Regional General Permit 1

U.S. ARMY CORPS OF ENGINEERS BUILDING STRONG®

Minimal Impact Activities
East Contra Costa County, California

EFFECTIVE: June 6, 2017
EXPIRES: June 6, 2022

NOTE: The term "you" and its derivatives, as used in this permit, means the permittee. The term "this office" refers to the U.S. Army Corps of Engineers, Sacramento District.

ISSUING OFFICE: U.S. Army Corps of Engineers, Sacramento District

ACTION ID: SPK-2001-00147

AUTHORITY: Section 404 of the Clean Water Act for the discharge of dredged or fill material in waters of the United States.

PURPOSE: The purpose of this RGP is to provide a simplified and expeditious means to authorize activities in waters of the United States (U.S.), including wetlands, that are substantially similar in nature and cause only minimal individual and cumulative impacts, within the area covered by the East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP), dated December, 2006. This RGP is part of an overall strategy envisioned in the HCP/NCCP to balance the protection of important natural resources with long term economic development in the area covered by the HCP/NCCP. The HCP/NCCP is intended to enhance protection of important natural resources, including 28 listed and non-listed species and waters of the United States, by coordinating conservation activities at a regional and watershed scale, enabling protection of large, contiguous resource-rich areas and preservation of ecosystem processes and watershed functions. Appendix J of the HCP/NCCP contains a partial inventory and assessment of the functions and services of waters of the U.S. located within the HCP/NCCP Plan Area. The HCP/NCCP, associated documents and other program information are available to the public at: http://www.cocohcp.org. Definitions associated with this RGP are provided under the "Definitions" section at the end of the RGP.

LOCATION: The area covered by this RGP is east Contra Costa County, including the cities of Clayton, Brentwood, Oakley, and Pittsburg, and other areas of east Contra Costa County. It is geographically coincident with the "Plan Area" of the HCP/NCCP (see *Figures 1a* and *1b*).

ACTIVITIES COVERED: This RGP authorizes specific categories of activities with minimal individual and cumulative impacts on the aquatic environment that meet the terms and conditions of this permit. Temporary structures, fills, and work necessary to construct an activity authorized by this RGP (e.g., cofferdams, access roads) are allowed, provided such

work complies with the terms and conditions of this RGP inclusive of special conditions that the Corps may add. This RGP applies only to HCP/NCCP Covered Activities, as set forth in Section 2.3 of the HCP/NCCP (also see Definitions section). Any question as to whether a proposed activity is considered a Covered Activity under the HCP/NCCP shall be subject to confirmation by the East Contra Costa County Habitat Conservancy (Conservancy) (see Definitions section). The HCP/NCCP Covered Activities are divided among the following Activity categories in this RGP for purposes of assigning Activity-specific conditions (see section Activity Specific Conditions):

1. Residential, commercial, industrial, institutional, and other urban developments and associated infrastructure inside the Urban Limit Line of Contra Costa County or inside the City Limits of the Cities of Brentwood, Clayton, Oakley and Pittsburg, including but not limited to roads, utilities, parks, storm water management facilities, and water supply and delivery facilities. (Activity-specific conditions: 1 through 4).

2. Recreation projects, including parks, picnic areas, staging areas, trails and park maintenance facilities. Applies only to the activities set forth in Sections 2.3.2 and 2.3.4 of the HCP/NCCP. (Activity-specific conditions: 1 through 4).

3. Flood control detention basins, reservoirs[1], channels, and related facilities. Applies only to the specific planned facilities set forth in Section 2.3.2 of the HCP/NCCP. (Activity-specific conditions: 1 through 4).

4. Transportation projects, including road construction and widening, bicycle trails, rail projects, bridges and safety-related projects. Applies only to the specific planned facilities set forth in Section 2.3.2 of the HCP/NCCP. (General conditions apply only).

5. Wetland and stream restoration, creation, enhancement and management. Applies only to activities set forth in Sections 2.3.2 and 2.3.4 of the HCP/NCCP. (Activity-specific conditions: 1, 2 and 4).

6. Utility projects, including electrical transmission projects, cellular communication projects and pipelines. Applies only to the activities set forth in Sections 2.3.2 and 2.3.4 of the HCP/NCCP. (Activity-specific condition 4).

7. Maintenance, repair, rehabilitation or replacement of any previously authorized (under the RGP or other Corps permit), currently serviceable, structure or fill. Applies only to the maintenance activities set forth in Sections 2.3.1 and 2.3.3 of the HCP/NCCP. (General conditions apply only).

This RGP does not cover any activities in waters of the U.S. conducted in emergency situations.

[1] The proposed Los Vaqueros Reservoir Expansion project is not covered by the HCP/NCCP as per Section 2.4 of the HCP/NCCP

PERMIT DURATION: This permit is valid for five years from issuance, and will expire on June 6, 2022. If this RGP is not modified or reissued by the expiration date, it automatically expires and becomes null and void. The Corps may re-evaluate the terms and conditions of this permit at any time it deems necessary to protect the public interest. This permit may be re-issued, after public notice and documentation of the decision. Activities under this permit must be verified in writing by the Corps. Verifications are valid until the permit expires.

TERMS OF AUTHORIZATION:

1. **Applying for RGP authorization**. Prior to commencing a proposed activity, applicants seeking authorization under this RGP shall notify the Corps in accordance with RGP general condition number 18 (Notification). If the Corps determines that an activity is not an eligible activity under the RGP, it will notify the applicant in writing within thirty (30) calendar days and provide instructions on the procedures to seek authorization under a standard permit, letter of permission or Nationwide permit. If the Corps determines that a proposed activity is eligible for coverage under the RGP, it will notify the applicant within 45 calendar days of receipt of a complete application. If the Corps does not provide a written response to the applicant within 45 calendar days following receipt of a complete application, the applicant may presume the proposed activity is an eligible activity that may be covered under the RGP, provided the activity complies with all other terms and conditions of the RGP.

2. **Impact Thresholds for waters of the U.S.** Impacts to waters of the U.S. shall be avoided and minimized to the maximum extent practicable. The loss of waters of the U.S. (including wetlands) resulting from individual project impacts may not exceed a total of 1.5 acres or more than 300 linear feet of perennial, intermittent or 3rd or higher order ephemeral streams (as defined in Table 2 of the RGP and further described in the HCP/NCCP), unless the linear foot limit is waived in writing by the Corps. Additional restrictions are listed in the General and Activity-Specific Conditions.

3. **Single and complete project**. The activity must be a single and complete project (see Definitions section). The same RGP authorization cannot be used more than once for the same single and complete project.

4. **After-the-fact projects**. This RGP may not be used to authorize activities after they have impacted waters of the U.S.

5. **Compliance with HCP/NCCP Conditions**. Activities to be authorized under this RGP must be HCP/NCCP Covered Activities and must fully comply with the HCP/NCCP. Compliance with the HCP/NCCP requires applicants to implement the appropriate conservation measures outlined in Chapter 6 of the HCP/NCCP.

6. **Special conditions**. The Corps may add special conditions to an authorization to ensure the activity complies with the terms and conditions of the RGP, and/or that adverse

impacts on the aquatic environment or other aspects of the public interest are individually and cumulatively minimal.

7. **Activity completion**. Any activity authorized by the Corps under the RGP shall be completed by the date specified in "Permit Duration," above. Furthermore, activities authorized under this RGP that have commenced or are under contract to commence will have 12 months from the date of the RGP's expiration, reissuance, modification or revocation to complete the activity under the terms and conditions of the RGP.

8. **Discretionary Authority**. The Corps has the discretion to suspend, modify, or revoke authorizations under this RGP. This discretionary authority may be used by the Corps to also further condition or restrict the applicability of the RGP for cases in which it has concerns associated with the Clean Water Act Section 404(b)(1) Guidelines, or regarding any public interest factor. Should the Corps determine that a proposed activity may have more than minimal individual or cumulative adverse impacts to aquatic resources or otherwise be contrary to the public interest, the Corps will modify the authorization to reduce or eliminate those adverse effects, or notify the applicant that the proposed activity is not authorized by the RGP and provide instructions on how to seek authorization under an individual permit. The Corps may restore authorization under the RGP at any time it determines that the reason for asserting discretionary authority has been resolved or satisfied by a condition, project modification, or new information. The Corps may also use its discretionary authority to modify, suspend, or revoke the RGP at any time.

GENERAL CONDITIONS:

The following general conditions apply to all Activity categories:

1. **Threatened and Endangered Species**: No activity is authorized under the RGP that does not comply with the mandatory terms and conditions of the USFWS's "Programmatic Biological Opinion for a Regional General Permit for the East Contra Costa Habitat Conservation Plan/Natural Community Conservation Plan, Contra Costa County, California" (USFWS #81420-2011-F-0655, dated April 30, 2012) (copy attached). The Biological Opinion contains mandatory terms and conditions to implement the reasonable and prudent measures that are associated with "incidental take" authorization under this RGP. Authorization under this RGP is conditional upon your compliance with all of the mandatory terms and conditions of the Biological Opinion. Failure to comply with the terms and conditions of the Biological Opinion would constitute non-compliance with the RGP. The USFWS is the appropriate authority to determine compliance with the terms and conditions of the Biological Opinion, and with the ESA. The permittee must comply with all applicable conditions of this Biological Opinion, including those ascribed to the Corps. If the proposed activity may affect Federally-listed endangered or threatened species that are not covered under the Programmatic Biological Opinion, specifically, species under the authority of the National Marine Fisheries Service, the Corps will initiate consultation with the National Marine Fisheries Service, pursuant to Section 7 of the Endangered Species Act, as appropriate.

2. **Water Quality Certification**: Section 401 Water Quality Certification is required for activities to be authorized by this RGP. The Corps may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal impacts, individually or cumulatively.

3. **Historic Properties**: No activity is authorized under the RGP if the activity may affect historic properties listed, or eligible for listing, in the National Register of Historic Places, until the requirements of Section 106 of the National Historic Preservation Act (NHPA), as amended, have been satisfied. Applicants must notify the Corps if the activity may have the potential to cause effects to any historic properties listed, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified historic properties. The Corps will consult with the State Historic Preservation Officer (SHPO), as appropriate, following the policy and procedural standards of 33 CFR Part 325 Appendix C .

4. **Unanticipated Cultural Resources Discoveries**: If any previously unknown historic, cultural or archeological remains or artifacts are discovered while accomplishing an activity authorized by this RGP, this permit, the applicant must immediately notify the Corps, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The Corps will initiate the Federal, Tribal, and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

5. **Fills within 100-Year Floodplains**: The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

6. **Bed and Bank Stabilization**: Bank stabilization activities are limited to: a) using the minimum amount of material needed for erosion protection; b) no more than 500 feet in length along the bank, unless this criterion is waived in writing by the Corps; and c) no more than an average of 1 cubic yard of material per running foot placed along the bank below the plane of the ordinary high water mark or high tide line, unless this criterion is waived in writing by the Corps.

7. **Best Management Practices**: Best Management Practices (BMPs) must be employed during construction and in project design to protect water quality and minimize impacts of stormwater runoff on aquatic resources. BMPs should be appropriately located in or adjacent to waters of the U.S. (e.g., silt curtains). The applicant shall employ the following BMPs, as appropriate and feasible, in designing and constructing the project. The applicant shall describe which BMPs are practicable as part of the notification procedure as per general condition #18, subpart (b):

a. Preservation of natural resource features on the project site (e.g., floodplains, wetlands, streams, and other drainageways, grasslands, woodlands, and native soils);

b. Preservation of natural water infiltration and storage characteristics of the site;

c. Minimization of new impervious surfaces in project design (impervious surfaces may be minimized through practices such as reducing road widths and clustering developments designed around open space);

d. Structural measures that provide water quality and quantity control;

e. Construction BMPs;

f. Low impact development (LID) BMPs.

Examples of structural BMPs include: vegetated natural buffers, grassed swales, infiltration trenches, level spreaders and channel grade controls. Examples of construction BMPs include: matting and filter fencing, or other barrier methods to intercept/capture sediment.

8. **Proper Maintenance**: Any authorized structure or fill shall be properly maintained, including maintenance necessary to ensure public safety and the movement of aquatic organisms.

9. **Aquatic Life Movements**: No activity may substantially disrupt the necessary life cycle movement of aquatic species indigenous to the water body, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. Culverts placed in streams must be installed to maintain low-flow conditions. If feasible, they should be designed as open-bottom culverts.

10. **Equipment**: Heavy equipment working in wetlands must be placed on mats, or other measures, such as low-ground pressure equipment, must be taken to minimize soil disturbance.

11. **Tribal Rights**: No activity or its operation may impair reserved Tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

12. **Water Supply Intakes**: No discharge of dredged or fill material may occur in the proximity of a public water supply intake, except where the discharge is for the repair or improvement of the intake structure(s), and/or adjacent bank stabilization.

13. **Suitable Material**: No discharge of dredged or fill material may consist of unsuitable material and material discharged must be free from toxic pollutants in toxic amounts (section 307 of the Clean Water Act). Unsuitable material includes, but is not limited to, trash, debris, car bodies, and asphalt.

14. **Management of Water Flows**: To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity,

and location of open waters if it benefits the aquatic environment (e.g., stream restoration project).

15. **Migratory Bird Breeding Areas**: Activities in waters of the U.S. that serve as breeding areas for migratory birds shall be avoided to the maximum extent practicable.

16. **Removal of Temporary Fills and Restoration of Affected Areas**: Temporary fills shall be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas shall be revegetated with native vegetation upon completion of the project. A restoration plan, which includes a 1-foot contour topographic map, must be submitted with the notification to the Corps.

17. **Compensatory Mitigation**: Compensatory mitigation for unavoidable impacts to waters of the U.S. must be accomplished by conforming to the minimum mitigation ratios set by the HCP/NCCP, as summarized in Table 1. Mitigation proposals are required to be consistent with the Federal mitigation rule (33 CFR Part 332).

a. The preferred mechanism for providing compensatory mitigation is by acquiring mitigation bank credits or in-lieu fee (ILF) program credits from a Corps-approved bank or ILF program, respectively. However, if an appropriate number and type of mitigation bank or ILF credits are not available at the time of notification (see general condition #18), permittee-responsible mitigation may be proposed. Pursuant to the Federal mitigation rule, the preference hierarchy for use of banks, ILF programs and permittee-responsible to fulfill compensatory mitigation requirements can be overridden based on project-specific considerations (33 CFR 332[b][2]).

b. Prior to proceeding with the activity authorized by this RGP, a final mitigation plan must be approved by the Corps, and mitigation fees (if applicable, e.g., bank and/or ILF program) must be paid. When mitigation fees are applicable, evidence of fee payment must be provided to the Corps before commencement of the activity authorized by this RGP can be initiated.

c. If the RGP verification includes permittee-responsible compensatory mitigation, the mitigation plan must contain a reporting procedure consistent with the Corps' mitigation rule (33 CFR Part 332.4[c][10]), Monitoring Requirements, as well as any Sacramento District and/or South Pacific Division compensatory mitigation guidance applicable at the time of application review.

18. **Notification**: The applicant shall provide written notification (i.e., a complete application) for a proposed activity to be authorized under the RGP prior to commencing the activity. The Corps' receipt of the complete application is the date when the Corps receives all required notification information from the applicant (see below). Written notification shall include all of the following:

a. A letter signed by the applicant requesting authorization under the RGP, identifying the Activity Category(s), a description of the proposed activity, the location of the activity (with latitude and longitude), and the area (in acres, and/or linear feet as applicable) of waters of the U.S., including wetlands, to be impacted;

b. For each general and applicable activity-specific condition of this RGP, a brief narrative describing how the activity would comply with the condition, or that the condition does not apply;

c. A vicinity map, plan-view and cross-section drawings clearly depicting the location, size and dimensions of the proposed activity, including areas to be used for access and staging. The drawings shall contain a title block, legend and scale, nearby structures, parcel boundaries, and dimensions of the proposed dock and associated access. Unless waived on a case by case basis at the Corps' discretion, all drawings shall comply with the Updated Map and Drawing Standards for the South Pacific Division Regulatory Program, which can be found at http://www.spd.usace.army.mil/Missions/Regulatory/Public-Notices-and-References/Article/651327/updated-map-and-drawing-standards/.

d. A delineation of aquatic resources in accordance with the Sacramento District's Minimum Standards for Acceptance of Aquatic Resources Delineation Reports (available at http://www.spk.usace.army.mil/Portals/12/documents/regulatory/jd/minimum-standards/Minimum_Standards_for_Delineation_with_Template-final.pdf), or updated standards adopted by the Sacramento District, unless specifically waived by the Sacramento District.

e. A written statement explaining how the activity has been designed to avoid and minimize adverse effects, both temporary and permanent, to waters of the U.S.

f. A cultural resource survey report for the project site, including all staging, access and construction areas. The report must be prepared in accordance with the March 24, 2014, Sacramento District Guidelines for Compliance with Section 106 of the NHPA, which can be found at http://www.spk.usace.army.mil/Portals/12/documents/regulatory/sec-106-tribal/FINAL_2014-03-24_Section-106-Guidelines.pdf (or more recent guidance, if applicable).

If the Corps determines that the activity complies with the terms and conditions of the RGP, including confirmation that proposed impacts to aquatic resources are minimal, the Corps will notify the applicant in writing and include any special conditions deemed necessary. If the Corps determines the impacts of the proposed activity are more than minimal, the Corps will notify the applicant that the project does not qualify for authorization under the RGP and instruct the applicant on the procedures to seek authorization under an individual permit.

19. **Reporting Responsibilities**: The permittee must submit a letter report to the Corps within 30 days of project completion. The report will contain the following:

a. The Corps' file number;
b. Photographs showing pre- and post-construction project conditions;
c. A completed compliance certification.

20. **Access**: The permittee must allow representatives from the Corps to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of the permit.

21. **Transfer of RGP Authorization**: If the permittee sells the property associated with this permit, the permittee must obtain the signature and mailing address of the new owner on the permit verification letter, and forward a copy to this office to validate the transfer.

ACTIVITY SPECIFIC GENERAL CONDITIONS:

The following general conditions apply to Activity categories specified at the end of each condition.

1. **Stream Setbacks**. Consistent with the requirements of the HCP/NCCP, stream setbacks shall be established. See the HCP/NCCP for detailed stream setback requirements, summarized in Table 2 of this RGP. Waters of the U.S. shall not be filled in order to meet the buffer requirements (Activity categories 1, 2, 3 and 5).

2. **Permanent Protections**. All preserved, created, restored or enhanced waters of the U.S. and adjacent buffers on the project site shall be preserved and permanently protected through a deed restriction, conservation easement, or other appropriate real estate or legal instrument, consistent with the requirements of the HCP/NCCP as determined by the Corps. A recorded copy of the real estate instrument must be provided to the Corps prior to proceeding with any activity otherwise authorized by this RGP (Activity categories 1, 2, 3 and 5).

3. **Fencing and Signage**. Preserved areas on the project site must be fenced and signed as sensitive areas to discourage human disturbance (Activity categories 1, 2 and 3).

4. **Utility Lines**. All utility lines shall be constructed in accordance with the following:

a. The construction area for linear utility line projects shall be limited to a width of 75 feet, unless this limit is waived in writing by the Corps.

b. For utility line projects, directional drilling, clear span or other techniques that do not contact the waterbody shall be used if the waterbody contains perennial flow.

c. Material resulting from trench excavation may be temporarily sidecast (up to 60 days) into waters of the U.S., provided that the material is not placed in such a manner

that is dispersed by currents or other forces. The Corps may extend the period of temporary side casting for no more than a total of 180 days, where appropriate.

d. Utility lines must not adversely alter existing hydrology, including draining of wetlands. In wetland areas, utility line trenches shall be lined with clay, or other impermeable materials or structures (such as cut-off walls) to ensure that the trench through which the utility line is installed does not drain waters of the U.S. In addition, to prevent a french drain effect, gravel cannot be used as backfill material in the top 10 feet of the trench.

e. In wetland areas, the top 6”-12” of the trench shall be backfilled with topsoil excavated from the trench in the same stratification in which it was removed.

f. Excess material shall be removed to upland areas immediately upon completion of utility line construction in any segment of the project containing waters of the U.S. In no case shall the excess material be left in place until the entire utility line is completed.

g. The construction area, including unprotected slopes and streambanks, shall be stabilized (e.g., blanketed and seeded) immediately upon completion of the utility line construction in any segment of the project. In no case shall soil stabilization be delayed until the entire utility line is completed.

h. Temporarily disturbed construction areas must be restored to pre-construction conditions, including grading to original contours and revegetating (with native vegetation or other appropriate vegetation approved by the Corps) immediately upon completion of the project. A restoration plan, which includes a 1-foot contour topographic map, shall be submitted with notification (Activity categories 1, 2, 3, 5 and 6).

DEFINITIONS:

Activity is any discharge of dredged or fill material into waters of the U.S. under Section 404 of CWA.

Activity categories are descriptions of HCP/NCCP Covered Activities listed in this RGP for purposes of assigning activity-specific conditions.

Activity-specific conditions are RGP conditions that would apply to specified Activity categories defined in this RGP.

Applicant is the individual, organization, or company requesting authorization under the RGP.

Authorization is written verification by the Corps that an activity qualifies for, and may proceed under, the RGP provided all terms and conditions of the RGP are followed.

Compensatory mitigation is the restoration, establishment (creation), enhancement, and/or in certain circumstances preservation of aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved. See also "in-lieu fee" definition.

Complete application is all required notification materials that must be submitted by the applicant to the Corps, as listed in general condition #18. If all materials are not submitted, the application is considered incomplete.

Conservancy is the East Contra Costa County Habitat Conservancy, a joint exercise of powers agency formed by the Cities of Brentwood, Clayton, Oakley and Pittsburg and Contra Costa County to perform the role of Implementing Entity for the HCP/NCCP.

Emergency refers to the guidance provided in 33 CFR 325.2(e)(4): "…a situation which would result in an unacceptable hazard to life, a significant loss of property, or an immediate, unforeseen, and significant economic hardship if corrective action requiring a permit is not undertaken within a time period less than the normal time needed to process the application under standard procedures. This RGP does not cover any activities in waters of the U.S. conducted in emergency situations.

General conditions are RGP conditions that would apply to all activities authorized.

HCP/NCCP is the East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan dated December, 2006. The United States Fish and Wildlife Service ("USFWS"), under incidental take permit TE 160958-0, and the California Department of Fish and Game ("CDFG"), under incidental take permit 2835-2007-01-03, have approved the HCP/NCCP and have authorized the "HCP/NCCP Permittees" to take certain species of plants and wildlife listed under the ESA and/or covered under the state of California's Natural Community Conservation Planning Act (NCCPA) while carrying out or approving certain development and other "covered activities." Take is defined under Federal and state laws.

HCP/NCCP Covered Activity means an activity or project within one of the categories of activities set forth in Section 2.3 of the HCP/NCCP that has been approved by an HCP/NCCP Permittee for coverage under the HCP/NCCP.

HCP/NCCP Permittee is any of the following eight local agencies that have approved the HCP/NCCP and have been authorized by USFWS and CDFG to take certain species, as take is defined respectively under Federal and state law. These are the Cities of Brentwood, Clayton, Oakley and Pittsburg, Contra Costa County, the Contra Costa County Flood Control and Water Conservation District, the Conservancy, and the East Bay Regional Park District.

Historic properties are as defined in 36 CFR Part 800.16(l). It means any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term

includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria.

Impact is the direct and indirect loss of waters of the U.S., including wetlands, which results from the discharge of dredged and/or fill material into waters of the U.S. associated with implementation of a proposed activity. See also “loss of waters” definition.

Independent utility is a test to determine what constitutes a single and complete non-linear project in the Corps Regulatory Program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.

In-lieu fee refers to an in-lieu fee (ILF) program as defined in 33 CFR Part 332.2. An ILF program involves the restoration, establishment (creation), enhancement and/or preservation of aquatic resources through funds paid to a governmental or non-profit natural resources management entity to satisfy compensatory mitigation (see above definition) requirements for Department of the Army (DA) permits. As required by 33 CFR Part 332.8(a), all ILF programs must be approved prior to being used to provide compensatory mitigation for projects authorized by the Corps.

Loss of waters of the U.S. refers to waters that are permanently adversely affected by filling, flooding, excavation, or drainage because of the regulated activity. Permanent adverse effects include permanent discharges of dredge or fill material that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of an aquatic feature. The acreage of loss of waters of the U.S. is a threshold measurement of the impact to jurisdictional waters for determining if the project may qualify for the RGP; it is not a net threshold that is calculated after considering compensatory mitigation that may be used to offset losses of aquatic functions and services. The loss of stream bed includes the acres or linear feet of stream bed that are filled or excavated as a result of the regulated activity.

Mitigation bank is a site where aquatic resources (e.g., wetlands, streams) are restored, established, enhanced, and/or preserved for the purpose of providing compensatory mitigation for impacts authorized by DA permits.

Notification is the submission of required information by the applicant to the Corps for a complete application.

Permittee is an entity that has received authorization to conduct activities in waters of the U.S. under this RGP.

Permittee-responsible mitigation refers to a type of compensatory mitigation as defined in 33 CFR Part 332.2, entailing aquatic resource restoration, establishment, enhancement, and/or

preservation activity undertaken by the permittee (or an authorized agent or contractor) to provide compensatory mitigation for which the permittee retains full responsibility.

Plan Area is the area shown in Figure 1-1 of the HCP/NCCP and *Figures 1a* and *1b* of this RGP. It is the area analyzed by the HCP/NCCP and covered by the USFWS and CDFG incidental take permits issued pursuant to the HCP/NCCP. In the HCP, the Plan Area is also referred to as the "Inventory Area." This RGP uses the term Plan Area.

Project site is the land, including waters of the U.S. and uplands, utilized for a single and complete project. The project site includes the land cleared, graded, and/or filled to construct the single and complete[2] project, including any buildings, utilities, stormwater management facilities, roads, yards, and other attendant features. Temporary construction areas (e.g., access and staging) are included. The project site also includes any other land and attendant features that are used in conjunction with the single and complete project, such as open space, roads and utilities.

Single and complete linear project is a project constructed for the purpose of getting people, goods, or services from a point of origin to a terminal point, which often involves multiple crossings of one or more waterbodies at separate and distant locations, as defined in the Final Rule for Issuance of the 2017 Nationwide Permits (Federal Register Vol. 82[4], January 6, 2017).
Single and complete non-linear project is the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers. A single and complete non-linear project must have independent utility (see definition of ''independent utility'').

Special conditions are conditions added by the Corps for projects on a case-by case basis to ensure an activity has minimal impacts on aquatic resources and complies with the RGP. The Corps' authority to require special conditions is provided in 33 CFR Part 325.4(a).

Stream order refers to the numeric identification of the reaches within a stream network. This document follows the stream ordering system of Strahler (1964)[3]. In this system, a first order stream is a stream with an identifiable bed and bank, without any tributary streams. A second order stream is formed by the confluence of two first order streams. A third order stream is formed by the confluence of two second order streams, and so on. Addition of a lesser order stream does not change the stream order of the trunk stream.

Suspension is the temporary cancellation of the authorization while a decision is made to modify, revoke or reinstate the authorization.

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[2] Linear or non-linear (see definitions below).
[3] Strahler, A.N. 1964. Quantitative Geomorphology of drainage basins and channel networks; section 4-2, in *Handbook of Applied Hydrology*, ed. Ven te Chow, McGraw-Hill, New York.

Terms and conditions are the parameters, including thresholds, limitations and requirements, for completing an activity under the RGP. These parameters are described in each Activity category and in the general conditions and Activity-specific conditions. Special conditions may also be added by the Corps on individual authorizations to ensure an activity has minimal individual and cumulative impacts.

Urban Limit Line is the boundary for urban growth that has been set for Contra Costa County in the Contra Costa County General Plan, as amended from time to time.

Utility line is any pipeline used to transport a gaseous, liquid, liquefiable or slurry substance for any purpose, and any cable, line or wire used to transmit electrical energy, telephone, radio signals, television signals or data communication. This definition does not include pipes or ditches which serve to drain a water of the United States, such as drainage tile; however, it does apply to pipes conveying drainage from one area to another.

Waters of the U.S. are as defined in 33 CFR Part 328.3(a).

Definitions found at 33 CFR Parts 320-323, 325-329, and 331-332 and 40 CFR Part 230 are also applicable to this RGP and are incorporated by reference herein.

FURTHER INFORMATION:

1. Congressional Authorities: This RGP has been issued under Section 404 of the Clean Water Act (33 U.S.C. 1344).

2. District Engineers have the authority to determine if an activity complies with the terms and conditions of this RGP.

3. This RGP does not obviate the need to obtain other Federal, state, or local permits, approvals, or authorizations required by law.

4. This RGP does not grant any property rights or exclusive privileges.

5. This RGP does not authorize any injury to the property or rights of others.

6. This RGP does not authorize interference with any existing or proposed Federal project.

7. Limits of Federal Liability. In issuing this RGP, the Federal Government does not assume any liability for the following:

a. Damages to the permitted project or uses thereof as a result of other permitted or unpermitted activities or from natural causes.

b. Damages to the permitted project or uses thereof as a result of current or future activities undertaken by or on behalf of the United States in the public interest.

c. Damages to persons, property, or to other permitted or unpermitted activities or structures caused by the activity authorized by this permit.

d. Design or construction deficiencies associated with the permitted work.

e. Damage claims associated with any future modification, suspension, or revocation of this permit.

8. Reevaluation of Permit Decision. This office may reevaluate its decision on this RGP at any time the circumstances warrant. Such a reevaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7.

9. Activities not meeting the terms and conditions of this RGP may be authorized through another type of permit, such as a Nationwide Permit, Letter of Permission, or Standard Permit. The Corps will determine on a case-by-case basis whether an activity has a more than minimal impact, individually or cumulatively, on the aquatic environment or may be contrary to the public interest. The Corps may include additional special conditions to any verification under this RGP to ensure the activity has minimal impact.

CONTACTS AND ADDITIONAL INFORMATION: For additional information about RGP 1, please contact the U.S. Army Corps of Engineers, Sacramento District at the address below, phone number (916) 557-5250.

ATTACHMENTS:

1. *Figure 1a*: General Location of HCP/NCCP Plan Area and Area Covered by RGP
2. *Figure 1b*: HCP/NCCP Plan Area and Area Covered by RGP
3. *Table 1*: Required Ratios and Estimated Preservation, Restoration, and Creation Requirements for Aquatic Land-Cover Types Under Initial and Maximum Urban Development Area
4. *Table 2*: Stream Setback Minimum Requirements for Streams
5. Programmatic Biological Opinion for a Regional General Permit for the East Contra Costa Habitat Conservation Plan/Natural Community Conservation Plan, Contra Costa County, California (USFWS #81420-2011-F-0655, dated April 30, 2012)

This permit becomes effective when the Federal official, designated to act for the Secretary of the Army has signed below.

Michael S. Jewell
Chief, Regulatory Division

6 June 2017
Date

Figure 1a: General Location of HCP/NCCP Plan Area and Area Covered by RGP

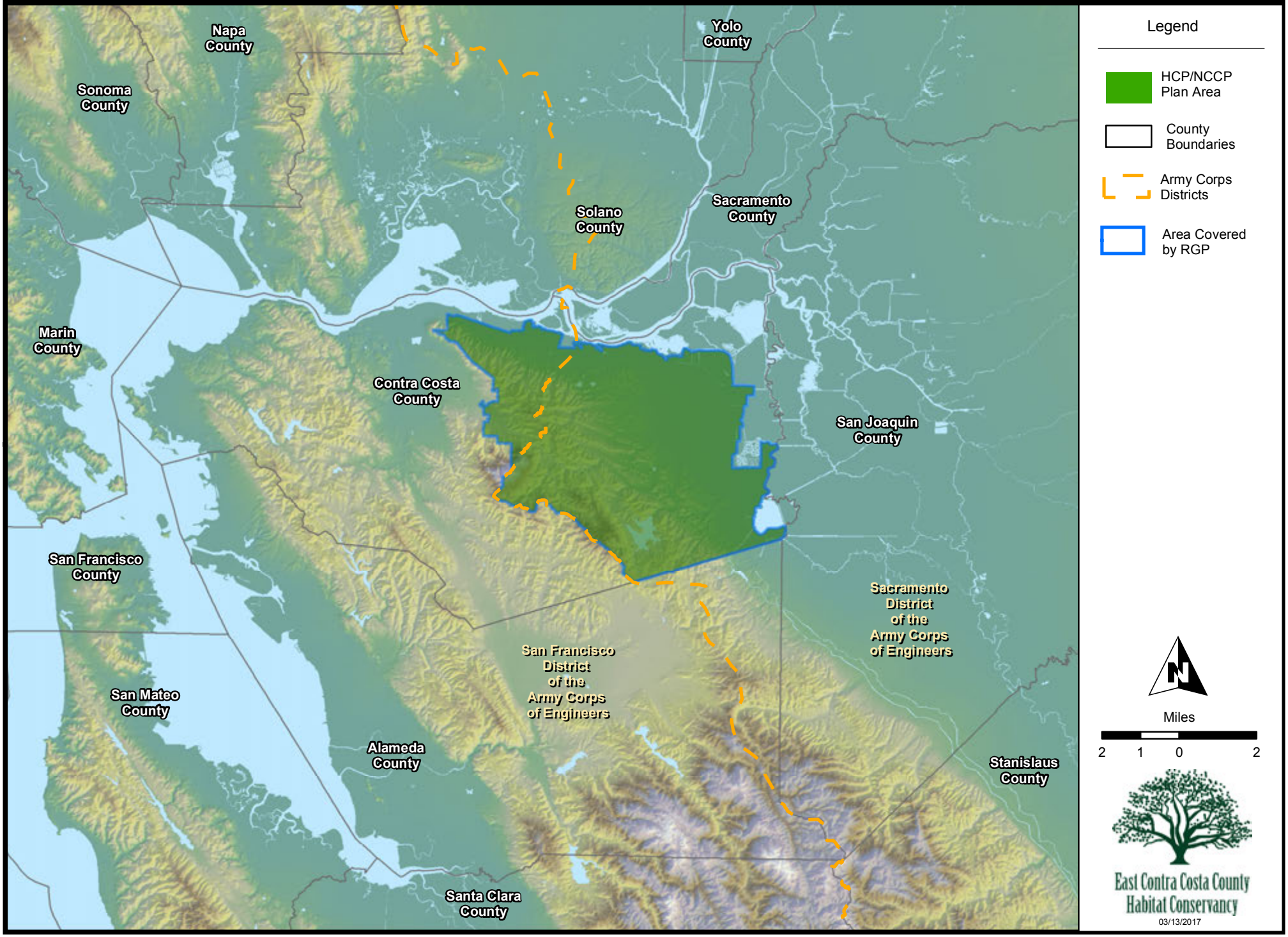

Figure 1b: HCP/NCCP Plan Area and Area Covered by RGP

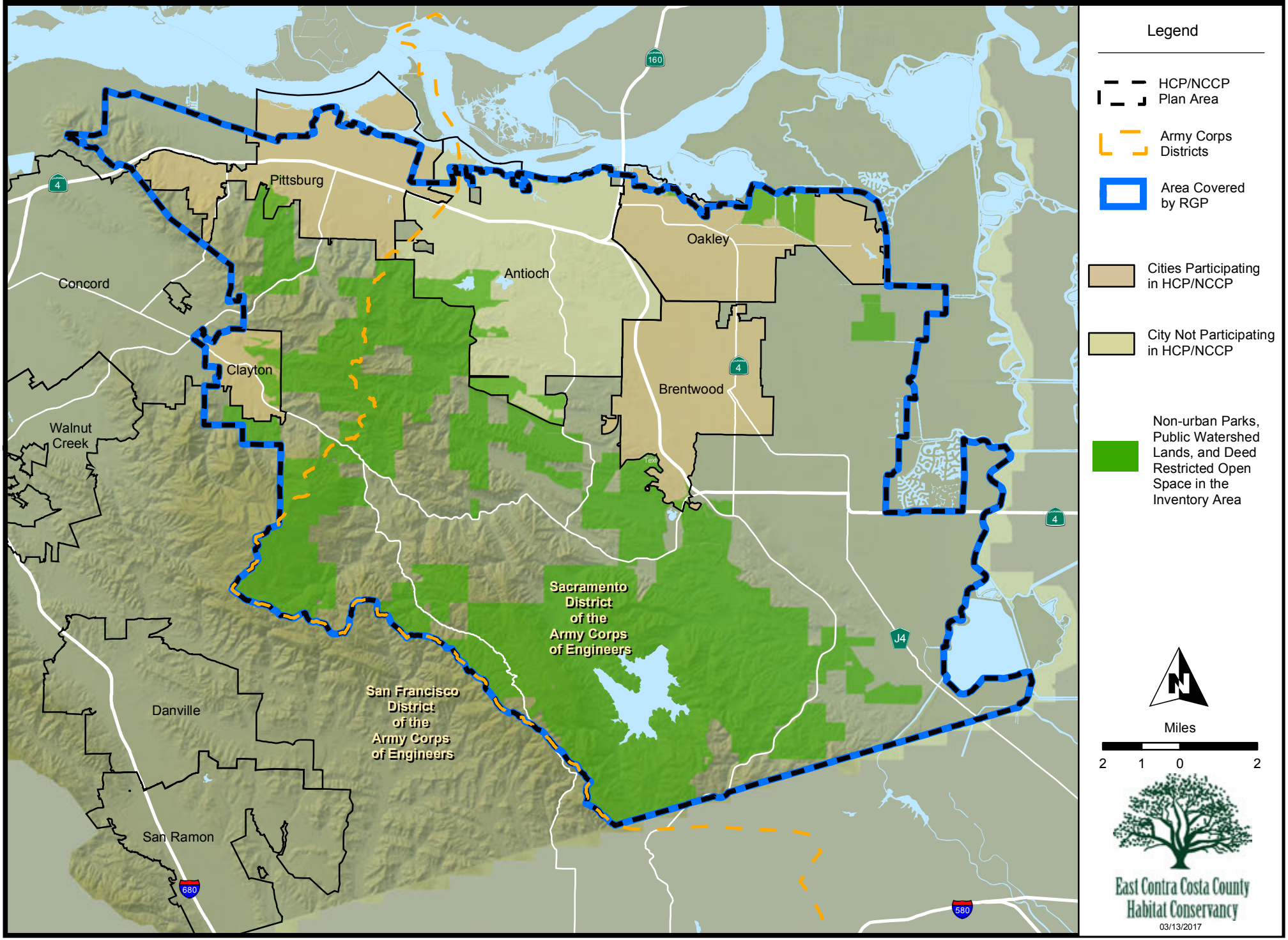

Table 1. Required Ratios and Estimated Preservation, Restoration and Creation Requirements for Aquatic Land-Cover Types under Initial and Maximum Urban Development Area

(Combines tables 5.5a, 5.5b, 5.16 and 5.17 of HCP)

	Preservation Requirements									Restoration & Creation Requirements								
	Required Preservation Ratio	Estimated Impact[1] (acres)		Estimated Preservation Requirement[1] (acres)		Impact & preservation notes	Minimum Available in Acquisition Analysis Zones[2] (acres)		Availabilty notes	Required Restoration and Creation Ratios (in addition to preservation requirements)		Estimated Restoration/ Creation Requirement[1] (acres)		Restoration or Creation Required to Contribute to Recovery (acres)		Estimated Total Restoration or Creation[1] (acres)		restoration / creation notes
Aquatic Land Cover Type		Initial Urban Development Area Scenario	Maximum Urban Development Area Scenario	Initial Urban Development Area Scenario	Maximum Urban Development Area Scenario		Initial Urban Development Area Scenario	Maximum Urban Development Area Scenario		Restoration	Creation	Initial Urban Development Area Scenario	Maximum Urban Development Area Scenario	Initial Urban Development Area Scenario	Maximum Urban Development Area Scenario	Initial Urban Development Area Scenario	Maximum Urban Development Area Scenario	
Riparian woodland/scrub	2:1	30	35	60	70		205	205		1:1	–	30	35	20	20	50	55	
Wetlands and Ponds																		
Perennial wetlands[3]	1:1	74	75	74	75	3	231	232	3	1:1	–	74	75	10	10	84	85	7
Seasonal wetlands	3:1	43	56	129	168	3, 4	172	172	3, 4, 5	2:1	–	86	112	20	20	106	132	4, 7
Alkali wetland	3:1	28	31	84	93	4	168	168	4	2:1	–	56	62	5	5	61	67	4
Ponds	2:1	7	8	14	16		80	80		–	1:1	7	8	8	8	15	16	
Slough/channel	0.5:1	72	72	36	36		137	137		1:1 or riparian	–	72	72	0	0	72	72	9
Aquatic (open water)	1:1	12	12		12		123	123		–	0.5:1 (ponds)	6 (ponds)	6 (ponds)	0	0	6 (ponds)	6 (ponds)	9
Total Aquatic Land Cover Types (acres)	–	266	289	397	470		1,117	1,117				331	370	63	63	394	433	
Perennial streams (miles)	2:1	0.3	0.4	0.6	0.8	6	18	184	6, 7	1:1	1:1 if restoration not feasible	0.3	0.4	0	0	0.3	0.4	7,10
Intermittent streams (miles)	1:1	0.3	0.4	0.3	0.4	6	184	184	6, 7	1:1	1:1 if restoration not feasible	0.3	0.4	0	0	0.3	0.4	7,10
Ephemeral streams (miles)	1:1	4	5	4	5		184	184	7	1:1	1:1 if restoration not feasible	4	5	0	0	4	5	7,10

Notes:

[1] Actual impacts, preservation requirements and restoration/creation requirements will be based on field-delineated resources at impact sites and application of the required preservation ratios in this table.

[2] Many land cover types were underestimated in the mapping conducted for this HCP/NCCP, so these figures represent minimum acreages of what is available for preservation. See Chapter 3 for a discussion of the mapping limitations.

[3] Undetermined wetlands could be seasonal wetlands or perennial wetlands (e.g., freshwater marsh). Seasonal wetlands will be mitigated at a preservation ratio of 3:1; perennial wetlands will be mitigated at a preservation ratio of 1:1. This table assumes 75% of undetermined wetlands are perennial wetlands and 25% are seasonal wetlands.

[4] Seasonal and alkali wetland acreage was quantified as the minimum polygon encompassing clusters of seasonal pools or drainages (i.e., wetland complexes). Impacts and land acquisition requirements will be tracked by jurisdictional wetland boundary, so estimates in this table overstate the expected impacts to and preservation of these land cover types. Impact restrictions and preservation ratios apply only to wetted acres.

[5] The actual amount of seasonal wetlands available for preservation in the inventory area is unknown because of a lack of field surveys. The allowable impact to seasonal wetlands by covered activities will be capped at the amount required to preserve seasonal wetlands at the required 3:1 ratio. For example, if only 30 acres are preserved, allowable impacts will be capped at 10 acres.

[6] Maximum allowable impacts for perennial and intermittent streams could not be separately estimated. Cumulative impacts for these two categories were estimated at 0.6 miles for the Initial Urban Development Area and 0.8 for the Maximum Urban Development Area. For the purposes of this table, it is assumed that the impacts are evenly split between the two categories.

[7] The approximate length of all streams of all types in the Acquisition Analysis Zone is 184 miles.

[8] Undetermined wetlands are either seasonal wetlands or perennial wetlands. Mitigation of seasonal wetlands will be accomplished through restoration at 2:1. Mitigation of perennial wetlands will be accomplished through in-kind creation at 1:1. This table assumes 75% of the undetermined wetlands are perennial wetlands and 25% are seasonal wetlands.

[9] Loss of slough/channel will be compensated by either restoring slough/channel at a 1:1 ratio or restoring riparian woodland/scrub at a 1:1 ratio (see text). These calculations assume all slough/channel impacts will be compensated through riparian woodland/scrub restoration because of the limited opportunities for slough/channel creation. Loss of open water will be compensated by creating ponds (see text).

[10] Streams will be restored at a 1:1 ratio where feasible. Where stream restoration is not feasible, out-of-kind creation of seasonal wetlands or permanent wetlands will be required to replace some of the functions of the lost stream at a 1:1 ratio. See Conservation Measure 2.10 for more details.

Table 2: Stream Setback Minimum Requirements for Streams[4]

Stream Reach Type and Location[1]	Buffer Objective/ Function (from Figure 5-11)	Example Sites in Inventory Area	Minimum Setback (from top of bank measured in aerial perspective[2])	Conditions and Limitations on Impacts To Streams[3]		Conditions and Limitations on Impacts Within Setbacks[4]		Comments
				Linear Limitations on Impacts to Streams	Activities for Which Stream Impacts Will Be Authorized	Limitations on Area of Impacts Within Setback[5]	Activities for Which Setback Impacts Will Be Authorized	
1st and 2nd order[6] ephemeral reaches in urban and agricultural areas	N/A	Multiple unnamed tributaries to intermittent and perennial reaches	Avoidance and minimization measures for drainages must be documented but no setback is required	No limitations	Any activities	No limitations	Any activities	These reaches are located in dense urban and intensive agricultural areas, and provide low habitat function for covered species. Avoidance and implementation of Conservation Measure 1.10 will minimize impacts to water quality and hydrologic functions.
Concrete-lined channels	Enhance water quality; retain restoration potential	Reaches of Kirker Creek	20 ft	No limitations	Any activities	No limitations	Any activities	These reaches are located in dense urban areas and provide low habitat function for covered species. A minimal buffer width will reduce sediment and nutrient inputs from surface flows, retain some potential for stream restoration, and provide for recreational opportunities.
1st and 2nd order[6] ephemeral reaches in natural areas	Erosion and nutrient control;	Multiple unnamed tributaries to intermittent and perennial reaches	25 ft	No limitations	Any activities	No limitations	No limitations, but avoidance and minimization must be documented.	Although ephemeral streams play a limited role in providing habitat to covered species, these systems represent the first point of entry for sediment and other contaminants into downstream reaches. Thus, unlike the stream types below, the primary objective of the setback for

[4] Stream setbacks apply Within the Urban Limit Line or City Limits of Brentwood, Clayton, Oakley or Pittsburg.

Stream Reach Type and Location[1]	Buffer Objective/ Function (from Figure 5-11)	Example Sites in Inventory Area	Minimum Setback (from top of bank measured in aerial perspective[2])	Conditions and Limitations on Impacts To Streams[3]		Conditions and Limitations on Impacts Within Setbacks[4]		Comments
				Linear Limitations on Impacts to Streams	Activities for Which Stream Impacts Will Be Authorized	Limitations on Area of Impacts Within Setback[5]	Activities for Which Setback Impacts Will Be Authorized	
								ephemeral streams is to filter out sediment and contaminants before they degrade downstream habitat.
Perennial, intermittent, or 3rd or higher order[6] ephemeral streams in urban areas except Marsh Creek mainstem	Enhance water quality; retain restoration potential	Lower Willow Creek, Lower Kirker Creek, Lower Sand and Deer Creeks	50 ft	300 feet	Necessary bridges and outfalls	Up to 15% of setback area	Necessary bridges and outfalls, access and maintenance roads for flood control, c3 facilities, and trails	These reaches are located mostly in dense urban areas and provide low habitat function for covered species. However, potential may exist for restoration of riparian vegetation and minimal floodplain areas. In addition, a minimal buffer width will reduce sediment and nutrient inputs from surface flows and provide for recreational opportunities.
Perennial, intermittent, or 3rd or higher order[6] ephemeral streams in agricultural or natural areas and Marsh Creek mainstem	Enhance water quality; retain restoration potential	See examples below[7]	75 ft	300 feet	Necessary bridges and outfalls	Up to 15% of setback area	Necessary bridges and outfalls, access and maintenance roads for flood control, trails, and other necessary facilities approved by wetlands agencies	These reaches retain the greatest habitat value and potential for restoration within the Urban Limit Line. The buffer will filter sediment and other contaminants, maintain habitat for covered species, allow for restoration of riparian vegetation and some small floodplain areas, as well as providing recreation opportunities.

[1] Location parameters (e.g., “agricultural areas”, “natural areas”, etc.) describe the setting of the stream at the time of completing this HCP/NCCP and refer to the fee zones and urban landcover shown in Figure 9-1.
[2] Where native woody riparian vegetation is present, minimum setbacks must extend to the outer dripline of the riparian vegetation or the specified number of feet measured from top of bank, whichever is greatest. Riparian vegetation is defined broadly to include oaks and other woody species that function as riparian

corridors. Setbacks must also meet minimum setback requirements of the applicable local land use agency. Contra Costa County has an ordinance regulating impacts near unimproved earthen channels. This Ordinance requires a "structure setback line" that varies between approximately 30 feet and 50 feet from top of bank depending on the height of top of bank above the channel invert (County Code Title 9, Division 914-14.012).

[3] Mitigation is required for all impacts to streams, as described in Chapter 5 of the HCP/NCCP. Restoration requirements are summarized in Tables 5-16, 5-17, and 9-5. Preservation requirements are summarized in Tables 5-5a and 5-5b and may be accomplished through payment of the development fee described in Section 9.3.1 or through provision of land in lieu of fees.

[4] Impacts within setbacks must be mitigated through: a) payment of the development fee described in Section 9.3.1 over the entire property including the setback and the stream channel; and b) through payment of the riparian impact fee (see Table 9-5 of HCP/NCCP) for every acre of impact within the setback or through direct performance of riparian restoration at a 0.5 to 1 ratio on-site or off-site.

[5] Restrictions will be measured as a percentage of the setback area excluding the area the of the stream channel.

[6] Stream order refers to the numeric identification of the links within a stream network. This document follows the stream ordering system of Strahler (1964). In this system, a first order stream is a stream with an identifiable bed and bank, without any tributary streams. A second order stream is formed by the confluence of two first order streams. A third order stream is formed by the confluence of two second order streams, and so on. Addition of a lesser order stream does not change the stream order of the trunk stream.

[7]Perennial streams in agricultural or natural areas within the Inventory Area consist of the following:

a. **Mount Diablo Creek, Russelman Creek, Peacock Creek upstream of the Oakhurst Country Club property, and tributaries to Mount Diablo Creek within Mount Diablo State Park;**

b. **Kellogg Creek in the Foothills/Upper Valley and Delta geomorphic zones;**

c. **Brushy Creek in the Delta and Lower Valley/Plain geomorphic zones;**

d. **Indian, Rock, Sand Mound, Dutch, Piper, and Taylor Sloughs, and False River (does not include reaches in concrete channels); and**

e. **Sand Creek and Oil Canyon Creek in the Montane geomorphic zone.**

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California95825-1846

In Reply Refer To:
81420-2011-F-0655

APR 3 0 2012

Kathleen A. Dadey
Chief, California Delta Branch
Attn: Mary Pakenham-Walsh
Regulatory Division
U.S. Army Corps of Engineers
650 Capitol Mall, Suite 5-200
Sacramento, California 95814

Subject: Programmatic Biological Opinion for a Regional General Permit for the East Contra Costa Habitat Conservation Plan/Natural Community Conservation Plan, Contra Costa County, California (Corps file number SPK-2001-00147)

Dear Ms. Dadey:

This programmatic Biological Opinion has been prepared in response to the U.S. Army Corps of Engineers' (Corps) June 14, 2011, request for section 7 consultation with the U.S. Fish and Wildlife Service (Service) for multiple activities that would be authorized under a Corps Regional General Permit (RGP) within the permit area for the (Plan Area) for the East Contra Costa Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP). At issue are the effects of this action on the threatened California red-legged frog (*Rana draytonii*), threatened Central California Distinct Population Segment (DPS) of the California tiger salamander (*Ambystoma californiense*) (Central California tiger salamander), threatened Alameda whipsnake (*Masticophis laterals euryxanthus*), threatened giant garter snake (*Thamnophis gigas)* endangered San Joaquin kit fox (*Vulpes macrotis mutica*), threatened vernal pool fairy shrimp (*Branchinecta lynchi)* and its critical habitat, the endangered longhorn fairy shrimp (*Branchinecta longiantenna*) and its critical habitat, and the endangered vernal pool tadpole shrimp (*Lepidurus packardi*). This programmatic Biological Opinion is issued under the authority of the Endangered Species Act, as amended (16 U.S.C. 1531 *et seq.*) (Act or ESA).

This document is based on: (1) the draft *Department of the Army Permit Regional General Permit Number 1 – Minimal Impact Activities-East Contra Costa County, California* dated June 14, 2011; (2) a public notice for the proposed issuance of a Regional General Permit (SPK-2001-00147) for activities covered under the HCP/NCCP dated February 2011; (3) a public notice for the proposed in-lieu fee program in conjunction with the HCP/NCCP (SPK-2001-00147) dated January 2011; (4) the final *East Contra Costa Habitat Conservation Plan/Natural Community Conservation Plan* dated October 2006; (5) *Exhibit B: Corrections and Updates to the*

HCP/NCCP dated December 2006; (6) the *Intra-Service Biological Opinion on Issuance of a Section 10(a)(1)(B) Incidental Take Permit for the HCP/NCCP* (Intra-Service Opinion) dated July 2007;(7) the draft *Aquatic Resources Inventory, Classification, and Function* for the HCP/NCCP dated October 2004; (8) the *East Contra Costa Habitat Conservation Plan/Natural Community Conservation Plan Annual Report 2010* dated March 2011; and (9) and other information available to the Service.

Consultation History:

June 14, 2011:	The Service received the Corps letter requesting initiation of formal consultation for the proposed action.
June 22, 2011:	The Service attended an informational workshop for the public hosted by the East Contra Costa HCP/NCCP with the Corps and the California Department of Fish and Game (CDFG) to discuss the proposed action.
March 1, 2012:	The Service received a revised RGP.

BIOLOGICAL OPINION

Description of the proposed action

The HCP/NCCP addresses effects to both federally listed and unlisted species. However, pursuant to section 7 of the Act, this Biological Opinion only addresses effects to federally listed or proposed threatened and endangered species resulting from the proposed issuance of a RGP that would authorize placement of dredged or fill materials into waters of the U.S. for activities covered under the HCP/NCCP within the Plan Area for the HCP/NCCP. For a complete description of all *Covered Activities* (Covered Activities) under the HCP/NCCP, see Chapter 2 of the HCP/NCCP (Jones and Stokes 2006).

The proposed RGP is valid for five years from the date of issuance (or reissuance), but can be extended or reissued (see *Terms of Authorization: Expiration of RGP* below); however, the HCP/NCCP and Intra-Service Opinion cover activities for a period of thirty years (expires on July 25. 2037). Because activities proposed under the RGP are a subset of the Covered Activities analyzed in the HCP/NCCP and Intra-Service Opinion, the Service will consider this Biological Opinion valid for the life of the HCP/NCCP's Incidental Take Permit (TE160958-0) (Service 2007), unless new information reveals effects of the proposed action may result in adverse effects to federally listed species in a manner not identified to date, or if a new species is listed that may be affected by the proposed action.

Project Overview

The proposed action is issuance of a RGP that would authorize placement of dredged or fill material into waters of the U.S. within the Plan Area, pursuant to section 404 of the Clean Water Act (CWA), for Covered Activities as defined in the HCP/NCCP that would have minimal individual and cumulative impacts on the aquatic environment. The RGP's procedures and associated requirements would integrate with those contained in the HCP/NCCP, resulting in consistent implementation of the section 10 permit for the HCP/NCCP and a coordinated permitting process under section 404 of the CWA.

The proposed RGP would authorize specific categories of activities with minimal individual and cumulative impacts on the aquatic environment that meet the terms and conditions of the RGP. Temporary structures, fills, and work necessary to construct an activity authorized by the RGP are allowed, provided such work complies with the terms and conditions of the RGP inclusive of special conditions that the Corps may add. The RGP applies only to HCP/NCCP Covered Activities, as set forth in Section 2.3 of the HCP/NCCP (Jones and Stokes 2006). Any question as to whether a proposed activity is considered a Covered Activity under the HCP/NCCP shall be subject to confirmation by the East Contra Costa County Habitat Conservancy, a joint exercise of powers agency formed by the Cities of Brentwood, Clayton, Oakley and Pittsburg and Contra Costa County to perform the role of Implementing Entity for the HCP/NCCP (Conservancy). The HCP/NCCP Covered Activities are divided among the following Activity categories in the RGP for purposes of assigning Activity-specific conditions (see *Activity Specific Conditions* below):

1. Residential, commercial, industrial, institutional, and other urban developments and associated infrastructure inside the Urban Limit Line of Contra Costa County or inside the City Limits of the Cities of Brentwood, Clayton, Oakley and Pittsburg, including but not limited to roads, utilities, parks, storm water management facilities, and water supply and delivery facilities (activity-specific conditions: 1 through 4).

2. Recreation projects, including parks, picnic areas, staging areas, trails and park maintenance facilities. Applies only to the activities set forth in Sections 2.3.2 and 2.3.4 of the HCP/NCCP (activity-specific conditions: 1 through 4).

3. Flood control detention basins, reservoirs, channels, and related facilities. Applies only to the specific planned facilities set forth in Section 2.3.2 of the HCP/NCCP (activity-specific conditions: 1 through 4).

4. Transportation projects, including road construction and widening, bicycle trails, rail projects, bridges and safety-related projects. Applies only to the specific planned facilities set forth in Section 2.3.2 of the HCP/NCCP (general conditions apply only).

5. Wetland and stream restoration, creation, enhancement and management. Applies only to activities set forth in Sections 2.3.2 and 2.3.4 of the HCP/NCCP (activity-specific conditions: 1, 2, and 4).

6. Utility projects, including electrical transmission projects, cellular communication projects and pipelines. Applies only to the activities set forth in Sections 2.3.2 and 2.3.4 of the HCP/NCCP (activity-specific condition 4).

7. Maintenance, repair, rehabilitation or replacement of any previously authorized (under the RGP or other Corps permit), currently serviceable, structure or fill. Applies only to the maintenance activities set forth in Sections 2.3.1 and 2.3.3 of the HCP/NCCP (general conditions apply only).

If there is any question as to which Activity category a proposed activity would apply to, the Corps will determine the applicable Activity category. The RGP does not cover any activities in waters of the U.S. conducted in emergency situations.

Terms of Authorization:

1. Applying for RGP authorization: Prior to commencing a proposed activity, applicants seeking authorization under the RGP shall notify the Corps in accordance with RGP general condition number 19 (Notification) listed in the general conditions below. If the Corps determines that an activity is not an eligible activity under the RGP, it will notify the applicant in writing within 30 calendar days and provide instructions on the procedures to seek authorization under a standard permit, letter of permission or Nationwide permit. If the Corps determines that a proposed activity is eligible for coverage under the RGP, it will notify the applicant within 45 calendar days of receipt of a complete application. If the Corps does not provide a written response to the applicant within 45 calendar days following receipt of a complete application, the applicant may presume the proposed activity is an eligible activity that may be covered under the RGP, provided the activity complies with all other terms and conditions of the RGP.

2. Impact Thresholds for waters of the U.S.: Impacts to waters of the U.S. shall be avoided and minimized to the maximum extent practicable. The loss of waters of the U.S. (including wetlands) resulting from individual project impacts may not exceed a total of 1.5 acres or more than 300 linear feet of perennial, intermittent or 3rd or higher order ephemeral streams (as defined in Table 2 of the RGP and further described in the HCP/NCCP), unless the linear limit is waived in writing by the Corps. Additional restrictions are listed in the General and Activity-Specific Conditions.

3. Single and complete project: The project must be a single and complete project. For example, if construction of a residential development involves phases, the sum of all impacted areas would be the basis for deciding whether or not the project will be covered by the RGP.

4. After-the-fact projects: The RGP may not be used to authorize activities after they have impacted waters of the U.S.

5. Compliance with HCP/NCCP Conditions: Activities to be authorized under the RGP must be HCP/NCCP Covered Activities and must fully comply with the HCP/NCCP. Compliance with the HCP/NCCP requires applicants to implement the appropriate conservation measures outlined in Chapter 6 of the HCP/NCCP.

6. Special conditions: The Corps may add special conditions to an authorization to ensure the activity complies with the terms and conditions of the RGP, and/or that adverse impacts on the aquatic environment or other aspects of the public interest are individually and cumulatively minimal.

7. Activity completion: Any activity authorized by the Corps under the RGP must be completed within three (3) years of the date it is authorized. The "authorization date" is the date the Corps verifies in writing that the activity meets the terms and conditions of the RGP. The Corps will, on a case-by-case basis, review requests for time extensions if the permittee fails to complete the activity within three years. A time extension would be considered a reverification and would be subject to review and approval policies in effect at the time of review. Pursuant to term #9, below, activities authorized under the RGP that are under construction or under contract for construction in reliance upon this authorization will remain authorized provided the activity is completed within 12 months of the date of the RGP's expiration, modification or revocation, unless the Corps exercises its discretionary authority to modify, suspend, or revoke the authorization of a specific project.

8. Discretionary Authority: The Corps has the discretion to suspend, modify, or revoke authorizations under the RGP. This discretionary authority may be used by the Corps to also further condition or restrict the applicability of the RGP for cases in which it has concerns associated with the Clean Water Act Section 404(b)(1) Guidelines, or regarding any public interest factor. Should the Corps determine that a proposed activity may have more than minimal individual or cumulative adverse impacts to aquatic resources or otherwise be contrary to the public interest, the Corps will modify the authorization to reduce or eliminate those adverse effects, or notify the applicant that the proposed activity is not authorized by the RGP and provide instructions on how to seek authorization under an individual permit. The Corps may restore authorization under the RGP at any time it determines that the reason for asserting discretionary authority has been resolved or satisfied by a condition, project modification, or new information. The Corps may also use its discretionary authority to modify, suspend, or revoke the RGP at any time.

9. Expiration of RGP: The RGP is valid for five years from the date of issuance (or reissuance). At least 60 calendar days prior to the expiration date of the RGP, the Corps will issue a public notice, with an opportunity for public comment, describing the reasons for reissuing the RGP, reissuing the RGP with modifications, or not reissuing the RGP for another five years. The Corps may extend the RGP for six months beyond the expiration date if it is

unable to reissue the RGP due to unresolved issues. If the Corps has not reissued or extended the RGP by the expiration date, the RGP will no longer be valid. The RGP may also be modified, suspended, or revoked by the Corps at any time deemed necessary. In such instance, the Corps will issue a public notice concerning the action.

General Conditions:

The following conditions apply to all Activity categories:

1. Threatened and Endangered Species: No activity is authorized under the RGP that does not comply with the mandatory terms and conditions of the Service's Section 10(a)(1)(B) Incidental Take Permit for the East Contra Costa HCP/NCCP dated July 20, 2007 (Service permit number: TE160958-0). This Biological Opinion contains mandatory terms and conditions to implement the reasonable and prudent measures that are associated with "incidental take" authorization under the RGP. Authorization under the RGP is conditional upon compliance with all of the mandatory terms and conditions of this Biological Opinion. Failure to comply with the terms and conditions of this Biological Opinion would constitute non-compliance with the RGP. The Service is the appropriate authority to determine compliance with the terms and conditions of the Biological Opinion, and with the ESA. The permittee must comply with all applicable conditions of this Biological Opinion, including those ascribed to the Corps.

2. Water Quality Certification: Section 401 Water Quality Certification is required for activities to be authorized by the RGP. The Corps may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal impacts, individually or cumulatively.

3. Historic Properties: No activity is authorized under the RGP if the activity may affect historic properties listed, or eligible for listing, in the National Register of Historic Places, until the requirements of Section 106 of the National Historic Preservation Act (NHPA), as amended, have been satisfied. Applicants must notify the Corps if the activity may have the potential to cause effects to any historic properties listed, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified historic properties. The Corps will consult with the State Historic Preservation Officer (SHPO), as appropriate, following the policy and procedural standards of 33 CFR Part 325 Appendix C[1].

4. Unanticipated Cultural Resources Discoveries: If previously unidentified cultural materials are unearthed during construction, all work shall be halted until a qualified archaeologist can examine the deposit and determine its nature and significance. In the event of discovery of possible human remains, state law requires that the County Coroner be contacted.

[1] Inclusive of Appendix C Interim Guidance dated April 25, 2005 and January 31, 2007, or such guidance that is applicable at the time that a permit application is submitted. Current guidance may be found on the Sacramento District's web site at: http://www.spk.usace.army.mil/organizations/cespk-co/regulatory/.

5. Fills within 100-Year Floodplains: The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

6. Bed and Bank Stabilization: Bank stabilization activities are limited to: (a) using the minimum amount of material needed for erosion protection; (b) no more than 500 feet in length along the bank, unless this criterion is waived in writing by the Corps; and (c) no more than an average of 1 cubic yard of material per running foot placed along the bank below the plane of the ordinary high water mark or high tide line, unless this criterion is waived in writing by the Corps.

7. Best Management Practices: Best Management Practices (BMPs) must be employed during construction and in project design to protect water quality and minimize impacts of stormwater runoff on aquatic resources. BMPs should be appropriately located in or adjacent to waters of the U.S. (e.g., silt curtains). The applicant shall employ the following BMPs, as appropriate and feasible, in designing and constructing the project. The applicant shall describe which BMPs are practicable as part of the notification procedure as per general condition #19, subpart (b) below:

   a. Preservation of natural resource features on the project site (e.g., floodplains, wetlands, streams, and other drainage ways, grasslands, woodlands, and native soils);
   b. Preservation of natural water infiltration and storage characteristics of the site;
   c. Minimization of new impervious surfaces in project design (impervious surfaces may be minimized through practices such as reducing road widths and clustering developments designed around open space);
   d. Structural measures that provide water quality and quantity control;
   e. Structural measures that provide only quantity control and conveyance;
   f. Construction BMPs;
   g. Low impact development (LID) BMPs.

   Examples of structural BMPs include: vegetated natural buffers, grassed swales, infiltration trenches, level spreaders and channel grade controls. Examples of construction BMPs include: matting and filter fencing, or other barrier methods to intercept/capture sediment.

8. Proper Maintenance: Any authorized structure or fill shall be properly maintained, including maintenance necessary to ensure public safety and the movement of aquatic organisms.

9. Aquatic Life Movements: No activity may substantially disrupt the necessary life cycle movement of aquatic species indigenous to the water body, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. Culverts placed in streams must be installed to maintain low-flow conditions. If feasible, they should be designed as open-bottom culverts.

10. Equipment: Heavy equipment working in wetlands must be placed on mats, or other measures, such as low-ground pressure equipment, must be taken to minimize soil disturbance.

11. Tribal Rights: No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

12. Water Supply Intakes: No discharge of dredged or fill material may occur in the proximity of a public water supply intake, except where the discharge is for the repair or improvement of the intake structure(s), and/or adjacent bank stabilization.

13. Suitable Material: No discharge of dredged or fill material may consist of unsuitable material and material discharged must be free from toxic pollutants in toxic amounts (section 307 of the CWA). Unsuitable material includes, but is not limited to, trash, debris, car bodies, and asphalt.

14. Management of Water Flows: To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration project).

15. Migratory Bird Breeding Areas: Activities in waters of the U.S. that serve as breeding areas for migratory birds shall be avoided to the maximum extent practicable.

16. Removal of Temporary Fills and Restoration of Affected Areas: Temporary fills shall be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas shall be revegetated with native vegetation upon completion of the project. A restoration plan, which includes a 1-foot contour topographic map, must be submitted with the notification to the Corps.

17. Compensatory Mitigation: Mitigation for impacts to waters of the U.S. must be accomplished by conforming to the minimum mitigation ratios set by the HCP/NCCP. Mitigation proposals are required to be consistent with the Corps' mitigation rule (33 CFR Part 332).

    a. Mitigation may be accomplished by one or more of the following mechanisms: 1) payment of the aquatic resources mitigation fee to the Conservancy in accordance with the in-lieu fee (ILF) program envisioned to be established by the Conservancy; 2) purchasing credits from a Corps-approved mitigation bank that also provides mitigation acceptable under the HCP/NCCP, and/or; 3) through a "permittee-responsible" mitigation project (33 CFR Part 332).

b. Prior to proceeding with the activity authorized by the RGP, a final mitigation plan must be approved by the Corps and the Conservancy, and/or mitigation fees must be paid. When mitigation fees are applicable, evidence of fee payment must be provided to the Corps before commencement of the activity authorized by the RGP can be initiated.
c. If the RGP verification includes permittee-responsible compensatory mitigation, the mitigation plan must contain a reporting procedure consistent with the Corps' mitigation rule (33 CFR Part 332.4[c][10]), *Monitoring Requirements*.

18. Notification: The applicant shall provide written notification (i.e., a complete application) for a proposed activity to be authorized under the RGP prior to commencing the activity. The Corps' receipt of the complete application is the date when the Corps receives all required notification information from the applicant (see below). Written notification shall include all of the following:

a. A letter signed by the applicant requesting authorization under the RGP, identifying the Activity Category(s), a description of the proposed activity, the location of the activity (with latitude and longitude), and the area (in acres, and/or linear feet as applicable) of waters of the U.S., including wetlands, to be impacted;
b. For each general and applicable activity-specific condition of the RGP, a brief narrative describing how the activity would comply with the condition, or that the condition does not apply;
c. Vicinity and project site maps;
d. A delineation of waters of the U.S., including wetlands, for the project site and for areas immediately adjacent to the project site. On-site wetlands must be delineated using the Corps Wetlands Delineation Manual (1987) and Arid West Region Regional Supplement (2008), or most recent manual(s) in effect at the time of the applicant's proposal. Off-site wetlands may be identified through the use of reference materials including local wetland inventories, soil surveys, and aerial photography. The delineation shall *also* include information on wetlands and waters, as defined in the HCP/NCCP, that are/may not be waters of the U.S.;
e. Preliminary plans (on 8 ½" x 11" or 14" reduced-sized drawings) showing all aspects of the proposed activity and the location of avoided and impacted waters of the U.S. Plan-view and cross-section plans shall be included. Both temporary (e.g., access, staging) and permanent impacts to waters of the U.S. shall be shown. The plans shall include grading contours and existing and proposed structures, such as buildings, roadways, stormwater management facilities, utilities, construction access areas and water conveyance structures. The drawings shall also show buffer areas, open space designations, locations of BMPs, deed restricted areas, and restoration areas, if required;
f. A written statement explaining how the activity has been designed to avoid and minimize adverse effects, both temporary and permanent, to waters of the U.S. For compensatory mitigation proposed in accordance with general condition #18, submit a preliminary plan to offset unavoidable impacts to waters of the U.S.;

g. A cultural resource survey report for the project site, including all staging, access and construction areas. The report must be prepared in accordance with the Sacramento District's Guidelines for Compliance with Section 106 of the NHPA (dated February 25, 2011), or more recent guidance (if applicable) at the time a permit application is submitted.

If the Corps determines that the activity complies with the terms and conditions of the RGP, including confirmation that proposed impacts to aquatic resources are minimal, the Corps will notify the applicant in writing and include any special conditions deemed necessary. If the Corps determines the impacts of the proposed activity are more than minimal, the Corps will notify the applicant that the project does not qualify for authorization under the RGP and instruct the applicant on the procedures to seek authorization under an individual permit.

19. Reporting Responsibilities: The permittee must submit a report to the Corps within 30 days of project completion. The report will contain the following:

    a. The Corps' file number;
    b. Photographs showing pre- and post-construction project conditions;
    c. A completed compliance certification.

20. Access: The permittee must allow representatives from the Corps to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of the permit.

21. Transfer of RGP Authorization: If the permittee sells the property associated with this permit, the permittee must obtain the signature and mailing address of the new owner on the permit verification letter, and forward a copy to this office to validate the transfer.

Activity-Specific Conditions:

The following conditions apply to Activity categories specified at the end of each condition.

1. Stream Setbacks. Consistent with the requirements of the HCP/NCCP, stream setbacks shall be established (see the HCP/NCCP for detailed stream setback requirements). Waters of the U.S. shall not be filled in order to meet the buffer requirements (Activity categories 1, 2, 3, and 5).

2. Permanent Protections. All preserved, created, restored or enhanced waters of the U.S. and adjacent buffers on the project site shall be preserved and permanently protected through a deed restriction, conservation easement, or other appropriate real estate or legal instrument, consistent with the requirements of the HCP/NCCP as determined by the Corps. A recorded copy of the real estate instrument must be provided to the Corps prior to proceeding with any activity otherwise authorized by the RGP (Activity categories 1, 2, 3, and 5).

3. Fencing and Signage. Preserved areas on the project site must be fenced and signed as sensitive areas to discourage human disturbance (Activity categories 1, 2, and 3).

4. Utility Lines. All utility lines shall be constructed in accordance with the following:
   a. The construction area for linear utility line projects shall be limited to a width of 75 feet, unless this limit is waived in writing by the Corps.
   b. For utility line projects, directional drilling, clear span or other techniques that do not contact the waterbody shall be used if the waterbody contains perennial flow.
   c. If the project involves the use of directional drilling below waters, notification shall include a contingency plan. The plan will include actions that will be taken to stabilize the work area and avoidance/contingency measures in the event of a potential "frac-out."
   d. Material resulting from trench excavation may be temporarily sidecast (up to 60 days) into waters of the U.S., provided that the material is not placed in such a manner that it is dispersed by currents or other forces. The Corps may extend the period of temporary side casting for no more than a total of 180 days, where appropriate.
   e. Utility lines must not adversely alter existing hydrology, including draining of wetlands. In wetland areas, utility line trenches shall be lined with clay, or other impermeable materials or structures (such as cut-off walls) to ensure that the trench through which the utility line is installed does not drain waters of the U.S. In addition, to prevent a French drain effect, gravel cannot be used as backfill material in the top 10 feet of the trench.
   f. In wetland areas, the top 6"-12" of the trench shall be backfilled with topsoil excavated from the trench in the same stratification in which it was removed.
   g. Excess material shall be removed to upland areas immediately upon completion of utility line construction in any segment of the project containing waters of the U.S. In no case shall the excess material be left in place until the entire utility line is completed.
   h. The construction area, including unprotected slopes and streambanks, shall be stabilized (e.g., blanketed and seeded) immediately upon completion of the utility line construction in any segment of the project. In no case shall soil stabilization be delayed until the entire utility line is completed.
   i. Temporarily disturbed construction areas must be restored to pre-construction conditions, including grading to original contours and revegetating (with native vegetation or other appropriate vegetation approved by the Corps) immediately upon completion of the project. A restoration plan, which includes a 1-foot contour topographic map, shall be submitted with notification (Activity categories 1, 2, 3, 5, and 6).

Limitations and Restrictions:

1. The Corps has authority to determine if an activity complies with the terms and conditions of the RGP.

2. The RGP does not obviate the need to obtain other Federal, state, or local permits, approvals, or authorizations required by law.

3. The RGP does not grant any property rights or exclusive privileges.

4. The RGP does not authorize any injury to the property or rights of others.

5. The RGP does not authorize interference with any existing or proposed Federal project.

Definitions:

This Biological Opinion incorporates by reference the Definitions contained within the RGP.

Action Area

The area covered by the RGP is geographically synonymous with the Plan Area for the HCP/NCCP in east Contra Costa County, including the cities of Clayton, Brentwood, Oakley, and Pittsburg, and specific areas of unincorporated Contra Costa County. The HCP/NCCP action area is within eastern Contra Costa County, California. The action area covers 174,018 acres, or approximately one-third of Contra Costa County, and is entirely within the eastern portion of the County. The action 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 action area encompasses all or most of five incorporated cities: Brentwood, Clayton, Oakley, Pittsburg, and Antioch; however, Antioch is not a Permittee to the HCP/NCCP. Three-quarters of the land in the action area, approximately 128,908 acres, are in unincorporated areas of Contra Costa County. For a more detailed description of the action area refer to the Intra-Service Opinion.

Analytical Framework for the Jeopardy Analysis

Jeopardy Determination

In accordance with policy and regulation, the jeopardy analysis in this Biological Opinion relies on three components: (1) the *Status of the Species*, which evaluates the California red-legged frog, Central California tiger salamander, Alameda whipsnake, giant garter snake, San Joaquin kit fox, vernal pool fairy shrimp, longhorn fairy shrimp, and vernal pool tadpole shrimp, the factors responsible for that condition, and their survival and recovery needs; (2) the *Environmental Baseline* and evaluates the condition of these listed species in the action area, the factors responsible for that condition, and the relationship of the action area to the survival and recovery of these listed species; (3) the *Effects of the Action*, which determines the direct and indirect effects of the proposed Federal action and the effects of any interrelated or interdependent activities on these species; and (4) *Cumulative Effects*, which evaluates the effects of future, non-Federal activities in the action area on them.

In accordance with policy and regulation, the jeopardy determination is made by evaluating the effects of the proposed Federal action in the context of the California red-legged frog, Central California tiger salamander, Alameda whipsnake, giant garter snake, San Joaquin kit fox, vernal pool fairy shrimp, longhorn fairy shrimp, and vernal pool tadpole shrimp's current status, taking into account any cumulative effects, to determine if implementation of the proposed action is likely to cause an appreciable reduction in the likelihood of both the survival and recovery of these listed species in the wild.

The jeopardy analysis in this Biological Opinion places an emphasis on consideration of the range-wide survival and recovery needs of these listed species, and the role of the action area in the survival and recovery of these listed species as the context for evaluating the significance of the effects of the proposed Federal action, taken together with cumulative effects, for purposes of making the jeopardy determination.

Adverse Modification Determination

This Biological Opinion does not rely on the regulatory definition of "destruction or adverse modification" of critical habitat at 50 CFR 402.02. Instead, we have relied upon the statutory provisions of the ESA to complete the following analysis with respect to critical habitat.

In accordance with policy and regulation, the adverse modification analysis in this Biological Opinion relies on four components: (1) the *Status of Critical Habitat*, which evaluates the range wide condition of designated critical habitat for vernal pool tadpole shrimp and longhorn fairy shrimp in terms of primary constituent elements (PCEs), the factors responsible for that condition, and the intended recovery function of the critical habitat at the provincial and range-wide scale; (2) the *Environmental Baseline*, which evaluates the condition of the critical habitat in the action area, the factors responsible for that condition, and the recovery role of the critical habitat in the action area; (3) the *Effects of the Action*, which determines the direct and indirect impacts of the proposed Federal action and the effects of any interrelated or interdependent activities on the PCEs and how that will influence the recovery role of affected critical habitat units; and (4) *Cumulative Effects* which evaluates the effects of future, non-Federal activities in the action area on the PCEs and how that will influence the recovery role of affected critical habitat units.

For purposes of the adverse modification determination, the effects of the proposed Federal action on vernal pool fairy shrimp and longhorn fairy shrimp critical habitat are evaluated in the context of the range-wide condition of the critical habitat at the provincial and range-wide scales, taking into account any cumulative effects, to determine if the critical habitat range-wide would remain functional(or would retain the current ability for the PCEs to be functionally established in areas of currently unsuitable but capable habitat) to serve its intended recovery role for the vernal pool fairy shrimp and longhorn fairy shrimp.

The analysis in this Biological Opinion places an emphasis on using the intended range-wide recovery function of vernal pool fairy shrimp and longhorn fairy shrimp critical habitat and the role of the action area relative to that intended function as the context for evaluating the significance of the effects of the proposed Federal action, taken together with cumulative effects, for purposes of making the adverse modification determination.

Status of the Species

California red-legged frog

Listing Status: The California red-legged frog was listed as a threatened species on May 23, 1996 (Service 1996). Critical habitat was designated for this species on April 13, 2006 (Service 2006) and revisions to the critical habitat designation were published on March 17, 2010 (Service 2010). At this time, the Service recognized the taxonomic change from *Rana aurora draytonii* to *Rana draytonii* (Shaffer *et al.* 2010). A recovery plan was published for the California red-legged frog on September12, 2002 (Service 2002a).

Status of the Species: In a study of California red-legged frog terrestrial activity in a xeric environment in eastern Contra Costa County, Tatarian (2008) noted that a 57 percent majority of frogs fitted with radio transmitters in the Round Valley study area stayed at their breeding pools, whereas 43 percent moved into adjacent upland habitat or to other aquatic sites. Her study reported a peak seasonal terrestrial movement occurring in the fall months associated with the first 0.2-inch of precipitation and tapering off into spring. Upland movement activities ranged from 3 to 233 feet, averaging 80 feet, and were associated with a variety of refugia including grass thatch, crevices, cow hoof prints, ground squirrel burrows at the base of trees or rocks, logs, and under man-made structures; others were associated with upland sites lacking refugia (Tatarian 2008). The majority of terrestrial movements lasted from 1 to 4 days; however, one adult female was reported to remain in upland habitat for 50 days (Tatarian 2008). Upland refugia closer to aquatic sites were used more often and were more commonly associated with areas exhibiting higher object cover, e.g., woody debris, rocks, and vegetative cover. Subterranean cover was not significantly different between occupied upland habitat and non-occupied upland habitat.

With the exception of the information provided above, the Service has determined that the Status of the Species is substantively unchanged from the time the Service issued its Intra-Service Opinion for the HCP/NCCP. Therefore, the Service is incorporating by reference the Status of the Species from that opinion. For additional information regarding the Status of the Species, including description, distribution, status and natural history, and threats, refer to the Intra-Service Opinion for the HCP/NCCP.

Central California Tiger Salamander

Listing Status: The Service proposed to list the Central California tiger salamander as threatened on May 23, 2003. At this time reclassification of the Santa Barbara County and Sonoma County

DPSs from endangered to threatened was also proposed (Service 2003). In the same notice the Service also proposed a special rule under section 4(d) of the Act to exempt take for routine ranching operations for the Central DPS and, if reclassified to threatened, for the Santa Barbara and Sonoma County DPSs (Service 2003). On August 4, 2004, after determining that the listed Central DPS was threatened (Service 2004), the Service determined that the Santa Barbara and Sonoma County DPSs were threatened as well, and reclassified the California tiger salamander as threatened throughout its range, removing the Santa Barbara and Sonoma County populations as separately listed DPSs (Service 2004). In this notice we also finalized the special rule to exempt take for routine ranching operations for the California tiger salamander throughout its range (Service 2004).

On August 18, 2005, as a result of litigation of the August 4, 2004, final rule on the reclassification of the California tiger salamander DPSs (*Center for Biological Diversity et al. v. United States Fish and Wildlife Service et al.*, C 04-04324 WHA (N.D. Cal. 2005), the District Court of Northern California sustained the portion of the 2004 rule pertaining to listing the Central California tiger salamander as threatened with a special rule, vacated the 2004 rule with regard to the Santa Barbara and Sonoma DPSs, and reinstated their prior listing as endangered. The List of Endangered and Threatened Wildlife in part 17, subchapter B of Chapter I, title 50 of the Code of Federal Regulations (CFR) has not been amended to reflect the vacatures contained in this order, and continues to show the range-wide reclassification of the California tiger salamander as a threatened species with a special rule. We are currently in the process of correcting the CFR to reflect the current status of the species throughout its range. The California tiger salamander was listed by the State of California as a threatened species on May 20, 2010.

Status of the Species: Thirty-one percent (221 of 711 records and occurrences) of all Central California tiger salamander records and occurrences are located in Alameda, Santa Clara, San Benito (excluding the extreme western end of the County), southwestern San Joaquin, western Stanislaus, western Merced, and southeastern San Mateo counties. Of these counties, most of the records are from eastern Alameda and Santa Clara counties (CDFG 2010; Service 2004). The CDFG (2010) now considers 13 of these records from the Bay Area region as extirpated or likely to be extirpated.

Of the 140 reported California tiger salamander localities where wetland habitat was identified, only 7 percent were located in vernal pools (CDFG 2010). The Bay Area is located within the Central Coast and Livermore vernal pool regions (Keeler-Wolf *et al.* 1998). Vernal pools within the Coast Range are more sporadically distributed than vernal pools in the Central Valley (Holland 2003). This rate of loss suggests that vernal pools in these counties are disappearing faster than previously reported (Holland 2003). Most of the vernal pools in the Livermore Region in Alameda County have been destroyed or degraded by urban development, agriculture, water diversions, poor water quality, and long-term overgrazing (Keeler-Wolf *et al.* 1998). During the 1980s and 1990s, vernal pools were lost at a 1.1 percent annual rate in Alameda County (Holland 1998).

Due to the extensive losses of vernal pool complexes and their limited distribution in the Bay Area region, many breeding sites consist of artificial water bodies. Overall, 89 percent (124) of the identified water bodies are stock, farm, or berm ponds used by cattle grazing and/or as a temporary water source for small farm irrigation (CDFG 2010). This places the California tiger salamander at great risk of hybridization with non-native tiger salamanders, especially in Santa Clara and San Benito counties. Without long-term maintenance, the longevity of artificial breeding habitats is uncertain relative to naturally occurring vernal pools that are dependent on the continuation of seasonal weather patterns (Shaffer *et al.* 2004). California tiger salamanders are now primarily restricted to artificial breeding ponds, such as bermed ponds or stock ponds, which are typically located at higher elevations (CDFG 2010).

With the exception of the information provided above, the Service has determined that the Status of the Species is substantively unchanged from the time the Service issued its Intra-Service Opinion for the HCP/NCCP. Therefore, the Service is incorporating by reference the Status of the Species from that opinion. For additional information regarding the Status of the Species, including description, distribution, status and natural history, and threats, refer to the Intra-Service Opinion for the HCP/NCCP.

Alameda whipsnake

Listing Status: The Alameda whipsnake was federally listed as threatened on December 5, 1997 (Service 1997). Approximately 406,598 acres within Contra Costa, Alameda, Santa Clara, and San Joaquin counties were designated critical habitat for the Alameda whipsnake on October 3, 2000 (Service 2000). The final rule was vacated and remanded on May 9, 2003. Critical habitat was re-proposed on October 18, 2005 (Service 2005b). A final rule on critical habitat was released on October 2, 2006 (Service 2006a). A draft recovery plan was published in November 2002 (Service 2002b).

Status of the Species: The Alameda whipsnake is known to inhabit chemise-redshank chaparral, mixed chaparral, coastal scrub, annual grassland, blue oak-foothill pine, blue oak woodland, coastal oak woodland, valley oak woodland, eucalyptus, redwood, and riparian communities (Mayer and Laudenslayer, Jr. 1988). Grassland and oak woodland habitat independent of chaparral habitat may also be important for Alameda whipsnake populations. A recent examination of recorded whipsnake observations revealed that the species has been found 32 percent of the time in grass- or woodland habitats on slopes of varying aspects (Alvarez 2006). Additional data on habitat use gathered from incidental observations of free-ranging Alameda whipsnakes and recapture data from trapping surveys showed regular use of these habitats at distances greater than 600 feet from scrub and chaparral and included observations of the species more than 3.7 miles from scrub and chaparral communities (Swaim pers. comm. 2004).

With the exception of the information provided above, the Service has determined that the Status of the Species is substantively unchanged from the time the Service issued its Intra-Service Opinion for the HCP/NCCP. Therefore, the Service is incorporating by reference the Status of the Species from that opinion. For additional information regarding the Status of the Species,

including description, distribution, status and natural history, and threats, refer to the Intra-Service Opinion for the HCP/NCCP.

Giant garter snake

Listing Status: The giant garter snake was listed as a threatened species on October 20, 1993 (Service 1993). The Service published the *Draft Recovery Plan for the Giant Garter Snake* in July 1999.

Status of the Species: With the exception of the information provided above, the Service has determined that the Status of the Species is substantively unchanged from the time the Service issued its Intra-Service Opinion for the HCP/NCCP. Therefore, the Service is incorporating by reference the Status of the Species from that opinion. For additional information regarding the Status of the Species, including description, distribution, status and natural history, and threats, refer to the Intra-Service Opinion for the HCP/NCCP.

San Joaquin Kit Fox

Listing Status: The San Joaquin kit fox was listed as an endangered species on March 11, 1967 (Service 1967) and it was listed by the State of California as a threatened species on June 27, 1971.

Status of the Species: The status of the San Joaquin kit fox population in Contra Costa County is not well documented, but the infrequency of confirmed sightings suggest their density is low or their occurrence could be periodic (Jones and Stokes 2006). Maintaining a connection to core San Joaquin kit fox populations in the San Joaquin Valley is likely critical to supporting a viable kit fox population in Contra Costa County. The HCP/NCCP aims to protect land in the Plan Area in order to protect San Joaquin kit fox habitat and to provide linkages to areas to the south and east. Currently, the HCP/NCCP has acquired numerous parcels to the east of Los Vaqueros Reservoir area and in the vicinity of Black Diamond Mines Regional Preserve that are to be incorporated into the preserve system of the HCP/NCCP.

With the exception of the information provided above, the Service had determined that the Status of the Species is substantively unchanged from the time the Service issued its Intra-Service Opinion for the HCP/NCCP. Therefore, the Service is incorporating by reference the Status of the Species from that opinion. For additional information regarding the Status of the Species, including description, distribution, status and natural history, and threats, refer to the Intra-Service Opinion for the HCP/NCCP.

Vernal Pool Fairy Shrimp

Listing Status: A final rule was published on September 19, 1994, listing the vernal pool fairy shrimp as threatened under the Act (Service 1994). The final rule to designate critical habitat for 15 vernal pool species, including the vernal pool fairy shrimp, was published on August 6, 2003 (Service 2003). A final rule was published again on August 11, 2005 (Service 2005a). Further

information on the life history and ecology of the vernal pool fairy shrimp may be found in the final listing rule, the final rule to designate critical habitat, the *Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon* (Service 2005c), Eng *et al.* (1990), Helm (1998), Simovich *et al.* (1992), and Volmar (2002).

Status of the Species: With the exception of the information provided above, the Service has determined that the Status of the Species is substantively unchanged from the time the Service issued its Intra-Service Opinion for the HCP/NCCP. Therefore, the Service is incorporating by reference the Status of the Species from that opinion. For additional information regarding the Status of the Species, including description, distribution, status and natural history, and threats, refer to the Intra-Service Opinion for the HCP/NCCP.

Longhorn Fairy Shrimp

Listing Status: A final rule was published on September 19, 1994, to list longhorn fairy shrimp as endangered under the Act (Service 1994). The final rule to designate critical habitat for 15 vernal pool species, including the longhorn fairy shrimp, was published on August 6, 2003 (Service 2003). A final rule was published again on August 11, 2005 (Service 2005a). Further information on the life history and ecology of the longhorn fairy shrimp may be found in the final listing rule, the final rule to designate critical habitat, the *Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon* (Service 2005b), and Eng *et al.* (1990).

Status of the Species: Since the time of listing, surveys for longhorn fairy shrimp throughout its range have not located additional populations of the species, although additional occurrences within the four known populations have been detected. Currently, the California Natural Diversity Database reports 11 occurrences of longhorn fairy shrimp (CDFG 2010).

Informal monitoring of known populations of longhorn fairy shrimp has occurred within the Brushy Peak Preserve, Alameda County. There are several vernal pools that have longhorn fairy shrimp within the 507-acre Brushy Peak Preserve, which is owned by the Livermore Area Recreation and Park District and managed by the East Bay Regional Park District (EBRPD). These pools are within rock outcrops within multiple indentations that seasonally pool water, but the exact number of vernal pools containing longhorn fairy shrimp has not been quantified.

With the exception of the information provided above, the Service has determined that the Status of the Species is substantively unchanged from the time the Service issued its Intra-Service Opinion for the HCP/NCCP. Therefore, the Service is incorporating by reference the Status of the Species from that opinion. For additional information regarding the Status of the Species, including description, distribution, status and natural history, and threats, refer to the Intra-Service Opinion for the HCP/NCCP.

Vernal Pool Tadpole Shrimp

Listing Status: A final rule was published on September 19, 1994, to list vernal pool tadpole shrimp as endangered under the Act (Service 1994). The final rule to designate critical habitat for 15 vernal pool species, including the vernal pool tadpole shrimp, was published on August 6, 2003 (Service 2003). A final rule was published again on August 11, 2005 (Service 2005a). Further information on the life history and ecology of the vernal pool tadpole shrimp may be found in the final listing rule, the final rule to designate critical habitat, the *Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon* (Service 2005b), and Eng *et al.* (1990).

Status of the Species: The vernal pool tadpole shrimp is a California Great Central Valley endemic species, with the majority of the populations occurring in the Sacramento Valley. This species has also been reported from the Sacramento River Delta to the east side of San Francisco Bay, and from a few scattered localities in the San Joaquin Valley from San Joaquin County to Madera County (Rodgers 2001). Currently, the CNDDB lists 270 occurrences of vernal pool tadpole shrimp with one occurrence in Contra Costa County within the city limits of Antioch along Empire Mine Road (CDFG 2011). Currently the city of Antioch is not a permittee under the HCP/NCCP nor are any activities within the Antioch city limits covered by the HCP/NCCP.

With the exception of the information provided above, the Service has determined that the Status of the Species is substantively unchanged from the time the Service issued its Intra-Service Opinion for the HCP/NCCP. Therefore, the Service is incorporating by reference the Status of the Species from that opinion. For additional information regarding the Status of the Species, including description, distribution, status and natural history, and threats, refer to the Intra-Service Opinion for the HCP/NCCP.

Vernal Pool Fairy Shrimp and Longhorn Fairy Shrimp Critical Habitat

The Service designated 228,785 acres of critical habitat for the vernal pool fairy shrimp and 13,557 acres of critical habitat for the longhorn fairy shrimp in 2005 (Service 2005a). In a February 10, 2006, revision, we identified the designated critical habitat on a species by unit basis (Service 2006). In determining which areas to designate as critical habitat, the Service considers those physical and biological features (primary constituent elements) that are essential to the conservation of the species, and that may require special management considerations and protections (50 CFR § 424.14).

The primary constituent elements of critical habitat for both vernal pool fairy shrimp and longhorn fairy shrimp are the habitat components that provide:(1) topographic features characterized by mounds and swales and depressions within a matrix of surrounding uplands that result in complexes of continuously, or intermittently, flowing surface water in the swales connecting the pools and providing for dispersal and promoting hydroperiods of adequate length in the pools; (2) depressional features including isolated vernal pools with underlying restrictive soil layers that become inundated during winter rains and that continuously hold water for a

minimum of 23 days in all but the driest years; thereby providing adequate water for incubation, maturation, and reproduction. As these features are inundated on a seasonal basis, they do not promote the development of obligate wetland vegetation habitats typical of permanently flooded emergent wetlands; (3) sources of food, expected to be detritus occurring in the pools, contributed by overland flow from the pools' watershed, or the results of biological processes within the pools themselves, such as single-celled bacteria, algae, and dead organic matter, to provide for feeding; and (4) structure within the pools consisting of organic and inorganic materials, such as living and dead plants from plant species adapted to seasonally inundated environments, rocks, and other inorganic debris that may be washed, blown, or otherwise transported into the pools, that provide shelter.

Environmental Baseline

All Species

As of the 2010 annual report for the HCP/NCCP, 61.4 acres of terrestrial impacts, 0.61 acres of aquatic (non-stream) impacts, and 138.3 linear feet of aquatic (stream) impacts have been authorized under the HCP/NCCP. In addition, 4,475.7 acres of terrestrial habitat, 36.9 acres of aquatic (non-stream) habitat, and 116,569.2 linear feet of aquatic (stream) habitat have been conserved under the HCP/NCCP, which support numerous occurrences of the Covered Species.

California Red-legged frog

The proposed action is located in the East San Francisco Bay Core Area of the East San Francisco Bay Recovery Unit number 16 for the California red-legged frog (Service 2002a). California red-legged frogs have been documented throughout the 18,500-acre Los Vaqueros Watershed (Watershed) and stock ponds in the Watershed support some of the highest densities of California red-legged frog in the region (Jones and Stokes Associates 2006). The CNDDB reports 96 California red-legged frog occurrences in and near the Watershed (CDFG 2010).

The HCP/NCCP provides a regional conservation strategy that includes the development and acquisition of a preserve system. A completed preserve system will encompass 23,800 to 30,300 acres of land in eastern Contra Costa County and will include connections linking existing and future protected private and public lands.

There are 127 occurrences of the California red-legged frog within the action area in the CNDDB (CDFG 2011). A few additional occurrences of the California red-legged frog have been documented within the action area and some additional take of the species has occurred since the HCP/NCCP was permitted. The current expansion of the Los Vaqueros Reservoir will result in the inundation of 451.27 acres of upland habitat and two ponds and four marshes that support California red-legged; however, the Service believes that the Environmental Baseline for this species is not substantively different from that described in the Service's Intra-Service Opinion for the HCP/NCCP. Therefore, the Service is incorporating by reference the Environmental Baseline from that opinion. For additional information regarding the

Environmental Baseline for the California red-legged frog, refer to the Intra-Service Opinion for the HCP/NCCP.

Central California tiger salamander

The CNDDB describes over 150 occurrences of the Central California tiger salamanders in Contra Costa County with the majority of these records from the vicinity of the Los Vaqueros Watershed (CDFG 2010). A few additional occurrences of the Central California tiger salamander have been documented within the action area and some additional take of the species has occurred since the HCP/NCCP was permitted. The current expansion of the Los Vaqueros Reservoir will result in the inundation of 451.27 acres of upland habitat and one pond and one marsh known to support breeding populations of the Central California tiger salamander; however, the Service believes that the Environmental Baseline for this species is not substantively different from that described in the Service's Intra-Service Opinion for the HCP/NCCP. Therefore, the Service is incorporating by reference the Environmental Baseline from that opinion. For additional information regarding the Environmental Baseline for the Central California tiger salamander, refer to the Intra-Service Opinion for the HCP/NCCP.

Alameda whipsnake

There are 22 occurrences of the Alameda whipsnake within the action area in the CNDDB (CDFG 2011). The Service believes that the Environmental Baseline for this species is not substantively different from that described in the Service's Intra-Service Opinion for the HCP/NCCP. Therefore, the Service is incorporating by reference the Environmental Baseline from that opinion. For additional information regarding the Environmental Baseline for the Alameda whipsnake, refer to the Intra-Service Opinion for the HCP/NCCP.

Giant garter snake

There are no records of the giant garter snake within the action area in the CNDDB (CDFG 2011). The Service believes that the Environmental Baseline for this species is not substantively different from that described in the Service's Intra-Service Opinion for the HCP/NCCP. Therefore, the Service is incorporating by reference the Environmental Baseline from that opinion. For additional information regarding the Environmental Baseline for the giant garter snake refer to the Intra-Service Opinion for the HCP/NCCP.

San Joaquin Kit Fox

The Bureau of Reclamation recently completed formal consultation on the Contra Costa Water District's (CCWD) proposed expansion of the Los Vaqueros Reservoir (Reservoir Expansion) (Service file number 81420-2009-F-0201-1). The Reservoir Expansion will result in permanent impacts to 410.21 acres of annual grasslands and 29.34 acres of oak woodland. The expanded reservoir will also raise the waterline into three sections of oak woodland habitat to the west of the existing reservoir isolating two large grassland areas (totaling 284.76 acres) from

surrounding grasslands likely rendering these areas inaccessible to San Joaquin kit fox. In addition, a grassland corridor to the west of the reservoir will be interrupted by approximately 700 feet of oak woodland at each of three locations making it unlikely that San Joaquin kit fox will use the remaining area to the west of the expanded reservoir following reservoir expansion. Loss of this corridor will compromise the southern branch of the Round Valley corridor to Black Diamond Mines Regional Preserve.

In order to compensate for temporary and permanent effects to San Joaquin kit fox from loss of habitat from the Reservoir Expansion, the CCWD will acquire and preserve, in perpetuity, a minimum of 4,890 acres. This includes additional lands preserved to those impacted in order to account for the loss of habitat, movement corridors, and habitat connectivity for San Joaquin kit fox within the northern portion of their range, and for the loss of San Joaquin kit fox conservation easement lands. The compensation is expected to preserve existing movement corridors within the northern San Joaquin kit fox range and currently includes one large under crossing of the I-580 corridor in Alameda County.

San Joaquin kit fox sightings have been documented within and surrounding the action area (CDFG 2010, CCWD 2010). Documented sightings within and near the action area include: multiple sightings between 1967 and 1989 along Brushy Creek east of Vasco Road (CDFG 2010); two San Joaquin kit fox sightings along the proposed Vasco Road alignment in 1989 (Jones and Stokes 1990); two records from May 2001 and June 2002 on Vasco Caves Regional Preserve (Clark *et al.* 2003); and two sightings near Brushy Creek in 2002 (CDFG 2010). CCWD has performed annual kit fox surveys throughout the Los Vaqueros Watershed since constructing the reservoir in 1998. During this period a single San Joaquin kit fox was observed in 2008 in close proximity to the Los Vaqueros Watershed Administrative Offices northeast of the reservoir (Howard 2008).

Grasslands throughout the action area provide suitable San Joaquin kit fox habitat. Because San Joaquin kit foxes can use native habitats interspersed with development if there is minimal disturbance, adequate dispersal corridors, and sufficient prey-base the HCP/NCCP considers grassland habitat within wind turbine areas suitable for kit fox use. Threats within the action area include the loss, fragmentation, and degradation of habitat through urban, rural, agricultural, and wind development. Although the use of pesticides to control rodents and other pests is restricted on CCWD and HCP/NCCP preserve lands, use of pesticides on private land within the action area may pose a threat to kit fox on private lands either directly through poisoning or indirectly through reduction of prey abundance. In addition, coyotes, cited as a significant source of San Joaquin kit fox mortality, are thought to have increased in number on the Los Vaqueros Watershed since reservoir filling in 1998 (CCWD 2011).

Longhorn Fairy Shrimp

There are two known occurrences of longhorn fairy shrimp within the action area in the CNDDB (CDFG 2011). The Service believes that the Environmental Baseline for this species is not substantively different from that described in the Service's Intra-Service Opinion for the HCP/NCCP. Therefore, the Service is incorporating by reference the Environmental Baseline

from that opinion. For additional information regarding the Environmental Baseline for the longhorn fairy shrimp, refer to the Intra-Service Opinion for the HCP/NCCP.

Vernal Pool Fairy Shrimp

There are thirteen known occurrence of vernal pool fairy shrimp within the action area in the CNDDB (CDFG 2011). The Service believes that the Environmental Baseline for this species is not substantively different from that described in the Service's Intra-Service Opinion for the HCP/NCCP. Therefore, the Service is incorporating by reference the Environmental Baseline from that opinion. For additional information regarding the Environmental Baseline for the vernal pool fairy shrimp, refer to the Intra-Service Opinion for the HCP/NCCP.

Vernal Pool Tadpole Shrimp

There are no known occurrences of vernal pool tadpole shrimp within the action area in the CNDDB (CDFG 2011). The Service believes that the Environmental Baseline for this species is not substantively different from that described in the Service's Intra-Service Opinion for the HCP/NCCP. Therefore, the Service is incorporating by reference the Environmental Baseline from that opinion. For additional information regarding the Environmental Baseline for the vernal pool tadpole shrimp, refer to the Intra-Service Opinion for the HCP/NCCP.

Vernal Pool Fairy Shrimp and Longhorn Fairy Shrimp Critical Habitat

Critical Habitat Unit 19 for vernal pool fairy shrimp includes three subunits; Units 19A-B are located in Contra Costa County. Unit 19C is located in Alameda County. Units 19A and 19B fall within the Plan Area. Unit 19A lies just north of Marsh Creek Road and Unit 19B lies north of Corral Hollow Road, west of Clifton Court Forebay (Service 2005a). Unit 19C is outside the action area. Units 19A-B include approximately 6,439 acres (Service 2005a). These units are essential to the conservation of the species because they support nearly all of the known occurrences of vernal pool fairy shrimp within Contra Costa and Alameda Counties and because they are necessary to maintain the current geographic and ecological distribution of the species.

Critical Habitat Unit 1 for longhorn fairy shrimp includes two subunits referred to as the Altamont Pass Subunits; Unit 1A is located in Contra Costa County and Unit 1B in Alameda County. Within the Altamont Pass subunits longhorn fairy shrimp occur within clear depression pools in sandstone outcrops (Service 2005a). Unit 1A falls within the Plan Area primarily within the Vasco Caves Regional Preserve. Unit 1B is outside the action area. Units 1A-B include approximately 791 acres (Service 2005a). These units are essential to the conservation of the species because they support nearly all of the known occurrences of longhorn fairy shrimp within Contra Costa and Alameda Counties and because they are necessary to maintain the current geographic and ecological distribution of the species.

Effects of the Proposed Action

California Red-legged frog and Central California Tiger Salamander

The proposed action will result in temporary and permanent effects to aquatic and upland habitat for California red-legged frog and Central California tiger salamander. This could result in individuals being directly and/or indirectly injured or killed by activities that disturb breeding, feeding, sheltering, and dispersal habitat. The effects of activities covered by the RGP were analyzed in the Intra-Service Opinion for the HCP/NCCP, including minimization and mitigation measures for both species. No additional effects or effects different from those analyzed in the Intra-Service Opinion for the HCP/NCCP are expected. Therefore, the Service is incorporating by reference the Effects of the Proposed Action from that opinion. For additional information regarding the Effects of the Proposed Action on California red-legged frogs and the Central California tiger salamander, refer to the Intra-Service Opinion for the HCP/NCCP.

Alameda Whipsnake

The proposed action will result in temporary and permanent effects to habitat suitable for Alameda whipsnake resulting in direct and indirect effects to the species. The effects of activities covered by the RGP were analyzed in the Intra-Service Opinion for the HCP/NCCP, including minimization and mitigation measures. No additional effects or effects different from those analyzed in the Intra-Service Opinion for the HCP/NCCP are expected. Therefore, the Service is incorporating by reference the Effects of the Proposed Action from that opinion. For additional information regarding the Effects of the Proposed Action on Alameda whipsnakes, refer to the Intra-Service Opinion for the HCP/NCCP.

Giant Garter Snake

The proposed action will result in temporary and permanent effects to habitat suitable for giant garter snake resulting in direct and indirect effects to the species. The effects of activities covered by the RGP were analyzed in the Intra-Service Opinion for the HCP/NCCP, including minimization and mitigation measures. No additional effects or effects different from those analyzed in the Intra-Service Opinion for the HCP/NCCP are expected. Therefore, the Service is incorporating by reference the Effects of the Proposed Action from that opinion. For additional information regarding the Effects of the Proposed Action on giant garter snakes, refer to the Intra-Service Opinion for the HCP/NCCP.

San Joaquin Kit Fox

The proposed action will result in temporary and permanent effects to annual grassland habitat suitable for San Joaquin kit fox denning, foraging, or dispersal resulting in direct and indirect effects to the species. The effects of activities covered by the RGP were analyzed in the Intra-Service Opinion for the HCP/NCCP, including minimization and mitigation measures. No additional effects or effects different from those analyzed in the Intra-Service Opinion for the

HCP/NCCP are expected. Therefore, the Service is incorporating by reference the Effects of the Proposed Action from that opinion. For additional information regarding the Effects of the Proposed Action on San Joaquin kit foxes, refer to the Intra-Service Opinion for the HCP/NCCP.

Vernal Pool Fairy Shrimp, Longhorn Fairy Shrimp, and Vernal Pool Tadpole Shrimp

Direct and indirect effects to vernal pool fairy shrimp, longhorn fairy shrimp, and tadpole shrimp will result from activities covered by the proposed RGP. The effects of activities covered by the RGP were analyzed in the Intra-Service Opinion for the HCP/NCCP, including minimization and mitigation measures for both species. No additional effects or effects different from those analyzed in the Intra-Service Opinion for the HCP/NCCP are expected. Therefore, the Service is incorporating by reference the Effects of the Proposed Action from that opinion. For additional information regarding the Effects of the Proposed Action on vernal pool fairy shrimp and longhorn fairy shrimp, refer to the Intra-Service Opinion for the HCP/NCCP.

Vernal Pool Fairy Shrimp Critical Habitat

Critical habitat for vernal pool fairy shrimp is found within the action area. Effects to vernal pool fairy shrimp critical habitat will result from activities covered by the proposed RGP. The effects of activities covered by the RGP were analyzed in the Intra-Service Opinion for the HCP/NCCP, including minimization and mitigation measures. No additional effects or effects different from those analyzed in the Intra-Service Opinion for the HCP/NCCP are expected. Therefore, the Service is incorporating by reference the Effects of the Proposed Action from that opinion. For additional information regarding the Effects of the Proposed Action on vernal pool fairy shrimp critical habitat, refer to the Intra-Service Opinion for the HCP/NCCP.

Longhorn Fairy Shrimp Critical Habitat

Critical habitat for longhorn fairy shrimp is found within the action area. Effects to longhorn fairy shrimp critical habitat will result from activities covered by the proposed RGP. The effects of activities covered by the RGP were analyzed in the Intra-Service Opinion for the HCP/NCCP, including minimization and mitigation measures. No additional effects or effects different from those analyzed in the Intra-Service Opinion for the HCP/NCCP are expected. Therefore, the Service is incorporating by reference the Effects of the Proposed Action from that opinion. For additional information regarding the Effects of the Proposed Action on longhorn fairy shrimp critical habitat, refer to the Intra-Service Opinion for the HCP/NCCP.

Cumulative Effects

Cumulative effects include the effects of future State, Tribal, local or private actions that are reasonably certain to occur in the action area considered in this Biological Opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act.

The Service is aware of numerous non-federal actions currently planned in the vicinity of the proposed action, defined here as eastern Contra Costa County. Environmental analysis is either underway or completed for many of these projects. These projects include such actions as urban expansion, road improvement projects, water transfers and developments, and continued agricultural development. The cumulative effects of these known actions pose a significant threat to the eventual recovery of all listed species in this area. However, many of these activities will be reviewed under section 7 of the Act as a result of the Federal nexus provided by section 404 of the Federal Water Pollution Control Act, as amended (Clean Water Act). Additionally, many of these activities are included as Covered Activities for the HCP/NCCP and effects resulting from these activities are being mitigated for under the HCP/NCCP.

Urban expansion in eastern Contra Costa and Alameda counties and western San Joaquin County will further fragment and isolate populations of California red-legged frogs, California tiger salamanders, and San Joaquin kit fox from other nearby populations. Urban expansion is accompanied by increased traffic resulting in increased wildlife injury and mortality from vehicle strikes. A 2009 wildlife movement study conducted along a 2.5-mile stretch of Vasco Road adjacent to the action area documented substantial wildlife mortality from vehicle strikes including 50 California tiger salamanders and 120 California red-legged frogs over a 15 month period (Mendelsohn *et al.* 2009). Continued development and maintenance of roadways and water projects to serve expanding urban areas are also likely to further fragment and isolate populations of these species. In addition, urban expansion is generally accompanied by increased predation associated with domesticated pets or feral animals that negatively affect populations of these species.

The global average temperature has risen by approximately 0.6 degrees Celsius during the 20th Century (IPPC 2001, 2007; Adger *et al.* 2007). There is an international scientific consensus that most of the warming observed has been caused by human activities (IPPC 2001, 2007; Adger *et al.* 2007), and that it is "very likely" that it is largely due to manmade emissions of carbon dioxide and other greenhouse gases (Adger *et al.* 2007). Ongoing climate change (Anonymous 2007; Inkley *et al.* 2004; Adger *et al.* 2007; Kanter 2007) likely imperils several listed species including the California red-legged frog, Central California tiger salamander, Alameda whipsnake, giant garter snake, San Joaquin kit fox, vernal pool fairy shrimp, longhorn fairy shrimp, and vernal pool tadpole shrimp and the resources necessary for their survival. Since climate change threatens to disrupt annual weather patterns, it may result in a loss of their habitats and/or food sources, and/or increased numbers of their predators, parasites, and diseases. Where populations are isolated, a changing climate may result in local extinction, with range shifts precluded by lack of habitat.

Conclusion

After reviewing the current status of the California red-legged frog, Central California tiger salamander, Alameda whipsnake, giant garter snake, San Joaquin kit fox, vernal pool fairy shrimp, longhorn fairy shrimp, and vernal pool tadpole shrimp, the environmental baseline for the action area, the effects of the proposed action, and the cumulative effects, it is the Service's

biological opinion that the RGP that would be used to authorize placement of dredged or fill material into waters of the U.S. for multiple actions considered to be Covered Activities under the East Contra Costa Habitat Conservation Plan/Natural Community Conservation Plan, as proposed, is not likely to jeopardize the continued existence of the California red-legged frog, Central California tiger salamander, Alameda whipsnake, giant garter snake, San Joaquin kit fox, vernal pool fairy shrimp, longhorn fairy shrimp, or vernal pool tadpole shrimp. We base this conclusion on the following: (1) some project effects are temporary in nature;(2) the proposed action does not include effects to listed species that were not analyzed in the Intra-Service Opinion for the HCP/NCCP; and (3) establishment of a 23,800 to 30,300 acres preserve system in eastern Contra Costa County to preserve and manage habitat for listed species in perpetuity.

The project is located within critical habitat for the vernal pool fairy shrimp and longhorn fairy shrimp; however the proposed action will not result in its adverse modification or destruction. We based this conclusion on the following: (1) only a small percentage of critical habitat for vernal pool fairy shrimp and longhorn fairy shrimp would be affected by the proposed action; (2) the PCEs that are essential to the conservation value of vernal pool fairy shrimp and longhorn fairy shrimp critical habitat will remain and continue to contribute to the conservation function of the unit as a whole; and (3) range-wide critical habitat for vernal pool fairy shrimp and longhorn fairy shrimp would remain functional.

INCIDENTAL TAKE STATEMENT

Section 9(a)(1) of the Act and Federal regulations pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species without special exemption. Take is defined as harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or attempt to engage in any such conduct. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns, including breeding, feeding, or sheltering. Harass is defined by the Service as actions that create the likelihood of injury to a listed species by annoying it to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with this Incidental Take Statement.

The measures described below are nondiscretionary, and must be implemented by the Corps so that they become binding conditions of any grant or permit issued to the applicant, as appropriate, for the exemption under section 7(o)(2) to apply. The Corps has a continuing duty to regulate the activity that is covered by this incidental take statement. If the Corps (1) fails to require the applicant, or any of its contractors to adhere to the terms and conditions of the incidental take statement through enforceable terms, and/or (2) fails to retain oversight to ensure compliance with these terms and conditions, the protective coverage of section 7(o)(2) may lapse.

Amount or Extent of Take

All Listed Species

The amount of incidental take exempted from the prohibitions described under section 9 of the Act through this Biological Opinion is a subset of the incidental take authorized under the HCP/NCCP. Take associated with activities carried out under the HCP/NCCP has been authorized under a section 10(a)(1)(B) permit; however, incidental take associated with actions authorized, funded, or carried out by Federal Agencies cannot be authorized under section 10 of the Act.

The extent of the take will be difficult to detect or quantify because of the ecology and biology of these species. Additionally, their size and cryptic nature makes the finding of a dead specimen unlikely. Seasonal population fluctuations may also make losses of these species difficult to quantify. Due to the difficulty in quantifying the number of California red-legged frog, Central California tiger salamander, Alameda whipsnake, giant garter snake, San Joaquin kit fox, vernal pool fairy shrimp, longhorn fairy shrimp, or vernal pool tadpole shrimp that will be taken as a result of the proposed action, the Service is quantifying take incidental to the proposed project as the number of acres of habitat that will become unsuitable for the species as a result of the action.

The exact subset of incidental take expected in conjunction with the RGP cannot be specifically segregated from the amount of take authorized under the HCP/NCCP, therefore, the Service is only authorizing the same amount of incidental take associated with the HCP/NCCP (i.e., the take is not in addition to that associated with the HCP/NCCP). The Service estimates that incidental take of California red-legged frog, Central California tiger salamander, San Joaquin kit fox, giant garter snake, Alameda whipsnake, vernal pool fairy shrimp, longhorn fairy shrimp, and vernal pool tadpole shrimp associated with loss of up to 13,387 acres of habitat will be affected.

Upon implementation of the Reasonable and Prudent Measures, incidental take of California red-legged frog, Central California tiger salamander, San Joaquin kit fox, giant garter snake, Alameda whipsnake, vernal pool fairy shrimp, longhorn fairy shrimp, and vernal pool tadpole shrimp associated with the Corps' proposed RGP will become exempt from the prohibitions described under section 9 of the Act.

Effect of the Take

In the accompanying biological opinion and the Intra-Service Opinion for the HCP/NCCP, the Service has determined that this level of anticipated take is not likely to result in jeopardy to the California red-legged frog, Central California tiger salamander, San Joaquin kit fox, giant garter snake, Alameda whipsnake, vernal pool fairy shrimp, longhorn fairy shrimp, and vernal pool tadpole shrimp

Reasonable and Prudent Measures

The Service believes the following reasonable and prudent measure is necessary and appropriate to minimize the effect of take on the Central California tiger salamander, San Joaquin kit fox, giant garter snake, Alameda whipsnake, vernal pool fairy shrimp, longhorn fairy shrimp, and vernal pool tadpole shrimp:

1. The proposed action will be implemented by the project proponent as described in the *Description of the Proposed Action* and the East Contra Costa Habitat Conservation Plan/Natural Communities Conservation Plan and further, conservation measures shall be supplemented by terms and conditions (a) through (e).

Terms and Conditions

To be exempt from the prohibitions of Section 9 of the Act, the Corps shall ensure compliance with the following terms and conditions, which implement the reasonable and prudent measure described above. These terms and conditions are nondiscretionary.

The following terms and conditions will implement the Reasonable and Prudent Measure described above:

a. The applicant shall minimize the potential for harm, harassment, injury, and death of federally listed wildlife species resulting from project related activities including implementation of the Conservation Measures in this Biological Opinion.

b. The applicant shall adhere to all of the conservation and management measures of the HCP/NCCP and the Terms and Conditions of its Incidental Take Permit (TE160958-0).

c. All activities authorized by the Corps under this RGP must occur while the HCP/NCCP's Incidental Take Permit (TE160958-0) is valid.

d. If the Corps determines that the activity complies with the terms and conditions of the RGP, including confirmation that proposed impacts to aquatic resources are minimal, written notification will be provided to the Conservancy, the Service, and CDFG consistent with the reporting requirements of the HCP/NCCP; this confirmation will be identified in the Corps' section 7 initiation letter to the Service for individual project applications under the RGP.

e. The permittee must allow representatives from the Conservancy, Service and CDFG to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with East Contra Costa HCP/NCCP and the Terms and Conditions of its Incidental Take Permit (TE160958-0).

f. All preserved, created, restored or enhanced waters of the U.S. and adjacent buffers on the project site shall be preserved and permanently protected consistent with the requirements of the East Contra Costa HCP/NCCP and subject to review and approval by the Service and CDFG.

Reporting Requirements

The Service is incorporating by reference the reporting requirements of the East Contra Costa HCP/NCCP and its associated permit and Terms and Conditions (TE160958-0).

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities that can be implemented to further the purposes of the Act, such as preservation of endangered species habitat, implementation of recovery actions, or development of information and data bases. The Service requests notification of the implementation of any conservation recommendations in order to be kept informed of actions minimizing or avoiding adverse effects or benefiting listed species or their habitats. No voluntary conservation recommendations are needed or proposed for the proposed action.

RENITIATION - CLOSING STATEMENT

This concludes formal consultation on the proposed issuance of a RGP for the East Contra Costa Habitat Conservation Plan/Natural Community Conservation Plan in Contra Costa County, California. As provided in 50 CFR 402.16, reinitiating of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this Biological Opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must immediately cease, pending reinitiating.

If you have any questions regarding this Biological Opinion on the proposed issuance of a Regional General Permit for the East Contra Costa Habitat Conservation Plan/Natural Community Conservation Plan in Contra Costa County, California, please contact Stephanie Jentsch, Mike Thomas, or Eric Tattersall (Deputy Assistant Field Supervisor) of my staff at the letterhead address or at telephone (916) 414-6600.

Sincerely,

Susan K. Moore

Susan K. Moore
Field Supervisor

cc:

Scott Wilson, California Department of Fish and Game, Yountville, California.
John Kopchik, Contra Costa County, Martinez, California.

LITERATURE CITED

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