing owl. Expansion of Clayton would affect small portions of primary foraging habitat for the species. HCP/NCCP Covered Activities will

impact an estimated 3,805 acres (9%) or 5,755 acres (13%) of suitable breeding and foraging habitat outside existing parks and conserved open space under the IUDA or MUDA, respectively.

The conservation strategy will protect an estimated 16,675 or 19,844 acres of suitable habitat for burrowing owl under the IUDA or the MUDA, respectively (Table 5-13: HCP/NCCP). New linkages will be created in blocks of habitat suitable for burrowing owl to facilitate owl and host burrower dispersal and colonization throughout the Preserve System, colonization from adjacent areas, and dispersal within the area. Conservation Measure 2.5 (Ch 5: HCP/NCCP) enhances habitat quality for burrowing owl in preserves by increasing abundance and availability of both burrows and prey by enhancing small-mammal populations. Conservation Measure 3.4 will temporarily create artificial burrows in grasslands to attract burrowing owls and Conservation Measure 3.5 will install temporary perches to attract burrowing owls. (Ch 5: HCP/NCCP)

Development guidelines ensure that impacts on this species from Covered Activities are avoided or minimized (Conservation Measures 1.6 and 1.9, Ch 6: HCP/NCCP). Planning and preconstruction surveys are required in areas with suitable habitat. Destruction of occupied burrows is prohibited during the nesting season (Section 6.3.3 Ch 6: HCP/NCCP).

To avoid take of individual owls or destruction of a nest, eggs, or young by Covered Activities, the HCP/NCCP allows the exclusion of owls from burrows only outside the nesting season and only in the impact areas.

Impacts to individual burrowing owls and associated habitat will be mitigated to below a level of significance by the avoidance and minimization measures and permanent management and conservation proposed by the HCP/NCCP.

Silvery Legless Lizard

Silvery legless lizard is nearly endemic to California, ranging from Antioch south through the Coast, Transverse and Peninsular Ranges, along the western edge of the Sierra Nevada Mountains and parts of the San Joaquin Valley and Mojave desert. The HCP/NCCP area already encompasses the East Bay Regional Park District Legless Lizard Preserve, which is east of the intersection of Highway 4 and Big Break Road, north of Oakley. Based on the habitat model for this species (Appendix D:HCP/NCCP), suitable habitat for silvery legless lizard is restricted to sandy soils on approximately 3,500 acres of the HCP/NCCP area, scattered through the central and southeastern portions. However, many activities may occur, such as grazing, off-road vehicle use, introduction of exotic grasses, and feral cats, which may preclude lizards from occupying otherwise suitable habitat.

HCP/NCCP Covered Activities will impact an estimated 298 acres (22%) of suitable habitat outside existing parks and conserved open space under either the IUDA or MUDA (Ch 4, Tables 4-5, 4-5, Section 4.4.3:HCP/NCCP. Take that may result from loss of habitat will be mitigated

for by the preservation and management, in perpetuity, of at least 153–166 acres of suitable habitat under the IUDA or MUDA, respectively (Section 5.3.3: HCP/NCCP), including all suitable habitat for silvery legless lizard in Subzones 2a and 2e. Several preserve and recreation measures as well as urban-wildland guidelines will be implemented to avoid or minimize impacts on silvery legless lizards and suitable habitat (particularly soils) in preserves (Conservation Measure 1.5, 1.2, Ch 5; and 1.8 and 1.9, Ch 6: HCP/NCCP). Restrictions on recreation in protected habitat will minimize disturbance to the species (Conservation Measure 1.5, Ch 5: HCP/NCCP). Pesticide use, which threatens this species by decreasing its insect prey base, will be controlled in preserves (Conservation Measure 1.2, Ch 5: HCP/NCCP). Buffers between protected habitat and the urban edge will benefit silvery legless lizard by discouraging intrusion by domestic predators (Conservation Measures 1.8 and 1.9, Ch 6: HCP/NCCP).

The HCP/NCCP area comprises very little of the species' range and with the acquisition of lands that are predicted to provide habitat and that will be managed to benefit silvery legless lizards the impacts are expected to be low. The permanent protection and management of habitat for the silvery legless lizard will minimize and mitigate the impacts to this species to below a level of significance.

Recurved Larkspur

Recurved larkspur historically ranged from Butte County to Kern County in California's Great Valley. The species now appears to be very rare outside of the southern San Joaquin Valley. There are four occurrences in the HCP/NCCP area, three of which are on private land southeast of Bryon. One occurrence of recurved larkspur may be removed by Covered Activities. No additional take is allowed under the HCP/NCCP unless additional occurrences are protected in the Preserve System (Table 5-20: HCP/NCCP). Two occurrences will be protected. Additional take will be permitted as described in the HCP/NCCP as additional occurrences are added to the Preserve System.

HCP/NCCP Covered Activities will impact an estimated 25 acres (1%) of suitable habitat outside existing parks and designated open space under either the IUDA or MUDA (Ch 4, Tables 4-5, 4-5, Section 4.4.6:HCP/NCCP). Take that may result from loss of habitat will be mitigated for by the preservation and management, in perpetuity, of at least 389 acres (23%) to1064 acres (62%) of currently unprotected suitable habitat under the IUDA or MUDA, respectively, and by the restoration of over 60 acres of alkali wetland habitat (Table 5-12: HCP/NCCP).

Conservation Measure 1.4 ensures that exotic plants will be controlled within preserves. Vegetation management and enhancement within alkali grassland (Conservation Measures 2.1, 2.4, 2.2, Ch 5 and 2.12, Ch 6: HCP/NCCP), including reducing grazing in alkali grasslands, will benefit recurved larkspur by maintaining or enhancing habitat for this species.

The avoidance and minimization measures and the permanent protection and management proposed by the HCP/NCCP will mitigate the impacts to recurved larkspur to below a level of significance.

Round-leaved Filaree

Round-leaved filaree is distributed from southern Oregon through California into northern Mexico. However, most of the populations are known to occur in California, and most of the documented occurrences are in the interior foothills of the South Coast Ranges. In the HCP/NCCP area, out of eight total occurrences, seven occurrences are on private lands in the Mount Diablo foothills south of Antioch. At least two of these seven known occurrences will be brought under protection by the Preserve System (see Table 5-20 and Conservation Measure 1.1, Ch 5: HCP/NCCP). Because there have been few surveys for this species in the area, it is expected that more than two occurrences would be protected in the Preserve System.

Covered activities within the urban development area could result in the removal of two known occurrences of round-leaved filaree in the Antioch area (Table 4-6: HCP/NCCP) and in the loss of up to 888 acres (15%) of suitable primary habitat for round-leaved filaree in the western part of Pittsburg and the southern parts of Antioch and Brentwood. In addition, Covered Activities could result in the loss of up to 560 acres (16%) of suitable secondary habitat for this species in the western and southern parts of Pittsburg, the southern parts of Antioch and Brentwood, and the Byron area (Table 5-12:HCP/NCCP).

To offset the loss of two known occurrences of this species and up to 1,448 acres of primary and secondary habitat, at least two occurrences will be protected. An estimated 2,877-2,997 acres of primary habitat and 542–633 acres of secondary habitat for this species will be protected within the Preserve System under the IUDA or the MUDA, respectively (Table 5-12, Table 5-20: HCP/NCCP). This protected land constitutes from 50% to 52%, respectively, of the primary habitat in the HCP/NCCP area that is available for preservation. Take of no more than two occurrences is allowed under HCP/NCCP unless additional occurrences are protected in the Preserve System. Additional take will be permitted as described by the HCP/NCCP as additional occurrences are added to the Preserve System.

Preserve management will enhance habitat quality for this species. For example, Conservation Measure 1.4 ensures that exotic plants will be controlled within preserves; increases in the cover of exotic grasses may have contributed to the decline of round-leaved filaree (Gillespie 2003). Vegetation management and enhancement within grasslands (Conservation Measure 2.4, Ch 5: HCP/NCCP), such as reducing grazing in some areas, will benefit round-leaved filaree by maintaining or improving suitable habitat for this species. Overgrazing has been noted as a threat to some occurrences of this species (Gillespie 2003, California Native Plant Society 2005).

The avoidance and minimization measures and permanent protection and management proposed by the HCP/NCCP will mitigate the impacts to round-leaved filaree to below a level of significance.

Brittlescale

Brittlescale occurs along the western side of the Great Valley from Glenn County to Merced County and in the small valleys of the inner Coast Ranges. Within the HCP/NCCP area there are nine occurrences, including four already protected within the Los Vaqueros watershed and on other public lands. One other occurrence is on private lands near Antioch. The remaining four populations are found on private lands south and west of Byron. Two of the five known occurrences of brittlescale in the HCP/NCCP area that are on private lands and not already permanently protected will be brought under protection by the Preserve System (Table 5-20 and Conservation Measure 1.1, Ch 5: HCP/NCCP). In addition, an estimated 577 or 697 acres of suitable habitat for brittlescale will be protected within the Preserve System under the IUDA or MUDA, respectively (Table 5-12: HCP/NCCP). This protected land constitutes from 49% to 60%, respectively, of the species habitat in the HCP/NCCP area that is available for preservation.

Covered activities within the urban development area could result in the removal of one known occurrence of brittlescale in the Byron area, and the loss of 81 acres of suitable habitat for brittlescale (7% of currently unprotected habitat). Although 81 acres of habitat would be lost, at least 577 to 697 acres of habitat will be managed and protected in perpetuity, and over 60 acres would be restored. In addition, two occurrences under IUDA (or four occurrences under the MUDA) will be protected and managed in perpetuity (Table 5-20: HCP/NCCP).

Take of no more than two additional occurrences is allowed under the IUDA unless additional occurrences are protected in the Preserve System (Table 5-20: HCP/NCCP). Additional take will be permitted as described in the HCP/NCCP as additional occurrences are added to the Preserve System.

Management of HCP/NCCP preserves will enhance habitat quality for this species. Reduction of grazing in alkali grassland, and other vegetation management techniques within alkali grassland and alkali wetlands (Conservation Measures 2.1, 2.2, 2.4, Ch 5; and 2.12, Ch 6: HCP/NCCP) will benefit brittlescale by maintaining or enhancing suitable habitat for this species. In addition, between 61 and 67 acres of alkali wetlands will be restored within preserves (Tables 5-16 and 5-17: HCP/NCCP). One objective of alkali wetland restoration is to restore habitat for brittlescale (e.g., in alkali meadows).

Threats to brittlescale historically have primarily included conversion of alkali grassland to agriculture. More recently threats include flooding of alkali grassland to create waterfowl habitat, grazing, and urban development.

The avoidance and minimization measures and permanent protection and management proposed by the HCP/NCCP will mitigate the impacts to brittlescale to below a level of significance.

San Joaquin Spearscale

San Joaquin spearscale occurs along the western side of the Great Valley from Glenn County to Merced County and in small valleys of the inner Coast Ranges. Within the HCP/NCCP area there are 32 documented occurrences, most of which are in the Los Vaqueros watershed, but some are on private lands within the Lone Tree and Briones valleys.

Covered Activities within the IUDA or MUDA will not result in the removal of any known occurrences of San Joaquin spearscale. Covered Activities outside the urban development area could directly affect populations of this species through direct mortality or loss of habitat, but location data are not sufficient to precisely determine impacts. This species often co-occurs with brittlescale, so it is anticipated that protection of suitable habitat for this species will be largely coincidental with protection of habitat for brittlescale. No species distribution model was developed for San Joaquin spearscale because of the difficulty in predicting the species' occurrence relative to conditions that could be mapped at a regional scale.

If habitat for this species is broadly defined to include all alkali grassland and alkali wetland in the HCP/NCCP area, then HCP/NCCP Covered Activities will result in the loss of an estimated 144 acres of suitable habitat (115 acres of alkali grassland (7%) and 29 acres of alkali wetlands (14%) under the IUDA). No additional loss of alkali grassland is estimated under the MUDA but impacts to alkali wetlands will increase to 31 acres (16%) for a total estimated impact to 146 acres under the MUDA (Ch 4, Table 4-2, 4-3:HCP/NCCP). This likely overstates the potential impact to San Joaquin spearscale, as none of the known occurrences would be impacted, but it is the best available estimate of worst-case impacts. Habitat loss would occur in the Byron area.

To offset this loss, an estimated 900 or 1,250 acres of alkali grassland, and 87 or 96 acres of alkali wetland will be protected within the Preserve.

Take of San Joaquin spearscale will not be permitted by the HCP/NCCP unless at least one additional occurrence is protected in the Preserve System. Additional take will be permitted as described in the HCP/NCCP if additional occurrences are added to the Preserve System. Although the habitat requirements of this species are poorly understood, it is thought that vegetation management within alkali grassland and alkali wetlands (Conservation Measures 2.1, 2.2, 2.4, Ch 5; and 2.12, Ch 6: HCP/NCCP), including reduction of grazing in alkali grassland, will benefit San Joaquin spearscale. In addition, between 61 and 67 acres of alkali wetlands will be restored within preserves under the IUDA and MUDA, respectively (Tables 5-16 and 5-17: HCP/NCCP). One objective of alkali wetland protection is to protect additional suitable habitat for San Joaquin spearscale (e.g., in alkali meadows).

The avoidance and minimization measures and permanent protection and management proposed by the HCP/NCCP will mitigate the impacts to San Joaquin spearscale to below a level of significance.

Big Tarplant

Big tarplant is endemic to the Mount Diablo Foothills and is found mostly in eastern Contra Costa County, eastern Alameda and western San Joaquin counties. There are four known occurrences on Cowell Ranch, seven occurrences on Roddy Ranch, and at least one occurrence at Black Diamond Regional Preserve (California Natural Diversity Database 2005).

Covered Activities within the urban development area could result in the removal of one big tarplant occurrence outside public land. However, three occurrences of big tarplant in the HCP/NCCP area outside public lands will be protected by the Preserve System (Table 5-20 and Conservation Measure 1.1, Ch 5: HCP/NCCP). Take of no more than one additional occurrence is allowed under the HCP/NCCP unless additional occurrences are protected in the Preserve System. Additional take will be permitted as described in the HCP/NCCP if additional occurrences are added to the Preserve System (Table 5-20: HCP/NCCP).

In addition, an estimated 9,300 or 11,395 acres of suitable habitat for the species will be protected within the Preserve System under the IUDA or the MUDA, respectively (Table 5-12: HCP/NCCP). This protected land constitutes from 48% to 59%, respectively, of the species range in the HCP/NCCP area that is available for preservation. It will be managed to benefit big tarplant. For example, Conservation Measure 1.4 ensures that exotic plants will be controlled within preserves. Vegetation management, including prescribed burning within grasslands (Conservation Measure 2.4, Ch 5: HCP/NCCP), will benefit big tarplant by maintaining or enhancing habitat for this species.

Impacts to big tarplant are expected to be low, and the species will persist within the HCP/NCCP area. The avoidance and minimization measures and permanent protection and management proposed by the HCP/NCCP will mitigate the impacts to this species to below a level of significance.

Summary of CEQA Findings for Covered Species Primarily Associated With Grassland

CDFG finds that issuance of the NCCP permit could result in significant impacts on these grassland-associated Covered Species from development and other Covered Activities proposed in the HCP/NCCP. Likewise, CDFG finds that all impacts on these species and their habitat that could result from CDFG's issuance of the 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 (Final EIR/EIS Sections 4.2.2, Table 4.2-1 and

4.2-2). 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 4.4.3, 5.3.3 , 6.3.3, 6.4.3 Conservation Measures 1.2, 1.3, 1.6. 1.8, 1.9 1.11, 2.2, 2.3, 2.4, 2.5, 2.9, 2.11, 2.12, 3.4, 3.5, Tables 4-5, 4-6, 5-13, 5-16, 5-20, and Volume 2: Appendix D Species Accounts: HCP/NCCP).

CEQA Findings for Covered Species Primarily Associated With Oak Woodland

Impact 3.5.3 **Approval of the HCP/NCCP authorized under the NCCP Permit could result in potentially significant adverse impacts on Covered Species primarily associated with Oak Woodland**. This species is showy madia (*Madia radiata*).

Finding 3.5.3 **CDFG finds that conservation measures required in the HCP/NCCP will mitigate or avoid the potential significant impacts of the HCP/NCCP on this oak woodland-associated species to below a level of significance. (Pub. Resources Code, § 21081, subd. (a)(1); CEQA Guidelines, § 15091, subd. (a)(1).)**

Explanation 3.5.3:

Showy Madia

Showy madia has been collected historically near Antioch and between Antioch and Lone Tree Valley (California Natural Diversity Database 2005). The last field observation of this species in Contra Costa County was in 1941 (California Natural Diversity Database 2005) Given suitable habitat conditions, there is nothing to suggest this species could not be sustained in historic habitats or colonize new locations. Although primarily associated with oak woodlands, showy madia is also associated with oak savannas and annual grassland.

The HCP/NCCP conservation strategy will provide the conditions necessary for a stable, protected population of showy madia in the HCP/NCCP area for the following reasons: no known occurrences of this species will be impacted by Covered Activities;; approximately 13,000–16,500 acres of grassland, 500 acres of oak savanna and 400 acres of oak woodland acres will be protected and between 42 and 165 acres of oak savanna will be created or restored in the Preserve System (Tables 5-16 and 5-17 and Conservation Measure 2.7, Ch 5: HCP/NCCP), which will provide additional potential habitat for showy madia.

Many of the landscape-level and community-level conservation measures will also benefit showy madia. Conservation Measure 1.4 ensures that exotic plants will be controlled within preserves. Vegetation management and enhancement within native grassland (Conservation Measures 2.1

and 2.4, Ch 5: HCP/NCCP), including reducing grazing in some areas, and oak savanna (Conservation Measures 2.1 and 2.6, Ch 5: HCP/NCCP) may also benefit showy madia by maintaining or enhancing potential habitat for this species.

Completion of planning surveys ensures that botanical surveys will be conducted in potential impact areas and that high-quality populations will be avoided. Take of showy madia will not be permitted by the HCP/NCCP unless at least one occurrence is protected in the Preserve System (Table 5-20: HCP/NCCP). Additional take will be permitted as described in the HCP/NCCP as additional occurrences are added to the Preserve System (Section 5.3.3, Ch 5: HCP/NCCP).

No impacts from Covered Activities to existing populations are expected, and acquired lands will be protected and managed in perpetuity to benefit this species. In the event that new populations are found and impacted, the avoidance and minimization measures and permanent protection and management proposed by the HCP/NCCP will mitigate the impacts to showy madia to below a level of significance.

Summary of CEQA Findings for Covered Species Primarily Associated With Oak Woodland

CDFG finds that issuance of the NCCP permit could result in significant impacts on this oak woodland-associated Covered Species from development and other Covered Activities proposed in the HCP/NCCP. Likewise, CDFG finds that all impacts on this species and its habitat that could result from CDFG's issuance of the 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 (Final EIR/EIS Sections 4.2.2, Table 4.2-1 and 4.2-2). 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 4.4.6, Conservation Measures 1.2, 1.3, 1.6. 1.8, 1.9 1.11, 2.2, 2.3, 2.4, 2.5, 2.9, 2.11, 2.12, 3.4, 3.5, Tables 4-5, 4-6, 5-13, 5-16, 5-20, and Volume 2: Appendix D Species Accounts: HCP/NCCP).

CEQA Findings for Covered Species Primarily Associated With Chaparral/Scrub

Impact 3.5.4 **Approval of the HCP/NCCP authorized under the NCCP Permit could result in potentially significant adverse impacts on Covered Species primarily associated with Chaparral/Scrub.** These species include: Alameda whipsnake (*Masticophis lateralis euryxanthus*), Mount Diablo manzanita (*Arctostaphylos auriculata*), Mount Diablo fairy lantern (*Calochortus pulchellus*), Diablo helianthella (*Helianthella castanea*), and Brewer's dwarf flax (*Hesperolinon breweri*).

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

Explanation 3.5.4:

Alameda Whipsnake

Alameda whipsnake is endemic to the western and central portions of Alameda and Contra Costa Counties. Consequently, the HCP/NCCP area constitutes an essential portion of the subspecies' existing habitat, which has been fragmented into five largely disjunct populations. The Alameda whipsnake is associated with core habitat consisting of open and low-growing shrubs, primarily chaparral, and surrounding grassland. Rock outcrops near these areas are also thought to be important for the subspecies. However, Alameda whipsnakes are known to move through grasslands between scrub patches (distances of up to 4 miles have been documented, but typical distances are closer to 1 mile) (Section 4.4.3, Ch 4 and Appendix D: HCP/NCCP). Up to an estimated 29 acres of impacts to core habitat and up to 341 acres of impacts to movement habitat will occur as a result of the HCP/NCCP. In total, impacts to core habitat represent less than 1% of the total chaparral/scrub habitat within the HCP/NCCP area (Table 4-5: HCP/NCCP).

The Preserve System will protect an estimated 1,690 or 1,817 acres of core and perimeter habitat and 10,564 or 12,166 acres of upland movement habitat and 46 miles of stream movement habitat for Alameda whipsnake under the IUDA or the MUDA, respectively (Table 5-13: HCP/NCCP). Between 53–57% of core and perimeter habitat outside existing parks and conserved open space will be conserved, and chaparral will be managed to benefit the species. An average of 70% of core and perimeter whipsnake habitat between Clayton, Black Diamond Regional Preserve, Mt. Diablo State Park and further south will be acquired to maintain connectivity between occupied areas.

Development guidelines ensure that impacts on this species from Covered Activities are avoided or minimized (Conservation Measures 1.6, 1.9, and 1.10, Ch 6: HCP/NCCP). Control of exotic plants and certain incompatible recreational practices (Conservation Measure 1.4 and 1.5, Ch 5: HCP/NCCP) will benefit or minimize impacts to Alameda whipsnake. Because whipsnakes may bask on open roads, recreational activities that may impact whipsnakes on roads will be restricted. Recreational controls include prohibiting bicycles in core whipsnake habitat and prohibiting construction of new trails in suitable core habitat. Prescriptive burning will be used, if feasible, to control vegetation and provide a thermal mosaic for basking by whipsnakes.

Movement habitat for Alameda whipsnake will be enhanced (Conservation Measures 1.2, 2.4, and 2.6, Ch 5: HCP/NCCP). Management of chaparral/scrub (Conservation Measure 2.8, Ch 5:HCP/NCCP) will provide the diversity of successional stages that are likely necessary to support this species. These conservation measures are consistent with measures discussed in the *Draft Recovery Plan for Chaparral and Scrub Community Species East of San Francisco Bay, California* (U.S. Fish and Wildlife Service 2002a). According to the recovery plan, recovery of Alameda whipsnake populations requires a combination of long-term research/management and immediate management actions. Incompatible land uses include fire suppression, off-road vehicle use, grazing practices, and mining. Conservation measures described by the recovery plan for Alameda whipsnake include protecting existing populations and experimenting with the reestablishment of disturbance regimes, especially fire.

Take of Alameda whipsnake will be negligible and the species will benefit from the large amount of conservation that will occur compared to the small amount of habitat loss. The permanent management and protection of Alameda whipsnake habitat will provide the habitat components needed to support the snake's essential behavioral patterns. The permanent protection and conservation proposed by the HCP/NCCP minimizes and mitigates the impacts to this species to a level of less than significant.

Mount Diablo Manzanita

Mount Diablo manzanita is endemic to Contra Costa County and is known only from Mount Diablo and the adjacent foothills at elevations ranging from 700 feet to 1860 feet. The two known occurrences of Mount Diablo manzanita in the HCP/NCCP area outside public lands will be protected by the Preserve System (Table 5-20: HCP/NCCP and Conservation Measure 1.1). Moreover, an estimated 414 or 447 acres of potentially suitable habitat for Mount Diablo manzanita will be protected within the Preserve System under the IUDA or MUDA, respectively (Table 5-12, Ch 5:HCP/NCCP). This protected land constitutes from 56% to 61% of the remaining species habitat that is available for preservation. Management of HCP/NCCP preserves will also benefit Mount Diablo manzanita.

Covered Activities within the urban development area will not result in the removal of any known occurrences of Mount Diablo manzanita. Covered Activities outside the urban development area, including road grading, road expansion, utility construction and maintenance, and habitat restoration could directly affect populations of this species, through direct mortality or loss of habitat, but location data are not sufficient to precisely determine impacts.

Impacts to this species are expected to be very low for the following reasons: (1) no known occurrences of this species will be impacted by Covered Activities, while two occurrences will be protected if willing sellers are found, (2) no suitable habitat will be removed by Covered Activities, while 414 acres will be protected under the IUDA (447 acres under the MUDA), and (3) preserve management will enhance habitat quality for Mount Diablo manzanita populations.

Thus, no significant impacts from Covered Activities to existing populations are expected. Acquired lands will be protected and managed in perpetuity.

Take of Mount Diablo manzanita will not be permitted by the HCP/NCCP unless new populations are protected in the Preserve System. Public access to known populations of Mount Diablo manzanita within preserves will be restricted to make illegal collection more difficult (Section 5.3.3, Ch 5: HCP/NCCP). Vegetation management actions, including prescribed burning (Conservation Measures 1.2 and 2.8, Ch 5: HCP/NCCP), will ensure that the condition of the chaparral vegetation community that supports Mount Diablo manzanita will be maintained.

No significant impacts from Covered Activities on existing populations are expected. Acquired lands will be protected and managed in perpetuity, ensuring that impacts to Mount Diablo manzanita are mitigated to below a level of significance.

Mount Diablo Fairy-Lantern

Mount Diablo fairy-lantern is endemic to the Diablo Range in Contra Costa County, and is distributed between elevations of 650 and 2,600 feet. Twelve occurrences are within the HCP/NCCP area, 11 of which are on public lands. The location of the one known occurrence of Mount Diablo fairy-lantern in the HCP/NCCP area outside public lands will be protected by the Preserve System (Table 5-20 and Conservation Measure 1.1, Ch 5:HCP/NCCP).

Covered Activities within the urban development area would not result in the removal of any known occurrences of Mount Diablo fairy-lantern. Covered Activities in the HCP/NCCP area could result in the loss of 788 acres of suitable habitat (3% of currently unprotected suitable habitat within the HCP/NCCP area) for Mount Diablo fairy-lantern. The habitat that could be lost is located south of Pittsburg and southwest of Antioch.

An estimated 11,178 or 13,360 acres of suitable habitat will be protected within the Preserve System under the IUDA or MUDA, respectively (Table 5-12:HCP/NCCP). This protected land constitutes from 43% to 54%, respectively, of the species range in the HCP/NCCP area that is available for preservation.

Preserve management will enhance habitat quality for this species. For example, Conservation Measure 1.4 ensures that exotic plants will be controlled within preserves to minimize possible competition with this species. Conservation Measure 1.5 requires the preparation of a system-wide recreation plan that will limit public access to minimize collection of the species. Vegetation management and enhancement within native grassland, oak savanna/woodland, and chaparral will benefit Mount Diablo fairy-lantern. For example, promoting canopy gaps within chaparral patches (Conservation Measure 2.8, Ch 5:HCP/NCCP) will maintain or increase habitat for this species. In addition, leaving snags and dead trees in place in oak woodland

(Conservation Measure 2.6, Ch 5:HCP/NCCP) will create openings that will maintain or enhance habitat for this species. Between 42 and 165 acres of oak savanna will be restored within preserves, which will provide additional potential habitat for Mount Diablo fairy-lantern.

Take of Mount Diablo fairy-lantern will not be permitted by the HCP/NCCP unless at least one additional occurrence is protected in the Preserve System. Additional take will be permitted as described in the HCP/NCCP as additional occurrences are added to the Preserve System.

Impacts to Mount Diablo fairy-lantern are expected to be negligible. The avoidance and minimization measures and permanent protection and management proposed by the HCP/NCCP will ensure that impacts to this species are mitigated to below a level of significance.

Diablo Helianthella

Diablo helianthella is endemic to the San Francisco Bay Area. There are 30 documented occurrences in the HCP/NCCP area, including 2 on private lands and 28 on lands within Mount Diablo State Park, Los Vaqueros Watershed, and East Bay Regional Park District. Covered activities within the urban development area will not result in the removal of any known occurrences of Diablo helianthella.

Although no known occurrences of this species would be impacted by Covered Activities, Covered Activities in the HCP/NCCP area could result in the loss of up to 85 acres of suitable habitat (1% of currently unprotected habitat) for Diablo helianthella in southwest of Antioch. To offset the loss of 85 acres of habitat, both known occurrences of Diablo helianthella in the HCP/NCCP area outside public lands will be brought under protection by the Preserve System (Table 5-20 and Conservation Measure 1.1, Ch 5:HCP/NCCP). The Preserve System will protect an estimated 6,168 or 7,250 acres of the suitable habitat for this species under the IUDA or MUDA, respectively. This protected land constitutes 46% to 54% of the species range in the HCP/NCCP area available for preservation. (Table 5-12, Ch 5:HCP/NCCP).

Take of Diablo helianthella will not be permitted by the HCP/NCCP unless at least one additional occurrence is protected in the Preserve System. Additional take will be permitted as described in the HCP/NCCP as additional occurrences are added to the Preserve System (HCP/NCCP Table 5-20).

Threats to Diablo helianthella include trail construction and maintenance, brush-clearing, and off- trail travel. Fire suppression in chaparral may also impact Diablo helianthella because it also grows in openings in, and on the margins of, chaparral.

Management of HCP/NCCP preserves will benefit Diablo helianthella. For example, Conservation Measure 1.4 ensures that exotic plants will be controlled within preserves. Implementation of a system-wide Preserve Recreation Plan (Conservation Measure 1.5) will

minimize additional impacts to the species from trail construction and maintenance and off-trail travel, which have been noted as threats to documented occurrences (California Natural Diversity Database 2005). Vegetation management within oak savanna/woodland (Conservation Measures 2.1 and 2.6) and chaparral (Conservation Measures 2.1 and 2.8) will benefit Diablo helianthella by maintaining or enhancing habitat for this species. For example, promoting canopy gaps within chaparral patches (Conservation Measure 2.8) will maintain or increase habitat for this species. In addition, leaving snags and dead trees in place in oak woodland (Conservation Measure 2.6) will create openings that will maintain or enhance habitat for this species. Between 42 and 165 acres of oak savanna will be created or restored in the Preserve System (Tables 5-16, 5-17, Ch 5:HCP/NCCP). One objective of oak savanna restoration is to provide additional suitable habitat for Diablo helianthella.

As no impacts from Covered Activities to existing populations are expected, and acquired lands will be protected and managed in perpetuity, Diablo helianthella will benefit from implementation of the HCP/NCCP. In the event that new populations are found and impacted, the avoidance and minimization measures and permanent protection and management proposed by the HCP/NCCP will mitigate the impacts to this species to below a level of significance.

Brewer's Dwarf Flax

Brewer's dwarf flax is restricted to Mount Diablo and adjacent foothills in the east San Francisco Bay Area and to the Vaca Mountains of the southern interior North Coast Ranges. Twenty occurrences of Brewer's dwarf flax were documented within the HCP/NCCP inventory area. Of these, two occurrences are in Mount Diablo State Park, two are in East Bay Regional Park District lands, fourteen are in the Los Vaqueros Watershed, one is on private land, and one historic population in Antioch has been extirpated (Table 5-20, Ch 5:HCP/NCCP, Occurrence Map, Appendix D, 26c, HCP/NCCP).

Covered Activities within the urban development area would not result in the removal of any known occurrences of Brewer's dwarf flax. However, Covered Activities in the HCP/NCCP area could result in the loss of 97 acres under the IUDA (255 acres under the MUDA) of suitable habitat for Brewer's dwarf flax (0.4% or 1%, respectively, of currently unprotected habitat within the HCP/NCCP area) (Table 4-5, Ch 4:HCP/NCCP). The habitat loss would occur in southern Pittsburg and southwest of Antioch. Specific threats to the dwarf flax have not been identified except possible trampling of plants adjacent to foot paths or trails.

The one known occurrence of Brewer's dwarf flax in the HCP/NCCP area outside public lands will be brought under protection by the Preserve System (Table 5-20, Ch 5:HCP/NCCP and Conservation Measure 1.1). Approximately 9,337 or 10,704 acres of the suitable range for this species will be protected within the Preserve System under the IUDA or MUDA, respectively (Table 5-12, Ch 5:HCP/NCCP). This protected land constitutes 48% to 55% of the species range available for preservation. Between 42–165 acres of oak savanna, which is potential habitat, will

be restored. Management of HCP/NCCP Preserves will benefit Brewer's dwarf flax. For example, Conservation Measure 1.4 ensures that exotic plants will be controlled within preserves. Implementation of a system-wide Preserve Recreation Plan (Conservation Measure 1.5) will minimize additional impacts to the species from trail construction and maintenance and foot traffic, which have been noted as threats to documented occurrences (California Natural Diversity Database 2005). Vegetation management and enhancement within native grassland (Conservation Measures 2.1 and 2.4), oak savanna/woodland (Conservation Measures 2.1 and 2.6), and chaparral (Conservation Measures 2.1 and 2.8) will benefit Brewer's dwarf flax. For example, promoting canopy gaps within chaparral patches (Conservation Measure 2.8) will maintain or increase habitat for this species. Between 42 and 165 acres of oak savanna will be created or restored in the Preserve System (Tables 5-16 and 5-17 and Conservation Measure 2.7, Ch5:HCP/NCCP).

Take of Brewer's dwarf flax will not be permitted by the HCP/NCCP unless at least one additional occurrence is protected in the Preserve System. Additional take will be permitted as described in the HCP/NCCP as additional occurrences are added to the Preserve System. (Table 5-20, Ch 5:HCP/NCCP).

As no impacts from Covered Activities to existing populations are expected, and acquired habitat lands will be protected and managed in perpetuity, Brewer's dwarf flax will benefit from implementation of the HCP/NCCP. In the event that new populations are found and impacted, the avoidance and minimization measures and permanent protection and management proposed by the HCP/NCCP will mitigate the impacts to this species to below a level of significance.

Summary of CEQA Findings for Covered Species Primarily Associated With Chaparral/Scrub

CDFG finds that issuance of the NCCP permit could result in significant impacts on these Covered Species primarily associated with Chaparral/Scrub from development and other Covered Activities contemplated by the HCP/NCCP. Likewise, CDFG finds that all impacts on these species and their habitat associated with CDFG's issuance of the 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 (see Final EIR/EIS Sections 4.2.2, Table 4.2-1 and 4.2-2C). 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 (Conservation Measures 1.1, 1.2, 1.4. 2.1, 2.2, 2.8, 2.6, 2.9, Tables 5-12, 5-16, 5-17, 5-20 and Volume 2: Appendix D Species Accounts: HCP/NCCP).

CEQA Findings for Covered Species Primarily Associated With Streams and Riparian/Woodland Scrub

Impact 3.5.5 **Approval of the HCP/NCCP authorized under the NCCP Permit could result in potentially significant adverse impacts on these Covered species primarily associated with Streams and Riparian/Woodland Scrub.** These species include: Swainson's hawk (*Buteo swainsoni*) and foothill yellow-legged frog (*Rana boylii*).

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

Explanation 3.5.5:

Swainson's Hawk

Swainson's hawks are migrants, highly mobile and have large home ranges. Swainson's hawks breed throughout western North American, including the Mojave Desert, northeastern California, and the Central Valley and Owens Valley regions of California. This species winters in Central and South America. The northeastern edge of the HCP/NCCP area is along the western edge of the species range. They have been documented nesting in the HCP/NCCP area. They nest primarily in riparian areas and forage over grassland or high quality agricultural habitat crops such as alfalfa, which support abundant small rodents. The IUDA or MUDA would affect up to 16 acres of breeding habitat (27% of the habitat outside existing parks and conserved open space) in the HCP/NCCP area. It is estimated that 3782 acres (13% of the habitat outside parks and open space) or 4,743 acres (16% of the habitat outside parks and open space) of foraging habitat would be affected by Covered Activities under the IUDA or MUDA, respectively (Tables 4-4, 4-5: Ch 4:HCP/NCCP). .

The Preserve System will protect an estimated 12 or 16 acres of suitable breeding habitat and 3,614 or 4,451 acres of suitable foraging habitat under the IUDA or the MUDA, respectively (Table 5-13: HCP/NCCP). Nesting habitat is a priority for acquisition. In addition, the loss of riparian woodland/scrub, all of which is considered suitable nesting habitat for Swainson's hawk, will be mitigated through in-kind protection of riparian woodland (Conservation Measure 1.1, Ch 5: HCP/NCCP) and enhancement and restoration of riparian woodland/scrub within preserves at a ratio of 1:1 (Conservation Measures 2.9 and 2.10, Table 5-13, Ch 5:HCP/NCCP).

An estimated 50–55 acres of riparian woodland/scrub will be restored within the Preserve System (Table 5-17: HCP/NCCP), much of which is suitable breeding habitat for Swainson's hawk. An estimated 250 to 400 acres of cropland or pasture that is suitable for riparian restoration will be acquired to support Swainson's hawk foraging along Kellogg Creek, Marsh Creek, or adjacent to Dutch Slough. Conservation easements will require landowners to enhance the value of agricultural lands for Swainson's hawk. Wind turbine leases acquired within the Preserve System will be retired, when feasible, to reduce injury and mortality of Swainson's hawk and other raptors. Preserves will be managed to enhance the prey base for raptors (Conservation Measure 2.5, Ch 5: HCP/NCCP). Annual grassland that is managed to decrease the cover and extent of exotic plants (Conservation Measure 1.4, Ch 5: HCP/NCCP) and to increase the cover and extent of native grasslands (Conservation Measures 1.2 and 2.4, Ch 5: HCP/NCCP) will benefit Swainson's hawks by reducing overall escape cover for prey. Management of agricultural lands will increase foraging and nesting habitat for Swainson's hawks (Conservation Measures 1.3 and 2.11, Ch 5: HCP/NCCP).

Development guidelines ensure that impacts on this species from Covered Activities will be avoided or minimized (Conservation Measures 1.6 and 1.9, Ch 6; HCP/NCCP). Impacts to Swainson's hawks will be minimized by requiring surveys for nests prior to submission of an application for coverage under the HCP/NCCP. Preconstruction surveys are required in areas with active nests. Project approvals must require avoidance of occupied nests during the breeding season. Destruction of occupied nests is prohibited, and buffer zones during the nesting season will be required (Section 6.3.3, Ch 6:HCP/NCCP).

The HCP/NCCP will restore riparian habitat, protect grassland habitat, acquire conservation easements, increase the prey base for hawks, and avoid direct take of the species. These actions and permanent protection and conservation proposed by the HCP/NCCP will minimize and mitigate impacts to Swainson's hawk to below a level of significance.

Foothill Yellow-Legged Frog

Foothill yellow-legged frogs have the potential to occur in perennial segments of streams in the HCP/NCCP area. There are 11 known documented occurrences in the HCP/NCCP area, but currently foothill yellow-legged frogs are only known to exist on Mount Diablo.

Impacts of up to 0.1 miles of stream breeding habitat and 0.5 to 0.6 miles of stream movement habitat will occur as a result of the HCP/NCCP under the IUDA or MUDA, respectively (Table 4-5: HCP/NCCP). Approximately 5.2–5.6 miles (2%) of streams outside existing parks and conserved open space will be protected, and restoration will create or enhance breeding and foraging habitat for the species. Preserved streams will include both perennial and ephemeral streams. Impacts to frog habitats are likely to be very small (<1% of available habitat). Impacts on perennial streams, including suitable foothill yellow-legged frog habitat, will be mitigated at a preservation ratio of 2:1 (Tables 5-5a and 5-5b: HCP/NCCP).

Stream restoration is also required as mitigation (e.g., creating meanders in channelized streams, removing concrete lining) but may be accomplished out of kind, as described in the HCP/NCCP (Conservation Measures 2.3 and 2.10, Ch 5, and Appendix J: HCP/NCCP). Up to 55 acres of riparian woodland/scrub will be created or restored. Restoration to mitigate for impacts on perennial streams can be accomplished through enhancement of riparian woodland/scrub. These restored areas will be designed to support the life-history requirements of covered aquatic species, including foothill yellow-legged frog. Land acquisition will be focused along Marsh Creek, especially in the upper reaches, where suitable breeding and dispersal habitat for yellow-legged frog is most extensive and is under threat.

Given the small amount of impacts resulting from Covered Activities compared with the amount of restoration being implemented, impacts to the species are expected to be negligible. Furthermore, the permanent management and protection of yellow-legged frog habitat, in perpetuity, will provide the habitat components needed to support the frog's essential behavioral patterns and will ensure that impacts on this species are mitigated to below a level of significance.

Summary of CEQA Findings for Covered Species Primarily Associated With Streams and Riparian/Woodland Scrub

CDFG finds that issuance of the NCCP permit could result in significant impacts on these Covered Species primarily associated with Streams and Riparian/Woodland Scrub from development and other Covered Activities contemplated by the HCP/NCCP. Likewise, CDFG finds that all impacts on these species and their habitat associated with CDFG's issuance of the 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 (Final EIR/EIS Sections 4.2.2, Table 4.2-1 and 4.2-2C). 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 (Conservation Measures 1.3, 1.6. 1.9, 2.1, 2.3, 2.10 Tables 4-5, 5-5, Ch 5 and 6, and Volume 2: Appendix D Species Accounts: 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 that mitigation measures that are required as conditions of approval are carried out. (CEQA Guidelines, § 15097, subd.(d).) The MMRP document serves the needs of CDFG to ensure that the HCP/NCCP, especially the components designed to avoid and mitigate potentially significant impacts, are properly implemented in compliance with their

conditions of approval. After reviewing the MMRP prepared by the HCPA as part of the HCP/NCCP, and determining that this document meets CDFG's needs with respect to implementation of the HCP/NCCP, CDFG is adopting the MMRP prepared by the lead agency 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 would 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 are 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 East Contra Costa County NCCP must be completed, approved and implemented pursuant to the NCCPA of 2003 and CDFG must evaluate the adequacy of the NCCP by reference to the 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.

The Planning Agreement for the HCP/NCCP was approved by the East Contra Costa County Habitat Conservation Plan Association Executive Governing Committee on October 23, 2003, and signed by the Deputy Director of the California Department of Fish and Game on November 19, 2003.

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: United States Fish and Wildlife Service, the California Department

of Fish and Game, the HCPA, the County of Contra Costa, and the cities of Brentwood, Clayton, Oakley and Pittsburg, the Contra Costa Water District, and the East Bay Regional Park District. The HCP/NCCP, through the Implementing Agreement, identifies the Permittees (Section 1.0 of the Implementing Agreement), which include most of the participating parties identified in the Planning Agreement and also include the Contra Costa County Flood Control and Water Conservation District, which has the same governing board as Contra Costa County, and the newly-formed East Contra Costa County Habitat Conservancy (the Implementing Entity).

The Planning Agreement also defines the scope of the HCP/NCCP generally in Section 2.0, and the geographic scope in Section 3 and Exhibit B. The scope of the planning area remained consistent through 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

Section 2.4.3 and Exhibit A of the Planning Agreement identify 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 26 such species in six natural communities, namely, agriculture, chaparral, grassland, oak woodland, riparian woodland/scrub and wetlands.

The HCP/NCCP undertook a lengthy, detailed process to identify sensitive natural communities and plant and animal species to include in the HCP/NCCP. A total of 24 different land cover types were mapped throughout 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 land cover data, as well as species occurrence records and the scientific literature, were studied to assemble a list of 154 species to consider for coverage under the HCP/NCCP. These 154 species were then 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 6 natural community types, the same types identified in the Planning Agreement. The HCP/NCCP also addresses and covers 28 endangered, threatened, proposed, candidate, or other species known or reasonably expected to be found in those natural communities, including the 26 plant and animal species identified in the Planning Agreement and 2 additional species identified later in the planning process.

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

Section 5 of the Planning Agreement discusses the process for collecting data and information necessary for the HCP/NCCP. It provides that the HCP/NCCP will use the best currently available scientific information and describes the process for filling data gaps discovered during development of the HCP/NCCP.

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, biological consultants 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 biological consultants developed habitat suitability models for 21 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 land acquisition strategy.

The Planning Agreement also provides that HCP/NCCP development is guided by independent scientific input and analysis (Section 5.1.4: Planning Agreement). During development of the HCP/NCCP, independent scientific input has been provided by the Science Advisory Panel, authorized by the HCPA Executive Governing Committee. The Science Advisory Panel was headed by Dr. Lynn Huntsinger, Associate Professor in the Department of Environmental Science, Policy, and Management at the University of California, Berkeley, and was facilitated by Dr. Erica Fleishman, then a Research Associate with the Center for Conservation Biology at Stanford University. The Science Advisory Panel convened four times during development of the HCP/NCCP and provided written guidance on substantive documents and biological issues submitted to it for review, including the selection of Covered Species, reserve design principles, the preliminary conservation strategy and the preliminary adaptive management and monitoring programs.

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 5.1.5 of the Planning Agreement provides for a public participation program to involve affected stakeholders and the public during the development of the HCP/NCCP. Section 5.1.5.1 of the Planning Agreement provides for public input through an advisory committee known as the Coordination Group. Section 5.1.5.2 of the Planning Agreement provides for additional public outreach measures, including open public meetings of the Coordination Group and Executive Governing Committee, periodic updates to the governing boards of HCPA member agencies, maintenance of a project website, and presentations to interested organizations and individuals.

The HCPA Executive Governing Committee formally constituted the Coordination Group in 2002. It was composed of representatives of the development community, environmental community, private land owners and agriculturalists, the Wildlife Agencies, HCPA member agencies and other governmental organizations. The Coordination Group met monthly from 2002-2006 to review the HCP/NCCP work products and make recommendations to the Executive Governing Committee. The Coordination group 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 strategy, development of the funding program, development of the adaptive management program, and development of the assurances chapter. The Coordination Group meetings were open to the public and advertised on the HCPA's web site. The role of the Coordination Group 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 Executive Governing Committee regarding the HCP/NCCP. The public had the opportunity to review and comment on all draft work products provided to the Coordination Group at least 10 days in advance of public meetings where the products would be 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 East Contra Costa County on the development of the HCP/NCCP. In addition, the HCPA 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.

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

Section 5.1.6 of the Planning Agreement provides an interim process for the review of projects prior to HCP/NCCP approval. That process includes the HCPA, HCPA 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.

The HCPA, HCPA member Agencies and the Wildlife Agencies coordinated frequently on interim project review during development of the HCP/NCCP. Such coordination included development of a Memorandum of Understanding among the Wildlife Agencies and property owners pursuing interim projects in the East Cypress area of Oakley. This Memorandum of Understanding covered approximately 1500 acres and resulted in a process for these interim projects to mitigate for their impacts via 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 November 8, 2006. The HCP/NCCP was approved for submission to HCPA Member Agencies and the Final EIR was certified by the HCPA on November 8, 2006, well after the 60 day notice requirement. Additionally, the Implementing Agreement was 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 basic 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 7.2, Chapter 7 of the HCP/NCCP, designing a biological monitoring and adaptive management program will take some time to develop as the Preserve System is being acquired. Chapter 7 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.

The Implementing Entity will create an 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 Preserve System will be acquired over time, and the implementation schedule for the monitoring and adaptive management will be broken down into three main phases. For the first five years information will be compiled from existing sources such as GIS data layers, aerial photography, and plans and reports provided by adjacent land owners to develop the framework for future monitoring of natural communities and focal species. As land is acquired, an inventory phase will be implemented which will focus on collecting data to define the biological baseline, further refine the conceptual models, and develop site-specific management recommendations. The long term monitoring phase will monitor species responses to enhancement, restoration, and habitat creation, and determine the amount of future monitoring that may be needed.

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 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 periodically

convening the Independent Conservation Assessment Team (Section 8.3.7, Ch 8: HCP/NCCP) The Implementing Entity will be advised by the Wildlife Agencies, HCP/NCCP land management agencies (or a Technical Advisory Committee composed of their representatives), Science Advisors, the Independent Conservation Assessment Team, and the public.

The organizational structure of the monitoring and adaptive management decision-making process is described in detail in the HCP/NCCP. (Figure 8-1, Ch 8: HCP/NCCP) In general, the Implementing Entity will oversee the adaptive management and monitoring programs. Science Advisors, Wildlife Agencies, and an Independent Conservation Assessment Team will provide input and help guide the program, but the Implementing Entity has ultimate responsibility for implementing the program and instituting changes through adaptive management. Additional responsibilities include prioritizing HCP/NCCP components, disseminating information, developing annual and long-term work plans, and facilitating input from the public and outside scientists. The Executive Director of the Implementing Entity will work with senior scientists and managers in the Implementing Entity to implement the adaptive management and monitoring program. Preserve managers, who will be in charge of day-to-day activities within the preserves, will contribute to annual work plans and formulate adaptive management recommendations for the HCP/NCCP as a whole.

A pool of Science Advisors will provide outside input regarding implementation of the monitoring and adaptive management program. Input will be provided regularly as needed to help guide monitoring protocols and experimental design, to interpret results and generate hypotheses, and to comment on the overall success of the monitoring and adaptive management programs in achieving the biological goals of the plan. Upon implementation, the Science Advisors will meet formally at least once a year to review the progress of the HCP/NCCP. Formal reviews will occur less frequently as the HCP/NCCP progresses.

The USFWS and CDFG will provide feedback on the implementation of the monitoring and adaptive management programs described in the annual work plans. Individuals within the Wildlife Agencies with particular expertise in management or monitoring may also participate as Science Advisors. All forms of input will be collected by the Implementing Entity and incorporated into management and monitoring practices, as appropriate (Chapter 8: HCP/NCCP).

An Independent Conservation Assessment Team, distinct from the Science Advisors, will provide conservation "audits" every five years. The role of the Independent Conservation Assessment Team is described in detail in Chapter 8 of the HCP/NCCP, Implementation.

A Local Land Managers Forum made up of both private and public landholders (e.g., park managers, local landowners) may be established to solicit feedback regarding the effects of preserve management on adjacent lands, to make recommendations for changing specific aspects of preserve management, and to facilitate communication between local landowners and the Implementing Entity (Section 8.3.7, Ch 8: HCP/NCCP).

Adaptive management revisions will be made consistent with the HCP/NCCP's Minor and Major Amendments sections (Sections 10.3.2 and 10.3.3, Ch 10: HCP/NCCP). The Implementing Entity is required to maintain a complete administrative record of all HCP/NCCP revisions resulting from the adaptive management program.

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 Preserve System, natural habitats, species and natural communities will be protected. The goal of the HCP/NCCP is to create a self-sustaining, comprehensive Preserve System.

The conservation strategy is based on the creation of a system of new preserves linked to existing protected lands. Acquisition priorities that will shape the Preserve System are shown in Figures 5-2 and 5-3 in the HCP/NCCP. The conservation strategy is designed to create a Preserve System that will:

- Preserve approximately 23,800 acres of land under the IUDA, or approximately 30,300 acres of land under the MUDA, 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.

Preserve design for this HCP/NCCP is based on general principles of conservation biology (Ch 5: HCP/NCCP).

Land acquisition will prioritize areas according to greatest conservation benefit. Six zones were created and specific targets within the zones and subzones are associated with each. Most natural land-cover types will be acquired in Zones 1–5. Tables 5-7 and 5-8 of the HCP/NCCP show land

acquisition requirements for terrestrial land-cover types under the IUDA and MUDA scenarios. The zones as shown in Figure 5-1 of the HCP/NCCP incorporate all undeveloped land outside the major urban areas of Bay Point, Clayton, Pittsburg, Antioch, Oakley, and Brentwood that is not already protected in large preserves. Most of this undeveloped land occurs outside the ULL. Large undeveloped areas within the ULL were included in the zones if they had potential conservation value and were connected to undeveloped lands outside the ULL. Rural public facilities were included within zones because their protection status for conservation may be uncertain. The six zones include some areas of small and isolated public lands (e.g., Byron Airport conservation easements) and small and isolated patches of development; these areas would not be acquired as part of the HCP/NCCP Preserve System and are excluded from all calculations of zone size. With these exceptions, the zones represent all undeveloped and unprotected land in the HCP/NCCP area with regional conservation value and within which the Preserve System can be designed.

Zone 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 vegetation communities. The boundaries of each zone are described in Section 5.2.2 of the HCP/NCCP. The HCP/NCCP also includes a brief description of each zone (Section 5.5.2.2, Ch 5: 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 inventory area. These data and models are not intended for site-specific planning because of their coarse resolution and lack of field verification. Project proponents must verify in the field all land cover types and suitable habitat for covered wildlife species as described in Chapter 6 (HCP/NCCP).

In addition, the Implementing Entity will conduct planning surveys for land cover type and Covered Species habitat on all lands considered for acquisition to measure in the field whether the proposed acquisition site meets HCP/NCCP requirements. The details of these land acquisition planning surveys are described in Chapter 8 (HCP/NCCP).

Preserve management is designed to maintain and enhance vegetation communities, habitat for Covered Species, biological diversity, and ecosystem function. The Preserve 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 Preserve System (Ch 7: HCP/NCCP).

Management measures and monitoring will also occur on EBRPD lands that are formally credited toward the obligations in Conservation Measure 1.1 and added to the Preserve System. (Ch 5: HCP/NCCP) In addition, EBRPD shall ensure that long-term management (i.e., beyond the 30-year initial term of the HCP/NCCP and the Permits) of its lands within the HCP/NCCP

area meets HCP/NCCP standards, provided EBRPD receives the required incremental funding for that purpose (Section 10.2:IA).

The Implementing Entity will prepare two types of preserve management plans: system-wide plans and preserve-specific plans. System-wide management plans include an overall approach to control exotic species and recreational uses of preserve lands. Preserve management plans will identify, on the basis of site-specific conditions and preserve objectives, the management/maintenance actions necessary to ensure that desired ecosystem characteristics and functions are maintained and protected. Site-specific management objectives and techniques will be developed only when suitable sites have been identified, surveyed, and purchased. Preserve management plans must minimize the conflicts that may arise when managing for multiple species and habitats. Preserve management plans will implement the system-wide plans for exotic species control and recreational uses. All system-wide and preserve-specific management plans must be approved by USFWS and CDFG. Management plans of both types will be updated and revised as part of the adaptive management program.

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 Preserve System will be linked to existing protected lands (see Figures 5-2 and 5-3: HCP/NCCP for the acquisition priorities that will shape the Preserve System). The conservation strategy is designed to create a Preserve System that will:

- Preserve approximately 23,800 acres of land under the IUDA or approximately 30,300 acres of land under the MUDA 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.
- Compensate for habitat loss by restoring or creating approximately 424–586 acres (under the IUDA or MUDA, respectively) of specific habitats and land cover types.

The process for delineating and prioritizing land for acquisition corresponds to the scalar approach of the conservation measures (landscape, habitat, or species). Consideration was first given to large, core preserves that could accommodate major vegetation communities and Covered Species with large geographical ranges and specific habitat needs. Linkages were also

included so that habitat connectivity goals and objectives could be met. Next, the conservation of rare vegetation communities (e.g., alkali grassland) was included. Finally, the conservation of species with small ranges was considered. For resources not protected by the core preserves or the habitat linkages, smaller, "satellite" preserves are proposed when necessary to protect isolated but important resources such as populations of covered plants and rare vegetation communities.

Lands within the HCP/NCCP Preserve System are defined by Zones. The Zone 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 vegetation communities. This landscape/watershed level approach is useful when assessing ecosystem function. The six Zones of the Preserve System are dominated by different vegetation types, elevations, slopes, aspects, and soil types. Acquisition of these areas will ensure preservation of the full range of environmental gradients and natural communities present in the HCP/NCCP area. The Preserve System will include the full representation of ecological diversity within natural communities in the inventory area and will maintain sufficient habitat diversity and species and population interactions to provide for the conservation of the Covered Species (Figures 3-1, 5-2, and 5-3:HCP/NCCP).

The HCP/NCCP conservation strategy requires the implementation of measures to avoid and minimize incidental take of species covered by the HCP/NCCP, in addition to the establishment, enhancement, and management (and monitoring) of approximately 23,800 to 30,300 acres of Preserve 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 (5.1, Ch 5: 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, grazing, and crop production, 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., the inventory area) to achieve multiple goals and objectives. These measures are related to overall design and assembly of the Preserve 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

vegetation communities and associated species and the management activities necessary to maintain a well-functioning Preserve System.

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

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 inventory area. These data and models are not intended for site-specific planning because of their coarse resolution and lack of field verification. Project proponents must verify in the field all land cover types and suitable habitat for Covered Species as described in Chapter 6 (HCP/NCCP).

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 (5.1, Ch 5: 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 Preserve System configuration and management address the need for connectivity, and will ensure viable linkages within and among the lands within the Preserve System. Species-specific conservation measures for Western burrowing owl, California red legged frog, San Joaquin kit fox, Alameda whipsnake, and California tiger salamander describe the creation of new linkages

in blocks of suitable habitat to facilitate dispersal and colonization throughout the Preserve System (Section 5.3.2, Ch 5:HCP/NCCP).

In addition, every effort will be made to ensure connectivity from the Preserve System to lands adjacent to the Preserve 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.

One example is Detachment Concord, a 12,920-acre facility that currently supports ecologically outstanding grassland and riparian communities. It likely serves as core habitat for Covered Species such as burrowing owl, California tiger salamander, and California red-legged frog. There are 150 acres of high-quality riparian woodland and forest within the facility along Mount Diablo Creek (Tetra Tech 2002). This area is directly adjacent to the inventory area and the future HCP/NCCP Preserve System. Because it currently supports very high-quality habitat, its future land use and management will greatly influence the Preserve System near it.

The HCP/NCCP inventory area is also adjacent to San Joaquin County. The San Joaquin County Council of Governments has been purchasing conservation easements in western San Joaquin County since the Multi-species Habitat Conservation and Open Space Plan was completed there in 2001. Agricultural lands that will be acquired for conservation by the Implementing Entity in Zones 5 and 6 and conservation efforts in nearby San Joaquin County will complement each other.

To the south, the Preserve System will border Alameda County and come close to connecting with existing public lands such as Brushy Peak Regional Preserve. Several agencies (EBRPD, City of Livermore, CDFG, and the Altamont Landfill Open Space Committee) are actively acquiring land in fee title or conservation easements for open space and conservation purposes in Alameda County near Zone 5. Coordinated actions of the Implementing Entity and the land acquisition agencies operating in Alameda County will enhance the effectiveness of the HCP/NCCP preserves. Long-term acquisition needs in Alameda County near the HCP/NCCP preserves include expanding Brushy Peak Regional Preserve, linking the Los Vaqueros watershed to the City of Livermore Springtown Alkali Sink Preserve, and linking Bethany Reservoir Recreation Area to Vasco Caves Regional Preserve (pg 5-52, Ch 5:HCP/NCCP).

A summary of the regional connections needed to link the HCP/NCCP Preserve System with areas outside the inventory area is shown in Figure 5-11, 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 Preserve 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 vegetation communities as well as a mosaic of these communities, where appropriate, within the Preserve System. Land cover types will be used as a primary unit for defining and assessing compliance with acquisition requirements.

The Preserve System acquisition requirements range from 23,800 acres to 30,300 under the IUDA or MUDA scenarios, respectively (Ch 5:HCP/NCCP). The total acquisition requirements for each terrestrial land cover type under the IUDA and MUDA are listed in Tables 5-7 and 5-8, Ch 5: HCP/NCCP, respectively. Tables 5-12 and 5-13 give estimates of the acreage and numbers of occurrences required for covered plant species, and of modeled habitat for covered wildlife species that will be included in the HCP/NCCP Preserve System.

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 would be met.

Early in the development of the HCP/NCCP it was recognized that two Covered Species, San Joaquin kit fox and Alameda whipsnake, would greatly influence the design of the Preserve System. San Joaquin kit fox exerts a substantial influence on the Preserve System design because of the species' extensive range and movement which require large habitat blocks and habitat linkages throughout the Preserve System. Alameda whipsnake is important because the inventory area contains several of the largest populations of this species, resulting in a need to comprehensively link patches of chaparral throughout the area into a large functional block of habitats that will provide movement routes for Alameda whipsnake among its breeding sites.

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 Preserve System includes the full representation of ecological diversity within natural communities in the inventory 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 Zone and throughout the Preserve System was a primary consideration in determining the value of areas considered for inclusion in the Preserve System (Section 5.3.1, Ch 5: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 Zones. Zone 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 vegetation communities. The boundaries of each zone are described in Section 5.2.2 of the HCP/NCCP. Within each Zone a range of elevations, slopes, aspects, soil types and natural communities will be acquired. Together, the six Zones, which are dominated by different vegetation types, elevations, slopes and aspects, encompass the full range of environmental gradients present in the HCP/NCCP area, as shown in Figures 3-1, 5-2, and 5-3 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. 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 Preserve System is intended to conserve and in many cases enhance populations of Covered Species. Ecological needs of Covered Species are summarized in the species profiles (Ch 5 and Appendix D, HCP/NCCP). The Preserve System design was intended to conserve multiple populations of, and high quality habitat, for Covered Species, and protection of additional suitable but unoccupied habitat for Covered Species. The HCP/NCCP Preserve System builds on an extensive network of public lands and other conserved open space (e.g., private conservation easements) in the inventory 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 preserves, and other important functions that contribute to population viability (5.3.1, Ch 5: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, San Joaquin kit fox and Alameda whipsnake, would greatly influence the design of the Preserve System. San Joaquin kit fox exerts a substantial influence on the Preserve System design because of the species' extensive range and movement which require viable linkages throughout the Preserve Systems. Alameda whipsnake is important because the inventory area contains several of the largest populations of this narrowly restricted species resulting in a need to link isolated patches of chaparral throughout the area. Linkages between patches of chaparral are needed to provide movement routes for Alameda whipsnake among isolated breeding sites.

All other Covered Species also have specialized and important habitat requirements that were considered in the overall Preserve System design. However, their habitats are either more localized (e.g., alkali soils) or distributed relatively widely across the landscape (e.g., ponds), and their needs did not influence the preserve design to the same extent as the requirements of San Joaquin kit fox and Alameda whipsnake.

To ensure that the Preserve System would satisfy the habitat needs of Alameda whipsnake and San Joaquin kit fox, as well as other species, the first step in the preserve design process was initiated with these two key species in mind. Providing habitat linkages, which promote movement and interchange of organisms, was a critical factor in the conservation of these species, and it also benefits other Covered Species in the HCP/NCCP area (5.2.2, Ch5: HCP/NCCP).

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 Preserve System include habitat and species management, habitat restoration or creation, habitat and species monitoring, limited construction and maintenance of passive recreational facilities (e.g., staging areas, fencing, and signage), and low-impact recreational use (hiking, mountain biking, equestrians) (Section 4.2.3, Ch 4: HCP/NCCP).

Conservation activities within HCP/NCCP preserves are expected to have a net benefit on all Covered Species (Ch 5: 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 Preserve System is designed to be large and diverse enough to ensure that the net effect of all preserve activities is beneficial across the system.

Some habitat enhancement, restoration, and creation activities may temporarily and adversely affect Covered Species. For example, planting emergent vegetation in stock ponds could temporarily disturb California red-legged frogs occupying the pond. Periodic dredging of ponds to maintain pond capacity and habitat quality may also have temporary adverse effects on pond species.

Required monitoring or research activities may also disturb wildlife. (Ch 7: HCP/NCCP). For example, in order to determine the presence of some Covered Species (e.g., California red-legged frog, vernal pool invertebrates), individuals must be handled by a qualified biologist. This qualifies as harassment, a form of take under the FESA and requires authorization. All biologists working under the HCP/NCCP, after approval by USFWS and CDFG, will be covered for their monitoring activities, should any take occur.

Some management activities may also disturb or inadvertently harm Covered Species. For example, fuel breaks must be created in key areas of the preserves to minimize the risk of wildfire and to protect structures and adjacent lands. Creating and maintaining these fuel breaks may have minor adverse effects on grassland-dependent species such as burrowing owl and San Joaquin kit fox or chaparral-dependent species such as Alameda whipsnake.

Recreational or management facilities built by the Implementing Entity to support the preserves 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 of all of these activities over the permit term are assumed to be up to 50 acres (Section 4.2.5, Ch 4: HCP/NCCP). Recreational activities allowed on preserves 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 (Conservation Measure 1.5, Ch 5:

HCP/NCCP). Despite these restrictions, some take (e.g., harassment) is expected to occur to Covered Species sensitive to human disturbance as a result of recreational activities. These species include San Joaquin kit fox, Townsend's big-eared bat, and western pond turtle.

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 33 biological goals and 91 biological objectives 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 Preserve System for the benefit of Covered Species. The Preserve 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 2002, the Science Advisors were invited to provide independent scientific input for development of the HCP/NCCP. The Science Advisors met four times to discuss key scientific issues and address questions posed by the HCPA, Wildlife Agencies, and the consultants. All meetings of the group were open to the public, and public comments were solicited and received at each meeting. Topics considered by the advisors included evaluation of data adequacy, identification of data gaps and sources of uncertainty, formulation of biological goals and objectives to conserve Covered Species and natural communities, identification of preserve-design principles and scientifically sound conservation measures for the local area, and development of monitoring and adaptive management guidelines for Covered Species and habitats (Section 1.4.4, Ch 1: HCP/NCCP).

The primary sources of information for land cover mapping in the inventory area, and additional ancillary data sources, were used to check the mapped information for accuracy (Ch 3: HCP/NCCP). In addition to using existing data sets, Jones & Stokes biologists conducted field visits. An initial field visit was conducted on December 7, 2001, to develop the land cover classification and to perform preliminary verification of aerial photograph signatures. Comments of the HCP/NCCP Science Advisors on the draft land cover maps indicated the need for follow-up field surveys to add detail to the data set. In particular, the Advisors identified the need to collect data on the occurrence and extent of "small-scale features," such as rock outcrops, caves, serpentine areas, small ponds, and vernal pools that may have been missed during the initial mapping effort. Field surveys were also recommended to increase the accuracy of mapped

locations of alkali grasslands and wetlands and to update the mapping from the 2000 aerial photos. These intensive follow-up field surveys were conducted.

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, Jones & Stokes research and environmental reports files, Jones & Stokes biological resource specialists, informal consultation with USFWS (letter request), Jones & Stokes in-house file information, personal communication with local experts including members of the HCPA, and independent Science Advisors (Section 3.3.7, Ch 3: HCP/NCCP).

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 (Ch 7: NCCP/HCP).

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). To facilitate awareness of responsibilities and ensure consistency of implementation, a table has been prepared that summarizes conditions for plan compliance. It lists the responsibilities of each party for key implementation tasks.

Biological Monitoring

The monitoring program described in Chapter 7 focuses on effectiveness monitoring for the conservation strategy (as opposed to compliance monitoring). The monitoring program will evaluate if 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.

In order to measure the success of meeting the biological goals and objectives, the effectiveness monitoring program will evaluate, at minimum, effects of the conservation strategy, including management, on ecosystem function, natural communities, and status of Covered Species. The monitoring program will include sampling at landscape, natural community and species levels. The program will be segregated into three major phases: monitoring design, inventory, and long-

term monitoring, and each phase will be structured according to monitoring priorities (Section 7.3.1, 7.3.2, 7.3.3, Ch 7: HCP/NCCP; also see Atkinson et al. 2004).

Specific monitoring components are recommended for each natural-community type in accordance with these phases and with the scale of the monitoring (landscape, natural community, and species). These recommendations provide a specific starting point for implementation of the monitoring program (Section 7.5, Ch 7: HCP/NCCP). Detail will be added to the monitoring program during the first phase of HCP/NCCP implementation. The Implementing Entity will revise the monitoring program whenever review indicates revision is necessary to effectively assess success in achieving the biological goals and objectives.

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 Chapter 8: HCP/NCCP). In general, the Implementing Entity will oversee the adaptive management program. Science Advisors, Wildlife Agencies, and an Independent Conservation Assessment Team will provide input and help guide the program, but the Implementing Entity has ultimate responsibility for implementing the program and instituting changes through adaptive management. Additional responsibilities include prioritizing HCP/NCCP components, disseminating information, developing annual and long-term work plans, and facilitating input from the public and outside scientists. The Executive Director of the Implementing Entity will work with senior scientists and managers in the Implementing Entity to implement the adaptive management program. Preserve managers, who will be in charge of day-to-day activities within the preserves, will contribute to annual work plans and formulate adaptive management recommendations for the plan as a whole (Section 8.2.2, Ch 8: HCP/NCCP).

A pool of Science Advisors will provide outside input regarding implementation of the adaptive management program. Input will be provided regularly as needed to help guide monitoring protocols and experimental design, to interpret results and generate hypotheses, and to comment on the overall success of the adaptive management program in achieving the biological goals of the HCP/NCCP. Upon implementation, the Science Advisors will meet formally at least once a

year to review the progress of the HCP/NCCP. Formal reviews will occur less frequently as the HCP/NCCP progresses (Section 8.2.5 and 8.3.7, Ch8: HCP/NCCP).

USFWS and CDFG will provide feedback on the implementation of the adaptive management program described in the annual work plans. Individuals within the Wildlife Agencies with particular expertise in management may also participate as Science Advisors. All forms of input will be collected by the Implementing Entity and incorporated into management and monitoring practices, as appropriate (Section 8.2.4 and 8.3.7, Ch8: HCP/NCCP).

An Independent Conservation Assessment Team, distinct from the Science Advisors, will provide conservation "audits" every five years. The role of the Independent Conservation Assessment Team is described in detail in Chapter 8, *Implementation.*

A Local Land Managers Forum made up of both private and public landholders (e.g., park managers, local landowners) may be established to solicit feedback regarding the effects of preserve management on adjacent lands, to make recommendations for changing specific aspects of the preserve management, and to facilitate communication between local landowners and the Implementing Entity (Section 8.3.7, Ch 8: 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 8.11, Ch 8: HCP/NCCP) and the Implementing Agreement. In addition, to facilitate awareness of responsibilities and ensure consistency of implementation, a table has been prepared that summarizes the responsibilities of each party for key implementation tasks.

The Implementing Entity is responsible for ensuring acquisition of land for the Preserve System in accordance with Conservation Measure 1.1 and the conservation strategy that guides land purchases (Ch 5: HCP/NCCP). The steps for the land acquisition process, including site identification and pre-acquisition surveys, for land acquired in fee title or through conservation easements are illustrated in Figure 8-3 (Ch 8:HCP/NCCP). The Implementing Entity may perform these steps on its own or in conjunction with acquisition partners.

The NCCPA requires that conservation stay in "rough proportion" to development. The Jump-Start guideline and Stay-Ahead provisions of the HCP/NCCP (Ch 8: NCCP/HCP) are intended to ensure that land acquisition and habitat restoration always stay ahead of impacts. Meeting this requirement, however, depends on the steady acquisition of land from willing sellers and a steady stream of funding from both development and non-development sources. The nature of land

acquisition is such that assembly of the Preserve System is not likely to be accomplished in a constant or predictable fashion. It is expected that large (640 acres or more) land acquisitions will comprise the bulk of the total acreage of the Preserve System. Acquisition of large parcels (or combinations of parcels) is typically more complex and may take longer to realize than acquisition of small parcels. Over the long term, larger land acquisitions will save money because of their typically lower price per acre and lower land expense costs per acre (e.g., due diligence, legal fees). The Implementing Entity will be responsible for performing the conservation measures necessary to comply with the Stay-Ahead provision, as described in Chapter 8 (Section 8.6.1, Ch 8: HCP/NCCP).

During the first year after permit issuance, the Implementing Entity will be establishing its structure, collecting initial HCP/NCCP fees, and actively pursuing land acquisition deals with willing landowners. To allow time for these start-up tasks to occur, the Stay-Ahead provision will only apply after one year of HCP/NCCP implementation. After one year of implementation, the Implementing Entity must measure its compliance with the Stay-Ahead provision by one of two methods during the first 10 years of the permit term (i.e., from the beginning of Year 2 to the end of Year 10). The two methods are provided to give the Implementing Entity more flexibility and to provide an incentive for land acquisition in key areas of the inventory area. (Ch 8: HCP/NCCP). After Year 10, the Implementing Entity must use only the Measurement Method #1 to measure compliance with the Stay-Ahead provision (Table 5-8: HCP/NCCP). Under either measurement method, land may be counted toward the Stay-Ahead provision once it is incorporated into the Preserve System. The criteria for incorporating land into the Preserve System are described in Section 8.6, in Chapter 8 of the HCP/NCCP.

The HCP/NCCP allows a 5% deviation from the strict requirements above without penalty to account for the likely pattern of infrequent land acquisition of large parcels. This allowable deviation will apply to either method employed by the Implementing Entity to calculate compliance with the Stay-Ahead provision.

The Implementing Entity will monitor the status of the Stay-Ahead provision throughout HCP/NCCP implementation. The Stay-Ahead provision will also be evaluated on an annual basis by USFWS and CDFG (Section 8.6.1, Ch 8: HCP/NCCP).

Beginning with the Year 2 annual report, the Implementing Entity will report on the status of the Stay-Ahead provision. As long as the ratio between impacts as a percentage of estimated impacts and acquisition as a percentage of required acquisitions remains within a 5% deviation (under either measurement method for the first ten years) then the Stay-Ahead provision will have been satisfied. If the annual evaluation shows that the Stay-Ahead provision is not satisfied, then the Implementing Entity and USFWS and CDFG will meet and confer to mutually develop a plan to achieve the Stay-Ahead provision, as further described below. Land acquired in full or in part by state or federal agencies to contribute to species recovery under this HCP/NCCP will also

contribute to compliance with the Stay-Ahead provision. Because a portion of the HCP/NCCP's conservation actions depend on efforts by the state and federal governments, the Implementing Entity's compliance with the Stay-Ahead provision will depend in part on the fulfillment of these efforts. The Implementing Entity must acquire land on its own and cannot rely on the timely availability of state or federal funds to acquire land.

The Stay-Ahead provision will also be evaluated on an annual basis (beginning at the end of Year 2) by CDFG based on analysis provided by the Implementing Entity to determine if the "rough proportionality" standard of NCCPA is being met. If the HCP/NCCP is found to be out of compliance with the Stay-Ahead provision by more than a 10% deviation (i.e., 5% over the allowable deviation of 5% for Stay Ahead), then CDFG will determine whether the HCP/NCCP has maintained rough proportionality. If CDFG issues a notification to the Implementing Entity that rough proportionality has not been met, then CDFG and USFWS and the Implementing Entity will meet to develop a plan to remedy the situation. If the federal and state commitment to the HCP/NCCP cannot be provided in order to meet the rough proportionality requirement, the HCP/NCCP will be reevaluated in light of these limitations, with possible adjustments made to the permit coverage and assurances or adjustments to the conservation obligations (Section 8.6.1, Ch 8: HCP/NCCP).

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 30-year permit term is estimated at $297,000,000 or $350,000,000 for the IUDA or MUDA, respectively. This includes the cost of land acquisition, HCP/NCCP administration, habitat management, habitat restoration, biological monitoring, remedial measures, and a 5% cost contingency.

Full funding during the permit term is guaranteed by the Permittees through the Implementing Agreement as described in Chapter 9 of the HCP/NCCP. In addition, Section 14.1 of the Implementing Agreement provides that the Implementing Entity, County, Cities and County Flood Control District shall ensure that monitoring, reporting, and adaptive management measures are adequately funded in perpetuity. There is a wide range of viable strategies available to fund the HCP/NCCP after the permit term and in perpetuity to cover the long-term costs of preserve management, monitoring, and program administration (Table 9-9: HCP/NCCP).

The HCP/NCCP describes funding for post-permit management and monitoring (Table 4-3, Ch 4 and Section 9.3.4, Ch 9: HCP/NCCP). Although no single strategy has been selected at this time, the Implementing Entity will develop a detailed plan for long-term funding of operation and maintenance and secure all necessary commitments to implement this plan before using 50% of all authorized take under the MUDA (this equals 50% of 13,029 acres, or 6,514 acres) or at the end of Year 15 of implementation, whichever occurs first.

Funding to implement the HCP/NCCP will come from a variety of sources. These sources may be classified as fees on Covered Activities and non-fee public funding. Proponents of Covered Activities will pay a fee to receive permit coverage under the HCP/NCCP. Non-fee public funding will either come from continued investment by local, state, and federal programs already funding conservation in this area or from existing state and federal sources reserved for areas with an approved HCP/NCCP.

Funding from Fees on Covered Activities

Funding for mitigating Covered Activities will include fees or land dedications and can be separated into the following categories: development mitigation fee, additional wetland mitigation fee, rural road fee, Byron Airport expansion, and temporary impact fee for impacts to wetland cover types.

In the first year of HCP/NCCP implementation, developer fees will range from $5,960 per acre for specific infill parcels less than 10 acres in size to $23,838 per acre for parcels on natural land-cover types in specific mapped areas. Figure 9-1 in Chapter 9 of the HCP/NCCP shows the three zones and the fee-per-acre in each zone. Additional fees will be charged for impacts on jurisdictional wetlands that range from $58,140 per acre to $172,380 per acre, depending on the wetland type, to pay for the direct and substantial cost of wetland restoration. Each covered road project has its own pre-defined fee. Some Covered Activities that cause temporary impacts will also be subject to a fee (Section 9.3.1, Ch 9: HCP/NCCP). All fees will be automatically adjusted annually using standard indexes to keep pace with inflation and expected increases in land costs. (The index used for inflation of land-acquisition cost is the Annual Home Price Index [HPI] for the Oakland-Fremont-Hayward, CA Metropolitan Division [MSAD] for the prior calendar year, published by the Federal Office of Federal Housing Enterprise Oversight. The index used to develop the non–land cost inflation is the Consumer Price Index for the San Francisco Bay Region.) Land may be contributed in lieu of fees.

Non-Fee Funding from Local, State, and Federal Sources

Non-fee public funding can only be used for portions of the HCP/NCCP that contribute to species recovery (not for mitigation), conservation, management, and monitoring. Local funding will take several forms, including continued investments in conservation by EBRPD and local land trusts. Federal and State funding sources will include USFWS grants under Section 6 of FESA, Wildlife Conservation Board grants, and state park and resource bond measures. Some of these federal and state funding sources are generally available throughout the state and nation, while others can only be used to implement an approved HCP/NCCP. Although not assumed in revenue projections, funding may be supplemented by future local funding measures for parks and open space.

Tables 9-1 and 9-2 in Chapter 9 of the HCP/NCCP summarize the estimated cost of HCP implementation. Table 9-8 provides a cost and 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. (2820(b)(1))**

The Implementing Agreement identifies 28 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 Implementing Agreement and the HCP/NCCP specifically prohibit the take of extremely rare plant species listed in Table 6-5 of the HCP/NCCP ("No-Take Plant Population") and golden eagle and ringtail which are Fully Protected Species under California Fish and Game Code Sections 3511 and 4700. All 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 Implementing Agreement 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. (2820(b)(2))**

The Implementing Entity shall create a Preserve System by acquiring land and dedicating it in perpetuity to the Preserve System through either a fee interest or conservation easement. The Implementing Entity may also include in the Preserve System lands acquired by EBRPD and lands acquired through partnerships with other entities in accordance with Sections 9.1, 9.4, and 9.5 of the Implementing Agreement. Where EBRPD or the Implementing Entity itself acquires a fee interest in land, preservation shall be ensured through conservation easements, restrictive covenants, deed restrictions, or equivalent title restrictions, recorded in favor of the Wildlife Agencies. For lands owned by other entities, permanent protection shall be ensured by a conservation easement or by some other permanent dedication of land that is approved by CDFG and USFWS. Where acquisition is by conservation easement, each conservation easement shall provide for the permanent protection and dedication of the land to the Preserve System, consistent with the criteria listed in Chapter 8.6.3 of the HCP/NCCP.

All acquisitions shall adhere to the principles and priorities for preserve design, and for species population and habitat preservation and enhancement, as set forth in Conservation Measure 1.1 of the HCP/NCCP, including any Zone and Subzone Requirements detailed in Conservation Measure 1.1 and the acreage requirements set in Tables 5-7 and 5-8 of the HCP/NCCP. The

creation of the Preserve System shall follow the process contained in the Conservation Measure 1.1, which the Parties acknowledge allows for some flexibility in how the Preserve System is ultimately assembled, including the acceptance of credits from approved mitigation or conservation banks, to account for availability and funding. The Implementing Entity shall also comply with the steps and guidelines for land acquisition described in Chapters 5.2 and 5.3 of the HCP/NCCP (Sections 9.4 and 9.5:IA).

As detailed in Table 5-9 of the HCP/NCCP, the Preserve System will contain a minimum of 21,450 or 26,050 acres under the IUDA or MUDA, respectively (Section 9.1:IA)

In addition to acquiring lands for the Preserve 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. and subject to all of the terms and conditions of Chapter 8.6.3 of the HCP/NCCP. 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. CDFG and USFWS shall be named as third party beneficiaries on all conservation easements. The Parties will develop a template conservation easement document that may be used for Preserve System lands (Sections 9.1.1: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. (2820(b)(3)**

As described in Section 19.2 of the Implementing Agreement, CDFG may revoke or terminate the NCCP Permit for a material violation of the NCCP Permit or material breach of the Implementing Agreement by the Permittees. If the Permittees are out of compliance with the Federal Permit issued for this HCP/NCCP, that constitutes a material breach of the Implementing Agreement (Section 19.1,19.2:IA). CDFG must determine in writing that (a) such violation or breach cannot be effectively redressed by other remedies or enforcement action, or (b) revocation or termination is required to avoid jeopardizing the continued existence of a Covered Species and to fulfill a legal obligation of the CDFG under NCCPA (Section 19.2 and 21.4.1:IA).

CDFG agrees that it will not revoke or terminate the NCCP Permit without first (a) requesting that the Permittees take appropriate remedial action, and (b) providing the Permittees with notice in writing of the facts or conduct which warrant the revocation or termination and a reasonable opportunity (but not less than forty-five (45) days) to demonstrate or achieve compliance with the NCCP Permit and the Implementing Agreement.

However, in the event that CDFG has determined that the Permittees have failed to meet the rough proportionality standard provided in Sections 8.6.1 of HCP/NCCP and 9.3 of the Implementing Agreement, and if the Permittees have failed to cure the default or to enter into an Agreement to do so within forty-five (45) days of the written notice of such determination, CDFG shall revoke the NCCP Permit in whole or in part in accordance with California Fish and Game Code Section 2820 (Section 21.4.1:IA).

Finding 4.2.3A **CDFG finds that the Implementing Agreement specifies the action CDFG shall take <u>if the participant fails to provide adequate funding.</u> (2820(b)(3)(A))**

In the event there is inadequate funding to implement the HCP/NCCP, USFWS and CDFG will assess the impact of the funding deficiency on the scope and validity of the permits. Unless the Permittees exercise the authority to withdraw pursuant to Section 20.0 of the Implementing Agreement or the Wildlife Agencies revoke the Permits pursuant to Section 19.0 of the Implementing Agreement, the Parties agree that they will meet and confer to cooperatively develop a strategy to address the funding shortfall, and to undertake all practicable efforts to maintain the level of conservation and take authorization afforded by the Permits until the funding situation can be remedied (Section 19.0 and 20.0:IA).

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

If at any time CDFG provides written notification that rough proportionality has not been met, then the Implementing Entity, County, Cities and County Flood Control District will either: (1) regain rough proportionality within forty-five (45) days; or (2) enter into an agreement with CDFG within forty-five (45) days which will set a course of action to expeditiously regain rough proportionality. The Agreement may include any of a variety of commitments or adjustments to the HCP/NCCP designed to regain rough proportionality, including but not limited to, a plan to acquire, restore, or enhance lands of appropriate vegetation or land-cover type expeditiously (Section 9.3: IA).

In the event that CDFG has determined that the Permittees have failed to meet the rough proportionality standard provided in Section 9.3 of the Implementing Agreement, and if the Permittees have failed to cure the default or have failed to enter into an Agreement to do so within forty-five (45) days of the written notice of such determination, CDFG shall suspend the NCCP Permit in whole or in part in accordance with California Fish and Game Code Section 2820 (Section 21.4.2: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. (2820(b)(3)(C))**

The USFWS or CDFG may object to an action or inaction by a Permittee with regard to a specific project, such as the Permittee's determination of appropriate mitigation requirements for the project. A Permittee may object to an action or inaction by the USFWS or CDFG with regard to a specific project.

In a dispute among the Parties pertaining to a specific project, the proponent of the project shall be allowed to provide input into the dispute resolution process by reviewing the initial notice of objection and submitting its own response and, if applicable, by participating in the meeting referenced in Section 21.1.1 of the Implementing Agreement among the Permittee(s), the Implementing Entity and the USFWS and/or CDFG (Section 21.1.1:IA).

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. (2820(b)(3)(D))**

Section 21.4.1 of the Implementing Agreement 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 Implementing Agreement by the Permittees, provided, however, that it shall not suspend this NCCP Permit without first (1) attempting to resolve any disagreements regarding the implementation or interpretation of the HCP/NCCP or the Implementing Agreement in accordance with Section 21.1, (2) requesting the Permittees to take appropriate remedial actions, and (3) providing the Permittees with written notice of the facts or conduct which may warrant the suspension and an adequate and reasonable opportunity for the Permittees to demonstrate why suspension is not warranted or to take steps necessary to cure the violation or breach (Sections 21.4.1 and 21.1:IA).

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

The HCP/NCCP may be amended only with the written consent of all of the Parties; provided, however, that any amendment or portion thereof pertaining to third party participants, implementing ordinances, or any other provision of the HCP/NCCP pertaining to the Cities' or County's application of conservation measures to private urban development projects shall not require the consent of the County Flood Control District or EBRPD (Section 17.6: IA).

Any change to the Implementing Agreement, the HCP/NCCP or the Permits that does not qualify as a Minor Amendment under Section 17.6.3 of the Implementing Agreement may be processed as a Major Amendment in accordance with all applicable laws and regulations, including but not limited to FESA, NEPA, NCCPA and CEQA. The Party proposing the Major Amendment shall provide a statement of the reasons and an analysis of its environmental effects, if any, including its effects on the effectiveness of the HCP/NCCP and on Covered Species. The Wildlife Agencies shall process the proposed Major Amendment in an expeditious manner, commensurate with the level of environmental review appropriate to the magnitude of the proposed Major Amendment. Any Permittee may, in its sole discretion, reject any Major Amendment proposed by the Wildlife Agencies; however, the Permittee will use reasonable efforts to explain in writing its rationale for any such rejection within thirty (30) days of communicating such rejection to the Wildlife Agencies (Section 17.6.3:IA).

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

The Implementing Entity shall carry out the compliance and effectiveness monitoring and reporting, as further described in Chapters 6.0 and 7.0 of the HCP/NCCP. The Implementing Entity may delegate monitoring and reporting tasks to other Parties or qualified third parties, including universities, scientists and other contractors. However, the Implementing Entity shall remain solely responsible for all monitoring and reporting requirements in perpetuity and for the timeliness and quality of the monitoring and reporting plan (Section 11.0: IA).

The Implementing Entity shall implement an adaptive management program as further described in Chapter 7.0 of the HCP/NCCP, in order to gauge the effectiveness of the HCP/NCCP, propose and modify conservation measures as the need arises, and respond to Changed Circumstances. The adaptive management program will be based on the results of monitoring and directed studies. The specific responsibilities of the Implementing Entity in carrying out the adaptive management program are further defined in Chapter 7.0 of the HCP/NCCP (Section 12.1.1:IA).

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. (2820(b)(6))**

All system-wide management plans, specific Preserve Management Plans, and Adaptive Management Plans must be reviewed and approved by the Wildlife Agencies. The Implementing Entity will also update and revise such plans as part of the HCP/NCCP's adaptive management program. The Implementing Entity shall submit such plans or revisions in writing with a cover

sheet explaining the plan or revisions and the rationale for such plan or revisions. The Wildlife Agencies shall review the submission and provide a consistent response in writing within sixty (60) days. The written response shall contain either an approval, which shall not be unreasonably withheld, a description of reasonable modifications needed to reach approval, or an objection accompanied by a written explanation of the objection. During preparation and agency review of such plans and revisions, preserve management shall continue according to the HCP/NCCP and best scientific practices (Section 10.4:IA).

The Parties will review the Annual Report described in Section 11.4 of the Implementing Agreement for the purposes of evaluating both the implementation of the HCP/NCCP during the preceding year and the adequacy of the overall progress being made towards reaching the conservation goals of the HCP/NCCP, utilizing HabiTrak or a Geographic Information System-based system that is transferable to HabiTrak. Items to be considered in the evaluation include, but are not limited to, all contributions towards the assembly of the Preserve System, such as public lands, private mitigation lands, land donations, land acquisitions, and management activities undertaken or proposed on habitat lands. Habitat management activities undertaken or proposed will also be discussed. The Parties will also review all available reports and recommendations from Science Advisors, land management agencies, the Independent Conservation Assessment Team, and others involved in preserve management and monitoring as described in Chapter 8.3.7 of the HCP/NCCP. If, based on this information, Wildlife Agencies determine that adequate progress towards implementation of the HCP/NCCP is not being achieved, Wildlife Agencies shall provide their findings and the basis for such findings in writing to the Permittees; and the Parties will take the actions specified in the HCP/NCCP and the Implementing Agreement to remedy that situation. If the Wildlife Agencies determine that adequate progress towards implementation of the HCP/NCCP is being achieved, but that it is nevertheless not providing sufficient protection to the Covered Species, the Wildlife Agencies shall provide their findings and the basis for such findings in writing to the Permittees; and then the Parties shall work cooperatively and take appropriate actions consistent with the HCP/NCCP and the Implementing Agreement (such as altering management activities or redirecting mitigation and acquisition) in order to remedy the situation. Once each year, the Implementing Entity and any other Permittee that wishes to participate shall meet with Wildlife Agencies to review and coordinate implementation of the HCP/NCCP (Section 11.5:IA).

Within thirty (30) days of receipt of a written request from the Wildlife Agencies, the Implementing Entity will provide any additional information in its possession or control related to implementation of the HCP/NCCP for the purpose of assessing whether the terms and conditions of the Implementing Agreement, the HCP/NCCP and the Permits are being fully implemented (Section 11.6:IA).

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. (2820(b)(7))**

The Implementing Entity shall prepare and submit an Annual Report to the Wildlife Agencies and Permittees. Each Annual Report shall address, at a minimum, the descriptions and analyses detailed in Chapter 8.10 of the HCP/NCCP (Section 11.4:IA).

By March 15 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: the previous calendar year's monitoring and research results; an accounting, by project and cumulatively, of habitat acreage lost and conserved within the HCP/NCCP Area (by habitat type or vegetation community); and assessment of the rough proportionality standard under Section 9.3 of the Implementing Agreement. The first Annual Report shall be prepared by no later than March 15 following the first full calendar year of HCP/NCCP implementation and shall report on all applicable activities and results from the date of permit issuance to the end of the first full calendar year. Each Annual Report shall address, at a minimum, the descriptions and analyses detailed in Chapter 8.10 of the HCP/NCCP. The Implementing Entity shall make the latest Annual Report accessible to the public via the Internet, and at a publicly noticed open meeting jointly conducted on an annual basis by the Implementing Entity, USFWS and CDFG to disseminate and discuss the annual report. (Section 11.4: IA)

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. (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, and that, 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 Conservation Strategy; rather, they intend to obtain sufficient funds through a comprehensive strategy further described in Chapter 9.3 of the HCP/NCCP, primarily depending on mitigation fees, dedications, and real estate transfer fees from future developments, federal and state grants pursuant to Section 9.1.2 of the Implementing Agreement, and maintenance of existing conservation efforts by local and state agencies that have a demonstrated record of acquiring and managing lands for recreational and conservation purposes in Contra Costa County. 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 Chapter 9.3.1 of the HCP/NCCP. Each Permittee will promptly notify the

Wildlife Agencies of any material change in the Permittee's financial ability to fulfill its obligations under the Implementing Agreement. In addition to providing any such notice, the Implementing Entity will include in its Annual Report to the Wildlife Agencies such reasonably available financial information to demonstrate the Permittees' ability to fulfill their obligations (Section 14.1, 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. (2820(b)(9))**

For purposes of the HCP/NCCP, whether "rough proportionality" is met shall be determined pursuant to Chapter 8.6.1 of the HCP/NCCP. Two methods to measure compliance with the Stay Ahead Provision are described along with criteria which must be met for land acquisitions to satisfy the requirements of the HCP/NCCP. Acquired lands must meet the goals and objectives as described in Chapter 5 of the HCP/NCCP, permanently protecting the biological functions and values that contribute to the HCP/NCCP.

Acquired lands must be managed in perpetuity according to a Preserve Management Plan. Acquisitions may be counted toward meeting the obligations of the HCP/NCCP before the Preserve Management Plan has been completed if the Implementing Entity owns the land or if the property owner is bound by a conservation easement or other Agreement that requires preparation of a Preserve Management Plan consistent with the requirements of Conservation Measure 1.2 and 1.3 in Chapter 5 (Section 8.6, Ch 8:HCP/NCCP; Section 9.3: IA).

Finding 4.3 **CDFG finds that the Implementing Agreement contains provisions for suspension or revocation of the permit, in whole or in part, if the HCP/NCCP participant does not maintain proportionality between take and conservation measures specified in the implementation Agreement and does not either cure the default with 45 days or enter into and Agreement with the department within 45 days to expeditiously cure the default. (2820(c))**

In the event that CDFG has determined that the Permittees have failed to meet the rough proportionality standard provided in Section 9.3 of the Implementing Agreement, and if the Permittees have failed to cure the default or have failed to enter into an Agreement to do so within forty-five (45) days of the written notice of such determination, CDFG shall suspend the NCCP Permit in whole or in part in accordance with California Fish and Game Code Section 2820 (Section 9.2, 21.4.2 IA).

Finding 4.4 **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. (2820(d))**

By March 15 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: the previous calendar year's monitoring and research results; an accounting, by project and cumulatively, of habitat acreage lost and conserved within the HCP/NCCP area (by habitat type or vegetation community); and an assessment of the rough proportionality standard. The first Annual Report shall be prepared by no later than March 15 following the first full calendar year of HCP/NCCP implementation and shall report on all applicable activities and results from the date of permit issuance to the end of the first full calendar year. Each Annual Report shall address, at a minimum, the descriptions and analyses detailed in Chapter 8.10 of the HCP/NCCP.

The Implementing Entity shall make the latest Annual Report accessible to the public via the Internet, and at a publicly noticed open meeting jointly conducted on an annual basis by the Implementing Entity, USFWS, and CDFG to disseminate and discuss the annual report (Section 11.4:IA).

Finding 4.5 **CDFG finds that the HCP/NCCP participant that is the lead agency or responsible agency shall incorporate in the review of any subsequent project in the plan area the feasible mitigation measures and alternatives related to the biological impacts on Covered Species and their habitat developed in the program environmental impact report. (2820(e))**

Projects being reviewed must be consistent with the CEQA document conditions. The proponent of any project that is a Covered Activity shall be eligible for take authorization in accordance with the HCP/NCCP and the Permits. To receive take authorization under the Permits, the project proponent must enter into an agreement with a Permittee that has approval authority over the project and assume the obligation to comply with all terms and conditions of the

Implementing Agreement, the HCP/NCCP, and the Permits that apply to the project, or the Permittee must impose such terms and conditions as conditions of project approval. Provided the project proponent is obligated under an agreement or conditions of project approval to comply with such terms and conditions, the Permittee shall extend the take authorization to the project proponent upon issuance of a grading permit for the project or, if a grading permit is not required, issuance of the first construction permit. The project proponent thereafter shall be a third party participant.

At a minimum, each third party participant must submit the following to the County or City with jurisdiction over the proposed project (these application requirements, among other things, will be required through an implementing ordinance) (Section 6.2: Ch 6:HCP/NCCP):

- Definition of project area, including project footprint, extent of construction, and extent of ongoing maintenance activities.
- Written description of project, including maps.
- Results of planning surveys, in accordance with Chapter 6 of the HCP/NCCP.
- Evidence of compliance with avoidance and minimization measures, in accordance with Chapter 6 of the HCP/NCCP.
- Quantification of anticipated direct and indirect impacts on HCP/NCCP land-cover types, Covered Species habitat, and other HCP/NCCP resources.
- Proposed conservation measures (e.g., land dedication, acquisition, fee).

Prior to approving or carrying out any Covered Activity within their respective land use jurisdictions, the County and Cities shall evaluate the proposed project to determine first if it is a Covered Activity and apply the above referenced instructions to ensure that all applicable avoidance and minimization measures are incorporated into the proposed project, as further provided by the Implementing Agreement. For those proposed projects that are not implemented directly by, or subject to the land use authority of, any one of the Permittees, the Implementing Entity shall be responsible to ensure that all applicable avoidance and minimization measures are implemented. Throughout Section 8.0 of the Implementing Agreement, the phrase "the Permittee or the Implementing Entity" shall be construed to refer to the Permittee that will implement the proposed project or, for projects implemented by third party participants, to the County or City with land use authority over the subject proposed project, and shall be construed to refer to the Implementing Entity only with regard to Covered Activities that are not implemented directly by any other Permittee and are not subject to the land use authority of the County or any City (Section 8.0:IA).

Finding 4.6 **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. (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. 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 Preserve System) linked to existing protected lands. Acquisition priorities that will shape the Preserve System are shown in Figures 5-2 and 5-3 in the HCP/NCCP. The conservation strategy is designed to create a Preserve System that will:

- Preserve approximately 23,800 acres of land under the IUDA or approximately 30,300 acres of land under the MUDA 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.
- Compensate for habitat loss by restoring or creating approximately 424–586 acres (under the IUDA or MUDA, respectively) of specific habitats and land cover types.

These actions, plus the avoidance, minimization, and additional specific conservation measures in the HCP/NCCP, will offset the loss of 9,796 acres under the IUDA or 13,029 acres under the MUDA (ES-3:HCP/NCCP).

As provided in the Implementing Agreement, 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, even in the event of Unforeseen Circumstances, provided the Permittees are properly implementing the Implementing Agreement, the HCP/NCCP and the terms and conditions of the NCCP Permit. The provisions of the Implementing Agreement 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 would 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 Implementing Agreement.

Finding 4.6.1A **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. (2820(f)(1))**

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 inventory 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 inventory area to adequately evaluate impacts on the species and to develop conservation measures to mitigate these impacts in accordance with regulatory standards (Section 3.3.7, Ch 3: HCP/NCCP).

The HCP/NCCP includes the following six vegetation communities, corresponding to the major land cover types (excluding development), grassland, chaparral/scrub, oak woodland (including oak savannah), riparian woodland/scrub (including streams), wetlands, and cultivated agriculture. Cultivated agriculture is included as a vegetation 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 vegetation 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 4.6.1B **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. (2820(f)(1)(B))**

Implementation of the Covered Activities will result in take of some 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 (see Table 3-10 and Appendix D, HCP/NCCP). Estimates of take are based on the habitat models developed for 20 of the 28 Covered Species. These estimates are likely to be inflated because (1) habitat models may overestimate the actual extent of suitable habitat (see species profiles in Appendix D for details on each model), and (2) not all suitable habitat is occupied by the subject species.

For eight of the Covered Species, sufficient information was not available to create habitat models. In these cases, worst-case assumptions were used regarding the amount of suitable habitat removed by Covered Activities (Section 4.1.1, Ch 4:HCP/NCCP).

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 3-10 and the species profiles (Appendix D: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 4-1 through 4-4. Impacts are described for each taxonomic group. Estimates of impacts on Covered Species with habitat models are provided in Tables 4-4 and 4-5 under the IUDA or MUDA, respectively (Ch 4: HCP/NCCP).

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 4.6.1C **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. (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 the Planning Agreement (Section 5, Planning Agreement).

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, biological consultants 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 biological consultants developed habitat suitability models for 20 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 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 (for details on each model, see species profiles in Appendix D: HCP/NCCP) and not all suitable habitat is occupied by the subject species.

For eight of the Covered Species, sufficient information was not available to create habitat models. In these cases, worst-case assumptions were used regarding the amount of suitable habitat removed by Covered Activities (Section 4.1.1, Ch 4:HCP/NCCP).

Development of the HCP/NCCP was guided by independent scientific input and analysis (Section 5.1.4: Planning Agreement). During development of the HCP/NCCP, independent scientific input was provided by the Science Advisors, authorized by the HCPA Executive Governing Committee. The Science Advisors Panel was headed by Dr. Lynn Huntsinger, Associate Professor in the Department of Environmental Science, Policy, and Management at the University of California, Berkeley, and was facilitated by Dr. Erica Fleishman, then a Research Associate with Center for Conservation Biology at Stanford University. The Science Advisors convened four times during development of the HCP/NCCP and provided written guidance on substantive documents and biological issues submitted to it for review, including the selection of Covered Species, reserve design principles, the preliminary conservation strategy and the preliminary adaptive management and monitoring programs.

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 4.6.1D **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. (2820(f)(1)(D))**

As previously described, the HCP/NCCP utilized an extensive data collection process and received input from scientific experts in various fields of biology and conservation biology. Inventory and permit-area boundaries were based on a combination of watershed boundaries, political, ecological, and hydrologic factors (Section 1.2.2, Ch 1:HCP/NCCP). One of the

primary data sources for the HCP/NCCP was a detailed GIS-based map of land cover types within the inventory area. Land cover type is defined as the dominant character of the land surface discernible from aerial photographs, as determined by vegetation, water, or human uses. Land cover types are the most widely used units in analyzing ecosystem function, habitat diversity, covered natural communities, wetlands and streams, and Covered Species habitat.

During development of the HCP/NCCP, biological consultants 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. Sources used to map and describe the physical setting of the inventory area included U.S. Geological Survey (USGS) data on topography and hydrology; geologic maps of the area, soil survey information, and other published information. Topography, hydrology, and soil data were downloaded from agency web sites and imported into ArcInfo, where files were clipped and converted into the projection for the inventory area.

In addition to using existing data sets, Jones & Stokes biologists conducted field visits. Once field visits were conducted, land cover mapping was revised on the basis of field findings. Comments of the HCP/NCCP Science Advisors on the draft land cover maps indicated the need for follow-up field surveys to add detail to the data set. In particular, the panel identified the need to collect data on the occurrence and extent of "small-scale features," such as rock outcrops, caves, serpentine areas, small ponds, and vernal pools, that may have been missed during the initial mapping effort. Follow-up field surveys were also conducted based on Science Advisors recommendations to increase the accuracy of mapped locations of alkali grasslands and wetlands and to update the mapping from the 2000 aerial photos (Section 3.2.2, Ch3:HCP/NCCP).

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. One criterion used to determine whether a species would be covered (i.e., authorized for take in the permits) was whether there was sufficient data on the species' life history, habitat requirements, and occurrence in the inventory area to adequately evaluate impacts on the species and to develop conservation measures to mitigate these impacts in accordance with regulatory standards (Section 3.3.7, Ch 3: HCP/NCCP). Table 3-7 (HCP/NCCP) lists all special-status species that were evaluated and the criteria that were met by each species. Table 3-8 (HCP/NCCP) lists the 28 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 4.6.1E **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. (2820(f)(1)(E))**

The cost of implementing the HCP/NCCP during the 30-year permit term is estimated at $297,090,000 or $350,040,000 for the IUDA or MUDA, respectively (Table ES-2:HCP/NCCP). This includes the cost of land acquisition, HCP/NCCP administration, habitat management, habitat restoration, biological monitoring, and remedial measures.

Funding to implement the HCP/NCCP will come from a variety of sources, including fees on Covered Activities and from non-fee public funding. Proponents of Covered Activities will pay a fee to receive permit coverage under the HCP/NCCP, a much simpler process for mitigating endangered species impacts than would be possible on project-by-project basis. Non-fee public funding will likely either come from continued investment by local, state, and federal programs already funding conservation in this area or from existing state and federal sources reserved for areas with an approved HCP/NCCP. The funds from public agencies may be available on budget cycles that may or may not correspond to the timing of Covered Activities in the permit area. Therefore, the Implementing Entity must acquire land on its own and cannot rely on the timely availability of state or federal funds to acquire land. In addition, Section 14.1 of the Implementing Agreement provides that the Implementing Entity, County, Cities and Flood Control District shall ensure that monitoring, reporting and adaptive management measures are adequately funded in perpetuity (Section 14.1:IA).

The Implementing Entity shall develop and begin to implement a detailed plan for long-term funding of the administration and management of the Preserve System beyond the term of the Permits, and shall secure all necessary commitments to collect such funding before developing 6,514 acres (fifty percent [50%] of the MUDA as provided in Table 4-3 of the HCP/NCCP) or within fifteen (15) years of the date of permit issuance, whichever comes first (Section 14.3:IA, Ch 4:HCP/NCCP).

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

Finding 4.6.1F **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. (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. The data repository and associated databases will be structured to be "user friendly," such that a trained staffer (as opposed to a technician or programmer) can enter data. Additionally, the data repository will allow for future expansion and integration with external databases (e.g., linkage to agency or other GIS map libraries and other preserve networks) (Section 8.9.1, Ch 8: HCP/NCCP).

The Implementing Entity will either use the HabiTrak database developed by CDFG, or a Geographic Information System-based data repository that is transferable to HabiTrak. The Implementing Entity shall make the data repository accessible to the parties named in the Implementing Agreement, including the Wildlife Agencies. The Wildlife Agencies shall safeguard sensitive species information to the extent permitted by the Freedom of Information Act and the California Public Records Act. Subject to the California Public Records Act, the Implementing Entity shall maintain sole discretion over whether to grant access to any of the data in the database to third parties, including third party participants (Section 11.2.1:IA).

All data and reports associated with the monitoring program for this HCP/NCCP will be available to the public, with the exception of reports documenting surveys on private lands considered for acquisition but not yet acquired by the Implementing Entity. At least once annually, the HCP/NCCP Implementing Entity will report on the progress of implementation directly to the public in a workshop. The Implementing Entity will summarize habitat losses and gains, habitat restoration and creation, and management and monitoring accomplishments for the previous year. The meeting will provide a forum for the public to ask questions and provide comments directly to the Implementing Entity on the overall progress of HCP/NCCP implementation (Section 8.2, Ch 8:HCP/NCCP).

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 4.6.1G **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. (2820(f)(1)(G))**

The following foreseeable changed circumstances were recognized in the HCP/NCCP: listing of Covered Species; listing of new non-Covered Species; natural communities lost to fire; invasion by new exotic species or diseases; pond or wetland control structures failure; riparian plantings destroyed by flooding, prolonged drought; and vandalism of preserves. Adequate mechanisms to respond to these changed circumstances, and funding to address them, in an adaptive management context were included in this HCP/NCCP.

Other potential changed circumstances were also considered but rejected. For example, earthquakes are a rare but expected occurrence in the San Francisco Bay Area. The location, magnitude, and effects of an earthquake with the potential to adversely affect the HCP/NCCP Preserve System are unknown, highly speculative, and not reasonably anticipated. However, although unlikely, a strong earthquake may damage structures such as preserve offices, fences, or pond levees. Any damage to these structures from earthquakes would be repaired by the Implementing Entity as a matter of course (Section 10.2.1, Ch 10: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 4.6.1H **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. (2820(f)(1)(H))**

Contra Costa County has a land area of more than 435,000 acres. The HCP/NCCP inventory area covers approximately one-third of the County, or 174,018 acres in East Contra Costa County. The inventory area was defined as the area in which impacts would be evaluated and landscape-level conservation would occur and the permit area is the area in which the Permittees expect to incur impacts to Covered Species. Inventory and permit-area boundaries were based on a combination of watershed boundaries, political, ecological, and hydrologic factors (1.2.2, Ch 1:HCP/NCCP).

The conservation strategy relies on assemblage of a system of new preserves linked to existing protected lands to form a network lands. The Preserve area will be between 23,800 acres and 30,300 acres and the total impacts allowed under the HCP/NCCP are between 9,796 acres and 13,029 acres. The size and configuration of the Preserve 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 Preserve System relative to the impacts associated with Covered Activities in the permit area, is adequate to support the assurances as stated in the Implementing Agreement (Section 15.3:IA).

To respond to potential changes in land use policy among the participating jurisdictions, the HCP/NCCP permit area could expand or contract as a result of local land use decisions made independently of the HCP/NCCP, provided that the revised permit area boundary does not preclude successful implementation of the HCP/NCCP conservation strategy.

The Permittees are seeking permits from USFWS and CDFG that have terms of 30 years. Accordingly, all assessments in the HCP/NCCP are based on a 30-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. Thirty years was chosen as the permit duration because it is a reasonable timeframe over which to provide assurances based on the ability to forecast local growth (Association of Bay Area Governments 2002). Even though the current General Plans of all local jurisdictions have a lifetime of 15 years or less, it may take considerably longer to realize the growth within these General Plans. This 30-year timeframe is also expected to be necessary to assemble the Preserve System called for in the HCP/NCCP (Section 1.2.1, Ch1:HCP/NCCP).

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

Finding 4.7.1 **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 (2821(a)(1)).**

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

Finding 4.7.2 **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 (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:

San Joaquin Kit Fox

Core habitat for San Joaquin kit fox is defined as annual grassland, alkali grassland, and oak savanna contiguous with grassland. Secondary foraging habitat occurs in agricultural fields and row crops (Appendix D:HCP/NCCP). Because habitat fragmentation is a significant threat to kit fox, preservation of contiguous habitat is of primary importance. Ideally, contiguous habitat would be preserved that will serve both as local foraging and breeding habitat (i.e., support one or more kit fox home ranges) and wide enough (0.25-mile) as regional movement habitat.

Although a wider corridor would be optimal, corridor width is restricted due to topography. The HCP/NCCP area represents the northernmost extension of the species' range, so maintaining connectivity to Alameda County to the south is critical to maintaining the species in the HCP/NCCP area. Within the HCP/NCCP area, four major movement routes, trending northwest-southeast, are believed to link known occurrences in Black Diamond Mines Regional Park to the portions of its range in southern Contra Costa County (Figure 5-5, Ch 5: HCP/NCCP and further discussion in Chapter 5).

Kit fox may be affected by impacts to a maximum of 4,576 acres of suitable habitat that may be removed by Covered Activities (approximately 11% of all suitable habitat in the HCP/NCCP area). The conservation strategy will protect an estimated 17,164–20,465 acres of suitable core habitat for San Joaquin kit fox in the HCP/NCCP area, resulting in an additional 43–51% of lands managed as foraging habitat outside of existing parks and conserved open space. A network of core preserves and movement routes will protect a critical linkage for San Joaquin kit fox between its range outside Contra Costa County and most past known locations in Contra Costa County. Preserves will link existing open space that supports San Joaquin kit fox to provide a continuous system of protected areas from Black Diamond Mines Regional Preserve at the northern edge of the species range to the Contra Costa-Alameda County line.

Annual grassland within preserves will be managed to enhance small-mammal populations (a prey base for kit fox) (Conservation Measure 2.5) and to enhance the native plant component of this vegetation community (Conservation Measure 2.4). Development guidelines will ensure that indirect impacts on this species from Covered Activities that occur adjacent to the Preserve System are minimized (Conservation Measures 1.6 and 1.9). Prior to submission of an application by a project proponent for coverage under the HCP/NCCP, planning surveys will identify active breeding habitat or denning sites for kit fox. The results of the planning surveys will provide project applicants with the information necessary to comply with the HCP/NCCP. Preconstruction surveys are required in areas with burrows or dens to identify potentially active dens. Destruction of occupied dens is prohibited. Protocols are in place for avoiding injury to individuals (Section 6.3.3, Ch 6:HCP/NCCP).

Because the HCP/NCCP will benefit the San Joaquin kit fox within the HCP/NCCP preserves and existing open space, coverage is warranted.

Tricolored Blackbird

Core breeding habitat for tricolored blackbirds is defined as wetlands, ponds, and sloughs/channels in grassland, alkali grassland, cropland, pastures, ruderal, urban, and oak savanna land-cover types. Primary foraging habitat is defined as pastures, grassland, seasonal wetlands, and cropland. Secondary foraging habitat occurs in orchards and vineyards (Appendix D: HCP/NCCP).

The tricolored blackbird is a sporadic resident within the HCP/NCCP area. California Natural Diversity Database records document two breeding colony occurrences along the northern border of the Los Vaqueros watershed. The Contra Costa County Breeding Bird Atlas shows additional breeding locations east and north of these areas (Flying Emu Birding Pages 2006).

Impacts to tricolored blackbird habitat of up to a maximum of 204 acres of core habitat and 9,621 acres of primary foraging habitat may occur as a result of Covered Activities. The Preserve System will protect an estimated 126–164 acres of suitable core habitat (14–19% of available habitat outside existing open space) and 16,474–20,138 acres of primary foraging habitat (27–33%) within the IUDA or MUDA, respectively. The Preserve System will also protect at least seven of the 13 ponds in Subzone 2c, all of which provide potential breeding habitat for tricolored blackbird. Wetland and pond creation and restoration will provide additional habitat for tricolored blackbird. An estimated 84–85 acres of perennial wetland complexes will be created or restored as well as an estimated 15-16 acres of pond habitat (Tables 5-16 and 5-17: HCP/NCCP). Conservation easements will be acquired on 250–400 acres of cropland or pasture in Acquisition Analysis Zone 6. Conservation easements will require landowners to enhance the value of agricultural lands for tricolored blackbird and other Covered Species (Conservation Measures 1.3 and 2.11, Ch 5: HCP/NCCP). Development guidelines will ensure that indirect impacts on this species from Covered Activities that occur adjacent to preserves are minimized (Conservation Measures 1.6, 1.9, and 1.10, Ch 6: HCP/NCCP). Projects covered by the HCP/NCCP must avoid occupied nests during the breeding season.

The HCP/NCCP will benefit this species through preservation and restoration of breeding habitat, and minimization and avoidance of direct impacts. Therefore, coverage is warranted for tricolored blackbird.

Golden Eagle

The golden eagle is a resident breeder and migrant within the HCP/NCCP area and it forages in nearly all terrestrial natural land-cover types in the HCP/NCCP area. The reproductive status of numerous nesting pairs has been monitored regularly within this general area (Hunt et al. 1998). The Contra Costa County Breeding Bird Atlas (Flying Emu Birding Pages 2006) shows additional breeding locations east and north of the known nests. The Altamont Wind Pass Area in Alameda and southeastern Contra Costa County supports the highest known density of nesting golden eagle territories in the world (Golden Gate Audubon Society).

Golden eagles will be affected by impacts to a maximum of 13,491 acres of foraging habitat that may occur as a result of Covered Activities. The Preserve System will protect an estimated 24,321–29,267 acres of foraging habitat depending on the size of the urban development area. Because of their ability to forage in a wide variety of habitats, nearly the entire Preserve System will provide suitable foraging habitat for golden eagles. The Preserve System will therefore conserve approximately 28–34% of foraging habitat outside existing parks and conserved open

space. New preserves will be linked to existing protected land, which will result in large areas of contiguous foraging habitat for golden eagles. Acquisition of occupied or suitable nest sites will be a priority when assembling the Preserve System (Conservation Measure 3.3, Ch 5: HCP/NCCP).

Projects covered by the HCP/NCCP must avoid occupied nests during the breeding season to minimize direct impacts on this species. However, few, if any, suitable nest sites occur within the urban development areas. Development guidelines will ensure that indirect impacts on this species from Covered Activities at the urban-wildland interface are minimized (Conservation Measures 1.6, 1.9, and 1.10, Ch 5: HCP/NCCP). Conservation Measure 1.11 prohibits the take of individual golden eagles due to their status as Fully Protected in the California Fish and Game Code. Wind turbine leases acquired within the Preserve System in Zone 5 will be retired when feasible to reduce injury to and mortality of golden eagles and other raptors. Annual grassland within preserves will be managed to enhance small-mammal populations (a prey base for golden eagles) (Conservation Measure 2.5, Ch 5: HCP/NCCP) and to enhance the native plant component of this vegetation community (Conservation Measure 2.4, Ch 5: HCP/NCCP). Both of these measures are expected to benefit golden eagle.

The HCP/NCCP will benefit this species through acquisition and restoration of grasslands and other natural land-cover types, increase in prey abundance and availability, and prohibition of direct take of golden eagles, therefore coverage is warranted.

Western Burrowing Owl

All annual grassland, alkali grassland, seasonal wetland, ruderal and turf land cover types within the HCP/NCCP area were considered suitable breeding and foraging habitat for burrowing owl. All pasture and cropland land cover types were considered to be occasional or limited use areas for burrowing owl.

Burrowing owls will be affected by impacts on a maximum of 5,755 acres of breeding and foraging habitat that may occur as a result of Covered Activities. The Preserve System will protect 16,675–19,844 acres of breeding and foraging habitat and 345–703 acres of low-use habitat under the IUDA or MUDA, respectively. Between 38–45% of breeding and foraging habitat outside of existing parks and conserved open space will be conserved, and habitat will be enhanced (Conservation Measures 3.4 and 3.5, Ch 5: HCP/NCCP). A network of preserves will protect large blocks of grassland habitat. New linkages will be created that will be suitable for dispersal and colonization throughout the Preserve System and to existing parks and conserved open space (Conservation Measure 1.1, Ch 5: HCP/NCCP). To attract and retain burrowing owl, temporary artificial burrows and perches will be installed, where appropriate (3.4 and 3.5, Ch 5: HCP/NCCP). Wind turbine leases acquired within the Preserve System in Zone 5 will be retired when feasible to reduce injury to and mortality of burrowing owls and other raptors. Project approvals must require avoidance of occupied burrows during the breeding season. Planning and

preconstruction surveys are required in areas with active burrowing owl burrows. Destruction of occupied burrows is allowed only following all avoidance and minimization measures. Development guidelines will ensure that indirect impacts on this species from Covered Activities that occur adjacent to preserves are minimized (Section 6.3.3, Conservation Measures 1.6, 1.9, and 1.10, Ch 6: HCP/NCCP). These guidelines may be modified according to new interim guidance provided by CDFG.

The HCP/NCCP will benefit this species through the protection and enhancement of grasslands and other natural land-cover types, acquisition of agricultural easements, improvement of habitat quality, and minimization and avoidance. Therefore, coverage is warranted for western burrowing owl.

Western Pond Turtle

Western pond turtle is known to occur in the HCP/NCCP area in the Marsh Creek and Kellogg Creek watersheds. Suitable core habitat is found in the many ponds scattered throughout the HCP/NCCP area and along Marsh Creek and other streams and creeks. According to the HCP/NCCP habitat model, there are 4,325 acres of core habitat outside of streams and approximately 33 miles of core habitat along streams. Movement habitat occurs along another 321 miles of streams (Appendix D: HCP/NCCP).

This species is commonly found in Marsh Creek through Round Valley south to Morgan Territory. Within the HCP/NCCP area the western pond turtle is also known from Black Diamond Mines Regional Preserve and potential habitat occurs in ponds throughout the Vasco Caves area. There are 27 documented observations of western pond turtle within the HCP/NCCP area, primarily in the Marsh Creek Watershed and in Kellogg Creek at Los Vaqueros watershed (California Natural Diversity Database 2004).

Western pond turtle will be affected by impacts to a maximum of 498 acres of non-stream core habitat and 0.1 mile of stream core habitat that may occur as a result of Covered Activities. The Preserve System will protect 675–873 acres of core non-stream habitat and 6–7 miles of core stream habitat under the IUDA or MUDA, respectively. Between 21–27% of core non-stream habitat and 18–21% of core stream habitat outside existing parks and conserved open space will be conserved, breeding habitat will be created or restored, and basking habitat will be enhanced. A network of core preserves will protect 1,715–1,956 acres of upland breeding and movement habitat for western pond turtle. New preserves will be established adjacent to existing protected land to maintain contiguous wetland-upland complexes (Conservation Measure 1.1, Ch 5: HCP/NCCP). Also, an estimated 15-16 acres of pond habitat will be created (Tables 5-16 and 5-17: HCP/NCCP). Approximately 0.6–0.8-mile of stream habitat will be restored. Pond creation and stream restoration will consider habitat requirements for western pond turtles, where appropriate. Additionally, artificial basking substrate and woody debris will be installed in some ponds to increase basking sites for pond turtles (Conservation Measure 3.7, Ch 5: HCP/NCCP).

Development guidelines, including stream setbacks, will ensure that impacts to this species from Covered Activities are avoided or minimized (Conservation Measures 1.6, 1.7, 1.9, and 1.10, Ch 6: HCP/NCCP).

The HCP/NCCP will benefit this species through the acquisition and protection of suitable habitat, restoration of ponds and streams, enhancement of basking habitat, and requirement for stream setbacks for all Covered Activities. Therefore, coverage is warranted for western pond turtle.

California Tiger Salamander

California tiger salamanders are known to occur within the HCP/NCCP area in numerous locations. Suitable breeding habitat includes ponds, wetlands, seasonal wetlands, and alkali wetlands within annual grassland, oak savanna, and oak woodland. Modeled migration and aestivation habitat includes all non-urban, non-aquatic land cover types within one mile of potential breeding sites. According to the HCP/NCCP habitat model, there are 269 acres of breeding habitat and 59,689 acres of migration/aestivation habitat (Appendix D:HCP/NCCP).

California tiger salamanders will likely be affected by impacts to a maximum of 68 acres of breeding habitat and 5,571 acres of migration/aestivation habitat that may occur as a result of Covered Activities (Section 4.4.4, Ch 4:HCP/NCCP). The Preserve System will protect an estimated 96–111 acres of aquatic breeding habitat and 24,047–28,751 acres of migration/aestivation habitat. At least 37–43% of breeding habitat and 40–51% of migration/aestivation habitat outside existing parks and designated open space will be conserved, breeding habitat will be created and restored, and migration/aestivation habitat will be enhanced. As more detailed inventories are completed it is likely that more occupied habitat will be identified and acquired for conservation. A network of core preserves will protect large, functional blocks of aestivation/migration habitat. New linkages will be created in blocks of habitat to facilitate dispersal and colonization throughout the HCP/NCCP area and movement between breeding sites.

Because tiger salamanders require habitat complexes that include both suitable aquatic habitat for breeding and upland habitat for migration and aestivation, areas preserved to achieve the biological goals and objectives for tiger salamanders will include both habitat elements. In addition, to compensate for loss of aquatic habitats that are suitable for breeding, in-kind aquatic habitats will be acquired (Table 5-5: HCP/NCCP). An estimated 15 to 16 acres of pond habitat will be created to mitigate for impacts and to contribute to recovery. In addition, 84–85 acres of perennial wetland complex will be created (Tables 5-16 and 5-17: HCP/NCCP). Ponds will be designed to support the life-history requirements of tiger salamanders, where appropriate (Conservation Measures 2.2 and 2.3, Ch 5: HCP/NCCP). Development guidelines will ensure that indirect impacts on this species from Covered Activities that occur adjacent to the Preserve System and other open space are minimized (Conservation Measures 1.6, 1.9, and 1.10, Ch 6:

HCP/NCCP). Surveys for suitable breeding habitat will be conducted prior to submission of requests for coverage by project proponents under the HCP/NCCP. USFWS and CDFG will be notified of any suitable breeding habitat to be filled prior to construction to allow salvage of individuals (Section 3.6.6, Ch 6: HCP/NCCP).

The HCP/NCCP will benefit this species through the protection of extensive breeding and aestivation habitat, the creation of up to 16 acres of ponds and 85 acres of perennial wetlands, most of which will be suitable for tiger salamanders, and managing these ponds to enhance populations of tiger salamanders. Therefore, coverage of California tiger salamander is warranted.

California Red-legged Frog

The majority of known occurrences of California red-legged frog in the San Francisco Bay Area are within Contra Costa and Alameda Counties. Ponds and streams in riparian woodland/scrub, wetland or seasonal wetland, annual grassland, alkali grassland, oak savanna, oak woodland, chaparral, non-urban ruderal (ruderal land cover areas outside existing urban land cover areas) and turf land-cover types were considered potential breeding habitat for California red-legged frog. Streams in urban areas that are connected hydrologically to suitable breeding streams were also considered potential breeding habitat for this species. Upland areas over underground reaches of streams were considered movement habitat only. All non-urban non-aquatic land cover types within 1 mile of potential breeding sites were considered potential migration and aestivation habitat for this species. Based upon the GIS-based habitat model, there are 95 acres of pond breeding habitat, 217 miles of stream breeding habitat, 70,625 upland acres of movement habitat, and 35 miles of stream movement habitat (Appendix D: HCP/NCCP).

Contra Costa and Alameda Counties contain the majority of known California red-legged frog occurrences in the San Francisco Bay Area. However, this species seems to have been nearly eliminated from the western lowland portions of these counties, particularly near urbanization. Eighty-one occurrence records of California red-legged frogs have been documented within the HCP/NCCP area (California Natural Diversity Database 2001). Sizeable breeding populations are also found at Sand Creek (Black Diamond Mines Regional Park) and Round Valley Regional Preserve (S. Bobzien in lit.; cited in U.S. Fish and Wildlife Service 2002b). California red-legged frogs have been recorded in high densities within the Los Vaqueros watershed.

California red-legged frogs will be affected by impacts to a maximum of 3 acres of non-stream breeding habitat, 0.6 miles of stream breeding habitat and 7,785 acres of upland movement habitat (11%) that may result from Covered Activities. California red-legged frog habitat will be conserved because 29–38% of non-stream breeding habitat, 39–45% of stream breeding habitat, and 35–42% of upland movement habitat outside existing parks and conserved open space will be protected. Additionally, breeding habitat will be created and restored and upland movement/aestivation habitat will be enhanced. The Preserve System will protect 28–36 acres of

non-stream breeding habitat, 85–98 miles of stream habitat, and 24,455–29,467 acres of upland movement habitat (Table 5-13 and Conservation Measure 1.1, Ch 5:HCP/NCCP).

To offset loss of habitat for red-legged frog, ponds will be acquired at a ratio of 2:1. Up to 16 acres of ponds will be created to both mitigate for impacts and to contribute to the recovery of red-legged frog (Tables 5-16 and 5-17: HCP/NCCP). Ponds will be designed to support the life-history requirements of red-legged frog (Conservation Measures 2.2 and 2.3, Ch 5: HCP/NCCP). Stream restoration will also enhance habitat for red-legged frog. Development guidelines, including stream setbacks, will ensure that effects on this species from Covered Activities that occur adjacent to preserves or existing open space are minimized (Conservation Measures 1.6, 1.7, 1.9, and 1.10, Ch 6: HCP/NCCP). Surveys for suitable breeding habitat will be conducted prior to submission of request for coverage by project proponents under the HCP/NCCP. The USFWS and CDFG will be notified of any suitable breeding habitat to be filled prior to construction to allow salvage of individuals (Section 6.4.3, Ch 6: HCP/NCCP).

The HCP/NCCP will benefit this species through the preservation of extensive breeding and high-quality aestivation habitat, providing habitat connectivity between breeding ponds, creating up to 16 acres of ponds, and managing these ponds to enhance populations of red-legged frog. Therefore, coverage is warranted for California red-legged frog.

Finding 4.7.3 **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:

Townsend's Western Big-Eared Bat

Townsend's western big-eared bat is found throughout California, but specific details on its distribution within the central Coast Ranges are not well known. Records of this species include sites in the coastal lowlands and agricultural areas of Marin, Napa, Alameda, and San Mateo Counties and nearby hills (Pierson 1988). There are no published records of Townsend's western big-eared bat within Contra Costa County and there is limited suitable habitat so very few surveys have been done. Because of the scarcity of mines and caves, it is unlikely that significant maternity roosts of this species occur in the county. However, future research may show that small numbers of individual bats roost in buildings, bridges, or other structures within the HCP/NCCP area. Its status in the HCP/NCCP area is unknown (Appendix D: HCP/NCCP).

The HCP/NCCP is expected to have a net benefit for the species by locating and protecting roost sites. Implementation of the HCP/NCCP will impact up to 4,152 acres of annual grassland that Townsend's western big-eared bat may use for foraging. The loss of this potential foraging habitat represents only 12% of the available foraging habitat in the HCP/NCCP area. Wind turbine leases acquired within the Preserve System in Zone 5 will be retired when feasible to reduce injury to and mortality of bats resulting from turbine strikes. Planning and preconstruction surveys are required in areas with suitable roosting habitat. If occupied sites are identified, seasonal restrictions on construction are required (Section 6.4.3, Ch 6: HCP/NCCP). This species will be covered by the HCP/NCCP because roosting sites (caves, abandoned buildings, and abandoned mines) will be protected and an estimated 40–54% of suitable foraging habitat outside existing parks and open space will be conserved.

The HCP/NCCP will benefit this species by protecting roost sites (caves, abandoned buildings, and abandoned mines) and suitable foraging habitat, and avoidance measures will be required. Therefore, coverage of Townsend's western big-eared bat is warranted

Swainson's Hawk

Modeled breeding habitat includes all riparian woodland scrub and non-native woodland land cover types within the HCP/NCCP area in or east of Marsh Creek and below 200 feet in elevation. All cropland and pasture, within 10 miles of existing breeding sites or potential breeding habitat are suitable as Swainson's hawk foraging habitat. Annual grassland, alkali grassland, and seasonal wetland land-cover types below 200 feet in elevation are also suitable as foraging habitat.

Swainson's hawks have been documented nesting in the HCP/NCCP area; however, they are not regular breeders there. The core breeding population occurs along the Central Valley floor, outside of the HCP/NCCP area. In the HCP/NCCP area, most pairs have been observed nesting in small clumps of eucalyptus trees (Glover pers. comm. 2002). There are four records of Swainson's hawk nesting in the northeast section of the HCP/NCCP area (CNDDB 2001). Three additional locations were documented in 2007.

Swainson's hawk will be affected by impacts to a maximum of 16 acres of breeding habitat and 4,743 acres of foraging habitat that may occur as a result of Covered Activities. The Preserve System will protect at least 12–16 acres of riparian breeding habitat and an estimated 3,614–4,451 acres of foraging habitat. Between 9–12% of breeding habitat and 12–15% of foraging habitat outside parks and open space will be conserved. The loss of riparian woodland/scrub, some of which is considered suitable nesting habitat for Swainson's hawk, will be mitigated through in-kind protection of riparian woodland (Tables 5-5a and 5-5b, and Conservation Measure 1.1, Ch 5: HCP/NCCP) at a ratio of 2:1 and enhancement and restoration of riparian woodland/scrub within preserves at a ratio of 1:1 (Tables 5-16 and 5-17 and Conservation Measures 2.9 and 2.10, Ch 5: HCP/NCCP). An estimated 50–55 acres of riparian

woodland/scrub will be restored within the Preserve System (Table 5-17: HCP/NCCP), much of which will be suitable breeding habitat for Swainson's hawk. An estimated 250–400 acres of cropland or pasture will be acquired to support Swainson's hawk foraging along Kellogg Creek, Marsh Creek or adjacent to Dutch Slough, which are suitable for riparian restoration. Acquired conservation easements will require landowners to enhance the value of agricultural lands for Swainson's hawk and other Covered Species (Conservation Measures 1.3 and 2.11, Ch 5: HCP/NCCP). Wind turbine leases acquired within the Preserve System in Zone 5 will be retired when feasible to reduce injury to and mortality of Swainson's hawk and other raptors.

Extensive areas of cultivated agriculture that provide suitable foraging habitat for Swainson's hawk will continue to be protected through strict zoning within Contra Costa County's Agricultural Core and there is no plan to substantially change the existing zoning. Project approvals must require avoidance of occupied nests during the breeding season. Development guidelines will ensure that indirect impacts on this species from Covered Activities that occur adjacent to preserves are minimized (Conservation Measures 1.6, 1.9, and 1.10, Ch 5:HCP/NCCP). Prior to submission of an application for coverage under the HCP/NCCP, planning surveys will identify potentially active Swainson's hawk nest sites. Preconstruction surveys are required in areas with active nests. Destruction of occupied nests by Covered Activities is prohibited, and 1,000-foot buffer zones during the nesting season are required.

The HCP/NCCP will protect grassland habitat, restore riparian habitat, acquire conservation easements, increase the prey base, and minimize direct take of this species. Therefore, coverage is warranted for Swainson's hawk.

Silvery Legless Lizard

The HCP/NCCP area is known to provide habitat for silvery legless lizard. Within the HCP/NCCP area, known occurrences of silvery legless lizard are restricted to the EBRPD Legless Lizard Preserve located east of the intersection of SR 4 and Big Break Road in Oakley. Based on the HCP/NCCP habitat model (Appendix D:HCP/NCCP), suitable habitat for silvery legless lizard is restricted to sandy soils on approximately 3,422 acres scattered through the central and southeastern portions of the HCP/NCCP area.

Silvery legless lizards occur in areas with sandy or loose loamy soils such as under sparse vegetation of beaches, chaparral, or pine-oak woodland; or near sycamores, cottonwoods, or oaks that grow on stream terraces (Gorman 1957; Cunnignham 1959; Banta and Morafka 1968; Stebbins 1985; Jennings and Hayes 1994). The sandy loam soils of stabilized dunes seem to be especially favorable habitat (Grinnel and Camp 1917; Miller 1944; Smith 1946; Bury 1985). The species is often found under or in the close vicinity of logs, rocks, old boards, and the compacted debris of woodrat nests (Jennings and Hayes 1994).

Silvery legless lizards will be affected by impacts to a maximum of 298 acres of impacts to suitable habitat that may occur as a result of Covered Activities. The Preserve System will protect at least 153–166 acres of suitable habitat under the IUDA or MUDA, respectively. Habitat for silvery legless lizard in Subzones 2a, 2e, and 2h will be preserved if pre-acquisition surveys confirm the suitability predicted by habitat models (Conservation Measure 1.1, Ch 5: HCP/NCCP). Development and refinement of management-oriented conceptual models and species-habitat models will guide future efforts at conservation and management. Restrictions on recreation in protected habitat will minimize disturbance to the species (Conservation Measure 1.5, Ch 5: HCP/NCCP). Also, pesticide use, which threatens this species by affecting its insect prey base, will be controlled in preserves (Conservation Measure 1.2, Ch 5: HCP/NCCP). Buffers between protected habitat and the urban edge will benefit silvery legless lizard by discouraging intrusion by domestic predators (Conservation Measures 1.8 and 1.9, Ch 6: HCP/NCCP).

The HCP/NCCP will protect suitable habitat, restrict recreation near areas protected for the silvery legless lizard, control pesticide use within preserves, and require urban-wildland buffers. Therefore coverage is warranted for silvery legless lizard.

Alameda Whipsnake

Alameda whipsnake is endemic to the western and central portions of Alameda and Contra Costa Counties. Consequently, the HCP/NCCP area constitutes an essential portion of the subspecies' existing habitat, which has been fragmented into five largely disjunct populations (65 FR 58933-58962). Of the 48 California Natural Diversity Database (2001) records for the Alameda whipsnake in the state, 19 records (40%) occur within the HCP/NCCP area. A large portion of the Mount Diablo–Black Hills population of the Alameda whipsnake occurs within the HCP/NCCP area.

Within the HCP/NCCP area, core habitat for Alameda whipsnake is composed of open and low-growing shrubs, primarily chaparral, and surrounding grassland (Figure 4-2: HCP/NCCP). Rock outcrops near these areas are also thought to be important for the subspecies. Alameda whipsnakes move relatively long distances between scrub patches (distances of up to 4 miles have been documented, but typical distances are closer to 1 mile), and habitat suitable for movement is important for the maintenance of healthy populations. Core and movement habitats are scattered throughout the central and southwestern portions of the HCP/NCCP area. A range map and a GIS-based habitat model were developed for this species and can be found in Appendix D of the HCP/NCCP.

Alameda whipsnakes will be affected by impacts to a maximum of 29 acres of core habitat and up to 341 acres of movement habitat that may occur as a result of Covered Activities. The Preserve System will protect 1,690–1,817 acres of core and perimeter habitat, 10,564–12,166 upland movement habitat, and 46–51 miles of stream movement habitat under the IUDA or

MUDA, respectively. Between 53–57% of core and perimeter habitat outside existing parks and conserved open space will be protected, and chaparral will be managed to benefit the species. An average of 70% of currently unprotected core and perimeter whipsnake habitat in Subzones 2a, 2b, 2c, 3a, and Zone 4 will be preserved (Conservation Measure 1.1, Ch 5: HCP/NCCP). Important habitat linkages comprising grassland and riparian corridors between chaparral patches will be protected, including the linkage in Zone 2 and Subzone 3a between Black Diamond Mines Regional Preserve and Mount Diablo State Park.

Core habitats comprised of diverse canopy-cover stages will be maintained (Conservation Measure 2.8, Ch 5: HCP/NCCP). Movement habitat for Alameda whipsnake will be enhanced through management of oak woodland, oak savanna, and annual grassland (Conservation Measures 1.2, 2.4, and 2.6, Ch 5: HCP/NCCP). Wildfire management measures such as vegetation control, fuel breaks, or prescribed burns will be designed to minimize impacts on and enhance habitat for Alameda whipsnake (Conservation Measure 1.2, Ch 5: HCP/NCCP). Development guidelines will ensure that indirect impacts on this species from Covered Activities at the urban-wildland interface are avoided or minimized (see Conservation Measures 1.6, 1.9, and 1.10, Ch 6: HCP/NCCP). Control of exotic plants and control of recreational uses will also benefit or minimize impacts to Alameda whipsnake. Recreational controls include prohibiting mountain bike riding in core whipsnake habitat and prohibiting construction of new trails in suitable core habitat. (Conservation Measure 1.4 and 1.5, Ch 5: HCP/NCCP) This HCP/NCCP will provide substantial conservation of whipsnake core and movement habitat, link existing protected areas for the benefit of this species, and include management to maintain and enhance habitat. Less than 1% of suitable core habitat and approximately 2% of suitable movement habitat would be lost as a result of Covered Activities.

The HCP/NCCP will protect core and linkage habitat for this species, restrict recreation in suitable habitat areas, and require urban-wildland interface avoidance measures. Therefore coverage is warranted for Alameda whipsnake.

Giant Garter Snake

Giant garter snake is known from the HCP/NCCP area through one historic record near Antioch. A GIS-based habitat model was developed for this species and can be found in Appendix D of the HCP/NCCP. Suitable habitat for breeding and movement occurs in the sloughs and upland areas associated with adjacent agricultural fields. A lack of records in the HCP/NCCP area may be due to a lack of surveys and/or that the snakes occur at such low densities that it is highly unlikely that a trapping effort would detect them.

Giant garter snakes will be affected by impacts to a maximum of 0.4-mile of core habitat that may occur as a result of Covered Activities. Between 1 and 3 miles of core habitat outside of parks and open space will be conserved, and up to 72 acres of slough/channel habitat will be restored to compensate for impacts to Covered Activities at a ratio of 1:1. Mitigation for

permanent impacts involves preservation of aquatic habitat or upland habitat lost at a ratio of 1:1. In addition, if only aquatic habitat is lost, 2 acres of upland habitat must be preserved for every acre of aquatic habitat lost. The restoration of slough/channel habitats on Dutch Slough and in other areas will also benefit giant garter snake. Development guidelines will ensure that indirect impacts to this species from Covered Activities at the urban-wildland interface are avoided or minimized (Conservation Measures 1.6, 1.9, and 1.10, Ch 6: HCP/NCCP). Planning and preconstruction surveys are required in areas with giant garter snake habitat. Seasonal restrictions or buffer zones are required (Section 6.3.3, Ch 6: HCP/NCCP).

The HCP/NCCP will acquire agricultural lands in fee title or in easements, will restore sloughs and channel habitat, will mitigate through land acquisition, and will avoid impacts to occupied habitat through seasonal restrictions. Therefore, coverage is warranted for giant garter snake.

Foothill Yellow-Legged Frog

Foothill yellow-legged frogs have the potential to occur in perennial segments of streams in the HCP/NCCP area. Core habitat includes perennial streams in riparian woodland/scrub, grassland, oak savanna, and oak woodland land cover types. Perennial streams provide breeding habitat for foothill yellow-legged frog. Low-use habitat includes other streams in riparian woodland/scrub, grassland and oak savanna, and oak woodland land cover types. According to the GIS-based habitat model, there are 20 miles of suitable breeding habitat and 146 miles of suitable migration habitat in the HCP/NCCP area (Appendix D: HCP/NCCP).

Foothill yellow-legged frogs are likely to occur in the few perennial streams and stream segments in the HCP/NCCP area including upper Marsh Creek and upper Mount Diablo Creek. There are 11 documented occurrences of foothill yellow-legged frog in Contra Costa County. Eight of these occurrences are believed to be extinct and three are concentrated in the Mount Diablo region. There are no known occurrences within the boundary of the HCP/NCCP.

Foothill yellow-legged frogs will be affected by impacts up to a maximum of 0.1 mile of stream breeding habitat and 0.6 mile of stream movement habitat that may occur from Covered Activities. Approximately 5.2–5.6 miles (2%) of streams outside existing parks and conserved open space will be protected, and restoration will create or enhance breeding and foraging habitat for the species. Preserved streams will include both perennial and ephemeral streams. Impacts to frog habitats are likely to be very small (<1% of available habitat). Impacts on perennial streams, including suitable foothill yellow-legged frog habitat, will be mitigated at a preservation ratio of 2:1 (Tables 5-5a and 5-5b:HCP/NCCP). Stream restoration is also required as mitigation (Tables 5-16 and 5-17, Ch 5:HCP/NCCP) and will be attempted on up to 0.8 miles of existing streams (Conservation Measures 2.3 and 2.10, Ch 5: HCP/NCCP). Up to 55 acres of riparian woodland/scrub will be created or restored. This habitat will be designed to support the life-history requirements of foothill yellow-legged frog and it will also mitigate impacts to stream habitat. Land acquisition in Zone 4 will be focused along Marsh Creek, especially in the upper

reaches, where suitable breeding and dispersal habitat for foothill yellow-legged frog is most extensive and under threat. Development guidelines, including stream setback requirements, will ensure that impacts on this species from Covered Activities are avoided or minimized (Conservation Measures 1.6, 1.7, 1.9, and 1.10, Ch 6: HCP/NCCP).

The HCP/NCCP will protect and restore streams and riparian areas throughout the Preserve System, and require stream setbacks for all Covered Activities. Therefore, coverage is warranted for foothill yellow-legged frog.

Longhorn Fairy Shrimp

Longhorn fairy shrimp occurs in ephemeral pools in sandstone rock outcrops, and within the HCP/NCCP area longhorn fairy shrimp is known only from the Vasco Caves Regional Preserve and an adjacent privately owned parcel. Accordingly, no direct impacts on longhorn fairy shrimp habitat are expected unless additional occupied areas are discovered within the permit area outside the Vasco Caves Regional Preserve.

To mitigate take for these crustaceans, approximately 129 to 168 acres of seasonal wetland complexes outside of existing parks and designated open space will be acquired and managed in perpetuity. In addition, 104-163 acres of seasonal wetland complexes will be created or restored. Because longhorn fairy shrimp are associated only with rock outcrops in this area, it is unknown whether protection and restoration of wetland complexes will be of any benefit to the species. To minimize impacts to longhorn fairy shrimp, prior to submission of an application package, planning surveys will identify habitat. Preconstruction surveys are required in areas with habitat. If additional occupied sites are identified, buffer zones or seasonal restrictions are required. If seasonal wetlands are occupied by longhorn fairy shrimp, applicants must preserve 3 acres of occupied habitat and restore 2 acres within the Preserve System or dedicate an equivalent amount of vernal pool credits in a USFWS-approved mitigation bank. Applicants have the option of assuming presence of longhorn fairy shrimp in lieu of conducting presence/absence surveys and compensating accordingly.

The HCP/NCCP will protect suitable habitat, restore ponds and wetlands, require additional mitigation for occupied habitat, and require seasonal restrictions for impacts to occupied habitat. Therefore, coverage is warranted for longhorn fairy shrimp.

Vernal Pool Fairy Shrimp, Midvalley Fairy Shrimp, Vernal Pool Tadpole Shrimp

There are six known occurrences of vernal pool fairy shrimp in the HCP/NCCP inventory area. The vernal pool fairy shrimp records include numerous occupied pools on the Cowell Ranch on the northeast side of Mount Diablo, artificial pools in a railroad access road near Pittsburgh, and pools around the Byron Airport (e.g., Stromberg and Ford 2003).

A single record for Midvalley fairy shrimp exists near the Byron Airport. The paucity of data points in the HCP/NCCP area is likely due to a lack of survey effort and the difficulty of detecting this species.

The vernal pool tadpole shrimp is not known to be present, however, due to the presence of suitable habitat and populations within close proximity to the HCP/NCCP area, it is anticipated that unrecorded populations may be present in vernal pool and swale habitat of the non-native annual grassland and in other depressions that seasonally collect rainwater. The lack of data points within the HCP/NCCP area is probably due to a lack of survey effort.

Areas in which additional vernal pools could be found are expected to experience limited impacts both in absolute acreage and relative to the overall proportion of available vernal pool habitat. Of the 604 acres of seasonal wetland complexes and undetermined wetlands identified in the HCP/NCCP area, an estimated 117 acres (19%) would be lost to Covered Activities under the IUDA and 121 acres (22%) under the MUDA. This represents the maximum amount of habitat loss for these three species of covered shrimp.

The HCP/NCCP will conserve approximately 129 to 168 acres of seasonal wetland complexes outside of existing parks and designated open space under the IUDA or MUDA, respectively. Ponds will be managed within the Preserve System to benefit Covered Species and 104-163 acres of seasonal wetland complexes will be created or restored under the IUDA or MUDA, respectively, some complexes of which are expected to be suitable for midvalley fairy shrimp, vernal pool fairy shrimp, and vernal pool tadpole shrimp (Tables 5-16 and 5-17 and Conservation Measures 2.2 and 2.3, Ch 5: HCP/NCCP). Restored vernal pools will be evaluated to determine if covered vernal pool crustaceans are present at frequencies similar to those in natural vernal pool complexes. If not, efforts will be made to establish new populations.

The HCP/NCCP ensures that impacts on these species from Covered Activities will be avoided or minimized (Conservation Measure 2.12, Ch 5: HCP/NCCP). Preconstruction surveys will be required in areas with suitable habitat. Applicants who fill vernal pools must determine if the pools provide suitable habitat for covered shrimp. If surveys show absence of covered shrimp (Section 6.3.3, Ch 6: HCP/NCCP), applicants will mitigate for impacts according to Conservation Measure 2.3 for seasonal wetlands (Ch 5: HCP/NCCP). Project proponents are required to conduct USFWS protocol surveys in one year (rather than two) to determine presence or absence of listed shrimp species. If occupied sites are identified, buffer zones or seasonal restrictions are required. If vernal pools are occupied by covered shrimp, applicants must compensate for impacts to these wetlands according by creating, preserving, and restoring suitable vernal pool habitat either within the HCP/NCCP area or through purchasing an appropriate number of credits at an approved vernal pool mitigation bank that serves the HCP/NCCP area. Applicants have the option of assuming presence of covered shrimp in lieu of conducting presence/absence surveys and then compensating accordingly.

The HCP/NCCP will protect suitable habitat, restore ponds and wetlands, require additional mitigation for occupied habitat, and require seasonal restrictions for impacts to occupied habitat. Therefore, coverage is warranted for Midvalley fairy shrimp, vernal pool fairy shrimp, and vernal pool tadpole shrimp

Mount Diablo Manzanita

Mount Diablo manzanita is endemic to Contra Costa County, where it occurs only on Mount Diablo and in the adjacent foothills. It is found between 700 and 1,860 feet above sea level. A range map of the species in California is found in Appendix D of the HCP/NCCP.

Twelve occurrences of Mount Diablo manzanita are known within the inventory area. Ten of these occurrences are in Mount Diablo State Park, on East Bay Regional Park District lands, or on other public lands. The two known occurrences of Mount Diablo manzanita in the HCP/NCCP area outside public lands will be protected by the Preserve System (Conservation Measure 1.1, Table 5-20, Ch 5:HCP/NCCP).

An estimated 414 or 447 acres of potentially suitable habitat for Mount Diablo manzanita will be protected within the Preserve System under the IUDA or MUDA, respectively (Table 5-12, Ch 5:HCP/NCCP). This protected land constitutes from 56% to 61% of the remaining species habitat that is available for preservation. Management of HCP/NCCP preserves will also benefit Mount Diablo manzanita.

Covered Activities within the urban development area will not result in the removal of any known occurrences of Mount Diablo manzanita. Covered Activities outside the urban development area, including road grading, road expansion, utility construction and maintenance, and habitat restoration could directly affect populations of this species, through direct mortality or loss of habitat, but location data are not sufficient to precisely determine impacts.

Take of Mount Diablo manzanita will not be permitted by the HCP/NCCP unless new populations are protected in the Preserve System. Public access to known populations of Mount Diablo manzanita within preserves will be restricted to make illegal collection more difficult (Section 5.3.3, Ch 5: HCP/NCCP). Vegetation management actions, including prescribed burning (Conservation Measures 1.2 and 2.8, Ch 5: HCP/NCCP), will ensure that the condition of the chaparral vegetation community that supports Mount Diablo manzanita will be maintained.

Impacts to this species are expected to be very low for the following reasons: (1) no known occurrences of this species will be impacted by Covered Activities, while two occurrences will be protected if willing sellers are found, (2) no suitable habitat will be removed by Covered Activities, while 414 acres will be protected under the IUDA (447 acres under the MUDA), and (3) preserve management will enhance habitat quality for Mount Diablo manzanita populations.

Acquired lands will be protected and managed in perpetuity. Therefore, coverage is warranted for Mount Diablo manzanita.

Brittlescale

Brittlescale occurs along the western side of the Great Valley from Glenn County to Merced County and in the small valleys of the inner Coast Ranges, including the Livermore Valley. It occurs in the broad flood basins of the valley floor and on alluvial fans associated with the major streams draining from the inner Coast Range foothills. It is generally found at low elevations but has been collected up to 1,055 feet above sea level. A range map of the species in California is found in Appendix D of the HCP/NCCP.

Nine occurrences of brittlescale have been documented in the HCP/NCCP inventory area (California Natural Diversity Database 2005; Mundie & Associates and City of Antioch 2002). Four occurrences are on Contra Costa Water District lands at Los Vaqueros Reservoir or on other public lands. One occurrence is on private lands near Antioch; all others are on private lands south and west of Byron.

Two of the five known occurrences of brittlescale in the HCP/NCCP area that are on private lands and not already permanently protected will be brought under protection by the Preserve System (Conservation Measure 1.1, Table 5-20, Ch 5:HCP/NCCP). In addition, an estimated 577 or 697 acres of suitable habitat for brittlescale will be protected within the Preserve System under the IUDA or MUDA, respectively (Table 5-12, Ch 5: HCP/NCCP). This protected land constitutes from 49% to 60%, respectively, of the species habitat in the HCP/NCCP area that is available for preservation.

Covered activities within the urban development area could result in the removal of one known occurrence of brittlescale in the Byron area, and the loss of 81 acres of suitable habitat for brittlescale (7% of currently unprotected habitat). Although 81 acres of habitat will be lost, at least 577 to 697 acres of habitat will be managed and protected in perpetuity, and over 60 acres will be restored. In addition, two to four occurrences under IUDA or MUDA, respectively, will be protected and managed in perpetuity (Table 5-20, Ch 5:HCP/NCCP).

Take of no more than two additional occurrences is allowed under the IUDA unless additional occurrences are protected in the Preserve System (Table 5-20: HCP/NCCP). Additional take will be permitted as described in the HCP/NCCP as additional occurrences are added to the Preserve System.

Management of HCP/NCCP preserves will enhance habitat quality for this species. Reduction of grazing in alkali grassland, and other vegetation management techniques within alkali grassland and alkali wetlands (Conservation Measures 2.1, 2.2, 2.4, Ch 5; and 2.12, Ch 6: HCP/NCCP) will benefit brittlescale by maintaining or enhancing suitable habitat for this species. In addition,

between 61 and 67 acres of alkali wetlands will be restored within preserves (Tables 5-16 and 5-17: HCP/NCCP). One objective of alkali wetland restoration is to restore habitat for brittlescale (e.g., in alkali meadows).

Threats to brittlescale historically have primarily included the conversion of alkali grassland to agriculture. More recently threats include flooding of alkali grassland to create waterfowl habitat, grazing, and urban development.

The HCP/NCCP conservation strategy provides the conditions necessary for a stable, protected population of brittlescale in the HCP/NCCP area for the following reasons: one occurrence of this species will be affected by Covered Activities, while a minimum of two to four additional occurrences will be protected under the IUDA or MUDA, respectively; between 577-697 acres of suitable habitat will be protected and over 60 acres will be restored; and preserve management will enhance habitat quality for this species by removing non-native invasive plants. Therefore, coverage is warranted for brittlescale.

San Joaquin Spearscale

San Joaquin spearscale occurs along the western side of the Great Valley from Glenn County to Merced County and in small valleys of the inner Coast Ranges. Within the HCP/NCCP area there are 32 documented occurrences, most of which are in the Los Vaqueros watershed, but some are on private lands within the Lone Tree and Briones valleys.

Covered Activities within the IUDA or MUDA will not result in the removal of any known occurrences of San Joaquin spearscale. Covered Activities outside the urban development area could directly affect populations of this species, through direct mortality or loss of habitat, but location data are not sufficient to precisely determine impacts. This species often co-occurs with brittlescale, so it is anticipated that protection of suitable habitat for this species will be largely coincidental with protection of habitat for brittlescale. No species distribution model was developed for San Joaquin spearscale because of the difficulty in predicting the species' occurrence relative to conditions that could be mapped at a regional scale.

If habitat for this species is broadly defined to include all alkali grassland and alkali wetland in the HCP/NCCP area, then HCP/NCCP Covered Activities will result in the loss of an estimated 144 acres of suitable habitat (115 acres of alkali grassland (7%) and 29 acres of alkali wetlands (14%) under the IUDA). No additional loss of alkali grassland is estimated under the MUDA but impacts to alkali wetlands will increase to 31 acres (16%) for a total estimated impact to 146 acres under the MUDA (Ch 4, Table 4-2, 4-3:HCP/NCCP). This likely overstates the potential impact to San Joaquin spearscale, as none of the known occurrences would be impacted, but it is the best available estimate of worst-case impacts. Habitat loss would occur in the Byron area.

To off set this loss, an estimated 900 or 1,250 acres of alkali grassland, and 87 or 96 acres of alkali wetland will be protected within the Preserve System under the IUDA or MUDA, respectively (Tables 5-7, Table 5-8, Ch 5:HCP/NCCP).

Take of San Joaquin spearscale will not be permitted by the HCP/NCCP unless at least one additional occurrence is protected in the Preserve System. Additional take will be permitted as described in the HCP/NCCP as additional occurrences are added to the Preserve System. Although the habitat requirements of this species are poorly understood, it is thought that vegetation management within alkali grassland and alkali wetlands (Conservation Measures 2.1, 2.2, 2.4, Ch 5; and 2.12, Ch 6: HCP/NCCP), including reduction of grazing in alkali grassland, will benefit San Joaquin spearscale. In addition, between 61 and 67 acres of alkali wetlands will be restored within preserves under the IUDA or MUDA, respectively (Tables 5-16, 5-17, Ch 5: HCP/NCCP). One objective of alkali wetland protection is to protect additional suitable habitat for San Joaquin spearscale (e.g., in alkali meadows).

The HCP/NCCP conservation strategy will provide the conditions necessary for a stable, protected population of San Joaquin spearscale in the HCP/NCCP area for the following reasons: no known occurrences of this species will be affected by Covered Activities; an estimated 900 or 1,250 acres of alkali grassland and 87 or 96 acres of alkali wetland will be protected within the Preserve System under the IUDA or MUDA; and preserve management will enhance habitat quality for this species. Therefore, coverage is warranted for San Joaquin spearscale.

Big Tarplant

Big tarplant is endemic to the Mount Diablo foothills and is found primarily in eastern Contra Costa, eastern Alameda, and western San Joaquin Counties (Hoover 1937). A range map of the species in California is found in Appendix D of the HCP/NCCP.

In the HCP/NCCP area, big tarplant is known from 4 occurrences on Cowell Ranch, west of Brentwood, and 7 occurrences on Roddy Ranch, south of Antioch (California Natural Diversity Database 2005). The historic occurrences in Antioch are likely to have been extirpated, although at least 1 population is present at Black Diamond Mines Regional Preserve (Preston pers. comm.). Big tarplant may also be present in the hills south of Pittsburg, where it was collected in 1937 and last seen in 1992 (Preston pers. comm.).

Covered Activities within the urban development area could result in the removal of one big tarplant occurrence outside public land. However, three occurrences of big tarplant in the HCP/NCCP area outside public lands will be protected by the Preserve System (Table 5-20 and Conservation Measure 1.1, Ch 5: HCP/NCCP). Take of no more than one additional occurrence is allowed under the HCP/NCCP unless additional occurrences are protected in the Preserve System. Additional take will be permitted as described in the HCP/NCCP if additional occurrences are added to the Preserve System (Table 5-20, Ch 5: HCP/NCCP).

In addition, an estimated 9,300 or 11,395 acres of the suitable habitat for this species will be protected within the Preserve System under the IUDA and the MUDA, respectively (Table 5-12, Ch 5:HCP/NCCP). This protected land constitutes from 48% to 59%, respectively, of the species range in the HCP/NCCP area that is available for preservation. It will be managed to benefit big tarplant. For example, Conservation Measure 1.4 ensures that exotic plants will be controlled within preserves. Vegetation management, including prescribed burning within grasslands (Conservation Measure 2.4, Ch 5: HCP/NCCP) will benefit big tarplant by maintaining or enhancing habitat for this species.

The HCP/NCCP conservation strategy will provide the conditions necessary for a stable, protected population of big tarplant in the HCP/NCCP area for the following reasons: only one known occurrence of this species will be affected by Covered Activities, while three occurrences will be protected; between 9,300 and 11,395 acres of suitable habitat will be protected; and preserve management will enhance habitat quality for this species. Therefore, coverage is warranted for big tarplant.

Mount Diablo Fairy-Lantern

Mount Diablo fairy-lantern is endemic to the Diablo Range in Contra Costa County, and is distributed between elevations of 650 and 2,600 feet. Twelve occurrences are within the HCP/NCCP area, 11 of which are on public lands. At least five of the occurrences are either in Mount Diablo State Park or EBRPD lands. The location of the one known occurrence of Mount Diablo fairy-lantern in the HCP/NCCP area outside public lands will be protected by the Preserve System (Conservation Measure 1.1, Table 5-20, Ch 5:HCP/NCCP).

Covered Activities within the urban development area would not result in the removal of any known occurrences of Mount Diablo fairy-lantern. Covered Activities in the HCP/NCCP area could result in the loss of 788 acres of suitable habitat (3% of currently unprotected suitable habitat within the HCP/NCCP area) for Mount Diablo fairy-lantern. The habitat that could be lost is located south of Pittsburg and southwest of Antioch.

An estimated 11,178 or 13,360 acres of suitable habitat will be protected within the Preserve System under the IUDA or MUDA, respectively (Table 5-12:HCP/NCCP). This protected land constitutes from 43% to 54%, respectively, of the species range in the HCP/NCCP area available for preservation.

Preserve management will enhance habitat quality for this species. For example, Conservation Measure 1.4 ensures that exotic plants will be controlled within preserves to minimize possible competition with this species. Conservation Measure 1.5 requires the preparation of a system-wide recreation plan that will limit public access to minimize collection of the species. Vegetation management and enhancement within native grassland, oak savanna/woodland, and chaparral will benefit Mount Diablo fairy lantern. For example, promoting canopy gaps within

chaparral patches (Conservation Measure 2.8, Ch 5:HCP/NCCP) will maintain or increase habitat for this species. In addition, leaving snags and dead trees in place in oak woodland (Conservation Measure 2.6, Ch 5:HCP/NCCP) will create openings that will maintain or enhance habitat for this species. Between 42 and 165 acres of oak savanna will be restored within preserves, which will provide additional potential habitat for Mount Diablo fairy-lantern.

Take of Mount Diablo fairy-lantern will not be permitted by the HCP/NCCP unless at least one additional occurrence is protected in the Preserve System. Additional take will be permitted as described in the HCP/NCCP as additional occurrences are added to the Preserve System.

The HCP/NCCP conservation strategy will provide the conditions necessary for a stable, protected population of Mount Diablo fairy-lantern in the HCP/NCCP area for the following reasons: no known occurrences of this species will be impacted by Covered Activities, while one additional occurrence will be protected; between 11,178–13,360 acres suitable habitat will be protected and 42 to165 acres of oak savanna habitat will be restored; and preserve management will enhance habitat quality for this species. Therefore, coverage is warranted for Mount Diablo fairy-lantern.

Recurved Larkspur

Recurved larkspur historically ranged from Butte County to Kern County in California's Great Valley. The species now appears to be very rare outside of the southern San Joaquin Valley. There are four occurrences in the HCP/NCCP area, three of which are on private land southeast of Bryon. One occurrence of recurved larkspur may be removed by Covered Activities. No additional take is allowed under the HCP/NCCP unless additional occurrences are protected in the Preserve System (Table 5-20, Ch 5:HCP/NCCP). Two occurrences will be protected. Additional take will be permitted as described in the HCP/NCCP as additional occurrences are added to the Preserve System.

HCP/NCCP Covered Activities will impact an estimated 25 acres (1%) of suitable habitat outside existing parks and conserved open space under either the IUDA or MUDA (Section 4.4.6, Tables 4-5, 4-5, Ch 4:HCP/NCCP). Take that may result from loss of habitat will be mitigated for by the preservation and management, in perpetuity, of at least 389 acres (23%) to1064 acres (62%) of suitable habitat which is currently unprotected in the HCP/NCCP area under the IUDA and MUDA, respectively, and the restoration of over 60 acres of alkali wetland habitat (Table 5-12, Ch 5:HCP/NCCP).

Conservation Measure 1.4 ensures that exotic plants will be controlled within preserves. Vegetation management and enhancement within alkali grassland (Conservation Measures 2.1, 2.4, 2.2, Ch 5 and 2.12, Ch 6:HCP/NCCP), including reducing grazing in alkali grasslands, will benefit recurved larkspur by maintaining or enhancing habitat for this species.

The HCP/NCCP conservation strategy will provide the conditions necessary for a stable, protected population of recurved larkspur in the HCP/NCCP area for the following reasons: one known occurrence of this species will be impacted by Covered Activities, while two additional occurrences will be protected; between 389–1,064 acres of suitable habitat will be protected; and preserve management will enhance habitat quality for this species. Therefore coverage is warranted for recurved larkspur.

Round-Leaved Filaree

Round-leaved filaree is distributed from southern Oregon through California into northern Mexico. However, most of the populations are known to occur in California, and most of the documented occurrences are in the interior foothills of the South Coast Ranges. In the HCP/NCCP area, out of eight total occurrences, seven occurrences are on private lands in the Mount Diablo foothills south of Antioch. At least two of these seven known occurrences will be brought under protection by the Preserve System (Conservation Measure 1.1, Table 5-20, Ch 5: HCP/NCCP). Because there have been few surveys for this species in the area, it is expected that more than two occurrences would be protected in the Preserve System.

Covered activities within the urban development area could result in the removal of two known occurrences of round-leaved filaree in the Antioch area (Table 4-6, Ch 4:HCP/NCCP) and in the loss of up to 888 acres (15%) of primary habitat for round-leaved filaree in the western part of Pittsburg and the southern parts of Antioch and Brentwood. In addition, Covered Activities could result in the loss of up to 560 acres (16%) of secondary habitat for this species in the western and southern parts of Pittsburg, the southern parts of Antioch and Brentwood, and the Byron area (Table 5-12, Ch 5:HCP/NCCP).

To offset the loss of two known occurrences of this species and up to 1,448 acres of primary and secondary habitat, at least two occurrences will be protected. An estimated 2,877 or 2,997 acres of the primary habitat and 542–633 acres of secondary habitat for this species will be protected within the Preserve System under the IUDA or MUDA, respectively (Table 5-12, Table 5-20, Ch 5:HCP/NCCP). This protected land constitutes from 50% to 52%, respectively, of the primary habitat in the HCP/NCCP area that is available for preservation. Additional take will be permitted as described by the HCP/NCCP as additional occurrences are protected by the Preserve System.

Preserve management will enhance habitat quality for this species. For example, Conservation Measure 1.4 ensures that exotic plants will be controlled within preserves; increases in the cover of exotic grasses may have contributed to the decline of round-leaved filaree (Gillespie 2003). Vegetation management and enhancement within grasslands (Conservation Measure 2.4, Ch 5: HCP/NCCP), such as reducing grazing in some areas, will benefit round-leaved filaree by maintaining or improving suitable habitat for this species. Overgrazing has been noted as a threat to some occurrences of this species (Gillespie 2003, California Native Plant Society 2005).

The HCP/NCCP conservation strategy will provide the conditions necessary for a stable, protected population of round-leaved filaree in the HCP/NCCP area for the following reasons: two known occurrences of this species will be affected by Covered Activities, while at least two additional occurrences will be protected; between 2,877–2,997 acres of suitable primary habitat and 542–633 acres of suitable secondary habitat will be protected; and preserve management will enhance habitat quality for this species. Therefore, coverage is warranted for round-leaved filaree.

Diablo Helianthella

Diablo helianthella is endemic to the San Francisco Bay Area. There are 30 documented occurrences in the HCP/NCCP area, including 2 on private lands and 28 in Mount Diablo State Park, Los Vaqueros Watershed, and East Bay Regional Park District lands. Covered Activities within the urban development area will not result in the removal of any known occurrences of Diablo helianthella.

Although no known occurrences of this species would be impacted by Covered Activities, Covered Activities in the HCP/NCCP area could result in the loss of up to 85 acres of suitable habitat (1% of currently unprotected habitat) for Diablo helianthella in southwest of Antioch. To offset the loss of 85 acres of habitat, both known occurrences of Diablo helianthella in the HCP/NCCP area outside public lands will be brought under protection by the Preserve System (Table 5-20 and Conservation Measure 1.1, Ch 5:HCP/NCCP).

The Preserve System will protect an estimated 6,168 or 7,250 acres of the suitable habitat for this species under the IUDA or MUDA, respectively. This protected land constitutes 46% to 54% of the species range in the HCP/NCCP area available for preservation. (Table 5-12, Ch 5:HCP/NCCP).

Take of Diablo helianthella will not be permitted by the HCP/NCCP unless at least one additional occurrence is protected in the Preserve System. Additional take will be permitted as described in the HCP/NCCP as additional occurrences are added to the Preserve System (HCP/NCCP Table 5-20).

Threats to Diablo helianthella include trail construction and maintenance, brush-clearing, and off- trail travel. Fire suppression in chaparral may also impact Diablo helianthella because it also grows in openings in, and on the margins of, chaparral. Management of HCP/NCCP preserves will benefit Diablo helianthella. For example, Conservation Measure 1.4 ensures that exotic plants will be controlled within preserves. Implementation of a system-wide Preserve Recreation Plan (Conservation Measure 1.5, Ch 5:HCP/NCCP) will minimize additional impacts to the species from trail construction and maintenance and off-trail travel, which have been noted as threats to documented occurrences (California Natural Diversity Database 2005). Vegetation

management within oak savanna/woodland (Conservation Measures 2.1 and 2.6, Ch 5:HCP/NCCP) and chaparral (Conservation Measures 2.1 and 2.8, Ch 5:HCP/NCCP) will benefit Diablo helianthella by maintaining or enhancing habitat for this species. For example, promoting canopy gaps within chaparral patches will maintain or increase habitat for this species. In addition, leaving snags and dead trees in place in oak woodland will create openings that will maintain or enhance habitat for this species. Between 42 and 165 acres of oak savanna will be created or restored in the Preserve System (Conservation Measure 2.6, Tables 5-16, 5-17, Ch 5:HCP/NCCP). One objective of oak savanna restoration is to provide additional suitable habitat for Diablo helianthella.

The HCP/NCCP conservation strategy will provide the conditions necessary for a stable, protected population of Diablo helianthella in the HCP/NCCP inventory area for the following reasons: no known occurrences of this species will be impacted by Covered Activities, while two additional occurrences will be protected; between 6,168–7,250 acres of suitable habitat will be protected and 42 to165 acres of oak savanna (potential habitat) will be restored; and preserve management will enhance habitat quality for this species. Therefore, coverage is warranted for Diablo helianthella.

Brewer's Dwarf Flax

Twenty occurrences of Brewer's dwarf flax were documented within the HCP/NCCP inventory area. Of these, two occurrences are in Mount Diablo State Park, two are in East Bay Regional Park District lands, fourteen are in the Los Vaqueros Watershed, one is on private land, and one historic population in Antioch has been extirpated (Table 5-20, Ch 5:HCP/NCCP, Occurrence Map, Appendix D, 26c, HCP/NCCP).

Covered Activities within the urban development area will not result in the removal of any known occurrences of Brewer's dwarf flax. However, Covered Activities in the HCP/NCCP area could result in the loss of 97 to 255 acres under the IUDA and MUDA, respectively, of suitable habitat for Brewer's dwarf flax (0.4% or 1%, respectively, of currently unprotected habitat within the HCP/NCCP area) (Table 4-5, Ch 4:HCP/NCCP). The habitat loss would occur in southern Pittsburg and southwest of Antioch. Specific threats to the dwarf flax have not been identified except possible trampling of plants adjacent to foot paths or trails.

The one known occurrence of Brewer's dwarf flax in the HCP/NCCP area outside public lands will be brought under protection by the Preserve System (Conservation Measure 1.1, Table 5-20, Ch 5:HCP/NCCP). Approximately 9,337 or 10,704 acres of the suitable range for this species will be protected within the Preserve System under the IUDA or MUDA, respectively (Table 5-12, Ch 5:HCP/NCCP). This protected land constitutes 48% to 55% of the species range available for preservation. Between 42 to165 acres of oak savanna, which is potential habitat, will be restored.

Management of HCP/NCCP Preserves will benefit Brewer's dwarf flax. For example, Conservation Measure 1.4 ensures that exotic plants will be controlled within preserves. Implementation of a system-wide Preserve Recreation Plan (Conservation Measure 1.5, Ch 5:HCP/NCCP) will minimize additional impacts to the species from trail construction and maintenance and foot traffic, which have been noted as threats to documented occurrences (California Natural Diversity Database 2005). Vegetation management and enhancement within native grassland, oak savanna/woodland, and chaparral, will benefit Brewer's dwarf flax. For example, promoting canopy gaps within chaparral patches will maintain or increase habitat for this species. Between 42 and 165 acres of oak savanna will be created or restored in the Preserve System (Conservation Measure 2.7, Tables 5-16 and 5-17, Ch5:HCP/NCCP).

Take of Brewer's dwarf flax will not be permitted by the HCP/NCCP unless at least one additional occurrence is protected in the Preserve System. Additional take will be permitted as described in the HCP/NCCP as additional occurrences are protected by the Preserve System. (Table 5-20, Ch 5:HCP/NCCP).

The HCP/NCCP conservation strategy will provide the conditions necessary for a stable, protected population of Brewer's dwarf flax in the HCP/NCCP area for the following reasons: no known occurrences of this species will be impacted by Covered Activities, while one occurrence will be protected; between 9,337 and 10,704 acres of suitable habitat will be protected, and 42–165 acres of oak savanna (potential habitat) will be restored; and preserve management will attempt to enhance habitat quality for this species. Therefore, coverage is warranted for Brewer's dwarf flax.

Showy Madia

Showy madia has been collected historically near Antioch and between Antioch and Lone Tree Valley (California Natural Diversity Database 2005). The last field observation of this species in Contra Costa County was in 1941 (California Natural Diversity Database 2005). Given suitable habitat conditions, there is nothing to suggest this species could not be sustained in historic habitats or colonize new locations. Although primarily associated with oak woodlands, showy madia is also associated with oak savannas and annual grassland.

No known occurrences of this species will be impacted by Covered Activities. Approximately 13,000–16,500 acres of grassland, 500 acres of oak savanna and 400 acres of oak woodland acres will be protected and 42–165 acres of oak savannah habitat will be restored under the IUDA or MUDA, respectively; and preserve management will enhance habitat quality for this species.

Many of the landscape-level and community-level conservation measures will benefit showy madia. Conservation Measure 1.4 ensures that exotic plants will be controlled within preserves. Vegetation management and enhancement within native grassland (Conservation Measures 2.1 and 2.4, Ch 5: HCP/NCCP), including reducing grazing in some areas, and oak savanna

(Conservation Measures 2.1 and 2.6, Ch 5: HCP/NCCP) may also benefit showy madia by maintaining or enhancing potential habitat for this species.

Completion of planning surveys ensures that botanical surveys will be conducted in potential impact areas and that high-quality populations will be avoided. Take of showy madia will not be permitted by the HCP/NCCP unless at least one occurrence is protected in the Preserve System (Table 5-20: HCP/NCCP). Additional take will be permitted as described in the HCP/NCCP as additional occurrences are added to the Preserve System (Section 5.3.3, Ch 5: HCP/NCCP).

The HCP/NCCP conservation strategy will provide the conditions necessary for a stable, protected population of showy madia in the HCP/NCCP area for the following reasons: no known occurrences of this species will be impacted by Covered Activities; impacts to this plant will only be permitted as described in the HCP/NCCP as occurrences are identified and protected by the Preserve System; approximately 13,000–16,500 acres of grassland, 500 acres of oak savanna, and 400 acres of oak woodland acres will be protected; 42–165 acres of oak savannah habitat will be restored; and preserve management will enhance habitat quality for this species through removal of nonnative plants. Therefore, coverage is warranted for showy madia.

Adobe Navarettia

Five occurrences of adobe navarretia have been documented in the HCP/NCCP inventory area since 1987 (CalFlora 2005; Lake 2004). These occurrences are in Cowell Ranch, Horse Valley, Sand Creek, Byron Hot Springs, and the Los Vaqueros watershed. Two of these occurrences (Cowell Ranch and Los Vaqueros watershed) are on public lands (Contra Costa Water District and East Bay Regional Park District). One of the three known occurrences of adobe navarretia in the inventory area outside public lands will be brought under protection by the Preserve System (Conservation Measure 1.1, Table 5-20, Ch 5:HCP/NCCP).

Covered activities within the urban development area could result in the removal of one out of three known occurrences of adobe navarretia outside public lands in the Byron Hot Springs and Sand Creek area. To offset the loss of 2,471-4,103 acres of annual grassland and 43-56 acres of seasonal wetland under the IUDA or MUDA respectively that may provide habitat for adobe navarretia, the HCP/NCCP will acquire 13,000–16,500 acres of grassland and 129-168 acres of seasonal wetland, and an additional 104–163 acres of seasonal wetland complexes will be created or restored, under the IUDA and MUDA, respectively (Tables 5-16 and 5-17, Ch 5: HCP/NCCP). This protected land constitutes 40-54% of the species range available for preservation. The loss of one occurrence of this species will be compensated by the conservation of one occurrence (Horse Valley), and additional take will only be permitted as described in the HCP/NCCP as additional occurrences are protected by the Preserve System.

Preserve management will enhance habitat quality for this species. Many of the landscape-level and community-level conservation measures will directly benefit adobe navarretia, if it is found

in HCP/NCCP preserves. Conservation Measure 1.4 ensures that exotic plants will be controlled within preserves. Vegetation management and enhancement within native grassland (Conservation Measures 2.1 and 2.4, Ch 5:HCP/NCCP) and wetlands will benefit adobe navarretia (Conservation Measure 2.2, Ch 5: HCP/NCCP). The conservation measures noted above call for the introduction of grazing to some areas to reduce exotic plant cover, and the reduction of grazing in other areas to allow for the development of seasonal wetland vegetation. Feral pigs, which have been noted as a threat to vernal pool plant species, will be excluded from seasonal wetlands where they appear to be damaging native vegetation. In addition to restoration of seasonal wetlands for mitigation of impacts to this habitat type, 20 additional acres of seasonal wetlands will be restored to contribute to recovery of adobe navarretia and other Covered Species (Conservation Measure 2.3, Ch 5: HCP/NCCP).

Completion of planning surveys will ensure that botanical surveys will be conducted in potential impact areas and that high-quality populations will be avoided. Impacts on covered plants will be tracked by population (Table 4-6 and 5-48 and Ch 4: HCP/NCCP). Likewise, the Implementing Entity must ensure that an adequate number of populations of adobe navarretia are included in the Preserve System. If the Implementing Entity cannot preserve the necessary plant populations, then applicants causing impacts to adobe navarretia will be required to preserve populations of this species in order to receive take authorization under this HCP/NCCP. Site-specific surveys for adobe navarretia in impact areas (planning surveys) and preacquisition surveys in new preserves will be conducted to avoid and minimize take and to identify appropriate conservation areas.

The HCP/NCCP conservation strategy will provide the conditions necessary for a stable, protected population of adobe navarretia in the HCP/NCCP area for the following reasons: one occurrence of this species will be affected by Covered Activities while one additional occurrence (Horse Valley) will be protected; additional take of one occurrence will be permitted and subsequent take will only be permitted as described in the HCP/NCCP as additional occurrences are protected by the Preserve System; 129–168 acres of seasonal wetland and 13,000–16,500 acres of grassland will be conserved; an additional 104-163 acres of seasonal wetland complexes will be created or restored; and preserve management will enhance habitat quality for this species. Therefore, coverage is warranted for adobe navarretia.

Finding 4.8 **CDFG finds that the mitigation measures specified in the plan and imposed by the plan participants are consistent with subdivision (d) of Section 2801. (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 2801 (d) regarding coordination and cooperation, cumulative impact concerns, conservation and management of unfragmented diverse habitat for multiple species, options to ensure rough proportionality of

impacts to conservation, and conservation of broad-based natural communities and species diversity (Findings 4.1.9, 4.2.7, 4.6.1 H and F, 4.7.2, 4.7.3: NCCP Permit).

5.0 OTHER FINDINGS

5.1 Fully Protected Covered Species

Finding 5.1 **CDFG finds that the Covered Activities authorized in this approval will not result in take of fully protected Covered Species**

One fully protected species, golden eagle, is included in the HCP/NCCP list of Covered Species.

Although foraging habitat for golden eagle is common in the inventory area, occupied nest sites are rare. Conservation Measure 1.11 prohibits the direct take of individual golden eagles. Several preserve management measures will benefit golden eagles. To minimize indirect impacts and to avoid direct impacts on golden eagle as a result of Covered Activities, the following procedures will be implemented.

A USFWS/CDFG approved biologist will identify potential active nests of golden eagle. If nests are identified, the project proponent will avoid and minimize impacts to the maximum extent practicable. Avoidance measures should include relocating impacts away from the nest.

Prior to project construction, a qualified biologist will conduct a preconstruction survey to establish whether nests of golden eagles are occupied (6.3.1, Ch 6:HCP/NCCP). If nests are occupied, minimization requirements and construction monitoring will be required.

Covered activities will be prohibited within 0.5 mile of active nests. Nests can be built and active at almost any time of the year, although mating and egg incubation occurs late January through August, with peak activity in March through July. If site-specific conditions or the nature of the covered activity (e.g., steep topography, dense vegetation, limited activities) indicate that a smaller buffer could be appropriate or that a larger buffer should be implemented, the Implementing Entity will coordinate with CDFG/USFWS to determine the appropriate buffer size and configuration.

Construction monitoring will focus on ensuring that no Covered Activities occur within the buffer zone established around an active nest. Although no known golden eagle nest sites occur within or near the ULL, Covered Activities inside and outside of the Preserve System have the potential to disturb golden eagle nest sites. Construction monitoring will ensure that indirect effects to golden eagles are minimized and direct effects to golden eagles are avoided.

CDFG concurs that the measures in the HCP/NCCP are sufficient to avoid take of fully protected species from Covered Activities.

5.2 Extremely Rare Plants and Fully Protected Non-Covered Species

Finding 5.2 **CDFG finds that the Covered Activities authorized in this approval will not result in take of extremely rare plants and fully protected non-covered species**

Covered activities in the HCP/NCCP will avoid all impacts to plant species that are considered "no-take" plants. These plants are considered extinct or extirpated from the HCP/NCCP area and the likelihood of discovering new populations is extremely unlikely. However, if a new population of these plants is found, the protection of that plant or population will be of highest importance to the conservation of that species. Plants that are considered no-take are as follows: large-flowered fiddleneck; alkali milkvetch; Mount Diablo buckwheat; diamond-petaled poppy; Contra Costa goldfields; and caper-fruited tropidocarpum. If a no-take plant is found on a project site, it is the responsibility of the project applicant to prepare long-term management and monitoring programs and fund the implementation of those programs. If the applicant transfers ownership and management responsibilities to the Implementing Entity, the applicant may be required to provide additional funds to offset additional management costs (Table 6.5:HCP/NCCP).

Several non-covered wildlife species that occur in the inventory area are listed as fully protected (as defined under Sections 3511 (birds) and 4700 (mammals) of the California Fish and Game Code): white-tailed kite, peregrine falcon, and ringtail (Table 6-5:HCP/NCCP). 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. 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.

The two fully protected non-covered raptor species forage widely throughout the inventory area but nest in discrete locations. Activities covered under the HCP/NCCP must not disturb or destroy active nests of these fully protected species per Section 3503.5 of the Fish and Game Code. These species are expected to benefit from the HCP/NCCP, through protection and management of additional foraging and nesting habitat (Cons. Measure 1.11, Ch 6: HCP/NCCP).

Ringtail is likely common in woodlands in the inventory area. Ringtails will benefit from the preservation and restoration of riparian areas.

Planning surveys will establish whether suitable habitat is present for any of these species and projects will be designed to avoid take should any such species be found on the property.

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 Implementing Agreement.

6.1 Covered Activities

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 Implementing Agreement. Covered Activities consist of the activities defined and listed in Chapter 2, Section 2.3, of the HCP/NCCP. Covered activities in the HCP/NCCP fall into three categories.

1. All activities and projects associated with urban growth within the urban development area.
2. Specific projects and activities outside the ULL.
3. Activities that occur inside the HCP/NCCP preserves.

Activities within the Urban Development Area

This category includes all ground-disturbing projects and activities that may occur within the urban development area (Section 2.3.1, Figure 2-3, Ch 2: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 2.3.1, Ch 2:HCP/NCCP).

Rural Infrastructure Projects

Specific rural infrastructure projects outside the ULL are also Covered Activities under the HCP/NCCP (all infrastructure projects within the ULL are covered as urban development). A complete description of these Covered Activities is found in Chapter 2 of the HCP/NCCP

(Section 2.3.2). Locations of transportation projects are shown in Figure 2-4. Specific conditions on rural road projects, including siting requirements, wildlife design requirements, construction actions, and post-construction actions are listed in Chapter 6, Conservation Measures 1.12, 1.14 and Table 6-6.

All routine road operations and maintenance (O&M) activities that occur within the ULL of participating cities are covered by this HCP/NCCP. The Contra Costa County Department of Public Works also maintains and operates roads within the HCP/NCCP area outside the ULL. The routine O&M of these County-maintained roads outside the ULL is also a Covered Activity. The routine, periodic, and emergency operation and maintenance activities at facilities operated by the County Flood Control District outside the ULL and within Antioch are Covered Activities which are subject to specific conditions on Covered Activities and best management practices guidelines (Conservation Measure 1.13, Section 6.4.1, Ch 6: HCP/NCCP). The routine and emergency O&M of utility lines in the HCP/NCCP area outside the ULL is a covered activity under this HCP/NCCP, except for the use of pesticides, which is not covered by this permit (Section 2.3.3, Ch 2: HCP/NCCP).

HCP/NCCP Preserve Activities

Activities required to maintain and operate the new HCP/NCCP Preserve System are also covered by the HCP/NCCP. These activities include habitat and species management activities, habitat restoration or creation, habitat and species monitoring, limited construction and maintenance of passive recreational facilities (e.g., signage), and low-impact recreational use (hiking, mountain biking, equestrians)(Section 2.3.4, Ch 2: HCP/NCCP).

Neighboring Landowner Provisions

The HCP/NCCP includes a provision for landowners on lands within one mile of the Preserve System to obtain take authorization for impacts to Covered Species that occur as a result of routine agricultural activities. Take authorization is provided only for impacts above those already occurring when the Preserve System was established (i.e., those greater than baseline conditions). Neighboring Landowner Assurances provide incidental take permit coverage on an "opt-in" basis for all agricultural lands within one mile of any land that becomes part of the HCP/NCCP Preserve System. This opt-in approach allows for landowners to willingly participate in the HCP/NCCP. Those landowners that do not seek to participate would not be required to do so but would also not receive coverage for incidental take for their ongoing activities (Section 2.3.4, Ch 2: NCCP/HCP).

Activities Not Covered

The following activities or projects are not covered by the HCP/NCCP or this Permit:

- The Los Vaqueros Reservoir Expansion

- Routine and Ongoing Agricultural Activities (routine and ongoing agricultural activities on lands neighboring HCP/NCCP preserves are covered by this HCP/NCCP with landowner sign up)
- New Irrigated Agriculture
- Wind Turbine Expansion or Operation
- Activities Within Naval Weapons Station Seal Beach, Detachment Concord
- Construction of Rural Infrastructure Projects Not Listed in the HCP/NCCP
- New Rural Landfills
- Mining

6.2 Covered Species

Table ES-3 of the HCP/NCCP shows the 28 Covered Species with six columns of information: species name, habitat conserved by HCP/NCCP, impacts to habitats, general basis for analysis of coverage, monitoring methods, and take authorization standards. Of the 28 Covered Species, 27 are currently authorized for take. One (1) Covered Species is fully protected and not authorized for take (Section 6.3, Ch 6: HCP/NCCP).

6.2.1 List of 28 Covered Species

Amphibians
California red-legged frog, *Rana aurora draytonii*
California tiger salamander, *Ambystoma californiense*
Foothill yellow-legged frog *Rana boylii*

Birds
Golden Eagle *Aquila chyrsaetos*
Swainson's hawk *Buteo swainsoni*
Tricolored blackbird *Agelaius tricolor*
Western burrowing owl *Athene cunicularia hypugea*

Invertebrates
Longhorn fairy shrimp *Brachinecta longiantenna*
Midvalley fairy shrimp *Branchinecta mesovallensis*
Vernal pool fairy shrimp *Branchinecta lynchi*
Vernal pool tadpole shrimp *Lepidurus packardi*

Mammals
San Joaquin kit fox *Vulpes macrotus mutica*
Townsend's western big-eared bat *Corynorhinus townsendii townsendii*

Plants
Adobe navarretia *Navarretia nigelliformis* ssp. *nigelliformis*
Big tarplant *Blepharizonia plumose*
Brewer's dwarf flax *Hesperolinon breweri*
Brittlescale *Atriplex depressa*
Diablo helianthella *Helianthella castanet*
Mount Diablo fairy lantern *Calochortus pulchellus*
Mount Diablo manzanita *Arctostaphylos auriculata*
Recurved larkspur *Delphinium recurvatum*
Round-leaved filaree *Erodium macrophyllum*
San Joaquin spearscale *Atriplex joanquiniana*
Showy madia *Madia radiata*,

Reptiles
Alameda whipsnake *Masticophis lateralis euryxanthus*,
Giant garter snake *Thamnophis gigas*
Silvery legless lizard *Anniella pulchra pulchra*
Western pond turtle, *Clemmys marmorata pallida*

6.2.2 Species by Coverage Categories

Regarding take authorization, the list of Covered Species is divided into three categories: 1) Species that can be taken upon permit issuance, 2) Species protected by the Migratory Bird Protection Act and 3) California fully protected species

Species that can be taken upon permit issuance.

The Applicants are requesting take coverage under this NCCP Permit (Permit) for a total of twenty-eight species (Covered Species). This Permit allows incidental take of four threatened animal species [Alameda whipsnake (*Masticophis lateralis euryxanthus*), giant garter snake (*Thamnophis gigas*), San Joaquin kit fox (*Vulpes macrotus mutica*), and Swainson's hawk (*Buteo swainsoni*)]. This Permit also allows incidental take of eight California Species of Special Concern [California red-legged frog (*Rana aurora draytonii*), California tiger salamander (*Ambystoma californiense*), foothill yellow-legged frog (*Rana boylii*), Townsend's western big-eared bat (*Corynorhinus townsendii townsendii*), tricolored blackbird (*Agelaius tricolor*), silvery legless lizard (*Anniella pulchra pulchra*), western burrowing owl (*Athene cunicularia hypugea*), and western pond turtle (*Clemmys marmorata marmorata*)].

This Permit also authorizes incidental take of four additional currently unlisted animal species [midvalley fairy shrimp (*Branchinecta mesovallensis*), longhorn fairy shrimp (*Brachinecta longiantenna*), vernal pool tadpole shrimp (*Lepidurus packardi*)], and vernal pool fairy shrimp (*Branchinecta lynchi*)] and eleven currently unlisted plant species Mount Diablo manzanita (*Arctostaphylos auriculata*), brittlescale (*Atriplex depressa*). San Joaquin spearscale (*Atriplex joanquiniana*), big tarplant (*Blepharizonia plumosa*), Mount Diablo fairy lantern (*Calochortus pulchellus*), recurved larkspur (*Delphinium recurvatum*), round-leaved filaree (*Erodium macrophyllum*), Diablo helianthella (*Helianthella castanea*), Brewer's dwarf flax (*Hesperolinon breweri*), showy madia (*Madia radiata*), and adobe navarretia (*Navarretia nigelliformis* ssp. *nigelliformis*)].

This Permit allows for continuing incidental take of currently unlisted species in the event that they become listed in the future.

Species protected by the Migratory Bird Protection Act

The Migratory Bird Treaty Act (MBTA) prohibits the taking, killing, or possessing of migratory birds. The MBTA identifies a variety of prohibited actions including the taking of individual birds, young, feathers, eggs, nests, etc. Actions conducted under the HCP/NCCP and its Implementing Agreement will comply with the provisions of the MBTA and avoid taking, killing, or possessing Covered Species that are protected by the MBTA (golden eagle, Swainson's hawk, tricolored blackbird, and western burrowing owl) unless the applicant obtains an MBTA Special Purpose Permit consistent with the terms of the HCP/NCCP.

California Fully Protected Species

As stated in the Implementing Agreement (Section 17.3), one state fully protected species, golden eagle, *Aquila chrysaetos,* is included in the list of Covered Species. Take of golden eagle must be avoided pursuant to Fish and Game Code Section 3511, which prohibits CDFG from authorizing take of this fully protected species, except as provided in the Fish and Game Code for take associated with necessary scientific research. Consequently, take of this species is not authorized by this NCCP Permit. 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 golden eagle and that activities covered by theHCP/NCCP can be carried out without causing take of this state fully protected bird (Finding 5.1.1, above, Conservation Measure 1.11 in Chapter 6:HCP/NCCP, and Preconstruction Surveys and Conditions on Covered Activities Section 6.3.2 and 6.3.3:HCP/NCCP).

Consistent with the terms of the Implementing Agreement, the Permittees may apply for an amendment to this Permit for inclusion of this species in the event that Section 3511 is repealed

or amended in a manner that allows CDFG to authorize take of this bird under the Natural Community Conservation Planning Act.

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 this species. 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 this 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 golden eagle subject to California Fish and Game Code, Section 3511, the Permittees may apply for an amendment of the NCCP Permit or for a new permit for this 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 Implementing Agreement. 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 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 30 years. This Permit is subject to suspension or termination by action of the Director of CDFG in accordance with the terms of Section 19 of the Implementing Agreement.

Under these provisions, should any or all of the Permittees, except for the Implementing Entity, request early termination of this Permit, the Permittee or Permitees would 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 Implementing Agreement for any permitted activities that have been approved, authorized, or carried out.

CDFG may suspend or revoke this Permit as a result of a violation of the Permit and/or pursuant to any applicable State laws or regulations. If this Permit is revoked or suspended, the Permittees remain obligated to fulfill all of their responsibilities under this Permit for any permitted activity approved, authorized, or carried out by the Permittees between the effective date of this Permit and date of Permit suspension or revocation.

Withdrawal by a Permittee shall not diminish or otherwise affect the obligations of the remaining Permittees under the Implementing Agreement, the HCP/NCCP, or the Permits. The Permittees acknowledge that if one or more Permittees withdraws from the Implementing Agreement and, as a result of the withdrawal, it is no longer feasible or practicable to implement the HCP/NCCP successfully, it may be necessary to amend the HCP/NCCP and/or to amend the Permits in response to the withdrawal (Section 20:IA).

Because the Implementing Entity *(or its agents)*, in carrying out its reserve acquisition and management activities, is acting on behalf of the County and Cities, noncompliance by the Implementing Entity *(or its agents)* with the terms and conditions of its Permits, the HCP/NCCP or Implementing Agreement, shall be considered a failure of the County and Cities to comply with their obligations under the HCP/NCCP and may result in suspension and/or revocation of the Permit.

9.0 DURATION

This NCCP Permit shall remain effective for 30 (thirty) years from the effective date below, unless suspended, terminated or extended by earlier action of the Director of CDFG.

Approved by:

Date: 8/6/07

Sonke Mastrup, Deputy Director
California Department of Fish and Game

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