



**DEPARTMENT OF THE ARMY  
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO  
CORPS OF ENGINEERS  
1325 J STREET  
SACRAMENTO, CALIFORNIA 95814-2922**

**RECORD OF DECISION**

**ACTION ID:** SPK-2005-00485

**PROJECT NAME:** Clean Water Act Section 404 Permit Strategy (Permit Strategy)  
Aligned with the Placer County Conservation Program (PCCP)

I have reviewed and evaluated, in light of the overall public interest, the documents and factors concerning the proposed action, as well as the stated views of interested agencies and the public. In doing so, I have considered the possible consequences of the proposed action in accordance with regulations published in 33 Code of Federal Regulations (CFR) Parts 320 through 332 and 40 CFR Part 230.

The U.S. Army Corps of Engineers, Sacramento District (Corps) is a cooperating agency on the U.S. Fish and Wildlife Service's (USFWS) Environmental Impact Statement/Environmental Impact Report (EIS/EIR) prepared in accordance with the National Environmental Policy Act (NEPA) for the Placer County Conservation Program (PCCP).

The proposed action under NEPA is the issuance of incidental take permits (ITPs) by the USFWS and National Marine Fisheries Service (NMFS) pursuant to Section 10(a)(1)(B) of the Endangered Species Act for the PCCP. The PCCP is a regional, comprehensive program that would streamline permitting for Covered Activities, as defined in the *Western Placer County Habitat Conservation Plan/Natural Community Conservation Plan* (HCP/NCCP or Plan), while providing a framework to protect, enhance, and restore the natural resources in western Placer County. Placer County, the City of Lincoln, South Placer Regional Transportation Authority (SPRTA), Placer County Water Agency (PCWA), and Placer Conservation Authority (PCA) are the Plan Permittees for the HCP/NCCP. PCA has been created to implement the HCP/NCCP and the *Western Placer County Aquatic Resources Program* (CARP) on behalf of the other Plan Permittees. The PCCP includes three integrated programs:

- The *Western Placer County Habitat Conservation Plan and Natural Community Conservation Plan* (HCP/NCCP or Plan), is a joint habitat conservation plan and natural community conservation plan that protects fish, wildlife, plants, and their habitats and fulfills the requirements of federal Endangered Species Act of 1973, as amended (ESA), and California Natural Community Conservation Planning Act (NCCPA). The Plan Permittees under the HCP/NCCP consist of Placer County, City of Lincoln, South Placer Regional Transportation Authority (SPRTA), Placer County Water Agency (PCWA), and Placer Conservation Authority (PCA). Based on the HCP/NCCP and Section 10 of the Endangered Species Act (ESA 10), the USFWS issued an ITP to the Plan Permittees

on December 8, 2020, and NMFS issued an ITP to the Plan Permittees on March 31, 2021. Both ESA 10 ITPs are valid for 50 years.

- The *Western Placer County Aquatic Resources Program* (CARP) is a component of the HCP/NCCP that protects streams, wetlands, and other water resources in order to fulfill the requirements of the Clean Water Act (CWA) and analogous state laws and regulations. Placer County and the City of Lincoln approved local operating ordinances requiring implementation of the CARP for activities covered by the HCP/NCCP.
- The *Western Placer County In-Lieu Fee Program* (WPILF Program) fulfills compensatory mitigation requirements under Section 404 of the CWA and was approved on March 18, 2019.

The Corps' role as a NEPA cooperating agency is to adopt the EIS in accordance with 40 CFR 1506.3 and utilize the EIS, CARP, and implementing ordinances as a basis for decision making on a multi-tiered Section 404 Clean Water Act (CWA 404) Permit Strategy aligned with the HCP. The Corps' Permit Strategy is further described in Section 1.

## **I. Background**

The Placer County Conservation Program (PCCP) applies to western Placer County and specific conservation activity areas in neighboring Sutter County. The PCCP includes both the HCP/NCCP, the CARP, and the WPILF program. The HCP/NCCP covers fourteen species of wildlife, including nine state and/or federally listed as threatened or endangered. The CARP provides a structure for protecting aquatic resources in western Placer County while streamlining the environmental permitting process for impacts to aquatic resources. The HCP/NCCP uses a regional approach to address issues related to planned development and species habitat conservation and restoration. The boundaries of the PCCP are generally Nevada and Yuba Counties to the north, the City of Auburn and California State Highway 49 on the east, Sacramento County on the South, and Sutter County to the west. The PCCP Plan Area also includes specific areas in western Placer County and a small area in adjacent Sutter County where specific covered activities may be conducted by the Plan Permittees. The Plan Area excludes the Cities of Auburn, Roseville and Rocklin and the Town of Loomis, with the exception of specific activities within these cities that could be conducted by Participating Special Entities. The Plan Permittees have formed the Placer Conservation Authority (PCA), a joint exercise of powers agency, to implement the HCP/NCCP and the CARP commitments and requirements.

Under the proposed action, the HCP covers a range of covered activities that would occur within the Plan Area or under the authority of the Plan Permittees, which may affect federally listed threatened and/or endangered species, and may result in a discharge of dredged and/or fill material into waters of the U.S. The Plan Area encompasses approximately 269,118 acres, 99% of which is in Placer County. The Plan Area consists of Plan Area A and Plan Area B. Plan Area A contains the majority

of actions that would be conducted under the proposed action and is divided into areas where planned future growth would occur, and where future conservation and rural development would occur. The proposed future growth areas consist of the Valley Potential Future Growth Area (PFG), and the Foothills PFG. The future conservation and rural development areas are known as reserve acquisition areas (RAA) and would occur in the Valley and Foothill conservation and development areas.

On June 21, 2019, the USFWS issued the Notice of Availability (NOA) for the Draft EIS/EIR for the proposed PCCP (84 FR 29201). On July 8, 2019, the Corps issued a Public Notice requesting comments on the Corps proposed Draft CWA 404 Permit Strategy (Appendix A). The proposed Permit Strategy consists of:

- A programmatic general permit (PGP) founded on the CARP to be implemented via local ordinance, and designed to reduce duplication with that program, for activities with minimal individual and cumulative effects on the aquatic environment (Appendix B).
- A regional general permit (RGP) for minimal impact activities conducted by PCWA under the HCP/NCCP (Appendix C).
- A procedure for issuing Letters of Permission (LOPs) for activities with more than minimal, but less than significant, effects on the human environment, including aquatic resources (Appendix E).
- An abbreviated process for issuing standard permits (SPs) for other activities consistent with the PCCP that may have a significant impact on the human environment and requires the preparation of an EIS/EIR under NEPA (Appendix F).
- An RGP for minimal impact activities conducted under the WPILF Program (Appendix D).

On March 18, 2019, the Corps, U.S. Environmental Protection Agency (USEPA), the Central Valley Regional Water Quality Control Board (CVRWQCB), and Placer County approved the WPILF Program, which will be utilized to complete compensatory mitigation requirements for implementation of the Corps' Permit Strategy and other activities covered under the HCP/NCCP. On May 22, 2020, the USFWS issued the Final EIS/EIR for the proposed PCCP (85 FR 31182). The Final EIS/EIR provided responses to comments provided to the USFWS, as well as comments submitted to the Corps, on the proposed Permit Strategy. On December 1, 2020, USFWS issued an intra-Service Section 7 Biological Opinion (BO) (Appendix H) on the issuance of an ESA 10 ITP for the HCP/NCCP and for the Corps' proposed CWA 404 Permit Strategy for the HCP/NCCP and on March 15, 2021, NMFS issued their intra-Service Section 7 BO (Appendix I) on the issuance of an ESA 10 ITP for the HCP/NCCP and for the Corps' proposed CWA 404 Permit Strategy. The agreement for implementing the HCP/NCCP (Implementation Agreement) was signed by the USFWS, NMFS, CDFW, and Plan Permittees on April 21, 2021, making the PCCP operative on April 22, 2021. Additional

background information on the PCCP can be found in Chapter 1.1.1 of the Final EIS/EIR and 1.4 of the HCP/NCCP.

## II. Project Purpose and Need

**a. Purpose and Need under NEPA:** In Section 1.3.2 of the HCP EIS, USFWS identified a purpose and need as follows:

- Respond to the application for an ITP based on the proposed Covered Activities that may result in incidental take of the Covered Species within the Plan Area.
- To comprehensively protect and conserve Covered Species and to conserve, enhance, and restore the habitat and ecosystems upon which these species depend to ensure their long-term survival in the Plan Area.
- Assemble and maintain a Reserve System within the Plan Area that focuses on preservation and enhancement actions that provide for the protection of species, natural communities, and ecosystems on a landscape level.

USFWS further stated that the purpose of the Corps' involvement was to ensure that the EIS/EIR addressed our NEPA requirements for considering issuance of the Permit Strategy under the PCCP, consistent with the USFWS' purpose and need. For purposes of the Corps' Regulatory Program, the purpose and need for the proposed action is to develop a comprehensive Permit Strategy to expedite the review process for activities that comply with the HCP and CARP.

**b. Basic Project Purpose:** The Section 404(b)(1) Guidelines require the identification of an overall project purpose, which is used by the Corps in determining whether other available and practicable alternatives to the proposed action exist which would have fewer adverse effects to the aquatic environment. The Section 404(b)(1) Guidelines also require the identification of a basic project purpose, which is used to determine whether or not a proposed discharge in a special aquatic site is water dependent. Because the proposed action consists of developing a Permit Strategy consistent with the HCP/NCCP and CARP, a determination of the basic project purpose and water dependency cannot be made at this time. These determinations will be made on a case-by-case basis for activities evaluated under the proposed Permit Strategy.

**c. Overall project purpose, as determined by the Corps:** The overall project purpose serves as the basis for the Corps' 404(b)(1) alternatives analysis and is determined by further defining the basic project purpose in a manner that more specifically describes the goals for the proposal, and which allows for a reasonable range of alternatives to be analyzed.

The overall project purpose is to develop a multi-tiered CWA 404 Permit Strategy aligned with the HCP/NCCP and CARP that would result in increased efficiencies in

permit processing and decisions, when aligned with HCP and CARP requirements for avoidance, minimization and protection of aquatic resources in the Plan Area.

### III. Alternatives Considered

**a. Alternatives considered under NEPA:** The USFWS considered a range of alternatives to the proposed PCCP, as described in Chapter 2 of the Final EIS/EIR. Twelve alternatives were originally identified for evaluation (Alternatives A through L), which are described in Section 2.1.2 and Appendix E of the EIS. These alternatives consisted of both those related to federally-listed threatened and/or endangered species, as well as those related to the Corps' jurisdiction, including an alternative where the Corps would not implement a multi-tiered Permit Strategy, an alternative where no activities resulted in a discharge of dredged and/or fill material into waters of the U.S., and an alternative where the overall effects to waters of the U.S. was reduced. As described in Section 2.2 of the EIS, these 12 alternatives screened against a set of criteria in order to determine which alternatives would be evaluated in the EIS. Sections 2.2.1, 2.2.2, 2.2.3, and Appendix E of the EIS/EIR describe the screening process. The Corps reviewed and provided input on the alternatives screening process during development of the EIS and has determined that the alternatives screening was sufficient for the purpose of compliance with the Section 404(b)(1) Guidelines. Of the twelve alternatives, eight were eliminated as a result of the screening process. The four remaining alternatives evaluated in the EIS/EIR consist of:

(1) No Action: Under this alternative, ESA 10 ITPs would not be issued by USFWS/NMFS and the Corps would not implement a multi-tiered Permit Strategy. Under the no action alternative, authorizations of projects would continue under current processes. For proposed activities under CWA 404, the Corps would make a permit decision on a case-by-case basis and evaluate activities either under an existing Nationwide Permit or Regional General Permit or decide whether to issue a Letter of Permission, or Standard Permit. No integrated, regional, and watershed-based approach to avoidance, minimization, or compensatory mitigation strategies would exist, and both on-site and off-site avoidance and minimization and compensatory mitigation requirements would be determined on a case-by-case basis. Authorization to affect federally-listed threatened and/or endangered species would be sought either through project-specific Section 7 or Section 10 Endangered Species Act compliance. This alternative would likely result in similar effects to the aquatic environment as the proposed action; however, it would not provide any of the program efficiencies afforded under the HCP and CARP.

(2) Proposed Action: Under this alternative, the USFWS and NMFS would issue ESA 10 ITPs for a 50-year term, and the HCP would be implemented. The Plan Permittees would adopt the CARP and implementing ordinances, and the Corps would issue the multi-tiered Permit Strategy, as proposed. The Permit Strategy would be valid for a 5-year term. The Permit Strategy would be re-evaluated, and if appropriate, modified or reissued at a minimum of every 5-years, although could be re-evaluated at any time as needed. The planned development and RAA areas would encompass

those areas as shown in Figure 2-1 of the EIS. Under this alternative, avoidance and minimization would be conducted at a regional level, with avoidance and minimization being concentrated within the RAA and along stream corridors, resulting in the establishment of fewer “pocket” preserves surrounded by development. For the purposes of the Corps Permit Strategy, provided proposed projects are located within the Valley and Foothills PFG areas, the evaluation of alternatives under the LOP and SP procedures would be limited to additional on-site avoidance and minimization of tributaries and their adjacent wetlands. In addition, compensatory mitigation would be constructed through the WPILF program, which would use a regional watershed approach to focus compensatory mitigation in the RAA, where the benefits to the aquatic environment would be greater. The estimated loss of potential aquatic resources over a 50-year period under the proposed action are analyzed in the EIS and summarized in Table 4-1 of the HCP/NCCP (EIS, Appendix A, Vol. 1, page 4.8).

Aquatic Resource Type	Estimates Loss over 50- years (acres)	Estimated Loss over 5-year Permit Strategy Term (acres)
Vernal Pool	185	19.5
Seasonal Wetlands in vernal pool complexes	223	22.3
Seasonal wetland swales	172	17.2
Fresh Emergent Marsh	105	10.5
Lacustrine Wetland	103	10.3
Non-vernal pool seasonal wetlands	52	5.2
Riverine	115	11.5
Riparian	375	37.5
Rice agriculture (may contain aquatic resources)	2060	206

As noted above, aquatic resources may occur within areas currently under rice cultivation. However, the exact acreage of waters of the U.S. within these areas is unknown and cannot be estimated. However, based on historic aquatic resources verifications conducted by the Corps’, the acreage of waters of the U.S. within rice agricultural will likely be substantially less than overall rice agriculture affected. While the Corps’ proposed LOP and abbreviated SP procedures do not contain limits on the potential loss of waters of the U.S., the proposed PGP and RGP for activities proposed by PCWA contain the following limits on the loss of waters of the U.S.

PGP: Loss of waters of the U.S.: The total loss of waters of the U.S. for a single and complete project under the PGP cannot exceed 3.0 acres, or 500 linear feet of jurisdictional streams. Of the 3.0 acres of loss authorized for each single and complete project, there can be a loss of no more than 1.0 acre of jurisdictional vernal pools, 3.0 acres of jurisdictional irrigated wetlands in active rice fields, and 2.0 acres of other types of waters of the U.S. In addition, the PGP does not authorize the loss of any vernal pool type waters of the U.S. within the Lower American River 8-digit hydrologic unit

code (HUC) (HUC 18020111), other than those activities within the boundaries of the Placer Vineyards Specific Plan Area (PVSP, SPK-1999-00737). Implementation of the PVSP is a Covered Activity under the HCP/NCCP.

Cumulative: Not including activities within the boundaries of the PVSP, the cumulative loss of waters of the U.S. under the PGP shall not exceed 90 acres, and the cumulative loss of vernal pool type waters of the U.S. authorized under the PGP shall not exceed 15 acres. For activities within the PVSP, the cumulative loss of waters of the U.S. shall not exceed 50 acres of waters of the U.S. and 15 acres of vernal pool waters of the U.S. This cumulative limit would be for the 5-year term of the PGP.

RGP for PCWA: Loss of waters of the U.S.: The total loss of waters of the U.S. for a single and complete project under the RGP for activities conducted by PCWA, cannot exceed 0.25 acre of waters of the U.S., 300 linear feet of jurisdictional stream, or 1,000 linear feet of jurisdictional irrigation, water supply, or drainage ditch or canal (unless the linear foot limit is waived by the Corps in accordance with the RGP). Bank stabilization activities under the RGP for PCWA are limited to no more than 500 linear feet in length along the bank of a jurisdictional stream and no more than 1,000 linear feet in length along the bank of a jurisdictional irrigation, water supply, or drainage ditch or canal (unless the linear foot limit is waived by the Corps in accordance with the RGP).

Cumulative: The cumulative loss of waters of the U.S. under the RGP for PCWA shall not exceed 3 acres, and the cumulative loss of vernal pool type waters of the U.S. shall not exceed 1 acre. This cumulative limit would be for the 5-year term of the RGP.

(3) Reduced Take/Reduced Fill: This alternative would include the same components as the proposed action. USFWS and NMFS would issue permits under Section 10 of the ESA, the plan permittees would adopt and implement the CARP, and the Corps would issue the multi-tiered CWA 404 Permit Strategy. However, under this alternative, less development would occur within the Valley PFG area over the 50-year term of the Section 10 permit. Under this alternative, over the 50-year term of the Section 10 permit and HCP/NCCP, there would be a reduction in the loss of aquatic resources that are potential waters of the U.S. due to additional on-site avoidance and minimization. The EIS estimated that this alternative would reduce the vernal pool complex land conversion for the Valley PFG by 10% (about 1,250 acres) compared to the proposed action and that there would be similar reductions in other communities associated with wetlands or other waters over the 50-year ITP term. Under this alternative, the Corps' Permit Strategy, including the thresholds identified in Section III(a)(2) above, would be the same as under the proposed action. The proposed PCCP includes maximum limits on the loss of species habitat and waters of the U.S. over a 50-year term. Because both the Corps' Permit Strategy and the CARP require the applicant conduct on-site avoidance and minimization to reduce the loss of waters of the U.S., practically speaking the Reduced Take/Reduced Fill alternative would have similar affects to the aquatic environment as the proposed action for the 5-year term of the Permit Strategy. In addition, under the Section 404(b)(1) Guidelines, applicants are

required to avoid and minimize adverse effects to the aquatic environment to the maximum extent practicable for all activities requiring authorization under CWA Section 404. Therefore, even for the 50-year term of the ITP, activities authorized by the Corps would result in similar discharges into waters of the U.S. under the proposed action or this alternative.

(4) Reduced Permit (ITP) Term: Under this alternative, the USFWS and NMFS would issue the Section 10 ESA ITPs for a 30-year term, instead of a 50-year term. All other aspects would be the same as the proposed action. Overall, effects under the HCP/NCCP would be reduced, as they would only be covered under the Section 10 ESA ITP for a 30-year period. However, environmental effects would continue to occur after the end of the 30-year period, these effects would just be evaluated on a case-by-case basis and would not be evaluated under a comprehensive regional framework. This alternative would result in similar affects to the aquatic environment as the proposed action for the 5-year term of the Corps' Permit Strategy. In addition, under the Section 404(b)(1) Guidelines, applicants are required to avoid and minimize adverse effects to the aquatic environment to the maximum extent practicable for all activities requiring authorization under CWA Section 404. Therefore, even for the 30-year term of the ITP, activities authorized by the Corps would result in similar discharges into waters of the U.S. under the proposed action or this alternative.

**b. Determination of Practicable Alternatives and the Least Environmentally Damaging Practicable Alternative under Section 404(b)(1) Guidelines:**

(1) The Corps has determined that the No Action Alternative, would not meet the overall project purpose, as it would not result in the development of a multi-tiered CWA 404 Permit Strategy aligned with the HCP/NCCP and CARP that would result in both substantially increased efficiency in permit processing and ensuring permit decisions align with HCP and CARP requirements for avoidance, minimization and protection of aquatic resources in the Plan Area. Therefore, Alternative 1 is not the least environmentally damaging practicable alternative (LEDPA).

(2) The Corps has determined that the Proposed Action Alternative, meets the overall project purpose, and is practicable. With a comprehensive regional development conservation plan coordinated between local, state, and federal land use and regulatory agencies, adverse effects to the aquatic environment would be avoided and minimized. Under the CARP and implementing ordinances, Placer County and the City of Lincoln would require applicants under the HCP/NCCP avoid and minimize impacts to waters of the state to the maximum extent practicable. Under the Corps' Permit Strategy, activities covered under the PGP would need to comply with the CARP avoidance and minimization measures. For activities covered under the RGPs, LOP procedures and abbreviated SP procedures, the applicants would need to provide site-specific information to show that on-site avoidance and minimization has occurred.

(3) Reduced Take/Reduced Fill Alternative: Under this alternative, the effects to the aquatic environment may be reduced over the 50-year permit term. However, the



requirements of the CARP and the Corps' Permit Strategy require that activities covered under the Permit Strategy avoid and minimize effects to waters of the U.S. to the maximum extent practicable. Therefore, for the 5-year term of the proposed Permit Strategy, the effects to waters of the U.S. would be similar under the reduced take/reduced fill alternative as under the proposed action. As identified in the August 23, 1993, *Memorandum to the Field SUBJECT: Appropriate Level of Analysis Required for Evaluating Compliance with the Section 404(b)(1) Guidelines Alternatives Requirements*, issued by the USEPA and USACE, "when it is determined that there is no identifiable or discernible difference in adverse impact on the environment between the applicant's proposed alternative and all other practicable alternatives, then the applicant's alternative is considered as satisfying the requirements of Section 230.10(a)." Because the Corp's permit strategy under the Reduced Take/Reduced Fill Alternative would have the same effects on the aquatic environment as the proposed action during the 5-year duration, we have determined this alternative is not the LEDPA.

(4) Reduced Permit (ITP) Term: The Corps has determined that the Reduced Permit Term Alternative meets the overall project purpose and is practicable. However, this alternative would not reduce overall effects to the aquatic environment during the 5-year term of the Corps' Permit Strategy. Because this alternative would overall result in similar effects to waters of the U.S., the Corps has determined it is not the LEDPA.

**e. Alternative(s) Considered to be Environmentally Preferable under NEPA:**

As also determined by the USFWS in Section 5 of their ROD for the PCCP EIS, the alternative considered to be environmentally preferable under NEPA is the Proposed Action. This alternative is practicable and would have similar adverse effects to the aquatic environment as the Reduced Take/Reduced Fill and Reduced Permit Term alternatives.

**IV. Comments on the CWA 404 Permit Strategy:** On July 8, 2019, the Corps issued a Public Notice requesting comments on the Draft Permit Strategy. The Corps received 4 comment letters in response to the public notice. These comment letters were provided to the USFWS, and the Corps worked with the USFWS to respond to these comments in the Final EIS/EIR for the PCCP. The comments and the responses can be found in Appendix I of the Final EIS/EIR for the PCCP, as follows:

Comment Letter	Response (page)
Friends of Auburn Ravine; Comment Letter 3	I.2.4
Sheppard Mullin; Comment Letter 13	I.2.24 to I.2.28
Cox, Castle, & Nicholson, LLP., Comment Letter 15	I.2.34 to I.2.35
George T. Kammerer, Comment Letter 46	I.2.154 to I.2.163

As a result of these comments, several modifications were made to the Corps' draft Permit Strategy. These changes were made specifically in response to comments received by the Corps related to the PVSP, as identified in the response to Comment Letter 15 of the Final EIS/EIR for the PCCP.

## V. Consideration of Applicable Laws and Policies

**a. National Environmental Policy Act (NEPA):** The proposed action is in compliance with NEPA. An EIS/EIR was completed to evaluate a reasonable range of alternatives and the direct, indirect, and cumulative effects associated with these alternatives. As a NEPA cooperating agency, the Corps coordinated with the USFWS, following all of the NEPA processes identified in 40 CFR Part 1500, 33 CFR Part 230, and 33 CFR Part 325, Appendix B, including noticing and timeline requirements. The May 2020 Final EIS/EIR discloses to the public the probable impacts of each alternative, taking into account mitigation. The EIS/EIR is being utilized to make decisions on development of a multi-tiered CWA Section 404 Permit Strategy aligned with the HCP/NCCP.

**b. Section 401 of the Clean Water Act Section 401 of the CWA:** The proposed action is in compliance with Section 401 of the CWA. The proposed action does not itself require compliance under Section 401 of the CWA, as there is no direct authorization for the discharge of fill material into waters of the U.S. associated with approval of the Permit Strategy. For the LOP and abbreviated SP procedures, applicants for activities that would result in a discharge into waters of the U.S. would need to receive an individual 401 water quality certification (certification) or waiver thereof, from the applicable certifying authority, following the procedures of 40 CFR Part 121. On October 16, 2020, the Central Valley Regional Water Quality Control Board (CVRWQCB) issued general certification for the proposed PGP (WDID 5A31CR00534), the RGP for activities conducted by PCWA (WDID 5A31CR00538), and the RGP for activities approved under the Western Placer ILF Program (WDID 5A31CR00539). The terms and conditions of the PGP and RGPs require the permittees to comply with the terms and conditions of these general certifications.

**c. Endangered Species Act of 1973 (ESA):** The approval of the proposed Permit Strategy does not affect federally-listed threatened and/or endangered species, as the Permit Strategy does not authorize the discharge of fill material into waters of the U.S. However, activities conducted under the PGP, RGPs, LOP procedures or abbreviated SP procedures may adversely affect federally-listed threatened and/or endangered species. In order to ensure that the Permit Strategy provides efficient and effective processing for proposed activities, on May 28, 2020, the Corps designated the USFWS as the lead federal agency for compliance with Section 7 of the ESA, and requested the USFWS and NMFS include the Corps' Permit Strategy in their intra-Service Section 7 consultations for the HCP/NCCP. On December 1, 2020, the USFWS issued their *Biological and Conference Opinion on U.S. Fish and Wildlife Service Proposed Issuance of a Section 10(a)(1)(B) Permit for the Western Placer County Habitat Conservation Plan/Natural Community Conservation Plan and U.S. Army Corps of Engineers Proposed Authorization and Implementation of a Clean Water Act Section 404 Permit Strategy Aligned with the Placer County Conservation Program* (USFWS File Number 81420-2009-F-0520), including an incidental take statement. On March 15, 2021, NMFS issued their *Intra-Service Endangered Species Act Section 7*

*Consultation (WCR-2020-00XXX) for the Issuance of section 10(a)(1)(B) Incidental Take Permit for the Placer County Conservation Program Habitat Conservation Plan authorizing take of California Central Valley steelhead (Oncorhynchus mykiss), Central Valley fall-run Chinook salmon (O. tshawytscha), and Central Valley late fall-run Chinook salmon (O. tshawytscha) and documentation of Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response (NMFS file number WCRO-2020-03651), including an incidental take statement. Activities authorized under the Corps' Permit Strategy would be required to comply with these Biological Opinions and the requirements of the incidental take statements, as applicable. In the unlikely case that a future proposed action may affect federally-listed species and is not covered by these BOs, the Corps will initiate consultation with the USFWS and/or NMFS, as appropriate. Based on a review of the information above, the Corps has determined that it has fulfilled its responsibilities under Section 7(a) (2) of the ESA.*

**d. Fish and Wildlife Coordination Act (FWCA):** The approval of the proposed Permit Strategy does not affect fish or wildlife species, as the Permit Strategy does not authorize the discharge of fill material into waters of the U.S. However, activities conducted under the PGP, RGP, LOP procedures or abbreviated SP procedures may affect fish and wildlife species. Decisions on individual future CWA 404 Permit Strategy actions pursuant to the Permit Strategy would comply with the FWCA based on the Corps' ongoing coordination with the USFWS and NMFS on the PCCP, serving as a cooperating agency on the EIS/EIR, and by the programmatic coverage of future DA permit actions as specified in the USFWS' and NMFS' Biological Opinions.

**e. Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA):** The approval of the proposed Permit Strategy does not affect essential fish habitat (EFH), as the Permit Strategy does not authorize the discharge of fill material into waters of the U.S. However, activities conducted under the PGP, RGP, LOP procedures or abbreviated SP procedures may adversely affect EFH. As identified in Section V(c), above, NMFS has issued their *Intra-Service Endangered Species Act section 7 Consultation (WCR-2020-00XXX) for the Issuance of section 10(a)(1)(B) Incidental Take Permit for the Placer County Conservation Program Habitat Conservation Plan authorizing take of California Central Valley steelhead (Oncorhynchus mykiss), Central Valley fall-run Chinook salmon (O. tshawytscha), and Central Valley late fall-run Chinook salmon (O. tshawytscha) and documentation of Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response (NMFS file number WCRO-2020-03651)*. In this Biological Opinion, NMFS determined that activities conducted under the PCCP would result in adverse effects to EFH, however, these adverse effects would be offset with the implementation of best management practices and conservation measures of the HCP/NCCP, and additional conservation recommendations are not needed. Activities authorized under the Corps' Permit Strategy would be required to comply with this Biological Opinion, which would ensure that effects to EFH are minimized. In the unlikely case that a future proposed action may adversely affect EFH in a way not contemplated in the Biological Opinion, the Corps will consult with NMFS under the MSFCMA, as appropriate. Based on a

review of the information above, the Corps has determined that it has fulfilled its responsibilities under the MSFCMA.

**f. Section 106 of the National Historic Preservation Act (NHPA):** The approval of the proposed Permit Strategy does not authorize the discharge of fill material into waters of the U.S.; and therefore, does not constitute an “undertaking” as defined in the NHPA or in 33 CFR Part 325, Appendix C. However, activities conducted under the PGP, RGPs, LOP procedures or abbreviated SP procedures would be “undertakings” that may affect properties listed in or eligible for listing in the National Register of Historic Places. Consultation would be initiated, as appropriate, for individual future CWA 404 Permit Strategy actions to ensure compliance of the regulated activity with the NHPA. Although approval of the Permit Strategy doesn’t require consultation under NHPA, the Corps has met with the USFWS, California State Historic Preservation Officer (SHPO), and Plan Permittees, to discuss the development of a Programmatic Agreement (PA) for compliance with Section 106 of the NHPA. The Corps intends to continue discussions with the SHPO to develop a PA, once additional information is received from the Plan Permittees regarding the estimated number of activities that would be covered under the Corps’ Permit Strategy. However, until and unless a PA is developed and executed, compliance with Section 106 NHPA for future DA permit actions would be achieved on a project-by-project basis, as noted above.

**g. Section 176(C) of the Clean Air Act (CAA) General Conformity Rule Review:** The approval of the proposed Permit Strategy does not authorize the discharge of fill material into waters of the U.S., and therefore would not have an effect on air quality. However, activities conducted under the PGP, RGPs, LOP procedures or abbreviated SP procedures may affect air quality. The Corps anticipates that direct emissions from the proposed activities that would require future DA permit authorizations for the CWA 404 Permit Strategy will not exceed de minimis levels of a criteria pollutant or its precursors and are exempted by 40 CFR 93.153. Any later indirect emissions are generally not within the Corps’ continuing program responsibility and generally cannot be practicably controlled by the Corps. For these reasons, a conformity determination is not required for the approval of the CWA 404 Permit Strategy.

**h. Executive Order 11988, Floodplain Management:** The approval of the proposed Permit Strategy does not authorize the discharge of fill material into waters of the U.S., and therefore would not affect floodplains. However, activities conducted under the PGP, RGPs, LOP procedures or abbreviated SP procedures may result in effects to floodplains. As part of the PCCP, the Plan Permittees are proposing stream protection, enhancement, and avoidance measures, as discussed in Section VI(a). General Condition 8 of the PGP requires applicants establish wetland and Stream System avoidance and minimization measures as described in the HCP/NCCP, CARP, and implementing ordinances. General Condition 1 of the RGP for activities conducted by PCWA require PCWA comply with avoidance and minimization measures, terms, and other conditions as identified in Chapter 6 of the HCP/NCCP. In addition, General Condition 5 of the RGP for activities conducted by PCWA requires PCWA ensure the

activity complies with applicable FEMA-approved state or local floodplain management requirements. For the proposed RGP for ILF projects, the activities authorized under this RGP would be for compensatory mitigation projects, which would result in either preservation or a net increase in aquatic resource functions and services. Activities that adversely affect stream systems and floodplains would not be appropriate under the Western Placer ILF Program. For any activity that results in more than minimal adverse effect to the stream system or floodplains, the activity would not be authorized under the PGP or the RGPs. The applicant would need to request authorization under the LOP procedures or abbreviated SP procedures. For activities evaluated under the LOP or abbreviated SP procedures, the Corps would conduct a case-specific analysis on the effects of the proposed action on the stream system and floodplains and would ensure compliance with EO 11988.

**i. Executive Order 13175: Consultation with Indian Tribes, Alaska Natives, and Native Hawaiians:** The public notices for the proposed CWA 404 Permit Strategy was sent to applicable tribal contacts in the PCCP Plan Area, as they are on our office's public notice mailing list. No tribes responded to the request for comments. For future CWA 404 Permit Strategy actions activities evaluated under the PGP, LOP procedure and abbreviated SP, the Corps would coordinate with tribes, as appropriate, on a case-by-case basis to ensure compliance with EO 13175. Additionally, should the proposed Section 106 NHPA PA described in Section V(f) above move forward, one of the first steps would be to initiate tribal coordination to see comments and/or invite participation in the PA.

**j. Executive Order 12898: Environmental Justice:** The proposed action is in compliance with Title VI of the Civil Rights Act and Executive Order 12898. The proposed action is not expected to negatively impact any community, and therefore is not expected to cause disproportionately high and adverse impacts to minority or low-income communities. In accordance with Title III of the Civil Right Act of 1964 and Executive Order 12898, the Corps has determined that the activities conducted under the proposed PGP and RGPs would not directly or through contractual or other arrangements, use criteria, methods, or practices that discriminate on the basis of race, color, or national origin nor would it have a disproportionate effect on minority or low-income communities. For activities evaluated under the LOP procedure and abbreviated SP, compliance with EO 12898 would be evaluated by the Corps on a case-by-case basis.

**k. Other – Effects on Corps Civil Works Projects Under Section 14 of the River and Harbors Act (33 USC 408):** The approval of the proposed Permit Strategy does not authorize the discharge of fill material into waters of the U.S., and therefore would not affect Corps Civil Works Projects under Section 14 of the RHA. However, activities conducted under the PGP, RGPs, LOP procedures or abbreviated SP procedures may result in effects to Corps Civil Works Projects along the Bear River, within the RAA. The full extent of these effects is not known at this time. Activities that would alter or temporarily or permanently occupy or use a Corps' federally authorized Civil Works project will not be authorized by the PGP due to the limited reporting capacity of the

PGP. However, such activities may be authorized by the applicable RGP, LOP, or SP under the Permit Strategy. Activities that may affect a Corps Civil Works Project under an applicable RGP, LOP, or SP will be required to request and obtain a Section 408 permission from the Corps prior to the verification of any activity under the Corps' Permit Strategy.

**VI. Consideration of Mitigation Measures:** The EIS/EIR, including the HCP/NCCP and CARP, include a number of mitigation measures to reduce or offset impacts that fall outside of the Corps responsibility and generally cannot be practicably controlled by the Corps, such as those associated with state- and/or federally-listed species that are not (primarily) associated with aquatic resources. Many of the mitigation measures are requirements of the USFWS and NMFS for implementation by the Plan Permittees, including local land use. As such, these mitigation measures are enforced by other agencies and not the Corps.

The Corps requires mitigation measures to reduce or offset impacts to waters of the U.S. These are typically provided as special conditions of DA permits. The proposed action would not result in the issuance of a project-specific DA permit but rather a DA Permit Strategy consisting of different permit instruments and processes. The Corps evaluated several mitigation measures contained in the HCP/NCCP and CARP that would avoid, minimize, and compensate for effects to waters of the U.S., as follows:

**a. Regional, Watershed-Based Avoidance and Minimization and Project-Specific Avoidance and Minimization:** The PCCPs conservation strategy and the CARP rely on watershed and conservation-based principles. Both the PCCP conservation strategy and CARP use a watershed-based mitigation strategy for avoidance, minimization, and compensatory mitigation, which include, but are not limited to:

**(1) Maximum Permanent Direct Effect Aquatic Resources for the 50-year Permit Term:** The HCP/NCCP (EIS Appendix A, Vol. 1, Table 4-1) identifies a maximum cumulative direct effects to aquatic resources within the Plan Area over its 50-year term, as shown on Table 4-1 on Page 4.8 of the HCP/NCCP. Under the HCP/NCCP, permanent direct effects would occur to a maximum of 580 acres of aquatic resources in vernal pool complexes (vernal pools, seasonal wetlands, and seasonal swales), of which a maximum of 185 acres of vernal pools could be affected, 260 acres of aquatic/wetland complex (fresh emergent marsh, lacustrine, non-VP seasonal wetlands) of which up to 105 acres could be fresh emergent marsh, up to 490 acres of riverine/riparian constituent habitats (riverine and riparian wetlands) of which up to 375 would be riparian wetlands, and up to 2,060 acres of rice agriculture. Not counting rice agriculture, the maximum permanent direct effect to potential waters of the U.S. would be 1,330 acres. Additional effects to wetlands located within areas currently under rice agriculture may occur, although these effects cannot be calculated at this time.

**(2) Advanced Identification of Impacts and Mitigation:** The HCP/NCCP and CARP's advanced identification of impacts, avoidance, minimization and compensation would contribute to offsetting the loss of aquatic functions that would result from the anticipated impacts.

As explained in Section III.a.2 of this ROD, under the proposed action, avoidance and minimization would be conducted at a regional level, with avoidance and minimization being concentrated within a reserve system concentrated in the RAA and along stream corridors, resulting in the establishment of fewer "pocket" preserves surrounded by development. Within the Plan Area, the RAA is broken up into Valley RAA and Foothills RAA. These are the primary areas designated within which the connected reserve system will be assembled. The RAA comprises a largely contiguous arc of land extending from the North Foothills west to Sutter County in the valley and south almost to Sacramento County. The RAA is largely in private ownership and primarily in agricultural uses. Total, the RAA encompasses 68,325 acres of the 210,154-acre Plan Area (44,095 acres of Valley RAA and 24,230 acres of Foothills RAA). A map of the RAA's can be found on Figure 1-5 of the HCP/NCCP. Under the PCCP, some development is authorized in the RAA, which are identified in Section 2.6.2 and 2.6.4 of the HCP/NCCP. Under the PCCP, approximately 45,300 acres of the RAA would be acquired through fee title or easement for inclusion into the Reserve System. In addition, a small portion of the Reserve System (approximately 2,000 acres) may be acquired in the PFG, as long as the land meets specific size and connectivity requirements and meets the biological goals and objectives of the HCP/NCCP. Additional information on the RAA can be found in Section 5.3.1.3.1 of the HCP/NCCP. While the RAA is intended to be established for effects to federally- and state-listed fish and wildlife species, it would also be the primary location for compensatory mitigation for the loss of waters of the U.S. that occurs within the Plan Area and is conducted under the WPILF Program.

In addition to the RAA, the PCCP Reserve System identifies protection of the Stream System, which includes riparian communities and aquatic resources. Under the PCCP, covered activities will avoid and minimize effects within the stream system, which includes incorporation of buffer zones where aquatic and wetland habitats are present in the Reserve System. The Stream System consists of the stream channel and surrounding areas. The width of the surrounding areas is identified in Table 3-4 (Section 3.2.7 of the HCP/NCCP) and is a minimum of 50 feet. For activities that would affect the Stream System, applicants must compensate at a 1.52:1 ratio.

**(3) Avoidance and Minimization Requirements of the HCP/NCCP and CARP:** The HCP/NCCP and CARP contain several mandatory provisions for avoidance and minimization, at both landscape and project site scales. As identified in Section 5.1.3 of the HCP/NCCP, the Conservation Strategy for the HCP/NCCP consists of establishment of a reserve system, stream protection, enhancement and avoidance, wetland conservation and no overall net loss of wetland functions and services, and avoidance and minimization.

Chapter 5 of the HCP/NCCP and Section 4.7 of the CARP also outlines the biological goals and measurable objectives of the PCCP. Section 6 of the HCP/NCCP describes conditions that would be placed on covered activities, which would be implemented to meet the biological goals and objectives. The biological goals and objectives and the conditions on covered activities range from those related just to species, to those that are necessary to avoid, minimize, and compensate for the loss of waters of the U.S. associated with activities conducted under the Corps' Permit Strategy.

**b. Terms and Conditions of PGP and LOP Procedure:** Both the PGP, RGP for PCWA, and LOP Procedure contain terms and conditions addressing avoidance and minimization of impacts to aquatic resources. The conditions of the PGP and RGP for PCWA are intended to ensure that effects to the aquatic environment are no more than minimal. Conditions on the LOP procedures are to ensure that effects are avoided, minimized, and compensated to the maximum extent practicable.

**c. Individual and Cumulative Thresholds on the PGP and RGP:** As described in Section III(a)(2) of this ROD, the Corps has placed individual and cumulative threshold for the loss of waters of the U.S. associated with the PGP and RGP for activities conducted by PCWA. These thresholds would ensure that effects of proposed activities are avoided and minimized to the maximum extent practicable, and that the effects are no more than minimal.

**d. Mandatory Reporting Requirements for Use of the PGP:** The PCA and Corps will execute a Memorandum of Understanding (MOU) requiring the PCA to provide applicable reporting information on utilization of the PGP to the Corps. The Corps anticipates utilizing the reporting information when re-evaluating the PGP at five-year intervals, as described below.

**e. Re-evaluation of the PGP, RGPs, LOP Procedure, and Abbreviated SP Every Five Years:** As described in Section IX(h) of this ROD, the Corps will re-evaluate the PGP and RGPs for potential re-issuance with or without modifications, and will also re-evaluate the LOP procedure and abbreviated SP process every five years to determine whether additional compliance with NEPA is necessary, ensure the CWA 404 Permit Strategy is implemented and continues to be operated through time in compliance with the findings of this ROD and all applicable laws and policies addressed therein.

**f. Utilization of the 404 Permit Strategy Requires Applicants to Comply with all Applicable Avoidance and Minimization Measures:** Term 3 in the PGP, General Condition 1 of the RGP for PCWA, and Term 4 of the RGP for ILF activities requires compliance with applicable terms and conditions contained in the HCP/NCCP, including avoidance and minimization contained in Section 5.1.3 of the HCP/NCCP. In addition, the LOP Procedures identify that activities must be covered activities under the HCP/NCCP and must comply with any applicable terms and conditions of the HCP/NCCP, CARP, and implementing ordinances.



**g. Corps' Discretion to Add Special Conditions to LOP and Abbreviated SP Authorizations:** The Corps retains discretion to add special conditions to the LOP and abbreviated SP authorization to avoid, minimize, and/or compensate for adverse effects to waters of the U.S.

**h. Compensatory Mitigation Requirements:** Compensatory mitigation for loss of waters of the U.S. would be satisfied by purchasing credits from the Western Placer ILF Program established by the Plan Permittees and approved by the Corps in March 2019. Activities authorized under the Corps' Permit Strategy would incorporate the compensatory mitigation ratios as identified in the HCP/NCCP, and CARP, which is 1.5:1 (impact to compensation) for the majority of loss of waters of the U.S., and 1.52:1 for the Stream System.

As part of the HCP/NCCP, the Plan Permittees must stay ahead of the amount of take allowed under the permit to ensure the assembly of the Reserve System stays ahead of impacts and that PCA is making steady progress toward completing the reserve system. These stay ahead provisions apply to each natural community type, including aquatic resources. To provide flexibility in implementation of the PCCP, compensatory mitigation provided by PCA can only fall behind up to 10% of each natural community type for no more than 3 years.

Both the HCP/NCCP and ILF program have substantive, regular reporting requirements and would be subject to ongoing, regular compliance reviews by the Corps, USFWS, and other involved agencies including the USEPA, RWQCB and CDFW. The HCP/NCCP stay ahead provision negates most of the temporal loss of aquatic resource functions and services. ILF programs themselves reduce uncertainty due to the rigorous review prior to establishment to ensure compliance with the federal mitigation rule (33 CFR Part 332), ongoing review of proposed and operating ILF projects, and overall ability to consolidate compensatory mitigation projects, financial planning and review expertise.

## **VII: Compliance with 404(b)(1) Guidelines**

Only the proposed issuance of a PGP and RGPs as a part of the streamlined CWA 404 Permit Strategy requires a determination of compliance with the Section 404(b)(1) Guidelines. Therefore, parts (a) and (b) below apply only to the proposed issuance of the PGP and RGPs. Compliance with the 404(b)(1) Guidelines will be determined on a case-by-case basis during evaluation of future CWA 404 Permit Strategy actions under the LOP procedure and abbreviated Standard Permit process.

### **a. Restrictions on Discharge:**

Yes  No  Based on the discussion in Section 4.0, are there available, practicable alternatives having less adverse impact on the aquatic ecosystem and without other significant adverse environmental consequences that do not involve discharges into "waters of the U.S." or at other locations within these waters?

Yes  No  N/A  If the project is in a special aquatic site and is not water dependent, has the applicant clearly demonstrated that there are no practicable alternative sites available? The proposed issuance of the PGP and RGPs would not result in a discharge into a special aquatic site. Avoidance and minimization for specific activities authorized under the PGP will be evaluated consistent with the terms and conditions of the PGP and RGPs.

Will the discharge:

Yes  No  Violate state water quality standards?

Yes  No  Violate toxic effluent standards under Section 307 of the Clean Water Act?

Yes  No  Jeopardize endangered or threatened species or their critical habitat?

Yes  No  Violate standards set by the Department of Commerce to protect marine sanctuaries?

Evaluation of the information in Section 6 above indicates that the proposed discharge material meets testing exclusion criteria for the following reason(s):

based on the above information, the material is not a carrier of contaminants.

the levels of contaminants are substantially similar at the extraction and disposal sites and the discharge is not likely to result in degradation of the disposal site and pollutants will not be transported to less contaminated areas.

acceptable constraints are available and will be implemented to reduce contamination to acceptable levels within the disposal site and prevent contaminants from being transported beyond the boundaries of the disposal site.

Will the discharge contribute to significant degradation of "waters of the U.S." through adverse impacts to:

Yes  No  Human health or welfare, through pollution of municipal water supplies, fish, shellfish, wildlife and/or special aquatic sites?

Yes  No  Life stages of aquatic life and/or wildlife?

Yes  No  Diversity, productivity, and stability of the aquatic life and other wildlife? Or wildlife habitat or loss of the capacity of wetlands to assimilate nutrients, purify water or reduce wave energy?

Yes  No  Recreational, aesthetic and economic values?

Yes  No  Will all appropriate and practicable steps be taken to minimize adverse impacts of the discharge on the aquatic ecosystem? Does the proposal include satisfactory compensatory mitigation for losses of aquatic resources?

**b. Factual Determinations:** The below determinations apply to the proposed issuance of the PGP and RGPs under the CWA 404 Permit Strategy. Factual determinations for LOPs and SPs under this Permit Strategy will be provided at the time a permit decision is made on a project-by-project basis.

(1) Substrate Determination: EIS Chapters 4.5, *Hydrology and Water Quality*, and 4.7, *Mineral Resources*, identify the nature and degree of effect that the proposed action will have, individually and cumulatively, on the characteristics of the substrate. The proposed PGP and RGPs would be utilized for the majority of activities that would result in the discharge of fill material into potential waters of the U.S. Avoidance, minimization, and mitigation measures identified in Section VI would minimize effects for future authorizations under the PGP and RGPs. No activity would be authorized under the PGP and RGPs that would have more than minimal adverse effects. For activities under the proposed LOP and abbreviated SP procedures, the effects would be determined on a case-by-case basis.

(2) Water circulation, fluctuation, and salinity determinations: EIS Chapter 4.5, *Hydrology and Water Quality* identifies the nature and degree of effect that the proposed action will have, individually and cumulatively, on water current patterns, circulation, and fluctuation. No effects would occur to salinity patterns. The proposed PGP and RGPs would be utilized for the majority of activities that would result in the discharge of fill material into potential waters of the U.S. Avoidance, minimization, and mitigation measures identified in Section VI would minimize effects for future authorizations under the PGP and RGPs. No activity would be authorized under the PGP and RGPs that would have more than minimal adverse effects. For activities under the proposed LOP and abbreviated SP procedures, the effects would be determined on a case-by-case basis.

(3) Suspended particulate/turbidity determinations: EIS Chapter 4.5, *Hydrology and Water Quality* identifies the nature and degree of effect that the proposed action will have, individually and cumulatively, as a result of changes in suspended particulate/turbidity in the vicinity of the disposal sites for the proposed action. The proposed PGP and RGPs would be utilized for the majority of activities that would result in the discharge of fill material into potential waters of the U.S. Avoidance, minimization, and mitigation measures identified in Section VI would minimize effects for future authorizations under the PGP and RGPs. Activities authorized under the PGP and RGPs would have to comply with the general Section 401 Water Quality Certifications (WQC) issued for these permits, and activities authorized under the LOP and abbreviated SP procedures would have to obtain individual 401 WQC's or waivers. No activity would be authorized under the PGP and RGPs that would have more than

minimal adverse effects. For activities under the proposed LOP and abbreviated SP procedures, the effects would be determined on a case-by-case basis.

(4) Contaminant determinations: EIS Chapters 4.3, *Biological Resources* and 4.5, *Hydrology and Water Quality* identify the nature and degree of effects that the proposed action will have, individually and cumulatively, on the aquatic ecosystem as a result of a potential increase in contaminants. The proposed PGP and RGPs would be utilized for the majority of activities that would result in the discharge of fill material into potential waters of the U.S. Avoidance, minimization, and mitigation measures identified in Section VI would minimize effects for future authorizations under the PGP and RGPs. No activity would be authorized under the PGP and RGPs that would have more than minimal adverse effects. For activities under the proposed LOP and abbreviated SP procedures, the effects would be determined on a case-by-case basis.

(5) Aquatic ecosystem and organism determinations: EIS Chapters 3.3, *Biological Resources* and 3.5, *Hydrology and Water Quality* identify the nature and degree of effect that the proposed action will have, individually and cumulatively, on the aquatic ecosystem and organisms. The proposed PGP and RGPs would be utilized for the majority of activities that would result in the discharge of fill material into potential waters of the U.S. Avoidance, minimization, and mitigation measures identified in Section VI would minimize effects for future authorizations under the PGP and RGPs. No activity would be authorized under the PGP and RGPs that would have more than minimal adverse effects. For activities under the proposed LOP and abbreviated SP procedures, the effects would be determined on a case-by-case basis.

(6) Proposed disposal site determination: EIS Chapters 3.3, *Biological Resources* and 3.5, *Hydrology and Water Quality*, describe the effects of discharges on the aquatic ecosystem. The proposed PGP and RGPs would be utilized for the majority of activities that would result in the discharge of fill material into potential waters of the U.S. Avoidance, minimization, and mitigation measures identified in Section VI would minimize effects for future authorizations under the PGP and RGPs. No activity would be authorized under the PGP and RGPs that would have more than minimal adverse effects. For activities under the proposed LOP and abbreviated SP procedures, the effects would be determined on a case-by-case basis.

(7) Determination of cumulative effects on the aquatic ecosystem: EIS Chapters 4.3 *Biological Resources* and 4.5, *Hydrology and Water Quality*, describe the cumulative effects of the proposed action on the aquatic ecosystem. In addition, in January 2016, the Corps completed an *Assessment of Cumulative Impacts to Waters of the United States within the Placer County Conservation Plan – HCP/404 Project (Regulatory Division SPK-2005-00485)* (Cumulative Impact Assessment (CIA) (Appendix G). In the CIA, the Corps evaluated the loss of waters of the U.S. associated with past, present, and reasonably foreseeable future development in the Plan Area. Under the HCP/NCCP, CARP, and the proposed PGP and RGP for PCWA activities, the loss of potential waters of the U.S. is limited to specific thresholds. These thresholds for the PGP and RGP for activities conducted by PCWA are based on the

Corps' January 2016 CIA, as well as the estimated loss of potential aquatic resources over a 50-year period under the proposed action as identified in Table 4-1 of the HCP/NCCP (Appendix A of the EIS).

As part of implementing the proposed action, avoidance, minimization, and compensatory mitigation measures identified in Section VI of this ROD would ensure the effects of authorizations under the PGP are not more than minimal, cumulatively. The mitigation measures under the proposed action and the cumulative threshold of loss of waters of the U.S. for the 5-year term of the PGP and RGP for activities conducted by PCWA, will ensure the cumulative effects to the aquatic environment are no more than minimal. If a proposed activity under the PGP or RGPs would result in more than minimal cumulative adverse effects to the aquatic environment, the applicant would be required to submit an application under the LOP or abbreviated SP procedures. For activities under the LOP or abbreviated SP procedures, cumulative effects will be determined on a case-by-case basis and would not be authorized if they would result in significant degradation of the aquatic environment.

(8) Determination of secondary effects on the aquatic ecosystem: EIS Chapters 3.3, *Biological Resources* and 3.5, *Hydrology and Water Quality*, describes both direct and indirect (secondary) effects of the proposed action on the aquatic environment over the 50-year term of the HCP/NCCP. If a proposed activity under the PGP or RGPs would result in more than minimal adverse effects, including secondary effects, to the aquatic environment, the applicant would be required to submit an application under the LOP or abbreviated SP procedures. For activities under the LOP or abbreviated SP procedures, secondary effects will be determined on a case-by-case basis and would not be authorized if they would result in significant degradation of the aquatic environment.

### **VIII. Public Interest Review**

The issuance of the PGP and RGPs as a part of the proposed CWA 404 Permit Strategy requires a determination of compliance with the public interest review factors identified in 33 CFR 320.4. Compliance with public interest review factors will be determined on a case-by-case basis during evaluation of future DA applications under the LOP procedure and abbreviated SP process.

a. The relative extent of the public and private need for the proposed work has been considered: The proposed issuance of the PGP and RGPs as part of the proposed CWA 404 Permit Strategy would benefit the Plan Permittees, general public, public agencies involved with applicable regulatory reviews, and future private- and public-sector applicants. The PGP and RGPs are anticipated to be utilized for authorization of most of the future CWA 404 Permit Strategy actions and would provide efficient review and evaluation of activities that require authorization under Section 404 of the Clean Water Act. Incorporation of PCCP avoidance and minimization measures would benefit the public by reducing both direct and indirect impacts to aquatic resources in the Plan Area in a coordinated manner.

b. The practicability of using reasonable alternative locations and/or methods to accomplish the objective of the proposed structure or work has been evaluated: The Corps has determined that there are no practicable alternatives that would accomplish the purpose of the proposed issuance of the PGP and RGPs. The Corps has also determined that there are no practicable alternative methods to accomplish the purpose of the proposed issuance that would have fewer direct or indirect effects than issuing the PGP and RGPs. As noted above, the PGP and RGPs are anticipated to be the most highly utilized type of permit within the multi-tiered proposed CWA 404 Permit Strategy. The Proposed Action represents on a regional level, the LEDPA, as described in Section III(d)(2).

c. The extent and permanence of the beneficial and/or detrimental effects that the proposed structures or work may have on the public and private uses which the area is suited has been reviewed: EIS Chapter 4, *Environmental Consequences*, describes the direct, indirect, and cumulative effects of the proposed action on a number of resource topics. EIS Chapter 5.8, *Public Interest Review Special Topics*, provides either the location in the EIS/EIR or an analysis of the effects of the proposed action on each public interest review factor identified in 33 CFR 320.4. No activity is authorized under the proposed PGP or RGPs that would have more than minimal effects to the aquatic environment or public interest. For activities under the LOP and abbreviated SP procedures, a determination on the effects will be made on a case-by-case basis. No permit will be issued for a proposed activity that would be contrary to the public interest.

## **IX. Findings**

a. The Corps has determined the evaluation of the proposed action and alternatives was done in accordance with all applicable laws, executive orders, regulations, and agency regulations. In its role as a NEPA cooperating agency, for purposes of its jurisdiction under law, the Corps has determined that the EIS/EIR and supporting documents are adequate and contain sufficient information to make reasoned CWA 404 Permit Strategy decisions. Pursuant to 40 CFR 1506.3, the Corps adopts the EIS/EIR prepared by the lead federal agency, the USFWS.

b. The selected alternative is the Proposed Action, with the inclusion of appropriate and practicable avoidance and minimization measures required by the HCP/NCCP, CARP, implementing ordinances and applicable terms and conditions of the Corps' PGP, RGPs, and LOP. The selected alternative minimizes environmental harm and potential adverse impacts of the discharges on the aquatic ecosystem and the human environment within the Plan Area. The proposed action, as mitigated by these conditions, is the environmentally preferable alternative under NEPA.

c. The Corps has determined the decision to implement a CWA 404 Permit Strategy aligned with the HCP/NCCP and CARP addresses avoidance and minimization of impacts to aquatic resources at regional and project-specific scales, and complies with the 404(b)(1) Guidelines at the regional level. Since avoidance and minimization of

impacts to aquatic resources have been addressed at the regional level, analysis of off-site alternatives for purposes of determining compliance with the Section 404(b)(1) Guidelines will not be required for future projects evaluated under the LOP procedure and abbreviated SP, provided that the activities are designed and implemented consistent with the HCP/NCCP, CARP, implementing ordinances and Corps' Permit Strategy. Evaluation of on-site alternatives for future LOP and/or SP applications consistent with the Permit Strategy, HCP/NCCP, and CARP is required. Most on-site avoidance and minimization will be considered to have been achieved by incorporating HCP/NCCP and CARP avoidance and minimization measures into project design. The Corps will exercise discretionary judgment in evaluating additional on-site avoidance and minimization opportunities within the context of the HCP/NCCP.

d. Issuance of a DA Programmatic General Permit (PGP) 18, *Minimal Impact Covered Activities Under The Western Placer County Habitat Conservation Plan/Natural Community Conservation Plan*, RGP 19, *Minimal Impact Activities Conducted by Placer County Water Agency under the Western Placer County Habitat Conservation Plan/Natural Communities Conservation Plan*, and RGP 20 *Minimal Impact Activities Conducted under the Western Placer County In-Lieu Fee Program*, with the inclusion of the general conditions on the permits, as prescribed by regulations published in 33 CFR Parts 320 to 330, and 40 CFR Part 320, complies with the Section 404(b)(1) Guidelines, and is not contrary to the public interest.

e. The Corps has determined, appropriate and consistent with Findings (a), (b), and (c), to issue a DA Letter of Permission procedure *Covered Activities Under The Western Placer County Habitat Conservation Plan/Natural Community Conservation Plan With Less Than Significant Impact*. The extent of analysis required for LOPs will be commensurate with proposed impacts. The findings of this ROD, inclusive of non NEPA-based decisions (LOPs are categorically excluded from NEPA under 33 CFR Part 325, Appendix B), will be relied upon to the maximum extent practicable in evaluating future LOP permit decisions.

f. The Corps has decided, appropriate and consistent with Findings (a), (b), and (c), to implement the *Abbreviated Standard Permit Process For Covered Activities Under The Placer County Conservation Program With Significant Impacts On The Human Environment*. This process would apply to HCP/NCCP Covered Activities requiring an EIS. The extent of analysis will be lessened by tiering from and/or incorporating by reference the HCP/NCCP EIS, inclusive of the findings of this ROD.

g. The Corps will evaluate the appropriateness of the CWA 404 Permit Strategy (PGP, RGPs, LOP, and abbreviated SP) consistent with expiration dates (as applicable), and/or at minimum every five years, to determine appropriate implementation of the Permit Strategy across the HCP/NCCPs Incidental Take Permit term. The Corps will determine whether additional analysis for compliance with NEPA and other applicable laws is required during the re-evaluation of the Permit Strategy.

h. Compensatory mitigation requirements for the CWA 404 Permit Strategy are fully aligned with the HCP/NCCP, inclusive of its conservation strategy identifying the type and amount of compensatory mitigation requirements for aquatic resources. The Western Placer ILF Program was developed to ensure compensatory mitigation for unavoidable losses under CWA 404 are implemented in accordance with 33 CFR 332.8, while also being implemented in conjunction with mitigation actions to satisfy the requirements of the ESA associated with the HCP/NCCP. Therefore, all compensatory mitigation requirements shall be satisfied through the Western Placer ILF Program, inclusive of its requirements for avoiding temporal loss through the stay ahead provisions and its required mitigation ratios, also consistent with the HCP/NCCP and CARP. Under the proposed PGP and RGP for activities conducted by PCWA, applicants would be required to purchase credits from the Western Placer ILF program at the ratios specified in the HCP/NCCP and CARP. For the proposed RGP for activities authorized by the Western Placer ILF, no compensatory mitigation is required as these are compensatory mitigation projects. Under the abbreviated LOP and SP procedures, applicant would be required to purchase credits from the Western Placer ILF program at the ratios specified in the HCP/NCCP and CARP. Alternatively, for activities evaluated under the abbreviated LOP or SP procedures, applicants may propose to compensate for the loss of waters of the U.S. through the purchase of credits from a Corps-approved mitigation bank, provided the applicant provides information demonstrating that the mitigation bank is consistent with the HCP/NCCP and CARP, and the purchase of credits from the mitigation bank is authorized by the Corps for the proposed activity.

## **XI. Appendices**

Appendix A: July 8, 2019, *Public Notice of Proposed Section 404 Clean Water Act Permit Strategy Aligned with the Placer County Habitat Conservation Plan*

Appendix B: PGP 18, *Minimal Impact Covered Activities Under The Western Placer County Habitat Conservation Plan/Natural Community Conservation Plan*

Appendix C: RGP 19, *Minimal Impact Activities Conducted by Placer County Water Agency under the Western Placer County Habitat Conservation Plan/Natural Communities Conservation Plan*

Appendix D: RGP 20 *Minimal Impact Activities Conducted under the Western Placer County In-Lieu Fee Program*

Appendix E: *LOP Procedures for Covered Activities Under The Western Placer County Habitat Conservation Plan/Natural Community Conservation Plan With Less Than Significant Impact*

Appendix F: *Abbreviated Standard Permit Process For Covered Activities Under The Placer County Conservation Program With Significant Impacts On The Human Environment*



Record of Decision (SPK-2005-00485)

Appendix G: January 6, 2016, *Memorandum For Record, Subject: Assessment of Cumulative Impacts to Waters of the United States within the Placer County Conservation Plan – HCP/404 Project (Regulatory Division SPK-2005-00485)*

Appendix H: USFWS Biological Opinion for the PCCP

Appendix I: NMFS Biological Opinion for the PCCP

**PREPARED BY:**

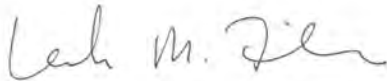


Lisa M. Gibson  
Chief  
Special Projects Branch

18 May 2021

Date

**REVIEWED BY:**



Leah M. Fisher  
Regulatory Permit Specialist  
Special Projects Branch

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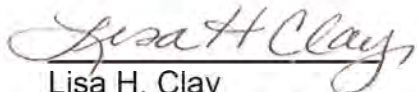
Date



Nancy A. Haley  
Chief  
CA North Section

18 May 2021

Date



Lisa H. Clay  
Deputy District Counsel  
Office of Counsel

05/18/2021

Date

**APPROVED BY:**



Michael S. Jewell  
Chief  
Regulatory Division

18MAY2021

Date

# APPENDIX A

*Public Notice*



# SPK-2005-00485, Proposed Section 404 Clean Water Act Permit Strategy Aligned with the Placer County Conservation Program, Placer and Sutter Counties, CA

Published July 8, 2019

**Comments Period: July 8, 2019 – August 7, 2019**

**SUBJECT:** The U.S. Army Corps of Engineers, Sacramento District, (Corps) proposes multi-tiered approach to Clean Water Act Section 404 (CWA 404), or “CWA 404 permit strategy,” for activities that involve discharge of dredged or fill material into waters of the United States, and overlaid by the Placer County Habitat Conservation Plan (HCP)/Natural Resource Community Conservation Plan (NCCCP) proposed under Section 10 of the Endangered Species Act (ESA). The Placer County HCP requires approval of species in individual permit under Section 10 of the ESA from the U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS). This notice is to inform interested parties and to solicit comments.

**AUTHORITY:** This permit strategy is being evaluated under Section 404 of the Clean Water Act for the discharge of dredged or fill material in waters of the United States.

**LOCATION:** The proposed permit strategy would be applicable within the Placer County HCP Plan Area, encompassing approximately 270,000 acres within western Placer County and northern Sutter County. Within western Placer County, the Plan Area is bounded on the north by Nevada and Yuba County, on the east by the City of Auburn and California Highway 49, on the south by Sacramento County, and on the west by Sutter County. With the exception of activities overlaid by the Placer County Water Agency (PCWA), the Plan Area in western Placer County includes the Cities of Auburn, Roeline, and Rosvill and Town of Loomis. Within Sutter County, the Plan Area includes 724 acres along the Coon Creek floodplain, and 33 miles of Auburn River, Coon Creek, Cross Creek, and East Side Creek. The Plan Area boundary is shown on the enclosed 2018, [Figure 1-1, Plan Area, Placer County Conservation Program – EIS/EIR](#), prepared by ICF ([Attachment](#)).

**BACKGROUND AND RELATED DOCUMENTATION:** The Placer County Conservation Program (PCCP) is a regional, comprehensive program intended to protect, enhance, and restore natural resources in western Placer County, while streamlining permitting for overlaid activities. Within this framework, the PCCP would have various provisions and comply with state and federal environmental regulations while streamlining planning and permitting for anticipated urban and rural growth and the construction and maintenance of infrastructure needed to serve Placer County’s population.

In 1998, the Placer County Board of Supervisors directed the Placer County Planning Department to prepare a program to implement the open space and conservation goals and policies of the 1994 *Placer County General Plan*. This program, now known as the Placer Legacy Open Space and Agricultural Conservation Program (Placer Legacy Program), was approved in June 2000. Implementation programs from the general plan provided the impetus for initiating the PCCP. The Placer Legacy Program further refined the direction provided by the general plan, including the decision to prepare an NCCP and comprehensive program to address wetlands and streams through the Colusa County Aquatic Resource Program (CARP). The PCCP was initiated in 2001 after the Board voted unanimously to sign the PCCP Planning Agreement (Planning Agreement), which included the work program for the PCCP. In 2007, the PCCP Ad Hoc Committee was formed consisting of two Board members from Placer County and two Council members from the City of Lincoln. The Ad Hoc Committee was directed to engage the decision-makers and to develop consistent framework, provisions, and priorities. In 2008, the Board unanimously adopted the Ad Hoc Committee’s recommendations to work with partners (City of Lincoln, PCWA, and South Placer Regional Transportation Authority (SPRTA)), and to coordinate with the public and resource agencies to finish the work plan and prepare second draft. In spring 2013, draft review map was developed by the Ad Hoc Committee and County staff. The map provided the foundation for the preparation of the proposed conservation strategy.

The 2001 Planning Agreement was entered into by the County, California Department of Fish and Wildlife, USFWS, and NMFS. The agreement identifies the Permit Applications, the Program Areas and phases, regulatory goals, the planning process, guidelines for plan development, commitment of resources to complete the program, and other miscellaneous provisions.

The process to develop the PCCP relied upon many of the same principles from the Placer Legacy Program, which included independent scientific input and analysis, extensive public participation, and derive from best hold practices. To assist in the development of the PCCP, the County formed working groups consisting of citizens (the Biological Study Holders Working Group [BWG] and Finance Committee), general staff, and scientists.

The PCCP comprises the integrated program components.

- The *Western Placer County Habitat Conservation Plan and Natural Community Conservation Plan* (Plan), joint habitat conservation plan and natural resource community conservation plan (HCP/NCCP) that would protect fish, wildlife, plants, and their habitats and fulfill the requirements of the federal Endangered Species Act of 1973, amended (ESA), and the California Natural Resource Community Conservation Planning Act (NCCPA). 1

- The *Western Placer County Aquatic Resources Program (CARP)* that would protect streams, wetlands, and other water resources and fill the requirements of the Clean Water Act (CWA) and national standards and regulations.
- The *Western Placer County In-Lieu Fee Program (ILF Program)* that fills compliance requirements under Section 404 of the CWA.

The Placer County HCP proposes to over ford species of wildlife, including ninth that rest and/or feed regularly through the area. The five permittees under the PCCP in Placer County, the City of Lincoln, SPRTA, PCWA, and Placer Conservation Authority (PCA). The Sacramento District is in coordination with the USFWS and permittees, and others, to develop and implement "streamline" approach to permitting under CWA 404 that encompasses a number of different permit types and processes. The Corps' CWA 404 permit strategy is intended to provide better services and quality permit decisions for the regulated public, while protecting quality resources to a long-term level consistent with existing regulations, policies and processes.

Before the USFWS issues a final permit under Section 10 of the ESA, the agency is required to comply with the National Environmental Policy Act (NEPA). As a result of the significant effects of the human environment, the PCCP requires the USFWS prepare an Environmental Impact Statement (EIS) under NEPA that will include impacts of all PCCP over activities within the Plan Area, for the duration of the Placer County HCP (50 years, as proposed). The Corps is cooperating with agency on this EIS, which along with associated documents including the draft Placer County HCP and draft CARP, provides the most comprehensive description and assessment of the proposed CWA 404 permit strategy. The Corps intends to submit the EIS in programmatic manner to and review its CWA 404 permit strategy.

The timing of this public notice is in compliance with the comment period of the Draft EIS for the PCCP issued on June 2, 2017, for a 60-day public comment period. The CWA 404 permit strategy is outlined in Appendix C of the PCCP Draft EIS. The Draft EIS can be viewed at <https://www.placer.gov/3362/Placer-County-Conservation-Program>.

**OVERVIEW OF CWA 404 PERMIT STRATEGY:** A multi-tiered approach to CWA 404 permitting will address activities which involve discharge of dredged or fill material into waters of the U.S. over ford by the Placer County HCP. [Attachment 2, CWA 404 Permit Strategy Aligned with the Placer County Conservation Program](#), provides summary of the permit strategy. The strategy consists of the following:

- A programmatic general permit (PGP) founded on the CARP to be implemented via local ordinance, and designed to reduce duplication with the current program, for activities with minimal individual and cumulative effects on the quality environment. A draft PGP is provided as [Attachment 3](#).
- A regional general permit (RGP) for minimal impact activities conducted by PCWA under the Placer County HCP. A draft RGP is provided as [Attachment 4](#).
- A procedural for issuing Letters of Permission (LOPs) for activities with more than minimal, but less than significant, effects on the human environment, including quality resources. A draft procedural for issuing LOPs is provided as [Attachment 5](#).
- An abbreviated process for issuing standard permits (SPs) for other activities consistent with the PCCP that may have significant impact on the human environment, and require preparation of an EIS under NEPA. A preliminary approach for processing abbreviated SPs is described on page 4 of [Attachment 2](#). The Final EIS would include details on process and timeline, as well as the Corps' Record of Decision (ROD) for the EIS.
- An RGP for minimal impact activities conducted under the PCCP In-Lieu Fee Program. A draft RGP is provided as [Attachment 6](#).

Following public input on this public notice and the Draft EIS/EIR for the PCCP, and coordination with the Placer Partners, resources and others, and review of any new information that becomes available, the Corps' Sacramento District CWA 404 permit strategy and final draft permit instruments will be published and included in the Final EIS/EIR for the PCCP.

#### ADDITIONAL INFORMATION:

**Environmental Setting.** Information regarding the environmental setting of the PCCP Plan Area can be found in Chapter 3 of the Draft EIR/EIS.

**Mitigation.** The Corps requires that applicants consider and disclose all reasonable and practical measures to avoid and minimize impacts to quality resources. If the applicant is unable to avoid or minimize all impacts, the Corps may require compliance with mitigation. On March 4, 2019, the Western Placer County ILF Program Enabling Instrument was fully executed between Placer County (Program Sponsor), the Central Valley Regional Water Quality Control Board, U.S. Environmental Protection Agency, and the Corps. The ILF program is intended to provide compliance with mitigation for impacts to waters of the U.S., including wetlands, and Section 404 of the Clean Water Act for over ford activities under the PCCP.

**OTHER GOVERNMENTAL AUTHORIZATIONS:** The issuance of the proposed PGP, RGPs, and LOP procedures would not require other government authorizations; however, individual water quality certification or waiver thereof, as required under Section 40 of the Clean Water Act (CWA) from the Central Valley Regional Water Quality Control Board, is required for activities authorized under the CWA 404 permit strategy. The Corps will request programmatic water quality certification under Section 40 of the CWA from the Central Valley Regional Water Quality Control Board for all activities under the CWA 404 permit strategy (as noted in [Attachment 2](#)).

**HISTORIC PROPERTIES:** The issuance of the proposed PGP, RGPs, and LOP procedures have no potential to affect historic resources; however, authorization of activities under the CWA 404 permit strategy may affect historic resources. The Corps intends to coordinate with the State Historic Preservation Officer (SHPO) for the preparation of Programmatic Agreement for compliance with Section 106 of the NHPA. Until/ unless Programmatic Agreement is executed, the Corps will initiate consultation with the SHPO under Section 106 of the National Historic Preservation Act (NHPA), as appropriate.

**EN ANGE E 1 SPECIES:** The issue of the proposed PGP and LOP project would have no effect on the threat or endangerment of species; however, the authorization of activities under the CWA 404 permit strategy may affect the threat or endangerment of species. The Corps will initiate programmatic consultations with the USFWS under Section 7 of the Endangered Species Act for coverage of activities authorized under the CWA 404 permit strategy.

**ESSENTIAL FISH HABITAT:** The issue of the proposed PGP and LOP project would not adversely affect Essential Fish Habitat (EFH) as defined in the Magnuson-Stevens Fishery Conservation and Management Act; however, the authorization of activities under the CWA 404 permit strategy may adversely affect EFH. The Corps will consult with the NMFS, as appropriate, for activities that may adversely affect EFH.

The above determinations are based on available information and other preliminary review.

**EVALUATION FACTORS:** The decision whether to issue the proposed PGP and RGPs will be based on a evaluation of the probable impacts, including cumulative impacts, on the public interest. The decision will reflect the national concern for both protection and utilization of important resources. The benefits, which are seasonally dependent, derived from the CWA 404 permit strategy, must be balanced against its seasonal benefits for seasonal benefits. All factors which may be relevant to the PGP and RGPs will be considered, including the cumulative effects thereof; among those considerations, geomorphology, geology, hydrology, sedimentation, erosion and deposition, water quality and quantity, riparian habitat, wildlife, flood hazards, floodplain values, lands, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, nitrogen, safety, food and fiber production, minerals, consideration of property ownership, including the lands and water of the public. The proposed PGP and RGPs impact on the public interest will include application of the Section 404(b)(1) guidelines promulgated by the Administrator, Environment Protection Agency (40 CFR Part 230).

The Corps is soliciting comments from the public, Federal, State, and local agencies and officials, Indian tribes, and other interested parties in order to consider and evaluate the impacts of this proposed CWA 404 permit strategy. Any comments received will be considered by the Corps to determine whether to issue the proposed PGP, RGPs, and/or LOP project, and/or to implement the proposed abbreviated process for issuing SPs. To make this decision, comments are used to assess impacts on the natural resources, historical properties, water quality, geology, environment effects, and other public interest factors listed above. Comments will be considered by the Sacramento District Corps in cooperation with the PCCP EIS/EIR, pursuant to the National Environmental Policy Act. Comments are also used to determine the need for public hearing and to determine the need for public interest of the proposed activity.

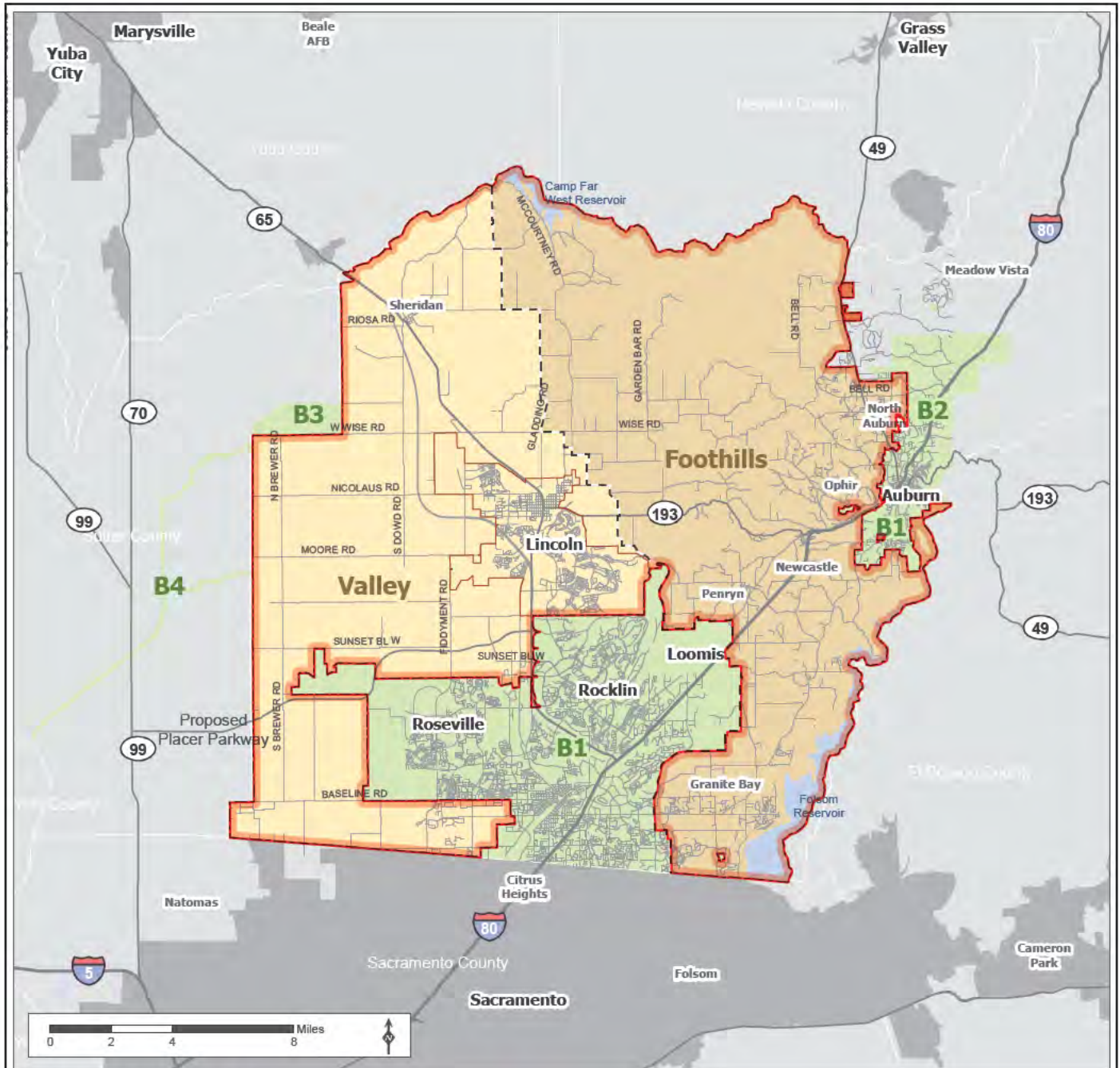
**SUBMITTING COMMENTS:** Written comments, referring to the PCCP- 995-003861 must be submitted to the office listed below on or before August 7, 2009.

Lisa M. Gibson, Regulatory Permit Specialist  
US Army Corps of Engineers, Sacramento District  
325 J Street, Room 350  
Sacramento, CA 958 4-2992  
Email: [Lisa.M.Gibson2@usace.army.mil](mailto:Lisa.M.Gibson2@usace.army.mil)  
Phone: 9 6-557-5288

The Corps is primarily interested in receiving comments related to the project's probable impacts on the affected environment and the secondary cumulative effects. Anyone may request, in writing, that the public hearing be held to consider this application. Requests should specify fully the title, with pertinent information, the person(s) for holding the public hearing. If the Corps determines that the information received in response to this notice is inadequate for thorough evaluation, the public hearing may be warranted. If a public hearing is warranted, interested parties will be notified of the time, date, and location. Please note that all comments received are subject to release to the public through the Freedom of Information Act. If you have questions or need additional information please contact the Corps' Regulatory Permit Specialist, Lisa M. Gibson, at [lisa.m.gibson2@usace.army.mil](mailto:lisa.m.gibson2@usace.army.mil), or 9 6-557-5288.

**Attachments:**

- Attachment 1: [PCCP Plan Area](#)
- Attachment 2: [CWA 404 Permit Strategy Aligned with the PCCP](#)
- Attachment 3: [Draft Programmatic General Impairment, Minimal Impact Covered Activities Under the Placer County Habitat Conservation Plan/Natural Community Conservation Plan](#)
- Attachment 4: [Draft Region I General Impairment, Minimal Impact Activities Conducted by the Placer County Water Agency Under the Placer County Habitat Conservation Plan](#)
- Attachment 5: [Draft Region I General Impairment, Minimal Impact Activities Conducted under the Placer County Conservation Program In-Lieu Fee Program](#)
- Attachment 6: [Draft Letter of Permittal Provisions, Covered Activities Under the Placer County Habitat Conservation Plan/Natural Community Conservation Plan With Less than Significant Impact](#)



Source: Placer County, 2014; MIG | TRA 2015; CalTrans

- |  |   |  |
|--|---|--|
| <ul style="list-style-type: none"> <li>— Interstate</li> <li>— Highway</li> <li>— Road</li> <li>— City of Lincoln</li> <li>- - Valley/Foothill Divide</li> <li>■ Surrounding Urban Area</li> </ul> | <p><b>Plan Area A</b></p> <ul style="list-style-type: none"> <li>Valley 100,698 acres</li> <li>Foothills 109,134 acres</li> <li>All Plan Area A 209,832 acres</li> </ul> <p><b>Plan Area B</b></p> <ul style="list-style-type: none"> <li>B1. Permittee Activity in Non-Participating City Jurisdiction. 50,636 acres</li> <li>B2. PCWA Zone 1 Operations and Maintenance. 6,315 acres</li> <li>B3. Coon Creek Floodplain Conservation. 1,724 acres in Sutter County</li> <li>B4. Fish Passage Channel Improvement. 33 miles of channels in Sutter County</li> <li>B5. Big Gun Conservation Bank. 52 acres in Placer County (Not shown on map)</li> </ul> | <ul style="list-style-type: none"> <li>■ Plan Area A Boundary</li> </ul> |
|--|---|--|

Source: Appendix A

Graphics ... 04-40-6.04 (7-12-2018) 19



**Figure 1-1**  
**Plan Area**  
 Placer County Conservation Program – EIS/EIR



# CWA 404 Permit Strategy Aligned with the Placer County Conservation Program

U.S. ARMY CORPS OF ENGINEERS

BUILDING STRONG.

August 2017

## Background

The Placer County Conservation Program (PCCP) applies to western Placer County and specific conservation activity areas in neighboring Sutter County. The PCCP includes both a proposed Habitat Conservation Plan (HCP) and Natural Community Conservation Plan (NCCP), the proposed Western Placer County Aquatic Resources Program (CARP), and the proposed Placer County In-Lieu Fee (ILF) Program. The HCP/NCCP proposes to cover fourteen species of wildlife, including nine state and/or federally-listed as threatened or endangered. The CARP is proposed by the County to provide a structure for protecting aquatic resources in western Placer County while streamlining the environmental permitting process for impacts to aquatic resources. The HCP/NCCP uses a regional approach to address issues related to planned development and species habitat conservation and restoration. The proposed boundaries of the PCCP are generally Nevada and Yuba Counties on the north, the City of Auburn and California State Highway 49 on the east, Sacramento County on the South, and Sutter County on the west. The PCCP Plan Area also includes specific areas in western Placer County and a small area in adjacent Sutter County where specific covered activities may be conducted by the Plan Participants. The Plan Area excludes the Cities of Auburn, Roseville and Rocklin and the Town of Loomis, with the exception of specific activities within these cities that would be conducted by the Plan Participants. The four PCCP Plan Participants are the County of Placer, City of Lincoln, South Placer Regional Transportation Authority (SPRTA), and Placer County Water Agency (PCWA). The Plan Participants are forming the Placer Conservation Authority (PCA), a joint exercise of powers agency, to implement the HCP/NCCP and the CARP commitments and requirements. Based on the HCP/NCCP, the U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) will issue species incidental take permits to the Plan Participants and the PCA under Section 10 of the Endangered Species Act (ESA 10). Before they can issue incidental take permits, the USFWS and NMFS must internally consult under Section 7 of the ESA (ESA 7) and are required to comply with the National Environmental Policy Act (NEPA) and other related laws.

The U.S. Army Corps of Engineers (Corps) regulates discharges of dredged or fill material into waters of the United States, including wetlands and other special aquatic sites, under Section 404 of the Clean Water Act (CWA 404) through its Regulatory Program. Permits are issued to applicants only after a determination has been made that the proposed activity is the least environmentally damaging practicable alternative under the U.S. Environmental Protection Agency's (USEPA) 404(b)(1) Guidelines. A determination of the least environmentally damaging practicable alternative (LEDPA) under the 404(b)(1) Guidelines involves evaluating avoidance, minimization and compensation for proposed impacts to waters of the U.S. Further, the Corps must comply with ESA 7, NEPA, Section 401 of the Clean Water Act (CWA 401), and Section 106 of the National Historic Preservation Act (NHPA 106) before authorizing an activity under CWA 404. Types of permits the Corps issues include general permits established on a regional, nationwide, or programmatic basis for activities with minimal impacts on the aquatic environment, individually and cumulatively, and individual permits (standard permits and letters of permission) for those activities which do not fall under a general permit and/or have greater than minimal impacts. The Corps' Sacramento District (Sacramento District) administers the Regulatory Program in the Central Valley and Sierra Nevada of California, the States of Nevada and Utah, and the Western Slope of Colorado.

In 2004, recognizing that many of the listed species to be covered by the HCP/NCCP spend some or all of their lifecycles in aquatic environments regulated under the Corps' Regulatory Program, the Sacramento District was invited to work with the Plan Participants and agencies. In 2006, the USEPA, Sacramento District and other agencies advanced a proposed approach to complying with the 404(b)(1) Guidelines at a regional level.<sup>i</sup> In addition, in 2012 and 2014, the Sacramento District identified principle needs for establishing a CWA 404 permitting strategy that could align with and

***In 2006, the USEPA, Sacramento District and other agencies advanced a proposed approach to complying with the 404(b)(1) Guidelines at a regional level.***



complement the HCP/NCCP. A CWA permitting strategy would provide for better assurances and quicker CWA 404 permit decisions for the regulated public, while protecting aquatic resources to an equal or greater level than existing regulations, policies and processes. This expectation continues to be based on a number of tenets upon which the HCP/NCCP is founded including, but not limited to:

- protection of a broad range of species and habitats,
- low impact development strategies (LIDS),
- consistency with general plans,
- avoidance of high quality vernal pool landscapes,
- preservation of watershed functions and stream corridors, and
- development of large, contiguous preserves, with particular focus on the Reserve Acquisition Area.

Presently, the Corps reviews permit applications on an individual basis, making it challenging to evaluate avoidance, minimization and compensation of impacts to aquatic resources on a broad scale. As a result, the Corps' review is generally focused on the merits of the individual activity and the characteristics of the proposed project site, with limited ability to comprehensively evaluate where the risks, trade-offs and interactions among several projects and aquatic resources can be considered. Over time, environmental issues and development demands, especially in

***The Sacramento District views the HCP/NCCP as a chance to improve both species and aquatic resource protection in a coordinated way on a regional scale, taking into account planned development, and providing greater certainty for the regulated***

urbanizing areas, have resulted in adverse effects to the aquatic ecosystem that are not necessarily surprising, but fall short of more ecologically meaningful and sustainable outcomes that a landscape-scale permitting solution may afford. For instance, in some areas, permits issued by the Corps have led to a patchwork of wetland mitigation sites, which may have disjointed or inconsistent preserve boundaries and be functionally compromised by abutting development, causing edge effects, and other adverse impacts. Furthermore, the distance between the permitted impact location and

its mitigation site may be considerable or located in another watershed, especially in cases where the compensatory mitigation was accomplished through the purchase of credits at a mitigation bank or through an in-lieu fee program. The Sacramento District views the HCP/NCCP as a chance to improve both species and aquatic resource protection in a coordinated way on a regional scale, taking into account planned development and providing greater certainty for the regulated public. With this in mind, the Sacramento District has been coordinating with the USFWS, NMFS and Plan Participants to develop and implement a "streamlined" approach to permitting under CWA 404 that encompasses a number of different permit types and processes.

## **Benefits of CWA 404 Alignment**

In addition to providing a regional platform to inform better and faster CWA 404 permit decisions, a USFWS- and NMFS-approved HCP/NCCP provides several other benefits to the Sacramento District and its customers. As an action significantly affecting the quality of the human environment, the HCP/NCCP requires the USFWS, as the lead Federal agency, to prepare an Environmental Impact Statement (EIS) under NEPA that will include impact analyses over a 50-year period of all HCP/NCCP covered activities within the Plan Area. As a cooperating agency, the Sacramento District intends to use the EIS in a programmatic manner to underpin its CWA 404 permit strategy. Because the EIS is expected to examine a range of reasonable alternatives affecting waters of the U.S., it can serve as a basis for the Sacramento District's evaluation of less damaging alternatives and mitigation under USEPA's 404(b)(1) Guidelines. The Sacramento District would adopt the EIS and make its own Record of Decision regarding the CWA 404 permit strategy's compliance with the 404(b)(1) Guidelines at the regional scale. Any necessary subsequent NEPA documentation prepared by the Sacramento District would tier from the HCP/NCCP EIS.

***As a cooperating agency, the Sacramento District intends to use the EIS in a programmatic manner to underpin its CWA 404 permit strategy.***

The Sacramento District would seek to further streamline the CWA 404 regulatory review process by requesting the USFWS and NMFS to consult once programmatically for all HCP/NCCP covered activities that require a CWA

404 permit, eliminating the need for individual project-by-project ESA 7 consultations. Furthermore, the Sacramento District would request programmatic water quality certification under CWA 401 from the Central Valley Regional Water Quality Control Board for all activities under the CWA 404 permit strategy. This would eliminate the need for permit applicants to apply individually for CWA 401 certification. Finally, to comply with NHPA 106, the Sacramento District would seek to develop a programmatic agreement with the State Historic Preservation Officer, following coordination with tribes and others, for the CWA 404 permit strategy. The Sacramento District would work with USFWS to avoid any potential duplication or conflicts in complying with NHPA 106 and Appendix C of the Corps' regulations at 33 CFR Part 325.

The Sacramento District recognizes the CWA 404 permit strategy is a critical element for streamlining regulatory approvals, while achieving greater protection of the highest quality aquatic resources than the existing project-by-project review process. For several years, the Sacramento District has worked closely with the USFWS, NMFS, USEPA, California Department of Fish and Wildlife, and the State and Regional Water Quality Control Boards to ensure processes and policies related to aquatic resource protection are understood and aligned. In June 2010, the agencies completed a permit process relationships mapping exercise which included aligning schedules, and provided

***The Sacramento District recognizes the CWA 404 permit strategy is a critical element for streamlining regulatory approvals, while achieving greater protection of the highest quality aquatic resources than the existing project-by-project review process.***

the output to the Plan Participants and other interested parties. These agencies continue to meet and resolve differences among their authorities and policies in the interest of a successful PCCP. The Sacramento District is committed to having its CWA 404 permit strategy in place, including programmatic compliance with ESA 7, CWA 401 and NHPA 106, when USFWS and NMFS issue permits based on the HCP/NCCP.

the output to the Plan Participants and other interested parties. These agencies continue to meet and resolve differences among their authorities and policies in the interest of a successful PCCP. The Sacramento District is committed to having its CWA 404 permit strategy in place, including programmatic compliance with ESA 7, CWA 401 and NHPA 106, when USFWS and NMFS issue permits based on the HCP/NCCP.

## **CWA 404 Permitting Strategy**

The Sacramento District has developed a multi-tiered approach to CWA 404 permitting that would address activities which involve discharges of dredged or fill material into waters of the U.S. covered by the USFWS- and NMFS-approved PCCP. This CWA 404 Permitting Strategy consists of the use of:

- A programmatic general permit (PGP) founded on a local aquatic resources protection program and implemented by local ordinances, and designed to reduce duplication with that program, for activities with minimal individual and cumulative effects on the aquatic environment;
- A regional general permit (RGP), if needed, for activities with minimal individual and cumulative effects on the aquatic environment that do not fall under the PGP and for certain activities conducted by PCWA, and activities to implement the HCP/NCCP conservation strategy under the ILF program;
- A procedure for issuing Letters of Permission (LOPs) for activities with more than minimal but less than significant effects on the human environment, including aquatic resources; and
- An abbreviated process for issuing standard permits (SPs) for other activities consistent with the PCCP that may have a significant impact on the human environment, and require the preparation of an EIS.

### PGP

Based on the PCCP and local aquatic resource ordinances (Placer County and City of Lincoln) that implement the CARP, the Sacramento District intends to establish a PGP for covered activities that would have minimal impacts on the aquatic environment, individually and cumulatively. The PGP is premised on the ordinances resulting in the same or better level of protection to waters of the U.S. as currently in place under CWA 404. The process for the Corps to establish a PGP follows the standard permit process, which requires a public notice. The PGP will be addressed in the Sacramento District's ROD prepared for the PCCP EIS. The PGP, which will likely include limits and thresholds that exceed those found in the Nationwide Permits, would be effective once the local aquatic

resources ordinances are approved. An activity determined to be compliant with the HCP/NCCP and ordinances, and the CARP would be authorized under the PGP, assuming all terms and conditions of the PGP are met. The PGP would not impose additional requirements or conditions on individual activities for avoiding, minimizing or compensating for the loss of aquatic resources beyond those required under the HCP/NCCP, CARP, and ordinances. A simple notification to the Sacramento District for individual activities may be necessary; however, the Corps would generally rely on the entities responsible for administering the CARP/ordinances to regularly report to the Sacramento District on use of the ordinances and coverage under the PGP. The ultimate goal of the PGP is to rely heavily on the HCP/NCCP, HCP/NCCP EIS, USFWS's and NMFS's programmatic biological opinions, CARP and the local aquatic resources ordinances, thus eliminating to the maximum extent possible the Sacramento District's review of activities with minimal impacts on waters of the U.S. The PGP would result in CWA 404 authorization in under 30 days.

***The PGP would not impose additional requirements or special conditions for avoiding, minimizing or compensating for the loss of aquatic resources.***

### RGP

For PCCP-covered activities that would have minimal impacts to aquatic resources conducted by PCWA and other activities associated with implementation of the HCP/NCCP conservation strategy under the ILF program, the Sacramento District would establish an RGP. Like the PGP, the method for establishing an RGP follows the standard permit process and would be documented in the Sacramento District's ROD. The RGP would have limits and thresholds greater than those found in the Nationwide Permit Program. The RGP would rely on the HCP/NCCP to reduce the Sacramento District's review of activities with minimal impacts on waters of the U.S., and would be designed to not impose additional requirements or special conditions for avoiding, minimizing or compensating for the loss of aquatic resources for individual activities. An activity determined to be compliant with all HCP/NCCP requirements would be authorized under the RGP after the applicant has notified the Sacramento District and the District has verified the activity meets all terms and conditions of the RGP. The RGP is expected to result in CWA 404 authorization in about 30 days.

### LOP Procedure

For covered activities found to be consistent with the PCCP requirements which would have more than minimal impacts to aquatic resources but less than significant impacts on the human environment under NEPA, the Sacramento District would institute an abbreviated procedure for issuing LOPs under CWA 404. The process for establishing the LOP procedure requires the development of a list of categories or activities proposed for authorization through coordination with Federal, state and local agencies, a public notice, and a 401 WQC issued or waived on a general or individual basis. The decision to implement the LOP procedures will be addressed in the Sacramento District's ROD. The LOP procedure would streamline the standard permit process by eliminating the need for a public notice and only require the preparation of a simplified decision document that tiers from the PCCP EIS. Further, the LOP procedure would rely on the HCP/NCCP to address avoidance, minimization and requirements for compensatory mitigation for impacts to aquatic resources. For instance, compensatory mitigation requirements should be the same as those in the HCP/NCCP. The goal is to issue LOPs in 60 days or less, assuming programmatic compliance with other laws is in place.

***The LOP procedure would rely on the HCP/NCCP to address avoidance, minimization and requirements for compensatory mitigation for impacts to aquatic resources.***

establishing the LOP procedure requires the development of a list of categories or activities proposed for authorization through coordination with Federal, state and local agencies, a public notice, and a 401 WQC issued or waived on a general or individual basis. The decision to implement the LOP procedures will be addressed in the Sacramento District's ROD. The LOP procedure would streamline the standard permit process by eliminating the need for a public notice and only require the preparation of a simplified decision document that tiers from the PCCP

### SP Abbreviated Process

A small number of PCCP covered activities requiring CWA 404 will not fall under the PGP, RGP, or LOP procedure and will require a SP. In many cases, these activities are those that may potentially have a significant impact on the human environment and require the preparation of an EIS under NEPA. Even for activities that require a SP, the process and amount of time it takes to reach a permit decision can be compressed significantly by relying on the avoidance, minimization and compensation and other measures required under the HCP/NCCP. For instance, the degree of analysis in the project EIS would be lessened by tiering from the PCCP EIS, and off-site alternatives analyses under Section 404(b)(1)

***Off-site alternatives analyses under the Section 404(b)(1) Guidelines would not be required because avoidance has already been addressed at the regional level and compensatory mitigation requirements would align with those of***

Guidelines would not be required because avoidance has already been addressed at the regional level and compensatory mitigation requirements would align with those of the HCP/NCCP. In addition, the on-site alternatives analysis under Section 404(b)(1) would focus on evaluating alternative means of applying on-site avoidance and minimization measures required under the HCP/NCCP. Time may further be shortened through the preparation of joint EIS/EIRs for projects. In addition, the Corps would pursue programmatic compliance with ESA, NHPA 106 and CWA 401 to provide for greater assurances and further streamline the process. With reliance on the PCCP EIS and programmatic compliance with related laws, the Corps expects to complete SP decisions for activities under the PCCP within six months.

To complete its CWA 404 Permit Strategy aligned with the HCP/NCCP, the Sacramento District must rely on several sources of information, including a baseline estimate of the location and amount of waters of the U.S. in the PCCP Plan area, the functional or conditional quality of those resources, use of a watershed approach to assess the existing and proposed future condition of the major watersheds within the PCCP Plan Area, a CWA 404 cumulative impact assessment, draft ordinances describing local aquatic resource protection plans, ESA recovery plans for aquatic species, and analysis in the PCCP EIS. For the permit types described above, the Sacramento District would need to complete a CWA 404 jurisdictional determination (JD) for most proposed activity sites, based on an aquatic resources delineation provided by the project proponent, before the applicant submits an application for a CWA 404 permit.

Activities involving a discharge of fill material into waters of the U.S. that are not covered under the PCCP would be subject to the normal Corps' regulatory permit processes.

## The Way Forward

As an EIS cooperating agency with significant interest in the success of the PCCP, the Sacramento District will continue to work with the USFWS and NMFS to ensure the PCCP Draft EIS addresses and incorporates the proposed CWA 404 Permit Strategy, including the terms, conditions, limits/thresholds and processes for each permit type described above. Following public input on the Draft EIS, coordination with the Plan Participants, resource agencies and others, and the review of any new information that becomes available, the Sacramento District's approach to streamlined CWA 404 permitting will be updated and included in the Final EIS for the PCCP. With adoption of the EIS, the Sacramento District would then complete a ROD and implement its CWA 404 Permit Strategy. At the implementation phase, the Sacramento District plans to execute an MOU with Placer County and the City of Lincoln to address coordination and permit timelines.

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<sup>i</sup> See *A Proposed Methodology for a "Regional LEDPA" Determination: Permitting under CWA Section 404 in Western Placer County* (6 April 2006) Tim Vendlinski – USEPA Wetland Regulatory Office. This proposed methodology was premised on and incorporated other references including a description of EPA's Federal Guidelines (40 CFR 230), and the Corps' implementing regulations (33 CFR 323) released by Sylvia Quast at Resources Law Group entitled: *Clean Water Act Section 404 Permit Process For Projects in Western Placer County That Cannot Be Authorized Under The County's Aquatic Resource Plan*; plus the classic treatment of "impact avoidance" published in the journal *Wetlands: Wetlands Protection Through Impact Avoidance: A Discussion of the 404(b)(1) Alternatives Analysis* (Yocom, Leidy, and Morris, 1989).



# Placer County HCP/NCCP Programmatic General Permit

U.S. ARMY CORPS OF ENGINEERS

BUILDING STRONG®

## MINIMAL IMPACT COVERED ACTIVITIES UNDER THE PLACER COUNTY HABITAT CONSERVATION PLAN/NATURAL COMMUNITY CONSERVATION PLAN

**EFFECTIVE:**

**EXPIRES:** (5 years from effective date)

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The U.S. Army Corps of Engineers, Sacramento District (Corps), hereby issues a programmatic general permit (PGP) for certain covered activities identified in the Placer County Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP), under the Placer County Conservation Program (PCCP), that result in the discharge of dredged and/or fill material into waters of the United States (U.S.) resulting in no more than minimal individual and cumulative impacts.

An activity is verified under the PGP when Placer County or the City of Lincoln approve a local **(NAME OF AUTHORIZATION FROM CARP)**, in compliance with the **DATE**, County Aquatic Resources Program (CARP), implementing ordinances, and all applicable terms and conditions of the HCP/NCCP.

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

**ACTION ID:** SPK-2005-00485

**AUTHORITY:** Section 404 of the Clean Water Act (CWA 404)

**LOCATION:** The PCCP Plan Area encompasses approximately 270,000 acres within western Placer County and eastern Sutter County. Within western Placer County, the Plan Area is bounded on the north by Nevada and Yuba County, on the east by the City of Auburn and California Highway 49, on the south by Sacramento County, and on the west by Sutter County. With the exception of activities conducted by the Placer County Water Agency (PCWA), the Plan Area in western Placer County excludes the Cities of Auburn, Rocklin, and Roseville and Town of Loomis. Within Sutter County, the Plan Area includes 1,724 acres along the Coon Creek floodplain, and 33 miles of Auburn Ravine, Coon Creek, Cross Canal, and East Side Canal. The Plan Area Boundaries can be seen on the enclosed **2016, Figure 1-1, Plan Area, Placer County Conservation Program – EIS/EIR**, prepared by ICF.

**PURPOSE:** This PGP is intended to minimize duplication between the implementation of the CARP under Placer County and City of Lincoln implementing ordinances, and the Corps Regulatory Program, for authorization of HCP/NCCP Covered Activities subject to CWA 404 that are substantially similar in nature, and would result in minimal individual and cumulative impacts on the aquatic environment. The PGP is premised on the CARP as implemented under local ordinances, resulting in the same or better level of protection of waters of the U.S. as currently exists under CWA 404. Subject to certain exclusions and conditions, the PGP eliminates the need for project applicants to seek separate review from the Corps for many activities that result in minimal impacts to waters of the U.S., when such activities are authorized by Placer County or the City of Lincoln in compliance with the CARP and implementing ordinances. In addition to reducing duplication with the CARP, the PGP is designed to

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U.S. Army Corps of Engineers, Sacramento District  
1325 J Street, Room 1350, Sacramento, CA 95814-2922  
[www.spk.usace.army.mil/Missions/Regulatory.aspx](http://www.spk.usace.army.mil/Missions/Regulatory.aspx)

expedite review of certain covered activities through other programmatic elements, such as compliance with Section 7 of the federal Endangered Species Act (ESA) and Section 106 of the National Historic Preservation Act (NHPA). The PGP will increase certainty, reduce time, and improve efficiency for project applicants through synergies with processes implemented by local jurisdictions, such as those associated with land use entitlements, while protecting aquatic resources.

**BACKGROUND:** The PCCP is a regional approach to address issues related to planned development and species habitat conservation, consisting of the HCP/NCCP, CARP, and an In-Lieu Fee (ILF) program. The HCP/NCCP provides coverage for fourteen species of plants and wildlife, including seven that are federally-listed as threatened or endangered. The Plan Permittees consist of Placer County, the City of Lincoln, South Placer Regional Transportation Authority (SPRTA), and PCWA. The U.S. Fish and Wildlife Service's Sacramento Field Office (USFWS) and National Marine Fisheries Service (NMFS) [have approved] the HCP/NCCP through a species incidental take permit (ITP) issued to the PCCP's Plan Permittees under Section 10 of the ESA. The CARP provides a program, implemented by Placer County and the City of Lincoln through local implementing ordinances, to evaluate activities that would impact aquatic resources considered to be waters of the U.S. or waters of the State. The ILF program provides compensatory mitigation for impacts associated with the Covered Activities, through funds paid to Placer County or the City of Lincoln.

**ACTIVITIES COVERED:** This PGP applies only to HCP/NCCP Covered Activities that would result in minimal individual and cumulative impacts on the aquatic environment, and have been authorized under the CARP. HCP/NCCP Covered Activities are described briefly below and in greater detail in Chapter 2.6 of the HCP/NCCP.

**1. Valley Potential Future Growth (PFG) Area:** Discharges of dredged and/or fill material into waters of the U.S. associated with rural and urban land uses within the Valley PFG area in Plan Area A1, as shown on the 2016, *Figure 2-1 Plan Area Components, Placer County Conservation Program – EIS/EIR*. Specific activities included in this PGP within the Valley PFG include those Covered Activities identified in Chapter 2.6, Section 2.6.1 of the HCP/NCCP.

**2. Valley Conservation and Rural Development Area:** Discharges of dredged and/or fill material into waters of the U.S. associated with rural and urban land uses within the Valley Conservation and Rural Development Area in Plan Area A2, as shown on the 2016, *Figure 2-1 Plan Area Components, Placer County Conservation Program – EIS/EIR*. Specific activities included in this PGP within the Valley Conservation and Rural Development Area include those Covered Activities identified in Chapter 2.6, Section 2.6.2 of the HCP/NCCP.

**3. Foothills PFG Area:** Discharges of dredged and/or fill material into waters of the U.S. associated with rural and urban land uses within the Foothills PFG area in Plan Area A3, as shown on the 2016, *Figure 2-1 Plan Area Components, Placer County Conservation Program – EIS/EIR*. Specific activities included in this PGP within the Foothills PFG include those Covered Activities identified in Chapter 2.6, Section 2.6.3 of the HCP/NCCP.

**4. Foothills Conservation and Rural Development:** Discharges of dredged and/or fill material into waters of the U.S. associated with rural and urban land uses within the Foothills Conservation and Rural Development area in Plan Area A4, as shown on the 2016, *Figure 2-1 Plan Area Components, Placer County Conservation Program – EIS/EIR*. Specific activities included in this PGP within the

Foothills PFG include those Covered Activities identified in Chapter 2.6, Section 2.6.4 of the HCP/NCCP.

**5. Regional Public Programs:** Discharges of dredged and/or fill material into waters of the U.S. associated with rural and urban land uses within Plan Area A or B, as shown on the 2016, *Figure 2-1 Plan Area Components, Placer County Conservation Program – EIS/EIR*. Specific activities included in this PGP for Regional Public Programs include those Covered Activities identified in Chapter 2, Section 2.6.5 of the HCP/NCCP.

**6. In-Stream Activities:** Activities resulting in the discharge of dredged and/or fill material into waters of the U.S. for activities within streams, reservoirs, or on-stream ponds in Plan Area A or B, as shown on the 2016, *Figure 2-1 Plan Area Components, Placer County Conservation Program – EIS/EIR*, and as described in Chapter 2, Section 2.6.6 of the HCP/NCCP, including, but not limited to, maintenance activities in the stream channel, along the streambank, and on adjacent waters of the U.S. within the riparian corridor. These activities may include those described in 1 through 5 above.

**7. Conservation Programs:** Activities resulting in the discharge of dredged and/or fill material into waters of the U.S. associated with implementing the conservation strategy identified in Chapter 5 of the HCP/NCCP in Plan Area A or B, as shown on the 2016, *Figure 2-1 Plan Area Components, Placer County Conservation Program – EIS/EIR*, including, but not limited to, habitat enhancement, restoration, creation, translocation, and reserve management, and other activities, as described in Chapter 2, Section 2.6.7 of the HCP/NCCP.

#### **EXCLUSIONS:**

1. This PGP may not be used to authorize discharges of dredged and/or fill material into waters of the U.S. for activities that do not require authorization from Placer County or the City of Lincoln under the CARP or implementing ordinances.

2. This PGP may not be used to authorize activities not covered by the HCP/NCCP unless such activities receive coverage pursuant to Section 8.9.6 of the HCP/NCCP.

3. After-the-fact authorizations: This PGP may not be used to authorize activities that resulted in the discharge of dredged or fill material into waters of the U.S. without Department of the Army (DA) authorization.

#### **TERMS OF AUTHORIZATION:**

1. Activity Completion: Activities authorized by the Corps under this PGP are valid until the expiration date of the PGP or the expiration date of the CARP authorization issued by Placer County or the City of Lincoln. Activities authorized under this PGP 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 expiration of the PGP.

2. Applying for PGP Authorization: Prior to commencing a proposed activity, project applicants seeking authorization under this PGP shall notify Placer County or the City of Lincoln as required in the CARP and implementing ordinances, in accordance with PGP General Condition number 5 (*Notification*).

3. Compliance with Placer County HCP/NCCP Conditions: Activities to be authorized under this PGP must be Covered Activities as identified above and Chapter 2.6 of the HCP/NCCP, and must comply with any applicable terms and conditions contained in the HCP/NCCP, CARP, and implementing ordinances. Project applicants must receive written concurrence from Placer County or the City of Lincoln that the proposed project is eligible for coverage under the HCP/NCCP. Compliance with the HCP/NCCP requires project applicants to implement the applicable and appropriate avoidance and minimization measures contained in Chapter 6 of the HCP/NCCP, and other applicable terms and conditions as contained in the HCP/NCCP.

4. Discretionary Authority: The Corps has the discretion to suspend, modify, or revoke authorizations under this PGP. This discretionary authority may be used by the Corps to further condition or restrict the applicability of the PGP for cases in which it has concerns associated with the Clean Water Act Section 404(b)(1) Guidelines, or regarding any factor of the public interest. Should the Corps determine that a proposed activity may have more than minimal individual or cumulative adverse impacts to waters of the U.S. or otherwise be contrary to the public interest, the Corps will modify the authorization to reduce or eliminate those adverse effects, or notify the project applicant that the proposed activity is not authorized by the PGP and provide instructions on how to apply for authorization under another type of DA permit. Activities not meeting the terms and conditions of this permit may be authorized through another type of permit from the Corps, such as a Nationwide Permit, Regional General Permit, Letter of Permission, or Standard Permit. The Corps will determine on a case-by-case basis, as needed, 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 restore authorization under the PGP at any time it determines 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 PGP at any time.

5. Avoidance and Minimization: Impacts to waters of the U.S. shall be avoided and minimized to the maximum extent practicable. For purposes of the PGP, notwithstanding the Corps' discretionary authority described above, this term shall be considered satisfied when project applicants have designed and implemented activities to comply with all applicable avoidance and minimization measures contained in both Chapters 5 and 6 of the HCP/NCCP, the CARP, and local implementing ordinances.

6. Impact Thresholds for Losses of Waters of the U.S.: Loss of waters of the U.S. shall be determined using the definition in Section F of the January 6, 2017, Federal Register Notice for *Issuance and Reissuance of Nationwide Permits; Final Rule* (82 FR 1860), which can be found at: [http://www.usace.army.mil/Portals/2/docs/civilworks/nwp/2017/nwp2017\\_final\\_rule\\_FR\\_06jan2017.pdf?ver=2017-01-06-092409-457](http://www.usace.army.mil/Portals/2/docs/civilworks/nwp/2017/nwp2017_final_rule_FR_06jan2017.pdf?ver=2017-01-06-092409-457).

a. Except for as specified in 6(a)(1) through (3), 6(b), and 6(c) below, the loss of waters of the U.S. (including wetlands) resulting from authorization of a single and complete project under this PGP shall not exceed a total of 3.0 acres, and the loss of streambed shall not exceed 500 linear feet of perennial, intermittent, or ephemeral streams, and/or a total of 1,000 linear feet of irrigation or drainage ditch (provided the irrigation or drainage ditch is not a relocated or channelized stream), as verified by the Corps. The acreage of loss of streambed for streams and/or ditches shall be included in the acreage threshold for loss of waters of the U.S.



(1) The loss of vernal pool waters of the U.S., as verified in writing by the Corps, resulting from authorization of a single and complete project under this PGP shall not exceed 1.0 acre.

(2) The loss of irrigated wetlands in existing and active rice fields that are considered to be waters of the U.S., as verified in writing by the Corps, resulting from authorization of a single and complete project under this PGP shall not exceed 3.0 acres.

(3) The loss of all other waters of the U.S. not identified in 6(a)(1) and/or 6(a)(2), as verified in writing by the Corps, resulting from authorization of a single and complete project under this PGP shall not exceed 2.0 acres.

b. No loss of vernal pool waters of the U.S., as verified in writing by the Corps, as a result of a single and complete project, is authorized under this PGP within the Lower American River 8-digit hydrologic unit code (HUC) watershed (HUC 18020111), as identified by the U.S. Geological Survey.

c. The cumulative loss of waters of the U.S. authorized by this PGP shall not exceed 90 acres of waters of the U.S., including wetlands, within the Plan Area. The cumulative loss of vernal pool waters of the U.S. authorized by this PGP shall not exceed 15 acres. Additional restrictions are listed in the General Conditions, below.

7. Single and Complete: The activity must be a single and complete linear or non-linear project, as defined in Section F of the January 6, 2017, Federal Register Notice for *Issuance and Reissuance of Nationwide Permits; Final Rule* (82 FR 1860), which can be found at [http://www.usace.army.mil/Portals/2/docs/civilworks/nwp/2017/nwp2017final\\_rule\\_FR\\_06jan2017.pdf?ver=2017-01-06-092409-457](http://www.usace.army.mil/Portals/2/docs/civilworks/nwp/2017/nwp2017final_rule_FR_06jan2017.pdf?ver=2017-01-06-092409-457)

8. Section 401 Water Quality Certification: In order for authorization to be valid under this PGP, an approved Section 401 Water Quality Certification (WQC) or waiver thereof is required to be obtained and evidence thereof in possession by Placer County or the City of Lincoln, prior to the commencement of activities authorized by this PGP (see General Condition 10 [*Water Quality Certification*]).

9. Reporting Requirements: Placer County and the City of Lincoln shall submit reports to the Corps documenting usage of the PGP. Reporting will include the activity name, type of HCP/NCCP covered activity, acreage and/or linear feet of permanent and temporary discharges of dredged and/or fill material into waters of the U.S. by aquatic resource type, acreage and/or linear feet of loss of waters of the U.S. by aquatic resource type, and evidence of the permittees fulfillment of CWA 404 compensatory mitigation requirements. Reporting shall be provided on a quarterly basis for Year 1, biannually for Year 2, and annually for Years 3-to-5 of this PGP. For this PGP to be applicable, a memorandum of understanding between the Corps, Placer County, and City of Lincoln will need to be executed to record processing, tracking, and reporting of HCP/NCCP Covered Activities.

#### **GENERAL CONDITIONS:**

1. Notification: The prospective project applicant shall submit an application to Placer County or the City of Lincoln in accordance with the procedures specified in the CARP and implementing ordinances. No notification is required to be made to the Corps, except as provided by General Condition 4.

2. Compensatory Mitigation: Compensatory mitigation for impacts to waters of the U.S. shall be accomplished at the ratios specified in the *Compensatory Mitigation Standards* specified in the CARP and implementing ordinances (which mirror requirements contained in the HCP/NCCP), and shall be accomplished by payment into a Corps-approved HCP/NCCP ILF program.
3. Compliance Inspections: The project applicant must allow representatives from the Corps to inspect the authorized activity at any time deemed necessary to ensure that the activity is being, or has been, accomplished in accordance with the terms and conditions of the permit. The Corps will notify the project applicant at least 48 hours advance of an inspection.
4. Threatened and Endangered Species: No activity is authorized under this PGP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal ESA. Activities authorized under this PGP must comply with the mandatory terms and conditions of the USFWS and NMFS [to be sought by initiation for programmatic Section 7 ESA consultation] [programmatic Biological Opinion (BO) for this PGP] (USFWS # \_\_\_\_, dated \_\_\_\_ ) (copy [to be] attached). The BO contains mandatory terms and conditions to implement the reasonable and prudent measures that are associated with "incidental take" authorization under this PGP. Authorization under this PGP 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 PGP. The USFWS and NMFS are the appropriate authorities to determine compliance with the terms and conditions of their Biological Opinion, and with the ESA. The project applicant must comply with all applicable conditions of these Biological Opinions, including those ascribed to the Corps.
5. Historic Properties: No activity is authorized under the PGP 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. If NHPA compliance is not addressed programmatically, (e.g., by a Programmatic Agreement (PA)), project 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 notification shall consist of the application identified in General Condition 5, and two hard copies and one electronic copy of a cultural resources report meeting the Corps *Guidelines for Compliance with Section 106 of the National Historic Preservation Act of 1966* ([http://www.spk.usace.army.mil/Portals/12/documents/regulatory/sec-106-tribal/FINAL\\_2014-03-24\\_Section-106-Guidelines.pdf](http://www.spk.usace.army.mil/Portals/12/documents/regulatory/sec-106-tribal/FINAL_2014-03-24_Section-106-Guidelines.pdf)). 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.
6. Permit Transfer: If the property associated with this permit is sold, the permittee shall transfer the verification to the new owner by submitting a letter to Placer County or the City of Lincoln, with a copy provided to the Corps, to validate the transfer. A copy of the CARP authorization must be attached to the letter, and the letter must contain the name and address of the transferee, as well as the following statement and signature of the transferee:

When the structures or work authorized by this programmatic general permit (PGP) are still in existence at the time the property is transferred, the terms and conditions of this PGP, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this PGP

and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

\_\_\_\_\_  
(Transferee)

\_\_\_\_\_  
(Date)

7. Wetland and Stream Avoidance and Minimization: Project applicants shall establish wetland and Stream System avoidance and minimization measures as described in the HCP/NCCP, CARP and implementing ordinances. Associated terms of the local CARP and implementing ordinances concerning avoidance and minimization measures, including (but not limited to) land use, allowable uses within the Stream System, exemptions, and waivers shall apply as described in the CARP and implementing ordinances. These terms shall meet or exceed all applicable standards and terms contained within Chapter 6 of the HCP/NCCP.

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

9. Discovery of Previously Unknown Remains and Artifacts (or - Unanticipated Cultural Resources Discoveries): If the permittee discovers any previously unknown historic, cultural or archeological remains and/or artifacts while accomplishing the activity authorized by this PGP, the permittee shall immediately notify the Corps of what has been found, and to the maximum extent practicable, shall avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. Notification to the Corps shall include a copy of the CARP authorization issued by Placer County or the City of Lincoln. 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.

10. Water Quality Certification: Water Quality Certification (WQC), or waiver thereof, under Section 401 of the Clean Water Act is required for activities to be authorized by this PGP. The project applicant shall comply with the terms and conditions of any individual or programmatic WQC provided by the State Water Resources Control Board and/or Central Valley Regional Water Quality Control Board.

**FURTHER INFORMATION:**

1. Congressional Authorities: Section 404 of the Clean Water Act (33 U.S.C. 1344)
2. Limits of this authorization:
  - a. The Corps has authority to determine if an activity complies with the terms and conditions of the PGP.
  - b. This permit does not obviate the need to obtain other federal, state, or local authorizations required by law.
  - c. This permit does not grant any property rights or exclusive privileges.
  - d. This permit does not authorize any injury to the property or rights of others.

e. This permit does not authorize interference with any existing or proposed federal projects.

3. Limits of Federal Liability: In issuing this permit, 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.

4. Reliance on Applicant's Data: The determination of the Corps that issuance of this PGP is not contrary to the public interest was made in reliance on the information provided by the HCP/NCCP Plan Permittees.

5. Reevaluation of Permit Decision: The Corps may reevaluate its decision on this PGP at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

a. The project applicant fails to comply with the terms and conditions of this permit.

b. The information provided by the project applicant in support of a permit application proves to have been false, incomplete, or inaccurate (see 4 above).

c. Significant new information surfaces which the Corps did not consider in reaching the original public interest decision.

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 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5.

**PERMIT DURATION:** This PGP is valid for five (5) years from the date of issuance. It will expire on [Day, Month, 20XX]. At least sixty (60) calendar days prior to expiration, the Corps will issue a public notice, with an opportunity for public comment, describing the reasons for reissuing the PGP for another five years with or without modification, or not reissuing the PGP. If the Corps has not reissued the PGP by the expiration date, the PGP will no longer be valid. This PGP 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 proposed action. Authorizations under this PGP are valid until the permit expires. An activity authorized by this PGP that has commenced, or is under contract to commence, will have 12 months from the date of the PGP expiration to be completed.

**CONTACTS AND ADDITIONAL INFORMATION:** For additional information about this PGP, please contact the U.S. Army Corps of Engineers, Sacramento District.

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  
Sacramento District

\_\_\_\_\_  
Date

DRAFT



# Regional General Permit [#]

U.S. ARMY CORPS OF ENGINEERS

BUILDING STRONG®

## Minimal Impact Activities Conducted by Placer County Water Agency under the Placer County Habitat Conservation Plan

**EFFECTIVE:**

**EXPIRES: (5 years from effective)**

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The U.S. Army Corps of Engineers, Sacramento District (District), hereby issues Regional General Permit (RGP) [#] for the discharge of dredged and/or fill material into waters of the U.S. associated with minimal impact activities conducted by the Placer County Water Agency (PCWA) in accordance with the under the Placer County Habitat Conservation Plan (HCP), and Placer County Aquatic Resources Program (CARP) provided the activities meet all terms and conditions of the RGP.

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

**ACTION ID:** SPK-2005-00485

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

**LOCATION:** Activities authorized under this RGP would occur within the Placer County Conservation Program (PCCP) Plan Area boundaries. The PCCP Plan Area encompasses approximately 270,000 acres within western Placer County and eastern Sutter County. Within western Placer County, the Plan Area is bounded on the north by Nevada and Yuba County, on the east by the City of Auburn and California Highway 49, on the south by Sacramento County, and on the west by Sutter County. Activities conducted by the Placer County Water Agency (PCWA), also may include activities in the Cities of Auburn, Loomis, Rocklin, and Roseville. Within Sutter County, the Plan Area includes 1,724 acres along the Coon Creek floodplain, and 33 miles of Auburn Ravine, Coon Creek, Cross Canal, and East Side Canal. The Plan Area Boundaries can be seen on the enclosed 2016, *Figure 1-1, Plan Area, Placer County Conservation Program – EIS/EIR*, prepared by ICF.

**ACTIVITIES COVERED:** This RGP authorizes the discharge of dredged and/or fill material into waters of the U.S. associated with construction, maintenance, expansion, or operational activities conducted by PCWA, provided the activities comply with the HCP and CARP. This RGP authorizes only those activities that require a permit under Section 404 of the Clean Water Act (i.e. would result in a discharged of dredged and/or fill material into waters of the U.S. and/or the activity would not be exempt under Section 404(f) of the Clean Water Act). Activities authorized include:

1. Utility lines: Permanent or temporary discharges of dredged and/or fill material into waters of the U.S. for the construction, expansion, maintenance, or operation of utility lines.
2. Water Treatment Plants: Permanent or temporary discharges of dredged and/or fill material into waters of the U.S. for the construction, expansion, maintenance, or operation of water treatment plants.
3. Energy Supply: Permanent or temporary discharges of dredged and/or fill material into waters of the U.S. for the construction, expansion, maintenance, or operation of power plants or generators.
4. Metering Stations: Permanent or temporary discharges of dredged and/or fill material into waters of the U.S. for the construction, expansion, maintenance, or operation of metering stations.
5. Water Storage Tanks: Permanent or temporary discharges of dredged and/or fill material into waters of the U.S. for the construction, expansion, maintenance, or operation of water storage tanks.
6. Intake and Water Diversion Structures: Permanent or temporary discharges of dredged and/or fill material into waters of the U.S. for the construction, expansion, maintenance, or operation of intake structures and water diversion structures.
7. Outfall Structures: Permanent or temporary discharges of dredged and/or fill material into waters of the U.S. for the construction, expansion, maintenance, or operation of outfall structures.
8. Water Systems Facilities Center: Permanent or temporary discharges of dredged and/or fill material into waters of the U.S. for the construction, expansion, maintenance, or operation of water systems facilities centers. Structures associated with a facilities center include, but are not limited to warehouses, fabrication shops, crew buildings, administration buildings, vehicle/equipment wash areas, fuel stations, and associated infrastructure, including utilities, parking areas, and access roads/driveways.
9. Corporation Yards: Permanent or temporary discharges of dredged and/or fill material into waters of the U.S. for the construction, expansion, maintenance, or operation of corporation yards. Structures associated with a corporation yard include, but are not limited to, warehouses, lay-down areas for storage, and associated infrastructure, including utilities, parking areas, and access roads/driveways.
10. Pump Stations: Permanent or temporary discharges of dredged and/or fill material into waters of the U.S. for the construction, expansion, maintenance, or operation of pump stations.

11. Wells: Permanent or temporary discharges of dredged and/or fill material into waters of the U.S. for the construction, expansion, maintenance, or operation of water supply wells.
12. Bank Stabilization: Permanent or temporary discharges of dredged and/or fill material into waters of the U.S. for the construction or maintenance of bank stabilization within the immediate vicinity of any in-stream structures or fills associated with producing or providing water to residents and businesses of Placer County.
13. Sediment and Debris Removal: Permanent or temporary discharges of dredged and/or fill material into waters of the U.S. for the removal of sediment from streams, reservoirs, canals, ditches, or other waters of the U.S. within 200 feet from water supply structures or fills managed by PCWA.
14. Access and Staging: Permanent or temporary discharges of dredged and/or fill material into waters of the U.S. for the construction, expansion, maintenance, or operation of access and staging areas.
15. Canals and Ditches: Permanent or temporary discharges of dredged and/or fill material into waters of the U.S. for the construction, lining, expansion, maintenance, or operation of water supply canals or ditches.
16. Berm Maintenance: Permanent or temporary discharges of dredged and/or fill material into waters of the U.S. for the construction, expansion, maintenance, or operation of reservoir and canal berms.
17. Linear Transportation Projects: Permanent or temporary discharges of dredged and/or fill material into waters of the U.S. for the construction, expansion, maintenance, or operation of linear transportation projects associated with water supply projects.
18. Minor Discharges: Permanent or temporary discharges of dredged and/or fill material into waters of the U.S. for the construction, expansion, maintenance, or operation of other structures, fills, or facilities not specifically listed above, associated with producing or providing water to residents and businesses of Placer County, as identified in the HCP/NCCP.

#### **EXCLUSIONS:**

1. This RGP may not be used to authorize discharges of dredged and/or fill material into waters of the U.S. for activities that are not conducted by PCWA.
2. This RGP may not be used to authorize activities not covered by the HCP/NCCP as identified in Chapter 2 of the HCP/NCCP.



3. After-the-fact authorizations: This RGP may not be used to authorize activities that resulted in the discharge of dredged or fill material into waters of the U.S. without Department of the Army (DA) authorization.

### **TERMS:**

1. Activity Completion: Activities authorized by the Corps under this RGP are valid until the expiration date of the RGP or the expiration date of the CARP authorization issued by Placer County or the City of Lincoln. Activities authorized under this 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 expiration of the RGP.

2. Applying for RGP Authorization: Prior to commencing a proposed activity, PCWA shall submit a complete pre-construction notification containing the information identified in *Procedures*.

3. Compliance with Placer County HCP Conditions: Activities to be authorized under this RGP must be Covered Activities as identified in Chapter 2 of the HCP, and must comply with any applicable terms and conditions contained in the HCP and this RGP. Project applicants must provide information to support a determination that the proposed project is eligible for coverage under the HCP to the Corps with the notification required in General Condition 14. Compliance with the HCP requires PCWA to implement the applicable and appropriate avoidance and minimization measures contained in Chapter 6 of the HCP, and other applicable terms and conditions as contained in the HCP.

4. 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 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 factor of the public interest. 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 project applicant that the proposed activity is not authorized by the RGP and provide instructions on how to apply for authorization under another type of DA permit. Activities not meeting the terms and conditions of this permit may be authorized through another type of permit from the Corps, such as a NWP, LOP or Standard Permit. The Corps will determine on a case-by-case basis, as needed, 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 restore authorization under the RGP at any time it determines 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.

5. Avoidance and Minimization: Impacts to waters of the U.S. shall be avoided and minimized to the maximum extent practicable. For purposes of the RGP, notwithstanding the Corps' discretionary authority described above, this term shall be considered satisfied when project applicants have designed and implemented activities to comply with all applicable avoidance and minimization measures contained in Chapter 6 of the HCP.

6. Impact Thresholds for Losses of Waters of the U.S.: Loss of waters of the U.S. shall be determined using the definition in Section F of the January 6, 2017, Federal Register Notice for *Issuance and Reissuance of Nationwide Permits; Final Rule* (82 FR 1860), which can be found at:

[http://www.usace.army.mil/Portals/2/docs/civilworks/nwp/2017/nwp2017\\_final\\_rule\\_FR\\_06jan2017.pdf?ver=2017-01-06-092409-457](http://www.usace.army.mil/Portals/2/docs/civilworks/nwp/2017/nwp2017_final_rule_FR_06jan2017.pdf?ver=2017-01-06-092409-457)

a. The loss of waters of the U.S. (including wetlands) resulting from authorization of a single and complete project under this RGP shall not exceed a total of 0.25 acres, and the loss of streambed shall not exceed 300 linear feet of perennial, intermittent, or ephemeral streams, and/or a total of 1,000 linear feet of irrigation, water supply, or drainage ditch or canal (provided the ditch or canal is not a relocated or channelized stream, as verified by the Corps), unless the district waives the linear foot requirement by making a written determination concluding the discharge will result in no more than minimal individual or cumulative effects. The acreage of loss of streambed for streams, ditches, and/or canals shall be included in the acreage threshold for loss of waters of the U.S.

b. Bank stabilization activities are limited to no more than 500 feet in length along the bank of perennial, intermittent, or ephemeral streams and no more than 1,000 feet in length along the bank of irrigation, water supply, or drainage ditches or canals (provided the ditch or canal is not a relocated or channelized stream, as verified by the Corps), unless the District waives this requirement by making a written determination concluding the discharge will result in no more than minimal individual or cumulative effects.

c. The cumulative loss of waters of the U.S. authorized under this RGP shall not exceed 3 acres of waters of the U.S., including wetlands, within the Plan Area. The cumulative loss of vernal pool waters of the U.S. authorized by this RGP shall not exceed 1 acre. Additional restrictions are listed in the General Conditions, below.

7. Single and Complete: The activity must be a single and complete linear or non-linear project, as defined in the Section F of the January 6, 2017, Federal Register Notice for *Issuance and Reissuance of Nationwide Permits; Final Rule* (82 FR 1860), which can be found at:

[http://www.usace.army.mil/Portals/2/docs/civilworks/nwp/2017/nwp2017\\_final\\_rule\\_FR\\_06jan2017.pdf?ver=2017-01-06-092409-457](http://www.usace.army.mil/Portals/2/docs/civilworks/nwp/2017/nwp2017_final_rule_FR_06jan2017.pdf?ver=2017-01-06-092409-457)

8. Section 401 Water Quality Certification: In order for authorization to be valid under this RGP, an approved Section 401 Water Quality Certification (WQC) or waiver thereof is

required to be obtained and provided to the Corps prior to the commencement of activities authorized by this RGP (see General Condition 10 [*Water Quality Certification*]).

9. Reporting Requirements: PCWA shall submit annual post-construction reports to the Corps documenting all activities covered under the RGP that were completed the previous year. The reports shall be submitted no later than January 30, and contain documentation related to activities completed between January 1 and December 31 of the previous year. The reports shall include: (a) the activity name; (b) DA permit number; (c) type of HCP covered activity; (d) a full description of the work in waters of the U.S. that was completing, including acreage and/or linear feet of permanent and temporary discharges of dredged and/or fill material into waters of the U.S. (by aquatic resource type) and acreage and/or linear feet of loss of waters of the U.S. (by aquatic resource type); (e) evidence of PCWA's fulfillment of any CWA 404 compensatory mitigation requirements required by the RGP verification issued by the Corps, and (f) the cumulative acreage and/or linear feet loss of waters of the U.S. and loss of stream bed that has occurred under the RGP since issuance.

10. Special conditions: The District may add special conditions to an authorization to ensure the activity complies with the terms and conditions of the RGP, and adverse impacts are individually and cumulatively minimal.

#### **GENERAL CONDITIONS:**

1. Notification: PCWA shall provide written notification (i.e., a complete application and associated documentation) for a proposed activity to be authorized under the RGP prior to commencing the activity. PCWA shall submit a pre-construction notification package for all covered activities. No discharge of dredged and/or fill material into waters of the U.S. shall commence until the Corps has provided written verification the activity is authorized under this RGP.

2. Avoidance and Minimization Measures: You shall comply with all avoidance and minimization measures, terms, and other conditions as identified in Chapter 6 of the HCP. You shall ensure impacts to waters of the U.S. within and adjacent to the stream system are avoided and minimized to the maximum extent practicable.

3. Compensatory Mitigation: Compensatory mitigation for impacts to waters of the U.S. shall be accomplished at the ratios specified in the HCP, and shall be accomplished by payment into a Corps-approved PCCP in-lieu fee (ILF) program. Any compensatory mitigation requirements will be specifically identified in the RGP verification issued by the Corps for the single and complete project.

4. Bed and Bank Stabilization: All bank stabilization activities shall involve either the sole use of native vegetation or other bioengineered design techniques (e.g. willow plantings, root wads, large woody debris, etc.), or a combination of hard-armoring (e.g. rip-rap) and native vegetation or bioengineered design techniques, unless specifically determined to be

impracticable by the Corps. For projects that would involve hard armoring or the placement of any non-vegetated or non-bioengineered technique below the ordinary high water mark of waters of the U.S., the notification required in General Condition 14 must include information on why the sole use of vegetated techniques is not practicable.

5. Equipment: Heavy equipment working in wetlands shall be placed on mats, or other measures such as low-ground pressure equipment, to minimize soil disturbance shall be taken. Information regarding methods to minimize soil disturbance shall be submitted with the pre-construction notification.

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

7. Limits of Disturbance: PCWA shall clearly identify the limits of disturbance in the field with highly visible markers (e.g. construction fencing, flagging, silt barriers, etc.) prior to commencing construction activities in waters of the U.S. PCWA shall maintain such identification properly until construction is completed and the soils have been stabilized. PCWA is prohibited from any activity (e.g. equipment usage or materials storage) that may impact waters of the U.S. outside of the permit limits (as shown on the permit drawings).

8. Management of Water Flows: The pre-construction course, condition, capacity, and location of open waters shall be maintained to the maximum extent practicable, unless determined impracticable by the Corps. 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). The District Engineer will determine the need for appropriate and practicable compensatory mitigation necessary to ensure that adverse effects on the aquatic environment are minimal. If compensatory mitigation is determined necessary, mitigation proposals are required to be prepared in accordance with 33 CFR Part 332.

9. 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.

10. Sediment Removal: The removal of sediment shall be limited to the minimum necessary to restore the waterway in the vicinity of a structure to the approximate dimensions that existed when the structure was built, but shall not extend farther than 200 feet in any direction from the structure. This 200 foot limit does not apply to maintenance dredging to remove accumulated sediments blocking or restricting outfall and intake structures or to maintenance dredging to remove accumulated sediments from canals associated with outfall and intake structures. All dredged or excavated materials must be deposited and retained in an area that has no waters of the United States unless otherwise specifically approved by the Corps.

11. Suitable Fill: No discharge of dredged or fill material shall consist of unsuitable material and material discharged shall be free from toxic pollutants in toxic amounts (section 307 of the Clean Water Act). Fill material shall be clean and free of contaminants and noxious plants. Fresh cement or concrete is not allowed in waters unless it is placed in sealed forms. Unsuitable fill material includes vehicle bodies, farm machinery, appliances and other metal objects, asphalt, biodegradable construction debris and tires, concrete with exposed rebar.

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

a. Directional drilling, clear span, or other techniques that do not contact the waterbody shall be used if the waterbody contains perennial or intermittent flows, unless determined impracticable by the Corps.

b. PCWA shall ensure the construction of utility lines does not result in draining any water of the U.S., including wetlands. This may be accomplished through the use of clay blocks, bentonite, or other suitable material (as approved by the Corps) to seal the trench. For utility line trenches, during construction, PCWA shall remove and stockpile, separately, the top 6-12 inches of topsoil. Following installation of the utility line(s), PCWA shall replace the stockpiled topsoil on top and seed the area with native vegetation.

c. All disturbed areas immediately adjacent to and within 25 feet of waters of the U.S., including unprotected slopes and stream banks, 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.

d. 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 District) within 30 days following completion of the discharge of dredged and/or fill material into waters of the U.S. authorized by this RGP. A restoration plan, which includes a contour topographic map, shall be submitted with the pre-construction notification required in General Condition 1.

13. Aquatic Life Movements: The following criteria shall apply to all linear transportation crossings (e.g. roads, trails, bridges, culverts) of perennial, intermittent, or ephemeral streams:

a. For all activities in waters of the U.S. that are suitable habitat for Federally-listed fish species, including designated critical habitat for such species, PCWA shall design all new or substantially reconstructed linear transportation crossings (e.g. roads, bridges, culverts) to ensure that the passage and/or spawning of fish is not hindered. In these areas, PCWA shall employ bridge designs that span the stream or river, including pier-or pile-supported spans, or designs that use a bottomless arch culvert with a natural stream bed;

b. Linear transportation crossings shall be constructed to maintain the pre-construction course, condition, capacity, and location of open waters, unless it can be demonstrated by PCWA, and the Corps' concurs, that the activity would result in a net increase in aquatic resource functions and services. For areas containing existing linear transportation crossings, the pre-construction course, condition, capacity, and location of open waters shall be determined based on the upstream and downstream portions of the open waters.

c. Unless determined to be not practicable by the Corps, all linear transportation crossings proposed to be replaced shall be designed to the approximate bankfull width and depth of upstream and downstream open waters.

d. All bank stabilization activities shall comply with General Condition 4.

14. **Work in Standing or Flowing Waters:** No construction activities shall occur within standing or flowing waters, unless determined to be not practicable or appropriate by the Corps. For intermittent or ephemeral streams, this may be accomplished through construction during the dry season. In perennial streams, this may be accomplished through dewatering of the work area. Any proposed dewatering plan must be approved, in writing, by the Corps prior to commencing construction activities; and

15. **Compliance Inspections:** PCWA must allow representatives from the Corps to inspect the authorized activity at any time deemed necessary to ensure that the activity is being, or has been, accomplished in accordance with the terms and conditions of the permit. The Corps will notify PCWA at least 48 hours advance of an inspection.

16. **Threatened and Endangered Species:** No activity is authorized under this RGP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal ESA. Activities authorized under this RGP must comply with the mandatory terms and conditions of the USFWS and NMFS [*to be sought by initiation for programmatic Section 7 ESA consultation*] [programmatic Biological Opinion (BO) for this RGP] (USFWS #\_\_\_\_, dated \_\_\_\_ ) (copy [to be] attached). The BO 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 and NMFS are the appropriate authorities to determine compliance with the terms and conditions of their Biological Opinion, and with the ESA. The project applicant must comply with all applicable conditions of these Biological Opinions, including those ascribed to the Corps.

17. 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. If NHPA compliance is not addressed programmatically, (e.g., by a Programmatic Agreement (PA)), project 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 notification shall consist of the application identified in General Condition 5, and two hard copies and one electronic copy of a cultural resources report meeting the Corps *Guidelines for Compliance with Section 106 of the National Historic Preservation Act of 1966* ([http://www.spk.usace.army.mil/Portals/12/documents/regulatory/sec-106-tribal/FINAL\\_2014-03-24\\_Section-106-Guidelines.pdf](http://www.spk.usace.army.mil/Portals/12/documents/regulatory/sec-106-tribal/FINAL_2014-03-24_Section-106-Guidelines.pdf)). 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.

18. Permit Transfer: If the property associated with this permit is sold, PCWA shall transfer the verification to the new owner by submitting a letter to Placer County or the City of Lincoln, with a copy provided to the Corps, to validate the transfer. A copy of the CARP authorization must be attached to the letter, and the letter must contain the name and address of the transferee, as well as the following statement and signature of the transferee:

When the structures or work authorized by this programmatic general permit (RGP) are still in existence at the time the property is transferred, the terms and conditions of this RGP, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this RGP and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

\_\_\_\_\_  
(Transferee)

\_\_\_\_\_  
(Date)

19. Wetland and Stream Setbacks: Project applicants shall establish wetland and stream setback and avoidance and minimization as described in the CARP and implementing ordinances. Associated terms of the local CARP ordinances concerning setbacks, including (but not limited to) land use, allowable uses within setbacks, exemptions, and waivers shall apply as described in the CARP and implementing ordinances. These terms shall meet or exceed all applicable standards and terms contained within Chapter 6 of the HCP.

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

21. Discovery of Previously Unknown Remains and Artifacts (or - Unanticipated Cultural Resources Discoveries): If PCWA discovers any previously unknown historic, cultural or archeological remains and/or artifacts while accomplishing the activity authorized by this RGP, PCWA shall immediately notify the Corps of what has been found, and to the maximum extent practicable, shall avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. Notification to the Corps shall include a copy of the CARP authorization issued by Placer County or the City of Lincoln. 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.

22. Water Quality Certification: Water Quality Certification (WQC), or waiver thereof, under Section 401 of the Clean Water Act is required for activities to be authorized by this RGP. The project applicant shall comply with the terms and conditions of any individual or programmatic WQC provided by the State Water Resources Control Board and/or Central Valley Regional Water Quality Control Board.

### **PROCEDURES:**

1. PCWA may choose to request a pre-application meeting with the Corps and other resource agencies prior to submittal of a pre-construction notification. To request a pre-application meeting, please contact the District office listed in the "Contacts" section of this document. A request for a pre-application meeting should contain the project name, type of project, county, approximately acreage of impacts to waters of the U.S., the contact name, company name, and telephone number.

2. PCWA shall submit a pre-construction notification (PCN) consisting of a written request for verification under this RGP. The PCN shall contain the following information in order to be considered complete:

a. A letter or a completed Department of the Army Permit Application Form (ENG 4345), requesting authorization under the RGP.

b. The applicable Covered Activity as identified in the HCP.

c. A complete description of the proposed activity, including

(1) The activities purpose;

(2) Direct and indirect adverse environmental effects the activity would cause, including the anticipated amount of loss of each type of waters of the U.S. expected to result from the proposed activity, in acres and, if applicable, linear feet;



(3) The amount (in cubic yards) and type of fill material proposed to be discharged into each type of water of the U.S.; and

(4) The amount (in acres) and length (in linear feet) of each type of waters of the U.S. to be permanently filled and the amount and length of each type of waters of the U.S. to be temporarily filled. For waters of the U.S. to be temporarily filled, the approximate length of time the waters of the U.S. would be filled before restoration to pre-construction contours and conditions would occur;

d. The location of the activity (with latitude and longitude)

e. A brief narrative describing how the proposed activity would comply with all General Conditions of this RGP, or a statement that the General Condition does not apply or, for General Conditions 3 and 7, a description of why compliance with the General Condition is not practicable.

f. For each applicable avoidance and minimization measure identified in Chapter 6 of the HCP, a brief narrative describing how the activity would comply with each measures. Specifically, the narrative should describe how the proposed activity is in compliance with Avoidance and Minimization Measures associated with an aquatic resource as specified in the HCP.

g. 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. to the maximum extent practicable.

h. For all dewatering activities that propose structures or fill in waters of the U.S. that require authorization from the Corps:

(1) The proposed methods for dewatering

(2) The equipment that would be used to conduct dewatering

(3) The length of time the area is proposed to be dewatered

(4) The area (in acres) and length (in linear feet) of waters of the U.S. of the dewatering structure and/or fill;

(5) The method for removal of the dewatering structure and/or fill; and

(6) The method for restoration of the waters of the U.S. affected by the structure or fill following construction

i. For all temporary discharge of dredged and/or fill material into waters of the U.S.:

(1) The reason(s) why avoidance of temporary fill in waters of the U.S. is not practicable;

(2) A description of the proposed temporary fill, including the type and amount (in cubic yards) of material to be placed;

(3) The area (in acres) of waters of the U.S. and, for drainages (e.g. natural or relocated streams, creeks, rivers), the length (in linear feet) where the temporary fill is proposed to be placed; and

(4) A proposed plan for restoration of the temporary fill area to pre-project contours and conditions, including a plan for the re-vegetation of the temporary fill area, if vegetation would be removed or destroyed by the proposed temporary fill;

j. For linear transportation crossings that propose to alter the pre-construction course, condition, capacity or location of open waters, the PCN shall include sufficient justification to determine that the proposed activity would result in a net increase in aquatic resource functions and services. Functions and services to be considered in the justification include, but are not limited to: short- or long-term surface water storage, subsurface water storage, moderation of groundwater flow or discharge, dissipation of energy, cycling of nutrients, removal of elements and compounds, retention of particulates, export of organic carbon, and maintenance of plant and animal communities.

k. For replacement linear transportation crossings that would result in a reduction in the pre-construction bankfull width and depth of open waters of the U.S. at the crossing, as compared to the upstream and downstream open waters:

(1) Information on why it is not practicable to approximate the pre-construction bankfull width of the upstream and downstream open waters, and;

(2) Sufficient justification to determine that the reduction in the pre-construction bankfull width would result in a net increase in aquatic resource functions and services. Functions and services to be considered in the justification include, but are not limited to: short- or long-term surface water storage, subsurface water storage, moderation of groundwater flow or discharge, dissipation of energy, cycling of nutrients, removal of elements and compounds, retention of particulates, export of organic carbon, and maintenance of plant and animal communities.

l. A written statement identifying the compensatory mitigation proposed for the loss of each type of water of the U.S.

m. Project Figures:

(1) A vicinity map clearly depicting the location of the proposed activity.

(2) A plan-view, and cross-section view drawing, clearly depicting the location, size, and dimensions of the proposed permanent or temporary discharge of fill material into waters of the U.S., and the location of all waters of the U.S. on-site. The drawings shall contain a title block, legend and scale, amount (in cubic yards) and area (in acres) of fill in Corps jurisdiction, including both permanent and temporary fills/structures. The ordinary high water mark should be shown (in feet) based on National Geodetic Vertical Datum (NGVD) or other appropriate referenced elevation.

(3) All drawings shall be prepared in accordance with the South Pacific Division February 2016, *Updated Map and Drawing Standards for the South Pacific Division Regulatory Program*, or most recent update (available on the South Pacific Division website at: <http://www.spd.usace.army.mil/Missions/Regulatory/PublicNoticesandReferences.aspx/>)

n. Numbered and dated pre-project color photographs showing a representative sample of waters proposed to be impacted on the site, and all waters of the U.S. proposed to be avoided on and immediately adjacent to the project site. The compass angle and position of each photograph shall be identified on the plan-view drawing(s) required in subpart b of this Regional Condition;

o. A delineation of waters of the U.S., including wetlands, for the project site. Wetlands shall be delineated using the Corps 1987 Wetland Delineation Manual and 2008 Arid West Region Regional Supplement, or most recent manual in effect at the time of the proposal. The delineation report shall be conducted 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](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;

p. Two hard copies and one electronic copy of a cultural resources report meeting the Corps *Guidelines for Compliance with Section 106 of the National Historic Preservation Act of 1966* ([http://www.spk.usace.army.mil/Portals/12/documents/regulatory/sec-106-tribal/FINAL\\_2014-03-24\\_Section-106-Guidelines.pdf](http://www.spk.usace.army.mil/Portals/12/documents/regulatory/sec-106-tribal/FINAL_2014-03-24_Section-106-Guidelines.pdf)).

q. For any proposals to waive the linear foot limits identified in *Term 6(a)* and *6(b)*, the PCN shall contain information on why the proposed activity would result in no more than minimal individual or cumulative effects, including the following:

(1) A narrative description of the stream. This should include known information on: volume and duration of flow; the approximate length, width, and depth of the waterbody and characteristics observed associated with an Ordinary High Water Mark (e.g. bed and bank, wrack line or scour marks); a description of the adjacent vegetation community and a

statement regarding the wetland status of the adjacent areas (i.e. wetland, non-wetland); surrounding land use; water quality; issues related to cumulative impacts in the watershed, and; any other relevant information;

(2) An analysis of the proposed impacts to the waterbody, in accordance with Procedure 2(a);

(3) Measures taken to avoid and minimize losses to waters of the U.S., including other methods of constructing the proposed activity(s); and

(4) A compensatory mitigation plan describing how the unavoidable losses are proposed to be offset, in accordance with 33 CFR 332.

3. Within 15-days following receipt of the PCN, the Corps will notify PCWA via letter or email if:

a. The proposed activity may qualify for authorization under the RGP;

b. The PCN is complete; and

c. If consultation under Section 7 of the ESA, Section 305(b)(4)(b) of the Magnuson-Stevens Fisheries Conservation and Management Act and/or Section 106 of the National Historic Preservation Act is required.

If the proposed activity does not qualify for authorization under the RGP, the notification will identify specific modifications necessary for the proposed activity to qualify for authorization under the RGP, and/or instructions on how to apply for authorization under a different permit. If the PCN is not complete, the notification will specifically identify the additional information required to be submitted.

4. Within 30-days following receipt of a complete PCN, the Corps will initiate any required consultations under Section 7 of the ESA, Section 305(b)(4)(B) of the Magnuson-Stevens Fisheries Conservation and Management Act, and/or Section 106 of the National Historic Preservation Act.

5. Within 15-days following completion of required consultations identified in 4, or, if consultation is not required, within 30-days following receipt of a complete PCN, the Corps will notify PCWA via letter if the activity is authorized under this RGP, subject to the terms and conditions of the authorization.

6. No work may proceed under the authority of this RGP until PCWA has been notified, in writing, by the Corps that the activity is authorized.

**FURTHER INFORMATION:**

1. Congressional Authorities: You have been authorized to undertake the activity described above pursuant to: Section 404 of the Clean Water Act (33 U.S.C. 1344), and/or Section 103 of the Marine Protection, Research and Sanctuaries Act of 1972 (33 U.S.C. 1413).
2. Limits of this authorization.
  - a. This permit does not obviate the need to obtain other federal, state, or local authorizations required by law.
  - b. This permit does not grant any property rights or exclusive privileges.
  - c. This permit does not authorize any injury to the property or rights of others.
  - d. This permit does not authorize interference with any existing or proposed federal projects.
3. Limits of Federal Liability. In issuing this permit, 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.
4. Reliance on Applicant's Data. The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.
5. Reevaluation of Permit Decision. This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:
  - a. You fail to comply with the terms and conditions of this permit.
  - b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (see 4 above).
  - c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

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 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you comply with the terms and conditions of your permit and for the initiation of legal action where

appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Extensions. The permit duration, as described above, establishes a time limit for the completion of the activity authorized by this permit. Unless there are circumstances requiring either a prompt completion of the authorized activity or a reevaluation of the public interest decision, the Corps will normally give favorable consideration to a request for an extension of this time limit.

Activities not meeting the terms and conditions of this permit may be authorized through another type of permit from the Corps, such as a Nationwide Permit or Letter of Permission. 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 a verification under this permit to ensure the activity has minimal impact.

**PERMIT DURATION:** This permit is valid for five years from issuance, and will expire on [DATE-same as above]. 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.

**CONTACTS AND ADDITIONAL INFORMATION:** For additional information about this RGP, please contact the U.S. Army Corps of Engineers, Sacramento District.

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  
Sacramento District

\_\_\_\_\_  
Date



# Placer County HCP/NCCP Letter of Permission Procedure

U.S. ARMY CORPS OF ENGINEERS

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## COVERED ACTIVITIES UNDER THE PLACER COUNTY HABITAT CONSERVATION PLAN/NATURAL COMMUNITY CONSERVATION PLAN WITH LESS THAN SIGNIFICANT IMPACT

### DATE:

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**ACTION ID:** SPK-2005-00485

**AUTHORITY:** 33 CFR 325.2(e)(1)(ii).

**LOCATION:** The Placer County Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP) Plan Area encompasses approximately 270,000 acres within western Placer County and eastern Sutter County. Within western Placer County, the Plan Area is bounded on the north by Nevada and Yuba County, on the east by the City of Auburn and California Highway 49, on the south by Sacramento County, and on the west by Sutter County. With the exception of activities conducted by the Placer County Water Agency (PCWA), the Plan Area in western Placer County excludes the Cities of Auburn, Rocklin, and Roseville, and Town of Loomis. Within Sutter County, the Plan Area includes 1,724 acres along the Coon Creek floodplain, and 33 miles of Auburn Ravine, Coon Creek, Cross Canal, and East Side Canal. The Plan Area Boundaries can be seen on the enclosed **2016, Figure 1-1, Plan Area, Placer County Conservation Program – EIS/EIR**, prepared by ICF.

**PURPOSE:** The U.S. Army Corps of Engineers, Sacramento District (Corps) is establishing a Letter of Permission (LOP) procedure to efficiently authorize HCP/NCCP Covered Activities which involve discharges of dredged or fill material into waters of the United States (U.S.) under Section 404 of the Clean Water Act (CWA 404) with more than minimal but less than significant impacts on the aquatic environment. The HCP/NCCP LOP Procedure is an optional abbreviated permit process available to all applicants for Department of the Army (DA) permits for activities meeting the criteria and conditions described in this notice. If the proposed activity does not meet LOP criteria or the applicant chooses not to use this process, the activity may be authorized under a different permit type or procedure.

**BACKGROUND:** In accordance with Title 33 of the Code of Federal Regulations (CFR) Part 325, district engineers are authorized to use alternative procedures, including LOPs, to authorize activities under the Corps Regulatory Program. LOPs are a type of permit issued through an abbreviated processing procedure which includes coordination with Federal and state fish and wildlife agencies, as required by the Fish and Wildlife Coordination Act, and a public interest evaluation, but without the publishing of an individual public notice.

The Placer County Conservation Program (PCCP) is a regional approach to address issues related to planned development and species habitat conservation, consisting of the HCP/NCCP, County Aquatic Resources Program (CARP), and an In-Lieu Fee (ILF) program. The HCP/NCCP provides coverage for fourteen species of plants and wildlife, including seven that are federally-listed as threatened or

endangered. The Plan Permittees consist of Placer County, the City of Lincoln, South Placer Regional Transportation Authority (SPRTA), and PCWA. The U.S. Fish and Wildlife Service's Sacramento Field Office (USFWS) and National Marine Fisheries Service (NMFS) [have approved] the HCP/NCCP through a species incidental take permit (ITP) issued to the PCCP's Plan Permittees under Section 10 of the ESA. The CARP provides a program, implemented by Placer County and the City of Lincoln through local implementing ordinances, to evaluate activities that would impact aquatic resources considered to be waters of the U.S. or waters of the State. The ILF program provides compensatory mitigation for impacts associated with the Covered Activities, through funds paid to Placer County or the City of Lincoln.

**PROPOSED CATEGORIES OF ACTIVITIES:** This LOP procedure applies only to HCP/NCCP Covered Activities that (1) have been approved by Placer County or the City of Lincoln, in compliance with the HCP/NCCP and the **DATE**, CARP and implementing ordinances, or (2) are being conducted by SPRTA or PCWA in compliance with the HCP/NCCP, CARP and implementing ordinances. HCP/NCCP Covered Activities are described briefly below, and in greater detail in Chapter 2.6 of the HCP/NCCP.

Activities to be authorized under a LOP following the procedure described herein must be HCP/NCCP Covered Activities and comply with any applicable terms and conditions contained in the HCP/NCCP, CARP, and implementing ordinances. Applicants must receive a consistency determination from Placer County, the City of Lincoln, SPRTA, or PCWA that the proposed project is covered under the HCP/NCCP. Compliance with the HCP/NCCP requires applicants to implement the applicable and appropriate avoidance and minimization measures contained in Chapter 6 of the HCP/NCCP and in the CARP, as well as any other applicable terms and conditions as contained in the HCP/NCCP and CARP.

A LOP will be issued only for those activities which meet all of the procedures and criteria identified in this notice, including the general conditions, and which do not result in a potentially significant impact(s) on the human environment. The Corps reserves the use of its discretionary authority to determine that an activity may be authorized under a LOP, to add special conditions to LOP authorizations, or to determine that an activity may not be authorized by a LOP and will instead require authorization under another permit type.

For a HCP/NCCP Covered Activity to be authorized under an LOP following this procedure, impacts to waters of the U.S. shall be avoided and minimized to the maximum extent practicable. For purposes of the procedure, notwithstanding the Corps' discretionary authority described above, avoidance and minimization requirements shall be considered to be primarily satisfied when applicants have designed and implemented activities to comply with all applicable avoidance and minimization measures contained in both Chapter 6 of the HCP/NCCP and the CARP and implementing ordinances.

To qualify for a LOP under this procedure; activities must meet the following criteria:

1. The proposed activity does not result in a potentially significant impact(s) on the human environment that requires preparation of an environmental impact statement (EIS) under the National Environmental Policy Act (NEPA).



2. Compensatory mitigation for impacts to waters of the U.S. shall be accomplished at the ratios specified in Chapter 5 of the HCP/NCCP and Chapter 6.2.3 of the CARP HCP/NCCP, and shall be accomplished by payment into a Corps-approved HCP/NCCP in-lieu fee (ILF) program.

**Covered Activities under the HCP/NCCP:** The following HCP/NCCP Covered Activities, described in greater detail in Chapter 2 of the HCP/NCCP, are applicable to this LOP procedure, after authorization under the CARP.

1. **Valley Potential Future Growth (PFG) Area:** Discharges of dredged and/or fill material into waters of the U.S. associated with rural and urban land uses within the Valley PFG area in Plan Area A1, as shown on the **2016, Figure 2-1 Plan Area Components, Placer County Conservation Program – EIS/EIR**. Specific activities included in this PGP within the Valley PFG include those Covered Activities identified in Chapter 2.6, Section 2.6.1 of the HCP/NCCP.

2. **Valley Conservation and Rural Development Area:** Discharges of dredged and/or fill material into waters of the U.S. associated with rural and urban land uses within the Valley Conservation and Rural Development Area in Plan Area A2, as shown on the **2016, Figure 2-1 Plan Area Components, Placer County Conservation Program – EIS/EIR**. Specific activities included in this PGP within the Valley Conservation and Rural Development Area include those Covered Activities identified in Chapter 2.6, Section 2.6.2 of the HCP/NCCP.

3. **Foothills PFG Area:** Discharges of dredged and/or fill material into waters of the U.S. associated with rural and urban land uses within the Foothills PFG area in Plan Area A3, as shown on the **2016, Figure 2-1 Plan Area Components, Placer County Conservation Program – EIS/EIR**. Specific activities included in this PGP within the Foothills PFG include those Covered Activities identified in Chapter 2.6, Section 2.6.3 of the HCP/NCCP.

4. **Foothills Conservation and Rural Development:** Discharges of dredged and/or fill material into waters of the U.S. associated with rural and urban land uses within the Foothills Conservation and Rural Development area in Plan Area A4, as shown on the **2016, Figure 2-1 Plan Area Components, Placer County Conservation Program – EIS/EIR**. Specific activities included in this PGP within the Foothills PFG include those Covered Activities identified in Chapter 2.6, Section 2.6.4 of the HCP/NCCP.

5. **Regional Public Programs:** Discharges of dredged and/or fill material into waters of the U.S. associated with rural and urban land uses within Plan Area A or B, as shown on the **2016, Figure 2-1 Plan Area Components, Placer County Conservation Program – EIS/EIR**. Specific activities included in this PGP for Regional Public Programs include those Covered Activities identified in Chapter 2, Section 2.6.5 of the HCP/NCCP.

6. **In-Stream Activities:** Activities resulting in the discharge of dredged and/or fill material into waters of the U.S. for activities within streams, reservoirs, or on-stream ponds in Plan Area A or B, as shown on the **2016, Figure 2-1 Plan Area Components, Placer County Conservation Program – EIS/EIR**, and as described in Chapter 2, Section 2.6.6 of the HCP/NCCP, including, but not limited to, maintenance activities in the stream channel, along the stream bank, and on adjacent waters of the U.S. within the riparian corridor. These activities may include those described in 1 through 5 above.

7. **Conservation Programs:** Activities resulting in the discharge of dredged and/or fill material into waters of the U.S. associated with implementing the conservation strategy identified in Chapter 5 of the HCP/NCCP in Plan Area A or B, as shown on the 2016, *Figure 2-1 Plan Area Components, Placer County Conservation Program – EIS/EIR*, including, but not limited to, habitat enhancement, restoration, creation, translocation, and reserve management, and other activities, as described in Chapter 2, Section 2.6.7 of the HCP/NCCP.

### **EXCLUSIONS:**

1. The LOP procedure does not apply to any activities in waters of the U.S. that are not considered Covered Activities under the HCP/NCCP.
2. The LOP procedure does not apply to any activities in waters of the U.S. that have a potential to significantly impact the human environment.

### **LOP PROCEDURE:**

#### **1. Before submitting an application:**

The applicant must attend a pre-application meeting with the Corps. Applicants are encouraged to invite the applicable Plan Permittee (i.e. Placer County, City of Lincoln, SPRTA, or PCWA) and other applicable agencies to the pre-application meeting with the Corps.

#### **2. Application submittal:**

To be considered for authorization under an LOP, the application must include all information required for a standard permit application, pursuant to 33 CFR 325.1. The application package must be submitted to the Corps in both paper and electronic form (pdf), suitable for electronic transmittal and/or posting to an FTP site, and include the following:

- a. A cover letter from the applicant requesting an LOP under the HCP/NCCP LOP procedures for the proposed activity, referencing the Corps' identification number and including contact information for the applicant and their designated agents or primary points-of-contact. This must include mailing and e-mail addresses and telephone and fax numbers.
- b. A completed and signed Department of the Army Engineering Form 4345.
- c. A copy (hardcopy, and electronic on CD or through posting to an FTP site) of the CARP application submitted to Placer County or the City of Lincoln.
- d. An aquatic resources delineation for the activity area, conducted in accordance with the Corps' minimum standards for aquatic resource delineations, or information that an aquatic resources delineation has been verified (including Corps file number) and is still valid.

e. Site location map(s), including the proposed activity, clearly outlined on USGS 7.5' quad sheet drawings, with latitudes and longitudes for the site(s), name of the quad sheet(s) and directions to the site, as well as all appropriate aerial and other imagery available.

f. A complete description of the proposed activity, including all of the information identified under 33 CFR 325.1 (d) "Content of application."

g. Plan and profile views of the proposed work, relative to potential or approved waters of the U.S. (e.g., wetlands and open waters below the Ordinary High Water Mark), showing areas, types and acreages of waters and other aquatic resources to be impacted by the proposed activity. All available drawings must be provided and must show proposed impacts on appropriately scaled figures, in accordance with the Corps' map and drawing standards. All maps and drawings shall follow the South Pacific Division February 2016, Updated Map and Drawing Standards for the South Pacific Division Regulatory Program, or most recent update (available on the South Pacific Division website at: <http://www.spd.usace.army.mil/Missions/Regulatory/PublicNoticesandReferences.aspx/>), unless specifically waived by the Corps.

h. The total area (acreage), if applicable, length (linear feet), and types of aquatic resources to be directly and/or indirectly affected by the proposed activity, the volume (in cubic yards) and type of material to be discharged into each type of aquatic resources, a description of habitat types, including plant communities, within and surrounding the activity site, and a description of how the proposed activity would affect all of the above resources.

i. A description and graphical representation of how impacts to aquatic resources and associated functions (e.g., water quality and habitat) have been avoided and minimized to the maximum extent practicable on the project site. This may include a copy of the applicant's documentation provided to the HCP/NCCP Plan Permittees as required to demonstrate avoidance and minimization of impacts for compliance with the HCP/NCCP and/or CARP.

j. A description of potential indirect (secondary) and cumulative impacts to aquatic resources and the human environment in the watershed and vicinity of the proposed activity.

k. Documentation and record of all pre-application coordination with the Corps and other agencies (as applicable), including any activity-specific comments or concerns provided by agencies, as well as the applicant's response(s) to the comments or concerns.

l. Information, in report form, concerning on-site practicable alternatives and the relative environmental impacts of those alternatives as compared to the environmental impacts of the proposed activity, in accordance with 33 CFR 325.1 (e) and 323.6 (a). The information must address compliance with the Environmental Protection Agency's 404(b)(1) Guidelines at 40 CFR part 230.

m. A statement providing the proposed compensatory mitigation for offset of unavoidable losses of waters of the U.S., indicating proposed compliance with General Condition 3, *Compensatory Mitigation*.

n. Copies of state and local approvals, pending applications or approvals, and any other evidence that the proposed activity has been or is currently being reviewed by the appropriate state and

local agencies and is consistent with their land use plans and policies, particularly wetland policies, programs, ordinances and/or laws.

### **3. Review and Decision:**

a. The Corps will review the applicant's submittal for completeness within approximately fifteen (15) calendar days of receipt. If the application is incomplete, the appropriate Corps staff person will notify the applicant and request the additional information necessary to complete the application for further processing within 30 days after receipt of a complete application.

b. If the Corps determines the application is complete but the activity cannot be authorized by a LOP, the Corps will notify the applicant within 15 calendar days of that determination and proceed to an alternate permitting process (General Permit or Standard Permit).

c. If the application is determined to be complete and appears to meet LOP criteria, the Corps will notify the applicant that the proposed activity is being evaluated for LOP authorization. The Corps will notify the applicable HCP/NCCP Plan Permittee, and applicable state and federal coordination agencies via e-mail of the proposed LOP for the activity, and request any comments within fifteen (15) calendar days of such notice. The Corps will also request any additional information necessary to complete processing of the permit application, and, if sufficient information has been submitted, initiate any required consultation(s) with other agencies, to the extent necessary (e.g., in lieu of programmatic consultations).

d. The Corps will review the comments received and, if otherwise complete (e.g., Endangered Species Act (ESA), National Historic Preservation Act (NHPA) consultations and 401 Water Quality Certification (WQC) completed), make a determination within 30 calendar days after the close of the comment period as to whether LOP authorization is warranted, and whether special conditions are needed. If the Corps determines the activity (1) meets the criteria for LOP authorization, (2) would have a less than significant impact on aquatic resources and the human environment, (3) meets the requirements of the U.S. Environmental Protection Agency's Section 404(b)(1) Guidelines for Specification of Disposal Sites, (4) would not be contrary to the public interest, (4) is in compliance with other applicable laws (e.g. ESA, NHPA, Section 401 WQC), and (5) has a consistency determination from Placer County and/or the City of Lincoln that the project is covered under the HCP/NCCP, an LOP will be issued.

e. If at any time during the process the Corps determines the activity may not be authorized by a LOP, Corps staff will immediately notify the applicant, terminate the LOP process, and proceed to an alternate permitting process, as described in C(3)(b) above.

f. Evidence of Section 401 Water Quality Certification must be provided to the Corps before any final LOP decision is made. A LOP will not be issued until and unless all necessary certifications, consultations and/or authorizations (e.g., 401 Water Quality Certification, ESA and/or NHPA) have been completed and/or issued.

g. The Corps will add special and/or general conditions to LOP authorizations as necessary.



# Regional General Permit

U.S. ARMY CORPS OF ENGINEERS

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## Minimal Impact Activities Conducted under the Placer County Conservation Program In-Lieu Fee Program

**EFFECTIVE:**

**EXPIRES:** (5 years from effective date)

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The U.S. Army Corps of Engineers, Sacramento District (Corps), hereby issues a regional general permit (RGP) for minimal impact activities conducted under the Placer County Conservation Program (PCCP) In-Lieu Fee (ILF) Program, resulting in the discharge of dredged and/or fill material into waters of the United States (U.S.) resulting in no more than minimal individual and cumulative impacts. The activities authorized would be conducted to meet the Conservation Strategy as identified in the Placer County Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP).

An activity is verified under the RGP when the Corps, as the Chair of the interagency review team (IRT) of the PCCP ILF Program, approves the ILF Site under the ILF Program.

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

**ACTION ID:** SPK-2005-00485

**AUTHORITY:** Section 404 of the Clean Water Act (CWA 404)

**LOCATION:** The PCCP Plan Area encompasses approximately 270,000 acres within western Placer County and eastern Sutter County. Within western Placer County, the Plan Area is bounded on the north by Nevada and Yuba County, on the east by the City of Auburn and California Highway 49, on the south by Sacramento County, and on the west by Sutter County. With the exception of activities conducted by the Placer County Water Agency (PCWA), the Plan Area in western Placer County excludes the Cities of Auburn, Loomis, Rocklin, and Roseville. Within Sutter County, the Plan Area includes 1,724 acres along the Coon Creek floodplain, and 33 miles of Auburn Ravine, Coon Creek, Cross Canal, and East Side Canal. The Plan Area Boundaries can be seen on the enclosed **2016, Figure 1-1, Plan Area, Placer County Conservation Program – EIS/EIR**, prepared by ICF.

**PURPOSE:** This RGP is intended to expedite authorization under Section 404 of the Clean Water Act for establishment, re-establishment, enhancement, or rehabilitation activities that result in a net increase in aquatic resource functions and services and are approved by the Corps under the ILF Program. The RGP is premised on the approval of an activity by the Corps, in consultation with the IRT, under the ILF Program, conducted by the Placer Conservation Authority (PCA) in partnership with the HCP/NCCP Permittees (Placer County, City of Lincoln, South Placer Regional Transportation Authority [SPRTA], and PCWA). This RGP eliminates the need for project applicants to seek separate authorization from the Corps for those activities approved by the Corps under the ILF Program. This RGP will reduce time and paperwork, and improve efficiency for the Corps, PCA, and the HCP/NCCP Permittees for those activities approved under the ILF Program.

**BACKGROUND:** The PCCP is a regional approach to address issues related to planned development and species habitat conservation, consisting of the HCP/NCCP, County Aquatic Resources Program (CARP), and the ILF Program. The HCP/NCCP provides coverage for fourteen species of plants and wildlife, including seven that are federally-listed as threatened or endangered. The U.S. Fish and Wildlife Service's Sacramento Field Office (USFWS) and National Marine Fisheries Service (NMFS) [have approved] the HCP/NCCP through a species incidental take permit (ITP) issued to the PCCP's Plan Permittees under Section 10 of the ESA. The CARP provides a program, implemented by Placer County and the City of Lincoln through local implementing ordinances, to evaluate activities that would impact aquatic resources considered to be waters of the U.S. or waters of the State. The ILF Program provides compensatory mitigation for impacts associated with the Covered Activities, through funds paid to Placer County or the City of Lincoln.

**ACTIVITIES COVERED:** This RGP authorizes discharges of dredged and/or fill material into waters of the U.S. associated with establishment, re-establishment, enhancement, and rehabilitation activities, provided the activities result in a net increase in aquatic resource functions and services and are approved by the Corps under the ILF Program. The activities authorized under this RGP includes only those activities required to meet the conservation strategy identified in Chapter 7 of the HCP/NCCP.

**EXCLUSIONS:**

1. This RGP may not be used to authorize discharges of dredged and/or fill material into waters of the U.S. for activities that do not result in a net increase in aquatic resource functions and services.
2. This RGP may not be used to authorize discharges of dredged and/or fill material into waters of the U.S. for activities that are not approved by the Corps through the ILF Program.
3. This RGP may not be used to authorize discharges of dredged and/or fill material into waters of the U.S. for activities that do not comply with the conservation strategy identified in Chapter 7 of the HCP/NCCP, as determined by the U.S. Fish and Wildlife Service, California Department of Fish and Wildlife, and National Marine Fisheries Service.
4. After-the-fact authorizations: This RGP may not be used to authorize activities that resulted in the discharge of dredged or fill material into waters of the U.S. without Department of the Army (DA) authorization.

**TERMS OF AUTHORIZATION:**

1. Activity Completion: Activities authorized by the Corps under this RGP are valid until the expiration date of the RGP or by the date identified by the Corps in the approved ILF project documentation appended to the ILF Program instrument, whichever date is sooner. If approved by the Corps under the ILF Program, activities authorized under this 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 expiration of the RGP.
2. RGP Authorization: Concurrent with Corps approval of an ILF project resulting in discharges of dredged and/or fill material into waters of the U.S.

3. Compliance with Placer County HCP/NCCP Conditions: Activities to be authorized under this RGP must meet the conservation strategy identified in Chapter 7 of the HCP/NCCP.

4. 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 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 factor of the public interest. 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 project applicant that the proposed activity is not authorized by the RGP and provide instructions on how to apply for authorization under another type of DA permit. Activities not meeting the terms and conditions of this permit may be authorized through another type of permit from the Corps, such as a NWP, Letter of Permission, or Standard Permit. The Corps will determine on a case-by-case basis, as needed, 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 restore authorization under the RGP at any time it determines 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.

5. Avoidance and Minimization: Impacts to waters of the U.S. shall be avoided and minimized to the maximum extent practicable. For purposes of the RGP, notwithstanding the Corps' discretionary authority described above, this term shall be considered satisfied when project applicants have designed and implemented activities to comply with all applicable avoidance and minimization measures contained in Chapters 5 and 6 of the HCP/NCCP.

6. Single and Complete: The activity must be a single and complete linear or non-linear project, as defined in the Section F of the January 6, 2017, Federal Register Notice for *Issuance and Reissuance of Nationwide Permits; Final Rule* (82 FR 1860), which can be found at: [http://www.usace.army.mil/Portals/2/docs/civilworks/nwp/2017/nwp2017\\_final\\_rule\\_FR\\_06jan2017.pdf?ver=2017-01-06-092409-457](http://www.usace.army.mil/Portals/2/docs/civilworks/nwp/2017/nwp2017_final_rule_FR_06jan2017.pdf?ver=2017-01-06-092409-457)

7. Section 401 Water Quality Certification: In order for authorization to be valid under this RGP, an approved Section 401 Water Quality Certification (WQC) or waiver thereof is required to be obtained and evidence thereof in possession by Placer County or the City of Lincoln, prior to the commencement of activities authorized by this RGP (see General Condition 7 [*Water Quality Certification*]).

#### **GENERAL CONDITIONS:**

1. Permit Transfer: If an ILF site associated with this permit is sold, the permittee shall transfer the verification to the new owner by submitting a letter to the Corps, to validate the transfer. The letter must contain the name and address of the transferee, as well as the following statement and signature of the transferee:

When the structures or work authorized by this regional general permit (RGP) are still in existence at the time the property is transferred, the terms and conditions of this RGP, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this RGP

and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

\_\_\_\_\_  
(Transferee)

\_\_\_\_\_  
(Date)

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

3. Discovery of Previously Unknown Remains and Artifacts (or - Unanticipated Cultural Resources Discoveries): If the permittee discovers any previously unknown historic, cultural or archeological remains and/or artifacts while accomplishing the activity authorized by this RGP, the permittee shall immediately notify the Corps of what has been found, and to the maximum extent practicable, shall avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. Notification to the Corps shall include a copy of the CARP authorization issued by Placer County or the City of Lincoln. 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.

4. Water Quality Certification: Water Quality Certification (WQC), or waiver thereof, under Section 401 of the Clean Water Act is required for activities to be authorized by this RGP. The project applicant shall comply with the terms and conditions of any individual or programmatic WQC provided by the State Water Resources Control Board and/or Central Valley Regional Water Quality Control Board.

**FURTHER INFORMATION:**

1. Congressional Authorities: Section 404 of the Clean Water Act (33 U.S.C. 1344)
2. Limits of this authorization:
  - a. The Corps has authority to determine if an activity complies with the terms and conditions of the RGP.
  - b. This permit does not obviate the need to obtain other federal, state, or local authorizations required by law.
  - c. This permit does not grant any property rights or exclusive privileges.
  - d. This permit does not authorize any injury to the property or rights of others.
  - e. This permit does not authorize interference with any existing or proposed federal projects.
3. Limits of Federal Liability: In issuing this permit, 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.
4. Reliance on Applicant's Data: The determination of the Corps that issuance of this RGP is not contrary to the public interest was made in reliance on the information provided by the HCP/NCCP Plan Permittees.
5. Reevaluation of Permit Decision: The Corps may reevaluate its decision on this RGP at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:
- a. The project applicant fails to comply with the terms and conditions of this permit.
  - b. The information provided by the project applicant in support of a permit application proves to have been false, incomplete, or inaccurate (see 4 above).
  - c. Significant new information surfaces which the Corps did not consider in reaching the original public interest decision.

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 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5.

**PERMIT DURATION:** This RGP is valid for five (5) years from the date of issuance. **It will expire on [Day, Month, 20XX].** At least sixty (60) calendar days prior to expiration, the Corps will issue a public notice, with an opportunity for public comment, describing the reasons for reissuing the RGP for another five years with or without modification, or not reissuing the RGP. If the Corps has not reissued the RGP by the expiration date, the RGP will no longer be valid. This 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 proposed action. Authorizations under this RGP are valid until the permit expires. An activity authorized by this RGP that has commenced, or is under contract to commence, will have 12 months from the date of the RGP expiration to be completed.

**CONTACTS AND ADDITIONAL INFORMATION:** For additional information about this RGP, please contact the U.S. Army Corps of Engineers, Sacramento District.

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

*DRAFT*

*DRAFT*

\_\_\_\_\_  
[Name]  
Chief, Regulatory Division  
Sacramento District

\_\_\_\_\_  
Date

**DRAFT**

# **APPENDIX B**

*PCCP PGP 18*



# Western Placer County HCP/NCCP Programmatic General Permit 18

U.S. ARMY CORPS OF ENGINEERS

BUILDING STRONG®

## MINIMAL IMPACT COVERED ACTIVITIES UNDER THE WESTERN PLACER COUNTY HABITAT CONSERVATION PLAN/NATURAL COMMUNITY CONSERVATION PLAN

**EFFECTIVE DATE: May 18, 2021**

**EXPIRES: May 18, 2026**

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The U.S. Army Corps of Engineers, Sacramento District (Corps), hereby issues Programmatic General Permit (PGP) 18 for certain covered activities identified in the Western Placer County Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP), under the Placer County Conservation Program (PCCP), that result in the discharge of dredged and/or fill material into waters of the United States (U.S.) resulting in no more than minimal individual and cumulative impacts.

An activity is verified under the PGP when Placer County or the City of Lincoln issue an authorization in compliance with the February 2020, County Aquatic Resources Program (CARP), implementing ordinances, and all applicable terms and conditions of the HCP/NCCP.

Note: The term "you" and its derivatives, as used in this PGP, means the project applicant seeking authorization under the PGP, or any future transferee. The term "this office" refers to the appropriate U.S. Army Corps of Engineers, Sacramento District office identified in the *Contacts and Additional Information* section below.

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

**ACTION ID:** SPK-2005-00485

**AUTHORITY:** Section 404 of the Clean Water Act (CWA 404)

**LOCATION:** The PCCP Plan Area (Plan Area) encompasses approximately 270,000 acres within western Placer County and eastern Sutter County. Within western Placer County, the Plan Area is bounded on the north by Nevada and Yuba Counties, on the east by the City of Auburn and California Highway 49, on the south by Sacramento County, and on the west by Sutter County. With the exception of activities conducted by the Placer County Water Agency (PCWA), the Plan Area in western Placer County excludes the Cities of Auburn, Rocklin, and Roseville and Town of Loomis. Within Sutter County, the Plan Area includes 1,724 acres along the Racoon Creek floodplain, and 33 miles of Auburn Ravine, Racoon Creek, Cross Canal, and East Side Canal. The Plan Area Boundaries can be seen on the attached May 2020, *Figure 1-1, Plan Area, Placer County Conservation Program – EIS/EIR* (attachment 1), prepared by ICF.

**PURPOSE:** This PGP is intended to minimize duplication between the CARP and the Corps' Regulatory Program, for authorization of HCP/NCCP Covered Activities subject to CWA 404 that are substantially similar in nature, and would result in minimal individual and cumulative impacts on the aquatic environment. The PGP is premised on the CARP as implemented under local ordinances, resulting in the same or better level of protection of waters of the U.S. as currently exists under CWA 404. Subject to certain exclusions and conditions, the PGP eliminates the need for project applicants to

seek separate review from this office for covered activities that result in minimal impacts to waters of the U.S., when such activities are authorized by the HCP/NCCP, in compliance with the CARP and implementing ordinances. In addition to reducing duplication with the CARP, the PGP is designed to expedite review of certain covered activities through other programmatic elements, such as compliance with Section 7 of the federal Endangered Species Act (ESA) and Section 106 of the National Historic Preservation Act (NHPA). The PGP will increase certainty, reduce time, and improve efficiency for project applicants through synergies with processes implemented by local jurisdictions, such as those associated with land use entitlements, while protecting aquatic resources.

**BACKGROUND:** The PCCP is a regional approach to address issues related to planned development and species habitat conservation, consisting of the HCP/NCCP, CARP, and an In-Lieu Fee (ILF) program. The HCP/NCCP provides coverage for fourteen species of wildlife, including seven that are federally-listed as threatened or endangered. The Plan Permittees consist of Placer County, the City of Lincoln, South Placer Regional Transportation Authority (SPRTA), Placer County Water Agency (PCWA), and Placer Conservation Authority (PCA). Furthermore, other entities (e.g. Placer County Resource Conservation District) may receive coverage under the HCP/NCCP as a Participating Special Entity (PSE). The U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) have approved the HCP/NCCP through a species incidental take permit (ITP) issued to the PCCP's Plan Permittees under Section 10 of the ESA. The CARP provides a program, implemented by Placer County and the City of Lincoln through local implementing ordinances, to evaluate activities that would impact aquatic resources considered to be waters of the U.S. or waters of the State. The ILF program provides compensatory mitigation for impacts associated with the covered activities, through funds paid to PCA.

**ACTIVITIES COVERED:** This PGP authorizes the discharge of dredged and/or fill material into waters of the U.S. associated with covered activities under the HCP/NCCP that would result in minimal individual and cumulative impacts on the aquatic environment and have been authorized under the CARP. HCP/NCCP covered activities are described briefly below and in greater detail in Chapter 2.6 of the HCP/NCCP.

1. **Valley Potential Future Growth (PFG) Area:** Discharges of dredged and/or fill material into waters of the U.S. associated with rural and urban land uses within the Valley PFG area in Plan Area A1, as shown on the May 2020, *Figure 2-1 Plan Area Components, Placer County Conservation Program – EIS/EIR*. Specific activities included in this PGP within the Valley PFG include those covered activities identified in Chapter 2.6, Section 2.6.1 of the HCP/NCCP.

2. **Valley Conservation and Rural Development Area:** Discharges of dredged and/or fill material into waters of the U.S. associated with rural and urban land uses within the Valley Conservation and Rural Development Area in Plan Area A2, as shown on the 2020, *Figure 2-1 Plan Area Components, Placer County Conservation Program – EIS/EIR*. Specific activities included in this PGP within the Valley Conservation and Rural Development Area include those covered activities identified in Chapter 2.6, Section 2.6.2 of the HCP/NCCP.

3. **Foothills PFG Area:** Discharges of dredged and/or fill material into waters of the U.S. associated with rural and urban land uses within the Foothills PFG area in Plan Area A3, as shown on the May 2020, *Figure 2-1 Plan Area Components, Placer County Conservation Program – EIS/EIR*. Specific activities included in this PGP within the Foothills PFG include those covered activities identified in Chapter 2.6, Section 2.6.3 of the HCP/NCCP.

4. **Foothills Conservation and Rural Development:** Discharges of dredged and/or fill material into waters of the U.S. associated with rural and urban land uses within the Foothills Conservation and Rural Development area in Plan Area A4, as shown on the May 2020, *Figure 2-1 Plan Area Components, Placer County Conservation Program – EIS/EIR*. Specific activities included in this PGP within the Foothills Conservation and Rural Development Area include those covered activities identified in Chapter 2.6, Section 2.6.4 of the HCP/NCCP.

5. **Regional Public Programs:** Discharges of dredged and/or fill material into waters of the U.S. associated with rural and urban land uses within Plan Area A or B, as shown on the May 2020, *Figure 2-1 Plan Area Components, Placer County Conservation Program – EIS/EIR*. Specific activities included in this PGP for Regional Public Programs include those covered activities identified in Chapter 2, Section 2.6.5 of the HCP/NCCP.

6. **In-Stream Activities:** Activities resulting in the discharge of dredged and/or fill material into waters of the U.S. for activities within streams, reservoirs, or on-stream ponds in Plan Areas A or B, as shown on the May 2020, *Figure 2-1 Plan Area Components, Placer County Conservation Program – EIS/EIR*, and as described in Chapter 2, Section 2.6.6 of the HCP/NCCP, including, but not limited to, maintenance activities in the stream channel, along the streambank, and adjacent wetlands within the riparian corridor. These activities may include those described in 1 through 5 above.

7. **Conservation Programs:** Activities resulting in the discharge of dredged and/or fill material into waters of the U.S. associated with implementing the conservation strategy identified in Chapter 5 of the HCP/NCCP in Plan Area A or B, as shown on the May 2020, *Figure 2-1 Plan Area Components, Placer County Conservation Program – EIS/EIR*, including, but not limited to, habitat enhancement, restoration, creation, translocation, and reserve management, and other activities, as described in Chapter 2, Section 2.6.7 of the HCP/NCCP.

#### **EXCLUSIONS:**

1. This PGP may not be used to authorize discharges of dredged and/or fill material into waters of the U.S. for activities that do not require authorization under the CARP or implementing ordinances.

2. This PGP may not be used to authorize activities not covered by the HCP/NCCP unless such activities receive coverage pursuant to Section 8.9.6 of the HCP/NCCP.

3. This PGP may not be used to authorize activities that resulted in the discharge of dredged or fill material into waters of the U.S. without Department of the Army (DA) authorization.

4. This PGP may not be used to authorize activities that require Section 408 permission to alter or temporarily or permanently occupy or use a Corps' federally authorized Civil Works projects under 33 USC 408.

#### **TERMS OF AUTHORIZATION:**

1. **Activity Completion:** Activities authorized by this office under this PGP are valid until the expiration date of the PGP or the expiration date of the CARP authorization issued by the Plan Permittee, whichever occurs sooner.

2. Applying for PGP Authorization: Prior to commencing a proposed activity, you shall notify Placer County or the City of Lincoln as required in the CARP and implementing ordinances, in accordance with PGP General Condition number 1 (*Notification*).

3. Compliance with HCP/NCCP Conditions: Activities to be authorized under this PGP must be Covered Activities as identified above and Chapter 2.6 of the HCP/NCCP, and must comply with any applicable terms and conditions contained in the HCP/NCCP, CARP, and implementing ordinances. You must receive written concurrence from Placer County or the City of Lincoln that the proposed project is eligible for coverage under the HCP/NCCP. Compliance with the HCP/NCCP requires you to implement the applicable and appropriate avoidance and minimization measures contained in Chapter 6 of the HCP/NCCP, and other applicable terms and conditions as contained in the HCP/NCCP.

4. Discretionary Authority: This office has the discretion to suspend, modify, or revoke authorizations under this PGP. This discretionary authority may be used by this office to further condition or restrict the applicability of the PGP for cases in which it has concerns associated with the Clean Water Act Section 404(b)(1) Guidelines, or regarding any factor of the public interest. Should the Corps determine that a proposed activity may have more than minimal individual or cumulative adverse impacts to waters of the U.S. or otherwise be contrary to the public interest, the Corps will modify the authorization to reduce or eliminate those adverse effects, or notify you that the proposed activity is not authorized by the PGP and provide instructions on how to apply for authorization under another type of DA permit. Activities not meeting the terms and conditions of this permit may be authorized through another type of permit from this office, such as a Nationwide Permit, Regional General Permit, Letter of Permission, or Standard Permit. This office will determine on a case-by-case basis, as needed, whether an activity has a more than minimal impact, individually or cumulatively, on the aquatic environment or may be contrary to the public interest. This office may restore authorization under the PGP at any time it determines the reason for asserting discretionary authority has been resolved or satisfied by a condition, project modification, or new information. This office may also use its discretionary authority to modify, suspend, or revoke the PGP at any time.

5. Avoidance and Minimization: Impacts to waters of the U.S. shall be avoided and minimized to the maximum extent practicable. For purposes of the PGP, notwithstanding this office's discretionary authority described above, this term shall be considered satisfied when you have designed and implemented activities to comply with all applicable avoidance and minimization measures contained in both Chapters 5 and 6 of the HCP/NCCP, the CARP, and local implementing ordinances.

6. Single and Complete Project: The activity must be a single and complete linear or non-linear project, as defined in the Section F of the March 15, 2021, Federal Register Notice for *Reissuance and Modification of Nationwide Permits; Final Rule* (86 FR 2744), which can be found at: <https://www.federalregister.gov/documents/2021/01/13/2021-00102/reissuance-and-modification-of-nationwide-permits>.

7. Impact Thresholds for Losses of Waters of the U.S.: Loss of waters of the U.S., including the loss of streambed, shall be determined using the definition in Section F of the March 15, 2021, Federal Register Notice for *Reissuance and Modification of Nationwide Permits; Final Rule* (86 FR 2744), which can be found at: <https://www.federalregister.gov/documents/2021/01/13/2021-00102/reissuance-and-modification-of-nationwide-permits>.

a. Subject to the limitations identified in 7(a)(1) through (3), 7(b), and 7(c) below, this PGP does not authorize the loss of greater than 3.0 acres of waters of the U.S. or 500 linear feet of stream

bed for each single and complete project. The limit for loss of streambed does not apply to jurisdictional ditches or canals, unless the ditch or canal is a relocated or channelized stream, as verified by this office). The acreage of loss of streambed for streams and/or ditches shall be included in the acreage threshold for loss of waters of the U.S.

(1) The loss of vernal pool type waters of the U.S., as verified in writing by this office, resulting from authorization of a single and complete project under this PGP shall not exceed 1.0 acre.

(2) The loss of irrigated wetlands in existing and active rice fields that are considered to be waters of the U.S., as verified in writing by this office, resulting from authorization of a single and complete project under this PGP shall not exceed 3.0 acres.

(3) The loss of all other types of waters of the U.S. not identified in 6(a)(1) and/or 6(a)(2), as verified in writing by this office, resulting from authorization of a single and complete project under this PGP shall not exceed 2.0 acres.

b. With the exception of activities within the boundaries of the Placer Vineyards Specific Plan and backbone infrastructure area (PVSP, SPK-1999-00737), this PGP does not authorize the loss of vernal pool waters of the U.S. within the Lower American River 8-digit hydrologic unit code (HUC) watershed (HUC 18020111),

c. Not including activities within the boundaries of the PVSP the cumulative loss of waters of the U.S. authorized by this PGP shall not exceed 90 acres of waters of the U.S., and 15 acres of vernal pool waters of the U.S. Additional restrictions are listed in the General Conditions, below. The cumulative loss of waters of the U.S. authorized by this PGP within the PVSP area shall not exceed 50 acres or 15 acres of vernal pool waters of the U.S. within the Plan Area.

8. Section 401 Water Quality Certification: A general Section 401 water quality certification has been issued for this PGP. If a project proponent determines they cannot comply with one or more of the general water quality certification conditions, they must request individual water quality certification. A valid 401 water quality certification or waiver thereof is required to be obtained and evidence thereof in possession by the applicant, prior to the commencement of activities authorized by this PGP (see General Condition 10).

#### **GENERAL CONDITIONS:**

1. Notification: You shall submit an application to Placer County or the City of Lincoln in accordance with the procedures specified in the CARP and implementing ordinances. Notification is not required to be made to this office except as provided by General Conditions 5 or 6. Specific written authorization from this office is not required, although this office may assert discretionary authority to modify, suspend, or revoke specific authorizations under this PGP as described in Term 4.

2. Compensatory Mitigation: You shall conduct required compensatory mitigation for the loss of waters of the U.S. at the ratios specified in the *Compensatory Mitigation Standards* specified in the CARP and implementing ordinances (which mirror requirements contained in the HCP/NCCP), through the purchase of credits from the Western Placer County ILF program as described in Section 6.2.3 of the CARP.

3. Compliance Inspections: You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that the activity is being, or has been,



accomplished in accordance with the terms and conditions of the permit. This office will notify you at least 48 hours advance of an inspection.

4. Threatened and Endangered Species: No activity is authorized under this PGP which is likely to jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal ESA. Activities authorized under this PGP must comply with the mandatory terms and conditions of the Incidental Take Statement in the attached USFWS and NMFS Biological Opinions (BOs) for this PGP (USFWS #81420-2009-F-0520, dated December 1, 2020) (attachment 2) and (NMFS #WCRO-2020-03651, dated March 15, 2021) (attachment 3). These Incidental Take Statements contain mandatory terms and conditions to implement the reasonable and prudent measures that are associated with “incidental take” authorization under this PGP. Authorization under this PGP is conditional upon your compliance with all of the mandatory terms and conditions of the Incidental Take Statements. The reasonable and prudent measures associated with the “incidental take” authorization, as well as the mandatory terms and conditions, are derived from and consistent with the HCP/NCCP. Failure to comply with the mandatory terms and conditions of the Incidental Take Statements would constitute non-compliance with the PGP. The USFWS and NMFS are the appropriate authorities to determine compliance with the mandatory terms and conditions of their Incidental Take Statements, the Biological Opinions, and with the ESA. You must comply with all applicable mandatory terms and conditions of these Incidental Take Statements, including those ascribed to this office.

5. Historic Properties: You are not authorized to initiate any activities in waters of the U.S. under this PGP 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. If NHPA compliance is not addressed programmatically, (e.g., by a Programmatic Agreement (PA)), you must notify this office 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. Such notification may be conducted by and through the local implementing agency (i.e. Placer County or the City of Lincoln). The notification shall consist of the application identified in General Condition 1. This office may require the preparation of a cultural resources report, if not yet prepared, and will consult with the State Historic Preservation Officer (SHPO), as appropriate, following the policy and procedural standards of 33 CFR Part 325 Appendix C. This office's determination of compliance with the NHPA, including completed consultation with the SHPO, as appropriate, will be provided to you and Placer County or the City of Lincoln. Should a memorandum of agreement (MOA) be required in association with a determination of “adverse effect to historic properties,” you shall comply with the terms and conditions of the MOA.

6. Tribal Rights: You shall ensure the activity, or its operation does not impair reserved Tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights. You are not authorized to initiate any activities in waters of the U.S. that have the potential to impair tribal rights under this PGP until this office has completed necessary tribal coordination/consultation or has determined the proposed action does not impair Tribal rights, unless tribal coordination/consultation is addressed programmatically (e.g., by a PA).

7. Permit Transfer: If the property associated with this permit is sold, you shall transfer the verification to the new owner by submitting a letter to Placer County or the City of Lincoln, with a copy provided to this office, to validate the transfer. A copy of the CARP authorization must be attached to the letter, and the letter must contain the name and address of the transferee, as well as the following statement and signature of the transferee:

When the structures or work authorized by this programmatic general permit (PGP) are still in existence at the time the property is transferred, the terms and conditions of this PGP, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this PGP and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

\_\_\_\_\_  
(Transferee)

\_\_\_\_\_  
(Date)

8. Wetland and Stream Avoidance and Minimization: You shall establish wetland and *Stream System* avoidance and minimization measures as described in the HCP/NCCP, CARP and implementing ordinances. Associated terms of the local CARP and implementing ordinances concerning avoidance and minimization measures, including (but not limited to) land use, allowable uses within the *Stream System*, exemptions, and waivers shall apply as described in the CARP and implementing ordinances. These terms shall meet or exceed all applicable standards and terms contained within Chapter 6 of the HCP/NCCP.

9. Unanticipated Discovery: If you discover any previously unknown historic, cultural or archeological remains and/or artifacts while accomplishing the activity authorized by this PGP, you shall immediately notify this office of what has been found, and to the maximum extent practicable, shall avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. Notification to this office shall include a copy of the CARP authorization issued by Placer County or the City of Lincoln. This office 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.

10. Water Quality Certification: You shall comply with all terms and conditions of the attached October 16, 2020, Section 401 General Water Quality Certification (WDID# 5A31CR00534) (attachment 4) issued by the Central Valley Regional Water Quality Control Board, which is expressly incorporated as a condition of this permit. If you cannot comply with the terms and conditions of this water quality certification, then you must obtain individual water quality certification, or waiver thereof, for the proposed discharge in order for the activity to be authorized by this PGP.

#### **FURTHER INFORMATION:**

1. Congressional Authorities: Section 404 of the Clean Water Act (33 U.S.C. 1344)
2. Limits of this authorization:
  - a. This office has authority to determine if an activity complies with the terms and conditions of the PGP.
  - b. This permit does not obviate the need to obtain other federal, state, or local authorizations required by law.
  - c. This permit does not grant any property rights or exclusive privileges.

- d. This permit does not authorize any injury to the property or rights of others.
- e. This permit does not authorize interference with any existing or proposed federal projects.

3. Limits of Federal Liability: In issuing this permit, 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.

4. Reliance on Applicant's Data: The determination of this office that issuance of this PGP is not contrary to the public interest was made in reliance on the information provided by the HCP/NCCP Plan Permittees.

5. Reevaluation of Permit Decision: This office may reevaluate its decision on this PGP at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

- a. You fail to comply with the terms and conditions of this permit.
- b. The information provided by you in support of a permit application proves to have been false, incomplete, or inaccurate (see 4 above).
- c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

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 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5.

**PERMIT DURATION**: This PGP is valid for five (5) years from the date of issuance. It will expire on May 18, 2026. At least sixty (60) calendar days prior to expiration, this office will issue a public notice, with an opportunity for public comment, describing the reasons for reissuing the PGP for another five years with or without modification, or not reissuing the PGP. If this office has not reissued the PGP by the expiration date, the PGP will no longer be valid. This PGP may also be modified, suspended, or revoked by this office at any time deemed necessary. In such instance, this office will issue a public notice concerning the proposed action. Authorizations under this PGP are valid until the permit expires.

**CONTACTS AND ADDITIONAL INFORMATION:** For additional information about this PGP, please contact this office by phone at 916-557-5250, or by email at [SPKRegulatoryMailbox@usace.army.mil](mailto:SPKRegulatoryMailbox@usace.army.mil). For an updated list of contacts, please visit our website at: <http://www.spk.usace.army.mil/missions/regulatory>.

**ATTACHMENTS:**

1. *Figure 1-1, Plan Area, Placer County Conservation Program – EIS/EIR (May 2020)*
2. *Biological and Conference Opinion on U.S. Fish and Wildlife Service Proposed Issuance of a Section 10(a)(1)(B) Permit for the Western Placer County Habitat Conservation Plan/Natural Community Conservation Plan and U.S. Army Corps of Engineers Proposed Authorization and Implementation of a Clean Water Act Section 404 Permit Strategy Aligned with the Placer County Conservation Program (December 1, 2020; USFWS File Number 81420-2009-F-0520).*
3. *Intra-Service Endangered Species Act Section 7 Consultation (WCR-2020-00XXX) for the Issuance of section 10(a)(1)(B) Incidental Take Permit for the Placer County Conservation Program Habitat Conservation Plan authorizing take of California Central Valley steelhead (*Oncorhynchus mykiss*), Central Valley fall-run Chinook salmon (*O. tshawytscha*), and Central Valley late fall-run Chinook salmon (*O. tshawytscha*) and documentation of Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response (March 15, 2021; NMFS File Number WCRO-2020-03651).*
4. *Central Valley Regional Water Quality Control Board, General Order No. R5-2020-0048 Waste Discharge Requirements and Clean Water Act Section 401 Water Quality Certification (October 16, 2020; WDID# 5A31CR00534).*

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




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Michael S. Jewell  
Chief, Regulatory Division  
Sacramento District

May 18, 2021

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Date

# APPENDIX C

*PCWA RGP 19*



# Western Placer County HCP/NCCP - PCWA Regional General Permit 19

U.S. ARMY CORPS OF ENGINEERS

BUILDING STRONG®

## MINIMAL IMPACT COVERED ACTIVITIES BY PLACER COUNTY WATER AGENCY UNDER THE HABITAT CONSERVATION PLAN/NATURAL COMMUNITY CONSERVATION PLAN

**EFFECTIVE: May 18, 2021**

**EXPIRES: May 18, 2026**

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The U.S. Army Corps of Engineers, Sacramento District, hereby issues Regional General Permit (RGP) 19 for covered activities conducted by the Placer County Water Agency (PCWA) under the Western Placer County Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP), that result in the discharge of dredged and/or fill material into waters of the United States (U.S.) resulting in no more than minimal individual or cumulative impacts.

Note: The term "you" and its derivatives, as used in this RGP, means the permittee (PCWA) or any future transferee. The term "this office" refers to the appropriate U.S. Army Corps of Engineers, Sacramento District office identified in the *Contacts and Additional Information* section below. After you receive written verification for your project under this RGP from this office, you are authorized to perform that work in accordance with the terms and conditions specified below, and any project specific special conditions included in the written verification.

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

**ACTION ID:** SPK-2005-00485

**AUTHORITIES:** Section 404 of the Clean Water Act (CWA 404) for the discharge of dredged or fill material in waters of the United States.

**LOCATION:** Activities authorized under this RGP would occur within the Placer County Conservation Program (PCCP) Plan Area boundaries. The PCCP Plan Area encompasses approximately 270,000 acres within western Placer County and eastern Sutter County. Within western Placer County, the Plan Area is bounded on the north by Nevada and Yuba Counties, on the east by the City of Auburn and California Highway 49, on the south by Sacramento County, and on the west by Sutter County. Activities conducted may also be located in the Cities of Auburn, Loomis, Rocklin, and Roseville. Within Sutter County, the Plan Area includes 1,724 acres along the Racoon Creek floodplain, and 33 miles of Auburn Ravine, Racoon Creek, Cross Canal, and East Side Canal. The Plan Area Boundaries can be seen on the attached May 2020, *Figure 1-1, Plan Area, Placer County Conservation Program – EIS/EIR* (attachment 1), prepared by ICF.

**ACTIVITIES COVERED:** This RGP authorizes the discharge of dredged and/or fill material into waters of the U.S. associated with construction, maintenance, expansion, or operational activities conducted by you, provided the activities comply with the HCP/NCCP and Placer County Aquatic Resources Program (CARP). This RGP authorizes only those activities that require a DA permit under Section 404 of the Clean Water Act (e.g. the activity would result in a discharge of dredged and/or fill material into waters of the U.S. and/or the activity would not be exempt under Section 404(f) of the Clean Water Act). Activities authorized include:

U.S. Army Corps of Engineers, Sacramento District  
1325 J Street, Room 1350, Sacramento, CA 95814-2922  
[www.spk.usace.army.mil/Missions/Regulatory.aspx](http://www.spk.usace.army.mil/Missions/Regulatory.aspx)

1. Utility lines: Permanent or temporary discharges of dredged and/or fill material into waters of the U.S. for the construction, expansion, maintenance, or operation of utility lines.
2. Water Treatment Plants: Permanent or temporary discharges of dredged and/or fill material into waters of the U.S. for the construction, expansion, maintenance, or operation of water treatment plants.
3. Energy Supply: Permanent or temporary discharges of dredged and/or fill material into waters of the U.S. for the construction, expansion, maintenance, or operation of power plants or generators.
4. Metering Stations: Permanent or temporary discharges of dredged and/or fill material into waters of the U.S. for the construction, expansion, maintenance, or operation of metering stations.
5. Water Storage Tanks: Permanent or temporary discharges of dredged and/or fill material into waters of the U.S. for the construction, expansion, maintenance, or operation of water storage tanks.
6. Intake and Water Diversion Structures: Permanent or temporary discharges of dredged and/or fill material into waters of the U.S. for the construction, expansion, maintenance, or operation of intake structures and water diversion structures.
7. Outfall Structures: Permanent or temporary discharges of dredged and/or fill material into waters of the U.S. for the construction, expansion, maintenance, or operation of outfall structures.
8. Water Systems Facilities Center: Permanent or temporary discharges of dredged and/or fill material into waters of the U.S. for the construction, expansion, maintenance, or operation of water systems facilities centers. Structures associated with a facilities center include, but are not limited to warehouses, fabrication shops, crew buildings, administration buildings, vehicle/equipment wash areas, fuel stations, and associated infrastructure, including utilities, parking areas, and access roads/driveways.
9. Corporation Yards: Permanent or temporary discharges of dredged and/or fill material into waters of the U.S. for the construction, expansion, maintenance, or operation of corporation yards. Structures associated with a corporation yard include, but are not limited to, warehouses, lay-down areas for storage, and associated infrastructure, including utilities, parking areas, and access roads/driveways.
10. Pump Stations: Permanent or temporary discharges of dredged and/or fill material into waters of the U.S. for the construction, expansion, maintenance, or operation of pump stations.
11. Wells: Permanent or temporary discharges of dredged and/or fill material into waters of the U.S. for the construction, expansion, maintenance, or operation of water supply wells.
12. Bank Stabilization: Permanent or temporary discharges of dredged and/or fill material into waters of the U.S. for the construction or maintenance of bank stabilization within the immediate vicinity of any in-stream structures or fills associated with producing or providing water to residents and businesses of Placer County.

13. Sediment and Debris Removal: Permanent or temporary discharges of dredged and/or fill material into waters of the U.S. for the removal of sediment from streams, reservoirs, canals, ditches, or other waters of the U.S. within 200 feet from water supply structures or fills managed by PCWA.

14. Access and Staging: Permanent or temporary discharges of dredged and/or fill material into waters of the U.S. for the construction, expansion, maintenance, or operation of access and staging areas.

15. Canals and Ditches: Permanent or temporary discharges of dredged and/or fill material into waters of the U.S. for the construction, lining, expansion, maintenance, or operation of water supply canals or ditches.

16. Berm Maintenance: Permanent or temporary discharges of dredged and/or fill material into waters of the U.S. for the construction, expansion, maintenance, or operation of reservoir and canal berms.

17. Linear Transportation Projects: Permanent or temporary discharges of dredged and/or fill material into waters of the U.S. for the construction, expansion, maintenance, or operation of linear transportation projects associated with water supply projects.

18. Minor Discharges: Permanent or temporary discharges of dredged and/or fill material into waters of the U.S. for the construction, expansion, maintenance, or operation of other structures, fills, or facilities not specifically listed above, associated with producing or providing water to residents and businesses of Placer County, as identified in the HCP/NCCP.

#### **EXCLUSIONS:**

1. This RGP may not be used to authorize discharges of dredged and/or fill material into waters of the U.S. for activities that are not conducted by you.

2. This RGP may not be used to authorize activities not covered by the HCP/NCCP as identified in Chapter 2 of the HCP/NCCP.

#### **TERMS OF AUTHORIZATION:**

1. Activity Completion: Activities authorized by this office under this RGP are valid until the expiration date of the RGP or by the date identified by the Corps in the verification letter, whichever is soonest.

2. Applying for RGP Authorization: Prior to commencing a proposed activity, you shall submit a complete pre-construction notification (PCN) containing the information identified in *PROCEDURES* below. No discharge of dredged and/or fill material into waters of the U.S. shall commence until this office has provided written verification that the activity is authorized under this RGP.

3. Compliance with HCP/NCCP Conditions: Activities to be authorized under this RGP must be covered activities as identified in Chapter 2 of the HCP/NCCP and must comply with any applicable terms and conditions contained in the HCP/NCCP and this RGP. You must provide information to support a determination that the proposed project is eligible for coverage under the



HCP/NCCP to this office with the PCN required in *PROCEDURES* below. Compliance with the HCP/NCCP requires you to implement the applicable and appropriate avoidance and minimization measures contained in Chapter 6 of the HCP/NCCP, and other applicable terms and conditions as contained in the HCP/NCCP.

4. Discretionary Authority: This office has the discretion to suspend, modify, or revoke authorizations under this RGP. This discretionary authority may be used by this office to 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 factor of the public interest. Should this office 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, this office will modify the authorization to reduce or eliminate those adverse effects, or notify you that the proposed activity is not authorized by the RGP and provide instructions on how to apply for authorization under another type of DA permit. Activities not meeting the terms and conditions of this permit may be authorized through another type of permit from this office, such as a Nationwide Permit (NWP), Letter of Permission (LOP) or Standard Permit (SP). This office will determine on a case-by-case basis, as needed, whether an activity has more than minimal impact, individually or cumulatively, on the aquatic environment or may be contrary to the public interest. This office may restore authorization under the RGP at any time it determines the reason for asserting discretionary authority has been resolved or satisfied by a condition, project modification, or new information. This office may also use its discretionary authority to modify, suspend, or revoke the RGP at any time.

5. Avoidance and Minimization: Impacts to waters of the U.S. shall be avoided and minimized to the maximum extent practicable. For purposes of the RGP, notwithstanding this office's discretionary authority described above, this term shall be considered satisfied when you have designed and implemented activities to comply with all applicable avoidance and minimization measures contained in Chapters 5 and 6 of the HCP/NCCP.

6. Single and Complete Project: The activity must be a single and complete linear or non-linear project, as defined in the Section F of the March 15, 2021, Federal Register Notice for Reissuance and Modification of Nationwide Permits; Final Rule (86 FR 2744), which can be found at: <https://www.federalregister.gov/documents/2021/01/13/2021-00102/reissuance-and-modification-of-nationwide-permits>.

7. Thresholds: Loss of waters of the U.S., including the loss of streambed, shall be determined using the definition in Section F of the March 15, 2021, Federal Register Notice for *Reissuance and Modification of Nationwide Permits; Final Rule* (86 FR 2744), which can be found at: <https://www.federalregister.gov/documents/2021/01/13/2021-00102/reissuance-and-modification-of-nationwide-permits>.

a. The loss of waters of the U.S., including wetlands, resulting from authorization of a single and complete project under this RGP shall not exceed a total of 0.25 acre, and the loss of streambed shall not exceed 300 linear feet of jurisdictional stream, and/or a total of 1,000 linear feet of jurisdictional irrigation, water supply, or drainage ditch or canal (provided the ditch or canal is not a relocated or channelized stream, as verified by this office), unless this office waives the linear foot requirement by making a written determination concluding the discharge will result in no

more than minimal individual or cumulative effects. The acreage of loss of streambed for streams, ditches, and/or canals shall be included in the acreage threshold for loss of waters of the U.S. The loss of waters of the U.S. and loss of streambed shall not include activities that do not require DA authorization (i.e. would not result in a discharge of fill material into waters of the U.S., or are exempt under Section 404(f) of the Clean Water Act).

b. Bank stabilization activities are limited to no more than 500 feet in length along the bank of jurisdictional streams and no more than 1,000 feet in length along the bank of jurisdictional irrigation, water supply, or drainage ditches or canals (provided the ditch or canal is not a relocated or channelized stream, as verified by this office), unless this office waives this requirement by making a written determination concluding the discharge will result in no more than minimal individual or cumulative effects.

c. The cumulative loss of waters of the U.S. authorized under this RGP shall not exceed 3 acres of waters of the U.S. (including the acreage of loss of streambed), within the Plan Area. The cumulative loss of vernal pool waters of the U.S. authorized by this RGP shall not exceed 1 acre.

d. The removal of sediment from the vicinity of existing structures or fills shall be limited to the minimum necessary to restore the waterway in the vicinity of the structure or fill to the approximate dimensions that existed when the structure was built, but shall not extend more than 200 feet in any direction from the structure. This limit does not apply to maintenance dredging to remove accumulated sediments blocking or restricting outfall and intake structures or to maintenance dredging to remove accumulated sediments from canals associated with outfall and intake structures. All dredged and/or excavated fill material must be deposited and retained in an area that has no waters of the United States unless otherwise specifically approved by this office.

8. Section 401 Water Quality Certification: A general Section 401 water quality certification (WQC) has been issued for this RGP. If you determine you cannot comply with one or more of the general WQC conditions, you must request individual WQC. A valid 401 WQC, or waiver thereof, is required to be obtained and evidence thereof in possession by you, prior to the commencement of activities authorized by this RGP (see General Condition 20).

9. Reporting Requirements: You shall submit annual post-construction reports to this office documenting all activities covered under the RGP that were completed the previous year. The reports shall be submitted no later than January 30, and contain documentation related to activities completed between January 1 and December 31 of the previous year. The reports shall include: (a) the activity name; (b) DA permit number; (c) type of HCP/NCCP covered activity; (d) a full description of the work in waters of the U.S. that was completed, including acreage and/or linear feet of permanent and temporary discharges of dredged and/or fill material into waters of the U.S. (by aquatic resource type) and acreage and/or linear feet of loss of waters of the U.S. (by aquatic resource type); (e) evidence of your fulfillment of any CWA 404 compensatory mitigation requirements required by the RGP verification issued by this office, and (f) the cumulative acreage and/or linear feet loss of waters of the U.S. and loss of stream bed that has occurred under the RGP since its issuance.

10. Special conditions: This office may add special conditions to the verification letter to ensure that the activity will comply with the terms and conditions of the RGP, and that adverse impacts are individually and cumulatively minimal.

### **GENERAL CONDITIONS:**

1. Avoidance and Minimization Measures: You shall comply with all avoidance and minimization measures, terms, and other conditions as identified in Chapter 6 of the HCP/NCCP. You shall ensure impacts to waters of the U.S. within and adjacent to the stream system are avoided and minimized to the maximum extent practicable.
2. Compensatory Mitigation: You shall conduct required compensatory mitigation for the loss of waters of the U.S. at the ratios specified in Chapter 5 of the HCP/NCCP, through the purchase of credits from the Western Placer In-Lieu Fee Program (WPILF). Compensatory mitigation requirements will be specifically identified in the RGP verification letter issued by this office for the single and complete project.
3. Bed and Bank Stabilization: You shall ensure all bank stabilization activities involve either the sole use of native vegetation or other bioengineered design techniques (e.g. willow plantings, root wads, large woody debris, etc.), or a combination of hard-armoring (e.g. rip-rap) and native vegetation or bioengineered design techniques, unless specifically determined to be impracticable by this office. Information on why the sole use of vegetated techniques is not practicable must be provided in your PCN.
4. Equipment: You shall ensure heavy equipment working in wetlands is placed on mats or other measures, such as low-ground pressure equipment to minimize soil disturbance, are taken. You shall include information regarding methods to minimize soil disturbance in the PCN.
5. Fills within 100-Year Floodplains: You shall ensure the activity complies with applicable FEMA-approved state or local floodplain management requirements.
6. Limits of Disturbance: You shall clearly identify the limits of disturbance in the field with highly visible markers (e.g. construction fencing, flagging, silt barriers, etc.) prior to commencing construction activities in waters of the U.S. You shall maintain such identification properly until construction is completed and the soils have been stabilized. You are prohibited from any activity (e.g. equipment usage or materials storage) that may impact waters of the U.S. outside of the permit limits (as shown on the permit drawings).
7. Management of Water Flows: Unless otherwise specifically authorized by this office, you shall maintain the pre-construction course, condition, capacity, and location of open waters (e.g. rivers, streams, lakes, ponds). You must construct the activity to withstand expected high flows and ensure the proposed activity does 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. Activities that alter the pre-construction course, condition, capacity, and location of open waters may be authorized if this office makes a determination, based on the information you provide, that the alteration would result in no more than minimal individual or cumulative adverse effects. For areas containing existing linear transportation crossings or other structures in open waters, the pre-construction course, condition, capacity, and location of open waters shall be determined based on the upstream and downstream portions of the open waters.
8. Migratory Bird Breeding Areas: You shall ensure the activity avoids waters of the U.S. that serve as breeding areas for migratory birds to the maximum extent possible.
9. Suitable Fill: You shall ensure that fill material discharged into waters of the U.S. is free from toxic pollutants in toxic amounts (section 307 of the Clean Water Act). You shall ensure that

all fill material discharged into waters of the U.S. is clean and free of contaminants and noxious plants. You shall not discharge fresh cement or concrete unless it is placed in sealed forms, and specifically authorized by this office. Unsuitable fill material includes, but is not limited to, vehicle bodies, farm machinery, appliances and other metal objects, asphalt, biodegradable construction debris, tires, and concrete with exposed rebar.

10. Utility Lines: You shall construct all utility lines in accordance with the following:

a. You shall install utility lines by directional drilling, clear span, or other techniques that do not require a discharge of fill material into waters of the U.S. with perennial or intermittent flow, unless determined to be not practicable by this office.

b. You shall ensure the construction of utility lines does not result in draining any water of the U.S., including wetlands. This may be accomplished through the use of clay blocks, bentonite, or other suitable material (as approved by this office) to seal the trench. For utility line trenches, during construction, you shall remove and separately stockpile the top 6-12 inches of topsoil. Following installation of the utility line(s), you shall replace the stockpiled topsoil as the top layer and seed the area with native vegetation.

c. You shall stabilize (e.g., blanket and seed) all disturbed areas immediately adjacent to, and within 25 feet of, waters of the U.S. immediately upon completion of the utility line construction in waters of the U.S. at that location.

d. You shall restore temporarily disturbed construction areas in waters of the U.S. to pre-construction conditions, including grading to original contours and revegetating (with native vegetation or other appropriate vegetation approved by this office) within 30 days following completion of the discharge of dredged and/or fill material into waters of the U.S. authorized by this RGP. A brief restoration plan, which includes a contour topographic map, shall be submitted with the PCN.

11. Aquatic Life Movements: The following criteria shall apply to all linear transportation crossings (e.g. roads, trails, bridges, culverts) of streams:

a. For all activities in waters of the U.S. that are suitable habitat for Federally-listed fish species, including designated critical habitat for such species, you shall design all new or substantially reconstructed linear transportation crossings (e.g. roads, bridges, culverts) to ensure that the passage and/or spawning of fish is not hindered. In these areas, you shall employ bridge designs that span the stream or river, including pier-or pile-supported spans, or designs that use a bottomless arch culvert with a natural stream bed;

b. Unless determined to be not practicable by this office, you shall design all linear transportation crossings proposed to be replaced to match the approximate bankfull width and depth of upstream and downstream open waters; and,

c. You shall ensure all bank stabilization activities comply with General Condition 3.

12. Work in Standing or Flowing Waters: You shall not discharge dredged or fill material into standing or flowing waters, unless specifically authorized by this office. You may accomplish this through construction during the dry season or through dewatering of the work area. Any proposed

dewatering plan must be approved, in writing, by this office prior to commencing construction activities.

13. Compliance Inspections: You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that the activity is being, or has been, accomplished in accordance with the terms and conditions of the permit. This office will notify you at least 48 hours in advance of an inspection.

14. Threatened and Endangered Species: No activity is authorized under this RGP which is likely to jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal ESA. Activities authorized under this RGP must comply with the mandatory terms and conditions of the Incidental Take Statements in the attached USFWS and NMFS Biological Opinions (BOs) for this RGP (USFWS #81420-2009-F-0520, dated December 1, 2020) (attachment 2) and (NMFS #WCRO-2020-03651, dated March 15, 2021) (attachment 3). The Incidental Take Statements in these BOs contain 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 these Incidental Take Statements. Failure to comply with these mandatory terms and conditions would constitute non-compliance with the RGP. The USFWS and NMFS are the appropriate authorities to determine compliance with the terms and conditions of their Incidental Take Statements, Biological Opinions, and with the ESA. You must comply with all applicable mandatory terms and conditions of these Incidental Take Statements, including those ascribed to this office.

15. 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. Upon receipt of the PCN, if one has not been prepared, this office may determine a cultural resources report or other information is necessary to ensure compliance with Section 106 of the NHPA, and will request the necessary information within 30 days after receipt of the PCN. This office will consult with the State Historic Preservation Officer (SHPO), as appropriate, following the policy and procedural standards of 33 CFR Part 325 Appendix C. This office's determination of compliance with the NHPA, including completed consultation with the SHPO, as appropriate, will be provided to you. Should a memorandum of agreement (MOA) be required in association with a determination of "adverse effect to historic properties," you shall comply with the terms and conditions of the MOA.

16. Permit Transfer: If the property associated with this permit is sold, you shall transfer the verification to the new owner by submitting a letter to this office to validate the transfer. The letter must contain the name and address of the transferee, as well as the following statement and signature of the transferee:

When the structures or work authorized by this regional general permit (RGP) are still in existence at the time the property is transferred, the terms and conditions of this RGP, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this RGP and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

---

(Transferee)

\_\_\_\_\_  
(Date)

17. Wetland and Stream Setbacks: You shall establish wetland and stream setback and avoidance and minimization as described in the CARP and implementing ordinances. Associated terms of the local CARP ordinances concerning setbacks, including (but not limited to) land use, allowable uses within setbacks, exemptions, and waivers shall apply to all activities authorized by this RGP, as described in the CARP and implementing ordinances. Wetland and stream setbacks shall meet or exceed all applicable standards and terms contained within Chapter 6 of the HCP.

18. Tribal Rights: No activity or its operation shall impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights. You are not authorized to initiate any activities in waters of the U.S. that have the potential to impair tribal rights under this RGP until this office has completed necessary tribal coordination/consultation or has determined the proposed action does not impair tribal rights, unless tribal coordination/consultation is addressed programmatically (e.g., by a PA).

19. Unanticipated Discoveries: If you discover any previously unknown historic, cultural or archeological remains and/or artifacts while accomplishing the activity authorized by this RGP, you shall immediately notify this office of what has been found, and to the maximum extent practicable, shall avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. This office 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.

20. Water Quality Certification: You shall comply with all terms and conditions of the attached October 16, 2020, Section 401 General Water Quality Certification (WDID# 5A31CR00538) (attachment 4), which is expressly incorporated as condition of this permit. If you cannot comply with the terms and conditions of this 401 WQC, then you must obtain individual 401 WQC, or waiver thereof, for the proposed discharge in order for the activity to be authorized by this RGP.

### **PROCEDURES:**

1. You may choose to request a pre-application meeting with this office and other resource agencies prior to submittal of a PCN. To request a pre-application meeting, please contact this office as listed in the "Contacts" section of this document. A request for a pre-application meeting should contain the project name, type of project, county, approximately acreage of impacts to waters of the U.S., and the project proponent's contact information.

2. You shall submit a PCN to this office consisting of a written request for verification under this RGP. The PCN shall be submitted to this office in electronically. Electronic submittal of the PCN should be sent to: SPKRegulatoryMailbox@usace.army.mil. The PCN shall contain the following information in order to be considered complete:

a. A letter or a completed Department of the Army Permit Application Form (ENG 4345), requesting authorization under the RGP;

b. Contact information of the project proponent and designated agent or primary point of contact, including mailing address, email address, telephone number, and fax number (if applicable);

c. The applicable *Covered Activity* as identified in the HCP/NCCP;

d. A complete description of the proposed activity, including:

(1) The activity's purpose;

(2) Direct and indirect adverse environmental effects the activity would cause, including the anticipated amount of loss of each type of waters of the U.S. expected to result from the proposed activity, in acres and, for streams, linear feet;

(3) The amount (in cubic yards) and type of fill material proposed to be discharged into each type of water of the U.S.; and

(4) The amount (in acres) and length (in linear feet) of each type of waters of the U.S. to be permanently filled and the amount and length of each type of waters of the U.S. to be temporarily filled. For waters of the U.S. to be temporarily filled, include the approximate length of time the waters of the U.S. would be filled before restoration to pre-construction contours and conditions would occur;

e. The location of the activity (with latitude and longitude);

f. A brief narrative describing how the proposed activity would comply with all General Conditions of this RGP, a statement identifying why the General Condition does not apply or a description of why compliance with the General Condition is not practicable. Failure to comply with a General Condition may result in this office determining the proposed activity does not qualify for authorization under this RGP and will be evaluated under an alternative process;

g. For each applicable avoidance and minimization measure identified in Chapter 6 of the HCP/NCCP, a brief narrative describing how the activity would comply with each measure. Specifically, the narrative should describe how the proposed activity is in compliance with Avoidance and Minimization Measures associated with an aquatic resource as specified in the HCP;

h. 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. to the maximum extent practicable;

i. For all dewatering activities that propose structures or fill in waters of the U.S. that require authorization from this office:

(1) The proposed methods for dewatering;

(2) The equipment that would be used to conduct dewatering;

(3) The length of time the area is proposed to be dewatered;

(4) The area (in acres) and length (in linear feet) of waters of the U.S. of the dewatering structure and/or fill;

(5) The method for removal of the dewatering structure and/or fill; and

(6) The method for restoration of the waters of the U.S. affected by the structure or fill following construction;

j. For all temporary discharge of dredged and/or fill material into waters of the U.S.:

(1) The reason(s) why avoidance of temporary fill in waters of the U.S. is not practicable;

(2) A description of the proposed temporary fill, including the type and amount (in cubic yards) of material to be placed;

(3) The area (in acres) of waters of the U.S. and, for drainages (e.g. natural or relocated streams, creeks, rivers), the length (in linear feet) where the temporary fill is proposed to be placed; and,

(4) A proposed plan for restoration of the temporary fill area to pre-project contours and conditions, including a plan for the re-vegetation of the temporary fill area, if vegetation would be removed or destroyed by the proposed temporary fill;

k. For activities that propose to alter the pre-construction course, condition, capacity or location of open waters, the PCN shall include sufficient justification to determine that the proposed activity would result in a no more than minimal individual or cumulative adverse effects;

l. For replacement linear transportation crossings that would result in a reduction in the pre-construction bankfull width and depth of open waters of the U.S. at the crossing, as compared to the upstream and downstream open waters:

(1) Information on why it is not practicable to approximate the pre-construction bankfull width of the upstream and downstream open waters, and;

(2) Sufficient justification to determine that the reduction in the pre-construction bankfull width would result in a net increase in aquatic resource functions and services. Functions and services to be considered in the justification include, but are not limited to: short- or long-term surface water storage, subsurface water storage, moderation of groundwater flow or discharge, dissipation of energy, cycling of nutrients, removal of elements and compounds, retention of particulates, export of organic carbon, and maintenance of plant and animal communities.

m. A written statement identifying the amount and type of proposed compensatory mitigation proposed for the loss of each type of water of the U.S., or a statement identifying why compensatory mitigation should not be required;

n. Project Figures:

(1) A vicinity map clearly depicting the location of the proposed activity; and,



(2) A plan-view, and cross-section view drawing, clearly depicting the location, size, and dimensions of the proposed permanent or temporary discharge of fill material into waters of the U.S., and the location of all waters of the U.S. on-site. The drawings shall contain a title block, legend and scale, amount (in cubic yards) and area (in acres) of fill in Corps jurisdiction, including both permanent and temporary fills/structures. The ordinary high water mark should be shown (in feet) based on National Geodetic Vertical Datum (NGVD) or other appropriate referenced elevation;

(3) All drawings shall be prepared in accordance with the South Pacific Division February 2016, *Updated Map and Drawing Standards for the South Pacific Division Regulatory Program*, or most recent update (available on the South Pacific Division website at: <http://www.spd.usace.army.mil/Missions/Regulatory/PublicNoticesandReferences.aspx/>);

o. Numbered and dated pre-project color photographs showing a representative sample of waters proposed to be impacted on the site, and all waters of the U.S. proposed to be avoided on and immediately adjacent to the project site. The compass angle and position of each photograph shall be identified on the plan-view drawing(s);

p. A delineation of waters of the U.S., including wetlands, for the project site. Wetlands shall be delineated using the Corps 1987 Wetland Delineation Manual and 2008 Arid West Region Regional Supplement, or most recent manual in effect at the time of the PCN. The delineation report shall be conducted 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](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 this office, unless specifically waived by this office;

q. If available, one hard copy and one electronic copy of a cultural resources report meeting the Corps *Guidelines for Compliance with Section 106 of the National Historic Preservation Act of 1966* ([http://www.spk.usace.army.mil/Portals/12/documents/regulatory/sec-106-tribal/FINAL\\_2014-03-24\\_Section-106-Guidelines.pdf](http://www.spk.usace.army.mil/Portals/12/documents/regulatory/sec-106-tribal/FINAL_2014-03-24_Section-106-Guidelines.pdf)). If a cultural resources report has not been prepared, the PCN shall include a statement to that effect; and,

r. For any proposals to waive the linear foot limits identified in *Term 7(a)* and *7(b)*, the PCN shall contain information on why the proposed activity would result in no more than minimal individual or cumulative effects, including the following:

(1) A narrative description of the stream. This should include known information on: volume and duration of flow; the approximate length, width, and depth of the waterbody and characteristics observed associated with an ordinary high water mark (e.g. bed and bank, wrack line or scour marks); a description of the adjacent vegetation community and a statement regarding the wetland status of the adjacent areas (i.e. wetland, non-wetland); surrounding land use; water quality; issues related to cumulative impacts in the watershed, and; any other relevant information;

(2) An analysis of the proposed impacts to the waterbody, in accordance with Procedure 2(d)(2);

(3) Measures taken to avoid and minimize losses to waters of the U.S., including other methods of constructing the proposed activity(s); and

(4) A compensatory mitigation plan describing how the unavoidable losses are proposed to be offset;

3. Within 15-days following receipt of the PCN, this office will notify you via letter or email if:

a. The proposed activity may qualify for authorization under the RGP;

b. The PCN is complete; and,

c. If consultation under Section 7 of the ESA, Section 305(b)(4)(b) of the Magnuson-Stevens Fisheries Conservation and Management Act (MSFCMA) and/or Section 106 of the National Historic Preservation Act (NHPA) is required; or,

d. If the proposed activity does not qualify for authorization under the RGP, the notification will identify specific modifications necessary for the proposed activity to qualify for authorization under the RGP, and/or instructions on how to apply for authorization under a different permit. If the PCN is not complete, the notification will specifically identify the additional information required to be submitted. If the PCN is complete, but additional information is necessary to make a decision, the notification will specifically identify the additional information required to be submitted.

4. Within 30-days following receipt of a complete PCN, and additional information necessary to complete the consultation(s), this office will initiate any required consultations under Section 7 of the ESA, Section 305(b)(4)(B) of the MSFCMA, and/or Section 106 of the NHPA;

5. Within 15-days following completion of any required ESA/NHPA/MSFCMA consultations and the 401 WQC process (if individual 401 WQC is requested), or, if consultation and individual 401 WQC is not required, within 30-days following receipt of a complete PCN, this office will notify you via letter if the activity is authorized under this RGP, subject to the terms and conditions of the authorization; and,

6. No work may proceed under the authority of this RGP until you have been notified, in writing, by this office that the activity is authorized.

#### **FURTHER INFORMATION:**

1. Congressional Authorities: Section 404 of the Clean Water Act (33 U.S.C. 1344)

2. Limits of this authorization:

a. This permit does not obviate the need to obtain other federal, state, or local authorizations required by law.

b. This permit does not grant any property rights or exclusive privileges.

c. This permit does not authorize any injury to the property or rights of others.

d. This permit does not authorize interference with any existing or proposed federal projects.

3. Limits of Federal Liability: In issuing this permit, 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.

4. Reliance on Applicant's Data: The determination of this office that issuance of this permit is not contrary to the public interest was made in reliance on the information you provided.

5. Re-evaluation of Permit Decision: This office may reevaluate its decision on this permit at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

- a. You fail to comply with the terms and conditions of this permit.
- b. The information provided by you in support of your permit application proves to have been false, incomplete, or inaccurate (see 4 above).
- c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

Such a re-evaluation may result in a determination that it is appropriate to use the suspension, modification, and revocation procedures contained in 33 CFR 325.7 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

6. Activities not meeting the terms and conditions of this permit may be authorized through another type of permit from this office, such as a NWP or LOP. This office 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. This office may include additional special conditions to a verification under this permit to ensure the activity has minimal impact.

**PERMIT DURATION**: This RGP is valid for five (5) years from issuance, and will expire on May 18, 2026. This office may reevaluate the terms and conditions of this RGP at any time it deems necessary to protect the public interest. At least sixty (60) calendar days prior to expiration, this

office will issue a public notice, with an opportunity for public comment, describing the reasons for reissuing the RGP for another five years with or without modification, or not reissuing the RGP. If this office has not reissued the RGP by the expiration date, the RGP will no longer be valid. This RGP may also be modified, suspended, or revoked by this office at any time deemed necessary. In such instance, this office will issue a public notice concerning the proposed action. This RGP may be reissued, after public notice and documentation of the decision. Activities authorized by this RGP must be verified in writing by this office. Written verifications will remain valid until this RGP expires.

**CONTACTS AND ADDITIONAL INFORMATION:** PCNs may be submitted electronically to: [SPKRegulatoryMailbox@usace.army.mil](mailto:SPKRegulatoryMailbox@usace.army.mil). For questions, please contact this office by phone at 916-557-5250, or by email at: [SPKRegulatoryMailbox@usace.army.mil](mailto:SPKRegulatoryMailbox@usace.army.mil). For an updated list of contacts, please visit our website at: <http://www.spk.usace.army.mil/missions/regulatory>.

**ATTACHMENTS:**

1. *Figure 1-1, Plan Area, Placer County Conservation Program – EIS/EIR (May 2020)*
2. *Biological and Conference Opinion on U.S. Fish and Wildlife Service Proposed Issuance of a Section 10(a)(1)(B) Permit for the Western Placer County Habitat Conservation Plan/Natural Community Conservation Plan and U.S. Army Corps of Engineers Proposed Authorization and Implementation of a Clean Water Act Section 404 Permit Strategy Aligned with the Placer County Conservation Program (December 1, 2020; USFWS File Number 81420-2009-F-0520).*
3. *Intra-Service Endangered Species Act Section 7 Consultation (WCR-2020-00XXX) for the Issuance of section 10(a)(1)(B) Incidental Take Permit for the Placer County Conservation Program Habitat Conservation Plan authorizing take of California Central Valley steelhead (*Oncorhynchus mykiss*), Central Valley fall-run Chinook salmon (*O. tshawytscha*), and Central Valley late fall-run Chinook salmon (*O. tshawytscha*) and documentation of Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response (March 15, 2021; NMFS File Number WCRO-2020-03651).*
4. *Central Valley Regional Water Quality Control Board, General Order No. R5-2020-0049 Waste Discharge Requirements and Clean Water Act Section 401 Water Quality Certification (October 16, 2020; WDID# 5A31CR00538).*

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




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Michael S. Jewell  
Chief, Regulatory Division  
Sacramento District

May 18, 2021

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Date

# APPENDIX D

*ILF RGP 20*



# Placer County HCP/NCCP – WPILF Program Regional General Permit 20

U.S. ARMY CORPS OF ENGINEERS

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## MINIMAL IMPACT ACTIVITIES CONDUCTED UNDER THE WESTERN PLACER COUNTY IN-LIEU FEE PROGRAM COVERED BY THE WESTERN PLACER COUNTY HABITAT CONSERVATION PLAN/ NATURAL COMMUNITY CONSERVATION PLAN

**EFFECTIVE: May 18, 2021**

**EXPIRES: May 18, 2026**

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The U.S. Army Corps of Engineers, Sacramento District (Corps), hereby issues Regional General Permit (RGP) 20 for activities conducted under the Western Placer County In-lieu Fee (WPILF) Program and covered by the Western Placer County Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP), that result in the discharge of dredged and/or fill material into waters of the United States (U.S.) resulting in no more than minimal individual and cumulative impacts. The activities authorized would be conducted to meet the *Conservation Strategy* as identified in the HCP/NCCP.

An activity is authorized under this RGP after this office approves the individual In-lieu fee project under the WPILF Program.

Note: The term "you" and its derivatives, as used in this RGP, means the WPILF Program Sponsor or any future transferee. The term "this office" refers to the appropriate U.S. Army Corps of Engineers, Sacramento District office identified in the *Contacts and Additional Information* section below. After you receive written verification for your project under this RGP from this office, you are authorized to perform that work in accordance with the terms and conditions specified below, and any project specific special conditions included in the written verification.

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

**ACTION ID:** SPK-2005-00485

**AUTHORITY:** Section 404 of the Clean Water Act (CWA 404)

**LOCATION:** Activities authorized under this RGP would occur within the Placer County Conservation Program (PCCP) Plan Area boundaries. The PCCP Plan Area encompasses approximately 270,000 acres within western Placer County and eastern Sutter County. Within western Placer County, the Plan Area is bounded on the north by Nevada and Yuba Counties, on the east by the City of Auburn and California Highway 49, on the south by Sacramento County, and on the west by Sutter County. With the exception of activities conducted by the Placer County Water Agency (PCWA), the Plan Area in western Placer County excludes the Cities of Auburn, Loomis, Rocklin, and Roseville. Within Sutter County, the Plan Area includes 1,724 acres along the Racoon Creek floodplain, and 33 miles of Auburn Ravine, Racoon Creek, Cross Canal, and East Side Canal. The Plan Area Boundaries can be seen on the attached May 2020, *Figure 1-1, Plan Area, Placer County Conservation Program – EIS/EIR* (attachment 1), prepared by ICF.

**PURPOSE:** This RGP is intended to expedite authorization under Section 404 of the Clean Water Act for establishment, re-establishment, enhancement, or rehabilitation activities that result in a net increase in aquatic resource functions and services and are approved by this office under the WPILF Program. The RGP is premised on the approval of an activity by this office, in consultation with the IRT, under the WPILF Program, conducted by the Placer Conservation Authority (PCA) in partnership with the HCP/NCCP Permittees (Placer County, City of Lincoln, South Placer Regional Transportation Authority [SPRTA], and PCWA). This RGP eliminates the need for project applicants to seek separate authorization from this office for those activities approved by this office under the WPILF Program. This RGP will reduce time and paperwork, and improve efficiency for this office, PCA, and the HCP/NCCP Permittees for those activities approved under the WPILF Program.

**BACKGROUND:** The PCCP is a regional approach to address issues related to planned development and species habitat conservation, consisting of the HCP/NCCP, County Aquatic Resources Program (CARP), and the WPILF Program. The HCP/NCCP provides coverage for fourteen species of wildlife, including seven that are federally-listed as threatened or endangered. The U.S. Fish and Wildlife Service's Sacramento Field Office (USFWS) and National Marine Fisheries Service (NMFS) have approved the HCP/NCCP through a species incidental take permit (ITP) issued to the PCCP's Plan Permittees under Section 10 of the ESA. The CARP provides a program, implemented by Placer County and the City of Lincoln through local implementing ordinances, to evaluate activities that would impact aquatic resources considered to be waters of the U.S. or waters of the State. The WPILF Program provides compensatory mitigation for impacts associated with the Covered Activities, through funds paid to PCA.

**ACTIVITIES COVERED:** This RGP authorizes discharges of dredged and/or fill material into waters of the U.S. associated with aquatic resource establishment, re-establishment, enhancement, and/or rehabilitation activities, provided the activities result in a net increase in aquatic resource functions and services and are approved by this office under the WPILF Program.

**EXCLUSIONS:**

1. This RGP may not be used to authorize discharges of dredged and/or fill material into waters of the U.S. for activities that do not result in a net increase in aquatic resource functions and services.
2. This RGP may not be used to authorize discharges of dredged and/or fill material into waters of the U.S. for activities under the WPILF Program that are not approved by this office.

**TERMS OF AUTHORIZATION:**

1. **Activity Completion:** Activities authorized by this office under this RGP may be conducted until the expiration date of the RGP or by the date identified by the Corps in the approved WPILF project documentation appended to the WPILF Program instrument, whichever date is sooner.
2. **RGP Authorization:** The discharges of dredged and/or fill material into waters of the U.S. associated with implementation of the WPILF program are verified under this RGP when the Corps approves the WPILF project.
3. **Discretionary Authority:** This office has the discretion to suspend, modify, or revoke authorizations under this RGP. This discretionary authority may be used by this office to 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 factor of the public interest. Should this office determine that a proposed activity may have more than minimal individual or cumulative adverse impacts to waters of the U.S. or otherwise be contrary to the public interest, this office will modify the authorization to reduce or eliminate those adverse effects, or notify you that the proposed activity is not authorized by the RGP and provide instructions on how to apply for authorization under another type of DA permit. Activities not meeting the terms and conditions of this permit may be authorized through another type of permit from this office, such as a Nationwide Permit, Regional General Permit, Letter of Permission, or Standard Permit. This office will determine on a case-by-case basis, as needed, whether an activity has a more than minimal impact, individually or cumulatively, on the aquatic environment or may be contrary to the public interest. This office may restore authorization under the RGP at any time it determines the reason for asserting discretionary authority has been resolved or satisfied by a condition, project modification, or new information. This office may also use its discretionary authority to modify, suspend, or revoke the RGP at any time.

4. Avoidance and Minimization: Impacts to waters of the U.S. shall be avoided and minimized to the maximum extent practicable. For purposes of the RGP, notwithstanding this office's discretionary authority described above, this term shall be considered satisfied when you have designed and implemented activities to comply with all applicable avoidance and minimization measures contained in Chapters 5 and 6 of the HCP/NCCP.

5. Single and Complete Project: The activity must be a single and complete linear or non-linear project, as defined in the Section F of the March 15, 2021, Federal Register Notice for *Reissuance and Modification of Nationwide Permits; Final Rule* (86 FR 2744), which can be found at: <https://www.federalregister.gov/documents/2021/01/13/2021-00102/reissuance-and-modification-of-nationwide-permits>.

6. Section 401 Water Quality Certification: A general Section 401 water quality certification (WQC) has been issued for this RGP. If you determine you cannot comply with one or more of the general WQC conditions, you must request individual WQC. A valid 401 WQC, or waiver thereof, is required to be obtained and evidence thereof in possession by you, prior to the commencement of activities authorized by this RGP (see General Condition 4).

#### **GENERAL CONDITIONS:**

1. Permit Transfer: If a WPILF project site associated with this permit is sold, you shall transfer the verification to the new owner by submitting a letter to this office, to validate the transfer. The letter must contain the name and address of the transferee, as well as the following statement and signature of the transferee:

When the structures or work authorized by this regional general permit (RGP) are still in existence at the time the property is transferred, the terms and conditions of this RGP, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this RGP and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below.

\_\_\_\_\_  
(Transferee)



\_\_\_\_\_  
(Date)

2. Tribal Rights: No activity or its operation shall impair reserved Tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights. You are not authorized to initiate any activities in waters of the U.S. that have the potential to impair tribal rights under this RGP until this office has completed necessary tribal coordination/consultation or has determined the proposed action does not impair tribal rights, unless tribal coordination/consultation is addressed programmatically (e.g., by a PA).

3. Unanticipated Discovery: If you discover any previously unknown historic, cultural or archeological remains and/or artifacts while accomplishing the activity authorized by this RGP, you shall immediately notify this office of what has been found, and to the maximum extent practicable, shall avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. This office 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.

4. Water Quality Certification: You shall comply with all terms and conditions of the enclosed October 16, 2020, Section 401 General Water Quality Certification (WDID# 5A31CR00539) (attachment 4), which is expressly incorporated as condition of this permit. If you cannot comply with the terms and conditions of this 401 WQC, then you must obtain individual 401 WQC, or waiver thereof, for the proposed discharge in order for the activity to be authorized by this RGP.

#### **FURTHER INFORMATION:**

1. Congressional Authorities: Section 404 of the Clean Water Act (33 U.S.C. 1344)

2. Limits of this authorization:

a. This office has authority to determine if an activity complies with the terms and conditions of the RGP.

b. This permit does not obviate the need to obtain other federal, state, or local authorizations required by law.

c. This permit does not grant any property rights or exclusive privileges.

d. This permit does not authorize any injury to the property or rights of others.

e. This permit does not authorize interference with any existing or proposed federal projects.

3. Limits of Federal Liability: In issuing this permit, 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.

4. Reliance on Applicant's Data: The determination of this office that issuance of this RGP is not contrary to the public interest was made in reliance on the information provided by you.

5. Reevaluation of Permit Decision: This office may reevaluate its decision on this RGP at any time the circumstances warrant. Circumstances that could require a reevaluation include, but are not limited to, the following:

- a. You fail to comply with the terms and conditions of this permit.
- b. The information provided by you in support of a permit application proves to have been false, incomplete, or inaccurate (see 4 above).
- c. Significant new information surfaces which this office did not consider in reaching the original public interest decision.

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 or enforcement procedures such as those contained in 33 CFR 326.4 and 326.5. The referenced enforcement procedures provide for the issuance of an administrative order requiring you comply with the terms and conditions of your permit and for the initiation of legal action where appropriate. You will be required to pay for any corrective measures ordered by this office, and if you fail to comply with such directive, this office may in certain situations (such as those specified in 33 CFR 209.170) accomplish the corrective measures by contract or otherwise and bill you for the cost.

**PERMIT DURATION**: This RGP is valid for five (5) years from the date of issuance and will expire on May 18, 2026. At least sixty (60) calendar days prior to expiration, this office will issue a public notice, with an opportunity for public comment, describing the reasons for reissuing the RGP for another five years with or without modification, or not reissuing the RGP. If this office has not reissued the RGP by the expiration date, the RGP will no longer be valid. This RGP may also be modified, suspended, or revoked by this office at any time deemed necessary. In such instance, this office will issue a public notice concerning the proposed action. Authorizations under this RGP are valid until the permit expires.

**CONTACTS AND ADDITIONAL INFORMATION**: For additional information about this RGP, please contact this office by phone at 916-557-5250, or by email at SPKRegulatoryMailbox@usace.army.mil. For an updated list of contacts, please visit our website at <http://www.spk.usace.army.mil/missions/regulatory>.

#### **ATTACHMENTS:**

1. *Figure 1-1, Plan Area, Placer County Conservation Program – EIS/EIR (May 2020)*
2. *Biological and Conference Opinion on U.S. Fish and Wildlife Service Proposed Issuance of a Section 10(a)(1)(B) Permit for the Western Placer County Habitat Conservation Plan/Natural Community Conservation Plan and U.S. Army Corps of Engineers Proposed Authorization and Implementation of a Clean Water Act Section 404 Permit Strategy Aligned with the Placer County Conservation Program (December 1, 2020; USFWS File Number 81420-2009-F-0520).*
3. *Intra-Service Endangered Species Act Section 7 Consultation (WCR-2020-00XXX) for the Issuance of Section 10(a)(1)(B) Incidental Take Permit for the Placer County Conservation Program Habitat Conservation Plan authorizing take of California Central Valley steelhead (*Oncorhynchus mykiss*), Central Valley fall-run Chinook salmon (*O. tshawytscha*), and Central Valley late fall-run Chinook salmon (*O. tshawytscha*) and documentation of Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response (March 15, 2021; NMFS File Number WCRO-2020-03651).*
4. *Central Valley Regional Water Quality Control Board, General Order No. R5-2020-0050 Waste Discharge Requirements and Clean Water Act Section 401 Water Quality Certification (October 16, 2020; WDID# 5A31CR00539).*

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

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Michael S. Jewell  
 Chief, Regulatory Division  
 Sacramento District

May 18, 2021

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Date

# **APPENDIX E**

## *PCCP LOP Procedure*



# Western Placer County HCP/NCCP Letter of Permission Procedure

U.S. ARMY CORPS OF ENGINEERS

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## LETTER OF PERMISSION PROCEDURE FOR COVERED ACTIVITIES UNDER THE WESTERN PLACER COUNTY HABITAT CONSERVATION PLAN/NATURAL COMMUNITY CONSERVATION PLAN WITH LESS THAN SIGNIFICANT IMPACT

**EFFECTIVE DATE:** May 19, 2021

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

**ACTION ID:** SPK-2005-00485

**AUTHORITY:** 33 CFR 325.2(e)(1)(ii)

**LOCATION:** The Western Placer County Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP) Plan Area (Plan Area) encompasses approximately 270,000 acres within western Placer County and eastern Sutter County. Within western Placer County, the Plan Area is bounded on the north by Nevada and Yuba Counties, on the east by the City of Auburn and California Highway 49, on the south by Sacramento County, and on the west by Sutter County. With the exception of activities conducted by the Placer County Water Agency (PCWA), the Plan Area in western Placer County excludes the Cities of Auburn, Rocklin, and Roseville, and Town of Loomis. Within Sutter County, the Plan Area includes 1,724 acres along the Racoon Creek floodplain, and 33 miles of Auburn Ravine, Racoon Creek, Cross Canal, and East Side Canal. The Plan Area Boundaries can be seen on the attached May 2020, *Figure 1-1, Plan Area, Placer County Conservation Program – EIS/EIR* (attachment 1).

**PURPOSE:** The U.S. Army Corps of Engineers, Sacramento District (Corps), is establishing this Letter of Permission procedure (LOP Procedure) to efficiently authorize activities covered by the HCP/NCCP which involve discharges of dredged or fill material into waters of the United States (U.S.) under Section 404 of the Clean Water Act (CWA 404) with more than minimal, but less than significant, impacts on the aquatic environment. This HCP/NCCP LOP Procedure is an optional abbreviated permit process available to all applicants seeking Department of the Army (DA) authorization for activities meeting the criteria and conditions described in this notice. If the proposed activity does not meet the terms and conditions of this LOP or the applicant chooses not to use this process, the activity may be authorized under a different permit type or procedure.

**BACKGROUND:** In accordance with Title 33 of the Code of Federal Regulations (CFR) Part 325, district engineers are authorized to use alternative procedures, including LOPs, to authorize activities under the Corps Regulatory Program. LOPs are a type of permit issued through an abbreviated processing procedure which includes coordination with Federal and state fish and wildlife agencies, as required by the Fish and Wildlife Coordination Act, and a public interest evaluation, but without publishing an individual public notice.

The Placer County Conservation Program (PCCP) is a regional approach to address issues related to planned development and species habitat conservation, consisting of the HCP/NCCP, County Aquatic Resources Program (CARP), and the Western Placer County In-Lieu Fee (WPILF) program. The HCP/NCCP provides coverage for fourteen species of wildlife, including seven that are federally-listed as threatened or endangered. The Plan Permittees consist of Placer County, the City of Lincoln, South Placer Regional Transportation Authority (SPRTA), Placer County Water Agency (PCWA), and Placer Conservation Authority (PCA). Furthermore, other entities (i.e., Placer County Resource Conservation District) may receive coverage under the HCP/NCCP as Participating Special Entities (PSE). PSE activities that receive HCP/NCCP coverage from the PCA will also be covered by this LOP procedure, provided the PCA requires such activities to comply with the CARP under legally enforceable contracts with each PSE. The U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) have approved the HCP/NCCP through a species incidental take permit (ITP) issued to the PCCP's Plan Permittees under Section 10 of the ESA. The CARP provides a program, implemented by the Plan Permittees through local implementing ordinances, to evaluate activities that would impact aquatic resources considered to be waters of the U.S. or waters of the State. The ILF program provides compensatory mitigation for impacts associated with the covered activities through funds paid to PCA.

**PROPOSED CATEGORIES OF ACTIVITIES:** This LOP Procedure applies only to HCP/NCCP Covered Activities that (1) have been approved by Placer County or the City of Lincoln in compliance with the HCP/NCCP and the CARP and implementing ordinances, or (2) are being conducted by SPRTA or PCWA in compliance with the HCP/NCCP, CARP and implementing ordinances, or (3) have received coverage under the HCP/NCCP from the PCA in compliance with the HCP/NCCP, CARP, and a legally enforceable PSE agreement.

HCP/NCCP Covered Activities are described briefly below, and in greater detail in Chapter 2.6 of the HCP/NCCP.

Activities to be authorized under an LOP following the procedures described herein must be HCP/NCCP covered activities and comply with any applicable terms and conditions contained in the HCP/NCCP, CARP, and implementing ordinances. Applicants must receive a consistency determination from the Plan Permittee that the proposed project is covered under the HCP/NCCP. Compliance with the HCP/NCCP requires applicants to implement the applicable and appropriate avoidance and minimization measures contained in Chapter 6 of the HCP/NCCP, as well as any other applicable terms and conditions as contained in the CARP and implementing ordinances.

An LOP may be issued only for those activities which meet all of the procedures and criteria identified in this notice, and which do not result in a potentially significant impact(s) on the human environment. All activities must also comply with the December 1, 2020, *Biological and Conference Opinion on U.S. Fish and Wildlife Service Proposed Issuance of a Section 10(a)(1)(B) Permit for the Western Placer County Habitat Conservation Plan/Natural Community Conservation Plan and U.S. Army Corps of Engineers Proposed Authorization and Implementation of a Clean Water Act Section 404 Permit Strategy Aligned with the Placer County Conservation Program* issued by the U.S. Fish and Wildlife Service (USFWS File Number 81420-2009-F-0520, Attachment 2), and the March 15, 2021, *Intra-Service Endangered Species Act Section 7 Consultation (WCR-2020-00XXX) for the Issuance of section 10(a)(1)(B) Incidental Take Permit for the Placer County Conservation Program Habitat Conservation Plan authorizing take of California Central Valley steelhead (*Oncorhynchus mykiss*), Central Valley fall-run Chinook salmon (*O. tshawytscha*), and Central Valley late fall-run Chinook salmon (*O. tshawytscha*) and documentation of Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat*

*Response* issued by the National Marine Fisheries Service (NMFS File Number WCRO-2020-03651, Attachment 3). The Corps reserves the right to use its discretionary authority to determine that an activity may be authorized under an LOP, to add special conditions to any LOP authorization, or determine that an activity may not be authorized by an LOP and will instead require authorization under another permit type.

For HCP/NCCP covered activities to be authorized under this LOP Procedure, impacts to waters of the U.S. must be avoided and minimized to the maximum extent practicable on the proposed project site. All applicable avoidance and minimization measures contained in Chapter 6 of the HCP/NCCP and the CARP shall be required, which will fulfill most on-site avoidance and minimization requirements necessary to comply with CWA 404 requirements. Evaluation of project-level, on-site avoidance and minimization opportunities will be assessed on a case-specific basis and will be limited to those identified in *LOP Procedures 2(l)* below.

To qualify for an LOP under this procedure; activities must meet the following criteria:

1. The proposed activity would not result in any potentially significant impact(s) on the human environment that would require the preparation of an environmental impact statement (EIS) under the National Environmental Policy Act (NEPA), as determined by the Corps.

2. Compensatory mitigation for the loss of waters of the U.S. shall be accomplished at the ratios specified in Chapter 5 of the HCP/NCCP and Chapter 6.2.3 of the CARP and shall be accomplished through the purchase of credits from the WPILF program. Alternatively, applicants may propose to compensate for the loss of waters of the U.S. through the purchase of credits from a Corps-approved mitigation bank, provided the applicant provides information demonstrating that the mitigation bank is consistent with the terms and conditions of the HCP/NCCP and CARP, and the purchase of credits from the mitigation bank is authorized by the Corps. A proposal to purchase credits from a mitigation bank may increase the Corps' permit evaluation process timeline.

**Covered Activities under the HCP/NCCP:** The following HCP/NCCP covered activities, as described in Chapter 2.6 of the HCP/NCCP, are applicable to this LOP Procedure, after authorization under the CARP.

1. **Valley Potential Future Growth (PFG) Area:** Discharges of dredged and/or fill material into waters of the U.S. associated with rural and urban land uses within the Valley PFG area in Plan Area A1, as shown on the May 2020, *Figure 2-1 Plan Area Components, Placer County Conservation Program – EIS/EIR*. Specific activities included in this LOP within the Valley PFG include those covered activities identified in Chapter 2.6, Section 2.6.1 of the HCP/NCCP.

2. **Valley Conservation and Rural Development Area:** Discharges of dredged and/or fill material into waters of the U.S. associated with rural and urban land uses within the Valley Conservation and Rural Development Area in Plan Area A2, as shown on the 2020, *Figure 2-1 Plan Area Components, Placer County Conservation Program – EIS/EIR*. Specific activities included in this LOP within the Valley Conservation and Rural Development Area include those covered activities identified in Chapter 2.6, Section 2.6.2 of the HCP/NCCP.

3. **Foothills PFG Area:** Discharges of dredged and/or fill material into waters of the U.S. associated with rural and urban land uses within the Foothills PFG area in Plan Area A3, as shown on the May 2020, *Figure 2-1 Plan Area Components, Placer County Conservation Program –*

*EIS/EIR*. Specific activities included in this LOP within the Foothills PFG include those covered activities identified in Chapter 2.6, Section 2.6.3 of the HCP/NCCP.

4. **Foothills Conservation and Rural Development:** Discharges of dredged and/or fill material into waters of the U.S. associated with rural and urban land uses within the Foothills Conservation and Rural Development area in Plan Area A4, as shown on the May 2020, *Figure 2-1 Plan Area Components, Placer County Conservation Program – EIS/EIR*. Specific activities included in this LOP within the Foothills Conservation and Rural Development Area include those covered activities identified in Chapter 2.6, Section 2.6.4 of the HCP/NCCP.

5. **Regional Public Programs:** Discharges of dredged and/or fill material into waters of the U.S. associated with rural and urban land uses within Plan Area A or B, as shown on the May 2020, *Figure 2-1 Plan Area Components, Placer County Conservation Program – EIS/EIR*. Specific activities included in this LOP for Regional Public Programs include those covered activities identified in Chapter 2, Section 2.6.5 of the HCP/NCCP.

6. **In-Stream Activities:** Activities resulting in the discharge of dredged and/or fill material into waters of the U.S. for activities within streams, reservoirs, or on-stream ponds in Plan Areas A or B, as shown on the May 2020, *Figure 2-1 Plan Area Components, Placer County Conservation Program – EIS/EIR*, and as described in Chapter 2, Section 2.6.6 of the HCP/NCCP, including, but not limited to, maintenance activities in the stream channel, along the streambank, and adjacent wetlands within the riparian corridor. These activities may include those described in 1 through 5 above.

7. **Conservation Programs:** Activities resulting in the discharge of dredged and/or fill material into waters of the U.S. associated with implementing the conservation strategy identified in Chapter 5 of the HCP/NCCP in Plan Area A or B, as shown on the May 2020, *Figure 2-1 Plan Area Components, Placer County Conservation Program – EIS/EIR*, including, but not limited to, habitat enhancement, restoration, creation, translocation, and reserve management, and other activities, as described in Chapter 2, Section 2.6.7 of the HCP/NCCP.

### **EXCLUSIONS:**

1. This LOP Procedure does not apply to any activities in waters of the U.S. that are not considered covered activities under the HCP/NCCP, as described in Chapter 2.6 of the HCP/NCCP.

2. The LOP Procedure does not apply to any activities in waters of the U.S. that have a potential to significantly impact the human environment, as determined by the Corps.

### **LOP PROCEDURES:**

#### 1. **Before submitting an application:**

The applicant must attend a pre-application meeting with the Corps. Applicants are encouraged to invite the applicable Plan Permittee (i.e. Placer County, City of Lincoln, SPRTA, PCA, or PCWA) and other resource agencies to the pre-application meeting with the Corps.

#### 2. **Application submittal:**



To be considered for authorization under an LOP, the application must include all information required for a standard permit application, pursuant to 33 CFR 325.1. The application package must be submitted to the Corps in electronic format (pdf), (either through email [if less than 40 MB], posting to a Corps-accessible FTP site, or submittal of a CD/DVD). Email submittal of the application should be sent to SPKRegulatoryMailbox@usace.army.mil. The application shall also include the following:

- a. A cover letter from the applicant requesting authorization under this HCP/NCCP LOP procedure for the proposed activity, referencing the Corps' identification number and including contact information for the applicant and their designated agents or primary points-of-contact. This must include mailing and e-mail addresses and telephone and fax numbers (if available).
- b. A completed and signed Department of the Army Engineering Form 4345.
- c. An electronic copy of the CARP application submitted to Placer County, the PCA, or the City of Lincoln.
- d. An aquatic resources delineation for the proposed activity area, conducted in accordance with the Corps' minimum standards for aquatic resource delineations, or information that an aquatic resources delineation has been verified (including Corps file number) and is still valid.
- e. Site location map(s), including the proposed activity site, clearly outlined on USGS 7.5' quad sheet drawings, with latitudes and longitudes for the site(s), name of the quad sheet(s) and directions to the site, as well as all appropriate aerial and other imagery available.
- f. A complete description of the proposed activity, including all of the information identified under 33 CFR 325.1 (d) "Content of application."
- g. Plan and profile views of the proposed work, relative to potential or approved waters of the U.S. (e.g., wetlands and open waters below the Ordinary High Water Mark), showing areas, types and acreages of waters of the U.S. to be impacted by the proposed activity. All available drawings must be provided and must show proposed impacts on appropriately scaled figures, in accordance with the Corps' map and drawing standards. All maps and drawings shall follow the South Pacific Division February 2016, Updated Map and Drawing Standards for the South Pacific Division Regulatory Program, or most recent update (available on the South Pacific Division website at: <http://www.spd.usace.army.mil/Missions/Regulatory/PublicNoticesandReferences.aspx/>), unless specifically waived by the Corps.
- h. The total area (acreage), and, for linear features, length (linear feet), of each type of waters of the U.S. proposed to be filled by the proposed activity, the volume (in cubic yards) and type of material to be discharged into each type of aquatic resources.
- i. A description and graphical representation of how impacts to waters of the U.S. and associated functions (e.g., water quality and habitat) have been avoided and minimized to the maximum extent practicable on the project site. This may include a copy of the applicant's documentation provided to the HCP/NCCP Plan Permittees as required to demonstrate avoidance and minimization of impacts for compliance with the HCP/NCCP and/or CARP.

j. A description of the potentially affected environment and degree of the effects of the activity to aquatic resources and the human environment, including a description of connected actions (as described in 40 CFR 1501.9(e)(1)) and how these actions may affect the area (national, regional, or local) and its resources .

k. Documentation and record of all pre-application coordination with the Corps and other agencies (as applicable), including any activity-specific comments or concerns provided by agencies, as well as the applicant's response(s) to the comments or concerns.

l. Information, in report form, concerning the practicability of on-site alternatives in accordance with 33 CFR 325.1(e) and 323.6(a). The information must address compliance with the U.S. Environmental Protection Agency's *Section 404(b)(1) Guidelines for Specification of Disposal Sites* (404(b)(1) Guidelines), at 40 CFR part 230. The report should include all applicable information for the Corps to determine whether or not an alternative meets the overall project purpose and is available, practicable, would result in fewer adverse effects to the aquatic environment, or would have other significant adverse environmental consequences. On-site alternatives are limited to: (1) the no action alternative; (2) alternatives that modify the proposed avoidance areas to further avoid or minimize adverse effects to waters of the U.S.; and (3) alternatives that would result in further avoidance and/or minimization of adverse effects to jurisdictional streams and their adjacent wetlands, as compared to the proposed action.

m. A statement identifying the proposed compensatory mitigation, consistent with Criterion 2 on Page 3 of this LOP procedure.

n. Documentation that a request for an individual Section 401 Water Quality Certification (WQC) was submitted to the Central Valley Regional Water Quality Control Board and the Corps concurrently, including the date of request. If a request for an individual WQC has not been submitted, the applicant must identify the date an individual 401 WQC is anticipated to be requested.

o. A cultural resources report completed in accordance with the Sacramento District's *Guidelines for Compliance with Section 106 of the National Historic Preservation Act of 1966 (NHPA)* ([http://www.spk.usace.army.mil/Portals/12/documents/regulatory/sec-106-tribal/FINAL\\_2014-03-24\\_Section-106-Guidelines.pdf](http://www.spk.usace.army.mil/Portals/12/documents/regulatory/sec-106-tribal/FINAL_2014-03-24_Section-106-Guidelines.pdf)).

p. A statement confirming if the proposed activity will require permission from the Corps pursuant to 33 U.S.C. 408 (Section 408) because it will alter or temporarily or permanently occupy or use a Corps federally authorized Civil Works project. If yes, describe if a written request for Section 408 has been submitted (Note: proposed Section 404 activities that require Section 408 permission will not be authorized until Section 408 permission is granted).

### **3. Review and Decision:**

a. The Corps will review the applicant's submittal for completeness within approximately fifteen (15) calendar days of receipt. If the application is incomplete, the Corps will notify the applicant and request the additional information necessary to complete the application for further processing within 30 days after receipt of a complete application.

b. If the Corps determines the application is complete but the activity cannot be authorized by an LOP, the Corps will notify the applicant within 15 calendar days of that determination and proceed to an alternate permitting process (General Permit or Standard Permit).

c. If the application is determined to be complete and appears to meet the LOP criteria, the Corps will notify the applicant that the proposed activity is being evaluated for LOP authorization. The Corps will notify the applicable HCP/NCCP Plan Permittee, and applicable state and federal permitting agencies, via e-mail of the proposed LOP for the activity, and request any comments within ten (10) calendar days of such notice. The Corps will also request any additional information necessary to complete processing of the permit application, such as information to conduct required consultations under Section 106 of the National Historic Preservation Act (NHPA), Section 7 of the Endangered Species Act (ESA), and/or Section 30(b)(2) of the Magnuson Stevens Fishery Conservation and Management Act (MSFCMA), and, if sufficient information has been submitted, initiate any required consultation(s) with applicable permitting agencies.

d. Evidence of individual Section 401 WQC, or waiver thereof, must be provided to the Corps before any final LOP decision is made. An LOP will not be issued until and unless all necessary certifications, consultations and/or authorizations (e.g., 401 WQC, NHPA, ESA, and MSFCMA) have been completed and/or issued/waived.

e. The Corps will review the comments received from other permitting agencies and, if otherwise complete (e.g., NHPA, ESA, MSFCMA complete, and 401 WQC issued/waived), make a determination within 30 calendar days after the close of the comment period as to whether to issue the LOP, and whether special conditions are needed. If the Corps determines the activity: (1) meets the criteria for LOP authorization; (2) would have a less than significant impact on aquatic resources and the human environment; (3) meets the requirements of the 404(b)(1) Guidelines; (4) would not be contrary to the public interest; (5) is in compliance with other applicable laws (e.g. ESA, NHPA, Section 401 WQC); and, (6) has a consistency determination from the applicable Plan Permittee that the project is covered under the HCP/NCCP, an LOP will be issued. The Corps will add special and/or general conditions to any LOP authorizations as necessary to ensure effects of the proposed action are not significant and are in compliance with Section 404 of the Clean Water Act and other applicable laws.

f. If at any time during the process the Corps determines the activity may not be authorized by an LOP, the Corps will immediately notify the applicant, terminate the LOP process, and proceed to an alternate permitting process, as described in *LOP Procedures* (3)(b) above.

### **ATTACHMENTS:**

1. *Figure 1-1, Plan Area, Placer County Conservation Program – EIS/EIR (May 2020)*
2. *Biological and Conference Opinion on U.S. Fish and Wildlife Service Proposed Issuance of a Section 10(a)(1)(B) Permit for the Western Placer County Habitat Conservation Plan/Natural Community Conservation Plan and U.S. Army Corps of Engineers Proposed Authorization and Implementation of a Clean Water Act Section 404 Permit Strategy Aligned with the Placer County Conservation Program (December 1, 2020; USFWS File Number 81420-2009-F-0520).*
3. *Intra-Service Endangered Species Act Section 7 Consultation (WCR-2020-00XXX) for the Issuance of section 10(a)(1)(B) Incidental Take Permit for the Placer County Conservation Program Habitat Conservation Plan authorizing take of California Central Valley steelhead*

*(Oncorhynchus mykiss), Central Valley fall-run Chinook salmon (O. tshawytscha), and Central Valley late fall-run Chinook salmon (O. tshawytscha) and documentation of Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response (March 15, 2021; NMFS File Number WCRO-2020-03651).*

# APPENDIX F

## *PCCP SP Abbreviated Procedures*



# Western Placer County HCP/NCCP Abbreviated Standard Permit Process

U.S. ARMY CORPS OF ENGINEERS

BUILDING STRONG ®

## ABBREVIATED STANDARD PERMIT PROCESS FOR COVERED ACTIVITIES UNDER THE PLACER COUNTY CONSERVATION PROGRAM WITH SIGNIFICANT IMPACTS ON THE HUMAN ENVIRONMENT

**EFFECTIVE DATE:** May 19, 2021

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

**ACTION ID:** SPK-2005-00485

**AUTHORITY:** 33 CFR 325.2(e)(1)(ii)

**LOCATION:** The Western Placer County Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP) plan area (Plan Area) encompasses approximately 270,000 acres within western Placer County and eastern Sutter County. Within western Placer County, the Plan Area is bounded on the north by Nevada and Yuba Counties, on the east by the City of Auburn and California Highway 49, on the south by Sacramento County, and on the west by Sutter County. With the exception of activities conducted by the Placer County Water Agency (PCWA), the Plan Area in western Placer County excludes the Cities of Auburn, Rocklin, and Roseville, and Town of Loomis. Within Sutter County, the Plan Area includes 1,724 acres along the Racoon Creek floodplain, and 33 miles of Auburn Ravine, Racoon Creek, Cross Canal, and East Side Canal. The Plan Area Boundaries can be seen on the attached May 2020, *Figure 1-1, Plan Area, Placer County Conservation Program – EIS/EIR*, (attachment 1).

**PURPOSE:** The U.S. Army Corps of Engineers, Sacramento District (Corps), is establishing this abbreviated standard permit (SP) process which will be used for the small number of HCP/NCCP covered activities requiring authorization under Section 404 of the Clean Water Act (CWA 404) that may significantly affect the quality of the human environment under the National Environmental Policy Act (NEPA), requiring the preparation of an Environmental Impact Statement (EIS). As a result of coordination and alignment with the HCP/NCCP and the CARP, the Corps' evaluation process for SP applications under this process will be streamlined or "abbreviated" to produce higher quality and faster decisions.

### EIS Requirements

If the Corps determines that an EIS is required for a PCCP covered activity, the abbreviated SP process would apply to that activity. The determination that a proposed activity may significantly affect the human environment is based on an analysis of the potentially affected environment and degree of the effects of the activity to aquatic resources and the human environment, including connected actions and how these actions may affect the area and its resources within the Corps' scope of analysis, as defined in 33 CFR Part 325, Appendix B. A determination that the proposed

action would result in significant effects to the human environment includes consideration mitigation measures designed to avoid, minimize, rectify, reduce/eliminate, and compensate for adverse effects that would be caused by the action requiring a CWA 404 permit.

The Corps recognizes that identifying the appropriate type of CWA 404 permit for processing PCCP covered activities needing Department of the Army authorization is of paramount interest to project proponents, particularly early in project planning and design. Although a final determination of the need for an EIS can only be made by the Corps in response to receiving a complete permit application, the Corps encourages applicants to engage the Corps early in the planning stages of their projects to discuss CWA 404 permitting strategies. Following this approach, applicants will have eliminated any unknowns in terms of which type of CWA 404 permit is anticipated to be required.

### HCP/NCCP Compliance

All activities evaluated under the abbreviated SP process must comply with the HCP/NCCP. Prior to making a permit decision, the applicant must provide the Corps with the consistency determination from the applicant Plan Permittees that the project is covered under the HCP/NCCP.

**BACKGROUND:** The Placer County Conservation Program (PCCP) applies to western Placer County and specific conservation activity areas in neighboring Sutter County. The PCCP is a regional approach to address issues related to planned development and species habitat conservation, and consists of the Western Placer County Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP), County Aquatic Resources Program (CARP), and the Western Placer County In-Lieu Fee (WPILF) program. The HCP/NCCP provides coverage for fourteen species of wildlife, including seven that are federally-listed as threatened or endangered. The CARP is proposed by the County and City of Lincoln to provide a structure for protecting aquatic resources in western Placer County while streamlining the environmental permitting process for impacts to aquatic resources. The WPILF Program provides compensatory mitigation for impacts associated with the covered activities through funds paid to the Placer Conservation Authority (PCA). The Plan Permittees consist of Placer County, the City of Lincoln, South Placer Regional Transportation Authority (SPRTA), and Placer County Water Agency (PCWA), and PCA. Furthermore, other entities (i.e., Placer County Resource Conservation District) may receive coverage under the HCP/NCCP as Participating Special Entity (PSE). PSE activities that receive HCP/NCCP coverage from the PCA are also covered by this abbreviated SP process, provided the PCA requires such activities to comply with the CARP under legally enforceable contracts with each PSE. The U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) have approved the HCP/NCCP through a species incidental take permit (ITP) issued to the Plan Permittees under Section 10 of the ESA.

**SP PROCEDURES:** While the procedural requirements for CWA 404 SPs would follow the same process as identified by regulations found at 33 CFR Part 325, *Applications for Permits*, the anticipated timeline for completing this abbreviated SP process will be substantially reduced as a result of streamlining. Certain SP processing components are required by regulation and cannot be abbreviated, for example, contents of a complete application and public notices. A top objective of the abbreviated SP process is to address the most information-intensive and time-consuming aspects of SP evaluation, in the most efficient way possible and with reliance on the PCCP,

including its EIS and other related documents like the CARP, and streamline this evaluation to the maximum extent possible. Key processing elements of the PCCP abbreviated SP process are described below and summarized (with some additional procedural examples) in comparison to a typical SP process in **Table 1**.

### Pre-application Meeting

The abbreviated SP process requires a pre-application meeting between the project applicant, Corps, and applicable Plan Permittee (e.g., Placer County or City of Lincoln). As an outcome of the pre-application meeting, the Corps will provide feedback on whether it appears an EIS may be required and provide guidance on mitigating measures the applicant may consider to reduce the likelihood of an EIS being required.

### Complete Permit Application and Supplemental Information

Reducing the review time for an SP under the PCCP will be in part achieved through the applicant's submittal of a complete Department of the Army (DA) permit application and supplemental information. The information necessary to reduce processing times includes: (1) Providing information required for a complete application as defined at 33 CFR 325, *Applications for Permits*; (2) Information to show the project is in compliance with all applicable requirements of the HCP/NCCP; (3) Information to show the project is in compliance with the U.S. Environmental Protection Agency's (EPA's) *Section 404(b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material* (404(b)(1) Guidelines) as it relates to on-site alternatives to avoid and minimize adverse effects to waters of the U.S.; (4) Information to show the project is in compliance with Section 106 of the National Historic Preservation Act (NHPA) and Section 401 of the CWA, as appropriate; and, (5) A proposed plan for compensating for the loss of waters of the U.S. as a result of the proposed project, as described below.

### Information Requirements for the EIS

The level of information and/or extent of analysis necessary in the proposed project's EIS to comply with NEPA at the project level will be reduced as a result of tiering from the HCP/NCCP EIS. While timelines for review required by NEPA regulations will remain the same (e.g. Draft EIS comment period of 45 days, Final EIS review period of 30 days), submittal of information necessary for a complete application and tiering from the HCP/NCCP EIS will substantially reduce the required preparation time for the EIS, specifically as it relates to potential adverse effects to the human environment, applicable mitigation measures, and evaluation of off-site alternatives already discussed in the HCP/NCCP EIS.

### Compliance with CWA 404 Avoidance and Minimization Requirements, Including EPA's 404(b)(1) Guidelines

Because the HCP/NCCP EIS examines a range of reasonable alternatives affecting waters of the U.S., it serves as the basis for the Corps' landscape-level evaluation of alternatives under NEPA evaluated in the Record of Decision. Similarly, the HCP/NCCP EIS provides the primary basis for the Corps' evaluation of avoidance, minimization, and less damaging practicable alternatives at the regional scale. Most project-level avoidance and minimization requirements will



be satisfied when proposed activities are designed to comply with all applicable avoidance and minimization measures contained in the HCP/NCCP and CARP.

The Corps will still need to conduct an on-site alternatives analysis, but the off-site alternatives analysis normally required for SP evaluation under EPA’s 404(b)(1) Guidelines has been addressed at the regional level in the Corps’ Record of Decision (ROD) for the HCP/NCCP EIS. Most on-site avoidance and minimization will be achieved by incorporating applicable avoidance and minimization measures from the HCP/NCCP and CARP. Evaluation of project-level, on-site avoidance and minimization opportunities will be assessed on a case-specific basis. For example, the Corps may require an evaluation of on-site alternatives to avoid and minimize effects to jurisdictional wetlands adjacent to streams. This may result in minor adjustments to mitigation measures such as stream setback width requirements imposed by the HCP/NCCP and CARP in an area of a project site containing a wetland adjacent to the stream setback. The Corps will work with the applicant to identify on-site alternatives where information is necessary to ensure compliance with the 404(b)(1) Guidelines on a case-by-case basis. Alternatives identified by the Corps will be limited to the following on-site alternatives: (1) the no action alternative; (2) alternatives that modify proposed avoidance areas to further avoid or minimize adverse effects to waters of the U.S.; and (3) alternatives that would result in further avoidance and/or minimization of adverse direct or indirect effects to jurisdictional streams and their adjacent wetlands, as compared to the proposed action.

#### Compensatory Mitigation Requirements

Compensatory mitigation requirements for unavoidable effects to waters of the U.S. would align to the mitigation requirements contained in the HCP/NCCP, and would generally be satisfied by a “one-fee” system in which the HCP/NCCP fees would, to the extent possible, cover the Corps’ compensatory mitigation requirements. This would be accomplished by payment into the WPILF Program established in May 2019. Alternatively, applicants may propose to compensate for the loss of waters of the U.S. through the purchase of credits from a Corps-approved mitigation bank, provided the applicant provides information demonstrating that the mitigation bank is consistent with the HCP/NCCP and CARP, and the Corps determines the use of the mitigation bank is appropriate. A proposal to purchase mitigation bank credits may increase the permit evaluation process timeline.

#### Compliance with Other Laws

To-date, the Corps has obtained programmatic compliance with Section 7 of the ESA. Programmatic Section 7 ESA coverage for abbreviated SPs provides for greater assurances and streamlining. The Corps intends to continue pursuing the goals of a programmatic Section 401 WQC for abbreviated SPs, and programmatic compliance with Section 106 of the NHPA. In comparison to a typical SP process, programmatic approaches to complying with these laws is anticipated to save significant amounts of time and cost to project applicants (see **Table 1**) on the following page.

**Table 1. Abbreviated SP Process under the PCCP vs. Normal SP Process**

<b>Requirements</b>	<b>PCCP Abbreviated SP Process</b>	<b>Normal SP Process</b>
Pre-application Meeting	Required	Recommended
Complete Application	Required. See 33 CFR Part 325.1(d)	Required. See 33 CFR Part 325.1(d)
Public Notice	Required. See Under 33 CFR Part 325.3	Required. See under 33 CFR Part 325.3
EIS Level of Analysis	Reduced, Due to "Tiering" from HCP/NCCP EIS/EIR	Required. Stand-Alone, Project-Specific
Alternatives for NEPA, 404(b)(1) and Public Interest Review	Reduced, Due to "Tiering" from HCP/NCCP EIS/EIR, and Incorporating HCP/NCCP Avoidance/Minimization Measures	Required. Stand-Alone, Project Specific
Evaluation of Off-site Alternatives Analysis	Not Required	Required
Evaluation of On-site Alternatives Analysis	Required. See 33 CFR Part 325, Appendix B.9(5). Primarily satisfied through incorporation of HCP/NCCP avoidance/minimization measures; Minor adjustments along preserve boundaries may be necessary. Extent of alternatives limited	Required. See Under 33 CFR Part 325, Appendix B.9(5). Project-specific avoidance and minimization
Applicant Information About Avoidance and Minimization for Effects to Waters of the US	Required. Most on-site avoidance and minimization requirements satisfied by incorporating HCP/NCCP avoidance/minimization measures; Additional supporting information will be required	Required. No standardized design and construction avoidance/minimization measures to rely upon
Compensation for Effects to Waters of the U.S.	Required. Compensatory mitigation achieved through WPILF Program, or, alternatively through the purchase of mitigation bank credits provided sufficient information is provided by the applicant	Required. Project-specific mitigation plan subject to Corps approval. Compensatory mitigation achieved through mitigation bank, Corps-approved ILF Program, and/or permittee-responsible mitigation; See 33 CFR Part 332
Compliance with Section 7 of the Endangered Species Act (ESA)	Required. Project covered by PCCP's Biological Opinions (BOs) and Incidental Take Statements (attachments 2 & 3)	Required. Project-specific Biological Assessment, consultation, and BO
Compliance with Section 401 of the Clean Water Act (Section 401 Water Quality Certification)	Required. Individual 401 WQC; with future goal of programmatic WQC for abbreviated SPs	Required. Individual 401 WQC

Requirements	PCCP Abbreviated SP Process	Normal SP Process
Compliance with Section 106 of the National Historic Preservation Act	Required. Project-specific information and consultation; with future goal of a Programmatic Agreement (PA)	Required. Project-specific information and consultation

**BENEFITS:** Alignment with the PCCP is an opportunity to streamline the standard permit process under the Corps’ Regulatory Program for HCP/NCCP covered activities that require preparation of an EIS. The abbreviated SP process is expected to reduce the Corps review time by more than half. With NEPA tiering and programmatic consultations, a permit decision can be made in 6 to 9 months (excluding any delays attributable to the permit applicant) from the date of submittal of a complete application. Additional reduction in processing times would also occur if reviews are conducted concurrent with local agency review, including completing a joint EIS and Environmental Impact Report (EIR) with the local agency. As shown in **Table 1**, reduction in length of processing of SPs under the abbreviated SP process will result from:

1. A reduction in time necessary to complete a Draft and Final EIS, as a result of tiering from the HCP/NCCP EIS.
  
2. A reduction in the level of information required to show compliance with EPA’s Section 404(b)(1) Guidelines, which would be limited to evaluation of on-site avoidance and minimization alternatives, most of which would be satisfied by incorporating PCCP avoidance/minimization measures. This would result in a reduction in the review time by the Corps, as well as a reduction in the time and cost to the applicant in preparing alternatives information.
  
3. A reduction in Corps review time for proposed compensatory mitigation, as compensatory mitigation would occur through the purchase of WPILF program credits and using mitigation ratios consistent with the PCCP. Additional review time by the Corps may be needed if applicants propose to deviate from the WPILF Program and applicable compensatory mitigation ratios established by the PCCP; and instead, propose to purchase credits from a Corps-approved mitigation bank.
  
4. A reduction in processing time for Section 7 ESA compliance due to the issuance of Biological Opinions by the USFWS and NMFS for activities covered by the HCP/NCCP. See attachments 2 and 3.
  
5. Upon establishment of a programmatic general 401 WQC for abbreviated SPs, a reduction in processing time for compliance with Section 401 of the CWA.
  
6. Upon establishment of a Section 106 NHPA PA, a reduction in processing time for compliance with Section 106 of the NHPA.

**ATTACHMENTS:**

1. *Figure 1-1, Plan Area, Placer County Conservation Program – EIS/EIR (May 2020)*

2. *Biological and Conference Opinion on U.S. Fish and Wildlife Service Proposed Issuance of a Section 10(a)(1)(B) Permit for the Western Placer County Habitat Conservation Plan/Natural Community Conservation Plan and U.S. Army Corps of Engineers Proposed Authorization and Implementation of a Clean Water Act Section 404 Permit Strategy Aligned with the Placer County Conservation Program* (December 1, 2020; USFWS File Number 81420-2009-F-0520).
  
3. *Intra-Service Endangered Species Act Section 7 Consultation (WCR-2020-00XXX) for the Issuance of section 10(a)(1)(B) Incidental Take Permit for the Placer County Conservation Program Habitat Conservation Plan authorizing take of California Central Valley steelhead (*Oncorhynchus mykiss*), Central Valley fall-run Chinook salmon (*O. tshawytscha*), and Central Valley late fall-run Chinook salmon (*O. tshawytscha*) and documentation of Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response* (March 15, 2021; NMFS File Number WCRO-2020-03651).

# APPENDIX G

*WOUS Cumulative  
Impacts Assessment  
for PCCP*

## MEMORANDUM FOR RECORD

SUBJECT: Assessment of Cumulative Impacts to Waters of the United States within the Placer County Conservation Plan - HCP/404 Project (Regulatory Division SPK-2005-00485)

**1. Introduction:** An assessment of cumulative impacts of a proposed activity on the human environment is required under the National Environmental Policy Act (NEPA), and a determination of cumulative effects on the aquatic ecosystem is required by the United States Environmental Protection Agency's (USEPA) *Section 404(b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material* (404(b)(1) Guidelines). Under NEPA at 40 CFR 1508.7, cumulative impact is defined as

The impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

Under the 404(b)(1) Guidelines, cumulative effects on the aquatic ecosystem are defined as

The changes in an aquatic ecosystem that are attributable to the collective effect of a number of individual discharges of dredged or fill material. Although the impact of a particular discharge may constitute a minor change in itself, the cumulative effect of numerous such piecemeal changes can result in a major impairment of the water resources and interfere with the productivity and water quality of existing aquatic ecosystems (40 CFR 230.11(g)).

The purpose of this cumulative impact assessment (CIA) is to determine the estimated cumulative impacts to waters of the United States (WOUS) within the 8-digit HUC watersheds within the Placer County Conservation Plan Area (Plan Area). This CIA is intended to provide information on cumulative effects to WOUS for both NEPA (40 CFR 1508.8) and the 404(b)(1) Guidelines (40 CFR 230.7(b)), which will be used by the Corps in developing a permitting strategy for the PCCP, including evaluation of a Programmatic General Permit (PGP) for a category or categories of activities that result in no more than minimal individual and cumulative adverse environmental impacts.

**2. Location:** The Plan Area encompasses approximately 212,000 acres of land in western Placer County. The Plan Area is bounded on the north by Nevada and Yuba County, on the east by the City of Auburn and California Highway 49, on the south by Sacramento County, and on the west by Sutter County. The Plan Area is shown on the enclosed *Overview of the Placer County Conservation Plan (PCCP) Area*, located in Appendix A.

**3. Activity Description:** The PCCP is a comprehensive regional Habitat Conservation Plan and Natural Community Conservation Plan designed to provide long-term conservation and

management of natural communities, sensitive species, and the habitats upon which those species depend, while accommodating other important uses of the land.

The PCCP addresses state and Federal endangered species compliance requirements for Placer County, the City of Lincoln, South Placer Regional Transportation Authority (SPRTA), and the Placer County Water Agency (PCWA). Between 50,000 and 60,000 acres of the Plan Area are proposed as part of a reserve system, to establish, re-establish, enhance, rehabilitate, and preserve aquatic resources and Federally- and state-listed species. The Corps' permit actions within the Plan Area would be limited to those PCCP covered activities that would result in the discharge of dredged or fill material into WOUS under Section 404 of the Clean Water Act.

**4. Purpose of the CIA:** This CIA has been conducted to determine the extent of impacts on WOUS from past, present, and reasonably foreseeable developments within the Plan Area. This CIA will also determine the approximate extent of compensatory mitigation required to offset losses of WOUS in the Plan Area associated with past, present and reasonably foreseeable permitted actions.

**5. Geographic and Temporal Scopes of CIA:** The geographic (review area) and temporal scopes considered in CIA are described in this section.

a. **Geographic Scope:** The geographic scope for this CIA consists of the Plan Area, as described in sections 1 and 2 of this document. The Plan Area is depicted in the *Overview of the Placer County Conservation Plan (PCCP) Area* (Appendix A), and includes all or portions of four 8-digit Hydrologic Unit Code (HUC) watersheds within the Plan Area as shown on the *8-Digit HUCs (Hydrologic Unit Codes) in Plan Area* drawing in Appendix A. For purposes of this CIA, it was determined to be appropriate to utilize the portions of the 8-digit HUC watersheds that conformed to the boundaries of the Plan Area, rather than entire watersheds or larger (e.g., remaining portion of the 8-digit outside of the Plan Area or 6-digit HUCs), based on the following rationale:

(1) Utilizing entire 8-digit HUCs extending outside of the Plan Area would increase the review area from 212,000 acres to approximately 1,416,394 acres. Based on a review of the Corp's Ombil Regulatory Module 2 (ORM2) database, extending the CIA to include the entirety of each of the 8-digit HUC watersheds in the Plan Area would have resulted in an initial list of 1257 permit actions and 147 pre-application actions, as opposed to the 303 permit actions and 46 pre-application actions obtained utilizing just a portion of these 8-digit HUCs. Reviewing data for over 1,055 additional files would have resulted in substantial strain on Regulatory resources, and therefore was determined to be impractical.

(2) In addition to resource limitations, the Council of Environmental Quality's (CEQ) handbook *Considering Cumulative Effects Under the National Environmental Policy Act*, published in January 1997, suggests that, for impacts to aquatic resources, "watershed boundaries are useful for cumulative effects assessment" and one way to determine the geographic boundary is to "consider the distance an effect can travel." The majority of impacts within the Plan Area are represented in two 8-digit HUCs: Upper Coon – Upper Auburn (18020161) and Lower American (18020111). For the Upper Coon – Upper Auburn

watershed, impacts to waters of the U.S are at the top of the watershed and represent the majority of the past, present and reasonably foreseeable development within the watershed, and therefore identifying impacts within other areas of the watershed likely would not yield substantially different results. For the Lower American watershed, the past, present, and reasonably foreseeable future impacts in the Plan Area represent a small portion of the total impacts in this watershed, which includes southern Placer County and northern Sacramento County. It is unlikely that the Plan Area impacts represented in the Lower American watershed is contributing to a significant effect to the bottom of the watershed (approximately 30 miles outside of the Plan Area). Therefore, extending the CIA to the remaining portions of the Lower American outside of the Plan Area would not result in a more meaningful assessment of cumulative effects in the context of this CIA. Two 8-digit HUICS, the North Fork American (18020128) and Upper Bear (18020126), represent a small portion of the Plan Area and there has been little to no development within these watersheds and little development is identified to occur under reasonably foreseeable projects. Extending the assessment to include the entire 8-digit HUICS for the North Fork American and Upper Bear would not result in a more meaningful assessment of cumulative effects in the context of this CIA.

b. Temporal Scope: The temporal scope for this CIA extends from 1989 (the beginning of the Corps' Permit action documented file history available in the ORM2 database in the Plan Area) to the "reasonably foreseeable" future.

(1) For purposes of this CIA, reasonably foreseeable projects were considered to be those where:

- The Corps is currently reviewing an application.
- Applications have been withdrawn from Corps evaluation, but based on available information, are located within the areas identified for growth under the PCCP).
- The Corps anticipates an application will be submitted in the reasonably foreseeable future. This includes actions for which a pre-application meeting has been scheduled or completed within the last 5 years, or actions for which a jurisdictional determination has been completed and the Corps believes that a permit application may be submitted in the reasonably foreseeable future.

**6. Methodology:** This section describes the procedures followed in conducting this study. The first step of the CIA involved identifying Regulatory permit actions and data categories of relevance to the CIA.

a. Data Setup and Acquisition

(1) A list of 2,229 permit actions was obtained from the ORM2 database representing all actions (permit actions, pre-application consultations, unauthorized activities, compliance/non-compliance actions, no permit required actions, permit modifications, Freedom of Information Act (FOIA) requests, congressional inquiry requests, mitigation bank evaluations, and Environmental Impact Statement actions).



(2) Utilizing ArcGIS, permit actions within the ORM2 database were compared against the Plan Area. Actions located outside of the Plan Area were eliminated while actions located inside the Plan Area were included. This generated a raw, comprehensive list of all permit actions in the Plan Area. The ORM2 database contains actions originating from both ORM2 (post-July 2007), and the previous database, RAMS.

(3) Refinement of the initial data was conducted, including:

(a) Limiting the actions assessed to those within the Plan Area.

(b) Limiting the actions assessed to the following: Nationwide Permit (NWP) 26, NWP 27, NWP 29, NWP 39, unknown NWPs, Letters of Permission, Standard Permits, Unauthorized Activities, and Pre-Application actions. These actions resulted in the most loss or in restoration (including establishment and enhancement) of WOUS of any of the NWPs. In addition, these NWP categories represent a majority of the types of impacts present within the Plan Area.

(c) Pre-Application actions limited to those identified as reasonably foreseeable projects.

(d) Removal of projects with no adverse impacts or losses to WOUS.

(e) Removal of duplicate file numbers or withdrawn projects.

(4) This resulted in an initial screened data set of 348 permit actions. A hard copy or digital copy of each of these actions was reviewed. Those were further refined to eliminate the following:

(a) Projects where, after a review of the file, it was determined that the project was not in the Plan Area.

(b) Projects where there was no information in the file regarding impacts and/or because of the type of project (e.g. storm drain outlets) there was no loss or very little loss of WOUS (most were NWP 26s).

(c) Data entry indicated the project was not completed and was authorized prior to 2008.

(d) A substantial effort was made to evaluate all available electronic and hardcopy data for the 348 permit actions identified in the Plan Area, to accomplish the study's objectives. If a file could not be located in any of the available hard copy files (Records Holding, FRC Boxes), was not previously digitized, and/or available electronic files did not provide information on the acreage of existing or impacted WOUS, the file was flagged for deletion during final quality assessment/quality control (QA/QC) stage.

(5) Although 348 permit actions were originally identified, data was only recorded and saved for the 159 actions that remained after all refinements. There was a high potential

for inconsistency of data resolution and clarity in database records. In order to get the most accurate estimates of impacts and mitigation, every file associated with these 159 Regulatory projects was reviewed.

(6) For each Permit action, raw data in an Excel spreadsheet was updated to populate the following information: basic project location, aquatic resources present (including jurisdictional and non-jurisdictional features), a complete project description (when available), impacts to WOUS, compensatory mitigation, and any on-site preserved WOUS. See section 6(c) for further discussion of data entry considerations.

(7) All data was input directly into Excel spreadsheets. As file review was conducted, data gaps (resulting when the initial file review failed to provide sufficient information regarding impacts and/or mitigation) were “flagged” on the spreadsheets to address during a final data QA/QC stage. If a project was identified as a “pre-application consultation” and there was a permit action associated with the same file number the Excel spreadsheet was updated.

(8) Eight datasets were used in ArcMap to determine the most complete depiction of WOUS within the Plan Area:

(a) Department of the Army (DA) permit actions master spreadsheet completed for this CIA (159 total)

(b) National Wetland Inventory (NWI) from the United States Fish and Wildlife Service (USFWS)

(c) National Hydrography Dataset (NHD) from the United States Geological Survey (USGS)

(d) 8-Digit Hydrologic Unit Code (HUC) dataset from the USGS

(e) PCCP Plan Area boundary

(f) Placer County Parcel data provided by Placer County

(g) Corps ORM2 project polygons

(9) All datasets were imported into ArcMap, projected in the same coordinate system/datum, and clipped to the Plan Area.

(10) Corps data was converted to polygons since in its raw form was latitude/longitude points to digitize total acres of Corps jurisdictional determination acreages. This data was determined to best represent WOUS within the Plan Area. This conversion was completed using the Corps ORM2 project polygons, parcel boundaries, or by digitizing new project boundaries.

(11) To avoid over-estimating any aquatic resources caused by USACE polygons falling partially outside the Plan Area, the following procedure was followed: Acres were calculated for the original USACE polygons. Then the dataset was clipped to the Plan Area, and a new field was added and new acres calculated. The new acres were divided by the original acres to result in a percentage that a USACE polygon fell within the Plan Area. This percentage was then applied to all aquatic resource numbers in the attribute table.

(12) After the Corps data was represented in polygon format, the USACE, NWI, and NHD data was geoprocesed as follows:

(a) All datasets were clipped to the Plan Area and acres and miles were calculated for each geometry class.

(b) Polygons representing ambiguous or non-WOUS classes in the NHD dataset were removed.

(c) NWI polygons that intersected the Corp polygons were erased so that no overlap occurred between the datasets in any given geographic location.

(d) Resulting polygons in each dataset were intersected with 8-Digit HUCs within the Plan Area so that each polygon was split and assigned to an 8-Digit HUC.

(e) Acres of the resulting polygons in the NWI datasets were calculated per 8-Digit HUC and then totaled for the Aquatic Resources Overview map.

(f) Unlike NWI datasets, Corps polygons represent project areas and not WOUS acres. In order to accurately calculate WOUS per Corps project polygon per 8-Digit HUC, Corps WOUS acres had to be split across 8-Digit HUCs and outside the Plan Area by calculating a percentage. To achieve this, Corps polygons that fell across 8-Digit HUCs or partially outside the Plan Area were selected and intersected with those datasets to result in split polygons. Acres of the new split polygons were calculated and then divided by their original total acres, which resulted in a percentage of each polygon that fell partially in an 8-Digit HUC. Those percentages were then applied to the WOUS acres in the spreadsheet for those partial polygons so that the numbers were weighted based on the percentage of the Corps polygon that fell within the 8-Digit HUC. This methodology assumes that Aquatic Resources delineated for each Corps project polygon are evenly distributed across the Corps project polygons.

(g) NHD flowlines, after being clipped to the Plan Area, were also intersected with the 8-Digit HUCs, and each line segment's mileage was calculated and added for each 8-Digit HUC and totaled for the Aquatic Resources Overview map. The NHD layer was included to show distribution of linear surface waters that might identify WOUS where the Corps data and NWI might not have.

b. Limitations for GIS

(1) There is an abundance of NHD surface water flowlines with no associated NWI classes near them even though they might be indicative of aquatic resources or WOUS. Because the NHD surface water flow lines are linear features, it is not possible to utilize this data to calculate past or present impacts to WOUS without estimating the acreage of these features. In order to get a more accurate representation of the total acreage of WOUS using the NHD data, it was assumed that all NHD lines are 5 feet in width, and an acreage total for the NHD was calculated. This conservative estimate was utilized as it is expected that while there may be some NHD flow lines that are less than 5 feet in width, the majority of waters are expected to be greater than 5 feet and width. While it is expected that this assumption to use 5-feet may under-map aquatic resources, it is a conservative approach that is not expected to result in over-mapping of these resources.

(2) It was assumed that all aquatic resourced identified on the NWI are WOUS, although it is likely that some of these aquatic resources would not be WOUS subject to Section 10 of the Rivers and Harbors Act and/or Section 404 of the Clean Water Act. However, NWI mapping was conducted primarily through aerial interpretation at a large scale and generally under-maps wetlands, including vernal pools. Therefore, it is expected that even if some of the aquatic resources identified in the NWI are not WOUS, the total amount of WOUS in the review area is greater than identified on the NWI. In addition, NWI utilizes Cowardin classification codes for identifying specific aquatic resource types. Cowardin classifications may group types of wetlands that would normally be separately identified by Corps based on vegetation composition. For example, Corps verified jurisdictional determinations generally distinguish between seasonal wetlands and vernal pools, while Cowardin would identify both wetland types as palustrine emergent (PEM) wetlands.

(3) Corps WOUS delineations for permitted projects were not captured spatially, only quantitatively, and are only available for areas where a permit was issued or verified by Corps, or where there were available impacts associated with known unauthorized activities. Because this CIA did not quantitatively identify impacts from all permit actions or from jurisdictional determinations, it is expected that there are WOUS in the 8-digit HUCs of the Plan Area that are not identified. Unknown unauthorized losses of WOUS may have occurred, and known unauthorized activities may not have identified impacts to WOUS. The estimate of losses of WOUS identified in this CIA is expected to be less than what actually occurred. However, it is not expected that additional actions not recorded or unauthorized activities resulted in substantially greater losses of WOUS than identified in this CIA.

c. Data Review and Compilation: The spreadsheets titled, *PCCP Cumulative Impact Assessment - Jurisdictional Determination Information*, *PCCP Cumulative Impact Assessment - Permit Information*, and *PCCP Cumulative Impact Assessment - Compensatory Mitigation Information*, located in Appendix B, contain the data used for this CIA for each of the 159 projects in the Plan Area.

(1) Recording Basic Project Information: Basic project information was recorded to determine the type of project authorized, latitude and longitude, 8-digit HUC of the project site, date permit verified/issued, and if the project was past, present, or reasonably foreseeable. For example, if there was a permit issued for a project that appeared to be developed based on aerial photo review, it was identified as past. If a project permit was authorized, and based

on aerial photographs it appears as though construction is occurring but the project has not been completed it was determined present. If a project has been authorized but no construction has occurred, or if a project has not been authorized but was determined to be reasonably foreseeable, as identified in section 5(b), it was determined reasonably foreseeable. If a project was determined to be one where only the acreage of WOUS were recorded on the site (i.e. no impacts to waters were authorized, the project was a mitigation bank or NWP 27 with no loss of WOUS), it was determined that the project was not past, present, or reasonably foreseeable.

(2) Recording Aquatic Resources: To simplify the CIA as much as possible but utilize relevant categories, the column Delineated Acres of WOUS consisted of four aquatic resource types: Vernal Pools (VP), Seasonal Wetland/Seasonal Wetland Swale (SW/SWS), Other Wetlands (OW), and Other Aquatic Resources (OAR). The acreage for all delineated waters (including isolated wetlands) was accounted for when specified in the project file. The acreage of each type of water identified in the permit file was included in the notes section of the spreadsheet.

(a) If there was not a verified delineation in the file, but impacts were specified in the permit or other document, an estimate of delineated acres of WOUS was assumed to equal all authorized impacts to wetlands/other WOUS. If there were no impacts identified and no wetlands or other waters delineated on-site, the file was “flagged” to be addressed during the final data QA/QC stage. If no data could be obtained from file review, the project was removed from the final spreadsheet.

(b) If delineated acreage was known but none of the WOUS types were specified, an aerial photograph of the site was reviewed. The acreage of WOUS was either lumped into “OW” or “OAR” based upon information in the file. The JD Notes section of the *PCCP Cumulative Impact Assessment - Jurisdictional Determination Information*, located in Appendix B specifies when these assumptions were made.

(c) In addition to the Corps verified WOUS on a site, NWI and NHD data were utilized to estimate additional potential WOUS in the Plan Area. Using an assumption that all NHD lines were equal to 5 feet in width, the acreage of these features was estimated within the Plan Area, as “OAR.” It was determined that 5 feet was an appropriate conservative estimate, as it is expected that while there may be some NHD flow lines that are less than 5 feet in width, the majority of waters are expected to be 5 feet or greater in width. While it is expected that this assumption to use 5-foot may under-map aquatic resources, it is a conservative approach that is not expected to result in over-mapping of these resources. The NWI classifications used were converted to match the classifications used for the Plan Area as follows:

- NWI Freshwater Emergent Wetland = PCCP OW
- NWI Freshwater Forested/Shrub Wetland = PCCP OW
- NWI Freshwater Pond = PCCP OAR

- NWI Lake = PCCP OAR
- NWI Other = PCCP OAR
- NWI Riverine = PCCP OAR

(3) Recording Impacts to WOUS: This study focused on permanent impacts that resulted in a “loss of WOUS.” Permanent impacts were recorded for each of the four aquatic resource types identified in [section 6\(c\)\(2\)](#). This section includes a discussion of assumptions for impacts identified during individual file review.

(a) Permanent impact, loss of WOUS was recorded when information in the file indicated that WOUS were filled and converted to uplands.

(b) Permanent impacts, no loss of WOUS are those where the activity is permanent (i.e. will not be removed), but WOUS were not converted to uplands. Examples include, but are not limited to: rip-rap installation, impacts associated with certain types of maintenance, and dredging. These permanent impacts with no loss of WOUS were not counted in the loss of WOUS identified in this CIA.

(c) Temporary impacts, when specified in the project file, were recorded but not counted in the loss of WOUS identified in this CIA.

(d) In cases where the file did not indicate the type of aquatic resource authorized to be filled, assumptions were made based on the jurisdictional determination information. The Impact Notes section of the *PCCP Cumulative Impact Assessment - Permit Information* spreadsheet located in Appendix B identifies any assumptions made.

(e) NWP 26, Headwaters and Isolated Waters Discharges (FR 59110, dated November 22, 1991) verifications after this date authorized the discharges of dredged or fill material in to headwaters and isolated waters provided the discharge did not cause the loss of more than 10 acres of WOUS. For the purposes of this NWP, the acreage of loss of WOUS included the filled area plus WOUS adversely affected by flooding, excavation, or drainage as a result of the project. For subdivisions the loss of WOUS was limited to 1 acre. The prospective permittee submitted a preconstruction notification to the District Engineer (DE) for any discharge into WOUS that resulted in a loss of greater than 1 acre. In these cases, the DE was required to notify the U.S. Fish and Wildlife Service (USFWS), state natural resource or water quality agency, U.S. Environmental Protection Agency (USEPA), and the National Marine Fisheries Service (NMFS), if appropriate. When information in the project file did not include notification to these required agencies and did not specify the acreage of loss to WOUS, the loss was assumed to be 0.99 acre.

(f) NWP 26, Headwaters and Isolated Waters Discharges (FR 65874, dated December 13, 1991) verifications after December 13, 1996, authorized discharges of dredged or fill material into WOUS for projects that did not result in the loss of more than 3 acres of WOUS nor the loss of WOUS for a distance greater than 500 linear feet of streambed. The prospective permittee was required to submit a pre-construction notification to the DE for any

discharges into WOUS that resulted in a loss greater than 1/3 acre. To capture the aquatic resources impacted by these authorizations the total acreage of “isolated” waters was tracked and captured in the total acreage of “USACE JD Acres” depicted on the figures in Appendix A. Under this NWP, the DE was required to notify the USFWS, state natural resource or water quality agencies, USEPA, the State Historic Preservation Office (SHPO), and the NMFS for impacts between 1 and 3 acres. When information in the project file did not include notification to these required agencies and did not specify the acreage of loss to WOUS, the loss was assumed to be 0.99 acre.

(g) Permit actions involving stream realignments were assumed to have resulted in permanent impact with a loss of WOUS; an equal accompanying acreage of stream establishment was entered in the dataset to offset the loss resulting from the realignment, unless the record indicated differently (e.g., establishment of the same, less, or more waters in the new stream alignment).

(h) In some cases for projects verified by NWP 26, post SWANCC (2001) or Rapanos (2007), some aquatic resources were considered non-jurisdictional. Those impacts were identified as non-jurisdictional in the notes columns of the spreadsheet and were not included in the total loss calculations. It should be noted that pre-SWANCC, waters were generally not identified as isolated waters, and therefore it was assumed that all waters authorized to be filled prior to SWANCC are WOUS.

(4) Recording Compensatory Mitigation: This study focused on compensatory mitigation required by special condition of DA authorizations, and other forms of “gain” in WOUS acreage within the Plan Area (e.g., wetland re-establishment done under the authorization of NWP 27). It also acknowledges preservation (which does not result in a gain of WOUS acreage, however does afford more protection against future potential impacts) required in association with permit actions. A “gain” in WOUS involves establishment (i.e. creation) and/or re-establishment (i.e., restoration) of waters, most typically wetlands. Compensatory mitigation requirements were recorded for each aquatic resource type category identified in section 6(c)(2). As described below, other types of mitigation not resulting in new acreage of WOUS were also recorded. In cases where a NWP 27 was verified for a project providing compensatory mitigation for another action being reviewed, only the acreage of WOUS that originally existed on this site were recorded, and no “gain” in WOUS acreage was recorded. In the case of mitigation banks, only the acreage of WOUS that originally existed on the site were recorded, and no “gain” in WOUS acreage was recorded, as any “gain” associated with this would be recorded as compensatory mitigation for a specific project.

(a) If permanent impacts were identified for a permit action, and file information indicated that compensatory mitigation was required, but the acreage of the compensatory mitigation was unknown, the assumption was that compensatory mitigation consisted of establishment of an in-kind aquatic resource type at a 1:1 ratio outside of the Plan Area and outside of the 8-digit HUC where the impact occurred at a mitigation bank. If the permit or verification letter did not specify compensatory mitigation was required, it was assumed none occurred, unless other information was found to indicate compensatory mitigation occurred (i.e. proof of purchase of mitigation bank credits, monitoring report).

(b) Mitigation location was recorded relative to the Plan Area, and 8-digit HUC watershed of the project. If compensatory mitigation required the purchase of an ILF credit then in all cases it was assumed the mitigation was accomplished outside of the Plan Area and outside of the 8-digit HUC watershed of the project. If the location of the permittee-responsible mitigation was available, this location was recorded. If information in the file did not specify the location of permittee responsible compensatory mitigation, or identify the name of the mitigation bank, it was assumed that the compensatory mitigation was completed outside of the Plan Area and outside of the 8-digit HUC watershed of the project.

(c) For ILF mitigation, if the file did not indicate the type of aquatic resource required, an assumption was made that the ILF payment was for in-kind mitigation (i.e., the same as the type of waters impacted). In cases where the required ILF was identified only as a required payment amount, and the acreage of required compensatory mitigation was not identified in the file, it was assumed the required compensatory mitigation was at a 1:1 ratio.

(d) For permit actions in which the requirement of the DA authorization required multiple forms of compensatory mitigation to be located in the same 8-digit HUC watershed, the actions were combined and the totals were recorded in the appropriate column. If compensatory mitigation was required for a project inside and outside of the Plan Area or inside and outside of the 8-digit HUC watershed of the project, the compensatory mitigation was separated to accurately account for the location of compensatory mitigation. In addition, if permittee responsible compensatory mitigation was conducted at different locations, the compensatory mitigation was separated. For example, SPK-1997-00375 (Sun City) had the following compensatory mitigation requirements: (1) purchase 0.29 VP and 6.67 SW/SWS creation credits at the Wildlands – Sheridan Mitigation Bank; (2) Create 23.9 acre of SW/SWS/riparian wetlands at the Orchard Creek Conservation Bank (considered PRM); and (3) create 1.39 acre VP and 31.61 acre SW/SWS on-site (considered PRM). While all of the required compensatory mitigation for SPK-1997-00375 was within the Plan Area, because the Wildlands – Sheridan Mitigation Bank is not within the same 8-digit HUC as the project site and, because the permittee responsible compensatory mitigation was at two different locations, three compensatory mitigation records were created for this project.

(e) For the purposes of this CIA it is assumed all compensatory mitigation for reasonably foreseeable projects would occur outside of the plan area and the 8-digit HUC watershed of the project. While it is expected that if the PCCP is implemented, much of the compensatory mitigation would occur in the Plan Area, and some may occur in the same 8-digit HUC watershed, because the PCCP has not been approved, it was determined to be more appropriate to utilize a conservative estimate of losses of waters within each watershed for this CIA.

(f) For permittee-responsible compensatory mitigation, if as-built drawings were found in the project file, the acreage of WOUS reported on the as-builts was recorded for mitigation, rather than what was required in the permit/verification letter. The as-builts were assumed to provide the most accurate record of compensatory mitigation, if available.

(g) All compensatory mitigation was assumed to have been completed and functioning successfully (e.g., constructed, or mitigation bank credits purchased), unless



information was easily identified in the file to indicate that compensatory mitigation did not occur (i.e. notice of non-compliance letter). Resource limitations prevented confirming the compliance status of mitigation across the data set. The spreadsheet includes information to indicate whether the compensatory mitigation was completed (e.g. credit transfer agreement in file or National Fish and Wildlife Foundation (NFWF) In-Lieu Fee (ILF) transmittal letter).

d. Data Analysis: Following recording of all data for each individual project and preparation of maps to determine the acreage of WOUS in each watershed, data was compiled and analyzed to determine the overall cumulative impacts to WOUS within the Plan Area, and the cumulative impacts to WOUS within each 8-digit HUC watershed as a result of the reviewed actions.

(1) Plan Area cumulative impacts: The *PCCP Cumulative Impact Assessment – Plan Area Summary* in Appendix B contains the assessment of cumulative impacts in the Plan Area. For this analysis the following was calculated:

(a) Compensatory mitigation:

- Acreage and type of compensatory mitigation inside the Plan Area and inside the 8-digit HUC watershed of the project site
- Acreage and type of compensatory mitigation inside the Plan Area and outside the 8-digit HUC watershed of the project site
- Acreage and type of compensatory mitigation outside the Plan Area and outside the 8-digit HUC watershed

(b) Total acreage of WOUS from Corps data, NWI and NHD.

(c) Total acreage of permanent loss of each type of water from past, present, and reasonably foreseeable future projects.

(d) Total acreage and percent gain or loss of WOUS in the Plan Area from past, present and reasonably foreseeable future projects.

(2) Watershed cumulative impacts: The *PCCP Cumulative Impact Assessment – Watershed Summary* in Appendix B contains an assessment of cumulative impacts in each of the four 8-digit HUCs in the Plan Area. For this CIA the following was calculated:

(a) Total amount and type of WOUS from Corps data, NWI, and NHD for each watershed.

(b) Total amount and type of impacts to WOUS for each watershed.

(c) Total amount and type of compensatory mitigation for each watershed

(d) For the estimated acreage and percent of each aquatic resources type (i.e. VP, SW/SWS, OW, and OAR) remaining in the watershed after taking into account compensatory mitigation the following calculations were applied:

- Acreage of WOUS remaining: The total acreage of WOUS (from Corps data, NWI and NHD) and the amount of compensatory mitigation for each aquatic resource type in each watershed was added together. The permanent loss of the specific aquatic resource type in that watershed was then subtracted from the total loss (e.g. for VP in HUC 18020111: 36.17 acre (Corps data) + 0 acre (NWI) + 0 acre (NHD) – 29.19 acre permanent loss = 6.63 estimated remaining acres of VP)

- Percent of WOUS remaining: The percent loss was calculated by dividing the estimated acreage of WOUS remaining by the total estimated acreage of the aquatic resource type in that watershed (e.g. for VP in HUC 18020111: 6.63 acre remaining VP/36.17 acre total estimated VP = 18.33% estimated VP remain in that watershed).

(e) For the estimated acreage and percent of each aquatic resource type gained or lost in the watershed after taking into account compensatory mitigation the following calculations were applied:

- Acreage net gain or loss: The acreage of each type of aquatic resource was added to the acreage of each type of compensatory. This number was then subtracted from the acreage of permanent loss of the aquatic resource type in the watershed. (e.g. for OAR in HUC 18020161: 66.37 acre permanent loss – (0.00 acre mitigation bank + 0.00 acre in-lieu fee + 27.06 acre permittee responsible) = 39.31 acre net loss of OAR in HUC 18020161).

- Percent net gain or loss: The percent of net gain or loss of WOUS was determined by dividing the acreage of net gain or loss of the aquatic resource type by the total estimated acreage of the aquatic resource type in that watershed (e.g. for OAR in HUC 18020161: 39.31 acre net loss of OAR/(228.44 acre (Corps data) + 753.52 acre (NWI) + 297.26 acre (NHD)) = 3.07% net loss of OAR in HUC 18020161).

## 7. Cumulative Impact Assessment:

a. Summary of past, present, and reasonably foreseeable actions and permit type

(1) Past, present, and reasonably foreseeable projects: The *PCCP Cumulative Impact Assessment – Project Summary*, spreadsheet located in Appendix B, contains a summary of the type and number of past, present and reasonably foreseeable projects in the Plan Area. Of the 159 projects reviewed in the Plan Area, it was determined that:

(a) 97 are past projects

(b) 3 are present projects

(c) 47 are reasonably foreseeable projects

(d) 12 are not past, present or reasonably foreseeable, and were kept only to document the acreage of WOUS, as this determination was not made until the project was evaluated during the QA/QC process.

(2) Permit Type: Of the 159 projects reviewed in the Plan Area, the following permit types and numbers have been issued/verified, or are currently being evaluated:

(a) 7 Letters of Permission (LOP) (3 past, 1 present, 3 reasonably foreseeable)

(b) 29 unknown or no permit (i.e. no permit was required (4), the site is a mitigation bank or preserve (8), or the project is a reasonably foreseeable future project and the permit type is not known at this time (17))

(c) 95 Nationwide Permit verifications (NWP) (81 past, 14 reasonably foreseeable), consisting of:

- 1 NWP 12 and 33 (past)
- 51 NWP 26 (past)
- 11 NWP 29 (3 past, 8 reasonably foreseeable)
- 1 NWP 32 (past)
- 29 NWP 39 (24 past, 5 reasonably foreseeable)
- 1 NWP 29 and 39 (reasonably foreseeable)
- 1 NWP 7, 14, and 33 (past)

(d) 1 NWP and LOP (past)

(e) 1 NWP and SP (past)

(f) 26 SPs (11 past, 2 present, 13 reasonably foreseeable)

b. Estimated WOUS

(1) Plan Area: A total of approximately 8,926.25 acres of WOUS were identified in the Plan Area based on Corps, NWI and NHD data. This consists of 321.91 acres of VP, 573.62 acres of SW/SWS, 1,632.66 acres of OW, and 6,398.06 acres of OAR.

(2) 8-digit HUC watershed: Estimated WOUS per 8-digit HUC watershed is as follows:

(a) Lower American (HUC 18020111)

- VP: 36.17 acres
- SW/SWS: 144.02 acres
- OW: 231.36 acres
- OAR: 452.80 acres

(b) Upper Bear (HUC 18020126)

- VP: 18.82 acres
- SW/SWS: 9.04 acres
- OW: 288.47 acres
- OAR: 958.02 acres

(c) North Fork American (HUC 18020128)

- VP: 0 acres
- SW/SWS: 0 acres
- OW: 14.61 acres
- OAR: 3708.02 acres

(d) Upper Coon-Upper Auburn (HUC 18020161)

- VP: 266.92 acres
- SW/SWS: 420.46 acres
- OW: 1098.22 acres
- OAR: 1279.22 acres

c. Estimated Loss of WOUS as a result of past, present and reasonably foreseeable projects:

(1) Plan Area: Past, present, and reasonably foreseeable future projects result in an estimated loss of 552.16 acres of WOUS, consisting of 109.19 acres of VP, 242.26 acres of SW/SWS, 101.83 acres of OW, and 98.88 acres of OAR.

(2) 8-digit HUC watershed: Estimated loss of WOUS per HUC watershed are as follows:

(a) Lower American (HUC 18020111)

- VP: 29.91 acres
- SW/SWS: 88.68 acres
- OW: 13.45 acres
- OAR: 26.72 acres

(b) Upper Bear (HUC 18020126)

- VP: 0.02 acres
- SW/SWS: 1.01 acres
- OW: 28.00 acres
- OAR: 5.79 acres

(c) North Fork American (HUC 18020128)

- VP: 0 acres
- SW/SWS: 0 acres
- OW: 0 acres
- OAR: 0 acres

(d) Upper Coon-Upper Auburn (HUC 18020161)

- VP: 79.26 acres
- SW/SWS: 152.57 acres
- OW: 60.38 acres
- OAR: 66.37 acres

d. Estimated Compensatory Mitigation:

(1) Overall: Past, present, and reasonably foreseeable future projects result in establishment and/or re-establishment of 685.42 acres of WOUS overall, consisting of 133.84 acres of VP, 192.56 acres of SW/SWS, 256.36 acres of OW, and 102.66 acres of OAR.

(2) Plan Area: Of the total compensatory mitigation, consisting of establishment and/or re-establishment, identified in 7(d)(1), 304.56 acres (46%) are within the Plan Area, consisting of 81.42 acres of VP (61% of total), 107.53 acres of SW/SWS (56% of total), 85.46 acres of OW (33% of total), and 30.15 acres of OAR (29% of total).

(3) 8-digit HUC watershed: Compensatory mitigation, consisting of establishment and re-establishment, per HUC watershed is as follows:

(a) Lower American (HUC 18020111): Total compensatory mitigation, consisting of establishment and/or re-establishment, identified in the Lower American 8-digit HUC watershed is 16.63 acres, consisting of 0.37 acres of VP, 12.33 acres of SW/SWS, 3.86 acres of OW, and 0.07 acres of OAR.

(b) Upper Bear (HUC 18020126): Total compensatory mitigation, consisting of establishment and/or re-establishment, identified in the Upper Bear 8-digit HUC watershed is 55.54 acres, consisting of 18.55 acres of VP, 19.49 acres of SW/SWS, 14.48 acres of OW, and 3.02 acres of OAR.

(c) North Fork American (HUC 18020128): No compensatory mitigation was identified in the North Fork American 8-digit HUC watershed.

(d) Upper Coon-Upper Auburn (HUC 18020161): Total compensatory mitigation, consisting of establishment and/or re-establishment, identified in the Upper Coon-Upper Auburn 8-digit HUC watershed is 232.39 acres, consisting of 62.50 acres of VP, 75.75 acres of SW/SWS, 67.12 acres of OW, and 27.06 acres of OAR.

e. Net gain or loss of aquatic resources

(1) Overall: Taking into account compensatory mitigation conducted both inside and outside of the Plan Area, the projects reviewed have resulted in an estimated net gain of approximately 133.26 acres of WOUS, which represents a net gain of 1.49% of the estimated WOUS in the Plan Area. Net gain and/or loss per aquatic resource type is as follows:

(a) VP: gain of 24.65 acres (7.66% gain)

(b) SW/SWS: loss of 49.70 acres (8.66% loss)

(c) OW: gain of 154.53 acres (9.46% gain)

(d) OAR: gain of 3.78 acres (0.06% gain)

The estimate of the overall net and percent gain/loss takes into account only those losses of WOUS inside the Plan Area, but takes into account compensatory mitigation requirements both inside and outside of the Plan Area.

(2) Plan Area: Taking into account only compensatory mitigation conducted within the Plan Area, the projects reviewed have resulted in an estimated net loss of approximately 247.60 acre of WOUS, a net loss of 2.77% of WOUS. Net gain and/or loss per aquatic resource type is as follows:

- (a) VP: Loss of 27.77 acres (8.63%)
- (b) SW/SWS: Loss of 134.73 acres (23.48%)
- (c) OW: Loss of 16.37 acres (1.00%)
- (d) OAR: Loss of 68.73 acres (1.07%)

(3) 8-digit HUC watershed: The identified net gain or loss of WOUS in the portion of the 8-digit HUCs within the Plan Area are as follows:

(a) Lower American (HUC 18020111): Taking into account the loss of waters and compensatory mitigation conducted in the Lower American 8-digit HUC watershed, the projects reviewed have resulted in an estimated net loss of approximately 142.95 acres of WOUS, a net loss of approximately 16.54% of WOUS within this 8-digit HUC watershed. Net gain and/or loss per aquatic resource type is as follows:

- VP: loss of 29.54 acres (81.67% loss)
- SW/SWS: loss of 76.35 acres (53.01% loss)
- OW: loss of 9.59 acres (4.15% loss)
- OAR: loss of 26.65 acres (5.89% loss)

(b) Upper Bear (HUC 18020126): Taking into account the loss of waters and compensatory mitigation conducted in the Upper Bear 8-digit HUC watershed, the projects reviewed have resulted in an estimated net gain of approximately 21.70 acres of WOUS, a net gain of approximately 1.70% of WOUS within this 8-digit HUC watershed. Net gain and/or loss per aquatic resource type is as follows:

- VP: gain of 18.53 acres (98.46% gain)
- SW/SWS: gain of 18.48 acres (204.42% gain)
- OW: loss of 13.52 acres (4.69% loss)
- OAR: loss of 2.77 acres (0.29% loss)

(c) North Fork American (HUC 18020128): Taking into account the loss of waters and compensatory mitigation conducted in the North Fork American 8-digit HUC watershed, the projects reviewed have not resulted in a net gain or loss of WOUS within this watershed.

(d) Upper Coon-Upper Auburn (HUC 18020161): Taking into account the loss of waters and compensatory mitigation conducted in the Upper Coon-Upper Auburn 8-digit HUC watershed, the projects reviewed have resulted in an estimated net loss of approximately 126.25 acres of WOUS, a net loss of approximately 4.12% of WOUS within this 8-digit HUC watershed. Net gain and/or loss per aquatic resource type is as follows:

- VP: loss of 16.76 acres (6.28% loss)
- SW/SWS: loss of 76.86 acres (18.28% loss)
- OW: gain of 6.74 acres (0.61% gain)
- OAR: loss of 39.31 acres (3.07% loss)

**8. Conclusion:** As identified in section 7(d), overall, the past, present and reasonably foreseeable future actions reviewed in the Plan Area have resulted in a net gain of 133.26 acres (1.49%) of WOUS. However, because a large portion of the required compensatory mitigation has been outside of the Plan Area, there has been a net loss of 247.60 acres (2.77%) of WOUS within the Plan Area. When looking at WOUS cumulative impacts by 8-digit HUC watershed within the Plan Area, there has been a net loss of 142.95 acres (16.44%) in the Lower American watershed, a net gain of 21.70 acres (1.63%) in the Upper Bear, no gain or loss in the North Fork American, and a net loss of 126.25 acres (4.12%) in the Upper Coon-Upper Auburn watershed. The portion of the Lower American 8-digit HUC watershed in the Plan Area has been subject to the highest net loss of WOUS. In this watershed, the VP net loss is approximately 29.54 acres (81.67%).

Encls  
Appendix A: PCCP CIA Figures  
Appendix B: PCCP CIA Spreadsheets



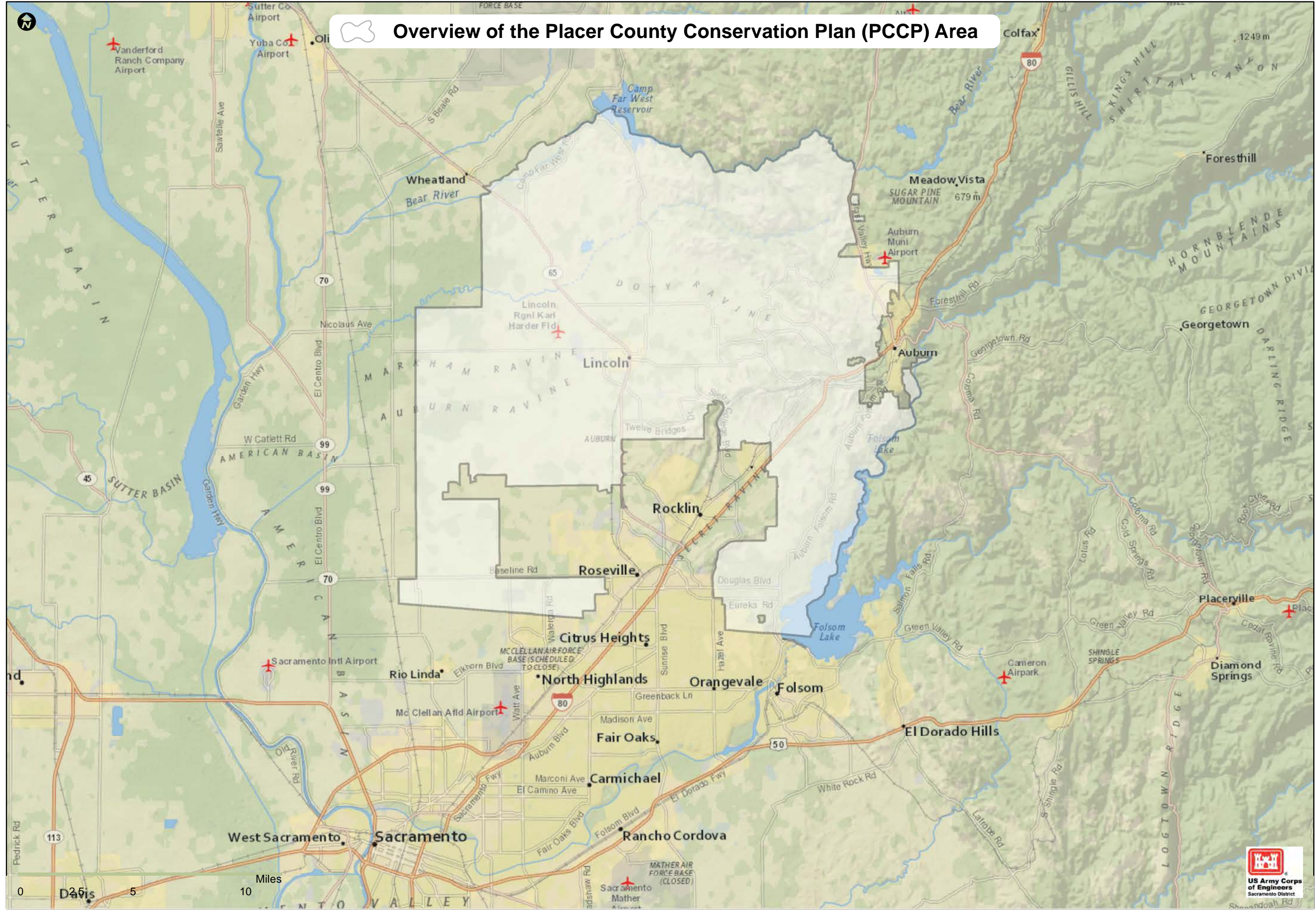
Lisa M. Gibson  
Regulatory Permit Specialist  
Regulatory Division



# **APPENDIX A**

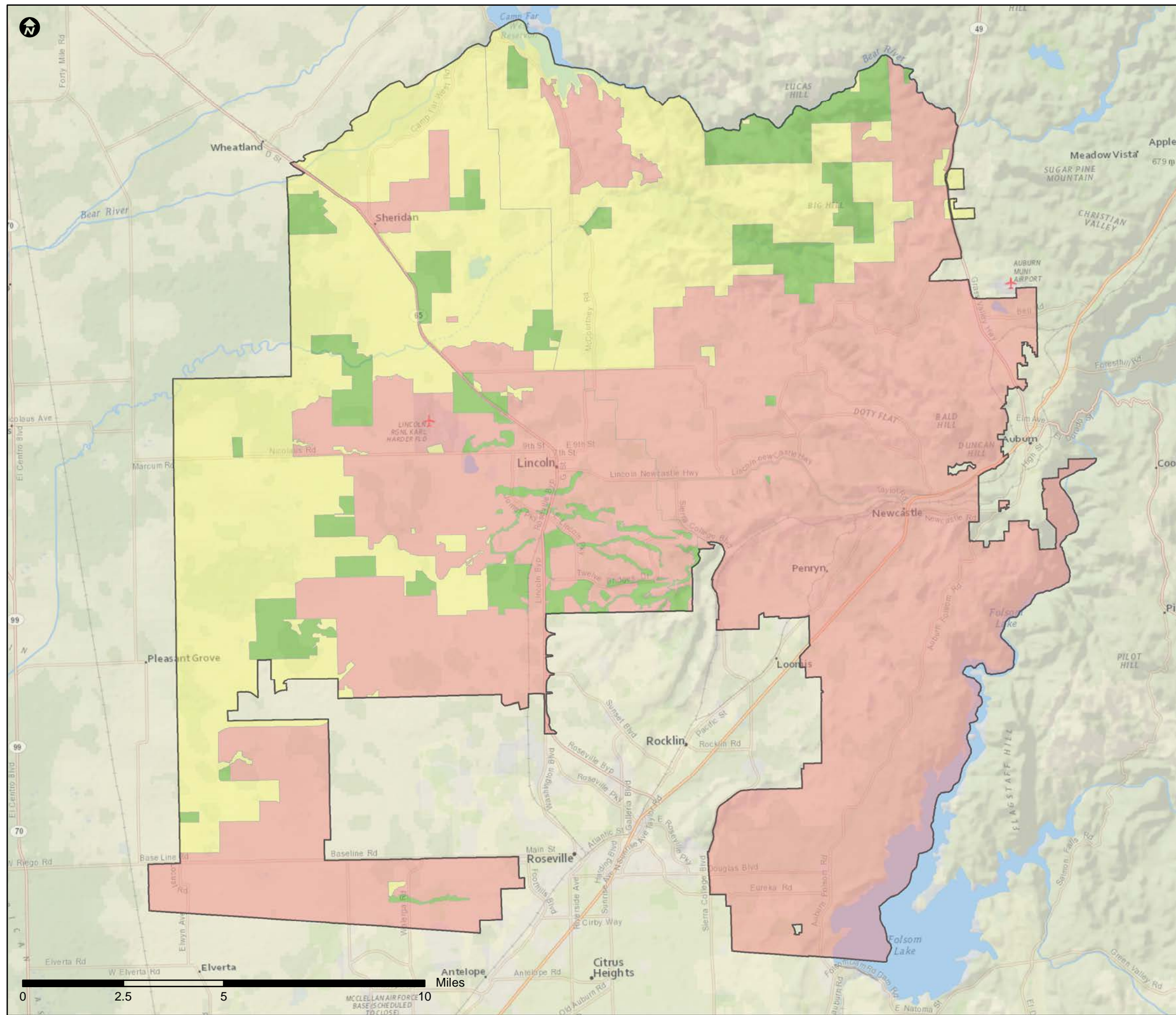
## **PCCP Drawings**

Overview of the Placer County Conservation Plan (PCCP) Area



CUMULATIVE IMPACTS TO WOUS (WATERS OF THE US)





## Land Use Descriptions in PCCP Area

### Legend

#### Land Description

- Existing Reserve  
16,041.79 Acres
- Potential Future Growth  
125,820.08 Acres
- Reserve Acquisition Area  
68,336.08 Acres

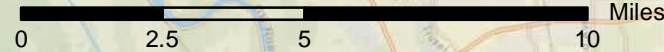
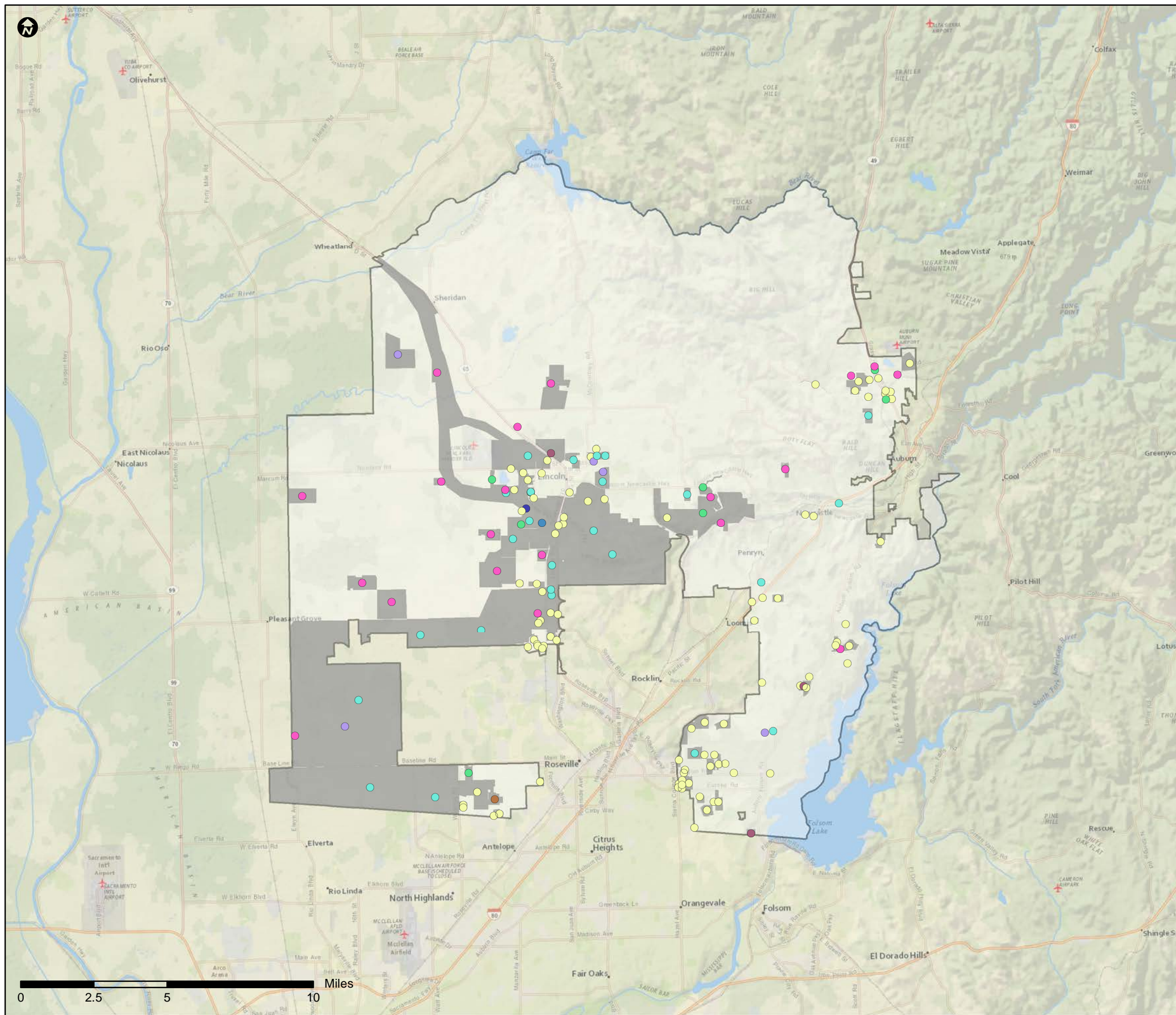
#### PCCP Area

- 210,216.78 Acres



Coordinate System: NAD 1983 UTM Zone 10N  
 Projection: Transverse Mercator  
 Datum: North American 1983





**Legend**

159 Total Permitted Actions  
 Considered for PCCP Analysis  
 of Cumulative Impacts to WOUS

**Permitted Action Types**

- LOP: 7
- NA: 8
- NPR: 1
- NWP/LOP: 1
- NWP/SP: 1
- NWP: 95
- None: 3
- SP: 26
- UK: 17

**Footprint of Permitted Actions**

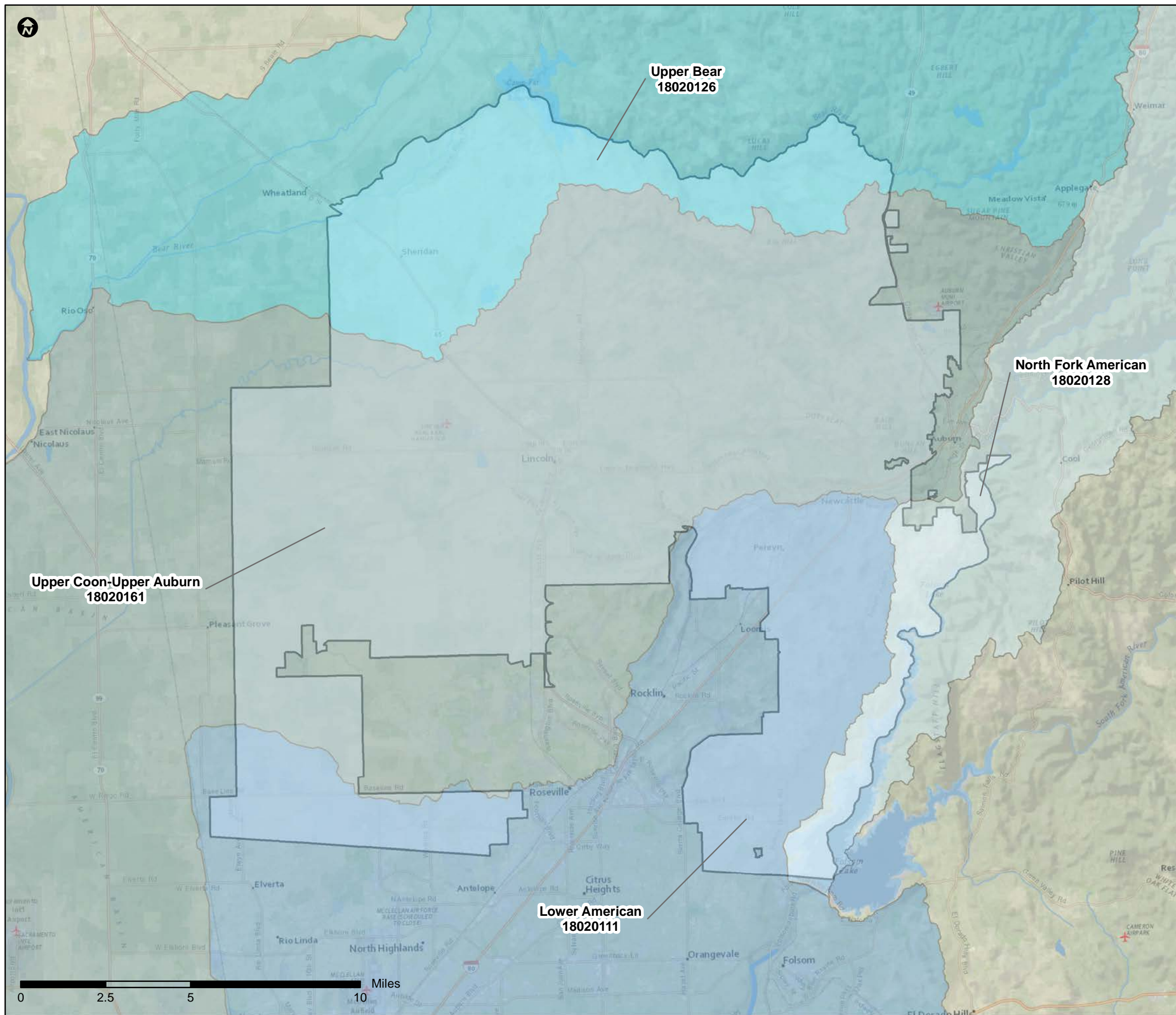


**PCCP Area**



Coordinate System: NAD 1983 UTM Zone 10N  
 Projection: Transverse Mercator  
 Datum: North American 1983





## 8-Digit HUCs (Hydrologic Unit Codes) in PCCP Area

### Legend

#### 8-Digit HUC

- Lower American  
1802011
- North Fork American  
1802028
- Upper Bear  
1802026
- Upper Coon-Upper Auburn  
1802061

#### PCCP Area

- Total Acres: 210,216.78

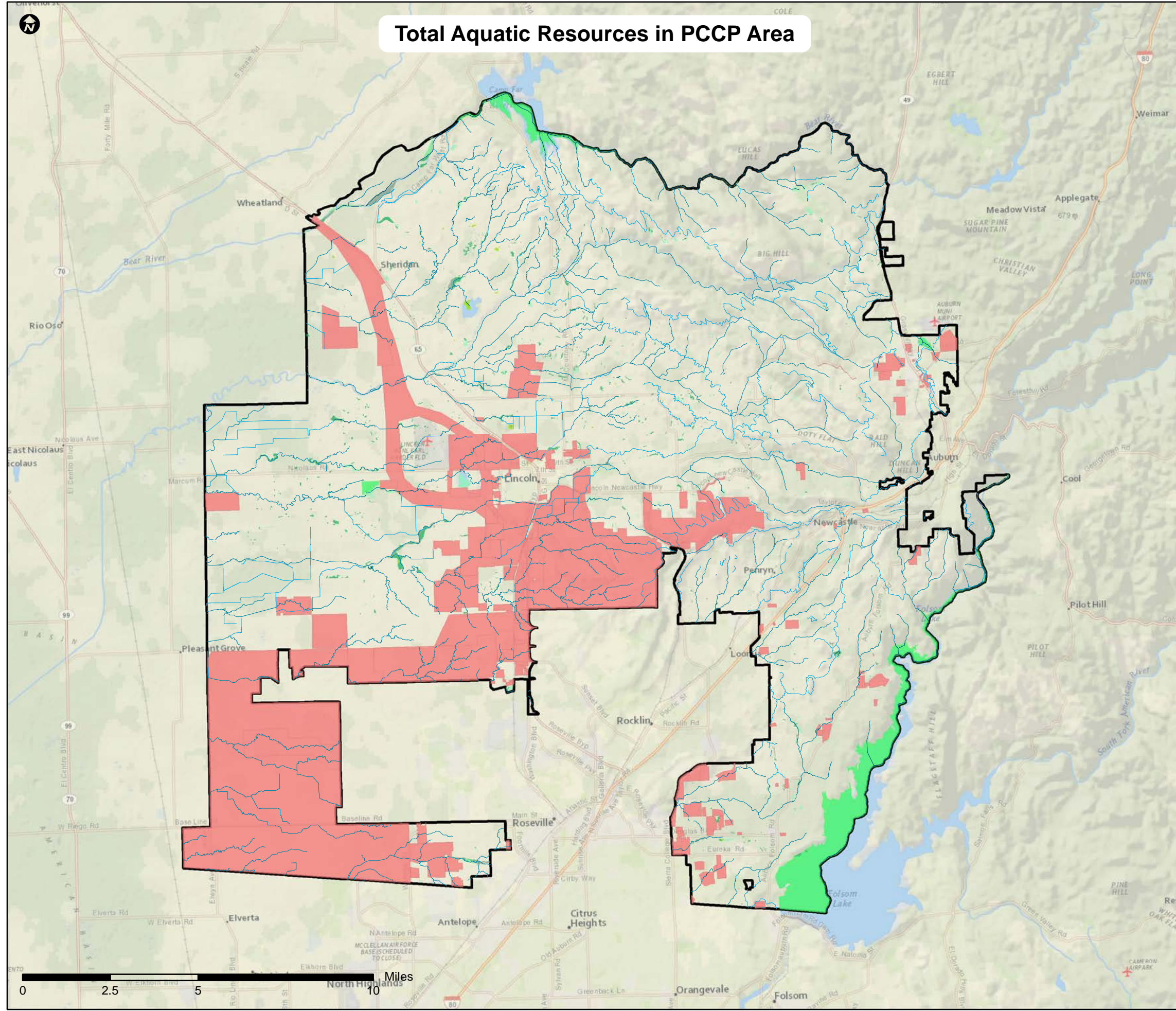
8-Digit HUC Name	Acres in PCCP
Lower American	39,710.07
Upper Bear	33,292.44
North Fork American	9,970.19
Upper Coon-Upper Auburn	127,244.08



Coordinate System: NAD 1983 UTM Zone 10N  
 Projection: Transverse Mercator  
 Datum: North American 1983



# Total Aquatic Resources in PCCP Area



## Aquatic Resources Overview

### Legend

Acres of "Aquatic Resources" below do not overlap (data is listed in order of priority and layers below were erased so that no geographic area was duplicated between datasets).

#### Total Miles of NHD in PCCP Area:

- Connector: 2.83
- Canal/Ditch: 230.19
- Stream/River: 494.09
- Artificial Path (polygon length): 52.33

#### Total Acres of NWI in PCCP Area:

- Freshwater Emergent Wetland: 918.38
- Freshwater Forested/Shrub Wetland: 339.62
- Freshwater Pond: 1,011.96
- Lake: 4,371.07
- Other: 66.86
- Riverine: 142.34

#### Acres of USACE JD Acres:

- Vernal Pool: 321.91
- Seasonal Wetland: 573.62
- Wetland: 374.66
- Other Aquatic Resource: 333.64
- TOTAL JD WATERS: 1,603.83**

#### Total Acres of PCCP Area:

🗺️ 210,216.78



Coordinate System: NAD 1983 UTM Zone 10N  
 Projection: Transverse Mercator  
 Datum: North American 1983

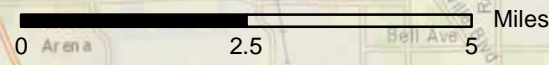
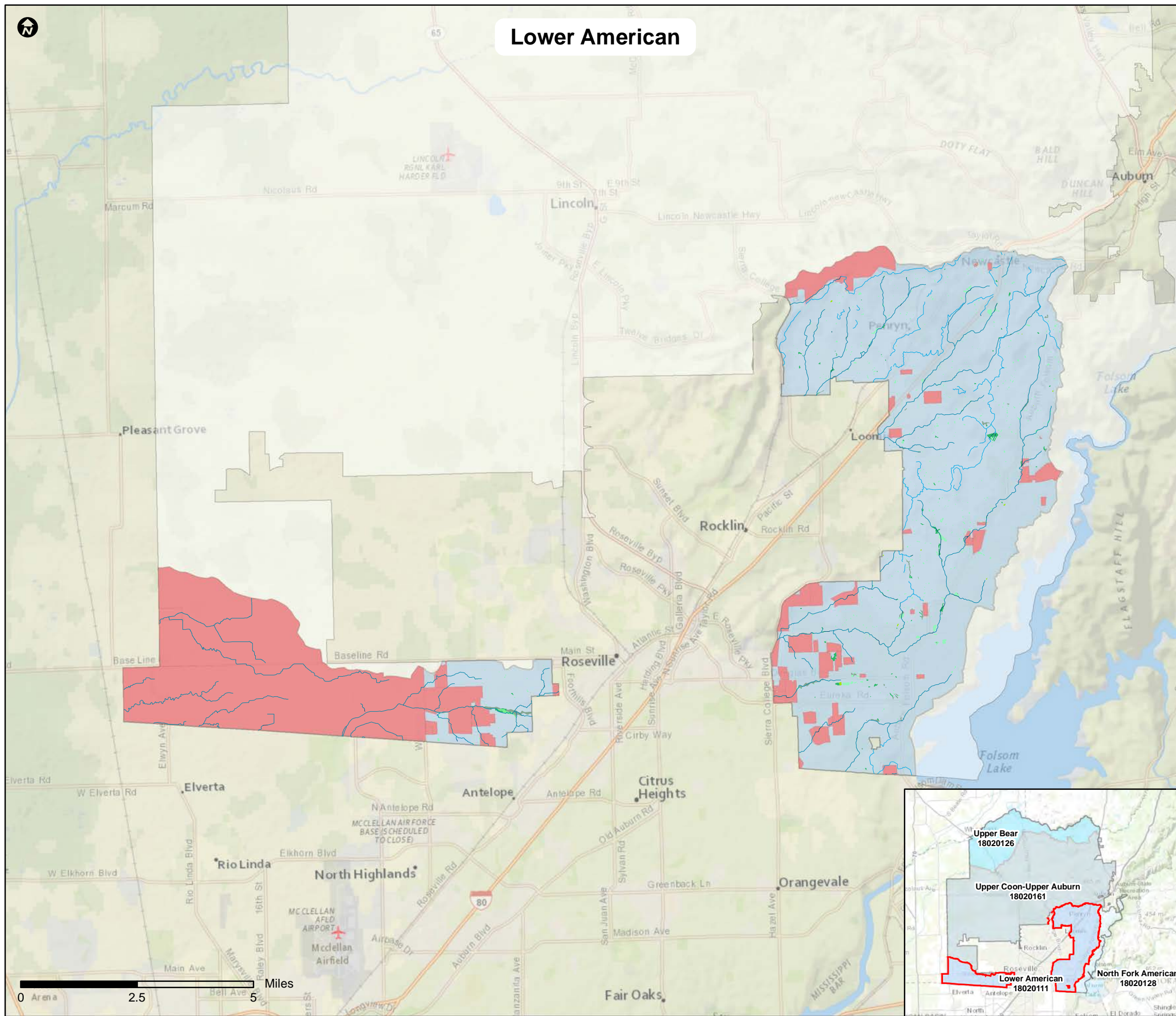


CUMULATIVE IMPACTS TO WOUS (WATERS OF THE US)

Total Miles of NHD in PCCP Area:



# Lower American



## Aquatic Resources Per BRCP 8-Digit HUC

Lower American  
18020111

### Legend

Acres of "Aquatic Resources" below do not overlap (data is listed in order of priority and layers below were erased so that no geographic area was duplicated between datasets).

#### Total Miles of NHD in PCCP Area:

- Connector: 0.00
- Canal/Ditch: 34.06
- Stream/River: 90.85
- Artificial Path (polygon length): 4.79

#### Total Acres of NWI in PCCP Area:

- Freshwater Emergent Wetland: 75.64
- Freshwater Forested/Shrub Wetland: 86.59
- Freshwater Pond: 262.93
- Lake: 0.00
- Other: 5.43
- Riverine: 10.71

#### Acres of USACE JD Waters:

- Vernal Pool: 36.17
- Seasonal Wetland: 144.02
- Wetland: 69.13
- Other Aquatic Resource: 95.12
- TOTAL JD WATERS: 347.44

#### Total Acres of PCCP 8-Digit HUC:

- Lower American: 39,710.07

#### PCCP Area

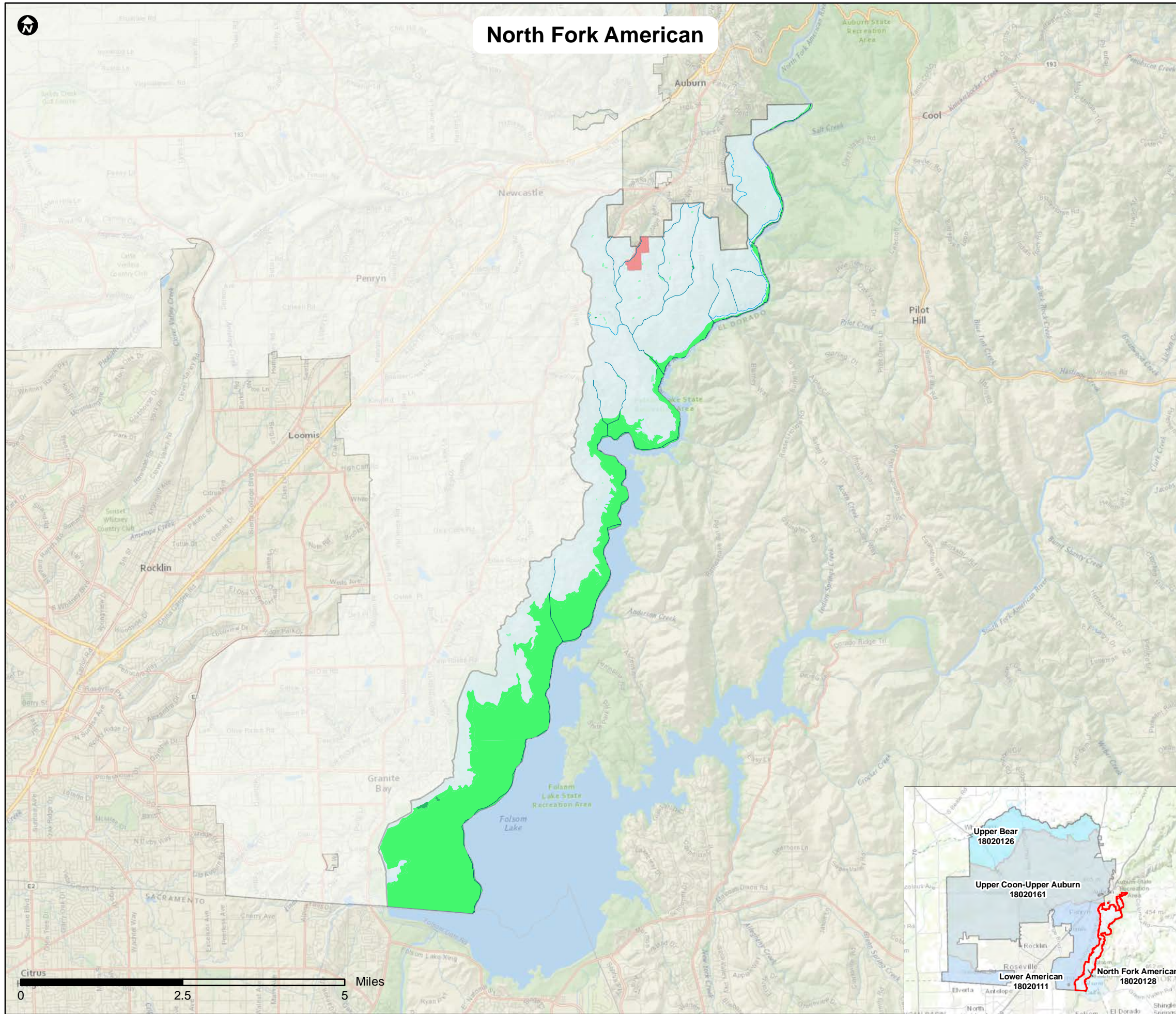


Coordinate System: NAD 1983 UTM Zone 10N  
Projection: Transverse Mercator  
Datum: North American 1983





# North Fork American



## Aquatic Resources Per BRCP 8-Digit HUC

North Fork American  
18020128

### Legend

Acres of "Aquatic Resources" below do not overlap (data is listed in order of priority and layers below were erased so that no geographic area was duplicated between datasets).

#### Total Miles of NHD in PCCP Area:

- Connector: 0.50
- Canal/Ditch: 5.95
- Stream/River: 11.53
- Artificial Path (polygon length): 15.19

#### Total Acres of NWI in PCCP Area:

- Freshwater Emergent Wetland: 11.62
- Freshwater Forested/Shrub Wetland: 0.00
- Freshwater Pond: 19.79
- Lake: 3,653.01
- Other: 0.10
- Riverine: 13.36

#### Acres of USACE JD Waters:

- Vernal Pool: 0.00
- Seasonal Wetland: 0.00
- Wetland: 2.99
- Other Aquatic Resource: 1.66
- TOTAL JD WATERS: 4.65

#### Total Acres of PCCP 8-Digit HUC:

- North Fork American: 9,970.19

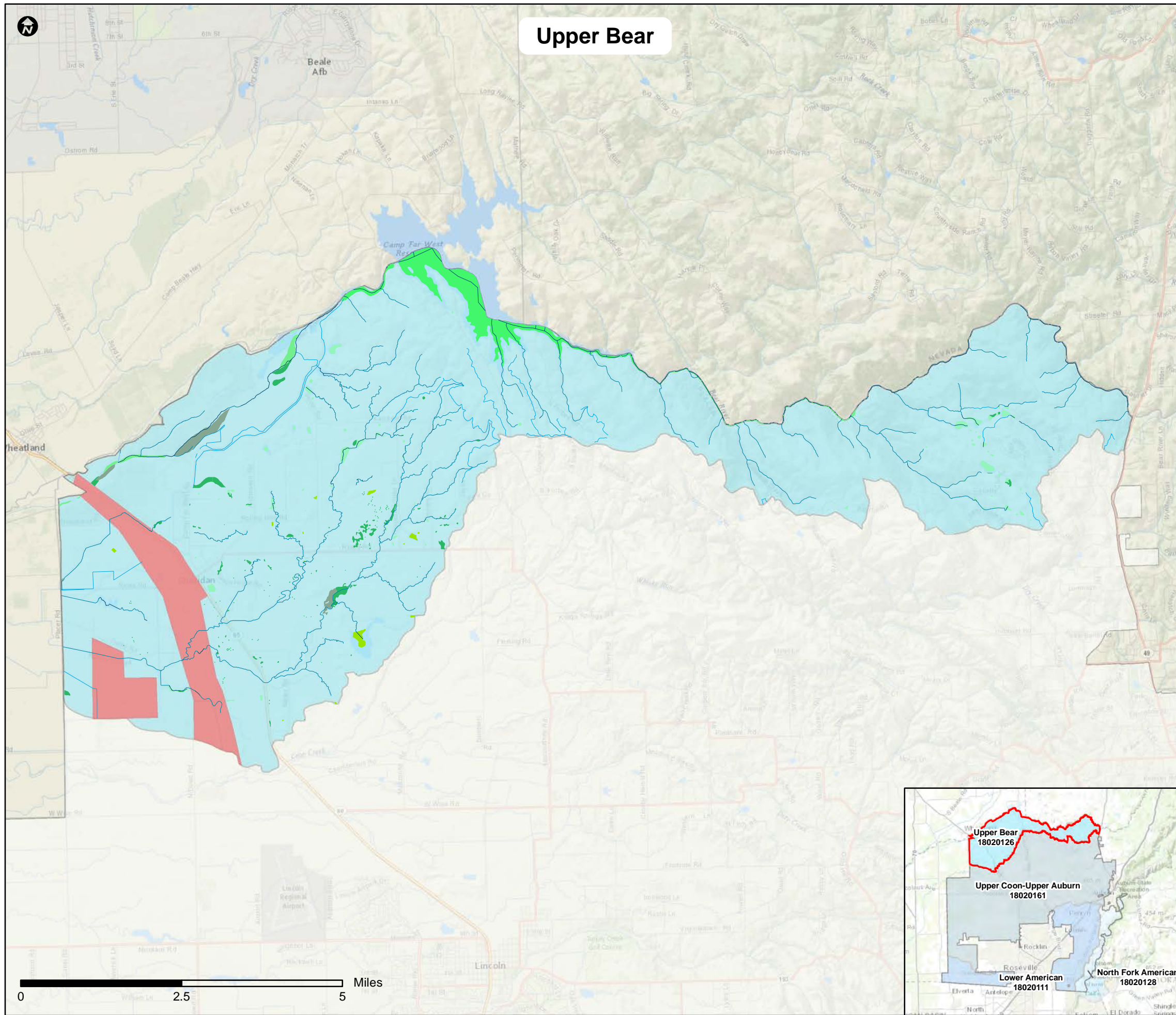
#### PCCP Area



Coordinate System: NAD 1983 UTM Zone 10N  
Projection: Transverse Mercator  
Datum: North American 1983







# Upper Bear

## Aquatic Resources Per BRCP 8-Digit HUC

**Upper Bear**  
18020126

### Legend

Acres of "Aquatic Resources" below do not overlap (data is listed in order of priority and layers below were erased so that no geographic area was duplicated between datasets).

#### Total Miles of NHD in PCCP Area:

- Connector: 0.20
- Canal/Ditch: 24.13
- Stream/River: 78.69
- Artificial Path (polygon length): 23.07

#### Total Acres of NWI in PCCP Area:

- Freshwater Emergent Wetland: 160.22
- Freshwater Forested/Shrub Wetland: 110.53
- Freshwater Pond: 153.95
- Lake: 591.33
- Other: 36.90
- Riverine: 91.00

#### Acres of USACE JD Waters:

- Vernal Pool: 18.82
- Seasonal Wetland: 9.04
- Wetland: 17.72
- Other Aquatic Resource: 8.42
- TOTAL JD WATERS: 54.00**

#### Total Acres of PCCP 8-Digit HUC:

- Upper Bear: 33,292.44

#### PCCP Area



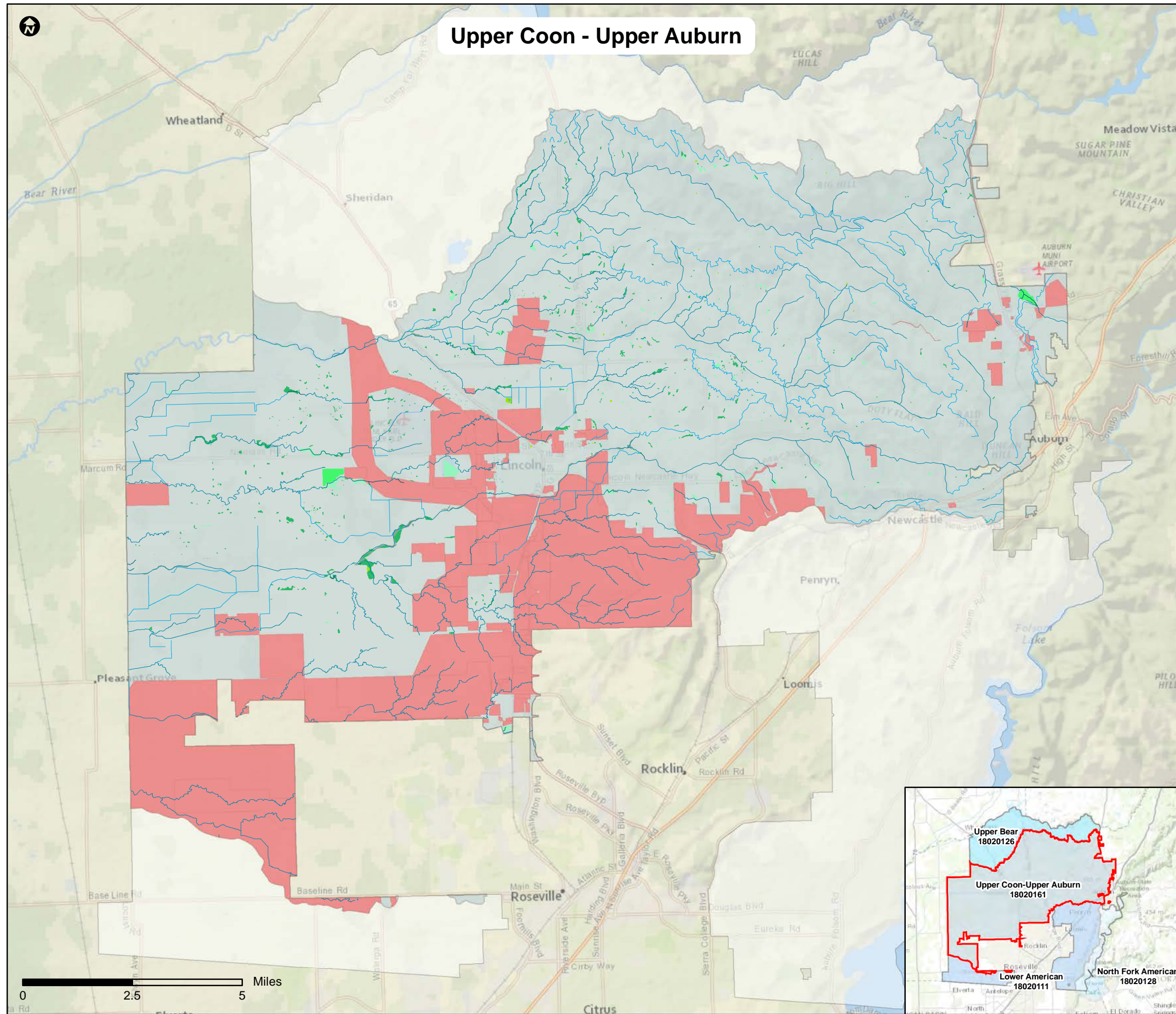
Coordinate System: NAD 1983 UTM Zone 10N  
Projection: Transverse Mercator  
Datum: North American 1983



**CUMULATIVE IMPACTS TO WOUS (WATERS OF THE US)**

**Total Miles of NHD in PCCP Area:**

# Upper Coon - Upper Auburn



## Aquatic Resources Per BRCP 8-Digit HUC

Upper Coon-Upper Auburn  
18020161

### Legend

Acres of "Aquatic Resources" below do not overlap (data is listed in order of priority and layers below were erased so that no geographic area was duplicated between datasets).

#### Total Miles of NHD in PCCP Area:

- Connector: 2.13
- Canal/Ditch: 166.05
- Stream/River: 313.02
- Artificial Path (polygon length): 9.28

#### Total Acres of NWI in PCCP Area:

- Freshwater Emergent Wetland: 670.90
- Freshwater Forested/Shrub Wetland: 142.50
- Freshwater Pond: 575.29
- Lake: 126.73
- Other: 24.43
- Riverine: 27.07

#### Acres of USACE JD Waters:

- Vernal Pool: 266.92
- Seasonal Wetland: 420.56
- Wetland: 284.82
- Other Aquatic Resource: 228.44
- TOTAL JD WATERS: 1,200.74**

#### Total Acres of PCCP 8-Digit HUC:

- Upper Coon-Upper Auburn: 127,244.08

#### PCCP Area



Coordinate System: NAD 1983 UTM Zone 10N  
Projection: Transverse Mercator  
Datum: North American 1983



0 2.5 5 Miles

# **APPENDIX B**

## **PCCP Spreadsheets**

# PCCP Cumulative Impact Assessment - Plan Area Summary

## Estimated Aquatic Resources in Plan Area

	Corps Data				NWI** and NHD						
	JD - Acres VP	JD - Acres SW/SWS	JD - Acres OW	JD - Acres OAR	Acres VP	Acres SW/SWS	Acres OW	Acres OAR	NHD mile	NHD Acre***	Total WOUS
Total	321.91	573.62	374.66	333.64	0.00	0.00	1258.00	5592.03	-	472.39	8926.25

## Loss of Waters of the U.S.

	VP - Permanent Loss	SW/SWS - Permanent Loss	OW - Permanent Loss	OAR - Permanent Loss	Total Permanent Loss
Total	109.19	242.26	101.83	98.88	552.16

## Compensatory Mitigation

	MB - Acres VP Create/Restore	MB - Acres SW/SWS Create/Restore	MB - Acres OW Create/Restore	MB - Acres OAR Create/Restore	ILF - Acres VP Create/Restore	ILF - Acres SW/SWS Create/Restore	ILF - Acres OW Create/Restore	ILF - Acres OAR Create/Restore	PRM Acres VP Create/Restore	PRM Acres SW/SWS Create/Restore	PRM Acres OW Create/Restore	PRM Acres OAR Create/Restore	On-Site Preserve Size	On-Site - Acres VP Preserved	On-Site - Acres SW/SWS Preserved	On-Site Acres OWs Preserved	On-Site Acres OAR Preserved
Compensatory Mitigation Inside the Plan Area	14.21	22.41	14.48	3.02	0.00	0.00	0.00	0.00	67.21	85.12	70.98	27.13	3633.82	85.48	198.08	167.58	156.94
Compensatory Mitigation Outside the Plan Area	51.62	82.89	170.27	72.36	0.80	2.14	0.63	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTAL	65.83	105.30	184.75	75.38	0.80	2.14	0.63	0.15	67.21	85.12	70.98	27.13	3633.82	85.49	198.08	167.58	156.94

# PCCP Cumulative Impact Assessment - Plan Area Summary

	Acres VP	% VP	Acres SW/SWS	% SW/SWS	Acres OW	% OW	Acres OAR	% OAR	Total All Aquatic Resources	% All Aquatic Resources
Net WOUS Remaining in the PA	294.14	91.37%	438.89	76.51%	1616.29	99.00%	6329.33	98.93%	8678.65	97.23%
Net Gain (-)/Loss WOUS in the PA	27.77	8.63%	134.73	23.49%	16.37	1.00%	68.73	1.07%	247.60	2.77%
Overall Net Gain (-)/Loss WOUS****	-24.65	-7.66%	49.70	8.66%	-154.53	-9.46%	-3.78	-0.06%	-133.26	-1.49%

Mitigation Ratio (compensation: impact)	VP	SW/SWS	OW	OAR	Total
In PA	0.75	0.44	0.84	0.30	0.55
Overall	1.23	0.79	2.52	1.04	1.24

\* PCCP aquatic resource designations are as follows: VP = Vernal Pool; SW/SWS = Seasonal Wetland/Seasonal Wetland Swale; OW = Other Wetland; OAR = Other Aquatic Resource

\*\* The following assumptions were made to convert the NWI designations to the PCCP designations for aquatic resource type: NWI Freshwater Emergent Wetland and Freshwater Forested/Shrub Wetland = PCCP Other Wetland; NWI Freshwater Pond, Lake, Other, and Riverine = PCCP Other Aquatic Resource

\*\*\* All NHD flowlines are assumed to be Other Aquatic Resources. In order to determine the acreage of these aquatic resources, an assumption was made that these flowlines are 5-feet wide.

\*\*\*\* The estimate of the overall net gain/loss take into account only those losses of waters of the U.S. inside the Plan Area, but takes into account compensatory mitigation requirements both inside and outside of the Plan Area. The estimated percent gain/loss of waters of the U.S. is based solely on the losses of waters of the U.S. inside of the Plan Area, and not on any losses of waters of the U.S. within those watersheds where compensatory mitigation occurred outside of the Plan Area.

# PCCP Cumulative Impact Assessment - Watershed Summary

## Estimated Aquatic Resources in Plan Area

Watershed	Corps Data				NWI** and NHD						Total WOUS
	JD - Acres VP	JD - Acres SW/SWS	JD - Acres OW	JD - Acres OAR	Acres VP	Acres SW/SWS	Acres OW	Acres OAR	NHD mile	NHD Acre***	
18020111	36.17	144.02	69.13	95.12	0.00	0.00	162.23	279.07	129.70	78.61	864.35
18020126	18.82	9.04	17.72	8.42	0.00	0.00	270.75	873.18	126.09	76.42	1274.35
18020128	0.00	0.00	2.99	1.66	0.00	0.00	11.62	3686.26	33.17	20.10	3722.63
18020161	266.92	420.56	284.82	228.44	0.00	0.00	813.40	753.52	490.48	297.26	3064.92
Total	321.91	573.62	374.66	333.64	0.00	0.00	1258.00	5592.03	-	472.39	8926.25

## Loss of Waters of the U.S.

Watershed	VP - Permanent Loss	SW/SWS - Permanent Loss	OW - Permanent Loss	OAR - Permanent Loss	Total Permanent Loss
18020111	29.91	88.68	13.45	26.72	158.76
18020126	0.02	1.01	28.00	5.79	34.82
18020128	0.00	0.00	0.00	0.00	0.00
18020161	79.26	152.57	60.38	66.37	358.58
Total	109.19	242.26	101.83	98.88	552.16

## Compensatory Mitigation

Watershed	MB - Acres VP Create/Restore	MB - Acres SW/SWS Create/Restore	MB - Acres OW Create/Restore	MB - Acres OAR Create/Restore	ILF - Acres VP Create/Restore	ILF - AC SW/SWS Create/Restore	ILF - Acres OW Create/Restore	ILF - Acres OAR Create/Restore	PRM Acres VP Create/Restore	PRM Acres SW/SWS Create/Restore	PRM Acres OW Create/Restore	PRM Acres OAR Create/Restore	On-Site Preserve Size	On-Site - Acres VP Preserved	On-Site - Acres SW/SWS Preserved	On-Site Acres OWs Preserved	On-Site Acres OAR Preserved
18020111	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.00	0.37	12.24	3.86	0.07	1062.30	11.38	47.01	30.23	56.22
18020126	13.07	19.49	14.48	3.02	0.00	0.00	0.00	0.00	5.48	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18020128	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18020161	1.14	2.83	0.00	0.00	0.00	0.00	0.00	0.00	61.36	72.88	67.12	27.06	2571.50	74.11	151.07	137.35	100.73
Other/Unknown	51.62	82.89	170.27	72.36	0.80	2.14	0.63	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	65.83	105.30	184.75	75.38	0.80	2.14	0.63	0.15	67.21	85.12	70.98	27.13	3633.80	85.49	198.08	167.58	156.95

# PCCP Cumulative Impact Assessment - Watershed Summary

## Remaining WOUS

Watershed	Remaining VP	% VP Remaining	Remaining SW/SWS	% SW/SWS Remaining	Reamainign OW	% OW Remaining	Remaining OAR	% OAR Remaining	Remaining All Aquatic Resources - Total	% All Aquatic Resources Remaining
18020111	18.01	49.79%	67.67	46.99%	221.77	95.85%	426.15	94.11%	733.60	84.87%
18020126	37.35	198.46%	27.52	304.42%	274.95	95.31%	955.25	99.71%	1295.07	101.63%
18020128	0.00	0.00%	0.00	0.00%	14.61	100.00%	3708.02	100.00%	3722.63	100.00%
18020161	250.16	93.72%	343.70	81.72%	1104.96	100.61%	1239.91	96.93%	2938.73	95.88%
HUC Total	305.52	94.91%	438.89	76.51%	1616.29	99.00%	6329.33	98.93%	8690.03	97.35%

## % Loss WOUS

Watershed	Net Gain (-)/ Loss VP	% Gain (-)/ Loss VP	Net Gain (-)/ Loss SW/SWS	% Gain (-)/ Loss SW/SWS	Net Gain (-)/ Loss OW	% Gain (-)/ Loss OW	Net Gain (-)/ Loss OAR	% Gain (-)/ Loss OAR	Total Net Gain (-) /Loss	Total % Gain (-)/ Loss
18020111	29.54	81.67%	76.35	53.01%	9.59	4.15%	26.65	5.89%	142.95	16.54%
18020126	-18.53	-98.46%	-18.48	-204.42%	13.52	4.69%	2.77	0.29%	-21.70	-1.70%
18020128	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%	0.00	0.00%
18020161	16.76	6.28%	76.86	18.28%	-6.74	-0.61%	39.31	3.07%	126.25	4.12%
HUC Total	27.77	8.63%	134.73	23.49%	16.37	1.00%	68.73	1.07%	247.69	2.77%

\* PCCP aquatic resource designations are as follows: VP = Vernal Pool; SW/SWS = Seasonal Wetland/Seasonal Wetland Swale; OW = Other Wetland; OAR = Other Aquatic Resource

\*\* The following assumptions were made to convert the NWI designations to the PCCP designations for aquatic resource type: NWI Freshwater Emergent Wetland and Freshwater Forested/Shrub Wetland = PCCP Other Wetland; NWI Freshwater Pond, Lake, Other, and Riverine = PCCP Other Aquatic Resource

\*\*\* All NHD flowlines are assumed to be Other Aquatic Resources. In order to determine the acreage of these aquatic resources, an assumption was made that these flowlines are 5-feet wide.

# PCCP Cumulative Impact Assessment - Project Summary

## Project Summary

	Number
Total Authorized Projects before 6-5-2000 (when NWP 26 expired)	52
Total authorized projects after 6-5-2000	64
Total reasonably foreseeable projects not authorized	30
<b>Total Projects</b>	<b>146</b>

## Compensatory Mitigation Summary

	Number	Percent
Total authorized projects before 6-5-2000 that required compensatory mitigation	34	65.38%
Total authorized projects after 6-5-2000 that required compensatory mitigation	61	95.31%
Total projects that have not been authorized where compensatory mitigation is assumed	30	100.00%
<b>Total Projects with Compensatory Mitigation</b>	<b>125</b>	<b>85.62%</b>

## Project Type Summary

	NWP							RGP/PGP	LOP	SP	NWP/LOP	NWP/SP	Unknown	Total
	12, 33	26	29	32	39	29, 39	7, 14, 33							
Past	1	51	3	1	24	0	1	0	3	11	1	1	0	97
Present	0	0	0	0	0	0	0	0	1	2	0	0	0	3
Reasonably Foreseeable*	0	0	8	0	5	1	0	0	3	13	0	0	17	47
<b>Total</b>	<b>1</b>	<b>51</b>	<b>11</b>	<b>1</b>	<b>29</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>7</b>	<b>26</b>	<b>1</b>	<b>1</b>	<b>17</b>	<b>147</b>

\* Includes both projects that have been authorized, and projects that have not been authorized. Of the 47 reasonably foreseeable projects, 17 have been authorized, and 30 either have not submitted permit applications, or no permit decision has been made



# PCCP Cumulative Impact Assessment - Jurisdictional Determination Information

DA Number	Project Name	Watershed	JD Verified? (Y/N)	JD - Acres VP	JD - Acres SW/SWS	JD - Acres Wetland	JD - Acres OAR	JD - Total WOUS	JD Notes
SPK-1989-00059	LINCOLN AIRPARK	18020161	Y	4.90	3.96	0.00	20.40	29.25	JD did not have information on acreage of waters on the site. Based on an addendum to the NWP 26 PDN, the site contained 4.8999 ac VP, 17.2139 ac perennial stream/emergent marsh, 3.9551 ac sw, 2.0329 acre seasonal stream, and 1.1500 ac pond. Because there was no breakout of perennial stream and emergent marsh, all were classified under OAR.
SPK-1990-00008	LOS LAGOS	18020111	Y	0.00	4.66	1.36	0.34	6.36	Unit 5 contains 2.89 acres of SW, 1.11 ac marsh, 0.06 ac seasonal seeps, and 0.26 ac ephemeral drains. Unit 3 contains 1.77 ac SW, 0.16 ac seasonal seep, and 0.08 acre ephemeral drain.
SPK-1990-00109	LINCOLN SCHOOL SITE	18020161	N	0.05	0.34	2.72	10.59	13.70	according to PN, site contains 10.32 acres historic, artificial treatment sewage ponds, 2.49 acres of artificial seasonal freshwater wetlands, 0.23 acre artificial perennial marsh, 0.27 realigned and abandoned channels, 0.34 ac natural seasonal freshwater wetlands, and 0.05 ac vp. The natural seasonal freshwater wetlands were identified under SW/SWS. The remaining artificial wetlands were identified as wetlands, and the treatment ponds and realigned/abandoned channels were identified as OAR.
SPK-1990-00173	JOINER RANCH COMMUNITY PARK	18020161	Y	1.70	0.00	0.00	1.24	2.94	according to delineation report, site contains 1.381 northern volcanic mudflow vernal pools, 0.316 acre northern hardpan vernal pools, and 1.240 acre intermittent drainage with emergent marsh.
SPK-1990-00270	CLOS-DU-LAC DEVELOPMENT	18020111	Y	0.00	0.00	0.41	0.00	0.41	JD was verified. However, letter does not identify the amount or type of waters. In addition, the microfilm file contained wetland delineation data sheets and soil report, but did not contain a map or information related to the acreage of waters on the site. The letter from the applicant stated that 0.41 acres of wetlands would be impacted. Therefore this assumed to be other wetlands.
SPK-1990-00404	DUTCH RAVINE FILL/RSC DEVELOPMENT	18020161	N	0.00	0.00	0.48	0.00	0.48	No JD in file. Permit was to retain 0.01 acre of fill and place an additional 0.28 acre of fill in wetlands. Unauthorized fill to an additional 0.18 ac of wetlands, which was required to be removed.
SPK-1990-00413	BARTON BUSINESS PARK	18020111	N	0.00	0.00	1.79	0.00	1.79	according to NWP application, the site contains 1.79 acres of freshwater wetlands
SPK-1990-00427	QUAIL OAKS II	18020111	Y	0.00	1.90	0.00	0.00	1.90	JD verified on 1-5-1990. Delineation report does not identify the acreage of waters on the site. The 4-17-1990 letter from Huffman & Associates identifies that the site contains 1.9 acres of wetlands, consisting of two swales that drain the property. Therefore, it is assumed that the site contains 1.9 acres of SWS.
SPK-1990-00445	EASTLAKE	18020161	Y	1.13	8.19	9.70	16.24	35.26	site contains 1.13 acres VP, 8.19 SW, 1.61 acres pond and impoundment, 2.79 ac saline wetland, 1.77 ac irrigation ditch, 2.63 acre swale and tributary, 6.91 ac cattail-rush marsh, 6.67 acre pond-irrigation water return, and 3.56 acre perennial stream
SPK-1990-00758	SILVERWOOD N26 REAUTHORIZATION	18020111	Y	0.53	8.05	0.00	0.36	8.94	Site contains 0.53 ac VP, 8.05 ac SW, and 0.364 ac ID.
SPK-1990-00786	BALDWIN RESERVOIR	18020111	Y	0.00	0.00	5.52	5.07	10.59	3.16 acres Open water; 0.67 acres of channels, 5.52 emergent wetlands, 1.24 acre of cottonwood/willow woodland,
SPK-1990-00877	PLACER PARK	18020161	Y	1.24	4.21	0.00	0.32	5.77	according to 8-10-1990 delineation report, site contains 1.38 ac vp, 0.98 ac sws, 1.7 ac seasonally inundated flats, and 0.84 ac channel. However, according to June 1997 mitigation plan, site contains 5.77 ac of waters, including 1.24 ac vp, 4.21 ac sws, and 0.32 ac channels. Because the 1997 information was the most recent, this was used in the totals

# PCCP Cumulative Impact Assessment - Jurisdictional Determination Information

DA Number	Project Name	Watershed	JD Verified? (Y/N)	JD - Acres VP	JD - Acres SW/SWS	JD - Acres Wetland	JD - Acres OAR	JD - Total WOUS	JD Notes
SPK-1990-00901	WINTERHAWK	18020111	Y	0.00	1.58	0.98	0.00	2.56	Original delineation identified 2.91 ac of SW and 1.95 ac riparian wetland.. JD verified on 8-31-1990. Subsequent wetland delineation identified 2.56 acres of waters, which includes existing waters and waters that were impacted by the authorized activities (0.58 acres). Delineation report identified that the site contains 1.07 acres of SW and 0.98 acres of riparian wetlands. This did not include all impacted waters. A subsequent submittal identified 1.98 acres of existing waters and 0.58 acres of impacted waters, although those were not distinguished between the types. The delineation numbers of 1.07 ac of SW and 0.98 ac of riparian wetlands will be used, with an addition of 0.51 acres of wetlands to reach 2.56. It is assumed that the 0.51 remaining wetlands not identified in the delineation report, consist of seasonal wetlands.
SPK-1990-00919	PEACHTREE PLACE PROPERTY	18020111	N	0.00	0.00	1.93	0.00	1.93	1.93 acres as wet meadow habitat, based on delineation report. No map in electronic microfilm.
SPK-1990-00946	BECHTEL CINCINNATI AVENUE PROPERTY	18020161	N	0.24	0.00	0.00	0.69	0.93	based on delineation report, site contains 0.24 ac vp and 0.69 ac drainage channel
SPK-1990-00955	CANNONSHIRE ESTATES	18020111	Y	0.00	0.23	3.01	0.21	3.45	site contains 0.23 ac SW, 3.01 ac marsh, 0.11 ac ID, 0.10 ac PD. JD verified.
SPK-1990-01115	FRANK ANDREWS PROPERTY	18020111	N	0.00	0.00	0.80	0.00	0.80	according to NWP verification. there was a placement of fill material into 0.80 acre of wetlands. No delineation or impact maps in the file. Just correspondence related to a possible violation.
SPK-1990-01136	SHIRLAND OAKS SUBDIVISION	18020128	Y	0.00	0.00	3.00	1.67	4.67	Based on JD, 1989-00056 (Shirland Lakeview Estates Project) contains 4.01 acres of WOUS, including 2.28 ac marsh, 1.01 ac open water, and 0.72 acre riparian wetland, and 1990-01136 contains 0.66 acre of Mormon Ravine. Delineation of 1989-00056 was verified, but delineation of 1990-01136 was not..
SPK-1990-01157	CHELSHIRE DOWNS	18020111	Y	0.00	0.00	0.57	7.50	8.07	according to JD/NWP verification letter, site contains 8.07 acres of WOUS. This includes wetlands. However, there is no information on how many waters are wetland, and how many are other waters. JD report says there are some small vernal pools. Impacts of the project are 0.57 acres. It is assumed that the 0.57 acres of impacts are to the wetlands, as the request for verification states that wetland areas would be filled. Therefore, therefore 0.57 acres of wetlands are assumed to occur on the site.and 7.5 acres are other waters, although this may not be correct.
SPK-1990-01257	THREE D ENTERPRISES	18020161	Y	6.34	0.30	0.00	0.00	6.63	According to delineation that was verified on 1-3-1991, site contains 1.67 ac vp and 6.55 ac sw. A new delineation was submitted in 2002, although it does not appear as though this delineation was verified. Based on this delineation, the site contains 6.365 acres of WOUS, including 6.215 ac VP and 0.150 ac SW. A July 28, 1999 NWP 26 verification authorized the discharge of fill material into 0.12 ac, including 0.08 ac vp and 0.04 ac sw. The october 15, 2003, impact/preservation map, which was included as the attachment to the pemrit, states that there are 6.255 ac VP and 0.258 ac drainage swale. Because the 10/2003 map is what the permit was based on, it has been used, with the addition of the 0.08 ac vp and 0.04 ac SW authorized to be filled in the 7-28-1999 NWP 26 verification..
SPK-1991-00046	MOSS PROPERTY	18020111	N	0.00	0.00	0.65	0.00	0.65	Unauthorized activity authorized under NWP 26. No delineation information. NWP verification letter states that the work conducted resulted in impacts to 0.65 acres of wetlands. Therefore, assumed other wetlands.

# PCCP Cumulative Impact Assessment - Jurisdictional Determination Information

DA Number	Project Name	Watershed	JD Verified? (Y/N)	JD - Acres VP	JD - Acres SW/SWS	JD - Acres Wetland	JD - Acres OAR	JD - Total WOUS	JD Notes
SPK-1991-00164	WIDENING OF HWY 49 NEAR AUBURN	18020161	N	0.00	0.00	0.07	0.00	0.07	according to the Natural Environment Study Report for State Route 49 Widening, there are 0.065 acres of wetlands on the site, consisting of two open drains and a roadside ditch
SPK-1991-00770	LINCOLN CROSSING	18020161	Y	6.12	8.95	27.78	3.36	46.21	Numbers recorded here do not match what was verified in the delineation, as later permitting of the project used different nomenclature for water types. Based on the permit applications, the site contained 6.12 ac VP, 8.95 ac SW, 17.90 ac OW/Perennial marsh, 9.88 ac riparian wetland, and 3.36 ac of PD. Because OW/Perennial marsh was not broken out, it is all accounted for as other wetlands.
SPK-1992-00286	EASTRIDGE PROJECT SITE	18020161	Y	1.97	0.70	0.01	0.52	3.20	While a JD was done, because this project was part of the SunCity (SPK-1997-00375), the acreage of waters will be recorded there. The only acreage of water on this site recorded are those that were impacted by the NWP verification. Impacts include 1.97 ac vp, 0.52 ac ID, 0.70 ac SW, 0.01 ac emergent wetlands.
SPK-1992-00601	HERITAGE PARK ESTATES, SECRET RAVINE	18020111	N	0.00	0.00	0.30	2.00	2.30	2.3 acres of waters that include stream and adjacent wetlands. Only info on wetland acreage is 0.3 wetlands to be filled as indicated in letter from the applicant.
SPK-1992-00632	TREELAKE VILLAGE, UNIT 6 AND 7	18020111	Y	0.00	0.00	1.47	0.00	1.47	Type of waters on the site not known. Electronic JD verification letter does not specify the amount of waters. It appears as though there is a preserve containing WOUS, however, no information is available, as the hard copy of the file cannot be found, to identify total acreage of waters on the site. Therefore, the JD identifies only the authorized impacts under NWP 26, which was 1.47 acres. The NWP verification letter did not identify the type of waters, and therefore it is assumed that they are wetlands.
SPK-1993-00153	RICE PROPERTY - DICK COOK ROAD	18020111	Y	0.00	3.05	0.00	0.00	3.05	according to WD, site contains 3.05 ac of SW/SWS.
SPK-1993-00342	DOUGLAS RANCH	18020111	Y	0.00	0.04	7.39	0.00	7.43	According to JD, application, site contains 0.65 ac ryegrass swale, 0.04 ac SW, 4.80 ac woody riparian/herbaceous riparian, and 0.08 ac wood riparian/ryegrass swale. JD verified on 8-17-1998
SPK-1993-00349	THE RIDGE GOLF COURSE (FORM. OAK CREEK)	18020161	Y	0.00	3.66	0.00	1.63	5.29	site contains 2.83 acres of seasonal wetlands, 0.83 acres of seasonal wetland swales, 0.76 acres of drainageways, and 0.87 acres of drainages with adjacent wetlands
SPK-1993-00351	BOULDER CREEK SUBD./VON ELTON AND KAPING	18020111	Y	0.00	9.84	0.00	0.55	10.39	site contains 9.10 ac SW, 0.74 ac SWS, and 0.55 ac pond
SPK-1994-00607	BICKFORD RANCH	18020161	N	0.23	10.82	4.54	2.06	17.65	Wetlands verified 6 AUG 1998. 17.5ac Waters of the US. Could not find wetland delineation map. Based on the LOP application, the site originally contained 17.651 ac of WOUS, including 3.111 ac SW, 7.711 ac SWS, 4.543 ac riverine wetlands, 1.795 ac ID, 0.231 ac VP, and 0.260 ac stock pond. The riverine wetland is considered an other wetland.
SPK-1994-01046	HAMILTON ENTERPRISES	18020161	Y	0.44	0.04	1.39	0.00	1.87	according to updated delineation, site contains 0.44 acre vp, 0.04 ac sw, and 1.39 ac riparian
SPK-1995-00111	FIRST INTERSTATE BANK	18020161	N	0.00	0.00	0.09	0.00	0.09	site contains 0.002 ac marsh, 0.09 ac riparian scrub wetland. No JD letter in file, although NWP verification was done.

# PCCP Cumulative Impact Assessment - Jurisdictional Determination Information

DA Number	Project Name	Watershed	JD Verified? (Y/N)	JD - Acres VP	JD - Acres SW/SWS	JD - Acres Wetland	JD - Acres OAR	JD - Total WOUS	JD Notes
SPK-1995-00143	MT. VERNON ROAD EXPANSION AUBURN	18020161	N	0.00	0.00	0.25	0.00	0.25	delineation report and NWP verification identify that WOUS are 0.25, although no information regarding type. Assumed all other waters.
SPK-1995-00190	PLACER COUNTY/SIERRA COLLEGE BLVD. WIDEN	18020111	Y	0.00	0.00	0.62	0.00	0.62	according to WD, site contains 0.62 ac of wetland habitat. No identification of type, and therefore assumed other wetlands. JD verified 5-11-1995
SPK-1995-00247	TARGET/BEST PROPERTY	18020161	Y	0.00	1.53	1.21	0.01	2.75	site contains 1.53 ac SW, 0.03 ac emergent marsh, 0.01 ac OW, 1.08 ac riparian, and 0.10 ac wetlands previously filled, of which the specific type was not identified (added as other wetland)
SPK-1995-00363	SR 65 Lincoln Bypass, Placer County - Caltrans	18020161	Y	67.12	28.91	63.27	9.40	168.70	Two PJDs were found, one for the Lincoln Bypass ROW, which contains 0.98 ac Great Valley Willow Scrub (wetland), 34.43 ac valley freshwater marsh (wetland), 34.43 ac vernal marsh (wetland), 26.55 ac vernal pool (vp), 2.57 ac vernal swale (vp), and 9.40 ac open water (OAR, unknown type). The other PJD was for the Rockwell Property (a mitigation site), which contains 35.95 ac vernal pool (vp), 2.05 ac vernal swale (vp), and 8.91 ac seasonal wetland (sw/sws).
SPK-1995-00589	TWELVE BRIDGES	18020161	N	16.59	9.03	29.40	20.71	75.73	based on table 1-2, referenced in the July 12, 1999, permit modification for the permitted project, the site contains 16.59 acres of vernal pools, 7.25 ac SWS, 1.78 ac SW, 7.64 ac wet meadow, 3.71 ac seasonal marsh, 0.94 ac seep, 5.27 ac riparian wetland, 8.48 ac riparian scrub wetland, 13.48 ac seasonal drainage, 5.61 ac open water pond, 1.62 ac perennial drainage, and 3.36 ac wetland scrub. No JD was found in the .pdf of the file, or on the R:/ drive.
SPK-1995-00590	LINCOLN CLAY PRODUCTS/DILLMAN VIOLATION	18020161	N	1.60	0.00	0.00	0.00	1.60	No JD completed. Project was potential violation. USACE estimated that 1.6 acres of vernal pools were on the site, but it is not known whether this number was correct.
SPK-1995-00621	LOOMIS LANDFILL	18020111	Y	0.00	0.00	1.01	0.00	1.01	site contains 1.01 acres of mixed-riparian wetland
SPK-1995-00730	CAVITT RANCH/PHASE 1-5 PORTION	18020111	Y	0.76	2.53	0.00	1.50	4.79	site contains 0.76 ac vp, 0.14 ac stock pond, 0.56 ac sw, 1.38 ac sws, 0.59 ac seasonal wetlands in miners ravine, 0.60 ac miners ravine, and 0.76 ac id
SPK-1996-00070	GREYHAWK ((PEREDNIA (GLADSTONE))	18020111	Y	0.00	0.86	11.44	0.01	12.31	According to revised delineation, site contains 11.44 ac riparian scrub wetland, 0.73 ac SW, 0.13 ac SWS, and 0.01 ac channel. Verified 7-11-1996
SPK-1996-00170	AUBURN HOME DEPOT	18020161	Y	0.00	0.13	0.05	0.00	0.18	Site contains 0.051 ac SW, 0.085 ac SWS, and 0.051 ac seep
SPK-1996-00189	SIERRA PACIFIC INDUST./LINCOLN SAWMILL	18020161	N	0.00	0.00	0.00	1.00	1.00	4-30-1996 letter states that some areas appear to be wetland and should be mapped, and that the total wetland acreage on the site is closer to 1 acre and that if impacts would be less than 1 acre, the project would qualify for NWP 26
SPK-1996-00532	ANTONIO MOUNTAIN RANCH/ORCHARD CREEK	18020161	N	31.43	37.00	11.52	16.24	96.19	Based on JD, site contains 31.43 ac of VP, 8.20 ac _ 20.14 ac SW, 8.66 ac SWS, 11.52 ac perennial marsh, 1.87 ac ID, 6.38 ac PD, 7.99 ac pond.
SPK-1997-00375	SUN CITY LINCOLN	18020161	Y	10.53	96.09	10.54	21.86	139.02	Based on original 1998 permit, the site contains 123.91 acres of waters of the U.S., including 10.53 ac vp, 81.98 ac SW, 2.42 ac seep, 5.72 ac saline wetlands, 1.40 ac riparian wetlands, 8.28 ac ponds, and 13.58 ac ED. Based on the 2001 permit application, the additional area contained 14.99 ac of WOUS, including 13.99 ac sw and 1 ac marsh. In addition, based on the 8-20-2013 modification, 0.12 acres of seasonal wetlands were identified. Total wous were 139.02 ac.

# PCCP Cumulative Impact Assessment - Jurisdictional Determination Information

DA Number	Project Name	Watershed	JD Verified? (Y/N)	JD - Acres VP	JD - Acres SW/SWS	JD - Acres Wetland	JD - Acres OAR	JD - Total WOUS	JD Notes
SPK-1997-00480	CHEROKEE ESTATES	18020111	Y	0.00	0.66	0.00	0.07	0.72	according to original JD, site contains 0.501 ac SW, 0.158 ac SWS, 0.008 ac ID, and 0.057 ac ditches. New JD request submitted, although has not been verified. Apparent violations, so some of the waters originally identified may have been filled.
SPK-1997-00593	CTS TRUCKING PROPERTY/BOOMER CONSTR.	18020161	N	0.10	0.00	0.00	0.00	0.10	according to wetland delineation, the site contains 0.10 acre vp
SPK-1997-00632	FOSKETT RANCH SUBDIVISION/LINCOLN	18020161	Y	10.43	7.38	1.85	0.95	20.61	Site contains 10.429 ac VP, 4.231 ac SW, 3.150 ac SWS, 1.853 ac marsh, and 0.950 ac ID.
SPK-1997-00649	HUNTERS GLEN	18020111	N	0.00	0.41	0.00	0.00	0.41	according to original NWP verification and re-verification request, the site contained 0.41 ac SW.
SPK-1998-00081	HIGHWAY 65 WIDENING PROJECT	18020161	Y	3.04	0.62	0.00	2.32	5.98	According to the wetland delineation, the site contains 3.05 ac vp, 0.46 ac seasonal swale, 0.16 ac sw, 1.68 acre ED, and 0.64 ac PD (Pleasant Grove Creek)
SPK-1998-00166	Nichols Ranch	18020161	N	1.39	0.37	1.05	0.13	2.94	site contains 1.39 ac VP, 0.37 ac SW, 0.07 ac perennial stream, 0.06 ac spring, 0.04 ac seep, and 1.01 ac freshwater marsh.
SPK-1998-00172	EASTPARK ROAD, SEWER, AND WATER LINE	18020161	N	0.22	0.75	0.04	0.00	1.01	No JD, so assumed that the impacts are what waters exist ion the site. site contains 0.59 ac VP, 0.11 ac SW, and 0.04 ac seep. The rest of the area is part of the SunCity permit and was completed by Del Webb.
SPK-1998-00208	UNITED AUBURN INDIAN TRIBAL GOVERNMENT	18020161	N	1.57	0.13	0.00	0.09	1.78	site contains 1.565 ac VP, 0.126 SW, and 0.083 ac ID
SPK-1998-00235	TREELAKE VILLAGE, UNIT 10	18020111	N	0.00	0.11	0.00	0.03	0.14	site contains 0.02 ac SW, 0.09 SWS, and 0.03 ac ID
SPK-1998-00259	DOUGLAS/SIERRA COLLEGE SOUTHEAST CORNER	18020111	Y	0.06	0.12	0.00	0.45	0.63	according to JD, site contained 0.06 ac VP, 0.13 ac SWS, and 0.45 ac creek/emergent marsh
SPK-1998-00265	47 ACRE ATHENS AVENUE PARCEL B	18020161	N	0.38	1.00	0.01	0.00	1.39	site contains 0.38 ac VP, 0.48 ac SW, 0.52 ac drainage swale (considered to be SWS), and 0.01 ac seasonal marsh.
SPK-1998-00347	BAYSIDE COVENANT CHURCH	18020111	N	0.00	0.00	0.00	0.00	0.00	WOUS that were on the site were identified in SPK-1995-00730. Therefore, they will not be added here. However, the impacts were not evaluated under SPK-1995-00730, and therefore those will be addressed here.
SPK-1998-00626	MORGAN CREEK GOLF AND COUNTRY CLUB	18020111	N	0.72	2.80	1.71	6.72	11.95	site contains 0.72 ac VP, 2.80 ac SW, 1.71 ac farmed wetland, 0.11 ac pond, 0.25 ac ID, and 6.36 ac dry creek.
SPK-1999-00376	Atwood Ranch Subdivision	18020161	Y	0.00	0.00	2.79	1.93	4.72	site contains 2.03 ac riparian scrub wetland, 0.66 ac marsh, less than 0.01 ac SWS, 0.10 ac seep, and 1.93 ac pond. Because the site was delineated as having 4.72, it was assumed that the SWS was 0.004 acre.
SPK-1999-00386	STONEBROOKE, MACARGO COURT	18020111	N	0.00	0.34	0.00	0.00	0.34	Site contains 0.07 acres of seasonal wetlands and 0.27 acres of seasonal wetland swales.
SPK-1999-00544	FRANKLIN SCHOOL EXPANSION/LOOMIS	18020111	N	0.00	0.00	0.33	0.00	0.33	Wetland delineation not verified as part of this project, although was verified as part of SPK-1997-00053

# PCCP Cumulative Impact Assessment - Jurisdictional Determination Information

DA Number	Project Name	Watershed	JD Verified? (Y/N)	JD - Acres VP	JD - Acres SW/SWS	JD - Acres Wetland	JD - Acres OAR	JD - Total WOUS	JD Notes
SPK-1999-00727	JOINER RANCH II	18020161	N	0.45	0.71	0.00	1.47	2.63	No Wetland Delineation map in folder, Letter states " 2.62 ac Waters of the US Including wetlands." Numbers obtained from the open space management plan. Site contains 0.269 ac SWS, 0.437 ac SW, 0.677 ac VP, and 1.475 ac creek with adjacent wetlands (identified as OAR).
SPK-1999-00737	Placer Vineyards Specific Plan	18020111	Y	38.50	88.70	6.10	60.10	193.40	According to DEIS, the Placer Vineyards site contains 38.3 ac VP, 42.8 ac SW, 43.5 ac SWS, 5.5 ac seasonal marsh, 0.6 ac perennial marsh, 23.9 ac pond, 2.1 ac drainage swale, 2.1 ac canal/ditch, 4.1 ac ED, 17.8 ac ID, 1.5 ac channel, and 7.0 ac creek. Waters identified include both those properties in the PVSP that have pending permit applications, and those that have not yet submitted permit applications. In addition, off-site WOUS include 0.2 ac vp, 2.2 ac SW, 0.2 ac SWS, 0.2 ac ID, 0.1 ac channel, 1.2 ac canal/ditch, and 0.1 ac creek.
SPK-2000-00054	WILLOW PARK	18020111	N	0.00	0.19	0.00	0.85	1.04	Oar is composed of 0.1 ac Drainage swale and 0.7 ac perennial stream/freshwater marsh
SPK-2000-00079	RIOLO GREENS	18020111	Y	0.00	0.57	0.00	0.14	0.71	site contains 0.47 ac SW, 0.10 ac SWS, and 0.14 ac ID
SPK-2000-00086	PENRYN PLAZA	18020111	Y	0.00	0.14	0.00	0.00	0.14	site contains 0.14 acres of seasonal wetlands. Corps verified on 2-29-2000
SPK-2000-00156	DARYL K. WEEDEN/ST. FRANCIS WOODS/LOT 13	18020111	N	0.00	0.05	0.00	0.00	0.05	site contains approximately 0.05 ac SWS
SPK-2000-00252	Miner's Creek Project	18020111	N	0.00	0.33	9.07	0.00	9.40	Wetlands Verified. Wetland is comprised of 5.34ac Marsh, 3.62ac Riparian Wetland, and 0.11ac seep. SWS/SW is comprised of 0.23ac SWS and 0.10ac SW
SPK-2000-00300	PACIFIC BELL ROCKLIN ADMINISTRATION COMPL	18020161	N	0.01	0.23	0.00	0.00	0.24	site contains 0.23 ac SWS and 0.012 ac VP
SPK-2000-00386	Lewis Property (formerly Nader Ranch)	18020161	Y	2.43	4.06	14.12	10.02	30.63	Delineation verified in 2002 and 2007. Currently a request for a delineation verification, although it has not been verified. Will assume waters on site consist of those verified in 2007. Site contains 2.43 ac VP, 1.37 ac SW, 2.69 ac SWS, 3.06 ac freshwater marsh, 8.50 ac irrigated swale, 6.63 ac Ingram Slough, 2.6 ac farmed wetlands, 0.01 ac ID, 3.38 ac stock pond.
SPK-2000-00513	INDUSTRIAL X TINKER	18020161	N	0.20	0.07	0.00	0.00	0.27	please note that based on 2000 NWP verification letter, and in looking at aerial photographs, the waters are isolated. However, approved JD not done.
SPK-2000-00671	PEPPERTREE BUSINESS PARK	18020161	Y	0.04	0.03	0.00	0.00	0.07	site contains 0.04 ac VP and 0.03 ac SW. JD verified on 11-16-2000, with NWP verification.
SPK-2000-00684	Lincoln 270	18020161	Y	17.01	9.73	0.00	3.63	30.37	lumped acreage for seasonal wetlands (depressional and riverine) and seasonal marsh (0.01 acre).
SPK-2000-00685	LARANE RANCH POND	18020161	N	0.00	0.07	9.76	0.07	9.90	According to delineation report, site contains 9.902 acres of WOUS, including 0.871 ac wet meadow, 3.68 ac blackberry and blackberry/marsh, 5.21 ac riparian/blackberry, 0.081 ac SW, and 0.07 ac stream. Delineation was not verified.
SPK-2000-00743	Bohemia Property	18020161	Y	0.00	0.05	0.00	0.13	0.18	unvegetated channel.

# PCCP Cumulative Impact Assessment - Jurisdictional Determination Information

DA Number	Project Name	Watershed	JD Verified? (Y/N)	JD - Acres VP	JD - Acres SW/SWS	JD - Acres Wetland	JD - Acres OAR	JD - Total WOUS	JD Notes
SPK-2001-00024	SUN VALLEY OAKS RESIDENTIAL DEVELOPMENT	18020111	N	0.33	0.13	0.01	0.56	1.03	delineation map identifies that the site contains 0.56 ac ID, 0.33 ac ponded depression, and 0.13 ac SWS. On impact map, ponded depressions were identified as VPs. Therefore, they are counted as VPs here. In addition, the later LOP impacted 0.01 ac farmed wetlands, which are included.
SPK-2001-00109	AUBURN HONDA RELOCATION	18020161	N	0.00	0.00	2.97	0.58	3.55	site contains 2.97 acres of palustrin seasonal wetland and 0.58 acre of riparian wetland, based on verification for 1993-00501.
SPK-2001-00318	Aspen Meadows Subdivision	18020161	Y	0.06	0.09	0.00	0.00	0.15	site contains 0.064 acres of vernal pools and 0.086 acres of seasonal wetlands
SPK-2001-00465	RIVER OAKS ESTATES	18020161	Uk	0.00	0.00	0.27	1.97	2.24	No Verification letter in the file. Perennial stream 0.93 acre; Intermittent stream 1.0 acre; Ephemeral drainage 0.04; Riparian swale 0.07 acre; seep 0.20
SPK-2001-00548	CROSSROADS @ CIRBY & SUNRISE	18020111	N	0.00	0.00	0.00	0.01	0.01	open channel 0.014 acre Linda Creek
SPK-2002-00017	LINCOLN PALISADES	18020161	N	0.63	3.36	0.08	0.00	4.07	site contains 2.219 ac SW, 1.141 ac SWS, and 0.082 ac seasonal marsh.
SPK-2002-00101	SUNDANCE INDUSTRIAL PARK	18020161	Y	0.12	0.31	0.00	0.00	0.43	SWS= 0.07 and SW=0.24
SPK-2002-00111	CREEKSIDE CHURCH	18020111	Y	0.00	0.06	0.00	0.00	0.06	0.06 ac SW
SPK-2002-00387	CYPRESS MEADOWS	18020161	N	0.35	0.72	0.53	0.00	1.60	SWS/SW is comprised of 0.038ac SW, 0.529ac Seasonal marsh & 0.685ac SWS
SPK-2002-00396	HIGHWAY 65 SELF STORAGE	18020161	Y	0.87	0.70	0.00	0.63	2.20	according to delineation, site contains 0.866 ac VP, 0.321 ac SW, 0.377 ac drainage swale (considered SWS), and 0.631 ac ID.
SPK-2002-00582	THE PLAZA PROJECT	18020161	Y	0.00	0.00	0.12	0.00	0.12	Waters delineated, 22 Oct 2003. 0.044ac Scrub wetland and 0.067 emergent wetland. Approved JD says 0.12 ac waters of the US. Therefore assumed 0.12 ac other wetlands
SPK-2002-00629	IM CONSTRUCTION OPAERATIONS BUILDING	18020161	N	0.00	0.00	0.00	0.00	0.00	0.0003ac Seasonal Wetland
SPK-2002-00662	DEWITT CENTER PROJECT	18020161	Y	0.00	0.33	1.89	2.73	4.95	0.03ac SW, 0.30ac SWS, Wetland is Riaparian wetland, OARis 2.55ac Open water, 0.02ac Ephemeral Drainage, and 0.16ac Detention Basin
SPK-2002-00685	PLACER RANCH	18020161	N	11.63	54.77	22.65	3.54	92.59	site contains 2.14 ac PD, 1.40 ac IS, 23.92 ac SW, 22.65 ac farmed wetlands, 30.85 ac SWS, and 11.63 ac VP.
SPK-2002-00752	SORENTO 150 (AKA AITKEN 150)	18020161	Y	0.20	2.71	0.00	2.42	5.33	SWS/SW is comprised of 1.851ac SW, 0.803ac Drainage Swale and 0.06ac Seasonal Marsh. OAR is comprised of 0.25ac Ephemeral Drainage, 1.205ac Ingram Slough and 1.185ac ac Stock Pond.

# PCCP Cumulative Impact Assessment - Jurisdictional Determination Information

DA Number	Project Name	Watershed	JD Verified? (Y/N)	JD - Acres VP	JD - Acres SW/SWS	JD - Acres Wetland	JD - Acres OAR	JD - Total WOUS	JD Notes
SPK-2003-00071	ST. JOSEPH CHURCH	18020161	N	0.37	0.19	0.00	0.09	0.65	Delineation was not verified. However, according to revised JD, site contains 0.37 ac VP, 0.085 ac SW, 0.105 ac SWS, 0.005 ac ID, and 0.089 ac PD.
SPK-2003-00096	IMC AND TRC INDUSTRIAL PARKS	18020161	N	0.00	0.03	0.00	0.02	0.05	site contains 0.033 acre swale (considered SWS) and 0.021 acre of two seasonal ponds.
SPK-2003-00167	CINCINNATI INDUSTRIAL CENTER	18020161	N	0.00	0.16	0.00	0.00	0.16	site contains 0.157 ac SW
SPK-2003-00172	PATTERSON PROPERTIES	18020111	Y	0.00	0.54	0.00	0.28	0.82	site contains 0.504 acres SW, 0.036 ac SWS, and 0.276 ac ID.
SPK-2003-00496	WHISPER CREEK 2	18020111	Y	0.00	0.25	0.00	0.00	0.25	Letter for Approved JD dated Dec 14, 2004 states "approximately 0.202ac WOUS" Map indicates 0.008ac Seasonal Wetland and 0.194ac Seasonal Wetland Swale. Permit Letter 17 Aug 2007 states 0.133ac WOUS. A revised proposed wetland impact map dated 10 June 2011 shows a total of 0.246ac WOUS, sw=0.021AC and wetland swale = 0.225AC. New permit letter dated 3 May 2012 states 0.246ac Seasonal Wetlands. While this delineation was not verified, it is assumed that the Corps agreed with the increased acreage, and therefore that is what will be used.
SPK-2003-00629	KEMPER WOODS PROJECT	18020161	Y	0.00	0.00	0.00	0.15	0.15	site contains 0.04 ac ID, 0.12 ac irrigation ditch, per 12-19-2006 JD.
SPK-2003-00630	Meadowlands Estates	18020161	Y	0.41	3.92	23.92	0.04	28.29	site contains 0.41 ac VP, 3.38 ac SWS, 0.54 ac SW, 23.92 wetland complex, and 0.04 ac drainage swale. According to PN, the wetland complex contains Markham Ravine.
SPK-2003-00644	OLIVE RANCH ROAD PROPERTY	18020111	Y	0.00	0.31	0.00	0.07	0.38	Site contains 0.31 ac SW and 0.07 ac ID. JD verified 12-14-2004
SPK-2003-00652	Amazing Facts	18020111	Y	0.22	0.89	0.85	1.76	3.73	JD verified on 6-29-2005, site contains 0.223 ac VP, 0.445 ac SW, 0.445 ac SWS, 0.852 ac seep, 0.320 ac ID, 0.066 ac ED, 1.377 ac pond.
SPK-2003-00653	Greyhawk II	18020111	Y	0.00	0.13	2.79	0.00	2.92	Site contains 0.004 ac VP, 0.128 ac SW, 0.009 ac seep, and 2.78 ac riparian wetlands.
SPK-2003-00824	LINCOLN MEADOWS	18020161	Y	1.90	2.00	0.00	0.20	4.10	site contains 1.9 ac VP, 0.5 ac SW, 1.5 ac SWS, and 0.2 ac irrigation ditch (Lincoln Canal)
SPK-2004-00021	LINCOLN GATEWAY	18020161	N	0.00	0.05	0.00	0.00	0.05	site contains 0.046 ac SW.
SPK-2004-00042	GUARANTY BANK (KASSEL PROPERTY)	18020111	N	0.00	0.29	0.00	0.00	0.29	No JD completed. However, NWP was verified for impacts to 0.29 ac of SWS. Based on drawings provided by applicant, these are all of the WOUS located on the site.
SPK-2004-00394	ORCHARD CREEK VERNAL POOL MITIGATION	18020161	N	2.27	0.58	0.00	0.33	3.18	The site contains 2.265 ac VP, 0.581 ac vernal swale (considered SWS) and 0.334 ac ED, based on WD map prepared by applicant.



# PCCP Cumulative Impact Assessment - Jurisdictional Determination Information

DA Number	Project Name	Watershed	JD Verified? (Y/N)	JD - Acres VP	JD - Acres SW/SWS	JD - Acres Wetland	JD - Acres OAR	JD - Total WOUS	JD Notes
SPK-2004-00424	JOHN D. VINCENT PRESERVE	18020161	N	14.52	11.11	19.66	9.59	54.88	site contains 9.53 ac perennial marsh, 3.24 ac seasonal drainage and associated wetlands, 9.12 ac SW, 14.52 ac VP, 1.29 ac abandoned ag ditch, 5.06 ac perennial drainage and associated wetlands, 1.99 ac vernal swale (considered SWS) and 8.90 ac floodplain wetlands and 1.23 ac wet meadow. Delineation not verified.
SPK-2004-00756	Regional University	18020161	N	24.05	5.12	0.00	8.31	37.48	No delineation submitted. Applicant estimates site contains 37.47 ac of WOUS, consisting of 5.12 ac SW, 24.05 ac VP, 0.24 ac ID, and 8.06 ac PD.
SPK-2004-00843	WHISPERING OAKS	18020161	Y	0.27	0.11	0.00	0.00	0.38	site contains 0.08 ac SW, 0.27 ac VP, and 0.03 ac SWS.
SPK-2004-00845	MOORE ROAD WIDENING	18020161	Y	0.07	0.54	0.00	0.65	1.26	based on delineation map, site contains 0.074 ac VP, 0.213 ac SW, 0.324 ac drainage swale (because identified as wetland, considered SWS), 0.414 ac perennial creek, and 0.231 ac roadside ditch. Elineation verified on 1-31-2006
SPK-2004-00856	GROVE AT GRANITE BAY	18020111	Y	0.00	2.35	0.87	0.00	3.22	site contains 2.347 ac SW, 0.006 SWS and 0.870 ac marsh. WD verified 8-31-2005. d.
SPK-2004-00867	WHISPER CREEK	18020111	Y	0.00	2.15	0.00	0.01	2.16	site contains 2.156 ac WOUS, including 2.145 ac SWS, and 0.011 ac ED.
SPK-2004-00888	Amoruso Specific Plan	18020161	Y	9.81	24.59	1.82	1.92	38.15	Site contains 9.813 ac VP, 4.844 ac SW, 19.744 ac SWS, 1.822 ac marsh, 1.92 ac ID, and 0.002 ac ED. PJD verified on 3-30-2011
SPK-2004-00910	SACRAMENTO PRESTIGE GUNITE	18020161	Y	0.00	0.15	0.05	0.00	0.20	Site contains 0.05 ac marsh, 0.01 ac SW, and 0.14 ac SWS.
SPK-2004-00922	HAWKS PROPERTY	18020111	Y	0.00	0.51	0.00	0.00	0.51	site contains 0.41 acre SWS and 0.10 ac SW.
SPK-2005-00017	LINCOLN SQUARE	18020161	Y	0.03	0.02	0.00	0.00	0.04	File has been sent for digitizing. Based on JD, site contains approximately 0.05 ac WOUS. Based on NWP verification, site contains 0.028 ac VP and 0.015 ac SW.
SPK-2005-00236	Plaza II	18020161	Y	0.00	0.07	0.00	0.00	0.07	Delineation map only shows one type of wetland swale and wetland sampling points.
SPK-2005-00242	Douglas Melwood	18020111	Y	0.00	0.22	0.00	0.03	0.25	site contains 0.25 acres of WOUS, including 0.21 ac of SWS, 0.01 ac of SW, and 0.03 ac of ED.
SPK-2005-00243	Manikas-PFE property	18020111	Y	0.00	0.69	0.00	0.00	0.69	according to 2005 delineation, site contains 0.69 ac SWS. Applicant has asked for revised JD. Because the revised JD has not been verified, the 2005 JD that was verified will be used.
spk-2005-00259	EMPIRE WEST WANG PROPERTY	18020161	Y	1.57	0.09	0.00	0.60	2.26	Electronic JD verification letter states that the site contains 1.9295 ac of WOUS. However, PN states 2.26. Information in PN is what is used for this JD, as the file has been sent for digitizing and cannot be reviewed, and electronic JD does not specify types of WOUS. Based on PN, site contains 1.57 ac VP, 0.09 ac SWS, 0.15 ac roadside ditch, and 0.45 ac channels.

# PCCP Cumulative Impact Assessment - Jurisdictional Determination Information

DA Number	Project Name	Watershed	JD Verified? (Y/N)	JD - Acres VP	JD - Acres SW/SWS	JD - Acres Wetland	JD - Acres OAR	JD - Total WOUS	JD Notes
SPK-2005-00470	PLACER PARKWAY	18020126	N	0.00	0.00	28.00	0.00	28.00	No delineation has been completed. According to DEIR, Alternative 5, which is the one that the Corps On October 29, 2009, USACE sent a letter to FHWA, stating that Alternative 5, with a no-access buffer, is the alternative most likely to contain the least environmentally damaging practicable alternative. Therefore, this alternative is being used for estimation of WOUS, impacts, and compensatory mitigation. No wetland delineations have been received, and therefore the information from the EIR will be used, which does not identify the specific water types, and identified only impacts to wetlands. According to the DEIR, the Placer Parkway Alternative 5 contains approximately 28 acres of wetlands, which includes vernal pools, seasonal wetlands, seasonal wetland swales, other wetlands, and other aquatic resources.
SPK-2005-00473	American Vineyard Village Project	18020111	Y	0.00	0.40	0.00	0.00	0.40	Swasonal Wetland Swale
SPK-2005-00493	Nichols Ranch	18020161	Y	0.00	0.90	0.08	0.00	0.98	site contains 0.03 acre SW, 0.87 acre SWS, and 0.08 acre seasonal marsh. JD verified on 3-6-2006
SPK-2005-00955	MOORE ROAD SEWER PROJECT	18020161	Y	0.00	0.02	0.48	0.04	0.53	site contains 0.016 ac SW, 0.002 ac drainage swale (considered SWS), 0.475 ac farmed wetland, and 0.037 ac man-made ditch.
SPK-2005-01060	Riolo Vineyards	18020111	Y	0.00	7.86	0.20	5.07	13.13	site contains 7.864 ac seasonal wetlands, 4.273 acres of channels, 0.200 acres of seasonal marsh, 0.149 acres of pond, and 0.645 acres of ditches.
SPK-2006-00030	Auburn Walgreens New Airport Road Retail Center	18020161	Y	0.00	0.07	0.00	0.00	0.07	site contains 0.07 ac SWS. JD verified 3-6-2006.
SPK-2006-00099	SEYMOUR RANCH	18020111	Y	0.00	0.12	0.41	0.00	0.53	JD verified on 4-28-2006. Site contains 0.53 ac WOUS, including 0.12 ac SW and 0.41 ac seasonal marsh
SPK-2006-00325	ST. JOSEPH MARELLO PARISH	18020111	Y	0.00	0.14	1.01	1.57	2.73	The property contains approximately 0.065 ac SW, 0.073 ac SWS, 0.663 ac marsh, 0.351 ac seep, 0.952 ac ID, and 0.621 ac pond.
SPK-2006-00350	FOLSOM LAKE EQUESTRIAN ESTATES	18020111	Y	0.00	0.48	0.38	0.20	1.06	0.484 acre seasonal wetland; 0.383 acre of seep; 0.196 acre intermittent drainage
SPK-2006-00379	Dowd Road	18020161	Y	0.00	1.42	0.59	4.18	6.19	6.19 acres of WOUS based on Feb 26, 2007 delineation.
SPK-2006-00585	LA BELLA ROSA	18020161	Y	0.00	0.87	0.00	2.23	3.10	0.871 seasonal wetland; 0.447 ravine; 1.785 stock pond
SPK-2006-00586	BICKFORD RANCH	18020161	N					0.00	The waters of the U.S. for this site are accounted for under SPK-1994-00607.
SPK-2006-00653	AUBURN CREEKSIDE CENTER-13.2 ACRE SITE	18020161	Y	0.00	0.03	2.54	0.00	2.57	JD re-verified 5-23-2012. Site contains 2.57 ac WOUS, including 0.03 ac SW, 2.54 ac riparian wetland, and 0.004 a ED.
SPK-2006-00691	FORMICA CORPORATION	18020161	Y	0.56	7.75	0.98	0.17	9.45	Verification dated 04/05/11: 6.32 acres of seasonal wetland; 0.11 acre of stream. Verification dated 08/27/14: 0.562 vp; 1.429 acres sw; 0.85 acre marsh; 0.057 acre stream.

# PCCP Cumulative Impact Assessment - Jurisdictional Determination Information

DA Number	Project Name	Watershed	JD Verified? (Y/N)	JD - Acres VP	JD - Acres SW/SWS	JD - Acres Wetland	JD - Acres OAR	JD - Total WOUS	JD Notes
SPK-2006-00718	LINCOLN LDS PROJECT SITE	18020161	Y	0.00	0.16	0.00	0.04	0.21	appears as though the site contains 0.162 ac SW/SWS and 0.044 ac roadside ditch and irrigation ditch.
SPK-2006-00800	Rancho Del Oro Estates	18020111	Y	0.00	1.66	1.25	0.82	3.73	site contains 3.73 acres of WOUS, including 0.067 ac seasonal marsh, 0.361 ac SW, 1.298 ac SWS, 0.230 a riparian wetland, 0.956 ac perennial marsh, 0.001 a ED, 0.646 ac perennial drainage, 0.027 ac pond, and 0.147 a mine pits. JD verified 9-16-2013
SPK-2006-00802	Larry Lake	18020161	N	0.00	6.70	0.00	6.13	12.83	A JD was originally verified, but is being re-visited. The new JD information will be used.. Based on most recent delineation map, the site contains 4.579 ac SW, 2.124 ac SWS, 0.134 ac drainage ditch, 0.162 ac ED, 0.069 ac ID, 0.178 irrigation ditch, and 4.407 ac pond.
SPK-2006-00964	60 Acre Gruber Mountain Estates Project	18020161	Y	0.00	0.06	0.11	2.13	2.30	Verification dated 09/15/14: 0.11 acre seep; 0.06 acre wetland swale; 0.01 acre ephemeral stream; 0.19 acre intermittent stream; 1.69 acres perennial stream; 0.24 acre pond.
SPK-2007-00019	Penryn Development	18020111	Y	0.00	0.45	0.00	0.08	0.53	based on impact map and JD, the site contains 5.31 ac of WOUS, including 0.255 ac SW, 0.196 ac SWS, and 0.080 ac ID. JD was verified on 7-12-2013
SPK-2007-00053	Cincinnati Avenue	18020161	Y	0.04	0.02	0.00	0.00	0.06	site contains 0.0423 ac "ponded depression" (considered VP) and 0.0191 ac SWS.
SPK-2007-00855	Locust Road Mitigation Bank	18020111	Y	0.00	0.61	1.03	0.93	2.57	verified delineation determined that the site contains 1.03 ac of agricultural field wetlands, 0.61 ac SW, and 0.93 ac intermittent drainage.
SPK-2007-00857	Toad Hill Ranch Mitigation Bank	18020161	Y	13.34	19.14	2.54	8.39	43.41	Verified delineation determined that the site contains 9.44 ac VP, 3.80 ac vernal swales, 0.10 ac artificial VP, 7.26 ac SW, 11.88 ac SWS, 2.18 ac agricultural field wetland, 0.36 ac seasonal marsh, 7.39 ac reservoir, and 1.00 ac ID.
SPK-2007-02200	Doty Ravine Preserve	18020161	UK	3.17	13.19	6.00	6.45	28.81	Can't find verification letter in file. Doty Ravine Preservation Area: 3 acres vp, 12 acres sws, 2 acres creek, 6 acres marsh, 4 acres perennial marsh. Doty Ravine Restoration Area: 0.45 acre ditch; 1.09 acre seasonal wetland; 0.17 acre vp.
SPK-2008-00480	Enclave at Granite Bay	18020111	Y	0.00	0.29	2.08	0.04	2.41	Verification dated March 6, 2012 for 0.2935 acre sw, 0.04 acre channels, 2.0847 acre emergent marsh
SPK-2008-00944	Onorato School	18020111	Y	0.00	0.42	0.01	0.08	0.51	Verification dated January 15, 2009 for 0.0801 acre ditch, 0.4211 acre wet swale, 0.0106 acre seep.
SPK-2009-00909	Shaeffer Violation	18020111	N	0.00	0.00	0.04	0.03	0.07	No JD completed. Based on available information, 0.02 acre of pond, .001 acre of drainage channel, and 0.04 acre of riparian wetland were filled without a DA permit.
SPK-2010-00812	La Faille Ranch	18020161	Y	0.00	4.18	0.00	14.63	18.81	Verification dated 09/30/14: 4.1831 acres vp; 11.0558 acres Creek/Associated wetlands; 2.4651 acres Pond; 0.1349 acre channels; 0.9733 acre Caperton Canal.
SPK-2011-00057	City of Lincoln Waste Water Treatment and Reclamation Facility	18020161	Y	5.56	18.29	0.50	0.00	24.35	Verification dated 12/04/12: 5.564 acres vp; 7.626 acres seasonal wetland; 10.659 acres seasonal wetland swale; 0.106 acres marsh; 0.391 acre seep.
SPK-2011-00671	SR193 Realignment, Placer County - Caltrans	18020161	Y	0.00	0.00	1.44	0.06	1.49	JD verified on 6-3-2014. Site contains 1.438 acres of wetlands and 0.055 ac other waters. No specific type of wetland identified, so put in under other wetlands.

# PCCP Cumulative Impact Assessment - Jurisdictional Determination Information

DA Number	Project Name	Watershed	JD Verified? (Y/N)	JD - Acres VP	JD - Acres SW/SWS	JD - Acres Wetland	JD - Acres OAR	JD - Total WOUS	JD Notes
SPK-2011-00684	Markham Ravine Ranch	18020161	Y	0.00	2.63	0.00	1.94	4.57	WD verified on 08/27/12. 2.28 acres seasonal wetland; 0.35 acre wetland swale; 0.22 acre ditch; 1.72 acres perennial stream.
SPK-2012-00568	Clover Valley Reservoir Desilting and Supply Pipeline	18020111	Y	0.00	0.01	0.51	3.41	3.93	0.510 acres of freshwater marsh; 0.014 acres of seasonal wetland; 3.057 acres of pond; 0.084 acres of perennial stream; 0.035 acres of ephemeral stream; and 0.233 acres of Antelope Canal are present at the site.
SPK-2012-00940	Swainsons Grassland Preserve	18020161	Y	0.00	0.00	1.58	0.00	1.58	1.581 acres of wetland features present at the site, including 1.579 acres of emergent marsh and 0.0002 acres of seasonal wetland swale.
SPK-2012-01017	Nelson Lane Bridge Replacement	18020161	Y	1.21	0.00	1.63	1.07	3.91	1.63 acres of seasonal wetlands, including 1.21 acres of vernal pools and swales, and 0.62 acres of other waters, including a 0.45 acre reach of Markham Ravine. Direct impacts would occur to 0.56 acres of waters of the US.
SPK-2012-01323	Peery Ranch	18020161	N	3.29	1.80	1.69	0.76	7.53	wetland delineation identifies 3.288 ac of seasonal wetland pool, 1.797 acre SWS, 1.687 ac wet meadow, 0.358 ac irrigation pond, 0.057 ac ditch, 0.030 ac ED, and 0.402 ac Perrenial stream. PM for the project indicates that the seasonal wetland pools should be classified as vernal pools.
SPK-2013-00047	CareMeridian Granite Bay	18020111	Y	0.00	0.00	0.10	0.39	0.49	0.10 acres of wetland and 0.39 acres of non-wetland waters
SPK-2013-00460	Auburn Grace Community Church	18020161	Y	0.00	0.00	0.19	0.00	0.19	0.19 acres of wetland and other water bodies
SPK-2013-00613	Dalby Property	18020126	Y	0.02	0.46	0.00	5.73	6.21	site contains 0.312 acre SWS, 0.143 ac SW, 0.024 ac VP, 0.745 ac perennial drainage, and 4.989 ac irrigation ditch.
SPK-2013-01016	Tse property violation	18020111	N	0.00	0.03	0.00	0.00	0.03	based on delineation report, the site contains 0.03 acres of SWS.
SPK-2014-00328	Bell Road	18020161	Y	0.00	0.00	7.24	0.00	7.24	site contains 5.77 acres riverine forested wetland and 1.47 acres rivering scrub-shrub wetland.
SPK-2014-00356	Amaryllis Property	18020126	N	0.00	0.56	0.00	0.06	0.62	based on delineation report, the site contains 0.105 ac SW, 0.451 ac SWS, and 0.061 ac ditch. JD has not been verified, and therefore, this may change.

# PCCP Cumulative Impact Assessment - Permit Information

DA Number	Project Name	Watershed	Permit Type (NWP/RGP/PGP/LOP)	NWP/RGP/PGP Number	Authority (Sec 10, Sec 404)	Permit Issued/Verified? (Y/N)	Past (PA)/Present (PR)/Reasonably Foreseeable (RF)?	Project Completed? (Y/N)	Date of permit/verification letter	Project Type	VP - Permanent Loss	SW/SWS - Permanent Loss	OW - Permanent Loss	OAR - Permanent Loss	Impact Notes
SPK-1989-00059	LINCOLN AIRPARK	18020161	NWP	26	404	Y	PA	Y	11/5/1996	Mixed-use	4.65	2.71	0.00	1.42	impacts to 4.6473 ac vp, 2.7081 ac SW, and 1.4161 ac seasonal stream
SPK-1990-00008	LOS LAGOS	18020111	NWP	26	404	Y	PA	Y	11/22/1990	Residential	0.00	0.04	0.00	0.01	For Unit 5, which is the only one constructe: impacts to 0.04 acre SW and 0.01 acre ephemeral drain. For Unit 3, which has not been developed, impacts to 0.12 ac SW, 0.16 ac seasonal seep, and 0.08 ac ephemeral drain
SPK-1990-00109	LINCOLN SCHOOL SITE	18020161	SP		404	Y	PA	Y	10/9/1990	Mixed-use	0.05	0.34	2.72	10.59	Permitted project to impact all waters on the site. see column O for the breakdown..
SPK-1990-00173	JOINER RANCH COMMUNITY PARK	18020161	NWP	26	404	Y	PA	Y	3/1/1990	Recreational	0.50	0.00	0.00	0.09	fill of 0.445 ac northern volcanic mudflow vernal pools, 0.05 ac northern hardpan vp, and 0.09 ac ID w/ emergent marsh.
SPK-1990-00270	CLOS-DU-LAC DEVELOPMENT	18020111	NWP	26	404	Y	PA	Y	6/28/1990	Residential	0.00	0.00	0.41	0.00	Proposed project for the discharge of fill materil into 0.41 acre of wetlands for road crossings and residential development. Likely for the road crossings there were impacts to other waters of the U.S., however these were not identified.
SPK-1990-00404	DUTCH RAVINE FILL/RSC DEVELOPMENT	18020161	SP		404		PR	Parti ally	2/4/1992	Commercial	0.00	0.00	0.01	0.00	Based on a compliance visit, the authorized fill did not occur, although the 0.01 acre of fill was ATF, and therefore is counted. In addition, it appears as though the 0.18 acre of additional fill was removed...therefore this fill will not be counted.
SPK-1990-00413	BARTON BUSINESS PARK	18020111	NWP	26	404	Y	PA	Y	4/21/1992	Commercial	0.00	0.00	1.68	0.00	No information in file regarding type of wetlands impacted, therefore assumed other wetland.
SPK-1990-00427	QUAIL OAKS II	18020111	NWP	26	404	Y	PA	Y	5/25/1990	Residential	0.00	0.99	0.00	0.00	Based on GoogleEarth aerial photographs, the wetlands on the site have been filled. The USACE authorization letter identified impacts to 0.99 acres of wetlands. Assumed to be SWS, based on information from the applicant.
SPK-1990-00445	EASTLAKE	18020161	NWP	26	404	Y	PA	Y	12/15/1994	Mixed-use	1.13	3.55	0.71	0.99	Discharge of fill material into 1.13 ac VP, 3.55 ac SW, 0.71 ac saline wetland, 0.99 ac pond. Based on aerial photo, project was completed. It is not known if there was any comp mit completed, as there is no record in the file
SPK-1990-00758	SILVERWOOD N26 REAUTHORIZATION	18020111	NWP	26	404	Y	PA	Y	NA	Residential	0.15	4.38	0.00	0.01	impacts to 4.38 ac SW, 0.15 ac VP, and 0.01 ac ID.
SPK-1990-00786	BALDWIN RESERVOIR	18020111	None		N/A		NA	N							
SPK-1990-00877	PLACER PARK	18020161	NWP	26	404	Y	PA	Y	6/17/1997	Commercial	0.72	1.13	0.00	0.00	impacts to 0.72 ac vp and 1.13 ac sws.
SPK-1990-00901	WINTERHAWK	18020111	NWP	26	404	Y	PA	Y	8/30/1994	Residential	0.00	0.89	0.00	0.00	Based on GoogleEarth aerial phtographs, the project has been completed.

# PCCP Cumulative Impact Assessment - Permit Information

DA Number	Project Name	Watershed	Permit Type (NWP/RGP/PGP/LOP)	NWP/RGP/PGP Number	Authority (Sec 10, Sec 404)	Permit Issued/Verified? (Y/N)	Past (PA)/Present (PR)/Reasonably Foreseeable (RF)?	Project Completed? (Y/N)	Date of permit/verification letter	Project Type	VP - Permanent Loss	SW/SWS - Permanent Loss	OW - Permanent Loss	OAR - Permanent Loss	Impact Notes
SPK-1990-00919	PEACHTREE PLACE PROPERTY	18020111	NWP	26	404	Y	PA	Y?	8/28/1990	Residential	0.00	0.00	0.01	0.00	fill of 0.01 acre of wet meadow, based on verification request. Impacts associated with construction of an access road. Based on aerial, some homes have been constructed in this area.
SPK-1990-00946	BECHTEL CINCINNATI AVENUE PROPERTY	18020161	NWP	26	404	Y	PA	Y	8/31/1990	Industrial	0.24	0.00	0.00	0.69	acreage of impacts not specified on verification letter or request for verification under NWP 26. Based on aerial, appears as though all waters were impacted, and therefore, assumed 0.93 acres.
SPK-1990-00955	CANNONSHIRE ESTATES	18020111	NWP	26	404	Y	PA	Y	2/4/1991	Residential	0.00	0.00	0.20	0.00	assumed 0.196 acre of impacts identified were to freshwater wetland
SPK-1990-01115	FRANK ANDREWS PROPERTY	18020111	NWP	26	404	Y	PA	Y	2/13/1991	Farming	0.00	0.00	0.80	0.00	grading in 0.80 ac wetlands for agricultural activities.
SPK-1990-01136	SHIRLAND OAKS SUBDIVISION	18020128	NWP	26	404	Y	PA	Y	3/11/1991		0.00	0.00	0.00	0.00	based on information in the file, no WOUS were impacted. No delineations were found in the file for 1990-01136, and 1989-00056, which is also located in this microfilm file, cannot be located in any other location.
SPK-1990-01157	CHELSHIRE DOWNS	18020111	NWP	26	404	Y	PA	Y	2/8/1991	Residential	0.00	0.00	0.57	0.00	Because the exact acreage of each type of water is not identified, it is assumed that the waters on the site consist of other wetlands and other waters. The request for verification of the JD/NWP from the consultant states that wetland areas would be filled. Therefore, it is assumed that the 0.57 acres of fill is for other wetlands.
SPK-1990-01257	THREE D ENTERPRISES	18020161	NWP/S P		404	Y	PA	Y	7-28-1999, 7-8-2004	Residential	4.19	0.37	0.00	0.00	based on special condition 3, the project would also result in indirect impacts to 0.22 ac of water of the U.S.
SPK-1991-00046	MOSS PROPERTY	18020111	NWP	26	404	Y	PA	Y	1/22/1991		0.00	0.00	0.65	0.00	authorized under NWP 26. No information on specific type of wetland, although NWP verification does state that the impacts were to 0.65 acre of wetlands.
SPK-1991-00164	WIDENING OF HWY 49 NEAR AUBURN	18020161	NWP	26	404	Y	PA	Y	6/26/1995	Road Widening	0.00	0.00	0.07	0.00	no information regarding impacts. Assumed that all of the waters in the survey area were impacted.
SPK-1991-00770	LINCOLN CROSSING	18020161	NWP/L OP		404	Y	PA	Y	Multiple	Mixed-use	3.44	3.24	1.83	2.95	
SPK-1992-00286	EASTRIDGE PROJEC	18020161	NWP	26	404	Y	PA	Y	2/4/1993	Residential	1.97	0.70	0.01	0.52	Impacts same as JD
SPK-1992-00601	HERITAGE PARK ESTATES, SECRET RAVINE	18020111	NWP	26	404	Y	PA	Y	3/5/1993	Residential	0.00	0.00	0.30	0.12	fill associated with bridge construction and channel realignment. Unknown exact waters type, although appears as though at least 0.30 acre of wetlands, considered other wetlands. Remainder assumed to be OAR.

# PCCP Cumulative Impact Assessment - Permit Information

DA Number	Project Name	Watershed	Permit Type (NWP/RGP/PGP/LOP)	NWP/RGP/PGP Number	Authority (Sec 10, Sec 404)	Permit Issued/Verified? (Y/N)	Past (PA)/Present (PR)/Reasonably Foreseeable (RF)?	Project Completed? (Y/N)	Date of permit/verification letter	Project Type	VP - Permanent Loss	SW/SWS - Permanent Loss	OW - Permanent Loss	OAR - Permanent Loss	Impact Notes
SPK-1992-00632	TREELAKE VILLAGE, UNIT 6 AND 7	18020111	NWP	26	404	Y	PA	Y	3/21/1994	Residential	0.00	0.00	1.47	0.00	NWP verification letter located at R:/RAMS does not identify the type of waters impacted, and the hard copy of the file cannot be found. It is assumed that the impacts are to wetlands.
SPK-1993-00153	RICE PROPERTY - DICK COOK ROAD	18020111	NWP	26	404	Y	PA	Y	4/2/1993	Residential	0.00	0.25	0.00	0.00	proposed impacts to 0.25 ac of the SW/SWS.
SPK-1993-00342	DOUGLAS RANCH	18020111	NWP	26	404	Y	PA	Y	12/7/1998	Residential	0.00	0.04	0.73	0.00	Based on 401 WQC, proposed impacts to 0.25 ac herbaceous riparian, 0.21 ac ryegrass swale, 0.04 ac SW, 0.19 ac woody ripariay/herbaceous riparian, and 0.08 ac woody riparian/ryegrass swale.
SPK-1993-00349	THE RIDGE GOLF COURSE	18020161	NWP	26	404	Y	PA	Y	9/11/1996	Recreational	0.00	2.78	0.00	1.25	
SPK-1993-00351	BOULDER CREEK SUBD	18020111	NWP	26	404	Y	PA	Y	2/10/2000	Residential	0.00	0.18	0.00	0.00	impacts to 0.12 ac SW and 0.06 ac SWS for a residential development
SPK-1994-00607	BICKFORD RANCH	18020161	NWP	26	404	Y	PA	Y	3/21/2000	Residential	0.23	0.19	0.00	0.02	fill 2.84ac waters of the us authorized. However, these were not all conducted. Fill completed includes 0.159 ac SW, 0.026 ac SWS, 0.015 ac ID and 0.231 ac VP.
SPK-1994-01046	HAMILTON ENTERPRISES LINCOLN	18020161	NWP	26	404	Y	PA	Y	6/11/1996	Residential	0.44	0.04	0.00	0.00	discharge of fill mateiral into 0.44 ac vp and 0.04 ac sw. Avoidance of the remainder of the WOUS on the site, which includes Auburn Ravine
SPK-1995-00111	FIRST INTERSTATE BANK	18020161	NWP	26	404	Y	PA	Y	3/24/1995	Commercial	0.00	0.00	0.09	0.00	fill of all waters on the site for commercial development (bank). No compensatory mitigation required.
SPK-1995-00143	MT. VERNON ROAD EXPANSION AUBURN	18020161	NWP	26	404	Y	PA	Y	5/12/1995	Road Widening	0.00	0.00	0.25	0.00	identified impacts to 0.25 ac WOUS, although no information on type of waters. Assumed other wetlands.
SPK-1995-00190	PLACER COUNTY/SIERRA COLLEGE BLVD. WIDEN	18020111	NWP	26	404	Y	PA	Y	6/28/1995	Road Widening	0.00	0.00	0.45	0.00	Discharge of fill material into 0.45 ac of wetlands. Type of wetlands impacted not specified, and therefore assumed other wetlands.
SPK-1995-00247	TARGET/BEST PROPERTY	18020161	LOP		404	Y	PA	Y	6/15/1998	Commercial	0.00	1.53	1.21	0.01	Impacts to all WOUS on-site, including 1.53 ac SW, 0.03 ac emergent marsh, 0.01 ac OW, 1.08 ac riparian, and 0.10 ac wetlands previously filled, of which the specific type was not identified (added as other wetland)

# PCCP Cumulative Impact Assessment - Permit Information

DA Number	Project Name	Watershed	Permit Type (NWP/RGP/PGP/LOP)	NWP/RGP/PGP Number	Authority (Sec 10, Sec 404)	Permit Issued/Verified? (Y/N)	Past (PA)/Present (PR)/Reasonably Foreseeable (RF)?	Project Completed? (Y/N)	Date of permit/verification letter	Project Type	VP - Permanent Loss	SW/SWS - Permanent Loss	OW - Permanent Loss	OAR - Permanent Loss	Impact Notes
SPK-1995-00363	SR 65 Lincoln Bypass, Placer County - Caltrans	18020161	SP		404	Y	PA	Y	10/19/2007	Road Construction	10.58	0.00	15.18	0.08	permit authorizes the loss of 30.14 acres of WOUS, but does not identify the types of resources, and there are no drawings attached to the permit. However, June 2007 mitigation and monitoring plan, identifies that the proposed project would result in direct impacts to 3.87 ac freshwater marsh, 11.31 ac vernal marsh, 10.58 ac vernal pools and swales, 0.08 acre of pen water, indirect impacts to 0.39 ac freshwater marsh, 0.06 acre vernal marsh, 31.10 ac vp and swales, and 0.09 ac open water, and temporary impacts to 2.10 ac freshwater marsh, 0.16 ac vernal marsh, and 0.60 ac open water. Total direct permanent and temporary impacts would be 28.7 acres. Unknown where the 30.14 acres of impacts permitted come from, so the 28.7 acres identified in the MMP are being used.
SPK-1995-00589	TWELVE BRIDGES	18020161	SP		404	Y	PR	N	12/11/1996	Mixed-use	5.55	4.46	8.14	4.41	permanent loss of 5.55 ac vp, 3.78 ac sws, 0.68 ac sw, 1.91 ac wet meadow, 0.34 ac marsh, 0.46 ac seep, 0.47 ac riparian wetland, 4.62 ac riparian scrub, 3.68 ac seasonal drainage, 0.73 ac perennial drainage, and 0.34 ac wetland scrub
SPK-1995-00590	LINCOLN CLAY PRODUCTS/DILLMAN VIOLATION	18020161	None		404	N	N/A	Y	N/A	Commercial	1.60	0.00	0.00	0.00	Potential violation that was apparently never resolved. One letter from USACE estimated that there were 1.6 acres of vernal pools impacted, but no other information in the file.
SPK-1995-00621	LOOMIS LANDFILL	18020111	NWP	26	404	Y	PA	Y	9/11/1996	Landfill Closure	0.00	0.00	0.42	0.00	permanent loss of 0.42 acres of mixed-riparian wetland
SPK-1995-00730	CAVITT RANCH/PHASE 1-5 PORTION	18020111	NWP	26	404	Y	PA	Y	4/29/1999	Residential	0.39	0.29	0.00	0.18	discharge of fill material into 0.39 acre vp, 0.07 ac sw, 0.22 ac sws, and 0.18 ac id.
SPK-1996-00070	GREYHAWK ((PEREDNIA (GLADSTONE))	18020111	NWP	26	404	Y	PA	Y	9/30/1999	Residential	0.00	0.28	0.42	0.00	impacts to 0.06 ac SW, 0.22 ac SWS, and 0.42 ac riparian wetland.
SPK-1996-00170	AUBURN HOME DEPOT	18020161	NWP	39	404	Y	PA	Y	3/29/2006	Commercial	0.00	0.13	0.05	0.00	discharge of fill material into all WOUS on the site. Also included piping of an irrigation ditch, which likely was an exempt activity under 404(f)
SPK-1996-00189	SIERRA PACIFIC INDUST./LINCOLN SAWMILL	18020161	NWP	26	404	Y	PA	Y	4/30/1996	Commercial	0.00	0.00	0.00	1.00	no information provided on actual impacts. Delineation identified 0.38 acres of waters, and USACE 4-30-1996 letter stated closer to an acre. NWP 26 authorized 1 acre of fill. Although based on aerial photographs, it doesn't appear as though 1 acre of waters were impacted, it is assumed that impacts were 1 acre OAR, to be conservative.



# PCCP Cumulative Impact Assessment - Permit Information

DA Number	Project Name	Watershed	Permit Type (NWP/RGP/PGP/LOP)	NWP/RGP/PGP Number	Authority (Sec 10, Sec 404)	Permit Issued/Verified? (Y/N)	Past (PA)/Present (PR)/Reasonably Foreseeable (RF)?	Project Completed? (Y/N)	Date of permit/verification letter	Project Type	VP - Permanent Loss	SW/SWS - Permanent Loss	OW - Permanent Loss	OAR - Permanent Loss	Impact Notes
SPK-1996-00532	ANTONIO MOUNTAIN RANCH/ORCHARD CREEK	18020161	NA		NA	NA	NA	NA	NA	Mitigation Bank	0.00	0.00	0.00	0.00	Development of a mitigation bank. While there may impacts to WOUS associated, there would be no loss of WOUS. Therefore, this will not be accounted for. In addition, because the constructed wetlands will be used for compensatory mitigation for impacted waters, these constructed waters will not be counted in the compensatory mitigation section.
SPK-1997-00375	SUN CITY LINCOLN	18020161	SP		404	Y	PA	Y	multiple	Residential	1.68	22.61	1.02	4.16	impacts from first permit are 1.68 ac VP, 8.5 ac SW, 0.15 ac seep, 0.81 ac saline wetland, 0.06 ac riparian wetland, 0.99 ac ponds, and 3.17 ac ED. Second permit impacted 13.99 ac SW, and 1 ac marsh. Modification authorized impact to 0.12 ac SW.
SPK-1997-00480	CHEROKEE ESTATES	18020111	NWP	29	404	Y	RF	N		Residential	0.00	0.59	0.00	0.06	New WD does not identify all of the waters that were identified for the proposed action. Because this is an alleged violation, impacts identified as reasonably foreseeable will include all waters identified on the verified JD, minus the proposed avoided waters under the current PCN. Therefore, the proposed impacts would be to 5.11 ac of SW, 0.076 ac SWS, and 0.057 ac of ditches. Please note that these impacts would not qualify for authorization under NWP 29. However, because the request is for a NWP, this will be kept.
SPK-1997-00593	CTS TRUCKING PROPERTY/BOOMER CONSTR.	18020161	NWP	26	404	Y	PA	Y	11/14/1997	Industrial	0.10	0.00	0.00	0.00	fill of 0.10 vp
SPK-1997-00632	FOSKETT RANCH SUBDIVISION/LINCOLN	18020161	SP		404	Y	PA	Y	9/9/2003	Mixed-use	4.91	0.66	0.01	0.03	Impacts to 4.909 ac VP, 0.110 ac SW, 0.006 ac marsh, 0.553 ac SWS, and 0.028 ac ID.
SPK-1997-00649	HUNTERS GLEN	18020111	NWP	26	404	Y	PA	Y	10/31/1997	Residential	0.00	0.41	0.00	0.00	impacts to all WOUS on the site, which appears to be 0.41 ac SW.
SPK-1998-00081	HIGHWAY 65 WIDENING PROJECT	18020161	NWP	26	404	Y	PA			Road Widening	0.95	0.31	0.00	0.37	The northern portion of the project impacted 0.40 ac vp, 0.13 ac sw, 0.08 ac ED, and 0.07 ac PD (Orchard Creek). The southern portion of the project impacted 0.55 ac vp, 0.01 ac sw, 0.17 ac sws, and 0.22 ac ED and PD. The northern portion of the project was authorized under SPK-1994-01010, which is not included on this CIA list. However, because Highway 65 is in the Plan area, all of the impacts for both the northern and southern portion are included here, including the impacts authorized by 1995-01010 and the required compensatory mitigation.
SPK-1998-00166	Nichols Ranch	18020161	NWP	26	404	Y	PA	Y	6/24/1998	Mixed-use	0.36	0.13	0.00	0.00	proposed impacts to 0.36 ac VP and 0.13 ac SW.
SPK-1998-00172	EASTPARK ROAD, SEWER, AND WATER LINE	18020161	NWP	26	404	Y	PA	UK	6/24/1998	Utility	0.22	0.75	0.04	0.00	see JD. All waters impacts for the sewer and road line.

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SPK-1998-00208	UNITED AUBURN INDIAN TRIBAL GOVERNMENT	18020161	NWP	26	404	Y	PA	Y	6/1/1999	Commercial	1.39	0.11	0.00	0.09	original impact map + letter including acreages when project was enlarged. Total impacts to 1.39 ac VP, 0.11 ac SW, and 0.09 ac ID
SPK-1998-00235	TREELAKE VILLAGE, UNIT 10	18020111	NWP	26	404	Y	PA	Y	6/16/1998	Residential	0.00	0.11	0.00	0.03	impacts to 0.02 ac SW, 0.09 SWS, and 0.03 ac ID
SPK-1998-00259	DOUGLAS/SIERRA COLLEGE SE CORNER	18020111	NWP	26	404	Y	PA	Y	9/24/1998	Commercial	0.06	0.13	0.00	0.02	impacts to 0.06 ac VP and 0.13 ac SWS, and 0.02 creek/emergent marsh.
SPK-1998-00265	47 ACRE ATHENS AVENUE PARCEL B	18020161	NWP	26	404	Y	PA	Y	11/30/1998	Commercial	0.38	1.00	0.01	0.00	impacts to all waters on-site. See JD.
SPK-1998-00347	BAYSIDE COVENANT CHURCH	18020111	NWP	26	404	Y	PA	Y	9/1/1998	Institutional	0.36	1.29	0.00	0.00	Discharge of fill material into 0.36 ac VP, 0.32 ac SW, and 0.97 ac SWS. Preservation of 0.13 ac SW.
SPK-1998-00626	MORGAN CREEK GOLF AND COUNTRY CLUB	18020111	NWP	26	404	y	PA	Y	2/25/1999	Residential	0.72	1.13	0.94	0.17	impacts to 0.72 ac vp, 1.13 ac sw, 0.97 ac farmed wetland, and 0.11 ac pond, 0.04 ac ID, and 0.02 ac Dry Creek
SPK-1999-00376	Atwood Ranch Subdivision	18020161	NWP	29	404	Y	PA	Y	7/8/2003	Residential	0.00	0.00	0.00	0.17	In the electronic file, the portion of the PCN identifying the impacts was not included. However, based on the NWP verification letters, the project would result in the loss of 0.171 acre of WOUS and indirect effects to 0.034 ac WOUS. Based on the site map, the loss of waters included primarily open water.
SPK-1999-00386	STONEBROOKE, MACARGO COURT	18020111	NWP	26	404	Y	PA	Y	12/17/1999	Residential	0.00	0.34	0.00	0.00	placement of fill material into 0.07 acres of seasonal wetlands and 0.27 acres of seasonal wetland swales
SPK-1999-00544	FRANKLIN SCHOOL EXPANSION/LOOMIS	18020111	NWP	26	404	Y	PA	Y	9/16/1999	Road Widening	0.00	0.00	0.33	0.00	discharge of fill material into 0.33 acres of wetlands.
SPK-1999-00727	JOINER RANCH II	18020161	NWP	12, 33	404	Y	PA	y	7/25/2001	Residential	0.21	0.27	0.00	0.00	most of file not found. Used open space management plan, which had information on impacts. Impacts to 0.125 ac SWS, 0.145 ac SW, and 0.212 ac VP.
SPK-1999-00737	Placer Vineyards Specific Plan	18020111	SP		404	N	RF	N		Residential	27.70	70.10	0.90	20.60	proposed impacts to 27.7 ac VP, 43.2 ac SWS, 26.9 ac SWS, 0.4 ac seasonal marsh, 0.5 ac perennial marsh, 6.3 ac pond, 3.8 ac ED, 4.2 ac ID, 2.0 ac drainage swale, 0.2 ac channel, 2.9 ac canal/ditch, 1.2 ac creek.
SPK-2000-00054	WILLOW PARK	18020111	NWP	39	404	Y	PA	Y	8/6/2004	Residential	0.00	0.19	0.00	0.00	
SPK-2000-00079	RIOLO GREENS	18020111	NPR		None		NA	N		None	0.00	0.00	0.00	0.00	Due to project re-design, no impacts to WOUS.
SPK-2000-00086	PENRYN PLAZA	18020111	NWP	26	404	Y	PA	Y	2/29/2000	Commercial	0.00	0.14	0.00	0.00	discharge of fill material into all WOUS on-site.

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SPK-2000-00156	DARYL K. WEEDEN/ST. FRANCIS WOODS/LOT 13	18020111	NWP	26	404	Y	PA	Y	6/21/2000	Residential	0.00	0.05	0.00	0.00	discharge into 0.05 acre SWS, and proposed re-construction of swale on property.
SPK-2000-00252	Miner's Creek Project	18020111	NWP	39	404	Y	PA	Y	11/8/2000	Residential	0.00	0.15	0.26	0.00	authorized impacts to 0.23 ac riparian wetland, 0.03 ac seep, 0.05 ac SWS, and 0.10 ac SW.
SPK-2000-00300	PACIFIC BELL ROCKLIN	18020161	NWP	39	404	Y	RF	Y	6/20/2000	Commercial	0.01	0.00	0.00	0.00	impacts to 0.012 ac of vernal pools
SPK-2000-00386	Lewis Property (formerly Nader Ranch)	18020161	SP		404	N	RF	N	NA	Mixed-use	0.09	0.92	2.20	4.19	proposed impacts to 7.40 ac WOUS, consisting of 0.09 ac VP, 0.05 ac SW, 0.42 ac SWS, 0 ac marsh, 0.81 ac irrigated swale, 0.80 ac Ingram Slough, 1.39 ac farmed wetlands, 0.01 ac ID, and 3.38 ac stock pond. Also includes temporary impacts to 0.03 ac marsh, 0.03 ac SWS, 0.28 ac farmed swale, 0.08 ac Ingram Slough, and 0.03 ac farmed wetlands
SPK-2000-00513	INDUSTRIAL X TINKER	18020161	NWP	39	404	Y	RF	N	9/12/2000	Industrial	0.20	0.07	0.00	0.00	based on aerial photograph, all WOUS on-site have not been impacted. However, they were all mitigated. In addition, based on aerial photograph, it appears as though there may be more waters on the site than originally delineated.
SPK-2000-00671	PEPPERTREE BUSINESS PARK	18020161	NWP	39	404	Y	PA	Y	11/16/2000	Commercial	0.04	0.03	0.00	0.00	proposal is to fill all WOUS on the site. See JD.
SPK-2000-00684	Lincoln 270	18020161	SP		404	Y	RF	N	10/9/2013	Mixed-use	5.21	5.33	0.00	0.04	Indirect impacts are captured as perm impacts no loss.
SPK-2000-00685	LARANE RANCH POND	18020161	SP		404	Y	PA	Y	9/10/2001	Residential	0.00	0.00	0.49	0.04	A total of 0.525 acre of wetland, open water, and seasonal stream area was or will be filled by project implementation. 0.06 acre of wetland and 0.005 acre of seasonal stream were filled by creation of the new dam. 0.017 acre of open water was filled to repair the outfall of the old pond. 0.016 acre of wetland was filled by road grading activities along the south face of the old pond. 0.399 acre of wetland and 0.01 acre of seasonal stream were excavated and converted to open water. 0.011 acre of wetland was affected by replacement of the culvert at the old pond. 0.003 acre of wetland will be filled adjacent to the home under construction in the southwest portion of the site. 0.004 acre of open water will be affected to repair or replace the outfall structure at the 3-acre pond. The permittee will create 0.49 acre of riparian habitat, 0.29 acre of marsh habitat, and 2.0 acres of open water to mitigate for the loss of 0.525 acre of waters of the United States, including wetlands.
SPK-2000-00743	Bohemia Property	18020161	NWP	39	404	Y	PA	Y	9/20/2006	Commercial	0.00	0.05	0.00	0.13	

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SPK-2001-00024	SUN VALLEY OAKS RESIDENTIAL DEVELOPMENT	18020111	LOP		404	Y	PA	Y	10/29/2002	Residential	0.31	0.11	0.01	0.00	based on difference between preserved waters and existing waters, the proposed project would impact 0.31 ac VP and 0.11 ac SWS. In addition, the later LOP authorized impacts to 0.01 ac farmed wetland.
SPK-2001-00109	AUBURN HONDA RELOCATION	18020161	LOP		404	Y	PA	Y	2/10/2003	Commercial	0.00	2.97	0.00	0.00	discharge of fill material into 2.97 acres of seasonal wetlands
SPK-2001-00318	Aspen Meadows Subdivision	18020161	NWP	26	404	Y	PA	Y	8/29/2001	Residential	0.06	0.09	0.00	0.00	
SPK-2001-00465	RIVER OAKS ESTATES	18020161	SP		404	Y	PA	Y	10/29/2002	Residential	0.00	0.00	0.17	0.22	0.02 acre of perennial stream; 0.16 acre of intermittent stream; 0.02 acre of ephemeral drainage; 0.02 acre of riparian swale; 0.15 acre seep.
SPK-2001-00548	CROSSROADS @ CIRBY & SUNRISE	18020111	NWP	26	404	Y	PA	Y	11/30/2001	Commercial	0.00	0.00	0.00	0.01	impacts to all WOUS, consisting of 0.014 ac of Linda Creek. Determined that cumulative loss (which includes off-site indirect impactes) is 0.025 ac of Linda Creek, which was required for compensatory mitigation.
SPK-2002-00017	LINCOLN PALISADES	18020161	SP		404	Y	PA	Y	1/23/2006	Residential	0.62	2.61	0.08	0.00	proposed impacts to 0.617 ac VP, 2.112 ac SW, 0.499 ac SWS, and 0.082 ac seasonal marsh
SPK-2002-00101	SUNDANCE INDUSTRIAL PARK	18020161	NWP	39	404	Y	PA	Y	2/1/2006	Industrial	0.12	0.31	0.00	0.00	impacts to all WOUS on-site
SPK-2002-00111	CREEKSIDE CHURCH	18020111	NWP	39	404	Y	PA	Y	7/9/2004	Institutional	0.00	0.06	0.00	0.00	impacts to the 0.06 ac SW on the site.
SPK-2002-00387	CYPRESS MEADOWS	18020161	SP		404	Y	PA	N	4/7/2003	Residential	0.35	0.72	0.00	0.00	Seasonal Wetlands is comprised of 0.038ac Seasonal Wetland and 0.685ac SWS
SPK-2002-00396	HIGHWAY 65 SELF STORAGE	18020161	SP		404	Y	PA	Y	9/17/2006	Commercial	0.62	0.18	0.00	0.07	impacts to 0.623 ac VP, 0.048 ac SW, 0.132 ac drainage swale (SWS) and 0.07 ac of ID
SPK-2002-00582	THE PLAZA PROJECT	18020161	NWP	39	404	Y	PA	Y	4/20/2006	Commercial	0.00	0.00	0.12	0.00	other wetlands is comprised of 0.044ac Scrub wetlands and 0.009 ac Emergent wetlands. Assumed 0.12 other wetlands
SPK-2002-00629	IM CONSTRUCTION OPERATIONS BUILDING	18020161	NWP	39	404	Y	PA	Y	9/18/2003	Industrial	0.00	0.00	0.00	0.00	proposed impact to all WOUS on the site, which is 12 sf of SW.
SPK-2002-00662	DEWITT CENTER PROJECT	18020161	NWP	39	404	Y	PA	Y	6/22/2005	Commercial	0.00	0.26	0.06	0.00	Based on MMP, impacts to 0.26 ac SWS and 0.06 ac riparian wetland.
SPK-2002-00685	PLACER RANCH	18020161	SP		404	N	RF	N		Mixed-use	4.13	28.36	12.29	0.18	impacts to 0.1443 ac IS, 0.0335 ac PD, 13.564 ac SW, 12.2885 ac farmed wetlands, 14.7985 ac SWS, 4.127 ac VP
SPK-2002-00752	SORENTO 150 (AKA AITKEN 150)	18020161	SP		404	Y	PA	Y		Residential	0.18	2.29	0.06	0.10	SWS/SW=0.530ac SW, 0.746ac Drainage Swale, 0.06ac Seasonal Marsh. OAR = 0.019ac Ephemeral Drainage,

# PCCP Cumulative Impact Assessment - Permit Information

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SPK-2003-00071	ST. JOSEPH CHURCH	18020161	NWP	39	404	Y	PA	Y	6/14/2005	Institutional	0.37	0.09	0.00	0.00	proposed impacts to 0.37 ac VP< 0.009 ac SWS, and 0.085 ac SW.
SPK-2003-00096	IMC AND TRC INDUSTRIAL PARKS	18020161	NWP	39	404	Y	PA	Y	12/17/2013	Commercial	0.00	0.03	0.00	0.02	impacts to all WOUS on-site. See JD
SPK-2003-00167	CINCINNATI INDUSTRIAL CENTER	18020161	NWP	39	404	Y	PA	Y	4/2/2003	Industrial	0.00	0.16	0.00	0.00	proposed impacts to all waters, which include 0.157 ac SW.
SPK-2003-00172	PATTERSON PROPERTIES	18020111	NWP	29, 39	404	Y	RF	N	8/22/2014	Mixed-use	0.00	0.21	0.00	0.28	permanent loss of 0.172 acre SW, 0.036 ac SWS, and 0.276 ac ID
SPK-2003-00496	WHISPER CREEK 2	18020111	NWP	29	404	Y	RF	N	5/3/2012	Residential	0.00	0.25	0.00	0.00	Fill of 0.246 ac WOUS on the site.
SPK-2003-00629	KEMPER WOODS PROJECT	18020161	NWP	29	404	Y	RF	N	3/2/2007	Residential	0.00	0.00	0.00	0.07	Project would result in the permanent impacts to 0.02 acre of ID. In addition, the proposed action would result in the piping of 0.05 acre of the irrigation ditch. While the piping of the irrigation ditch may be considered construction of an irrigation ditch and therefore an exempt activity under Section 404 of the CWA, because this decision has not been made, the impact to the ID is included in the loss of waters.
SPK-2003-00630	Meadowlands Estates	18020161	SP		404	N	RF	N	NA	Residential	0.41	2.42	0.00	0.04	impacts to 0.41 ac VP, 2.34 ac SWS, 0.08 ac SW, and 0.04 ac drainage channel
SPK-2003-00644	OLIVE RANCH ROAD PROPERTY	18020111	NWP	29	404	Y	PA	Y	10/7/2010	Residential	0.00	0.14	0.00	0.02	fill of 0.14 ac sw and 0.02 ac ID
SPK-2003-00652	Amazing Facts	18020111	NWP	39	404	N	RF	N	NA	Institutional	0.22	0.00	0.00	0.04	impacts based on PCN.
SPK-2003-00653	Greyhawk II	18020111	NWP	29	404	Y	RF	N	2/21/2013	Residential	0.00	0.01	0.00	0.00	impacts to 0.004 ac VP and 0.009 ac SW.
SPK-2003-00824	LINCOLN MEADOWS	18020161	SP		404	N	RF	N	N/A	Residential	1.45	1.45	0.00	0.20	Because the applicant was proposing to purchase only 2.9 acres of seasonal wetland and vernal pool creation credits, it is assumed that the 0.2 acre of irrigation ditch was proposed to be impacted. Because the public notice did not specify the other types of waters being impacted, they were distributed evenly between VP and SW/SWS.
SPK-2004-00021	LINCOLN GATEWAY	18020161	NWP	39	404	Y	PA	Y	6/29/2004	Commercial	0.00	0.05	0.00	0.00	fill of all WOUS on the site
SPK-2004-00042	GUARANTY BANK (KASSEL PROPERTY)	18020111	NWP	39	404	Y	PA	Y	7/16/2004	Commercial	0.00	0.00	0.00	0.00	Because no impacts to WOUS, no work occurred under the authority of the NWP 39, and therefore no compensatory mitigation was required.

# PCCP Cumulative Impact Assessment - Permit Information

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SPK-2004-00394	ORCHARD CREEK VP MITIGATION	18020161	NA		NA	NA	NA	NA	NA	Preserve	0.00	0.00	0.00	0.00	No impacts to WOUS.
SPK-2004-00424	JOHN D. VINCENT PRESERVE	18020161	NA		NA	NA	NA	NA	NA	Presere	0.00	0.00	0.00	0.00	This site has been used for compensatory mitigation for project authorized by Corps permits. Therefore, the NWP 27 did not result in a net increase in WOUS in the area. This file will be completed only for the WD information.
SPK-2004-00756	Regional University	18020161	SP		404	N	RF	N	NA	Mixed-use	6.11	4.84	0.00	4.75	Propose regional university would result in impacts to 3.71 ac SW, 5.32 ac VP, 0.29 ac PD. Proposed regional community would result in impacts to 0.74 ac PD, and proposed backbone would result in impacts to 1.13 ac SW, 0.80 ac vp, 0.25 ac ID, and 3.47 ac PD.
SPK-2004-00843	WHISPERING OAKS	18020161	NWP	29	404	Y	RF	N	7/12/2007	Residential	0.27	0.11	0.00	0.00	proposed fill of all WOUS on the site, including 0.08 ac SW, 0.27 ac VP, and 0.03 ac SWS.
SPK-2004-00845	MOORE ROAD WIDENING	18020161	NWP	7, 14, 33	404	y	PA	Y	31 Jan 2006 & 29 May 2008	Road Widening	0.00	0.00	0.00	0.02	permanent loss of 0.023 ac drainage ditch. Temporary impacts to 0.006 ac SWS, 0.002 ac perennial creek (Auburn Ravine) and 0.169 ac ditch.
SPK-2004-00856	GROVE AT GRANITE BAY	18020111	NWP	39	404	Y	PA	Y	9/30/2005	Residential	0.00	0.25	0.07	0.00	fill of 0.248 ac SW and 0.065 ac marsh.
SPK-2004-00867	WHISPER CREEK	18020111	NWP	39	404	Y	RF	N	5/21/2007	Residential	0.00	0.35	0.00	0.00	proposed impacts to 0.352 ac SWS.
SPK-2004-00888	Amoruso Specific Plan	18020161	SP		404	N	RF	N	NA	Mixed-use	4.05	16.98	1.88	0.08	Impacts by the project include 2.958 ac VP, 2.024 ac SW, 10.714 ac SWS, 0.084 ac ID, and 0.669 ac Marsh. Estimated impacts by Placer Parkway included here (although not part of permit application), include 1.095 ac VP, 1.458 ac SW, 2.787 ac SWS, and 1.213 ac marsh.
SPK-2004-00910	SACRAMENTO PRESTIGE GUNITE	18020161	NWP	39	404	Y	PA	Y	3/2/2006	Commercial	0.00	0.07	0.00	0.00	impacts to 0.068 ac of Seasonal wetlands.
SPK-2004-00922	HAWKS PROPERTY	18020111	NWP	39	404	Y	PA	Y	12/17/2008	Residential	0.00	0.17	0.00	0.00	permit to place fill material into 0.17 acres of waters of the U.S., consisting of 0.07 ac of SWS and 0.10 ac SW.
SPK-2005-00017	LINCOLN SQUARE	18020161	NWP	39	404	Y	PA	Y	7/2/2007	Commercial	0.03	0.02	0.00	0.00	Based on special condition 2, impacts to 0.028 ac VP and 0.015 ac SW.
SPK-2005-00236	Plaza II	18020161	NWP	39	404	Y	RF	N	6/18/2014	Commercial	0.00	0.07	0.00	0.00	impacts to all WOUS on-site
SPK-2005-00242	Douglas Melwood	18020111	NWP	29	404	Y	RF	N	3/21/2014	Residential	0.00	0.22	0.00	0.03	loss of all WOUS on the site.
SPK-2005-00243	Manikas-PFE property	18020111	NWP	29	404	N	RF	N	NA	Residential	0.00	0.69	0.00	0.00	discharge of fill material into all WOUS on-site, which is assumed to be the acreage from the 2005 WD.

# PCCP Cumulative Impact Assessment - Permit Information

DA Number	Project Name	Watershed	Permit Type (NWP/RGP/PGP/LOP)	NWP/RGP/PGP Number	Authority (Sec 10, Sec 404)	Permit Issued/Verified? (Y/N)	Past (PA)/Present (PR)/Reasonably Foreseeable (RF)?	Project Completed? (Y/N)	Date of permit/verification letter	Project Type	VP - Permanent Loss	SW/SWS - Permanent Loss	OW - Permanent Loss	OAR - Permanent Loss	Impact Notes
spk-2005-00259	EMPIRE WEST WANG PROPERTY	18020161	SP		404	Y	RF	N	1/9/2009	Commercial	0.93	0.00	0.00	0.18	File has been sent for digitizing, and electronic files do not specify the acreage of each type of WOUS authorized for impact. However, Special Condition 1 required that the applicant purchase 0.93 created VPs and 0.18 created seasonal marsh from a mitigation bank. Therefore, it is assumed that the project impacted 0.93 ac VP and 0.18 ac OAR
SPK-2005-00470	PLACER PARKWAY	18020126	UK		404	N	RF	N		Road Construction	0.00	0.00	28.00	0.00	No applications have been received. Impacts are assumed to be all resources identified in the DEIR for Alternative 5, which is approximately 28 acres of wetlands, including vernal pools, seasonal wetlands, seasonal wetland swales, other wetlands, and other aquatic resources. Because the DEIR does not estimate the specific types, all impacts were added to other wetlands.
SPK-2005-00473	American Vineyard Village Project	18020111	NWP	29	404	Y	PA	Y	7/16/2009	Residential	0.00	0.40	0.00	0.00	
SPK-2005-00493	Nichols Ranch	18020161	NWP	39	404	N	PA	Y	N/A	Industrial	0.00	0.00	0.00	0.00	impacts to 0.07 acres of wetland swale and seasonal wetland for the installation of two box culverts and filling of a seasonal wetland.
SPK-2005-00955	MOORE ROAD SEWER PROJECT	18020161	LOP		404	Y	RF	N	6/6/2007	Utility	0.00	0.02	0.48	0.04	impacts to all WOUS on the site.
SPK-2005-01060	Riolo Vineyards	18020111	SP		404	Y	RF	N	5/28/2013	Residential	0.00	0.79	0.19	0.71	The proposed project would result in permanent impacts to 1.687 acres of waters of the U.S. (0.191 acres of emergent marsh, 0.291 acres of vegetated channels, 0.785 acres of seasonal wetlands, and 0.420 acres of drainage ditches) and temporary impacts to 0.379 acres of waters of the U.S. (approximately 0.09 acres of channels, 0.283 acres of seasonal wetlands, and 0.006 acres of drainage ditches).
SPK-2006-00030	Auburn Walgreens New Airport Road Retail Center	18020161	NWP	39	404	Y	PA	Y	7/14/2008	Commercial	0.00	0.03	0.00	0.00	permanent impacts from improvements of New Airport Road and temporary impacts as a result of construction equipment entering the drainage to access the work ware
SPK-2006-00099	SEYMOUR RANCH	18020111	NWP	39	404	Y	PA	Y	4/28/2006	Residential	0.00	0.12	0.10	0.00	fill of 0.12 ac SWS and 0.10 ac marsh. Temporary impacts to 0.10 ac marsh
SPK-2006-00325	ST. JOSEPH MARELLO PARISH	18020111	SP		404	Y	PA	Y	7/27/2010	Institutional	0.00	0.10	1.01	0.54	authorized loss of 0.065 ac SW, 0.032 ac SWS, 0.663 ac marsh, 0.651 ac seep, 0.102 ac ID, and 0.438 ac pond.
SPK-2006-00350	FOLSOM LAKE EQUESTRIAN ESTATES	18020111	UK		404	N	RF	N	N/A	Unknown	0.00	0.48	0.38	0.20	assumed impacts to all WOUS on-site as no application or information in file.
SPK-2006-00379	Dowd Road	18020161	UK		404	N	RF	N	N/A	Unknown	0.00	1.42	0.59	4.18	assumed impacts to all WOUS on-site as no application or information in file.

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DA Number	Project Name	Watershed	Permit Type (NWP/RGP/PGP/LOP)	NWP/RGP/PGP Number	Authority (Sec 10, Sec 404)	Permit Issued/Verified? (Y/N)	Past (PA)/Present (PR)/Reasonably Foreseeable (RF)?	Project Completed? (Y/N)	Date of permit/verification letter	Project Type	VP - Permanent Loss	SW/SWS - Permanent Loss	OW - Permanent Loss	OAR - Permanent Loss	Impact Notes
SPK-2006-00585	LA BELLA ROSA	18020161	UK		404	N	RF	N	NA	Mixed-use	0.00	0.87	0.00	0.00	This project is in the pre-app stage, so may change with alternatives analysis.
SPK-2006-00586	BICKFORD RANCH	18020161	LOP		404	Y	PR	N	3/1/2007	Residential	0.00	1.73	0.18	0.20	proposed impacts to 1.302 ac SW, 0.431 ac SWS, 0.179 ac riverine wetland, and 0.195 ac ID
SPK-2006-00653	AUBURN CREEKSIDE CENTER-13.2 ACRE SITE	18020161	UK		404	N	RF	N	NA	Unknown	0.00	0.87	0.00	2.23	assumed impacts to all WOUS on-site as no application or information in file.
SPK-2006-00691	FORMICA CORPORATION	18020161	UK		404	N	RF	N	NA	Unknown	0.00	0.87	0.00	2.23	assumed impacts to all WOUS on-site as no application or information in file.
SPK-2006-00718	LINCOLN LDS PROJECT SITE	18020161	UK		404	N	RF	N	NA	Residential	0.00	0.16	0.00	0.04	assume impacts to all WOUS on-site
SPK-2006-00800	Rancho Del Oro Estates	18020111	SP		404	N	RF	N	NA	Residential	0.00	1.47	0.21	0.17	proposed impacts to 0.067 ac seasonal marsh, 0.179 ac SW, 1.296 ac SWS, 0.079 ac riparian wetland, 0.066 ac perennial marsh, 0.001 ac ED, 0.027 ac pond, and 0.144 ac mine pits (open water). Project has not been permitted. Will use the applicants proposed compensatory mitigation, which is purchase of wetland creation credits from a Corps approved mitigation bank at 1:1 ratio. Assumed the MB is outside of the PA.
SPK-2006-00802	Larry Lake	18020161	SP		404	N	RF	N	NA	Residential	0.00	4.75	0.00	0.75	application used different wetland delineation data, and identified approximately 9 acres of waters on the site. Therefore, impacts are different when considering additional waters identified on the most current wetland delineation map. When comparing the most recent wetland delineation map with the proposed land-uses, approximate impacts to waters of the U.S. consist of 3.239 ac SW, 1.508 ac SWS, 0.162 ac ED, 0.069 ac ID, 0.34 ac irrigation canal, 0.178 ac irrigation ditch, and 4.407 ac pond. Although application identifies pond as a temporary impact, as it would be converted into a detention basin, this was considered a permanent impact, but not a loss of WOUS.
SPK-2006-00964	60 Acre Gruber Mountain Estates Project	18020161	UK		404	N	RF	N	NA	Unknown	0.00	0.06	0.11	2.13	assumed impacts to all WOUS on-site as no application or information in file.
SPK-2007-00019	Penryn Development	18020111	SP		404	N	RF	N	NA	Residential	0.00	0.45	0.00	0.08	Proposed impacts to 0.255 ac SW, 0.196 ac SWS, 0.080 (450 lf) ac ID
SPK-2007-00053	Cincinnati Avenue	18020161	NWP	39	404	Y	PA	Y	8/14/2008	Commercial	0.04	0.02	0.00	0.00	impact to all WOUS on the site



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SPK-2007-00855	Locust Road Mitigation Bank	18020111	NA		NA	NA	NA	NA	NA	Mitigation Bank	0.00	0.00	0.00	0.00	Development of a mitigation bank. While there were impacts to WOUS associated, there was no loss of WOUS. Therefore, this will not be accounted for. In addition, because the constructed wetlands will be used for compensatory mitigation for impacted waters associated with other projects, these constructed waters will not be counted in the compensatory mitigation section.
SPK-2007-00857	Toad Hill Ranch Mitigation Bank	18020161	NA		NA	NA	NA	NA	NA	Mitigation Bank	0.00	0.00	0.00	0.00	Development of a mitigation bank. While there were impacts to WOUS associated, there was no loss of WOUS. Therefore, this will not be accounted for. In addition, because the constructed wetlands will be used for compensatory mitigation for impacted waters associated with other projects, these constructed waters will not be counted in the compensatory mitigation section.
SPK-2007-02200	Doty Ravine Preserve	18020161	NA		NA	NA	NA	NA	NA	Preserve	0.00	0.00	0.00	0.00	Development of a mitigation bank. While there were impacts to WOUS associated, there was no loss of WOUS. Therefore, this will not be accounted for. In addition, because the constructed wetlands will be used for compensatory mitigation for impacted waters associated with other projects, these constructed waters will not be counted in the compensatory mitigation section.
SPK-2008-00480	Enclave at Granite Bay	18020111	NWP	29	404	Y	RF	N	8/8/2014	Residential	0.00	0.29	0.00	0.01	impacts to 0.007 ac channel for a culvert extension and 0.2921 ac SW for development.
SPK-2008-00944	Onorato School	18020111	NWP	39	404	Y	PA	Y	3/18/2009	Institutional	0.00	0.03	0.00	0.00	ATF permit for 0.03 acre impacts to sw.
SPK-2009-00909	Shaeffer Violation	18020111	NWP	32	404	Y	PA	Y	5/17/2010		0.00	0.00	0.04	0.03	fill placed in 0.04 acre riparian wetland, 0.02 acre pond, and 0.01 acre drainage.
SPK-2010-00812	La Faille Ranch	18020161	UK		404	N	RF	N	NA	Unknown	0.00	4.18	0.00	14.63	assumed impacts to all WOUS on-site as no application or information in file.
SPK-2011-00057	City of Lincoln Waste Water Treatment and Reclamation Facility	18020161	UK		404	N	RF	N	NA	Unknown	5.56	18.29	0.50	0.00	assumed impacts to all WOUS on-site as no application or information in file.
SPK-2011-00671	SR193 Realignment, Placer County - Caltrans	18020161	LOP		404	Y	RF	N	2-24-15, 4-2-15	Road Widening	0.00	0.00	0.91	0.03	loss of 0.908 ac wetlands and 0.027 ac other waters and temporary impacts to 0.276 ac wetlands and 0.01 a other waters.
SPK-2011-00684	Markham Ravine Ranch	18020161	NA		NA	NA	NA	NA	NA	Mitigation Bank	0.00	0.00	0.00	0.00	Development of a mitigation bank. While there were impacts to WOUS associated, there was no loss of WOUS. Therefore, this will not be accounted for. In addition, because the constructed wetlands will be used for compensatory mitigation for impacted waters associated with other projects, these constructed waters will not be counted in the compensatory mitigation section.
SPK-2012-00568	Clover Valley Reservoir Desilting and Supply Pipeline	18020111	UK		404	N	RF	N	NA	Unknown	0.00	0.01	0.51	3.41	assumed impacts to all WOUS on-site as no application or information in file.

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SPK-2012-00940	Swainsons Grassland Preserve	18020161	NA		NA	NA	NA	NA	NA	Mitigation Bank	0.00	0.00	0.00	0.00	Development of a mitigation bank. While there were impacts to WOUS associated, there was no loss of WOUS. Therefore, this will not be accounted for. In addition, because the constructed wetlands will be used for compensatory mitigation for impacted waters associated with other projects, these constructed waters will not be counted in the compensatory mitigation section.
SPK-2012-01017	Nelson Lane Bridge Replacement	18020161	LOP		404	Y	RF	N	3/21/2014	Road Construction	0.00	0.00	0.00	0.00	Permanent Impact, No Loss to 0.1533 acres of unnamed wetlands; 0.1125 acres of unnamed vernal pools; 0.1483 acres of Markham Ravine; and 0.2362 acres of an unnamed ditch. Temporary impacts to 0.0008 acres of unnamed vernal pools and 0.0008 acres of an unnamed ditch.
SPK-2012-01323	Peery Ranch	18020161	UK		404	N	RF	N	NA	Unknown	3.29	1.80	1.69	0.76	assumed impacts to all WOUS on-site as no application or information in file.
SPK-2013-00047	CareMeridian Granite Bay	18020111	UK		404	N	RF	N	4/18/2013	Commercial	0.00	0.10	0.39	0.00	Exact project description not known, as no project has been proposed.
SPK-2013-00460	Auburn Grace Community Church	18020161	UK		404	N	RF	N	7/17/2013	Institutional	0.00	0.00	0.00	0.00	based on information in the NOI for the MND, there is no proposal to impact WOUS associated with this site. Therefore, 0 given.
SPK-2013-00613	Dalby Property	18020126	UK		404	N	RF	N	NA		0.02	0.46	0.00	5.73	Reasonably foreseeable project. Assume mitigation of 1:1 outside of the PA and 8-digit HUC watershed.
SPK-2013-01016	Tse property violation	18020111	None		404		N/A	Y		Landscaping	0.00	0.02	0.00	0.00	applicant graded 0.03 acre SWS and piped it as part of landscaping improvements. Swale is within a preserve required for the Los Lagos project (SPK-1990-00008)
SPK-2014-00328	Bell Road	18020161	UK		404	N	RF	N	NA	Unknown	0.00	0.00	7.24	0.00	assumed impacts to all WOUS on-site as no application or information in file.
SPK-2014-00356	Amaryllis Property	18020126	UK		404	N	RF	N	NA	Unknown	0.00	0.56	0.00	0.06	assumed impacts to all WOUS on-site as no application or information in file.

# PCCP Cumulative Impact Assessment - Compensatory Mitigation Information

DA Number	Project Name	Project 8-digit HUC	Type of Comp Mit*	Comp Mit in PA? (Y/N)	Comp Mit in Same 8-Digit HUC as Project? (Y/N)	Comp Mit Completed?	Compensatory Mitigation Watershed (8 digit HUC)	MB Name	MB - Ac VP Create/Restore	MB - Ac SW/SWS Create/Restore	MB - Ac OW Create/Restore	MB - Ac OAR Create/Restore	ILF Name	ILF - Ac VP Create/Restore	ILF - Ac SW/SWS Create/Restore	ILF - Ac OW Create/Restore	ILF - Ac OAR Create/Restore	PRM Ac VP Create/Restore	PRM Ac SW/SWS Create/Restore	PRM Ac OW Create/Restore	PRM Ac OAR Create/Restore	On-Site Preserve Size	On-Site - Ac VP Preserved	On-Site - Ac SW/SWS Preserved	On-Site Ac OW Preserved	On-Site Ac OAR Preserved
SPK-1989-00059	LINCOLN AIRPARK	18020161	MB	Y	N	Y	18020126	Wildlands - Sheridan	5.52	2.36	0.00	1.42										20.48	0.25	1.25	0.00	18.98
SPK-1990-00008	LOS LAGOS	18020111	MB	Y	N	Y	18020126	Wildlands - Sheridan	0.00	0.00	0.06	0.00										6.20	0.00	2.85	1.17	0.25
SPK-1990-00109	LINCOLN SCHOOL SITE	18020161	PRM	Y	Y	Y	18020161											0.00	13.00	3.00	0.00					
SPK-1990-00404	DUTCH RAVINE FILL/RSC DEVELOPMENT	18020161	PRM	Y	Y	N	18020161											0.00	0.00	0.00	0.00					
SPK-1990-00413	BARTON BUSINESS PARK	18020111	PRM	Y	N	Y	18020161											0.00	0.00	2.94	0.00					
SPK-1990-00445	EASTLAKE	18020161	PRM	Y	Y	UK	18020161											1.13	3.50	2.06	4.26	28.88	0.00	9.04	8.99	10.85
SPK-1990-00758	SILVERWOOD N26 REAUTHORIZATION	18020111	PRM	Y	Y	Y	18020111											0.37	6.98	0.00	0.00	34.30	0.38	3.69	0.00	0.33
SPK-1990-00877	PLACER PARK	18020161	PRM	Y	Y	UK	18020161											0.88	1.70	0.00	0.00	16.17	0.52	3.08	0.00	0.32
SPK-1990-01257	THREE D ENTERPRISES	18020161	MB	Y	N	Y	18020126	Wildlands - Sheridan	0.12	0.00	0.00	0.00														
SPK-1990-01257	THREE D ENTERPRISES	18020161	PRM	Y	Y	Y	18020161											8.34	0.00	0.00	0.00	9.74	2.06	0.00	0.00	0.00
SPK-1991-00770	LINCOLN CROSSING	18020161	MB	Y	N	Y	18020126	Wildlands - Sheridan	0.00	3.23	1.83	1.57														
SPK-1991-00770	LINCOLN CROSSING	18020161	PRM	Y	Y	Y	18020161											5.98	0.00	0.00	1.38	207.00	2.68	5.72	25.95	2.09
SPK-1992-00286	EASTRIDGE PROJECT SITE	18020161	PRM	Y	Y	?	18020161											3.94	1.95	0.00	0.00	193.90	4.17	18.53	14.96	5.60
SPK-1992-00632	TREELAKE VILLAGE, UNIT 6 AND 7	18020111	PRM	Y	Y	UK	18020111											0.00	0.00	1.47	0.00					
SPK-1993-00342	DOUGLAS RANCH	18020111	PRM	Y	Y	Y	18020111											0.00	0.00	0.87	0.00	31.00	0.00	0.00	6.66	0.00

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SPK-1993-00349	THE RIDGE GOLF COURSE (FORM. OAK CREEK)	18020161	MB	Y	N	Y	18020126	Wildlands - Sheridan	0.00	0.00	3.14	0.00														
SPK-1993-00349	THE RIDGE GOLF COURSE (FORM. OAK CREEK)	18020161	PRM	Y	Y	Y	18020161											0.00	3.08	0.00	0.24					
SPK-1993-00351	BOULDER CREEK SUBD	18020111	MB	Y	N	Y	18020126	Wildlands - Sheridan	0.00	0.00	0.18	0.00														
SPK-1994-00607	BICKFORD RANCH	18020161	MB	Y	N	Y	18020126	Wildlands - Sheridan	0.23	0.00	0.00	0.00														
SPK-1994-00607	BICKFORD RANCH	18020161	PRM	Y	Y	Y	18020161											0.00	0.00	8.46	0.00					
SPK-1995-00190	PLACER COUNTY/SIERRA COLLEGE BLVD. WIDEN	18020111	MB	N	N	Y	UK	Placer County Mitigation Fund	0.00	0.00	0.90	0.00														
SPK-1995-00247	TARGET/BEST PROPERTY	18020161	MB	Y	N	Y	18020126	Wildlands - Sheridan	0.00	0.00	7.30	0.03														
SPK-1995-00363	SR 65 Lincoln Bypass, Placer County - Caltrans	18020161	PRM	Y	Y	Y	18020161											10.72	0.00	4.95	0.00					
SPK-1995-00363	SR 65 Lincoln Bypass, Placer County - Caltrans	18020161	PRM	Y	Y	N	18020161											0.13	0.00	0.00	0.00					
SPK-1995-00363	SR 65 Lincoln Bypass, Placer County - Caltrans	18020161	MB	N	N	Y	Other	Beach Lake Mitigation Bank	0.00	0.00	10.85	0.00														
SPK-1995-00589	TWELVE BRIDGES	18020161	PRM	Y	Y	Y	18020161											8.33	7.27	14.66	3.61	53.17	11.04	4.57	21.26	16.30
SPK-1995-00621	LOOMIS LANDFILL	18020111	MB	Y	N	Y	18020126	Wildlands - Sheridan	0.00	0.00	0.42	0.00														
SPK-1995-00730	CAVITT RANCH/PHASE 1-5 PORTION	18020111	MB	N	N	UK	Other	Clay Station Mitigation Bank	0.39	1.25	0.00	0.00										23.00	0.00	0.75	0.00	1.16
SPK-1996-00070	GREYHAWK ((PEREDNIA (GLADSTONE))	18020111	MB	N	N	UK	UK	Unknown	0.00	0.00	0.85	0.00										31.00	0.00	0.58	11.02	0.00
SPK-1996-00170	AUBURN HOME DEPOT	18020161	ILF	N	N	Y	UK						NFWF	0.00	0.18	0.00	0.00									

# PCCP Cumulative Impact Assessment - Compensatory Mitigation Information

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SPK-1997-00375	SUN CITY LINCOLN	18020161	MB	Y	N	Y	18020126	Wildlands - Sheridan	0.29	6.67	0.00	0.00										613.00	8.85	73.48	8.52	17.70
SPK-1997-00375	SUN CITY LINCOLN	18020161	PRM	Y	Y	Y	18020161											0.00	0.00	23.90	0.00					
SPK-1997-00375	SUN CITY LINCOLN	18020161	PRM	Y	Y	Y	18020161											1.39	31.61	0.00	0.00					
SPK-1997-00480	CHEROKEE ESTATES	18020111	MB	N	N	N	UK	Unknown	0.00	0.66	0.00	0.14														
SPK-1997-00593	CTS TRUCKING PROPERTY/BOOMER CONSTR.	18020161	MB	Y	N	Y	18020126	Wildlands - Sheridan	0.10	0.00	0.00	0.00														
SPK-1997-00632	FOSKETT RANCH SUBDIVISION/LINCOLN	18020161	PRM	Y	N	Y	18020126											4.98	0.00	0.00	0.00	117.56	5.52	6.72	1.85	0.92
SPK-1997-00632	FOSKETT RANCH SUBDIVISION/LINCOLN	18020161	MB	Y	N	Y	18020126	Wildlands - Sheridan	0.70	0.00	0.00	0.00														
SPK-1997-00649	HUNTERS GLEN	18020111	MB	N	N	UK	UK	Unknown	0.00	0.00	0.41	0.00														
SPK-1998-00081	HIGHWAY 65 WIDENING PROJECT	18020161	MB	Y	N	Y	18020126	Wildlands - Sheridan	1.23	0.42	0.00	0.00														
SPK-1998-00166	Nichols Ranch	18020161	MB	Y	N	Y	18020126	Wildlands - Sheridan	0.36	0.13	0.00	0.00										3.50	1.03	0.24	1.05	0.13
SPK-1998-00172	EASTPARK ROAD, SEWER, AND WATER LINE	18020161	MB	Y	N	Y	18020126	Wildlands - Sheridan	0.22	0.80	0.00	0.00														
SPK-1998-00208	UNITED AUBURN INDIAN TRIBAL GOVERNMENT	18020161	MB	Y	N	UK	18020126	Wildlands - Sheridan	1.44	0.10	0.00	0.00										8.80	0.18	0.01	0.00	0.00
SPK-1998-00235	TREELAKE VILLAGE, UNIT 10	18020111	MB	Y	N	Y	18020126	Wildlands - Sheridan	0.05	0.09	0.00	0.00														
SPK-1998-00259	DOUGLAS/SIERRA COLLEGE SOUTHEAST CORNER	18020111	MB	Y	N	Y	18020126	Wildlands - Sheridan	0.06	0.13	0.02	0.00										2.20	0.00	0.00	0.00	0.43

# PCCP Cumulative Impact Assessment - Compensatory Mitigation Information

DA Number	Project Name	Project 8-digit HUC	Type of Comp Mit*	Comp Mit in PA? (Y/N)	Comp Mit in Same 8-Digit HUC as Project? (Y/N)	Comp Mit Completed?	Compensatory Mitigation Watershed (8 digit HUC)	MB Name	MB - Ac VP Create/Restore	MB - Ac SW/SWS Create/Restore	MB - Ac OW Create/Restore	MB - Ac OAR Create/Restore	ILF Name	ILF - Ac VP Create/Restore	ILF - Ac SW/SWS Create/Restore	ILF - Ac OW Create/Restore	ILF - Ac OAR Create/Restore	PRM Ac VP Create/Restore	PRM Ac SW/SWS Create/Restore	PRM Ac OW Create/Restore	PRM Ac OAR Create/Restore	On-Site Preserve Size	On-Site - Ac VP Preserved	On-Site - Ac SW/SWS Preserved	On-Site Ac OW Preserved	On-Site Ac OAR Preserved
SPK-1998-00265	47 ACRE ATHENS AVENUE PARCEL B	18020161	MB	Y	N	Y	18020126	Wildlands - Sheridan	0.49	0.90	0.00	0.00														
SPK-1998-00347	BAYSIDE COVENANT CHURCH	18020111	MB	Y	N	Y	18020126	Wildlands - Sheridan	0.36	0.00	1.29	0.00														
SPK-1998-00626	MORGAN CREEK GOLF AND COUNTRY CLUB	18020111	PRM	Y	Y	Y	18020111											0.00	1.35	1.52	0.00					
SPK-1998-00626	MORGAN CREEK GOLF AND COUNTRY CLUB	18020111	MB	Y	N	Y	18020126	Wildlands - Sheridan	1.07	0.00	0.00	0.00										46.70	0.00	1.67	0.77	6.91
SPK-1999-00376	Atwood Ranch Subdivision	18020161	ILF	N	N	Y	UK						NFWF	0.00	0.00	0.42	0.00					10.69	0.00	0.00	2.10	1.99
SPK-1999-00386	STONEBROOKE, MACARGO COURT	18020111	MB	Y	N	Y	18020126	Wildlands - Sheridan	0.00	0.30	0.00	0.00														
SPK-1999-00544	FRANKLIN SCHOOL EXPANSION	18020111	MB	Y	N	Y	18020126	Wildlands - Sheridan	0.00	0.33	0.00	0.00														
SPK-1999-00727	JOINER RANCH II	18020161	MB	N	N	UK	UK	Unknown	0.36	0.12	0.00	0.00										22.20	0.24	0.44	0.00	1.48
SPK-1999-00737	Placer Vineyards Specific Plan	18020111	MB	N	N	N	UK	Unknown	20.78	0.00	102.61	25.75										709.00	10.80	18.60	5.20	39.50
SPK-2000-00054	WILLOW PARK	18020111	MB	Y	Y	Y	18020126	Wildlands - Sheridan	0.00	0.29	0.00	0.00										3.50	0.00	0.00	0.00	0.75
SPK-2000-00086	PENRYN PLAZA	18020111	MB	N	N	N	UK	Unknown	0.00	0.00	0.14	0.00														
SPK-2000-00156	DARYL K. WEEDEN/ST. FRANCIS WOODS/LOT 13	18020111	PRM	Y	Y	Y	18020111											0.00	0.07	0.00	0.00					
SPK-2000-00252	Miner's Creek Project	18020111	MB	Y	N	Y	18020126	Wildlands - Sheridan	0.00	0.20	0.24	0.00										25.50	0.18	8.81	0.00	0.00
SPK-2000-00300	PACIFIC BELL ROCKLIN ADMINISTRATION COMPL	18020161	ILF	N	N	Y	UK						NFWF	0.01	0.00	0.00	0.00									
SPK-2000-00386	Lewis Property (formerly Nader Ranch)	18020161	PRM	Y	Y	N	18020161											0.00	7.04	0.00	0.00	115.00	2.34	3.14	11.92	5.83

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SPK-2000-00513	INDUSTRIAL X TINKER	18020161	MB	Y	N	Y	18020126	Wildlands - Sheridan	0.27	0.00	0.00	0.00														
SPK-2000-00671	PEPPERTREE BUSINESS PARK	18020161	MB	Y	N	Y	18020126	Wildlands - Sheridan	0.11	0.00	0.00	0.00														
SPK-2000-00684	Lincoln 270	18020161	MB	N	N	N	UK	Unknown	7.56	7.05	0.00	0.00									148.00	10.85	3.87	0.00	3.49	
SPK-2000-00685	LARANE RANCH POND	18020161	PRM	Y	Y	Y	18020161											0.00	0.00	0.29	2.49	9.38	0.00	0.07	9.27	0.03
SPK-2000-00743	Bohemia Property	18020161	ILF	N	N	Y	UK						NFWF	0.00	0.05	0.00	0.13									
SPK-2001-00024	SUN VALLEY OAKS	18020111	MB	N	N	UK	UK	Unknown	0.42	0.22	0.00	0.00										17.25	0.02	0.02	0.00	0.56
SPK-2001-00109	AUBURN HONDA RELOCATION	18020161	MB	Y	N	Y	18020126	Wildlands - Sheridan	0.00	2.97	0.00	0.00										0.58	0.00	0.00	0.58	0.00
SPK-2001-00318	Aspen Meadows Subdivision	18020161	MB	Y	N	Y	18020126	Wildlands - Sheridan	0.45	0.00	0.00	0.00														
SPK-2001-00465	RIVER OAKS ESTATES	18020161	MB	N	Y	UK	UK	Unknown	0.00	0.03	0.40	0.25										18.71	0.00	0.00	0.02	1.74
SPK-2001-00548	CROSSROADS @ CIRBY & SUNRISE	18020111	MB	N	N	Y	UK	Unknown				0.03														
SPK-2002-00017	LINCOLN PALISADES	18020161	PRM	Y	Y	UK	18020161											2.85	0.00	0.00	0.00					
SPK-2002-00017	LINCOLN PALISADES	18020161	MB	N	N	Y	Other	Laguna Creek Mitigation Bank	0.00	0.58	0.00	0.00										1.65				
SPK-2002-00101	SUNDANCE INDUSTRIAL PARK	18020161	ILF	N	N	Y	UK						NFWF	0.12	0.31	0.00	0.00									
SPK-2002-00111	CREEKSIDE CHURCH	18020111	MB	Y	N	Y	18020126	Wildlands - Sheridan	0.00	0.06	0.00	0.00														
SPK-2002-00387	CYPRESS MEADOWS	18020161	PRM	Y	N		18020126											0.50	0.00	0.00	0.00					

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SPK-2002-00387	CYPRESS MEADOWS	18020161	MB	N	N	Y	Other	Laguna Creek Mitigation Bank	0.00	0.69	0.00	0.00										1.32	0.00	0.00	0.53	0.00
SPK-2002-00396	HIGHWAY 65 SELF STORAGE	18020161	PRM	Y	Y	Y	18020161											1.18	0.20	0.00	0.00	11.65	0.24	0.45	0.00	0.55
SPK-2002-00582	THE PLAZA PROJECT	18020161	ILF	N	N	UK	UK						NFWF	0.00	0.00	0.12	0.00									
SPK-2002-00662	DEWITT CENTER PROJECT	18020161	PRM	Y	Y	Y	18020161											0.00	0.35	0.32	0.00	4.00	0.00	0.00	1.03	2.48
SPK-2002-00685	PLACER RANCH	18020161	MB	N	N	N	UK	Unknown	4.13	28.36	12.29	0.18										4.00	0.00	0.00	1.03	2.48
SPK-2002-00752	SORENTO 150 (AKA AITKEN 150)	18020161	PRM	Y	Y	Y	18020161											0.00	3.18	0.00	0.00	19.00	0.00	3.41	0.00	0.00
SPK-2003-00071	ST. JOSEPH CHURCH	18020161	MB	Y	N	Y	18020126	Wildlands - Sheridan	0.00	0.09	0.00	0.00										2.00	0.00	0.10	0.00	0.09
SPK-2003-00071	ST. JOSEPH CHURCH	18020161	ILF	N	N	Y	UK						NFWF	0.37	0.00	0.00	0.00									
SPK-2003-00167	CINCINNATI INDUSTRIAL CENTER	18020161	MB	Y	N	Y	18020126	Wildlands - Sheridan	0.00	0.16	0.00	0.00														
SPK-2003-00172	PATTERSON PROPERTIES	18020161	MB	Y	N	N	18020111	Locust Road Mitigation Bank	0.00	0.09	0.00	0.00														
SPK-2003-00172	PATTERSON PROPERTIES	18020111	MB	Y	N	N	18020161	Toad Hill Ranch Mitigation Bank	0.12	0.00	0.00	0.00										2.00	0.00	0.33	0.00	0.00
SPK-2003-00172	PATTERSON PROPERTIES	18020111	MB	N	N	N	Other	River Ranch Mitigation Bank	0.00	0.00	0.28	0.00														
SPK-2003-00496	WHISPER CREEK 2	18020111	MB	Y	N	N	18020161	Toad Hill Ranch Mitigation Bank	0.00	0.39	0.00	0.00														
SPK-2003-00629	KEMPER WOODS PROJECT	18020161	MB	N	N	N	UK	Unknown	0.00	0.00	0.00	0.05														
SPK-2003-00630	Meadowlands Estates	18020161	PRM	Y	Y	N	18020161											0.00	0.00	2.74	0.00	48.80	0.00	1.50	23.92	0.00



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SPK-2003-00630	Meadowlands Estates	18020161	MB	N	N	N	UK	Unknown	0.13	0.00	0.00	0.00														
SPK-2003-00644	OLIVE RANCH ROAD PROPERTY	18020111	ILF	N	N	Y	UK						NFWF	0.00	0.14	0.00	0.02					3.96	0.00	0.18	0.00	0.07
SPK-2003-00652	Amazing Facts	18020111	MB	N	N	N	UK	Unknown	0.22	0.00	0.00	0.04														
SPK-2003-00653	Greyhawk II	18020111	MB	Y	N	Y	18020161	Toad Hill Ranch Mitigation Bank	0.02	0.06	0.00	0.00										3.78	0.00	0.01	2.23	0.00
SPK-2003-00824	LINCOLN MEADOWS	18020161	MB	N	N	N	UK	Unknown	1.45	1.45	0.00	0.00														
SPK-2004-00021	LINCOLN GATEWAY	18020161	MB	Y	N	Y	18020126	Wildlands - Sheridan	0.00	0.05	0.00	0.00														
SPK-2004-00756	Regional University	18020161	MB	N	N	N	UK	Unknown	6.11	4.84	0.00	4.75										131.72	17.93	0.28	0.00	3.57
SPK-2004-00843	WHISPERING OAKS	18020161	ILF	N	N	N	UK						NFWF	0.27	0.11	0.00	0.00									
SPK-2004-00845	MOORE ROAD WIDENING	18020161	ILF	N	N	Y	UK						NFWF	0.00	0.02	0.00	0.00									
SPK-2004-00856	GROVE AT GRANITE BAY	18020111	ILF	N	N	Y	UK						NFWF	0.00	0.26	0.09	0.00					9.10	0.00	2.07	0.78	0.00
SPK-2004-00867	WHISPER CREEK	18020111	ILF	N	N	N	UK						NFWF	0.00	0.35	0.00	0.00					4.60	0.00	0.00	0.00	0.80
SPK-2004-00888	Amoruso Specific Plan	18020161	PRM	Y	Y	N	18020161											16.48	0.00	0.00	0.00	13.59	5.57	6.18	0.00	1.84
SPK-2004-00910	SACRAMENTO PRESTIGE GUNITE	18020161	ILF	N	N	Y	UK						NFWF	0.00	0.07	0.00	0.00									
SPK-2004-00922	HAWKS PROPERTY	18020111	ILF	N	N	Y	UK						NFWF	0.00	0.17	0.00	0.00					1.55	0.00	0.34	0.00	0.00
SPK-2005-00017	LINCOLN SQUARE	18020161	ILF	N	N	Y	UK						NFWF	0.03	0.02	0.00	0.00									

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SPK-2005-00236	Plaza II	18020161	MB	Y	N	N	18020161	Toad Hill Ranch Mitigation Bank	0.00	0.07	0.00	0.00														
SPK-2005-00242	Douglas Melwood	18020111	MB	Y	N	N	18020161	Toad Hill Ranch Mitigation Bank	0.00	0.25	0.00	0.00														
SPK-2005-00243	Manikas-PFE property	18020111	MB	N	N	N	UK	Unknown	0.00	0.69	0.00	0.00														
spk-2005-00259	EMPIRE WEST WANG PROPERTY	18020161	MB	N	N	N	UK	Unknown	0.93	0.18	0.00	0.00										17.00	0.64	0.09	0.00	0.42
SPK-2005-00470	PLACER PARKWAY	18020126	MB	N	N	N	UK	Unknown	0.00	0.00	28.00	0.00														
SPK-2005-00473	American Vineyard Village Project	18020111	ILF	N	N	Y	UK						NFWF	0.00	0.40	0.00	0.00									
SPK-2005-00955	MOORE ROAD SEWER PROJECT	18020161	MB	N	N	N	UK	Unknown	0.00	0.53	0.00	0.00														
SPK-2005-01060	Riolo Vineyards	18020161	PRM	Y	Y	N	18020111											0.00	3.84			97.76	0.00	7.08	0.01	4.36
SPK-2005-01060	Riolo Vineyards	18020111	MB	N	N	N	UK	Unknown	0.21	0.00	0.00	0.00														
SPK-2006-00030	Auburn Walgreens New Airport Road Retail Center	18020111	ILF	N	N	Y	UK						NFWF	0.00	0.03	0.00	0.00									
SPK-2006-00099	SEYMOUR RANCH	18020111	MB	Y	N	Y	18020126	Wildlands - Sheridan	0.00	0.22	0.00	0.00										2.73	0.00	0.00	0.31	0.00
SPK-2006-00325	ST. JOSEPH MARELLO PARISH	18020111	MB	Y	N	Y	18020161	Toad Hill Ranch Mitigation Bank	0.00	1.65												2.18	0.00	0.04	0.00	1.07
SPK-2006-00350	FOLSOM LAKE EQUESTRIAN ESTATES	18020111	MB	N	N	N	UK	Unknown	0.00	0.48	0.38	0.20														
SPK-2006-00379	Dowd Road	18020161	MB	N	N	N	UK	Unknown	0.00	1.42	0.59	4.18														
SPK-2006-00585	LA BELLA ROSA	18020161	MB	N	N	N	UK	Unknown	0.00	0.87	0.00	0.00														

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SPK-2006-00586	BICKFORD RANCH	18020161	PRM	Y	Y	N	18020161											0.00	0.00	3.80	15.08	720.00	0.00	8.90	4.37	1.84
SPK-2006-00653	AUBURN CREEKSIDE CENTER-13.2 ACRE SITE	18020161	MB	N	N	N	UK	Unknown	0.00	0.87	0.00	2.23														
SPK-2006-00691	FORMICA CORPORATION	18020161	MB	N	N	N	UK	Unknown	0.00	0.87	0.00	2.23														
SPK-2006-00718	LINCOLN LDS PROJECT SITE	18020161	MB	N	N	N	UK	Unknown	0.00	0.21	0.00	0.00														
SPK-2006-00800	Rancho Del Oro Estates	18020111	MB	N	N	N	UK	Unknown	0.00	0.00	1.86	0.00														
SPK-2006-00802	Larry Lake	18020161	MB	N	N	N	UK	Unknown	0.00	4.75	0.00	5.15														
SPK-2006-00964	60 Acre Gruber Mountain Estates Project	18020161	MB	N	N	N	UK	Unknown	0.00	0.06	0.11	2.13														
SPK-2007-00019	Penryn Development	18020111	MB	N	N	N	UK	Unknown	0.00	0.45	0.00	0.08														
SPK-2007-00053	Cincinnati Avenue	18020161	MB	N	N	Y	Other	North Suisun Mitigation Bank	0.06	0.00	0.00	0.00														
SPK-2008-00480	Enclave at Granite Bay	18020111	MB	Y	N	Y	18020161	Toad Hill Ranch Mitigation Bank	0.00	0.30	0.00	0.00									5.03	0.00	0.00	2.08	0.03	
SPK-2008-00944	Onorato School	18020111	ILF	N	N	Y	UK						NFWF	0.00	0.03	0.00	0.00									
SPK-2009-00909	Shaeffer Violation	18020111	PRM	Y	Y	UK	18020111											0.00	0.00	0.00	0.07					
SPK-2010-00812	La Faille Ranch	18020161	MB	N	N	N	UK	Unknown	0.00	4.18	0.00	14.63														
SPK-2011-00057	City of Lincoln Waste Water Treatment and Reclamation Facility	18020161	MB	N	N	N	UK	Unknown	5.56	18.29	0.50	0.00														
SPK-2011-00671	SR193 Realignment, Placer County - Caltrans	18020161	MB	Y	Y	N	18020161	Toad Hill Ranch Mitigation Bank	0.68	0.00	0.00	0.00														

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SPK-2011-00671	SR193 Realignment, Placer County - Caltrans	18020161	MB	N	N	N	Other	Beach Lake Mitigation Bank	0.00	0.94	0.00	0.00														
SPK-2012-00568	Clover Valley Reservoir Desilting and Supply Pipeline	18020111	MB	N	N	N	UK	Unknown	0.00	0.01	0.51	3.41														
SPK-2012-01017	Nelson Lane Bridge Replacement	18020161	MB	Y	Y	N	18020161	Toad Hill Ranch Mitigation Bank	0.32	0.11	0.00	0.00														
SPK-2012-01017	Nelson Lane Bridge Replacement	18020161	MB	N	N	N	Other	River Ranch Mitigation Bank	0.00	0.00	0.56	0.00														
SPK-2012-01323	Peery Ranch	18020161	MB	N	N	N	UK	Unknown	3.29	1.80	1.69	0.76														
SPK-2013-00047	CareMeridian Granite Bay	18020111	MB	N	N	N	UK	Unknown	0.00	0.00	0.10	0.39														
SPK-2013-00613	Dalby Property	18020126	MB	N	N	N	UK	Unknown	0.02	0.46	0.00	5.73														
SPK-2013-01016	Tse property violation	18020111	MB	N	N	N	UK	Unknown	0.00	0.03	0.00	0.00														
SPK-2014-00328	Bell Road	18020161	MB	N	N	N	UK	Unknown	0.00	0.00	7.24	0.00														
SPK-2014-00356	Amaryllis Property	18020126	MB	N	N	N	UK	Unknown	0.00	0.56	0.00	0.06														

\* Types of compensatory mitigation recorded consist of mitigation bank (MB), in-lieu fee (ILF), permittee responsible mitigation (PRM), and none.

# APPENDIX H

*USFWS Biological and  
Conference Opinion*

**Biological and Conference Opinion**

**on**

**U.S. Fish and Wildlife Service Proposed Issuance of a  
Section 10(a)(1)(B) Permit  
for the Western Placer County Habitat Conservation  
Plan/Natural Community Conservation Plan**

**and**

**U.S. Army Corps of Engineers Proposed Authorization and  
Implementation of a Clean Water Act Section 404 Permit  
Strategy Aligned with the Placer County Conservation  
Program**

**December 1, 2020**

**File Number 81420-2009-F-0520**

U.S. Fish and Wildlife Service  
Sacramento Fish and Wildlife Office  
Endangered Species Division  
2800 Cottage Way, Room W-2605  
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## TABLE OF CONTENTS

1.	CONSULTATION HISTORY .....	8
2.	BIOLOGICAL OPINION AND CONFERENCE OPINION .....	10
2.1	Description of the Proposed Actions.....	10
2.1.1	U.S. Fish and Wildlife Proposed Action.....	10
2.1.2	U.S. Army Corps of Engineers Proposed Action .....	10
2.1.3	Western Placer County Habitat Conservation Plan/Natural Community Conservation Plan Overview .....	12
2.1.4	Permit Area .....	13
2.1.5	Permit Term .....	13
2.2	Covered Activities.....	14
2.2.1	Valley Potential Future Growth Area .....	15
2.2.2	Valley Conservation and Rural Development Area.....	15
2.2.3	Foothills Potential Future Growth Area.....	16
2.2.4	Foothills Conservation and Rural Development Area .....	16
2.2.5	Regional General Programs .....	17
2.2.6	Conservation Program .....	25
2.2.7	Other Placer County Conservation Programs .....	27
2.3	Conservation Strategy .....	28
2.3.1	Reserve System.....	28
2.3.2	Stream Protection, Enhancement, and Avoidance.....	30
2.3.3	Wetland Conservation and No Overall Net Loss of Wetland Functions and Services 30	
2.3.4	Avoidance and Minimization.....	30
2.3.5	Biological Goals and Objectives and Conservation Measures .....	30
2.3.6	Conditions on Covered Activities.....	33
2.3.7	Monitoring and Adaptive Management .....	37
2.4	Implementation.....	47
2.4.1	Coordinated Implementation of the Placer County Conservation Program .....	47
2.4.2	Implementation Structure.....	48
2.4.3	Establishing the Reserve System .....	49
2.4.4	Process for Acquiring Lands.....	49
2.4.5	Stay Ahead Provision.....	50



2.4.6	Jump Start .....	50
2.4.7	Advance Acquisition of Vernal Pool Complex Lands.....	51
2.4.8	Private Mitigation and Conservation Banks .....	51
2.4.9	Mitigation for Activities not Covered Under the Plan.....	51
2.4.10	Conservation Easements .....	52
2.4.11	Land Dedication in Lieu of Land Conversion Fee.....	52
2.4.12	Management and Enhancement of the Reserve System .....	53
2.4.13	Restoration and Creation of Natural Communities and Covered Species Habitat .	53
2.4.14	Monitoring and Adaptive Management .....	54
2.4.15	Take Authorization under the Plan .....	54
2.4.16	Coverage Option for Certain Minor Activities .....	55
2.4.17	Compliance Tracking and Data Management.....	55
2.4.18	Reporting and Schedule .....	56
2.5	Cost and Funding .....	56
2.6	Action Area .....	57
2.7	Analytical Framework for the Jeopardy and Adverse Modification Analysis.....	58
2.7.1	Jeopardy Determination .....	58
2.7.2	Adverse Modification Determination .....	58
2.8	Status of the Species and Critical Habitat .....	59
2.8.1	Swainson’s Hawk.....	59
2.8.2	California Black Rail .....	60
2.8.3	Western Burrowing Owl.....	61
2.8.4	Tricolored Blackbird.....	62
2.8.5	Giant Garter Snake.....	63
2.8.6	Western Pond Turtle .....	63
2.8.7	Foothill Yellow-legged Frog.....	64
2.8.8	California Red-legged Frog .....	65
2.8.9	Valley Elderberry Longhorn Beetle.....	66
2.8.10	Vernal Pool Fairy Shrimp .....	66
2.8.11	Vernal Pool Tadpole Shrimp .....	66
2.8.12	Conservancy Fairy Shrimp .....	67
2.8.13	Critical Habitat.....	67
2.9	Environmental Baseline .....	67

2.9.1	General Baseline .....	68
2.9.2	Swainson’s Hawk.....	71
2.9.3	California Black Rail .....	71
2.9.4	Western Burrowing Owl.....	72
2.9.5	Tricolored Blackbird.....	72
2.9.6	Giant Garter Snake.....	73
2.9.7	Western Pond Turtle .....	74
2.9.8	Foothill Yellow-legged Frog.....	74
2.9.9	California Red-legged Frog .....	75
2.9.10	Valley Elderberry Longhorn Beetle.....	76
2.9.11	Vernal Pool Fairy Shrimp .....	77
2.9.12	Vernal Pool Tadpole Shrimp .....	78
2.9.13	Conservancy Fairy Shrimp .....	79
2.9.14	Critical Habitat.....	80
2.10	Effects Analysis Development.....	80
2.10.1	Effects Mechanisms Producing Covered Species Responses.....	81
2.10.2	Effects Analysis Methods .....	81
2.11	General Effects Analysis.....	83
2.11.1	Habitat Loss and Fragmentation .....	83
2.11.2	Reduction in Habitat Function .....	97
2.11.3	Effects on Covered Species individuals.....	102
2.12	Effects to Covered Species.....	104
2.12.1	Swainson’s Hawk.....	104
2.12.2	California Black Rail .....	106
2.12.3	Western Burrowing Owl.....	108
2.12.4	Tricolored Blackbird.....	110
2.12.5	Giant Garter Snake.....	112
2.12.6	Western Pond Turtle .....	114
2.12.7	Foothill Yellow-legged Frog.....	116
2.12.8	California Red-Legged Frog.....	117
2.12.9	Valley Elderberry Longhorn Beetle.....	119
2.12.10	Vernal Pool Fairy Shrimp .....	121
2.12.11	Vernal Pool Tadpole Shrimp.....	124

2.12.12	Conservancy Fairy Shrimp.....	125
2.12.13	Critical Habitat .....	126
2.13	Cumulative Effects.....	127
2.14	Conclusion.....	128
3.	INCIDENTAL TAKE STATEMENT.....	130
3.1	Amount or Extent of Take.....	131
3.2	Effect of the Take .....	133
3.3	Reasonable and Prudent Measures.....	133
3.4	Terms and Conditions .....	133
4.	CONSERVATION RECOMMENDATIONS .....	134
5.	REINITIATION—CLOSING STATEMENT .....	134
6.	LITERATURE CITED.....	136
7.	APPENDIX A: Species List.....	146
8.	APPENDIX B Species Evaluation .....	147

**TABLES**

Table 1. Extent of Natural Communities and the Maximum Allowable Loss (in acres; from Tables 4-1, 4-3, 5-3, 5-4 and 5-5 in the Plan).....	86
Table 2. Maximum Allowable Loss by Geographic Area, in acres.....	87
Table 3. Estimated extent of indirect effects, in acres.....	99
Table 4. Maximum take allowed for Covered Species, using habitat as a surrogate. ....	132



# United States Department of the Interior



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Subject: Biological Opinion and Conference Opinion on the U.S Fish and Wildlife Issuance of a Section 10(a)(1)(B) Permit for the Western Placer County Habitat Conservation Plan/Natural Community Conservation Plan and on the U.S. Army Corps of Engineers Proposed Authorization and Implementation of a Clean Water Act Section 404 Permit Strategy Aligned with the Placer County Conservation Program

In accordance with section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (Act) and its implementing regulations (50 CFR §402), this document transmits the biological and conference opinion (Biological Opinion) of the U.S. Fish and Wildlife Service (Service), Sacramento Fish and Wildlife Office, regarding: (1) the U.S. Fish and Wildlife Service California-Great Basin Region's proposed issuance of a section 10(a)(1)(B) incidental take permit to Placer County (County), City of Lincoln (Lincoln or City), Placer County Water Agency, South Placer Regional Transportation Authority, and the Placer Conservation Authority (collectively referred to as the "Applicants" or "Permittees") for the implementation of the Western Placer County Habitat Conservation Plan/Natural Community Conservation Plan (Plan); and (2) the U.S. Army Corps of Engineers (Corps) proposed authorization and implementation of the Clean Water Act 404 Permit Strategy Aligned with the Placer County Conservation Program (Placer County Conservation Program Clean Water Act 404 Permit Strategy).

The Applicants have developed the Plan, a County Aquatic Resources Program (CARP) (Placer County 2020) for permitting activities covered under the Plan that impact aquatic resources, and an In-Lieu Fee Program, under which compensatory mitigation requirements under Section 404 of the Clean Water Act for an individual project or activity can be fulfilled by payment of a fee. Together, the Plan, the CARP, and the In-lieu Fee Program are referred to as the Placer County Conservation Program. The Placer Conservation Authority, a joint powers authority formed for the purposes of implementing the Placer County Conservation Program, will be the “implementing entity” for the Plan and will have primary responsibility for implementing the Plan. See Section 2.1.3 below for a more detailed description of each of these elements.

At issue are the effects of the proposed incidental take permit, the effects of the proposed Plan, and the effects of the proposed Placer County Conservation Program Clean Water Act 404 Permit Strategy on 14 wildlife species (collectively “Covered Species”) listed below. In addition, this Biological Opinion analyzes effects to designated critical habitat for vernal pool fairy shrimp. Seven of the species proposed for coverage are currently listed as federally threatened (T) or endangered (E). Seven currently unlisted species would also be Covered Species and included on the incidental take permit. Although take of non-listed species is not prohibited under the Act and, therefore, cannot be authorized under an incidental take permit, these species would be included on the incidental take permit in recognition of the conservation benefits provided to the species under the Plan. Should any of the non-listed Covered Species become listed under the Act during the life of the incidental take permit, the incidental take permit would then also cover those species. Assurances provided to Permittees under the “No Surprises” rule at 50 CFR 17.13, 17.22(b)(5) and 17.32(b)(5) extends to all Covered Species. The “No Surprises” regulations are not applicable to the Corps’ action.

Two of the Covered Species are fish species (Central Valley steelhead and Central Valley fall/late-fall chinook salmon) that are under the jurisdiction of the National Marine Fisheries Service. Incidental take for these two species would be included on a section 10(a)(1)(B) incidental take permit issued by the National Marine Fisheries Service and would not be included on the incidental take permit issued by the Service. Effects to these two fish species will be considered in a separate biological opinion prepared by National Marine Fisheries Service.

#### Covered Species

1. Vernal pool fairy shrimp (*Branchinecta lynchi*) (T)
2. Vernal pool tadpole shrimp (*Lepidurus packardi*) (E)
3. Conservancy fairy shrimp (*Branchinecta conservatio*) (E)
4. Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*) (T)
5. Central Valley steelhead (*Oncorhynchus mykiss irideus*) (T; National Marine Fisheries Service)
6. Central Valley fall/late-fall chinook salmon (*Oncorhynchus tshawytscha*; National Marine Fisheries Service)
7. California red-legged frog (*Rana draytonii*) (T)
8. Foothill yellow-legged frog (*Rana boylei*)
9. Western pond turtle (*Emys marmorata*)
10. Giant garter snake (*Thamnophis gigas*) (T)
11. Western burrowing owl (*Athene cunicularia hypugaea*)

12. Tricolored blackbird (*Agelaius tricolor*)
13. Swainson's hawk (*Buteo swainsoni*)
14. California black rail (*Laterallus jamaicensis coturniculus*)

The Plan is intended to meet the requirements for a habitat conservation plan pursuant to section 10(a)(2)(A) of the Act. To fulfill this purpose, the Plan provides a conservation strategy (hereafter referred to as the Conservation Strategy) that includes measures to minimize and mitigate the impact of the taking to the maximum extent practicable for the 14 Covered Species in perpetuity, and to meet the State Natural Community Conservation Planning Act by contributing to the conservation of the species within the Plan Area. Incidental take to the Permittees will be authorized for all listed Covered Species upon the execution of the Implementing Agreement by all Parties; issuance of both State and Federal Permits; and City and County local implementing ordinances take effect. The Permittees will implement the Plan's Conservation Strategy measures for each Covered Species, regardless of their current listing status. Incidental take to the Corps will be authorized when the Service issues this Biological Opinion.

To help formulate this Biological Opinion, on May 11, 2020, an official list of threatened and endangered species under the Service's jurisdiction, that may be affected by Plan implementation, was created using the Service's Information for Planning and Consultation (IPaC) website (Appendix A). The effect of the Service's permitting actions, resulting in Plan implementation, was then evaluated for each species included on the IPaC list and on designated critical habitat by completing the Intra-Service Section 7 Biological Evaluation Form (Appendix B).

Based on the biological evaluations, the Service finds that the proposed action may affect, but is not likely to adversely affect, the California tiger salamander (*Ambystoma californiense*), Layne's butterweed (*Senecio layneae*), Sacramento Orcutt grass (*Orcuttia viscida*) or Stebbin's morning-glory (*Calystegia stebbinsii*). Because conservation actions are the only Plan activities that will occur within designated critical habitat for California red-legged frog the Service finds that the proposed action is not likely to adversely affect critical habitat for California red-legged frog. If an individual project, that would also be a Covered Activity, is likely to adversely affect a listed species that is not a Covered Species, that project is not covered by the incidental take permit and will be analyzed on a project-by-project basis by the Service via a separate section 7 consultation, or separate section 10 permit, as appropriate.

For complete species and critical habitat evaluations, including evaluations of species and critical habitat where no effect is expected as a result of proposed actions, please refer to Appendices A and B.

This Biological Opinion analyzes the effects of the issuance a section 10(a)(1)(B) incidental take permit for the implementation of the Conservation Plan on the Covered Species listed above (with the exception of Central Valley steelhead and Central Valley fall/late-fall chinook salmon, which will be considered in a separate biological opinion prepared by National Marine Fisheries Service), and on critical habitat for vernal pool fairy shrimp. This Biological Opinion was prepared in accordance with the requirements of section 7 of the Act (16 U.S.C. 1531 *et seq.*) and its implementing regulations at 50 CFR §402.

This Biological Opinion was prepared using the following information:

- Western Placer County Habitat Conservation Plan/Natural Community Conservation Plan, February 2020 (Placer County et al. 2020), prepared by ICF for the Placer County Planning Services Division and noticed in the Federal Register on May 22, 2020 (85 FR 31203) (hereby incorporated by reference);
- Placer County Conservation Program Final Environmental Impact Statement/Environmental Impact Report, May 2020 (Service and Placer County 2020), prepared by ICF for the Service and Placer County and noticed in the Federal Register on May 22, 2020 (85 FR 31203) (hereby incorporated by reference);
- Electronic mail correspondence, telephone conversations, site visits, and meetings between the Service and the Applicants between 2000-2020;
- References cited in this Biological Opinion; and
- Other information available to the Service.

### 1. CONSULTATION HISTORY

2000-2020	Numerous meetings, correspondence, and telephone calls between the Service, the California Department of Fish and Wildlife, Corps, and the Permittees concerning the development of the Conservation Plan; most notably discussions concerning the area, activities and species to be covered, and the Conservation Strategy.
October 2001	Placer County, National Marine Fisheries Service, the Service and California Department of Fish and Wildlife executed the Planning Agreement to develop a habitat conservation plan/natural community conservation plan.
October 2001	The Biological Working Group for the Conservation Plan was established.
January 2004	<i>Report of the Science Advisors for the Placer County Natural Communities Conservation Plan and Habitat Conservation Plan: Planning Principles, Uncertainties, and Management Recommendations</i> (Brussard et al. 2004) was published.
February 2005	The first draft of the Conservation Plan was provided for Wildlife Agencies' review; the draft included 33 plant and animal species.
March-April 2005	Joint Notice of Intent and Notice of Preparation were published for a proposed joint Environmental Impact Statement/Environmental Impact Report for the Western Placer County Habitat Conservation Plan/Natural Community Conservation Plan. Public meetings were held March 15-17, 2005; public comment period ended April 6, 2005.

- September 2007 An Ad Hoc Committee consisting of two elected representatives from the Placer County Board of Supervisors and the City Council for the City of Lincoln was formed to provide a coordinated framework for decision-making.
- September 2008 The Placer County Board of Supervisors unanimously adopted the Ad Hoc Committee's recommendations to work with partners (City of Lincoln, Placer County Water Agency, and South Placer Regional Transportation Authority), and to coordinate with the public and resource agencies to finish the work plan and prepare a second draft of the Conservation Plan.
- December 2011 The first amendment to the Planning Agreement was signed by all agencies, extending the Planning Agreement until December 2015.
- February 2011 The second draft of the Conservation Plan was provided to the Wildlife Agencies; the draft included 31 plant and animal species.
- November 2015 The Corps agreed to participate as a cooperating agency for the Placer County Habitat Conservation Plan's National Environmental Policy Act process.
- December 2015 The second amendment to the Planning Agreement was signed by all agencies, extending the Planning Agreement until December 2018.
- December 2015 The Western Placer County In-lieu Fee Program Prospectus was submitted for review.
- May 2017 A revised draft of the Conservation Plan was provided to the Wildlife Agencies.
- December 2018 The third amendment to the Planning Agreement was signed by all agencies, extending the Planning Agreement until December 2019.
- January 2019 Placer County and the Placer Conservation Authority, the City of Lincoln, Placer County Water Agency, and South Placer Regional Transportation Authority submitted applications for 10(a)(1)(B) permits for take authorization.
- June-August 2019 The Draft Environmental Impact Statement/Environmental Impact Report, Draft Western Placer County Habitat Conservation Plan/Natural Community Conservation Plan, Draft County Aquatic Resources Program (CARP), and Draft Corps' Placer County Conservation Program Clean Water Act 404 Permit Strategy released for public review and comment; public meetings were held August 8-15, 2019.
- December 2019 The fourth amendment to the Planning Agreement was signed by all agencies, extending the Planning Agreement until December 2020.



May 2020 The Final Environmental Impact Statement/Environmental Impact Report, Final Western Placer County Habitat Conservation Plan/Natural Community Conservation Plan, Final CARP, and Final Corps' Placer County Conservation Program Clean Water Act 404 Permit Strategy was released for public inspection.

## **2. BIOLOGICAL OPINION AND CONFERENCE OPINION**

### **2.1 Description of the Proposed Actions**

This Biological Opinion addresses two proposed federal actions: the Service's proposed issuance of a section 10(a)(1)(B) incidental take permit for the Western Placer County Habitat Conservation Plan/Natural Community Conservation Plan, and the Corps' proposed approval and implementation of a Clean Water Act 404 Permit Strategy Aligned with the Placer County Conservation Program.

#### **2.1.1 U.S. Fish and Wildlife Proposed Action**

Under section 10(a)(1)(B) of the Act, the Service is proposing the issuance of an incidental take permit for the implementation of the Western Placer County Habitat Conservation Plan/Natural Community Conservation Plan. The Plan is a regional conservation plan developed by the Applicants to achieve the permit issuance criteria in section 10(a)(2)(A) of the Act. To evaluate the effects of this proposed action on listed and other Covered Species and critical habitat, a summary of the Plan is contained within this Biological Opinion. Components of the Plan that are relevant to the effects analysis of this Biological Opinion are incorporated in the following subsections. For a comprehensive description of the proposed action, refer to the Conservation Plan (Placer County et al. 2020).

#### **2.1.2 U.S. Army Corps of Engineers Proposed Action**

The U.S. Army Corps of Engineers, Sacramento District, is proposing to approve and implement the Placer County Conservation Program Clean Water Act 404 Permit Strategy, summarized below. For a comprehensive description of the proposed Placer County Conservation Program Clean Water Act 404 Permit Strategy, see Appendix C of the Placer County Conservation Program Final Environmental Impact Statement/Environmental Impact Report, circulated for public review on May 22, 2020 (Service and Placer County 2020). The Placer County Conservation Program Clean Water Act 404 Permit Strategy includes the Corps' proposed issuance of a Programmatic General Permit, two Regional General Permits, and the establishment of abbreviated processes for issuing letters of permission and standard permits (these permits are described in more detail below).

The Placer County Conservation Program Clean Water Act 404 Permit Strategy provides an approach to authorizing placement of dredged or fill material into waters of the U.S. within the Plan Area (see Section 2.1.4 below for a description of the Plan Area), pursuant to section 404 of the Clean Water Act for Covered Activities as defined in the Plan (see Section 2.2 below for a description of Covered Activities) that involve a discharge of dredged or fill material into waters of the U.S. The Placer County Conservation Program Clean Water Act 404 Permit Strategy relies on the Conservation Strategy in the Plan (see Section 2.3 below for a description of the

Conservation Strategy), and mirrored in the final Western Placer County Aquatic Resources Program (CARP) (Placer County 2020) developed by the County as a basis for Clean Water Act 404 permitting. The CARP describes measures to avoid and minimize impacts to aquatic resources, and to address compensatory mitigation requirements for Covered Activities with unavoidable impacts to aquatic resources, consistent with requirements of the Conservation Plan.

The procedures and associated requirements for the Clean Water Act 404 permits will integrate with those contained in the Plan, resulting in consistent implementation of the Plan and Clean Water Act 404 permitting under the Placer County Conservation Program Clean Water Act 404 Permit Strategy. Implementation of compensatory mitigation projects will be located on Plan reserve lands and will be consistent with the Plan's Conservation Strategy, including Plan requirements regarding the re-establishment and establishment of aquatic resources. An in-lieu fee program will provide compensatory mitigation for impacts from Covered Activities (In-lieu Fee Program). Payment of Plan fees into the In-lieu Fee Program to purchase credits will fulfill compensatory mitigation required for Covered Activities under the Placer County Conservation Program Clean Water Act 404 Permit Strategy.

The proposed Regional General Permits and Programmatic General Permit are valid for 5 years from the date of issuance (or reissuance). The letter of permission procedure and the abbreviated standard permit process will be applied to specific activities that do not qualify for inclusion in the Regional General Permits or Programmatic General Permit, and may be used throughout the Conservation Plan's permit term of 50 years. Because activities authorized through the Placer County Conservation Program Clean Water Act 404 Permit Strategy are a subset of Covered Activities of the Plan that are analyzed in this Biological Opinion, the Service will consider this Biological Opinion valid for a period of fifty years, as long as the Service's incidental take permit is in good standing, or unless new information reveals effects of the Corps' proposed action may result in adverse effects to federally listed species or designated critical habitat in a manner not analyzed in this biological opinion, or if a new species is listed that may be affected by the Corps' proposed action.

The Placer County Conservation Program Clean Water Act 404 Permit Strategy includes the following (see appendix C of the Final Environmental Impact Statement/Environmental Impact Report for complete drafts of the proposed permits):

- A Programmatic General Permit founded on the CARP to be implemented via local ordinance, and designed to reduce duplication with that program, for activities with minimal individual and cumulative effects on the aquatic environment;
- A Regional General Permit for minimal impact activities conducted by Placer County Water Agency under the Western Placer County Habitat Conservation Plan/Natural Community Conservation Plan;
- A procedure for issuing Letters of Permission for activities with more than minimal but less than significant effects on the human environment, including aquatic resources;
- An abbreviated process for issuing standard permits for other activities consistent with the Placer County Conservation Program that may have a significant impact on the human environment, and require the preparation of an Environmental Impact Statement under the National Environmental Policy Act; and
- A Regional General Permit for minimal impact activities conducted under the Placer

County Conservation Program In-lieu Fee Program.

### **2.1.3 Western Placer County Habitat Conservation Plan/Natural Community Conservation Plan Overview**

The Western Placer County Habitat Conservation Plan/Natural Community Conservation Plan is a multi-species, 50-year plan intended to protect and conserve 14 Covered Species and other biological resources throughout western Placer County. The Conservation Plan aims to provide an effective framework to protect, enhance, and restore the natural resources in specific areas of western Placer County, while streamlining environmental permitting for activities covered by the Plan (Covered Activities). The Conservation Plan is intended to meet the requirements for a habitat conservation plan pursuant to section 10(a)(2)(A) of the Act. To fulfill this purpose, the Plan provides a Conservation Strategy that includes measures to minimize and mitigate the impact of the taking to the maximum extent practicable for the 14 Covered Species in perpetuity, and to meet the State Natural Community Conservation Planning Act by contributing to the conservation of the species within the Plan Area. The Conservation Strategy includes four main components: (1) establishment of a reserve system of interconnected blocks of land (Reserve System); (2) stream protection, enhancement, and avoidance; (3) wetland conservation and no overall net loss of wetland functions and services; and (4) avoidance and minimization measures (see summary in Section 2.3 below, and Chapter 5 of the Plan for details on the Conservation Strategy and Chapter 6 of the Plan for Conditions on Covered Activities including avoidance and minimization measures). If the Service determines the issuance criteria have been met, the incidental take permit will provide take authorization for the Covered Species under the Service's jurisdiction, including species that are not currently listed, if they become listed during the 50-year permit term. If any of the Covered Species are de-listed during the permit term, the Permittees are still required to implement the conservation activities for those species consistent with the obligations in the Plan.

Because many of the Covered Species are associated with aquatic habitats, the Applicants have also developed the CARP (Placer County 2020). The CARP is a Clean Water Act 404 program, integrated with the Plan, for permitting Covered Activities that impact aquatic resources. CARP avoidance, minimization, and mitigation requirements are derived from the Plan's requirements, and the CARP will provide a basis for fulfilling requirements of the federal Clean Water Act and analogous state laws and regulations using the Plan's Conservation Strategy. In conjunction with the CARP, the County has developed an In-Lieu Fee Program, a program under which compensatory mitigation requirements under Section 404 of the Clean Water Act for an individual project or activity can be fulfilled by payment of a fee. The In-lieu Fee Program will provide compensatory mitigation for impacts on aquatic resources for projects and activities that are covered under the Western Placer County Habitat Conservation Plan/Natural Community Conservation Plan and the CARP. Measures to avoid and minimize impacts to aquatic resources and compensatory mitigation for impacts to aquatic resources will be consistent between the Conservation Plan, the CARP, and the In-lieu Fee Program. Together, the Western Placer County Habitat Conservation Plan/Natural Community Conservation Plan, the CARP, and the In-lieu Fee Program are referred to as the Placer County Conservation Program.

The Permittees are responsible for implementing the Plan and the other elements of the Placer County Conservation Program and will ensure that their own activities and those within their

land use jurisdiction comply with the Plan. The Placer Conservation Authority, a joint powers authority formed for the purposes of implementing the Placer County Conservation Program, will be the “implementing entity” for the Plan and will have primary responsibility for implementing the Plan. The Placer Conservation Authority will fulfill monitoring and reporting responsibilities, and facilitate coordination among the local, state and federal agencies.

#### **2.1.4 Permit Area**

The Permit Area is the area in which the Applicants are requesting incidental take authorization of Covered Species. The Permit Area is the same as the Plan Area described in Section 1.2.1 of the Plan. The Permit Area includes 269,118 acres in western Placer County and a small portion of Sutter County; the Permit Area has two main parts, Plan Area A and Plan Area B, as shown on Plan Figure 1-2.

- Plan Area A is the main focus of the Plan, and is where all future growth and most of the Covered Activities will take place. Plan Area A is 209,832 acres and includes the City of Lincoln and all unincorporated lands within western Placer County. Plan Area A is divided into two areas as shown on Plan Figure 1-2: (1) the Valley portion of Plan Area A (Valley), which is comprised of the City of Lincoln and unincorporated western Placer County below 200 feet in elevation where vernal pool grassland complexes and annual grasslands are the primary natural communities; and (2) the Foothills portion of Plan Area A (Foothills), which is comprised of the unincorporated communities along the Interstate 80 (I-80) corridor, the unincorporated Auburn area, and the northern foothills that support most of the woodland communities in the Plan Area.
- Plan Area B is 59,286 acres and includes several specific additional areas (listed below and shown in Plan Figure 1-2) in Placer County and adjacent Sutter County where only specific Covered Activities may occur.
  - B1, Permittee Activity in Non-Participating City Jurisdiction (non-participating cities include Auburn, Loomis, Rocklin, and Roseville whose jurisdiction totals 50,600 acres)
  - B2, Placer County Water Agency Zone 1 Operations and Maintenance (6,315 acres)
  - B3, Raccoon Creek Floodplain Conservation (1,724 acres)
  - B4, Fish Passage Channel Improvement (559 acres and 32.9 miles of channel improvement reaches)
  - B5, Big Gun Conservation Bank (52 acres)

#### **2.1.5 Permit Term**

The Applicants are requesting a 50-year permit term. The permit term is the time period in which the Applicants may receive incidental take authorization for Covered Activities under the Plan.

The permit term is also the time in which all conservation actions must be successfully completed to offset the effects of the Covered Activities. The permit term of 50 years was proposed because it would allow for the full and successful implementation of the Plan's Covered Activities, Conservation Strategy, monitoring and adaptive management program, and funding strategy.

## **2.2 Covered Activities**

The projects and activities described herein as Covered Activities may be implemented by the Permittees, applicants under the jurisdiction of the Permittees (third-party projects), or by Special Participating Entities covered through a Certificate of Inclusion (see Section 2.4.15 below). In all cases, approval must be obtained from the Permittee with jurisdiction over a project for its inclusion as a Covered Activity within the Plan. All Covered Activities must incorporate the relevant conditions on Covered Activities described in Chapter 6 of the Plan to avoid and minimize adverse effects to Covered Species and natural communities, and to ensure that progress toward the Plan's Conservation Strategy, described in Chapter 5 of the Plan, is maintained. Part of the approval process for parties seeking coverage under the Conservation Plan is demonstration that the conditions have been incorporated or will be incorporated properly into proposed projects.

For the purposes of the Plan, "activities" are actions that occur repeatedly in one location or throughout the Permit Area, whereas "projects" are well-defined actions that occur once in a discrete location. Together, these activities and projects are referred to as "Covered Activities" for which incidental take authorization is being requested.

Covered Activities are divided into the following seven categories based on geographic boundaries or features and program goals (Plan Figure 2-4):

- Valley Potential Future Growth Area
- Valley Conservation and Rural Development
- Foothills Potential Future Growth Area
- Foothills Conservation and Rural Development
- Regional Public Programs
- In-Stream Programs
- Conservation Programs

The first four categories of Covered Activities encompass future growth and rural development in the Foothills and Valley in Plan Area A. They are defined geographically by mapped boundaries that reflect patterns of anticipated urban and rural-residential expansion (Plan Figure 1-5). The final three categories of Covered Activities occur throughout the Plan Area, and overlap geographically with the other categories. These are defined primarily by similar habitat features (i.e., in-stream programs) or programmatic objectives (i.e., regional public programs and

conservation programs). Each category of activities listed above is summarized below, and more fully described in Sections 2.3.2-2.3.8 of the Plan. Activities or projects that do not fall clearly within the descriptions provided in Chapter 2 of the Plan will be evaluated on a case-by-case basis. Chapter 2 of the Plan also describes categories of activities not covered by the Conservation Plan. For a list of activities not covered by the Plan, see Section 2.7 of the Plan.

As part of the methodology of Plan development, assumed acreage values for Covered Activities were determined based on estimates of land development needed to accommodate anticipated population and employment growth over the 50-year permit term (see Plan Section 2.6, *Categories of Covered Activities* and Appendix M, *Growth Scenario* for details). Table 2-5 of the Plan summarizes the land development estimates by decade for the 50-year permit term for the Plan Area components depicted on Plan Figure 2-4. Estimates include an allowance for associated infrastructure and public facilities in the Plan Area over the 50-year permit term. The estimate for Plan Area B is based on Permittee Activity in Non-participating City Jurisdictions. The other Plan Area B activities are either conservation activities or operations and maintenance on existing facilities that do not have an associated permanent land conversion footprint and are not listed here.

### **2.2.1 Valley Potential Future Growth Area**

This Covered Activity category includes ground- or habitat-disturbing projects and activities in the Valley Potential Future Growth Area (see component A1 in Plan Figure 2-4). The Valley Potential Future Growth Area includes 46,769 acres made up by the City of Lincoln and a portion of the adjacent Lincoln sphere of influence and unincorporated County area adjacent to the City of Roseville. Both public and private activities are included in this category. It includes rural and urban land uses and the use, construction, demolition, rehabilitation, maintenance, and abandonment of typical public facilities, consistent with the implementation of local general plans, community plans, area plans (collectively referred to as general plans); specific plans; and local, state, and federal laws. See Table 2-6 in the Plan for a list of categories and examples of Covered Activities that can be covered in the Valley Potential Future Growth Area.

### **2.2.2 Valley Conservation and Rural Development Area**

This Covered Activity category includes ground- or habitat-disturbing projects and activities that occur in the Valley Conservation and Rural Development Area (see component A2 in Plan Figure 2-4). This 53,929-acre area is an arc of unincorporated County land around the west and north side of the Valley Potential Future Growth Area. Covered Activities here include rural-residential uses and the few types of agriculture-related activities that are subject to approval by the County or City. Covered Activities in the Valley Conservation and Rural Development Area must be consistent with designations in the general plans of the County and the City of Lincoln. The Valley Conservation and Rural Development Area is where most of the Plan's conservation objectives for the Valley will be implemented. See Table 2-7 in the Plan for a list of categories and examples of Covered Activities that can be covered in the Valley Conservation and Rural Development Area. In addition, public agency programs described in Plan Section 2.6.4, *Foothills Conservation and Rural Development* are also Covered Activities in the Valley Conservation and Rural Development Area.

### **2.2.3 Foothills Potential Future Growth Area**

This Covered Activity category includes ground- or habitat-disturbing projects and activities in the Foothills Potential Future Growth Area (see component A3 in Plan Figure 2-4). The 78,897 acres of the Foothills Potential Future Growth Area comprise the I-80 corridor and the communities of Granite Bay, Penryn, Loomis, and Newcastle; the unincorporated area around the city of Auburn; and rural-residential lands east of Rocklin and Lincoln. The Foothills Potential Future Growth Area boundary extends to the Placer/El Dorado county line; hence, area tabulations include 3,820 acres of Folsom Reservoir in which no Covered Activities take place.

Future growth in the Foothills Potential Future Growth Area is expected to be lower in magnitude and density than in the Valley Potential Future Growth Area. There will be portions of the I-80 corridor and the outlying areas around Auburn and along State Route 49 that will develop at urban densities with urban land use. However, most of the Foothills Potential Future Growth Area outside the urban core is zoned for very low-density, rural-residential, and agricultural development. It is expected that most of the land area subject to future growth will be rural residential (i.e., a density of one dwelling unit per acre to one dwelling unit per 10 acres). Acquisition of reserve lands and conservation activities may occur in the Foothills Potential Future Growth Area, primarily in the Stream System (see Plan Section 3.2.7 and Plan Figure 3-8 for a description of the Stream System) to benefit covered fish species. See Table 2-8 in the Plan for a list of categories and examples of Covered Activities that can be covered in the Foothills Potential Future Growth Area.

### **2.2.4 Foothills Conservation and Rural Development Area**

This Covered Activity category includes ground- or habitat-disturbing projects and activities in the Foothills Conservation and Rural Development Area (see component A4 in Figure 2-4). This 30,237-acre area is north of the Foothills Potential Future Growth Area and generally north and east of the intersection of Wise and Gladding Roads; it extends to an area north and west of the intersection of Hubbard and Bell Roads. The Plan Area extends to the Placer/Nevada county line; hence, area tabulations include 837 acres of Camp Far West Reservoir in which no Covered Activities take place.

Most of the area consists of large parcels in woodland and rangeland, and is currently zoned for large-parcel minimums. This category of Covered Activities includes rural-residential uses and those agricultural activities that are subject to approval by the County. The Foothills Conservation and Rural Development Area is where most of the Plan's conservation objectives for the Foothills will be implemented, and Placer Conservation Authority acquisition and management of reserve lands is a Covered Activity.

Covered rural development activities in the Foothills Conservation and Rural Development Area are the same as those listed for the Valley Conservation and Rural Development Area (see Section 2.2.2 above and Table 2-7 in the Plan) and public agency programs (see Table 2-8 in the Plan) are also Covered Activities in the Foothills Conservation and Rural Development Area when they take place there.

## 2.2.5 Regional General Programs

Regional public programs provide and sustain the backbone infrastructure that supports public services and development within the Plan Area. Regional public programs involve operation and maintenance of existing facilities and construction and operation and maintenance of new facilities. Covered Activities could be carried out by a public agency/utility district, or private developer on behalf of a public agency/utility district.

All regional public programs in the categories described below are Covered Activities in Plan Area A. In Non-participating City Jurisdiction (see component B1 in Plan Figure 2-4) and in Placer County Water Agency Zone 1 operation and maintenance (see component B2 in Plan Figure 2-4) specific programs/activities are Covered Activities as described below.

### 2.2.5.1 Transportation Programs

Covered transportation program activities provide, enhance, and maintain infrastructure that support existing development and new development. They include transportation program activities in Plan Area A and Permittee activities in Non-participating City Jurisdiction (component B1 in Plan Figure 2-4).

- County and City road projects, including new lanes, new connections, extensions, widening, and realignment projects. Projects may include trails for pedestrian and bicycle use.
- County and City roadway safety and operational improvement projects to roads, including shoulder widening and straightening of curves. Modifications to vertical and horizontal alignments. Improvements at intersections and driveway encroachments, including constructing new turning lanes, adding signals, and lengthening existing turning lanes. Also, intersection level-of-service improvements, grade separations, and sound wall installations. Projects may improve access for pedestrians and cyclists.
- County and City maintenance of new and existing transportation facilities, including appurtenant drainage and water quality infrastructure.
- New roads constructed in association with urban or rural development (usually will be installed by the developer, and the County or City will assume ownership and maintenance).
- Metropolitan Transportation Plan 2035 and subsequent Metropolitan Transportation Plans (projects that are located in the Plan Area and under the jurisdiction of the Permittees).
- Other, yet-undesignated major regional transportation projects.
- Road Maintenance: All routine road maintenance activities by Permittees within Plan Area A and Permittee activities in Non-participating City Jurisdiction are Covered



Activities. Routine road maintenance work means work performed regularly (i.e., every 1 to 5 years) in the Plan Area. The County and City perform routine maintenance work to maintain the functional and structural integrity of their road facilities. Placer County Water Agency will perform routine maintenance on its facilities, including canal maintenance roads and roadway/parking lots associated with its facilities (see Section 2.6.5.1.4 of the Plan).

Certain covered transportation projects/activities are described in more detail in the Plan. See sections of the Plan referenced below for details about design, timing and estimated impacts of the following projects:

- Placer Parkway (South Placer Regional Transportation Authority): A new east–west roadway linking State Route 70/State Route 99 in Sutter County to State Route 65 in Placer County (see Section 2.6.5.1.1 of the Plan).
- I-80/State Route 65 Interchange Improvements (South Placer Regional Transportation Authority): A freeway-to-freeway interchange, which was constructed in 1985 and requires improvement. This is a Permittee activity in Non-participating City Jurisdiction (see Section 2.6.5.1.2 of the Plan).
- City of Lincoln Interchange Improvements: The City of Lincoln anticipates the construction of three interchanges along State Route 65 in Plan Area A, at the realigned Fiddyment Road and State Route 65, Nicolaus Road and State Route 65, and the realigned Wise Road and State Route 65 (See Section 2.6.5.1.3 of the Plan).

#### 2.2.5.2 Wastewater Programs

The County and City of Lincoln operate and maintain multiple wastewater treatment facilities, lift stations, and a network of collection and distribution pipelines for untreated wastewater, treated effluent for disposal, and reclaimed water for irrigation and other municipal purposes. The County is responsible for operation and maintenance of the sewer system in the Community of Sheridan. The County serves areas that include unincorporated portions of North Auburn, Granite Bay, Horseshoe Bar/Folsom Lake, Penryn, Loomis, western Placer County (Dry Creek), Livoti Tract, Sunset Industrial Area, and Sheridan.

The City’s waste management activities are mainly in the established urban area but will be extended to serve new urban growth, including growth in unincorporated areas covered by the Plan. The City will also provide treatment of wastewater for the North Auburn, Bowman, Applegate, Christian Valley, and portions of the unincorporated communities in Meadow Vista through the Mid-Western Placer Regional Sewer Project. The maintenance of this regional pipeline, pump stations, and related infrastructure is considered a Covered Activity.

The Plan will provide coverage for Permittee wastewater projects, including treatment plant construction or expansion (including installation of pipelines), operation and maintenance, effluent discharge, force main and effluent line construction and maintenance, discharge and reclamation line installation, and pump station construction.

Covered wastewater activities by Placer County may occur anywhere within Plan Area A or within Permittee Activity in Non-participating City Jurisdiction (see component B1 in Plan Figure 2-4). The wastewater projects currently planned are listed in Table 2-9A of the Plan.

Additionally, the Plan covers sewer pipeline operation and maintenance to prevent deterioration of infrastructure necessary for wastewater conveyance. The Placer County Environmental Engineering and Utilities Divisions operates and maintains five wastewater treatment facilities, 278 miles of pipe, and 42 lift stations in Placer County. For purposes of this Plan, routine maintenance work is defined as work performed regularly (i.e., every 1 to 5 years) to maintain the functional and structural integrity of facilities.

Maintenance activities will generally require trenching around existing pipelines and conducting repairs or replacing segments of pipeline. The pipelines are located in both urban and rural areas. For a list of the maintenance activities that are proposed for coverage under the Plan, see Section 2.6.5.2.1 of the Plan.

### 2.2.5.3 Water Supply Programs

Placer County Water Agency, the City of Lincoln, and Placer County (for the Sheridan community) will supply present and future water users in the Plan Area and portions of the non-participating cities as described in the sections below. The Conservation Plan covers the collection and conveyance of raw water from surface and groundwater sources to treatment plants or directly to consumers. In most cases, distribution of treated water does not require incidental take coverage. Two raw water suppliers in Placer County – Nevada Irrigation District and the South Sutter Irrigation District – are not Permittees but could apply for take coverage from the Placer Conservation Authority as a Participating Special Entity (see Section 2.4.15 below and Plan Section 8.9.4, *Take Authorization for Participating Covered Activities*).

### 2.2.5.4 Placer County Water Agency

Placer County Water Agency Covered Activities include operation and maintenance of its raw water distribution system, future capital improvement projects within the Plan Area, and future construction of Placer County Water Agency water supply facilities (e.g., new water supply, treatment and delivery infrastructure, operation and maintenance of new water supply, treatment, and delivery infrastructure). Covered Placer County Water Agency water supply activities may occur anywhere within Plan Area A and as a Permittee Activity in Non-participating City Jurisdiction (see component B1 of Plan Figure 2-4). Placer County Water Agency operation and maintenance of existing facilities is covered in Placer County Water Agency Zone 1 operation and maintenance (see component B2 in Plan Figure 2-4).

Placer County Water Agency planned capital projects for new surface and groundwater supply, treatment, storage, and delivery infrastructure over the term of the Plan are described in Table 2-9B of the Plan. These will include water supply projects, groundwater wells, transmission and distribution pipelines, metering station installations, water treatment and storage facilities, corporation yards, facilities and administration buildings, and pump stations. The largest of the

capital improvement projects would be the West Placer water supply projects. This includes the construction of water supply infrastructure components, including new or expanded diversions from the Sacramento and American Rivers, and new or expanded water treatment and pumping facilities, storage tanks, and major transmission and distribution pipelines.

The direct effects of operating the existing West Placer water supply projects are covered by existing biological opinions where necessary and therefore are not a Covered Activity of this Plan and are not assessed in this Biological Opinion. However, development projects and their associated water supply infrastructure within the Plan Area that will connect to existing water supply infrastructure are Covered Activities. Therefore, the growth-inducing effects in the Plan Area associated with expansion of the West Placer water supply projects are covered by the Plan.

Placer County Water Agency Covered Activities are described in Section 2.6.3.1 of the Plan, and more details about Placer County Water Agency maintenance are described in Plan Appendix E, *Placer County Water Agency Resource Management Plan*. Generally, Placer County Water Agency uses a variety of canals, pipelines, and other infrastructure to distribute water to its customers throughout Placer County. The majority of Placer County Water Agency's raw water distribution is facilitated by gravity flow through the canal system. Reservoirs provide flexibility in operations, allowing capture and storage of flow from portions of the upper system for release, as needed, to portions of the lower system.

Placer County Water Agency performs scheduled maintenance in the canal system as needed and cleans canals on an annual basis. Maintenance activities associated with canals include clearing debris and sediment, lining leaky canal sections, repairing damaged pipes and/or flumes, and controlling vegetative growth in the canals and on the canal berms. Incidental take from the use of pesticides, including herbicides and rodenticides, is not a Covered Activity. Other maintenance projects performed on an infrequent basis by Placer County Water Agency include sediment removal from reservoirs and dams as well as reservoir and canal berm maintenance related to damage by muskrats, beavers, and otters.

Additionally, the following are Placer County Water Agency operation and maintenance Covered Activities:

- Adjusting or replacing orifices at delivery points.
- Yearly water delivery outages.
- Delivery schedule changes and routine flow adjustments throughout the canal system through use of check boards, temporary weirs, valve controls, and debris removal.
- Seasonal release of excess water at designated outlet locations for flood management during storm events.

#### 2.2.5.5 Sheridan Public Water System

Operation and maintenance of Sheridan’s public water system, construction of a raw water transmission pipeline and related infrastructure, and the diversion of water will be Covered Activities. Sheridan’s water system consists of four public water wells (three for drinking water and one for fire protection), an 180,000-gallon storage tank, and a series of 4- and 6-inch distribution pipelines. As the Sheridan community grows, it may be necessary to construct a raw water transmission pipeline from either Bear River or Raccoon Creek to provide surface water for the Nader Road and Sheridan areas. The necessary capacity and resultant diversion from either of these surface water bodies will depend on the feasibility and need of the community in the Plan Area.

#### 2.2.5.6 City of Lincoln Water System

The City of Lincoln has partnered with Nevada Irrigation District to develop a water supply system for provisioning treated water to future customers within the City of Lincoln General Plan boundaries and the Nevada Irrigation District service district. The source of water for the proposed project is Lake Combie, with a pipeline proposed to connect at the Combie-Ophir turnout and carry raw water west to a reservoir and treatment plant to be located in the western portion of the Nevada Irrigation District service district. Covered Activities associated with this project include construction of approximately 16.3 miles of pipeline, raw water storage, and a water treatment plant as well as ongoing operation and maintenance of those facilities in Plan Area A.

#### 2.2.5.7 Solid Waste Management Facility Programs

Solid waste management facility programs include operation and maintenance and expansion of existing facilities, and construction of new facilities. Covered solid waste management facility program activities may occur anywhere within Plan Area A, and transfer stations built or operated by the County are Covered Activities in Non-participating City Jurisdiction (see component B1 of Plan Figure 2-4).

Post-closure maintenance activities and the future property use as open space, which may include public recreation (i.e., trails), agriculture, grazing, or other activities compatible with post-closure conditions that might be constructed in the future are also Covered Activities. Solid waste management projects listed in Table 2-9C of the Plan are expected to occur within the permit term of the Plan.

#### 2.2.5.8 Western Regional Sanitary Landfill

A variety of Covered Activities could take place on the existing Western Regional Sanitary Landfill facility property or on either of two adjacent properties as a result of expansion. The current landfill is expected to operate through 2058, and landfill expansion onto adjacent properties is anticipated to take place during the permit term. Covered Activities might include siting a new landfill; producing energy through landfill gasification, pyrolysis, anaerobic

digestion, or other waste-conversion technology; relocating the compost facility or recycling centers or other drop-off facilities; developing a solar array for on-site electricity demands; creating an alternative fuel and/or electric vehicle fueling station; providing pipeline compressed landfill gas/natural gas to third-party end users in and/or adjacent to the Sunset Industrial Area; or establishing a rail spur to establish off-site transport of recyclables and household hazardous waste. For more details about these activities and their location, see Section 2.6.5.4.1 of the Plan.

#### 2.2.5.9 Materials Recovery Facility

Ongoing operations, relocation, or construction of a new Materials Recovery Facility is a Covered Activity. The existing Materials Recovery Facility is an integral part of the landfill operation. It is an enclosed, warehouse-style facility where municipal solid waste is accepted and sorted into recyclables and waste that will be buried. For more details about this Covered Activity, see Section 2.6.5.4.2 of the Plan.

#### 2.2.5.10 The Loomis Landfill

The closed Loomis Landfill, owned and operated by Placer County Department of Public Works, is an unlined Class III landfill. Covered Activities at the landfill include implementation of the Loomis Closure Plan, adopted in 1996, that describes corrective actions, final closure, and post-closure maintenance activities (see Plan Section 2.6.5.4, *Solid Waste Management Facility Programs* for details). The minimum 30-year post-closure maintenance period will extend through 2028. The closure plan describes the post-closure land use of the site to be consistent with the surrounding terrain, land uses, and zoning. The site is planned to be maintained as open space, most likely as annual grassland, and may allow for recreation activities.

#### 2.2.5.11 Public Recreation-serving Activities

The establishment and maintenance of public recreation facilities by Plan Permittees are Covered Activities, although public use of the facilities is not. Covered Activities include construction of new parks, adaptation of existing public lands for enhanced recreational access, and operation and maintenance of these facilities. Many County and most City of Lincoln parks and trail facilities will be within, or close to, urban areas. Covered public parks and recreation-serving activities may occur anywhere within Plan Area A.

#### 2.2.5.12 New Parks

Covered Activities in County and City of Lincoln parks will include construction of trails, recreation facilities, and other park infrastructure, including restrooms, parking areas, maintenance facilities, restrooms, wildlife observation platform facilities, and educational kiosks. To the extent possible, recreational facilities will utilize existing infrastructure such as existing trails and fire or ranch roads.

The Auburn/Bowman, Dry Creek/West Placer, Granite Bay, and Horseshoe Bar/Penryn Community Plans, the Dry Creek Greenway Vision Plan, and the Placer County Regional

Bikeway Plans propose trail networks that will be constructed over time. As each of these plans and the Placer County General Plan are updated, trail alignments will be modified as conditions warrant. The existing Placer County Fairgrounds within the city of Roseville may relocate within western Placer County.

#### 2.2.5.13 Park and Trail Maintenance

County and City of Lincoln maintenance and management of park and open space areas in the Plan Area are Covered Activities. This includes trail and road maintenance, installation of fencing, facility maintenance, prescribed burns, pond maintenance (including draining and dredging), and invasive vegetation management. Vegetation management activities include the removal of exotic species, planting of native vegetation, and livestock grazing. Trail maintenance includes grading, clearing, brushing, erosion control, paving, re-paving, and trail restoration. If a park is to be included as part of the Plan's Reserve System, details for maintenance will be provided within a Reserve Management Plan (see Plan Section 5.3.2.1, *Reserve Management Plans*).

#### 2.2.5.14 Hidden Falls Regional Park

Hidden Falls Regional Park (Hidden Falls) is a 1,200-acre park located between north Auburn and the City of Lincoln. Expansion of park facilities will be included as a Covered Activity under the Plan (e.g., additional roads, trails, staging and parking area, maintenance and caretaker buildings, and a nature/education center). Trail connections to Placer Land Trust and Bear Yuba Land Trust properties are anticipated and will also be covered. The public's use of the parks is not a Covered Activity.

Hidden Falls currently features natural surface trails suitable for hiking, running, biking, and horseback riding. Other park amenities include a paved access road, 50-space paved parking lot, equestrian staging area, utilities, restrooms, a 60-foot emergency-access bridge over Deadman Creek, and a similar bridge over Raccoon Creek.

#### 2.2.5.15 Utility Line Construction and Facility Maintenance

Utility line construction and maintenance activities that are directly subject to the authority of a Permittee are Covered Activities within Plan Area A. Numerous pipelines and cables in the Plan Area are maintained by the Permittees or by public or private utilities, natural gas companies, petroleum companies, or telecommunications companies acting under Permittee authority, including franchise and encroachment within Permittee-owned roadway or other rights-of-way. These private companies also operate and maintain electric substations, gas valve stations, radio broadcasting towers, and cellular telephone towers, among other facilities.

A utility that is not directly subject to the authority of a Permittee may request coverage under the Plan for routine maintenance and repair of existing utilities within Plan Area A as a Participating Special Entity (see Plan Section 8.9.4, *Take Authorization for Participating Special Entities*). However, public and private utility activities that are regulated by or subject to the

authority of another entity such as the California Public Utilities Commission are not covered by the Plan.

Maintenance or repair of linear facilities may involve vegetation clearing (e.g., mowing, disking, tree trimming) or excavation of underground utility lines for inspection, maintenance, or replacement. These are all Covered Activities under the Plan; the use of pesticides are not. Requests for coverage for utility line or facility maintenance activities that take place in the Plan's Reserve System will be decided on a case-by-case basis and the Permittee may need to consult with state and federal regulatory agencies as needed.

#### 2.2.5.16 In-Stream Activities

This category of Covered Activity includes operation and maintenance activities in the stream channel, along the streambank, and on adjacent lands at top-of-bank within the riparian corridor. This category addresses projects that occur within streams (typically the top of the bank or the outer edge of the riparian canopy, whichever is more landward) and may result in effects on a stream, reservoir, or on-stream ponds. Covered in-stream activities may occur anywhere within Plan Area A.

In-stream activities that are covered under this Plan include the following:

- Urban and rural development and public program activities described above that overlap with the Stream System and the adjacent riparian corridor, including transportation, water supply, wastewater management, and stormwater management.
- Bridge construction, replacement, and repair, including vehicular, train, and pedestrian bridges (for details about these activities and their location, see Section 2.6.6.1 of the Plan).
- Flood control and stormwater management, including water retention/detention facilities construction, streambed and channel debris and vegetative control and removal, channel lining of canals, canal realignment, culvert replacement, maintenance of access roads, beaver dam removal, stormwater conveyance facilities and outfall structures, erosion/sediment control, bank stabilization, and floodplain enhancement (for details about these activities and their location, see Plan Section 2.6.6.2, *Flood Protection Projects* and for a list of planned projects see Table 2-9D in the Plan).
- Maintenance of existing flood protection and stormwater facilities such as drainage improvements, existing dams, armored creeks, bypass channels, and stormwater ponds. Maintenance includes trail repair, trash removal, installation of fences, accumulated sediment removal (primarily in reservoirs), road, culvert, and minor bridge repair.
- Natural resource protection such as bank stabilization projects, restoration to reduce erosion, and fish passage enhancements.

- Erosion control projects or storm damage prevention projects that do not create new permanent structures or hardscape on the creek bank or channel. This category includes temporary flood-fighting activities to prevent storm damage (e.g., temporary flood fighting would include sandbagging and earth-fill levees).
- Vegetation management for exotic species removal and native vegetation plantings, including the use of livestock grazing and prescribed burns.
- Reservoir fluctuations including drawdown and filling for maintenance or operational purposes (i.e., not associated with a capital project).
- In-stream gauge station monitoring (installation and maintenance).
- Operation and maintenance of water system facilities that are located in-stream.
- Implementation of Resource Management Plans.
- Water utility/water supply operation and maintenance activities associated with habitat enhancement and restoration that will be conducted inside and outside the Reserve System (see Plan Section 2.6.7, *Conservation Programs*).
- Implementation of the Riverine and Riparian Conservation and Management Strategies (see Plan Chapter 5, *Conservation Strategy*), including cleaning/removing sediment from gravel beds and augmenting gravel to streambeds, among other in-stream conservation activities.

### **2.2.6 Conservation Program**

This category of Covered Activity includes activities associated with implementing the Plan's Conservation Strategy. Most of these activities will take place within the Reserve System, but some, such as in-stream conservation measures, may occur outside of the Reserve System.

Conservation actions that are covered under this Plan include the following:

- Habitat management, enhancement, restoration, and creation and translocation of Covered Species consistent with the requirements of the Plan (see Plan Section 2.6.7.1.1, *Habitat Enhancement, Restoration, Creation, Translocation, and Reserve Management* for a list of activities in this category). Habitat management activities include vegetation management (i.e., grazing, invasive plant control, prescribed burning, etc.) consistent with the Plan. Use of pesticides for vegetation control or control of invasive species is not a Covered Activity.
- Research and monitoring of Covered Species, natural communities, and other resources within the Reserve System (See Plan Section 2.6.7.1.2, *Monitoring and Research*). These activities may require surveys for Covered Species that could disturb or capture Covered Species. Surveys for Covered Species will also be conducted on private land being considered for acquisition for the Plan. Research conducted in support of Plan implementation is covered as long as it has negligible



effects on populations of Covered Species, but research unrelated to Plan implementation is not covered.

- Fuel Management (see Plan Section 2.6.7.1.3, *Fuel Management*). The Reserve Management Plan (see Plan Section 5.3.2.1, *Reserve Management Plans*) for each unit of the Reserve System will have a fire management component that describes actions that will be taken to manage fuel loads. These actions will be Covered Activities under the Plan.
- Recreation (see Plan Section 2.6.7.1.4, *Recreation*). The development of recreational facilities within the Reserve System that meet the requirements in the Plan and that don't exceed the limits set by the Plan (see Plan Section 5.3.2.2.1, *Content of Reserve Unit Management Plans*, and Chapter 6, *Program Participation and Conditions on Covered Activities*, Reserve Management Conditions 1 through 3) will be Covered Activities. Recreational uses will only be allowed within the Reserve System if the Placer Conservation Authority determines that they are consistent with the biological goals and objectives of the Plan and are consistent with a reserve unit management plan approved by the Wildlife Agencies.
- Reserve System Infrastructure (see Plan Section 2.6.7.1.5, *Reserve System Infrastructure*) includes construction, maintenance, and use of facilities needed to manage the Reserve System. This could include maintenance of facilities such as roads, bridges, gates, maintenance yards, etc., conducted in compliance with the guidelines in Plan Chapter 5, *Conservation Strategy*, Plan Section 5.3.2.1, *Reserve Management Plans*, and conditions on Covered Activities described in Plan Chapter 6, *Program Participation and Conditions on Covered Activities*.
- Emergency Activities (see Plan Section 2.6.7.1.6, *Emergency Activities*). Emergency activities within the Reserve System include a variety of actions that may be implemented by the Permittees in response to disasters, national defense, casualties, or other security issues. Responses to changed circumstances within Reserve System lands that may affect populations of Covered Species are covered under this Plan.
- Placer County Conservation Program in-stream conservation activities (see Plan Section 2.6.7.2, *Placer County Conservation Program In-Stream Conservation Activities*). Conservation actions to improve in-stream systems may occur anywhere in either Plan Area A or B, and may occur either on public or private land. Specific Covered Activities performed to enhance and improve stream systems in the Plan Areas are described in the following sections.
- Stream barrier modification projects (see Plan Section 2.6.7.2.1, *Stream Barrier Modification Projects*). Dams and other in-stream barriers will be removed to improve fish passage into and within the Plan Area. There are several barriers to fish passage proposed for removal in the Plan. Some of the barriers proposed for removal are on private land and not under the control of the Permittees. If the Permittees do not have permission to remove the structures identified in Plan Section 2.6.7.2.1, then they will propose other structures for removal to the Wildlife Agencies.

- In-channel habitat improvement (see Plan Section 2.6.7.2.2, *In-Channel Habitat Improvement*). When opportunities exist, the Placer Conservation Authority will remove or modify in-channel features within and outside of the Reserve System to restore in-stream habitat in addition to the stream barrier removal described above. Potential restoration measures include removal of features such as riprap, dikes, and levees; the setting back and/or stabilization of creek banks; and the re-establishment of historical stream morphology. Additional activities include vegetation management and restoration, invasive species control, gravel augmentation and cleaning, and bank restoration and stabilization.
- Riparian restoration (see Plan Section 2.6.7.2.3, *Riparian Restoration*). The Placer Conservation Authority will restore 330 acres of riparian habitat, regardless of impacts, and up to an additional 876 acres if the maximum 375 acres of riparian land cover is converted. The restored riparian habitat will connect and expand existing riparian habitat. Restored riparian habitat will improve habitat quality for Covered Species, slow floodwaters, improve sediment deposition and bank formation, and reduce sediment loads streams.

### **2.2.7 Other Placer County Conservation Programs**

Placer County administers ongoing conservation and resource management programs that are separate from, but complementary to, the Placer County Conservation Program.

Environmental effects of these programs are covered by the Plan. The actions conducted by Placer County to implement the Placer Legacy Program, the Auburn Ravine/Raccoon Creek Ecosystem Restoration Program (Ecosystem Restoration Program), Dry Creek Coordinated Resource Management Plan (Coordinated Resource Management Plan), Pleasant Grove/Curry Creek Ecosystem Management Plan, and Dry Creek Greenway Vision Plan are similar to many of those that will be conducted by the Placer Conservation Authority to implement the Placer County Conservation Program conservation strategy (see Plan Section 2.4, *Permittees, Plans, Policies, and Programs*, for a description of Coordinated Resource Management Plans). These actions will occur primarily outside the Reserve System.

- Placer Legacy Program and Resource Management Plans (see Plan Section 2.6.7.3.1, *Placer Legacy Program and Resource Management Plans*). The Placer Legacy Program focuses on land preservation, stewardship programs, public education, and restoration and enhancement to meet the project goals and objectives. Conservation of agricultural lands occurs through fee title acquisition, conservation easements, and Williamson Act agreements. These actions complement the implementation of the biological goals and objectives of the Placer County Conservation Program. However, the Placer Legacy Program's restoration and enhancement actions will have environmental effects that are covered by the Plan. The Placer Legacy Program may also carry out activities such as creation of recreational trails and interpretive centers. These would also be Covered Activities as described in Section 2.2.5.13 above.
- Community Wildfire Protection Plan (see Plan Section 2.6.7.3.3, *Community Wildfire Protection Plan*). In 2012, Placer County undertook a regional planning effort to

identify areas at risk of wildfire, and to develop management strategies for communities. The Community Wildfire Protection Plan defines specific fire hazards in designated areas, assesses the communities at risk, and identifies and prioritizes specific projects to protect local communities. Any fuel management activities, which include the creation of firebreaks, and fuel treatment and restoration, conducted by the County on private or public lands would be considered a Covered Activity (private landowners clearing fuel on their own property is not covered).

- Resource Management Plans (see Plan Section 2.6.7.3.4, *Resource Management Plans*). The Plan integrates with three previously developed watershed management plans (the Dry Creek Coordinated Resource Management Plan, the Auburn Ravine/Markham Ravine/Raccoon Creek Ecosystem Management Plan, and the Pleasant Grove/Curry Creek Ecosystem Management Plan). These management plans were developed cooperatively with several different special-interest groups to address pollution, manage storm water, and restore and enhance Stream System habitats and surrounding uplands. The Placer Conservation Authority will use these restoration and resource management plans to help guide stream and riparian acquisition, enhancement, and restoration actions. Construction or restoration activities associated with implementation of these watershed management plans may have temporary effects, but overall these projects will provide a net benefit to Covered Species and natural and semi-natural communities by improving ecosystem integrity, resiliency, and connectivity.

## **2.3 Conservation Strategy**

The Plan's Conservation Strategy is fully described in Chapter 5 of the Plan. The Conservation Strategy will mitigate the impacts on Covered Species and their habitats, as well as contribute to the recovery of the Covered Species, as required pursuant to the State Natural Community Conservation Planning Act. The Conservation Strategy is based on landscape-level, natural community-level, and species-level biological goals and objectives (described in Section 5.2 of the Plan, and summarized below in Section 2.3.1), and on conservation measures that will be implemented to achieve the biological goals and objectives (described in Section 5.3 of the Plan and summarized below in Section 2.3.1).

The Plan's Conservation Strategy includes four main components: (1) establishment of a reserve system of interconnected blocks of land (Reserve System); (2) stream protection, enhancement, and avoidance; (3) wetland conservation and no overall net loss of wetland functions and services; and (4) avoidance and minimization measures.

### **2.3.1 Reserve System**

By the end of the 50-year permit term, an approximately 47,300-acre Reserve System will be established within the Plan Area (33,395 acres of which are for mitigation and 13,905 acres of which are attributable to conservation commitments related to the Natural Community Conservation Planning Act); see Plan Table 5-3 for acreages of natural communities and constituent habitats that will be preserved in the Reserve System. In addition, within the Reserve System the Placer Conservation Authority will restore at least 4,375 acres of natural

communities regardless of the amount of impacts from Covered Activities (independent of effects) to fulfill Natural Community Conservation Planning Act conservation commitments, and, because additional restoration of habitat will be implemented to mitigate for impacts from Covered Activities at certain ratios (dependent on effects), will restore up to 6,220 acres of natural communities if all allowable loss proposed under the Plan occurs (see Plan Table 5-4). These protected and restored lands will augment the approximately 16,000 acres of existing reserves and other protected areas in the Plan Area (see Plan Section 5.3.1.3.5, *The Role of Existing Protected Areas in the Conservation Strategy*). Cumulatively, 38 percent of the present natural and semi-natural landscape in Plan Area A would ultimately be subject to conservation management.

In order to minimize the effects of habitat fragmentation and to preserve habitat connectivity within the Plan Area, the Reserve System will mainly be located in the western and northern Valley and in the northern Foothills, away from future urban and suburban growth. In addition, the Reserve System will be distributed across the Plan Area in order to link and provide spatial diversity of protected communities. See Plan Section 5.3.1.3.2, *Conservation Zones* for a description of the five conservation zones considered in the Plan; the main geographical considerations are (1) division between Valley and Foothills, (2) division between North and South, (3) location of the Stream System drawn around Plan Area watercourses, and (4) the designation of the Reserve Acquisition Area. The resulting five Conservation Zones are Valley North Conservation Zone, Valley South Conservation Zone, Valley Potential Future Growth Area, Foothills North Conservation Zone, Foothills Potential Future Growth Area (See Plan Figure 5-1).

Table 5-3 of the Plan shows acreages to be protected within each Conservation Zone; note that there are flexible and non-flexible protection commitments and therefore the acreage ultimately preserved may differ from the estimates for respective conservation zones shown in Plan Table 5-3 as long as corresponding non-flexible protection commitments are achieved. Conservation that will occur in each of the conservation zones is summarized below.

Habitat protection in the Valley North Conservation Zone will include a minimum of 8,430 acres of vernal pool complex and include the majority of Valley aquatic/wetland complex in the Reserve System. Reserves in this zone will contribute to linkages with the Foothills along the Bear River and Raccoon Creek, maintain connectivity between the Valley North and Valley South conservation zones, and protect linkages along lower Raccoon Creek in Sutter County.

Habitat protection in the Valley South Conservation Zone will include a minimum 5,170 acres of vernal pool complex, and will most likely be the largest source of rice land acquisition. Reserves in Valley South will contribute to linkages along Auburn Ravine and Markham Ravine and between Pleasant Grove Creek and Curry Creek watersheds.

Up to 2,000 acres of the Reserve System may be located within the Potential Future Growth Area. The Valley Potential Future Growth Area includes approximately 2,350 acres of natural communities mapped in the Stream System as well as several thousand acres of vernal pool complex that are suitable for inclusion in the Reserve System along the western edge of the Valley Potential Future Growth Area, adjacent to the Reserve Acquisition Area.

The Foothills North Conservation Zone encompasses the entire Foothills Reserve Acquisition Area. At least 85 percent of protection of communities within the Foothills will occur in the Foothills North Conservation Zone, primarily for protection of oak woodland and the Bear River and Raccoon Creek stream systems. Habitat protection within the Foothills Potential Future Growth Area will include lands along Auburn Ravine and in the upper Doty Creek and Dry Creek watersheds and will provide east-west connectivity from the Foothills to the Valley.

### **2.3.2 Stream Protection, Enhancement, and Avoidance**

The Conservation Strategy will provide for the protection of the Stream System throughout Plan Area A, and in-stream enhancement actions will occur inside and outside of the Reserve System in Plan Areas A and B. The Stream System will contribute both to Covered Species' habitats and connectivity in the Reserve System.

### **2.3.3 Wetland Conservation and No Overall Net Loss of Wetland Functions and Services**

The Conservation Strategy will provide for no overall net loss of wetland functions by protecting, enhancing, restoring and creating wetlands through implementation of the conservation measures for the vernal pool complex, riverine/riparian complex, and aquatic/wetland complex natural communities. The Conservation Strategy provides for the protection of surrounding upland necessary to sustain the hydrological function of protected, restored, and created wetlands.

### **2.3.4 Avoidance and Minimization**

Covered Activities will avoid and minimize take by complying with general conditions that will apply to all Covered Activities, and specific conditions that apply to certain communities and species. The conditions are summarized in Section 2.3.6 below and described in full in Chapter 6, *Program Participation and Conditions on Covered Activities* of the Plan. Implementation of the Conservation Strategy will accomplish avoidance and minimization on a cumulative regional scale, while avoidance and minimization in the Potential Future Growth Areas will be focused only on specific resources.

### **2.3.5 Biological Goals and Objectives and Conservation Measures**

The Plan's Conservation Strategy is designed to achieve biological goals and objectives through the implementation of conservation measures. The hierarchal framework for Plan goals, objectives, and conservation measures is as follows:

- Goals are future desired states based on the conservation needs of Covered Species and natural communities.
- Objectives are measurable achievements or results that support the completion of a goal. They may include quantitative commitments, such as an amount of land to be protected and restored. They clearly state a desired result and will collectively achieve the biological goals.

- Conservation measures are implementable measures designed to achieve the biological goals and objectives. For the Plan, they consist of four broad conservation measures (See Section 5.3 of the Plan).

Biological goals are addressed at three levels:

- **Landscape.** Landscape-level conservation aims to acquire and manage large interconnected blocks of land in which optimal conditions for ecological sustainability can be maintained, including hydrologic function and land-cover diversity, while minimizing land use incompatibility (see Section 5.2.5 of the Plan for landscape-level goals and objectives and a rationale for each).
- **Community.** This level of conservation addresses natural and semi-natural communities primarily through the protection, management, enhancement, restoration, and creation of community types, particularly as habitat for Covered Species. The Reserve System will encompass viable units of the various natural and semi-natural communities (see Section 5.2.6 of the Plan for goals and objectives for natural communities and a rationale for each).
- **Species.** Covered Species may need protection for individuals and enhancement of populations and groups of populations. These needs may not be fully addressed at the landscape or community level and thus species-level goals, objectives, and conservation measures are also developed for some Covered Species (see Section 5.2.7 of the Plan for goals and objectives for Covered Species and a rationale for each).

Plan Section 5.3, *Conservation Measures*, describes the conservation measures the Placer Conservation Authority will implement to achieve the biological goals and objectives.

Plan Section 5.3.1, *Conservation Measure 1: Establish Reserve System*, describes the Plan's requirements for Reserve System assembly, including reserve design criteria and acre commitments for natural and semi-natural communities and Covered Species' habitats. This conservation measure includes the following:

- Section 5.3.1.2, *Tracking Progress toward Reserve System Assembly*, describes the Plan's commitment to track Reserve System assembly and ensure that conservation stays ahead of loss.
- Section 5.3.1.3, *Reserve System Components*, describes the roles of the Reserve Acquisition Area, the Reserve System in relation to the Reserve Acquisition Area, the Stream System, buffer zones, Plan Area B, and existing conservation lands that will contribute to the Reserve System.
- Section 5.3.1.4, *Landscape-level Reserve Design*, describes the acquisition-related conservation measures for meeting landscape-level biological goals and objectives.

- Section 5.3.1.5, *Natural Community–level Reserve Design*, describes acquisition requirements for meeting natural community–level biological goals and objectives. This includes guidance for acquisition needed to protect and restore/create natural communities.
- Section 5.3.1.6, *Species-level Reserve Design*, describes additional acquisition requirements for meeting species-level biological goals and objectives. This includes guidance for acquisition needed to protect and restore/create natural communities.

Plan Section 5.3.2, *Conservation Measure 2: Manage and Enhance the Reserve System*, describes the actions necessary to maintain and improve the ecological conditions of natural and semi-natural communities, Covered Species’ habitat on the Reserve System, and along streams outside the Reserve System. This conservation measure includes the following:

- Plan Section 5.3.2.1, *Reserve Unit Management Plans*, describes the process for development of reserve management plans and the required contents of management plans.
- Plan Section 5.3.2.2, *Landscape-level Management and Enhancement*, describes management and enhancement actions to be implemented at the landscape level, such as increasing permeability in the Reserve System.
- Plan Section 5.3.2.3, *Natural Community–level Management and Enhancement*, describes management and enhancement requirements and techniques for each natural community.
- Plan Section 5.3.2.4, *Species-level Management and Enhancement Measures*, describes management and enhancement to meet Covered Species’ needs that are not met through landscape- or natural community-specific measures.

Plan Section 5.3.3, *Conservation Measure 3: Restore and Create Natural Communities and Covered Species’ Habitat*, describes restoration and creation actions the Placer Conservation Authority will implement to increase the acres of natural communities and Covered Species’ habitat<sup>1</sup>. This conservation measure includes the following:

- Plan Section 5.3.3.2, *Timing of Restoration*, describes the timing of restoration/creation of habitat and establishes milestones for restoration/creation of natural community types and constituent habitat.
- Plan Section 5.3.3.2.1, *Site-level Restoration Plans*, describes requirements for restoration plans developed for individual restoration sites.

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<sup>1</sup> Restoration or creation as defined under the Plan will increase the area of the natural community or Covered Species’ habitat. Thus, the definition of restoration in the Plan differs somewhat from the definition used by the Corps (U.S. Army Corps of Engineers 2008), in that the Corps definition of restoration includes both *establishment* and *rehabilitation*. Under the Corps definition, rehabilitation does not involve an increase in aquatic resource area.

- Plan Section 5.3.3, *Natural Community-level Restoration/Creation*, describes specific restoration/creation methods, timing and other requirements (i.e., success criteria) for vernal pool and grassland, aquatic/wetland complex, riverine/riparian complex, and oak woodland natural communities, as well as species-specific restoration actions.

Plan Section 5.3.4, *Conservation Measure 4: Plan Area-wide Actions*, describes conservation measures that the Placer Conservation Authority will implement throughout Plan Area A, including outside the Reserve System. This conservation measure includes:

- Plan Section 5.3.4.1, *Landscape-level Plan Area-wide Actions*, describes Low Impact Development Standards that will be established and implemented in the Plan Area.
- Plan Section 5.3.4.2, *Natural Community-level Plan Area-wide Actions*, describes Plan-wide actions that will be taken for specific natural communities.

Table 5-8 of the Plan summarizes the Plan’s biological goals and objectives and applicable conservation measures (see Plan Table 5-1 for acronyms used in Table 5-8). For a full account of the biological goals and objectives as well as the rationale for each objective, refer to Section 5.2 of the Plan. Conservation measures in Section 5.3 of the Plan describe how the biological goals and objectives will be met.

### **2.3.6 Conditions on Covered Activities**

The Conditions on Covered Activities in Chapter 6 of the Plan describe measures that will apply to Covered Activities to achieve regional and site-specific avoidance, minimization, and mitigation of effects on natural communities and Covered Species. Not all conditions will apply to all activities. The process for determining which conditions apply is described in Plan Section 6.2, *Program Participation: Receiving Take Authorization under the Plan*.

#### **2.3.6.1 General Conditions**

The Plan includes five General Conditions that apply to all categories of Covered Activities. They are:

- *General Condition 1, Watershed Hydrology and Water Quality* describes conditions that will be implemented to minimize impacts to hydrology and water quality. See Plan Section 6.3.1.1 for a complete description of this Condition.
- *General Condition 2, Conservation Lands: Development Interface Design Requirements* describes design requirements for Covered Activities that occur in or adjacent to the Reserve System, existing reserves, mitigation sites or conservation banks. See Plan Section 6.3.1.2 for a complete description of this Condition.
- *General Condition 3, Land Conversion* describes the payment of fees and the tracking of impacts against take limits that will apply to Covered Activities that result in the permanent conversion of natural land cover. See Plan Section 6.3.1.3 for a complete description of this Condition.



- *General Condition 4, Temporary Effects* describes the payment of temporary effects fees and tracking of impacts against take limits that will apply to Covered Activities that result in temporary effects to natural land cover. It also describes standards that must be met in order to qualify as a temporary effect. See Plan Section 6.3.1.4 for a complete description of this Condition.
- *General Condition 5, Conduct Worker Training* describes training that will be provided to construction personnel about avoidance and minimization measures that must be applied during construction. See Plan Section 6.3.1.5 for a complete description of this Condition.

### 2.3.6.2 Natural Community Conditions

Based on their biological sensitivity and/or regulatory status, Covered Activities in the following natural communities have additional (i.e., in addition to the General Conditions described above) specific avoidance, minimization and mitigation requirements: vernal pool complex, aquatic/wetland complex, riverine/riparian complex, and valley oak woodland. Mitigation for take of these natural communities will involve off-site restoration overseen by the Placer Conservation Authority (funded through payment of special habitat fees; see Plan Chapter 9, *Costs and Funding*).

- *Community Condition 1, Wetland Avoidance and Minimization (Vernal Pool and Aquatic/Wetland Complex)* describes how avoidance of constituent habitat within the vernal pool complex and aquatic/wetland complex communities will be determined. It also describes how effects on aquatic/wetland complex constituent habitat that cannot be avoided will be minimized and, in cases where permanent effects on vernal pool constituent habitat occur, the process for allowing the Placer Conservation Authority to salvage vernal pool inoculum. See Plan Section 6.3.2.1 for a complete description of this Condition.
- *Community Condition 2, Riverine and Riparian Avoidance and Minimization* describes habitat avoidance and minimization focused specifically on the riverine and riparian complex community. This condition includes design requirements and construction Best Management Practices for Covered Activities in the Stream System, identifies Best Management Practices specific to Placer County Water Agency operations and maintenance activities, and describes habitat restoration required for impacts to riverine or riparian habitat. See Plan Section 6.3.2.2 for a complete description of this Condition. Note that this condition is in addition to *Stream System Condition 1, Stream System Avoidance and Minimization* described below and in Plan Section 6.3.3.
- *Community Condition 3, Valley Oak Woodland Avoidance, Minimization, and Mitigation* describes avoidance and mitigation requirements for impacts to valley oaks and valley oak woodlands. See Plan Section 6.3.2.3 for a complete description of this Condition.

### 2.3.6.3 Stream System Conditions

The Plan includes two conditions specific to the Stream System (see Plan Section 3.2.7, *Stream System*, Plan Table 3-4, and Plan Figure 3-8 for a description of how the Stream System is defined). The primary objective of Stream System Conditions is to protect watershed integrity (health and hydrology) by defining the extent of the Stream System and providing an incentive (in the form of a fee) to avoid land conversion within the Stream System boundary. Projects where effects on riparian and riverine constituent habitat are unavoidable must also comply with Community Condition 2, *Riverine and Riparian Avoidance and Minimization* described above.

- *Stream System Condition 1, Stream System Avoidance and Minimization* describes methods to avoid and minimize effects on the Stream System and therefore avoid paying fees described below in Stream System Condition 2, *Stream System Mitigation: Restoration*. See Plan Section 6.3.3.1 for a complete description of this Condition.
- *Stream System Condition 2, Stream System Mitigation: Restoration* describes the mitigation that will be required (in concert with Community Condition 2.3, *Riverine and Riparian Restoration*) for impacts to the Stream System. See Plan Section 6.3.3.2 for a complete description of this Condition.

### 2.3.6.4 Regional Public Project Programs

Conditions that will apply to activities in regional public programs (described above in Section 2.2.5 and in more detail in Plan Section 2.6.5, *Regional Public Programs*) include design and construction requirements to minimize the effects of regional public programs on wildlife movement, Covered Species, and their habitat. All such projects will also be subject to General Conditions and conditions on natural communities and Covered Species that apply. Projects that affect the Stream System are also subject to *Stream System Condition 1, Stream System Avoidance and Minimization*, and *Stream System Condition 2, Stream System Mitigation: Restoration*.

- *Regional Public Projects Condition 1, Transportation and Other Infrastructure Projects Design Requirements* describes design requirements for applicable public transportation projects located in the Reserve Acquisition Area to reduce the effects of barriers in potential conservation lands and minimize effects on Covered Species, natural communities, and wildlife movement. Plan Table 6-2 lists specific requirements for certain categories of projects and Plan Sections 6.3.4.1.4, *Design Guidance Measures*, and 6.3.4.2.1, *Construction Best Management Practices* describe the requirements in detail. Examples of design requirements include enhancing existing undercrossings, designating minimum sizing of culverts, and installing fencing to guide wildlife use of crossings. See Plan Section 6.3.4.1 for a complete description of this Condition.
- *Regional Public Projects Condition 2, Transportation and Other Infrastructure Projects Construction Best Management Practices* describes construction Best Management Practices for applicable transportation or other infrastructure projects

located in the rural portion of the Plan Area to reduce the effects of construction on natural communities and native species. This condition includes Best Management Practices for gravel road projects, roadside drainage, roadside construction, and post construction Best Management Practices. See Plan Section 6.3.4.2 for a complete description of this Condition.

- *Regional Public Projects Condition 3, Operation and Maintenance Best Management Practices* applies to operation and maintenance activities on public lands and on private lands where the activities are authorized pursuant to land use approvals granted by the Permittees and governed by conditions of approval. Operation and maintenance activities include utility line and facilities maintenance, public or private road maintenance, vegetation management, and mitigation monitoring. See Plan Section 6.3.4.3 for a complete description of this Condition.

### 2.3.6.5 Species Conditions

Conditions to minimize effects on Covered Species include measures that specify when surveys must be conducted, provide seasonal restrictions or spatial buffers to separate certain Covered Species from potential disturbance from Covered Activities, and sets forth the process for reporting survey results to Permittees to ensure that the appropriate Species Conditions will be incorporated into the conditions for the project's approval.

Surveys are required when certain land-cover types and other conditions are present on a project site. Plan Table 6-3 describes the locations and land-cover types that trigger species surveys and the survey period for required surveys. See Plan Section 6.3.5.4 of the Plan for exemptions to these requirements.

The following is a list of the Species Conditions in the Plan. See Plan Sections 6.3.5.6 through 6.3.5.15 for the content of each of these measures. Measures for species generally describe survey requirements, specific avoidance measures (i.e., buffer zones, seasonal avoidance, and other restrictions) that will be taken if surveys determine the species or certain habitat elements are present, and construction monitoring by a qualified biologist (see Plan Section 6.1.5 for the definition of qualified biologist) to ensure avoidance measures are implemented properly.

- Species Condition 1, Swainson's Hawk
- Species Condition 2, California Black Rail
- Species Condition 3, Western Burrowing Owl
- Species Condition 4, Tricolored Blackbird
- Species Condition 5, Giant Garter Snake
- Species Condition 6, California Red-legged Frog, Foothill Yellow-legged Frog, and Western Pond Turtle
- Species Condition 7, Central Valley Steelhead and Central Valley Fall-/Late Fall-run Chinook Salmon
- Species Condition 8, Valley Elderberry Longhorn Beetle
- Species Condition 9, Conservancy Fairy Shrimp
- Species Condition 10, Vernal Pool Fairy Shrimp and Vernal Pool Tadpole Shrimp

### 2.3.6.6 Reserve Management Conditions

Reserve management conditions establish requirements for public access and recreation on the Reserve System and describe incorporation of these requirements into reserve unit management plans (see Plan Section 5.3.2.1, *Reserve Unit Management Plans*).

- *Reserve Management Condition 1, Public Access and Recreation on Future Reserve Lands* describes the limited allowable recreational uses on future lands acquired for the Reserve System during Plan implementation, and the limited situations in which that use is allowed. This measure sets caps on the extent of new trails that may be constructed, limits the types of recreation that may be allowed, and sets standards for trail design and use. See Plan Section 6.3.6.1 for a complete description of this Condition.
- *Reserve Management Condition 2, Recreation Component of Reserve Unit Management Plans* describes what the recreation component of a reserve unit management plan will contain and the process for Placer Conservation Authority and Wildlife Agency approval if Permittees propose recreation activities in newly protected reserves. See Plan Section 6.3.6.2 for a complete description of this Condition.
- *Reserve Management Condition 3, Jump Start Lands* describes recreation that will be allowed on existing protected lands that may count towards Reserve System conservation commitments (see Plan Section 8.4.4, *Jump Start*). This measure describes how specific Jump Start Lands will be incorporated into the Reserve System, the process for determining allowable levels of recreation, and describing acreages of these properties that will not count towards the Reserve System because of recreational trails and usage. See Plan Section 6.3.6.3 for a complete description of this Condition.

### 2.3.7 Monitoring and Adaptive Management

Chapter 7 of the Plan describes the monitoring and adaptive management framework for the Conservation Plan; this framework will guide the development of a comprehensive monitoring program, which will be developed during the first 5 years of Plan implementation and as individual parcels are acquired as part of the Reserve System. The framework and the final monitoring program are intended to ensure compliance with Plan requirements, to assess the status of Covered Species and natural communities within the Reserve System, to evaluate the effects of management actions, and to assess whether the Plan's biological goals and objectives are being achieved.

Monitoring program objectives are stated in the Section 7.1.3 of the Plan, and include:

- Provide an organizational framework and decision-making process for evaluating monitoring, targeted studies, and other data to adjust management actions.

- Provide a process for incorporating monitoring, including targeted studies and new information, into management actions.
- Document the baseline condition of biological resources in the Reserve System and other key habitat (e.g., salmonid streams) outside of the Reserve System using existing data, modeling, and the results of field surveys.
- Improve understanding of biological resources in the Reserve System by incorporating results of field studies and pre- and post-acquisition surveys into existing data and modeling.
- Develop management-oriented conceptual models (Atkinson et al. 2004) that summarize understanding of and hypotheses about the structure and function of natural communities and factors that limit populations of Covered Species. Management-oriented conceptual models will be used to identify critical uncertainties, hypotheses, and assumptions; clarify likely responses to management actions (e.g., grazing, controlled burns) and environmental stressors (e.g., invasive competitors); identify variables to monitor and hypotheses to test; and design and change management practices.
- Incorporate hypothesis testing and experimental management into monitoring to address key uncertainties and to improve management and monitoring efforts.
- Develop and implement scientifically valid monitoring protocols at multiple levels to ensure that data collected will inform management and integrate with other monitoring efforts.
- Develop and implement accurate, reliable, feasible, and cost-effective monitoring protocols that produce data that can inform management efforts at multiple scales and that integrate with other monitoring efforts, and using accepted protocols when available.
- Ensure that monitoring data are collected, analyzed, stored, and organized so they are accessible to the Placer Conservation Authority, the Permittees, regulatory agencies, scientists, and, as appropriate, the public.

Plan Table 7-2 provides a summary and schedule of monitoring tasks that will be conducted throughout the permit term. Plan monitoring will also coordinate with other monitoring efforts in the Plan Area being conducted by other entities (see Plan Section 7.1.4.3, *Coordination with Other Programs*). Because some monitoring activities may require handling or disturbing Covered Species, take of Covered Species during monitoring activities is covered by the Plan if conditions listed in Plan Section 7.1.5, *Take Authorization during Monitoring* are met.

Plan Section 7.7, *Data and Reporting* lists reporting requirements for the monitoring program. Data on monitoring methods, results, and analysis must be managed, stored, and made available to Placer Conservation Authority staff, decision-makers, scientific advisors, Wildlife Agencies,

other interested government agencies, and other appropriate parties. A database and clear reporting procedure are also required for permit compliance.

#### 2.3.7.1 Adaptive Management

Adaptive management is a decision-making process that will be used during Plan implementation to adjust future management actions based on new information. Adaptive management is based on a flexible approach whereby actions can be adjusted as uncertainties become better understood or as conditions change (see Plan Figure 7-1). Integrating adaptive management and monitoring is critical to the successful implementation of the Conservation Strategy. Monitoring is the foundation of an adaptive approach, and adaptive management actions are developed, in part, from the results of monitoring. See Plan Section 7.1.2, *Adaptive Management* for a description of how adaptive management will be conducted under the Plan. Plan Section 7.6, *Adaptive Management Program Implementation* describes the elements and structure of the adaptive management program and lists the Placer Conservation Authority's responsibilities for executing the program.

Adaptive management by the Placer Conservation Authority will be advised by four groups: the Wildlife Agencies, Science Advisors, land managers, and the public. Wildlife Agencies will provide feedback to the Placer Conservation Authority regarding proposed changes to Plan implementation based on the results of monitoring and provide guidance on the biology and conservation of Covered Species. The primary forum in which these discussions will occur is the Interagency Working Group described in Plan Section 8.2.6.4, *Interagency Working Group*. The Science Advisors are an independent group of scientists retained by Placer County (see Plan Section 1.4.5, *Science Advisors*) that will be consulted by the Placer Conservation Authority regularly regarding Plan implementation. The Placer Conservation Authority will share information with other land management agencies (e.g., County Parks, State Parks) regarding resources and management across reserve boundaries and on a regional scale. Members of the public will be able to provide input to the Placer Conservation Authority regarding adaptive management during periodic (at least annual) public hearings and regular meetings of the public advisory committee, which will be open to the public.

#### 2.3.7.2 Levels of Monitoring

The monitoring framework includes a three-tiered approach that consists of landscape-, natural community-, and species-level monitoring. Landscape-level monitoring will collect large-scale information, such as changes in ecosystem processes and shifts in natural community distribution. Community-level monitoring will detect changes in the composition and function of natural communities, invasive species, and other important habitat factors for Covered Species. Species-level monitoring will measure the effects of management actions on Covered Species and track the distribution, status, and other information on Covered Species in the Reserve System and the Plan Area. Specific monitoring actions for each of these levels is summarized in Sections 2.3.7.6 through 2.3.7.8, below.

### 2.3.7.3 Types of Monitoring

The monitoring framework includes three main types of monitoring: compliance monitoring, effectiveness monitoring, and targeted studies.

Compliance monitoring (also known as implementation monitoring) will track the status of Plan implementation and document whether the requirements of the Plan are being met. Compliance monitoring verifies that the Permittees are carrying out the terms of the Plan, permits, and Implementation Agreement. The Placer Conservation Authority will track compliance monitoring and provide monitoring results to the Wildlife Agencies. See Plan Section 7.2.1.1, *Compliance Monitoring* for the components that will be tracked by compliance monitoring.

Effectiveness monitoring will assess whether implementation of the Conservation Strategy is achieving the Plan's biological goals and objectives and will evaluate whether the effects of implementing the Conservation Strategy are consistent with the assumptions and predictions made during development of the Conservation Strategy. Effectiveness monitoring will measure the effects of management actions on targeted communities and Covered Species, status and trends in resources, and status and trends of stressors to the biological resources. Effectiveness monitoring will include the development and assessment of success criteria for management actions. These criteria may include quantitative measures such as occupancy rates for vernal pool branchiopods, area of habitat suitable for Covered Species, etc. Quantifying these conditions before and after management will be the basis for judging success. Example success criteria for effectiveness monitoring are provided in Plan Table 7-1. Actual success criteria will be developed in the reserve unit management plans (see Plan Section 5.3.2.1.1, *Development of Reserve Unit Management Plans*) based on the communities and Covered Species (and their habitats) present, and the existing conditions of those communities and habitats. Plan Table 5-8 crosswalks each biological goal to its objectives, conservation measures, and monitoring actions. See Plan Section 7.2.1.2, *Effectiveness Monitoring* for a complete description.

Targeted studies may be needed to resolve critical uncertainties, the resolution of which is required to achieve the Plan's biological goals and objectives. Targeted studies will be implemented on an as-needed basis, when financial resources permit, and when uncertainties limit the ability of the Placer Conservation Authority to achieve the biological goals and objectives of the Plan. Pilot studies may also be needed if a proposed conservation measure is untested or if there is uncertainty about its effectiveness. For the purposes of the Plan, targeted studies that provide information about the effects of management actions are called *pilot projects* and targeted studies that address critical uncertainties are called *directed studies*. For a complete description of targeted studies under the Plan, see Plan Section 7.2.1.3, *Targeted Studies*.

### 2.3.7.4 Program Phases

The Plan's monitoring program includes two phases: inventory monitoring, and long-term monitoring and adaptive management. In general, activities in the inventory phase will occur during the first 5 years of Plan implementation, and thereafter on new parcels as the parcels are added to the Reserve System. The inventory phase will include documenting baseline conditions, initiating management and monitoring planning (a monitoring plan will be developed for each reserve unit management plan), refining management-oriented conceptual ecological models,

and implementing any necessary targeted studies. See Plan Section 7.2.2.1, *Inventory Phase* for a description of each of these elements of the inventory phase.

Activities in the long-term monitoring and adaptive management phase will begin on each site after the inventory phase is either complete or well under way. See Plan Section 7.2.2.2, *Long-term Monitoring and Adaptive Management Phase* for a list of tasks that will be accomplished by long-term monitoring and adaptive management. Because the Reserve System will be created over several decades, there will most likely be extensive overlap between activities in each phase during the first 10 to 20 years of Plan implementation (see Plan Figure 7-5, *Monitoring Program Phases*).

#### 2.3.7.5 Guidelines for Monitoring

Section 7.2.3 of the Plan provides guidance for the design of the monitoring program including principles and steps that should be incorporated into monitoring design. This section of the Plan also describes the use of indicators in monitoring and the use and development of Plan monitoring protocols, as well as guidance on sampling design and species models.

#### 2.3.7.6 Landscape-level Monitoring Actions

Landscape-level monitoring will be directed at tracking geographically large areas (e.g., the entire Reserve System or large portions of the Reserve System), landscape-scale processes, and regional issues that affect the Plan Area. Plan Section 7.3, *Landscape-level Monitoring Actions* summarizes the specific monitoring actions that the Placer Conservation Authority will carry out to track environmental issues at the landscape level and ensure that landscape-level goals and objectives are being met. The monitoring actions described in Plan Section 7.3 will facilitate monitoring the following:

- The amount of land-cover types in the Reserve System and Plan Area and their relationship to each other (e.g., succession or conversion from one community type to another, transitions zones between communities, degree of habitat fragmentation).
- Linkages, permeability, connectivity, and corridors.
- The amount and quality of land-cover types, natural communities, and other landscape features.
- Occurrences of invasive plant infestation, non-native wildlife species, and serious wildlife diseases in the Plan Area.
- The frequency, intensity, and geographic scope of disturbance events such as fires and floods.

The following landscape-level monitoring actions will be implemented. See relevant Plan sections for a full description of each action.

- Plan Section 7.3.1, *Assimilate Results of Pre-acquisition Assessments and Other Surveys* describes information on landscape features that will be collected through



pre-acquisition assessments. This includes biological surveys, updated land-cover mapping, assessments of habitat suitability for Covered Species, air photo interpretation, and the biological resources present or expected on site.

- Plan Section 7.3.2, *Monitor Land Cover in the Plan Area* describes how the Placer Conservation Authority will track all acres acquired within the Reserve System by land-cover type, constituent habitats and acres of enhancement/restoration, including in the Stream System. The Placer Conservation Authority will monitor land-cover types and habitat constituents in the Reserve System and throughout the Plan Area annually to track the amount of land-cover types, changes in land-cover types (and hence, natural communities), and changes in habitat constituents over the permit term, and the degree of fragmentation and connectivity in the landscape.
- Plan Section 7.3.3, *Assess and Monitor Landscape Linkages* describes how the Placer Conservation Authority will track the acquisition of lands that create movement corridors between Reserve System parcels (see Plan Goal L-2). In order to monitor landscape linkages (see Plan Objective L-2.1) the Placer Conservation Authority will use a combination of compliance monitoring (to ensure that land acquisition requirements are met) and effectiveness monitoring (to ensure that species utilize linkages effectively and that management actions to increase permeability or improve connectivity are successful).
- Plan Section 7.3.4, *Track Climate Change* describes how changes in temperature will be documented in the Plan Area during the permit term.
- Plan Section 7.3.5, *Track Invasive Species and Disease* describes how the Placer Conservation Authority will: track implementation and effectiveness of invasive plant control programs relative to success criteria (an invasive plant control program will be developed for all reserve units); monitor occurrences of invasive animals and management actions taken to control them; identify, monitor and report instances of disease in the Reserve System; monitor the effects of recreational use on biological resources in the Reserve System (protocols for evaluating the effects of recreational use will be developed during the inventory phase); and monitor disturbance events (i.e. events such as fire, drought, and flooding).

#### 2.3.7.7 Natural Community-level Monitoring Actions

Plan Section 7.4, *Natural Community-level Monitoring Actions* describes the following natural community-level monitoring actions that will be implemented across all natural communities. See relevant Plan sections for a full description of each action.

- Plan Section 7.4.1, *Develop Conceptual Ecological Models* describes the development of conceptual models that may be helpful for informing Reserve System management.
- Plan Section 7.4.2, *Enhance Natural Community Mapping* describes methods that will be used to ground truth natural communities and constituent habitat on lands

acquired for inclusion in the Reserve System. This will also include identifying ecosystem functions that will be monitored, and the assessment of natural community enhancement, restoration, and creation actions.

Plan Section 7.4.3, *Monitor Natural Communities* describes the specific monitoring actions the Placer Conservation Authority will carry out to track environmental issues at the natural-community level and ensure that natural community-level goals and objectives are being met. These actions are summarized below.

- Plan Section 7.4.3.1, *Vernal Pool Complex and Grasslands* describes how the Placer Conservation Authority will monitor the condition of vernal pool complexes and annual grasslands in the Reserve System, with a focus on identifying and monitoring habitat that support or have the potential to support Covered Species. This section details the methods the Placer Conservation Authority will use to monitor restored and created vernal pools to assess the success of restoration and creation of vernal pool constituent habitats. It also describes actions that will be taken to monitor the success of grassland restoration, the effects of water quality management actions, and management of vernal pool hydrology. In addition, effects to ground squirrel populations will be monitored (ground squirrels provide critical habitat elements for a number of Covered Species).
- Plan Section 7.4.3.2, *Aquatic/Wetlands* describes how the Placer Conservation Authority will monitor the status of key characteristics of the aquatic/wetlands natural community within the Reserve System. It lists tasks that may be used to help determine the baseline condition of aquatic/wetland communities on the Reserve System. It also details the methods the Placer Conservation Authority will use to evaluate the success of creation/restoration of fresh emergent marsh, lacustrine, and non-vernal pool seasonal wetland constituent wetlands and enhancement of wetlands and ponds.
- Plan Section 7.4.3.3, *Riverine and Riparian* describes how the Placer Conservation Authority will monitor the riverine and riparian characteristics within the Reserve System. It lists tasks that may be used to help determine the baseline condition of riverine and riparian communities. It also provides examples of monitoring activities that the Placer Conservation Authority will use to evaluate the success of riparian and riverine restoration and describes how stream enhancement projects will be monitored before restoration commences and after restoration is complete to assess effectiveness of the project (success criteria will be site specific and established in reserve unit management plans).
- Plan Section 7.4.3.4, *Oak Woodland* describes how the Placer Conservation Authority will monitor oak woodland characteristics within the Reserve System, with a focus on oak regeneration and disease. It lists tasks that may be used to help determine the baseline condition of oak woodland in order to help identify areas where recruitment appears to be limiting oak regeneration; to identify areas in need of fuels treatments; and to identify the most suitable techniques to manage wildfire fuels. It also lists tasks that may be used to evaluate effects of Foothill oak woodland restoration, oak

woodland enhancement, and Valley oak woodland restoration. Monitoring will track and document the effectiveness of these measures to promote regeneration and recruitment of representative species, manage vegetation and invasive plants in the understory, manage invasive animals, and manage fuel loads to reduce the chance of catastrophic fire at enhanced and restored sites in the Reserve System.

- Plan Section 7.4.3.5, *Agriculture and Other Open Space* describes how the Placer Conservation Authority will monitor the 2,000 acres of rice lands set aside for giant garter snake. Because the other agricultural lands incorporated into the Reserve System will not be maintained specifically as Covered Species' habitat (although they will provide open space value), and will not count toward Covered Species' habitat protection commitments, they will not be monitored for biological conditions.

#### 2.3.7.8 Species-level Monitoring Actions

Plan Section 7.5, *Species-level Monitoring Actions* describes species monitoring that will be implemented to ensure that species-level goals and objectives are being met. A summary of species-level monitoring actions is provided below. See relevant Plan sections for a full description of monitoring that will be conducted for each species. Also, see Plan Table 5-8 for a crosswalk of monitoring associated with species-level biological goals, objectives, and conservation measures for each species.

- Plan Section 7.5.1, *Swainson's Hawk*. Monitoring will include annual surveys that will be conducted to document and monitor success of Swainson's hawk nests in the Reserve System. This monitoring will be used to evaluate whether objective SWHA 1-1 has been fulfilled.
- Plan Section 7.5.2, *California Black Rail*. The Placer Conservation Authority will survey for rail occupancy on the Reserve System, monitor the success of habitat restoration and creation, evaluate the response of rails to restored/created habitat, and monitor potential threats to the black rail on the Reserve System. Occupancy surveys will be completed prior to and after habitat acquisition, and will be used to evaluate if objective BLRA-1.1 has been fulfilled.
- Plan Section 7.5.3, *Western Burrowing Owl*. Monitoring will include winter and breeding surveys to document the occurrence of overwintering and/or breeding burrowing owls within the Reserve System. Natural community-level monitoring in grasslands and suitable agricultural lands will include presence/absence surveys for burrows. Monitoring for burrowing owls will also document the species' response to the creation of burrows, and will monitor artificial burrows if installed on reserve lands. Potential threats to burrowing owls will be monitored.
- Plan Section 7.5.4, *Tricolored Blackbird*. Monitoring will include surveys to document the presence of nesting tricolored blackbird colonies on the Reserve System, and the use of foraging habitat by tricolored blackbirds to inform enhancement and restoration measures. Nest colony location and size will be monitored for colonies on reserve lands. Enhanced or restored wetlands and suitable

created ponds will be monitored to document species response (i.e., colonization by a colony or change in colony size). Potential threats to tricolored blackbirds will be monitored. Surveys of tricolored blackbird nesting colonies on the Reserve System will be used to evaluate whether objective TRBL-1.3 is met.

- Plan Section 7.5.5, *Giant Garter Snake*. Monitoring will include identifying suitable habitat for giant garter snake during acquisition surveys on parcels in the western portion of the Plan Area (see Plan Figure 5-3 and Plan Section 5.3.1.6.5, *Giant Garter Snake*). The Placer Conservation Authority will survey for presence of giant garter snakes in suitable habitat identified in these areas. The Placer Conservation Authority will also monitor restored aquatic and upland habitat for giant garter snake presence, and will monitor for potential threats to giant garter snake such as non-native predators and competitors.
- Plan Section 7.5.6, *Western Pond Turtle*. Monitoring will include surveys of western pond turtle habitat on the Reserve System, including habitat elements such as basking sites. Surveys will also be conducted to document whether turtles are present (i.e., occupancy), to guide long-term monitoring, and to prioritize management actions. Restored aquatic and upland habitat for western pond turtle will be monitored to document species response (i.e., colonization of an area by pond turtles or changes in the average number of individuals in occupied habitat). Potential threats to western pond turtles will be monitored.
- Plan Section 7.5.7, *Foothill Yellow-legged Frog*. Monitoring will include surveys for yellow-legged frog in potentially suitable habitat in the Reserve System. The Placer Conservation Authority will monitor the response of foothill yellow-legged frogs to restoration and creation of riparian habitat using visual surveys to assess the presence of individuals. Potential threats to foothill yellow-legged frogs will be monitored.
- Plan Section 7.5.8, *California Red-legged Frog*. Monitoring will identify suitable habitat for California red-legged frog (includes ponds, fresh emergent marsh, seasonal wetlands, riverine/riparian, and wetland land-cover types and constituent habitats in the eastern Foothills) during acquisition surveys. The Placer Conservation Authority will survey for presence of California red-legged frog in suitable habitat, monitor the response of California red-legged frogs to aquatic habitat restoration, and monitor potential threats to California red-legged frogs in the Reserve System.
- Plan Section 7.5.9, *Salmonids: Central Valley Steelhead and Central Valley Fall-/Late Fall-run Chinook Salmon*. Monitoring will include surveys in streams within the Reserve System, and in Bear River, Raccoon Creek, Auburn Ravine, and Dry Creek watersheds to document status of these fish. Surveys of habitat condition will be conducted on new reserves acquired into the Reserve System. The Placer Conservation Authority will monitor the response of covered fish species to aquatic habitat restoration and monitor potential threats to these species in the Reserve System.

- Plan Section 7.5.10, *Valley Elderberry Longhorn Beetle*. Monitoring for valley elderberry longhorn beetle will include documenting the occurrences of host elderberry plants (*Sambucus* sp.) on new reserves acquired into the Reserve System. At each reserve where suitable elderberry shrubs occur, the Placer Conservation Authority will survey for valley elderberry longhorn beetle to determine presence at the site. The Placer Conservation Authority will also monitor the response of valley elderberry longhorn beetle populations to habitat restoration. Potential threats to valley elderberry longhorn beetle, especially the effects of Argentine ants, will be monitored.
- Plan Section 7.5.11, *Vernal Pool Branchiopods*. There will be extensive monitoring for vernal pool branchiopods within vernal pool constituent habitat to assess whether Plan objectives to maintain an occupancy rate of vernal pool fairy shrimp and vernal pool tadpole shrimp on the Reserve System that is equal to or greater than that of vernal pools that will be lost, are achieved (see objectives VPB-1.1 and VPB-1.2 and Plan Table 5-8). Monitoring will include two phases: an Initial Survey Phase and an Occupancy Phase. The Initial Survey Phase is the period of time during which data will be collected to establish Occupancy Rate Standards (the target occupancy rates for vernal pool fairy shrimp and vernal pool tadpole shrimp on the Reserve System). Both an area-based and a pool-based Occupancy Rate Standard will be developed. The Occupancy Phase is the period of time from the end of the Initial Survey Phase to the end of the permit term. After the Occupancy Rate Standards are set for both species, monitoring will be conducted within the Reserve System to determine whether vernal pools in the Reserve System meet this occupancy rate on a long-term basis. See Plan Section 7.5.11.1.1, *Vernal Pool Fairy Shrimp and Vernal Pool Tadpole Shrimp* and Plan Section 5.3.1.6.10, *Vernal Pool Branchiopods*, for details on Occupancy Rate Standards, the Initial Survey Phase, and the Occupancy Phase. These sections define each of these elements, describe how Occupancy Rate Standards will be set, and provide detailed methods that will be used for each monitoring phase.

A different monitoring approach will be taken for Conservancy fairy shrimp. Surveys for Conservancy fairy shrimp in habitat to be impacted will be limited to habitat within the two watersheds where the species may occur; if impacts to occupied Conservancy fairy shrimp habitat occur, monitoring will be required on reserve lands to ensure that at least three occurrences of Conservancy fairy shrimp are protected for each occurrence taken as a result of Covered Activities.

The Placer Conservation Authority will monitor vernal pool branchiopod occupancy in vernal pool habitat on the Reserve System before and after enhancement actions in order to adaptively improve management. In cases where vernal pool branchiopod cysts are translocated to restored or created vernal pools, the Placer Conservation Authority will monitor restored and created pools for vernal pool fairy shrimp and vernal pool tadpole shrimp annually for at least 15 years after translocation. Plan Section 7.5.11.3, *Evaluate Species' Response to Vernal Pool Restoration/Creation* describes how results of these surveys will be incorporated into calculations of

occupancy rates. Targeted studies will be conducted as needed. Potential threats to vernal pool branchiopods will also be monitored.

## **2.4 Implementation**

Chapter 8 of the Plan describes how Plan implementation will be coordinated with implementation of the CARP and In-lieu Fee Program as part of the overall Placer County Conservation Program. The chapter also describes implementation structure and policies, approval processes, how the Reserve System will be assembled and managed, and the roles and responsibilities of the Permittees and state and federal agencies. These elements are summarized below; see Plan Chapter 8 for a complete description.

### **2.4.1 Coordinated Implementation of the Placer County Conservation Program**

Implementation of the Conservation Plan, CARP, and In-lieu Fee Program will be coordinated in several ways, including the following:

- **Funding.** Payment of Western Placer County Habitat Conservation Plan/Natural Community Conservation Plan fee(s) (see summary of fees in Section 2.8 below and in Plan Section 9.4.1) will satisfy the requirements of both the Plan and the CARP. For example, if a Covered Activity affects vernal pool wetlands, mitigation requirements will include payment of a fee to fund one set of compensatory mitigation actions that would fulfill both Plan and CARP requirements. Funding management and oversight will also be coordinated.
- **Avoidance and Minimization.** Conservation Plan and CARP avoidance and minimization requirements will be consistent. For example, avoidance areas and buffer distances for aquatic resources under both the Conservation Plan and the CARP will be consistent.
- **Land Acquisitions.** Lands acquired for the Reserve System to fulfill land acquisition commitments in the Conservation Plan may also be used as sites for aquatic resource mitigation projects for the In-lieu Fee Program.
- **Land Management and Enhancement.** Reserve System management and enhancement under the Plan will also provide management for aquatic resource mitigation sites for purposes of the In-lieu Fee Program.
- **Wetland Creation and Restoration.** Wetlands restored or created to fulfill restoration and creation commitments in the Plan will also create wetland mitigation “credits” under the In-lieu Fee Program.

Implementation of the Placer County Conservation Program will also require coordination between Permittees and state and federal agencies including:

- **Funding.** The Wildlife Agencies, Corps, and the Central Valley Regional Water Quality Control Board will coordinate oversight of the Placer Conservation

Authority's management and expenditure of funding for Plan implementation and In-lieu Fee Program implementation.

- **Avoidance and Minimization.** The Placer Conservation Authority, the County, the City, the Wildlife Agencies, the Corps, and the Central Valley Regional Water Quality Control Board will coordinate on providing guidance to project proponents regarding Plan, CARP, and Section 404 avoidance and minimization requirements, (e.g., to ensure that guidance regarding required avoidance areas and buffer distances for Covered Activities is consistent for the Plan, the CARP, and Section 404 permit requirements).

#### 2.4.1.1 Land Acquisitions

The Wildlife Agencies and the Corps will coordinate on approvals of Reserve System lands that will also be used for aquatic resource enhancement, restoration or creation for the In-lieu Fee Program.

- **Land Management and Enhancements.** The Wildlife Agencies and the Corps will cooperate on approvals of management plans for Reserve System lands that will be also be used for aquatic resource enhancement, restoration or creation for the In-lieu Fee Program. The review of draft management plans by the Wildlife Agencies and the Corps will be coordinated to ensure that management actions meet all relevant regulatory requirements but are consistent.
- **Wetland Creation and Restoration.** The approval of the Wildlife Agencies and the Corps is required for proposed wetland enhancement, restoration, or creation projects. The Wildlife Agencies and the Corps will coordinate on review of restoration/mitigation project proposals.
- **Interagency Review Team.** A group consisting of the Wildlife Agencies, the Corps, U.S. Environmental Protection Agency, and the Central Valley Regional water Quality Control Board, will provide coordinated and consistent guidance and input to the Permittees regarding implementation of the Plan and In-lieu Fee Program, and the use of In-lieu Fee Program credits for Covered Activities.

#### 2.4.2 Implementation Structure

Upon issuance of the incidental take permits each Permittee would be provided authorization for take that results from Covered Activities that they implement. The County and the City would also be able to extend take authorization for take resulting from Covered Activities under their jurisdiction (see Plan Chapter 2, *Covered Activities*). The County and the City will be responsible for confirming that such activities are eligible for coverage under the permits and for determining that each application for coverage under the Plan is complete (see Plan Section 6.2, *Program Participation: Receiving Take Authorization under the Plan*). The County and the City may extend take authorization, along with other local approvals and entitlements, for eligible activities that meet all applicable requirements of the permits, the Plan, and the Implementing Agreement. The County and City will report relevant information about such activities to the

Placer Conservation Authority to allow the Placer Conservation Authority to track impacts, compliance monitoring, and other requirements. The Placer County Water Agency and South Placer Regional Transportation Authority will also report information about Covered Activities they conduct to the Placer Conservation Authority to allow for tracking.

An Implementing Agreement among the Permittees and the Wildlife Agencies has been prepared for the Plan (Plan Appendix B, *Implementing Agreement*) to satisfy the requirements of the NCCP Act. The Implementing Agreement specifies the responsibilities of each Plan participant and various other provisions agreed to by the Plan participants. The Implementing Agreement cannot alter the terms of the incidental take permit.

See Plan Sections 8.2.2 through 8.2.8 and Plan Figure 8-1 for a description of the structure, relationships, roles, and responsibilities of entities that will participate in Plan implementation. See Plan Section 8.3, *Responsibilities of the Placer Conservation Authority* for a description of the Placer Conservation Authority's responsibilities.

### **2.4.3 Establishing the Reserve System**

The Placer Conservation Authority will be responsible for establishing the Reserve System as described in Plan Section 8.4, and will ensure that reserve lands meet the all criteria listed in Plan Section 8.4. In order to be counted toward the Plan's land acquisition commitments, lands must meet all applicable criteria described in Plan Section 8.4, must be included in a Reserve Unit Management Plan (see Plan Section 5.3.2.1, *Reserve Unit Management Plans*), and must be included in the Monitoring and Adaptive Management Plan. Acquisitions may be counted toward meeting the land acquisition commitments of the Plan before the Reserve Unit Management Plan has been completed if the Placer Conservation Authority owns the land, or if the property owner is bound by a conservation easement that requires preparation of a management plan consistent with the requirements of the Plan.

Plan Sections 8.4.1.1 through 8.4.1.3 describe additional criteria that must be met for reserve system lands in the Potential Future Growth Area, vernal pool complex lands, and lands acquired for vernal pool restoration and creation. See Plan Section 8.4.10 for a description of grazing leases within the Reserve System. Plan Section 8.4.11 describes how Reserve Lands will only be purchased from willing sellers, and Plan Section 8.4.1.2 address how gifts of land may contribute to the Reserve System.

### **2.4.4 Process for Acquiring Lands**

Section 8.4.2 of the Plan describes the following steps that must be taken for acquiring lands for the Reserve System; all steps must be taken for each acquisition. Plan Figure 8.2 illustrates these steps. The process for land acquisitions include: site identification (Step 1); pre-acquisition assessment (Step 2); site prioritization (Step 3); Wildlife Agency concurrence (Step 4); appraisal (Step 5); purchase offer, which includes a due diligence review of property encumbrances (Step 6); facilities assessment and site preparation (Step 7); and a reserve unit management plan (Step 8).

The Placer Conservation Authority may partner with other groups and provide matching funds for land acquisitions to purchase larger parcels than would be possible without the partnerships.



The Placer Conservation Authority will determine, subject to Wildlife Agency approval, the extent to which such acquisitions can be counted toward Plan commitments based on the purpose and location of the acquisition, the management of the land acquired, the proportional fair share acreage and function of the property acquired through Plan funding, and consistency with the goals and objectives of the Plan.

#### **2.4.5 Stay Ahead Provision**

Progress toward assembling the Reserve System must stay ahead of take allowed under the permits. See Plan Section 8.4.3, *Stay Ahead Provision* for a complete description of this requirement. The Stay Ahead provision will minimize the temporal loss of habitat. To measure compliance with the Stay Ahead provision, land-cover types will be aggregated by natural and semi-natural communities. The amount of each natural community conserved, restored, or created as a proportion of the total requirement by natural community must be equal to or greater than the impact on the natural community as a proportion of the total impact expected by all Covered Activities. Compliance with the Stay Ahead provision for habitat restoration or creation commitments will be tracked separately from land acquisition. Compliance with the Stay Ahead provision and overall crediting for habitat restoration or creation commitments will be measured and counted at the point when construction of the restoration or creation is completed.

To allow time for start-up tasks to occur, the Stay Ahead provision will not apply during the first 2 years of Plan implementation (i.e., during the first 2 years after the last local implementing ordinance takes effect). To provide flexibility during implementation, the Placer Conservation Authority may fall behind its Reserve System assembly requirement for each natural community or semi-natural community by a maximum of 10 percent for a period of three years without violating the Stay Ahead provision. The Placer Conservation Authority will not allow a deficit of any size in any land acquisition or restoration commitment to persist after the end of three consecutive years. The Placer Conservation Authority will monitor the status of the Stay Ahead provision throughout Plan implementation and will report the status of the Stay Ahead provision in each annual report, beginning with the third annual report. Plan Sections 8.4.3.6 and 8.4.3.7 address measures that will be taken if the Stay Ahead provision is not fulfilled.

Land acquired in full or in part by state or federal agencies to assist species recovery under the Plan (see Plan Section 8.4.3.4) may be counted toward compliance with the Stay Ahead provision. The Plan assumes some funding by the state and federal governments will be available to implement a portion of the Conservation Strategy. However, state and federal funding, including but not limited to Section 6 grants, cannot be used to fulfill mitigation requirements of the Plan.

#### **2.4.6 Jump Start**

Lands listed in Plan Table 8-1 that have already been acquired during Placer County Conservation Program development may be counted toward Plan acquisition commitments, and counted as “jump start” lands. If these jump start lands do not meet requirements for inclusion in the Reserve System, the Placer Conservation Authority may expend funds to augment management of these lands to meet the Plan requirements.

#### **2.4.7 Advance Acquisition of Vernal Pool Complex Lands**

Within 2 years of local implementing ordinances for the Plan being adopted, the Placer Conservation Authority will acquire vernal pool complex lands containing a minimum of 160 acres of vernal pool constituent habitats, of which at least 53 acres will be delineated as vernal pools. The advance acquisition of these vernal pool complex lands will be subject to Wildlife Agency review and approval, and must meet the criteria for Reserve System lands in Section 8.4.1, *Criteria for Reserve System Lands*. With the exception of the Bradley property, the jump-start lands listed in Plan Table 8-1 do not contribute towards meeting the advance acquisition. No more than 1,800 acres of vernal pool complex and 80 wetted acres of vernal pool constituent habitats (15 percent of the total allowed effects) will be authorized for take under the Plan until this advance acquisition goal is met.

The advanced acquisition requirement is designed to ensure that more high-quality vernal pools and vernal pool complex lands are protected than taken (especially early in the permit term), that the Placer Conservation Authority will exceed the Stay Ahead requirement early in the permit term for vernal pool complex, and that occupied vernal pool complexes are protected early in the permit term. Protecting high-quality vernal pools occupied by covered branchiopods early in the permit term will minimize temporal loss of habitat and help ensure that the Stay Ahead requirement will be met throughout the permit term.

#### **2.4.8 Private Mitigation and Conservation Banks**

Credits purchased from existing or future mitigation and conservation banks within the Plan Area can count toward Plan protection and restoration commitments if the banks are consistent with all of the relevant standards in Chapter 5, *Conservation Strategy*, and Chapter 7, *Monitoring and Adaptive Management Program*. If the Placer Conservation Authority concludes that a bank is consistent with Plan standards, it will provide a written summary of its review and conclusion to the Wildlife Agencies. The Placer Conservation Authority will also provide information on how bank credits will count towards specific Plan commitments. If the Wildlife Agencies concur with the Placer Conservation Authority, credits at the bank may be purchased to meet Plan land acquisition and restoration commitments as specified by the Placer Conservation Authority. Thereafter, the Placer Conservation Authority may purchase credits at the bank to meet applicable Plan commitments, and proponents of Covered Activities may purchase credits at the bank to fulfill applicable Plan conditions on Covered Activities. See Plan Section 8.4.7, *Private Mitigation and Conservation Banks* for a complete description of this process.

#### **2.4.9 Mitigation for Activities not Covered Under the Plan**

Proponents of projects in or near the Plan Area that are not covered by the Plan, but that affect Covered Species, may be interested in using the Plan as a vehicle to implement mitigation for the impacts of their projects. Some non-covered project proponents may also be interested in contributing land to the Plan to fulfill their mitigation requirements. Using the Plan's Conservation Strategy to guide mitigation for activities not covered under the plan will help ensure compatibility with the Plan and potentially achieve greater conservation benefits.

If land acquisitions used to fulfill mitigation requirements for non-covered projects occur within the Plan Area, such lands may, in limited situations and with Wildlife Agency approval, be added to the Reserve System and counted toward the conservation component (but not the mitigation component) of the Plan's land acquisition commitments (see Section 9.4, *Funding Sources and Assurances*). In order to count towards Plan commitments, the criteria listed in Plan Section 8.4.8 must be met.

#### **2.4.10 Conservation Easements**

To be incorporated into the Reserve System and counted toward Plan land acquisition commitments, all lands must be permanently protected by a conservation easement consistent with the requirements described in Plan Section 8.4.9, *Conservation Easements*. For lands owned by the Placer Conservation Authority or a Permittee, permanent protection must be ensured through a conservation easement granted to a Wildlife Agency or an appropriate third-party easement holder approved by the Wildlife Agencies. The Placer Conservation Authority will use the template conservation easements in Plan Appendix K, *Conservation and Agriculture Easement Templates* for Reserve System lands. The Placer Conservation Authority will follow these template conservation easements as closely as possible. However, reasonable variations from the templates may be proposed to address site-specific conditions and circumstances. In addition, for agricultural lands added to the Reserve System as described in Plan Section 8.4.9.3.2, *Cultivated Agricultural Lands and Irrigated Pasture Lands*, the Placer Conservation Authority may be required to use other forms of agricultural conservation easements approved by state or federal agencies. The Placer Conservation Authority and the Wildlife Agencies must review and approve any variations from the easement templates, and all baseline documentation reports prepared for such conservation easements.

The guidelines that all conservation easements acquired to meet Plan land acquisition requirements must adhere to are detailed in Plan Section 8.4.9.1, *General Guidelines*. Plan Section 8.4.9.2, *Prohibited Uses* lists activities that each conservation easement will prohibit except as necessary to maintain or enhance conservation values as described in the Reserve Unit Management Plan, or in the portions of the property designated for incompatible activities.

Activities that would otherwise be prohibited by a habitat conservation easement may be allowed in conservation easements on agricultural lands, if the activities directly support an allowable existing agricultural operation. See Plan Section 8.4.9.3, *Conservation Easements on Agricultural Lands Activities* for a complete description.

#### **2.4.11 Land Dedication in Lieu of Land Conversion Fee**

Land may be provided in lieu of all or a part of the land conversion fee (see Plan Section 8.4.13) if it meets all of the conditions listed below.

- The land meets the criteria for Reserve System Lands in Plan Section 8.4.1, *Criteria for Reserve System Lands*.
- Adding the lands to the Reserve System will mitigate the effects on Covered Species from the Covered Activity for which the dedication is offered.

- The transaction is approved by the Placer Conservation Authority and the Wildlife Agencies.
- The Placer Conservation Authority and the project proponent enter into a land dedication agreement (see Plan Section 8.4.13.4, *Land Dedication Agreement*).

The process for submitting land in lieu of fee proposals, calculating fee reductions, and development of a land dedication agreement is provided in Plan Section 8.4.13, *Land Dedication in Lieu of Conservation Fee*.

#### **2.4.12 Management and Enhancement of the Reserve System**

The Placer Conservation Authority will direct the management and enhancement of land acquired for the Reserve System; management measures will include such things as regular patrol, trash removal, fence/gate installation and repair, road maintenance, and other necessary activities. Some management and enhancement measures will be performed by the County and City. For example, Placer County Parks Division would be responsible for maintaining all County parks that are part of the Reserve System, including Hidden Falls Regional Park. The Placer Conservation Authority will coordinate with the County, City, and other local agencies to implement some management or enhancement measures that it cannot perform itself or would perform less efficiently. The Placer Conservation Authority may also contract with a third-party agency or organization to conduct management activities within the Reserve System on the Placer Conservation Authority's behalf.

The Placer Conservation Authority will be responsible for developing system-wide management plans for the Reserve System, as well as Reserve Unit Management Plans for all units of the Reserve System to guide site-specific management (see Plan Section 5.3.2.1, *Reserve Unit Management Plans*). The Placer Conservation Authority will also be responsible for interim management of acquired lands prior to completion of these Reserve Unit Management Plans. Plan Section 8.5.1 *Reserve Unit Management Plans* provides details regarding the development of these plans.

#### **2.4.13 Restoration and Creation of Natural Communities and Covered Species Habitat**

The Placer Conservation Authority will be responsible for natural community-level restoration and creation actions (see Plan Section 5.3.3.3, *Natural Community-level Restoration/Creation*), and species-specific restoration actions (see Plan Section 5.3.3.4, *Species-specific Restoration Actions*). The Placer Conservation Authority will direct the development and implementation of detailed restoration plans and specifications for individual restoration projects. Plan Section 8.7.1, *Restoration Plans* lists the requirements that these restoration plans must satisfy.

The Placer Conservation Authority can also approve credit for all or a portion of special habitat fees in exchange for the restoration/creation, management, and monitoring of wetlands, streams, or riparian areas that meets all applicable requirements, or for the purchase of appropriate wetland restoration or creation credits in a conservation bank or mitigation bank approved by the Placer Conservation Authority in accordance with Plan Section 8.4.7, *Private Mitigation and*

*Conservation Banks.* See Plan Section 8.7.2, *Restoration or Creation in Lieu of Special Habitat Fees* for a description of this process.

#### **2.4.14 Monitoring and Adaptive Management**

The Placer Conservation Authority is responsible for implementing and administering the monitoring and adaptive management program summarized in Section 2.6 above and described in Chapter 7 of the Plan. Plan Section 8.8, *Monitoring and Adaptive Management* describes the Placer Conservation Authority's specific roles and responsibilities, how the Placer Conservation Authority will seek and incorporate input from outside groups, and will seek approval of monitoring personnel for take of Covered Species that may occur during monitoring activities.

#### **2.4.15 Take Authorization under the Plan**

For projects implemented by a Permittee, the Permittee will be responsible for ensuring that the project complies with the requirements of the Plan, following the evaluation process described in Plan Section 6.2.1, *Evaluation Process for Permittee Projects*. The following sections summarize specific roles and responsibilities for entities participating in the Plan. See Plan Section 8.9, *Take Authorization Under the Plan* for a complete description.

*County and City.* The County and the City may extend take coverage to projects proposed by third parties provided that the projects are Covered Activities, are subject to the County's or City's land use authority, and are in compliance with the requirements of the Plan. To receive take authorization under the state and federal permits, third-party project proponents must apply to the City or the County for take authorization following the process described in Plan Section 6.2.2, *Application Process for Private Projects*. The County and the City will review participation packages submitted within their jurisdictions and determine, in consultation with the Placer Conservation Authority, whether to extend take authorization as described in Plan Section 6.2.2, *Application Process for Private Projects*. The Placer Conservation Authority will develop a checklist for evaluating third-party applications within the first 6 months after the permits take effect.

*Placer Conservation Authority.* The Placer Conservation Authority will consult with Permittees' on their decisions regarding the use and extension of take authorization and provide supporting information such as draft checklists, template applications, and fee calculator. The Placer Conservation Authority will also participate in review of participation packages and will promote coordination among the Permittees to ensure that conditions on Covered Activities are implemented and enforced consistently and effectively. The Placer Conservation Authority will have the specific responsibilities and authorities related to the Permittees' use of take authorization and extension of take authorization to project proponents listed in Plan Section 8.9.2, *Placer Conservation Authority Responsibilities*.

*Participating Special Entities.* For projects within the Permit Area that are not implemented by a Permittee or subject to the land use authority of the County or the City, the project proponent may apply for take coverage under the Plan as a Participating Special Entity as described in Plan Section 8.9.4, *Take Authorization for Participating Special Entities*. In order to receive take coverage, the effects of the proposed project must have been evaluated as part of potential future

growth and be included in the potential take covered in the permits. Entities that may apply for coverage as Participating Special Entities include existing or future school districts, water districts, irrigation districts, transportation agencies, local park districts, geologic hazard abatement districts, other utilities or special districts, or other public or private landowners, such as those within the Roseville Annexation Areas (see Plan Section 8.9.4.2, *Potential Roseville Annexation Area*).

Participating Special Entities must apply directly to the Placer Conservation Authority to receive take coverage under the permits and the Placer Conservation Authority must establish a legally enforceable contractual relationship. Plan Section 8.9.4 provides examples of special districts that are eligible to apply for coverage as a Participating Special Entity. Plan Section 8.9.4.1, *Application Process for Participating Special Entities* describes the process a Participating Special Entity must go through to receive take authorization from the Placer Conservation Authority. If the Placer Conservation Authority chooses to extend take authorization, it will issue a Certificate of Inclusion to the Participating Special Entity that provides take authorization under the permits for the proposed project.

Plan Section 8.9.4.2, *Potential Roseville Annexation Area* describes specific activities in the Potential Roseville Annexation Area (see Plan Figure 8-3) that may apply for take coverage under the Plan as Participating Special Entities and lists the conditions these activities would need to meet for the Placer Conservation Authority to extend take coverage.

Plan Section 8.9.5, *Placer Vineyards Specific Plan* describes specific conditions that will apply to the Placer Vineyards Specific Plan.

*Wildlife Agencies.* The Wildlife Agencies will monitor compliance with the permits primarily by reviewing and commenting on annual reports and monitoring reports (see Section 8.11, *Reporting*, and Section 8.12, *Schedule and Milestones*). The Wildlife Agencies will participate in the Interagency Working Group (see Plan Section 8.2.6.4), and the Interagency Review Team for the In-lieu Fee Program. The Wildlife Agencies may also monitor the Permittees as they extend take for Covered Activities. The Permittees will transmit copies of application materials, or Permittee consistency documentation, to the Wildlife Agencies upon request. See Plan Section 8.9.3 for a list of activities that require consultation with, or review and approval of, the Wildlife Agencies before take authorization can be provided.

#### **2.4.16 Coverage Option for Certain Minor Activities**

“Minor activities” as described in Plan Section 2.7, *Activities not Covered by this Plan* are not subject to Plan requirements. However, if a property owner of such a site wishes to be covered under the Plan, they may apply for coverage under the permits in accordance with Section 6.2, *Program Participation: Receiving Take Authorization under the Plan*. See Plan Section 8.9.6 *Coverage Option for Certain Minor Activities* for a description of allowing take coverage for this category of projects.

#### **2.4.17 Compliance Tracking and Data Management**

*Compliance Tracking.* The Placer Conservation Authority will track all aspects of compliance with the terms and conditions of the permits. See Plan Section 8.10.1, *Compliance Tracking* for a

description of data that the Placer Conservation Authority will maintain. The purpose of monitoring this information will be to track the amount of take that has occurred and the Placer Conservation Authority's progress toward achieving biological goals and objectives for Covered Species and natural communities. This tracking of progress will also help ensure compliance with the Stay Ahead provision.

*Database Development and Maintenance.* The Placer Conservation Authority will develop and maintain a comprehensive data repository to track permit compliance and all other aspects of Plan implementation for which reporting is required, including land and stream management and monitoring. Plan Section 8.10.2, *Database Development and Maintenance* describes in detail the types of information that will be collected, stored and maintained and describes possible formats for and requirements for the data repository.

#### **2.4.18 Reporting and Schedule**

Plan Table 8-2 lists key implementation milestones and timeframes for meeting them. Plan Section 8.12, *Schedule and Milestones* describes tasks that will be accomplished during various phases of Plan implementation.

The Placer Conservation Authority will prepare annual reports over the permit term that document permit compliance, conservation measures, management measures, restoration/creation measures, and monitoring results. The annual reports will summarize the previous calendar year's implementation activities, and be completed by March 1 following the reporting year. No annual report will be required for the first partial calendar year of Plan implementation. Annual reports will require synthesis of data and reporting on important trends such as land acquisition, fee collection, and habitat restoration. Plan Section 8.11, *Reporting* lists the goal for the annual report as well as minimum reporting requirements that must be fulfilled.

Annual reports will be submitted to the Permittees, the Wildlife Agencies, and other interested parties, and will be available to the public and posted on the Plan web site. The Placer Conservation Authority will also distribute these reports to science advisors periodically for their review (see Plan Section 8.2.7, *Science Advisors and Land Managers*).

#### **2.5 Cost and Funding**

Chapter 9 of the Plan describes how Plan costs were estimated, describes Plan budgets and funding sources, methods used to determine fee amounts, and how fee amounts will be adjusted over the permit term in order to ensure adequate funding (see Plan Section 9.2, *Cost to Implement the Habitat Conservation Plan/Natural Community Conservation Plan*, Plan Section 9.3, *Cost Estimate Methodology and Assumptions*, and Plan Section 9.4, *Funding Sources and Assurances*). Methods for calculating fees based on project impacts are described in Plan Section 9.4.1, *Habitat Conservation Plan/Natural Community Conservation Plan Development Fees*.

Plan Table 9-1, *Summary of Capital and Total Cumulative Operating Costs through 50-year Permit Term* shows anticipated costs of each cost category considered in developing cost estimates; Plan Appendix L, *Cost Model and Assumptions* provides additional detail. Plan Table 9-4, *Funding Plan* summarizes the expected revenues and their sources over the 50-year permit term. The funding plan fully funds the estimated cost of the Plan. Plan Table 9-5, *Chart of*

*Effects and Development Fees* provides a summary of the rationale for each of the development fees, the areas subject to each fee, and a description of how the fees will be used and tracked. Plan Tables 9-6, *Land Conversion Fee Schedule* and 9-7, *Special Habitats Fee Schedule* provide the fee amount for each development fee. Two mechanisms will be used to adjust fee levels over the permit term to ensure adequate Plan funding: annual automatic adjustments based on indices (see Plan Table 9-8, *Development Fee Adjustment indices*), and periodic assessments conducted every five years. Plan Section 9.4.0.7, *Adjustment of Development Fees* provides the methods and specific timing for conducting these adjustments.

Plan funding will come from sources in the following three categories: Plan Development Fees, Local Funding, and State and Federal Funding.

Plan development fees include a land conversion fee for permanent effects, special habitat fees for effects specific to wetlands, streams, and other sensitive habitats, and temporary impact fees for temporary effects. These development fees and how they were derived are described in Plan Section 9.4.1, *Habitat Conservation Plan/Natural Community Conservation Plan Development Fees*.

Plan Section 9.4.1.9, *Private Applicant Options to Pay Fees with Special Tax or Assessment District* and Plan Section 9.4.1.10, *Land Provided in Lieu of Development Fees* describe alternatives to the payment of development fees and conditions that must be met in order to allow the use of these alternatives in place of paying all or a portion of fees. Also, see Section 2.4.11 above and Plan Section 8.4.13, *Land Dedication in Lieu of Land Conversion Fee* for additional details.

Local Funding will include other development funding for open space (i.e., open space related fees separate from Plan development fees), credit for dedication of existing open space, investment and interest income, and leases on rice land. Depending on the source, funding will be allocated to either mitigation or conservation actions. Local funding sources are described in Plan Section 9.4.2, *Local Funding*.

State and Federal Funding will include federal and state grant programs. Most state and federal funding can only be used to provide for conservation actions in the Plan Area and cannot be used for the mitigation share of Plan costs. Potential state and federal funding sources and restrictions on their use are described in Section 9.4.3, *State and Federal Funding*. State and federal funding will fund the acquisition of a maximum of 13,905 acres of the Reserve System (this is the share of the Reserve System that provides for the conservation – not mitigation – of Covered Species). State and federal contributions can also provide funds for restoration and enhancement of wetland habitats that are independent of effects to Covered Species. Plan Section 9.4.3.3, *Mitigation and Conservation Components* provide guidance for delineating conservation versus mitigation under the Plan.

## **2.6 Action Area**

The action area is defined in 50 CFR § 402.02, as “all areas to be affected directly or indirectly by the federal action and not merely the immediate area involved in the action.” For the proposed project, the action area encompasses approximately 270,000 acres in western Placer County and



a small portion of eastern Sutter County as previously described in Section 2.1.4, *Permit Area* of this Biological Opinion.

## **2.7 Analytical Framework for the Jeopardy and Adverse Modification Analysis**

### **2.7.1 Jeopardy Determination**

Section 7(a)(2) of the Act requires that federal agencies ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of listed species. “Jeopardize the continued existence of” means to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species (50 CFR § 402.02).

The jeopardy analysis in this biological opinion considers the effects of the proposed federal action, and any cumulative effects, on the rangewide survival and recovery of the listed species. It relies on four components: (1) the *Status of the Species*, which describes the current rangewide condition of the species, the factors responsible for that condition, and its survival and recovery needs; (2) the *Environmental Baseline*, which analyzes the current condition of the species in the action area without the consequences to the listed species caused by the proposed action, the factors responsible for that condition, and the relationship of the action area to the survival and recovery of the species; (3) the *Effects of the Action*, which determines all consequences to listed species that are caused by the proposed federal action; and (4) the *Cumulative Effects*, which evaluates the effects of future, non-federal activities in the action area on the species. The *Effects of the Action* and *Cumulative Effects* are added to the *Environmental Baseline* and in light of the status of the species, the Service formulates its opinion as to whether the proposed action is likely to jeopardize the continued existence of the listed species.

### **2.7.2 Adverse Modification Determination**

Section 7(a)(2) of the Act requires that federal agencies insure that any action they authorize, fund, or carry out is not likely to destroy or to adversely modify designated critical habitat. A final rule revising the regulatory definition of “destruction or adverse modification” (DAM) was published on August 27, 2019 (84 FR 44976). The final rule became effective on October 28, 2019. The revised definition states:

“*Destruction or adverse modification* means a direct or indirect alteration that appreciably diminishes the value of critical habitat as a whole for the conservation of a listed species.”

The DAM analysis in this biological opinion relies on four components: (1) the *Status of Critical Habitat*, which describes the current rangewide condition of the critical habitat in terms of the key components (i.e., essential habitat features, primary constituent elements, or physical and biological features) that provide for the conservation of the listed species, the factors responsible for that condition, and the intended value of the critical habitat overall for the conservation/recovery of the listed species; (2) the *Environmental Baseline*, which analyzes the current condition of the critical habitat in the action area without the consequences to designated critical habitat caused by the proposed action, the factors responsible for that condition, and the

value of the critical habitat in the action area for the conservation/recovery of the listed species; (3) the *Effects of the Action*, which determines all consequences to designated critical habitat that are caused by the proposed federal action on the key components of critical habitat that provide for the conservation of the listed species, and how those impacts are likely to influence the conservation value of the affected critical habitat; and (4) *Cumulative Effects*, which evaluate the effects of future non-federal activities that are reasonably certain to occur in the action area on the key components of critical habitat that provide for the conservation of the listed species and how those impacts are likely to influence the conservation value of the affected critical habitat. The *Effects of the Action* and *Cumulative Effects* are added to the *Environmental Baseline* and in light of the status of critical habitat, the Service formulates its opinion as to whether the action is likely to destroy or adversely modify designated critical habitat. The Service's opinion evaluates whether the action is likely to impair or preclude the capacity of critical habitat in the action area to serve its intended conservation function to an extent that appreciably diminishes the rangewide value of critical habitat for the conservation of the listed species. The key to making that finding is understanding the value (i.e., the role) of the critical habitat in the action area for the conservation/recovery of the listed species based on the *Environmental Baseline* analysis.

## **2.8 Status of the Species and Critical Habitat**

### **2.8.1 Swainson's Hawk**

Swainson's hawk is not currently listed under the Act and does not have designated critical habitat. Swainson's hawk breeds throughout western North America, including provinces of Canada and most states west of the Mississippi River (Dechant et al. 2001). It winters in grassland and agricultural habitats from central Mexico to southern South America (Bechard et al. 2020). Swainson's hawk were thought to typically occur in California only during the breeding season (March through September) with the Central Valley population migrating to central Mexico (NBHCP 2003). However, about 30 individual hawks have been known to overwinter in the Sacramento-San Joaquin River Delta for the past 25 years (NBHCP 2003).

Historically, the Swainson's hawk bred throughout California, except in the Sierra Nevada Mountains, the lower Cascade and Trinity Mountains and the northern Coastal Range (Bloom 1980). Currently, the distribution consists of a population in the Central Valley and another in the Great Basin in northeastern California (California Department of Fish and Wildlife 2016). Breeding Bird Survey (bird survey) data indicate that from 1968 to 2015 the California population of Swainson's hawk increased, and Sauer et al. (2017) suggests that populations have been increasing since 1990. However, Sauer et al. (2017) also noted that, although the bird survey data may be useful in determining overall population trends, the inconsistencies in surveys limit the use of the results.

Most Swainson's hawk in the Central Valley nest in riparian woodland cover along drainages (Bloom 1980, Estep 1989, England et al. 1995). Swainson's hawks usually nest in large native trees such as valley oak (*Quercus lobata*), cottonwood (*Populus fremontii*), walnut (*Juglans* sp.) and large willows (*Salix* sp.), and generally do not select nonnative trees. Lone trees, oak woodlands and roadside trees are also commonly used. However, Swainson's hawks may prefer nesting in mature riparian cover (England et al. 1995, Bechard et al. 2020); for example, the majority of Swainson's hawk nests found in Yolo County during one study were located in

riparian cover (Schlorff and Bloom 1984). Home ranges for Swainson's hawk throughout the Central Valley have been found to vary between 6,821 and 8,069 acres, although one study from the Butte Valley revealed a much smaller home range of about 1,000 acres (California Department of Fish and Wildlife 2016).

Nest sites are directly associated with high-quality foraging habitat (Estep 1989). The loss of foraging habitat is recognized as the primary threat to the Swainson's hawk statewide population (California Department of Fish and Wildlife 2016). Swainson's hawks forage in open habitats with abundant small mammal and macroinvertebrate prey. Foraging habitat includes annual grassland and vernal pool complex, as well as open oak savanna. Swainson's hawks also forage in agriculture, especially alfalfa and other low growing row crops and irrigated pasture with abundant prey. Perennial crops, such as vineyards, and tall growing row crops do not provide suitable foraging habitat for the hawks.

The distance between nests in the Central Valley seems to be decreasing, likely due to the sparse distribution of mature stands of riparian forest (Estep 1989). Swainson's hawks tend to only be territorial immediately adjacent to the nest (Dechant et al. 2001), but the hawks require high quality foraging adjacent to nests to support reproduction. Increased competition for foraging habitat near nesting locations may decrease reproductive success of those hawks.

Threats to Swainson's hawks may include the loss, degradation and fragmentation of habitat, pesticide application and crop conversion. Nest trees may be removed by development and infrastructure, such as roads, or habitat may be degraded in riparian areas due to changes in hydrology (California Department of Fish and Wildlife 2016). Foraging habitat may be lost or separated from nesting trees by development, roads and crop conversion to unsuitable agriculture. Although the effect from environmental contaminants on Swainson's hawks in California is unknown, several large-scale mortality events have been noted in Argentina due to the applications of organophosphates and carbamate insecticides on agricultural fields (Goldstein et al. 1996).

### **2.8.2 California Black Rail**

California black rail is not a listed species under the Act, nor does it have designated critical habitat. Black rail are found in small, relatively isolated populations throughout the Americas (Eddleman et al. 1994). Black rail occur in marshes with dense vegetation and can tolerate a wide range in salinity from estuaries to freshwater marshes. Much remains unknown about black rail throughout its distribution due to its secretive and nocturnal nature. Historical distribution is poorly known, and it is difficult to accurately assess population trend in the species, but it has likely declined dramatically with the loss of wetland habitats, although some populations may have stabilized due to protection of wetlands under the Clean Water Act (Eddleman et al. 1994).

The distribution of California black rail may have been more extensive historically, particularly in the Central Valley. California black rail were only known from coastal locations in northern California such as San Francisco Bay and Bodega Bay (Evens et al. 1991), but a population was found in the Sierra Nevada foothills of the Sacramento Valley in 1994 (Aigner et al. 1995). Genetic work shows that the Foothills population is not a recent range expansion and the species has persisted in the foothills undetected (Girard et al. 2010). The rails use densely vegetated,

shallow perennial marshes for foraging and breeding (Richmond et al. 2008). The rails eat primarily seeds and invertebrates, and forage in dense marsh vegetation (Eddleman et al. 1994).

California black rails breed from early March through mid-September (Eddleman et al. 1994). The rails nest over shallow water on the edge of marshes in very dense vegetation (Aigner et al. 1995). The nest may be at water level (0 cm), or may be built up to 46 cm high in vegetation (Flores and Eddleman 1993). It is thought that both parents share incubation and the average clutch size is 3-8 eggs (Eddleman et al. 1994). Incubation lasts no more than 20 days, and the chicks leave the nest shortly after hatching (Flores and Eddleman 1993). It is unknown how long it takes the chicks to reach independence, and average reproductive success is unknown (Eddleman et al. 1994).

California black rails occur in a metapopulation in the Sierra foothills (Richmond et al. 2008, Hall and Beissinger 2017). That is, California black rail occur in patches of suitable habitat in the foothills, and these populations are connected by the dispersal of individuals between populations. Some populations may disappear from a patch of habitat (i.e., local extinction) while other patches of habitat become occupied (i.e., colonization). This dynamic structure constitutes a metapopulation. Rails have greater persistence at marshes that are larger than 0.2 acres, but may use smaller marshes for a few seasons or for dispersal (Richmond et al. 2010). Richmond et al. (2008) found that created marshes were colonized within a year of being created, which suggests there are extensive movements of individuals (Hall et al. 2018).

The primary threat to California black rail is the loss and fragmentation of habitat. Although capable of dispersing across large distances (Girard et al. 2010, Risk et al. 2011), most individuals appear to be residents and are non-migratory (Hall et al. 2018). The shallow marshes they depend on may be lost to development and changes in hydrology. The loss of small marshes distributed throughout the landscape may affect the dispersal of rails within the foothills, and limit the integrity of the metapopulation structure of the Sierra Nevada foothills (Richmond et al. 2008, Richmond et al. 2012). Increased predation and disturbance may occur as development encroaches on extant marshes and free-roaming pets spread into preserved natural areas. Adult rails may be particularly vulnerable to predation and habitat loss from July 1 through August 31 when they become flightless during molt (Eddleman et al. 1994).

### **2.8.3 Western Burrowing Owl**

Western burrowing owl is not a listed species under the Act and does not have designated critical habitat. Burrowing owls inhabit the western United States and Canada, as well as Florida, the Bahamas, and Central America (Poulin et al. 2020). The breeding range of the western burrowing owl (one of two subspecies) extends south from southern Canada throughout most of the western half of the United States and south to central Mexico. In California, owls of the Coastal Range, Sierra Nevada foothills and Great Basin Plateau are considered migratory, appearing only for breeding (California Department of Fish and Wildlife 2008). Both migratory and non-migratory owls occur throughout the Central Valley (Poulin et al. 2020).

The western burrowing owl occurs in grasslands and other open, arid areas with sparse shrub cover (Thomsen 1971, Gervais and Anthony 2003, Poulin et al. 2020). The owls also occur in agricultural landscapes that offer sufficient prey and burrows for roosting and nesting

(Rosenberg and Haley 2004). In agricultural landscapes, western burrowing owls will nest along roadsides, water conveyance structures and by other features along the margins of crops (Rosenberg and Haley 2004, Desante et al. 2007). Nest and roost burrows are commonly excavated by ground squirrels, but dens dug by larger mammals may also be used (Ronan 2002, Trulio and Chromczak 2007). In softer soils, western burrowing owls may dig their own nest sites, and manmade structures (i.e., culverts, under-building space, and rubble piles) may be used (Rosenberg et al. 1998). Nest sites are often associated with nearby perches that are used to look for predators.

Burrowing owls may nest as a single pair or in colonies, usually ranging from four to 10 pairs (Zarn 1974). Most pairs occupy a natal burrow and at least one additional satellite burrow. Clutches contain as many as 14 eggs (Todd and Skilnick 2002, Poulin et al. 2020). Western burrowing owls in California have shown considerable nest site fidelity between breeding seasons, ranging from 32-50 percent in large grasslands, and 57 percent in an agricultural landscape (Ronan 2002, Catlin 2004, Catlin et al. 2005). Western burrowing owls are territorial of their nest and satellite burrows, but will forage communally in adjacent habitat (Poulin et al. 2020). Dispersal distance is highly variable, and can be as great as about 30 miles in juveniles and more than 90 miles in adults (Gervais et al. 2006).

During the breeding season, western burrowing owls forage close to their nest sites, but have been recorded hunting as much as 1.67 miles away (Haug and Oliphant 1990). The diet of owls in California includes arthropods, rodents, birds, amphibians, reptiles and carrion (Thompson and Anderson 1988, Green et al. 1993, Plumpton and Lutz 1993, Gervais et al. 2000, York et al. 2002). California voles (*Microtus californicus*) are a primary prey species and may influence the survival and reproductive success of western burrowing owls (Gervais et al. 2006).

Threats to western burrowing owl include habitat loss and fragmentation, rodent abatement activities and reduction of prey. Breeding and foraging habitat may be lost to development, crop conversion, and levee repair and maintenance. Foraging habitat may be fragmented by roads, which increases the risk of vehicle strikes as burrowing owls tend to fly low to the ground (Poulin et al. 2020). Breeding and foraging habitat can also be fragmented by development and crop conversion. Rodent abatement activities are performed to support agricultural activities and to prevent damage to levees. These activities frequently target fossorial mammals and can reduce habitat suitability for the owls by reducing the availability and development of burrows in otherwise suitable habitat. Rodenticides and other pesticides used in agriculture may reduce prey availability in otherwise suitable foraging habitat. Burrowing owls may also be vulnerable to secondary poisoning through consumption of poisoned target and non-target species.

#### **2.8.4 Tricolored Blackbird**

Tricolored blackbird is not a listed species under the Act (Service 2019a) and does not have designated critical habitat. For the most recent comprehensive assessment of the range-wide status of the tricolored blackbird, please refer to the Species Status Assessment for the Tricolored Blackbird (*Agelaius tricolor*) (Service 2019b). Threats evaluated during that review and discussed in the document have continued to act on the species since the 2019 status assessment was finalized, with the loss and fragmentation of nesting and foraging habitat being the most significant effect.

### **2.8.5 Giant Garter Snake**

Giant garter snake is listed as threatened under the Act (Service 1993), and does not have designated critical habitat. For the most recent comprehensive assessment of the range-wide status of the giant garter snake, please refer to the Recovery Plan for the Giant Garter Snake (*Thamnophis gigas*) (Service 2017). No change in the garter snake's listing status was recommended in the recovery plan. Threats evaluated during that review and discussed in the final document have continued to act on the species since the 2017 recovery plan was finalized, with loss of habitat being the most significant effect. While there have been continued losses of snake habitat throughout the various recovery units, to date no project has proposed a level of effects for which the Service has issued a biological opinion of jeopardy for the species.

### **2.8.6 Western Pond Turtle**

Western pond turtle is not currently listed under the Act, nor does it have designated critical habitat. The action area is entirely within the range of northwestern pond turtle (Germano and Bury 2001). The range of northwestern pond turtle stretches south to San Francisco Bay and east to Nevada; the southwestern pond turtle is found south of San Francisco Bay (Bury 1970, Ernst et al. 2009).

Western pond turtles occur in rivers, streams, lakes, ponds, wetlands, reservoirs, and brackish estuarine waters (Holland 1994, Jennings and Hayes 1994). Western pond turtles use aquatic habitats for foraging, thermoregulation and predator avoidance. They select aquatic habitats with cover and basking sites, and pond turtles avoid open water that lacks those habitat features (Holland 1994). Both adult and juvenile turtles favor aquatic habitats with deep, slow water and underwater refugia. Aquatic refugia includes rocks, logs, mud, submerged vegetation and undercut areas along banks. Hatchlings are relatively poor swimmers and tend to seek areas with shallow, warm water with no predators and some aquatic vegetation (Holland 1994). Western pond turtles overwinter in both aquatic and terrestrial habitats. In terrestrial overwintering habitat, western pond turtles use burrows in leaf litter or soil (Holland 1994).

Western pond turtles are dietary generalists but prefer live prey (Bury 1986), and can scavenge carrion and browse on plant material. Prey items are ingested in the water, as western pond turtles are unable to swallow in air (Holland 1994). Preferred food items include aquatic insect larvae, crustaceans and annelids. Small vertebrates have been found during gut content analyses, but it is unclear whether these were ingested as prey or carrion (Bury 1986, Holland 1994).

Western pond turtles first breed at 10 to 14 years of age (Stebbins 2003), and most females lay eggs in alternate years. Breeding occurs from May through July. Gravid females usually leave the water to nest on land in the late afternoon or evening, and return to aquatic habitat by morning. Females deposit their eggs in sunny upland habitats, including grazed pastures and agricultural fields. Nests are usually within approximately 90 feet of aquatic habitat (Rathbun et al. 1992), but may be as far as 1,400 feet from water (Jennings and Hayes 1994). Clutch size ranges from four to seven eggs (Germano and Rathbun 2008). Incubation lasts 80 to 100 days, and hatching success has been observed to be approximately 70 percent.

Adult males typically have a higher apparent survival probability than adult females, with skewed sex ratios observed as high as four males to every female (Holland 1991). The most plausible explanation for these observed sex ratios is that females suffer higher rates of predation during nesting attempts (Holland 1991). The rate of scarring on the shell – indicating attempted predation by mammals – is as much as six times greater in females compared with males (Holland 1994). Adults are long lived, the maximum life span being approximately 40 years. Hatchlings and first year juveniles have very low survivorship, approximately 10 to 15 percent; survivorship may not increase significantly until turtles are 4 to 5 years old (Holland 1994). Survivorship increases to at least 95 percent once turtles reach a carapace length of 120 mm (Holland 1994).

Threats to western pond turtles include the loss, degradation and fragmentation of habitat, and introduced predators and competitors. Development, flood control activities and agriculture have reduced and fragmented habitat for pond turtles. Wetlands have been filled to accommodate development, and patches of habitat have been fragmented and possibly isolated by development. Flood control activities such as stream channelization and vegetation removal has degraded potential habitat for the species. Land conversion to agriculture also causes the loss and fragmentation of habitat. Introduced species such as bullfrogs and largemouth bass (*Micropterus salmoides*) may predate on pond turtle hatchlings, and red-eared sliders (*Trachemys scripta elegans*) may compete with and exclude western pond turtles from suitable habitat.

### **2.8.7 Foothill Yellow-legged Frog**

Foothill yellow-legged frog is not currently listed under the Act nor does it have designated critical habitat. The known elevation range of the species extends from near sea level to approximately 6,700 feet above sea level (Stebbins 2003). The current range excludes coastal areas south of northern San Luis Obispo County and foothill areas south of Fresno County, where the species is apparently extirpated (Jennings and Hayes 1994). Foothill yellow-legged frogs require shallow, flowing water in small to moderate-sized streams with at least some cobble-sized substrate (Hayes and Jennings 1986). This habitat is believed to favor oviposition (Fitch 1936), and refugial habitat for larvae and postmetamorphs (Jennings 1988). This species has been found in streams without cobble (Zweifel 1955), but it is not clear whether these habitats are regularly used (Jennings and Hayes 1994). Foothill yellow-legged frogs are usually absent from habitats where introduced aquatic predators, such as fishes and bullfrogs, are present (Hayes and Jennings 1986, Kupferberg 1997).

The foothill yellow-legged frog is a highly aquatic amphibian, spending most its life in or near streams, though frogs have been documented underground and beneath surface objects more than 165 feet from water (Nussbaum et al. 1983). Bourque (2008) reported the movements of radio-tracked frogs being restricted to watercourses, though movement distances were considerably longer than previously reported with mark-recapture techniques. Average distance from water was less than 10 feet, but was as great as 131.2 feet (Bourque 2008). Bourque (2008) documented movements up to 1,896 feet (males) and 23,106 feet (females) during the breeding season. Adult male foothill yellow-legged frogs have high site fidelity during the breeding season and typically occupy small home ranges near breeding sites (Bourque 2008).

Foothill yellow-legged frogs in California generally breed between March and early June (Wright and Wright 1949, Jennings and Hayes 1994). Females deposit egg masses on the downstream side of cobbles and boulders over which a relatively thin, gentle flow of water passes (Fitch 1936, Kupferberg 1996). The timing of oviposition typically follows the period of high-flow discharge from winter rainfall and snowmelt (Jennings and Hayes 1994, Kupferberg 1996). The embryos have a critical thermal maximum temperature of 26 degrees Celsius (Zweifel 1955). After oviposition, a minimum of approximately 15 weeks is required to reach metamorphosis, which typically occurs between July and September (Jennings 1988), and larvae attain adult size in two years (Storer 1925). Foothill yellow-legged frogs select egg laying sites and time egg laying to avoid fluctuations in river stage and current velocity (Kupferberg 1996). This suggests that stable flow and current velocities are important to create suitable reproductive sites for foothill yellow-legged frogs.

Habitat loss and degradation and introduced predators pose continued and increasing threats to the long-term viability of foothill yellow-legged frogs (Jennings and Hayes 1994). Poorly timed water releases from upstream reservoirs can scour egg masses (Jennings and Hayes 1994, Kupferberg et al. 2009), and decreased flows can force adult frogs to move into permanent pools where they may be more susceptible to predation. Davidson et al. (2002) found evidence that airborne agrochemicals play a significant role in the decline of this species. Lind (2005) found changes in land use and use of air-borne toxins contribute to the absence of foothill yellow-legged frogs in areas where they had previously been documented. Kupferberg (1997) found that bullfrogs disrupted aquatic community structure and negatively affected foothill yellow-legged frog populations in northern California. Interspecific matings between male yellow-legged frogs and female bullfrogs have been observed; these interactions with non-native bullfrogs likely reduce the reproductive output of foothill yellow-legged frog (Lind et al. 1996). Furthermore, centrarchid fishes eat frog eggs (Werschkul and Christensen 1977) and, where introduced into foothill streams, may contribute to the extirpation of foothill yellow-legged frogs (Morey 2000).

### **2.8.8 California Red-legged Frog**

California red-legged frog is listed as threatened under the Act (Service 1996). Critical habitat for California red-legged frog was designated in 2006 (Service 2006a) and revised in 2010 (Service 2010). In the revision of critical habitat, the Service recognized the taxonomic change from *Rana aurora draytonii* to *Rana draytonii* (Service 2010).

For a complete description of the life history and status of the species, please see the Recovery Plan for the California Red-legged frog (*Rana aurora draytonii*) (Service 2002). The recovery plan identifies eight recovery units, and within each recovery unit, delineates core areas that represent contiguous areas of moderate to high California red-legged frog densities. The establishment of these recovery units is based on the determination that various regional areas of the species' range are essential to its survival and recovery. These recovery units are delineated by major watershed boundaries as defined by U.S. Geological Survey hydrologic units and the limits of the species' range. The goal of the recovery plan is to protect the long-term viability of all extant populations within each recovery unit.

Habitat loss and fragmentation, urban encroachment and introduced non-native species are the primary threats to California red-legged frog throughout its range. Aquatic habitat has been lost



to development, agriculture, and repair of levees and irrigation structures. Suitable aquatic habitat may be fragmented by development, infrastructure and agriculture such that breeding populations become isolated. Urbanization of California red-legged frog habitat has also affected the species. Declines are attributed to channelization of riparian areas, enclosure of channels by urban development, and introduction of predatory fishes and bullfrogs. The decline and even eventual extirpation of California red-legged frogs has been documented in systems supporting bullfrogs (Jennings and Hayes 1990, Twedt 1993), red swamp crayfish (*Procambarus clarkia*), signal crayfish (*Pacifastacus leniusculus*), goldfish (*Carassius auratus*), common carp (*Cyprinus carpio*) and mosquito fish (*Gambusia affinis*) (Fisher and Shaffer 1996). Disease, such as *Chytridiomycosis* and ranaviruses, may also pose a significant threat as they have been found to adversely affect other amphibians (Davidson et al. 2003, Lips et al. 2006). While these threats to California red-legged frog continue, to date no project has proposed a level of effects for which the Service has issued a biological opinion of jeopardy for the species.

### **2.8.9 Valley Elderberry Longhorn Beetle**

Valley elderberry longhorn beetle is listed as threatened under the Act and has designated critical habitat (Service 1980). For the most recent comprehensive assessment of the range-wide status of the beetle, please refer to the Revised Recovery Plan for the Valley Elderberry Longhorn Beetle (Service 2019c). Threats discussed in the recovery plan continue to act on the beetle, with loss of habitat being the most significant effect. While there have been continued losses of habitat for valley elderberry longhorn beetle, to date no project has proposed a level of effects for which the Service has issued a biological opinion of jeopardy for the species.

### **2.8.10 Vernal Pool Fairy Shrimp**

Vernal pool fairy shrimp is listed as threatened under the Act (Service 1994), and critical habitat was designated in 2006 (Service 2006b). For the most recent comprehensive assessment of the range-wide status of the vernal pool fairy shrimp, please refer to the Vernal Pool Fairy Shrimp (*Branchinecta lynchi*) 5-year Review: Summary and Evaluation (Service 2007a). No change in the vernal pool fairy shrimp's listing status was recommended in this 5-year review. Threats evaluated during that review and discussed in the final document have continued to act on the species since the 2007 5-year review was finalized, with loss of habitat being the most significant effect. While there have been continued losses of fairy shrimp habitat throughout the various recovery units, to date no project has proposed a level of effects for which the Service has issued a biological opinion of jeopardy for the species.

### **2.8.11 Vernal Pool Tadpole Shrimp**

Vernal pool tadpole shrimp is listed as endangered under the Act (Service 1994), and critical habitat was designated in 2006 (Service 2006b). For the most recent comprehensive assessment of the range-wide status of the vernal pool tadpole shrimp, please refer to the Vernal Pool Tadpole Shrimp (*Lepidurus packardii*) 5-year Review: Summary and Evaluation (Service 2007b). No change in the vernal pool tadpole shrimp's listing status was recommended in this 5-year review. Threats evaluated during that review and discussed in the final document have continued to act on the species since the 2007 5-year review was finalized, with loss of habitat being the most significant effect. While there have been continued losses of tadpole shrimp habitat

throughout the various recovery units, to date no project has proposed a level of effects for which the Service has issued a biological opinion of jeopardy for the species.

### **2.8.12 Conservancy Fairy Shrimp**

Conservancy fairy shrimp is listed as endangered under the Act (Service 1994), and critical habitat was designated in 2006 (Service 2006b). For the most recent comprehensive assessment of the range-wide status of the conservancy fairy shrimp, please refer to the Conservancy Fairy Shrimp (*Branchinecta conservatio*) 5-year Review: Summary and Evaluation (Service 2012). No change in the conservancy fairy shrimp's listing status was recommended in this 5-year review. Threats evaluated during that review and discussed in the final document have continued to act on the species since the 2012 5-year review was finalized, with loss of habitat being the most significant effect. While there have been continued losses of conservancy fairy shrimp habitat, to date no project has proposed a level of effects for which the Service has issued a biological opinion of jeopardy for the species.

### **2.8.13 Critical Habitat**

#### **2.8.13.1 Vernal Pool Fairy Shrimp**

Critical habitat was designated for vernal pool fairy shrimp in 2005, and revised in 2006 (Service 2006b). The Service designated 597,821 acres of critical habitat for vernal pool fairy shrimp in 35 units throughout their range. The primary constituent elements of the critical habitat are as follows:

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 described below in (2), 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 18 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 described above in paragraph (2), 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.

## **2.9 Environmental Baseline**

*Environmental baseline* refers to the condition of the listed species or its designated critical habitat in the action area, without the consequences to the listed species or designated critical

habitat caused by the proposed action. The environmental baseline includes the past and present impacts of all Federal, State, or private actions and other human activities in the action area, the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early section 7 consultation, and the impact of State or private actions which are contemporaneous with the consultation in process. The consequences to listed species or designated critical habitat from ongoing agency activities or existing agency facilities that are not within the agency's discretion to modify are part of the environmental baseline.

### **2.9.1 General Baseline**

In western Placer County, the elevation ranges from approximately 40 feet above sea level on the Sacramento Valley floor up to 2,300 feet above sea level in the Sierra Nevada foothills north of Auburn. The valley floor has extensive areas of agricultural uses, as well as urban and suburban development along I-80 and State Route 65. Plan Figure 2-2 and Plan Table 2-1 show the present pattern and extent of urban and agricultural use. Natural vegetation that still exists in the valley generally consists of grasslands, vernal pool complexes within a grassland matrix, and riparian woodlands. The foothills in the northeastern and eastern parts of the Plan are dominated by rural-residential land use, woodlands, orchards, and grazing land.

The transition from the Sacramento Valley to Sierra Nevada foothills, which occurs roughly along the 200-foot elevation line, is reflected by differences in land use, ecology, and the distribution of natural communities and Covered Species. For this reason, the Plan Area is divided into three main subareas:

- The Valley (approximately 100,500 acres) consists of urban and suburban areas in Lincoln and unincorporated areas surrounded by agricultural uses and natural grassland and vernal pool complexes.
- The Foothills (approximately 109,000 acres) are characterized by lower-density suburban and rural-residential development along the I-80 corridor (approximately 41,000 acres) and lower-density rural-residential development, grazing land, and natural woodland communities in the North Foothills (approximately 68,000 acres).
- The non-participating cities' jurisdiction (approximately 50,600 acres) is mainly already in urban and suburban use.

The Plan uses natural communities, land-cover types, and constituent habitats to classify and describe the biological setting of the Plan Area. Natural communities are comprised of groups of similar land cover types, and constituent habitats are specific habitat features within land cover types. Because the species habitat models used in the Plan (see Appendix D of the Plan) are based on land cover mapping and estimates of constituent habitats, this Biological Opinion also relies heavily on these classifications. The baseline for each Covered Species below includes a description of the baseline condition of modeled habitat for that species in the action area.

Plan Table 3-6, *Communities and Land-cover Types* and Plan Table 3-7, *Habitat Constituents and their Primary Associated Community Types* lists natural communities, land-cover types, and constituent habitats. Plan Section 3.4, *Plan Area Communities* provides descriptions of each land

cover type and associated constituent habitats. A brief summary of each natural community (and associated land cover types) that provides habitat for Covered Species is included below; See Plan Section 3.4, *Plan Area Communities* for a full description.

See Plan Table 3-13, *Acres of Communities and Land-cover Types* for acreages of each land cover type currently mapped within Plan Area A, and Plan Figure 3-11, *Communities* for the location and distribution of natural communities in Plan Area A. Plan Table 3-14, *Estimated Acres of Constituent Habitats in Plan Area A Extrapolated from Survey Results* shows the estimated amount of each constituent habitat within Plan Area A.

*Grassland.* The grassland natural community includes annual grassland and pasture land cover types. In western Placer County, annual grasslands occur naturally at the lower elevations (generally below 300 feet). Annual grasslands in the Valley are dominated by non-native grasses and forbs, with few trees. In the Valley, there are still a few remnant examples of native grasslands, often found around the edges of wetlands or moist bottomlands. Foothill grasslands are mostly open annual grassland–oak woodland/savanna with widely scattered blue oaks (*Quercus douglasii*), interior live oaks (*Quercus wislizenii*), and valley oaks (*Quercus lobata*). Annual grasslands occur in the understory of open mixed oak, blue oak, interior live oak, and valley oak woodlands, in openings in oak–foothill pine woodland and foothill chaparral land-cover types. Where tree canopy exceeds an estimated 5 percent, land cover was mapped as savanna. Areas mapped as pasture show more extensive terrain modification to accommodate irrigation and from mechanical tilling for planting. Irrigated pastures occur throughout western Placer County.

*Vernal Pool Complex.* Although vernal pool complex can also function as annual grassland, it is defined as a separate community to focus on habitat for covered vernal pool species. Vernal pools form in seasonally flooded depressions in annual grasslands under a combination of specific climatic, soil, hydrologic, and topographic conditions. Although vernal pool complex contains the vast majority of vernal pool constituent habitats (vernal pools, seasonal wetland in vernal pool complex, and seasonal swales; see Plan Section 3.4.3.2, *Constituent Habitats* for a complete description of each of these), vernal pool constituent habitats may also occur in other land cover types. Land cover in vernal pool complex is categorized as high, intermediate, and low density (see Plan Section 3.4.3.1, *Land Cover Types* for a description of each of these categories). Also, see Plan Figure 3-13, *Grassland and Vernal Pool Complex* for locations of each of these cover types, and Plan Table 3-16, *Relative Disturbance in each Vernal Pool Complex Cover type* for acreages. A significant loss of vernal pool habitat has occurred throughout the Central Valley; based on mapping conducted in 1994 and 2005, Placer County experienced some of the greatest losses documented during that time period (Holland 2009).

*Aquatic/Wetland Complex.* The aquatic/wetland community includes marsh complex and pond land cover types. Marsh complex includes mosaics of wetlands and uplands found around perennial water. The pond land-cover type represents small patches of open water. Ponds in the action area typically occur on relatively flat land and are shallow, with a perimeter that expands or contracts substantially based on the water depth. This variable fringe of the pond creates conditions that allow the formation of marsh complex. Because of the close spatial and ecological relationship between ponds and marsh complex they are included together in the aquatic/wetland complex community. Marsh habitat has decreased dramatically in the

Sacramento Valley and Placer County since the turn of the century due to drainage and conversion to agriculture.

*Riverine/Riparian Complex.* Riverine and associated riparian complex includes a mosaic around the streams and rivers in the action area. This mosaic is mapped as a single riverine/riparian complex land-cover type, which also defines the natural community (see Plan Figure 3-14 and Plan Table 3-12). Riverine/riparian complex is strongly associated with riverine and riparian constituent habitats. Riverine systems occurring in western Placer County include perennial, intermittent, and ephemeral streams. Riparian constituent habitat includes riparian woodland or stands of deciduous trees near perennial streams as well as herbs, forbs, and shrubs that occur in the riparian corridor without a woodland overstory. Prior to 1900, riverine habitat was highly altered by dams, impoundments, water diversions and hydraulic mining debris. Riverine systems in the action area have been further altered by road crossings, culverts, authorized and unauthorized water diversions, channelization, flood control projects, the loss of riparian vegetation, and increased rates of sedimentation. Development, water diversions, grazing, flood control activities, cultivated agriculture, and aggregate mining, have reduced the extent of riparian habitat.

*Oak Woodland.* The oak woodland community occurs mainly in the Foothills and includes various dominant tree species represented by five woodland land-cover types including, blue oak woodland, interior live oak woodland, mixed oak woodland, oak-foothill pine woodland, oak savanna, foothill chaparral, and rock outcrop. Losses of oak woodlands have occurred as a result of clearing for range improvements and agriculture, reduction in oak regeneration as a result of fire suppression and introduction of non-native grasses, and due to rural residential development.

*Valley Oak Woodland.* Valley oak woodland was delineated where valley oak represents greater than 30 percent of canopy cover (where it was possible to make this distinction by aerial photograph interpretation or field assessments). Oak woodlands dominated by valley oak, but with less than 30 percent canopy cover were mapped as oak woodland savanna land cover. Valley oak associated with perennial streams was mapped as riparian land cover. Although valley oak woodland was once more widespread in the action area, few large stands still exist and most remaining valley oaks occur along stream corridors and floodplains with other tree species.

*Rice and Field Agriculture.* The rice community includes fields that are under current cultivation and fields that are temporarily fallow but have water control structures in place. Rice fields are flooded in the spring and often again after harvest to control pests and to provide waterfowl habitat for hunting clubs. Rice is grown as a monoculture and remaining vegetation is generally confined to the berms, ditches, and canals between and around fields and is dominated by wetland plants, both native and non-native. Rice fields cover approximately 19 percent of the Valley in the Plan Area A. The field agriculture community includes alfalfa, row crops (e.g., grain and vegetables), and eucalyptus (because groves have frequently been planted as wind breaks between fields).

### **2.9.2 Swainson's Hawk**

The action area is on the eastern edge of the Swainson's hawk distribution in the Sacramento Valley, and supports a relatively low density of Swainson's hawks. There are 18 records for Swainson's hawk in the action area from in the California Natural Diversity Database (California Natural Diversity Database 2019) mainly in the Valley portion of the action area where most remaining foraging habitat occurs. Nests are located in riparian woodlands, in valley and blue oaks, willows and, rarely, eucalyptus near foraging habitat. Most of the recorded nest sites in the action area are located within the Reserve Acquisition Area and no active nests have been documented within the Potential Future Growth Area since 2003 (California Natural Diversity Database 2019).

Development and crop conversion in the Valley have removed potential breeding and foraging habitat, as well as fragmenting those habitats. Elsewhere in the Sacramento Valley, alfalfa, tomato, and other similar crops provide the primary foraging habitat for Swainson's hawk (Estep 1989). However, because rice is the most common type of agriculture in the action area, these types of agricultural crops occur only in small amounts. Therefore, foraging habitat for Swainson's hawk within the action area is primarily grassland habitats (e.g., vernal pool complex grassland, annual grassland, pasture and irrigated pasture).

*Species Habitat Model.* Swainson's hawk modeled nesting habitat includes riverine/riparian, valley oak woodland, and eucalyptus land-cover types below 200 feet in elevation. Swainson's hawks typically nest in large trees, which are components of these land cover types. Isolated trees or small patches of trees that provide suitable nesting habitat may also be present in other land cover types, but are too small to be captured by a landscape-scale habitat model. Most Swainson's hawk modeled nesting habitat in the action area is located within the Stream System. Modeled foraging habitat for Swainson's hawk includes vernal pool complex, annual grassland, pasture, alfalfa and cropland land cover types below 200 feet elevation in the action area. There are 1,968 acres of modeled nesting habitat and 54,574 acres of modeled foraging habitat for Swainson's hawk in the action area.

### **2.9.3 California Black Rail**

Prior to the discovery of the Sierra Nevada foothills population of California black rail in 1994 (Aigner et al. 1995), black rails were not known to occur in the Sierra foothills. Since their discovery in the foothills, black rails have been detected in more than 200 wetlands and marshes in the eastern foothills of the Sacramento Valley. California black rails are residents in the action area and occupy perennial wetlands that are dominated by rushes and cattails. There are 10 occurrences of the black rail in the action area, all of which are east of State Route 65. The core area of the Sierra foothills black rail metapopulation is north of the action area in Yuba County, and the action area may help maintain connectivity between black rails in the foothills and the San Francisco Bay-Delta. Due to the recent discovery of the species in the action area, its historical abundance and distribution are unknown and it is not known how the rail may have been affected by previous land conversion. Development and agriculture may have removed or isolated suitable wetlands.

*Species Habitat Model.* Suitable habitat for California black rail is modeled as fresh emergent wetlands greater than 0.2 acres. Black rails occur in fresh emergent marshes year-round, and may occur throughout the action area. There are 1,112 acres of modeled habitat within the action area.

#### **2.9.4 Western Burrowing Owl**

The action area supports a small non-breeding population of western burrowing owl and at least one breeding pair. The action area is on the eastern periphery of the owl's distribution in the Central Valley, and suitable habitat only occurs in the western part of the action area.

There are seven occurrences of western burrowing owl from the valley portion of the action area (California Natural Diversity Database 2019). Most of the occurrences are of wintering owls, but one breeding pair has been documented at Swainson's Preserve where fledglings have been observed. The action area may have unoccupied suitable breeding habitat that could support additional breeding pairs.

Development, infrastructure (i.e., roads), crop conversion and flood control activities have removed and fragmented habitat for the species within the action area and may have affected the abundance and distribution of owls within the action area. Conversion to incompatible crops has reduced the available foraging habitat. Flood control activities, such as levee repairs, remove burrows that provide shelter and nesting locations. Roads that fragment foraging habitat may also increase vehicle strikes of foraging owls.

*Species Habitat Model.* Western burrowing owl modeled year-round habitat includes valley oak woodlands, oak woodland savanna, vernal pool complex, annual grassland, alfalfa, pasture and cropland below 200 feet in elevation. While all of these land cover types were included as suitable habitat, only areas that are sparsely vegetated, have fossorial mammals, and support sufficient prey may support owls. Therefore, the amount of modeled habitat in the action area is an overestimate of suitable habitat, but modeled habitat includes all of the areas where these site-specific features may be present, or could be present in the future. There are 55,101 acres of suitable habitat in the action area.

#### **2.9.5 Tricolored Blackbird**

As of 2014, Placer County supported an estimated 12 percent of the statewide tricolored blackbird breeding population (Meese 2014). Tricolored blackbirds consistently nest and winter in the action area. The action area is important for late season nesting attempts when blackbirds disperse from colonies in the San Joaquin Valley to nest in the Sacramento Valley and may also provide connectivity within the Central Valley, and between the peripheral Nevada breeding colony and the core population (Service 2019b).

Approximately five to six tricolored blackbird colonies are known to breed within the action area, and 21 nest colony sites that may or may not be occupied in a given year or breeding attempt have been documented in Plan Area A. Fifteen of these 21 sites are active or recently active; of these 15 sites, six are in the Reserve Acquisition Area, three or four are protected in existing reserves, and five are within the Potential Future Growth Area. About 12,000 to 18,000 blackbirds have bred in the action area recently during statewide surveys (Service 2019b). A

large mixed-species flock of blackbirds also winters in the action area at Yankee Slough, several thousand of which are estimated to be tricolored blackbirds.

Tricolored blackbirds in the action area primarily nest in Himalayan blackberry (*Rubus armeniacus*) and in cattail marshes in stock ponds. Development, agriculture and flood control activities may have limited the available suitable habitat for tricolored blackbirds in the action area. Development has removed and fragmented suitable wetland habitat. Agriculture has also removed, fragmented and degraded habitat, including potentially reducing prey availability in foraging habitat through pesticide use. Flood control activities have changed the hydrology of the action area such that some wetlands may now be ephemeral and may not support the vegetation and/or open water that tricolored blackbirds require for nesting. These impacts may have resulted in nesting habitat being located further from high quality foraging habitat in the action area.

*Species Habitat Model.* Tricolored blackbird modeled nesting habitat is the marsh complex land cover type below 300 feet in elevation, and foraging habitat includes annual grasslands, vernal pool complex, pasture, alfalfa and cropland below 300 feet elevation. Tricolored blackbirds typically nest in cattails and Himalayan blackberry either in marshes or within 1,500 feet of open water. While those site characteristics are too small to be captured in the land cover data, the marsh complex cover type should capture wetlands that could, at some time during the proposed permit term, support a nesting colony. As tricolored blackbirds breed and winter in Placer County, they forage in a variety of habitats (e.g., annual grassland, pasture and cropland) throughout the county depending on the time of year and food availability. There are 633 acres of modeled nesting habitat and 60,974 acres of modeled foraging habitat in the action area.

### **2.9.6 Giant Garter Snake**

There are no documented occurrences of giant garter snake in the action area. However, a population of giant garter snake occurs approximately 1.5 to 5 miles to the west and south of the Placer county line. The action area is within the historical range of wetlands in California and may have supported the garter snakes prior to loss of wetlands. The western portion of the action area is within the eastern edge of the American Basin Recovery Unit for giant garter snake; the portion of the recovery unit within the action area includes the Nicolaus and Natomas Basin Management Units (Service 2017).

There are 19 occurrences of giant garter snake within five miles of the action area, and there is dispersal habitat (e.g., irrigation canals) connecting occupied habitat to habitat within the action area. Suitable wetland and rice habitat is present on the western portion of the action area. Several locations within this area are used for growing rice, and the associated agricultural ditches and wetlands/sloughs containing emergent vegetation in conjunction with suitable adjacent upland habitat could provide habitat for giant garter snake during both the active and inactive seasons.

Loss of wetlands and development have removed and fragmented habitat for giant garter snake in the action area. Maintenance of flood control and agricultural waterways, weed abatement, and rodent control can degrade remaining habitat.



*Species Habitat Model.* Modeled aquatic habitat for the giant garter snake includes aquatic/wetland complex, rice and riverine/riparian land cover types below 100 feet in elevation. Within the riverine/riparian land cover, only small low-gradient streams, tributaries and canals, which provide dispersal and movement habitat, are included as modeled habitat. Aquatic habitat must have emergent vegetation for foraging, predator evasion, and to facilitate thermoregulation. Upland habitat includes annual grassland, pasture, alfalfa, vernal pool complex and cropland land cover types within 200 feet of the aquatic modeled habitat. During their active period, giant garter snakes require upland habitats adjacent to aquatic habitat for basking and refuge. In the winter, giant garter snakes need upland habitat for winter hibernacula to avoid winter flooding. There are 19,511 acres of modeled aquatic habitat, and 3,537 acres of upland habitat in the action area.

### **2.9.7 Western Pond Turtle**

Western pond turtles were known to occur in habitat throughout the American River drainage, including within the action area (Service 1999), and it is believed they were historically abundant when this area supported extensive wetlands (Hayes et al. 1999). It is probable that the population has declined from historical numbers with the loss of wetlands to agriculture and development.

Western pond turtles are known to occur within the action area as well as in adjacent counties. Western pond turtles are known from four occurrences in the action area (California Natural Diversity Database 2019). All four occurrences are from the foothills portion of the action area; three of the occurrences are from locations on Raccoon Creek in Hidden Falls Park. Pond turtles have been found in ponds, marshes, streams and in the uplands near suitable aquatic habitat.

Conversion of former wetlands to agricultural lands and development have reduced and fragmented habitat for western pond turtles in the action area. Agricultural activities, development, and flood control activities continue to remove, degrade and fragment remaining habitat for the species.

*Species Habitat Model.* Modeled habitat for western pond turtle includes both aquatic and upland habitats. Aquatic modeled habitat includes aquatic/wetland and riverine/riparian land cover, while upland (nesting) habitat includes all land cover types within 150 feet of the modeled aquatic habitat, except urban/rural and all agriculture land cover types. Western pond turtles are found in a variety of aquatic habitats that have heterogeneous structure that provides food, shelter and basking locations. Pond turtles require upland habitat for nesting and overwintering habitat. Pond turtles may use any adjacent habitat type except for highly disturbed communities such as urban, rural and agriculture. There are 10,244 acres of modeled aquatic habitat and 14,263 acres of modeled upland habitat in the action area.

### **2.9.8 Foothill Yellow-legged Frog**

There is limited information on the historical occurrence of the foothill yellow-legged frog in Placer County. Although there are numerous records of foothill yellow-legged frog in the foothills of Placer County outside the action area, there are no historical or current records of

foothill yellow-legged frog within the action area. The nearest extant occurrence is approximately 2.5 miles east of the eastern edge of the action area.

Within the action area, there is limited suitable habitat for foothill yellow-legged frog; a habitat assessment found that the upper reaches of Raccoon Creek provides the most suitable habitat for foothill yellow-legged frog in the action area, although the portion of the Bear River may also provide some potentially suitable habitat. In addition, a few streams within other watersheds in the action area may have potentially suitable habitat for foothill yellow-legged frog, although it is generally limited in extent and isolated from other potential stream areas.

Changes in hydrology caused by flood control activities, development and agriculture have impacted perennial streams to a degree that some streams no longer provide suitable habitat for foothill yellow-legged frog. Development and associated infrastructure, such as roads, in the action area have fragmented and degraded stream habitat in the action area. Application of pesticides in developed areas or for agricultural purposes may also degrade habitat for foothill yellow-legged frog.

*Species Habitat Model.* Modeled habitat for foothill yellow-legged frog is riverine/riparian land cover above 500 feet in elevation, specifically stream systems and riverine habitat. Foothill yellow-legged frogs require perennial aquatic habitat year-round, and generally do not move far from water. Foothill yellow-legged frogs are usually found in moving water or occasionally larger pools that persist throughout the dry season. There are 1,837 acres of modeled habitat in the action area.

### **2.9.9 California Red-legged Frog**

Only a limited number of isolated populations of California red-legged frog persist in the Sierra Nevada foothills (Barry and Fellers 2013) and the species is no longer considered extant in the Central Valley due to significant declines caused by habitat modifications and exotic species (Fisher and Shaffer 1996). Elimination of the species from the valley floor may have isolated the Sierra Nevada foothill populations as foothill populations may have depended on immigrants from the valley floor. Currently, only a few drainages in the foothills of the Sierra Nevada are known to support the species.

Of the eight recovery units identified in the recovery plan for California red-legged frog (Service 2002), portions of two recovery units, the Sierra Nevada Foothills and the North Coast Foothills and Western Sacramento recovery units, are within the action area. The action area also includes designated critical habitat for California red-legged frog, but only Plan Area B5 (an approximately 50-acre area located about 21 miles east of Plan Area A) is within California red-legged frog critical habitat; Plan Area B5 falls entirely within Big Gun Conservation Bank.

Within the action area, California red-legged frog is only known to occur at Big Gun Conservation Bank located in Plan Area B5. Big Gun Conservation Bank is located within the Sierra Nevada Foothills recovery unit and within designated critical habitat for California red-legged frog. Additional occurrences outside of the action area are known from surrounding Tahoe National Forest and Bureau of Land Management lands as well as one occurrence near Ralston Ridge. There is potentially suitable habitat throughout the action area, but, because

California red-legged frog is extirpated from the Central Valley, any newly discovered occurrences of California-red-legged frog would likely only be in the foothills portion of the action area.

Habitat suitable for California red-legged frogs in the action area includes streams and ponds, and adjacent habitats where frogs can shelter, forage and disperse. Development and infrastructure (i.e., roads) may have fragmented and degraded habitat for California red-legged frog in the action area. Agricultural activities that result in the fill of wetlands and degradation of aquatic habitat may also have fragmented and degraded potentially suitable habitat.

*Species Habitat Model.* Modeled habitat for California red-legged frog includes both aquatic and upland habitats. The aquatic habitat is used for breeding and foraging, while upland habitat provides refugia and dispersal habitat. Aquatic/wetland complex, riverine/riparian and urban wetland land-cover types are modeled aquatic habitat for California red-legged frog. Upland land-cover types include oak woodland, annual grassland, pasture, cropland, alfalfa and riparian woodlands within one mile of modeled aquatic habitat. There are 8,532 acres of modeled aquatic habitat and 75,306 acres of modeled upland habitat in the action area.

#### **2.9.10 Valley Elderberry Longhorn Beetle**

The Action Area is located within the Sacramento River Management Unit described in the Revised Recovery Plan for Valley Elderberry Longhorn Beetle (Service 2019c). The revised recovery plan sets recovery criteria by Hydrologic Unit Code (HUC) in 8 sub-basins within each management unit. The following HUC 8 sub-basins are located within the action area and have recovery criteria for the number of suitable habitat patches that would need to be protected within each: Upper Bear River (5 patches), Upper Coon- Upper Auburn (1-5 patches), Lower American River (5 patches), and North Fork American River (1-5 patches). No designated critical habitat for valley elderberry longhorn beetle occurs within the action area,

There are twelve documented occurrences of the beetle in the action area from three HUC-10 watersheds: the American River, Dry Creek, and Bear River. However, there have not been comprehensive surveys for the beetle or for elderberry shrubs in the action area, and there may be additional occupied patches of habitat. Known occurrences of valley elderberry longhorn beetle include: in the American River watershed below Auburn in the vicinity of Folsom Lake; in the Dry Creek watershed along Secret Ravine, Miners Ravine, and Raccoon Creek; at the Wildlands Sheridan Mitigation Bank; and in the Bear River watershed near Wheatland in Sutter County. Beetle occurrences in the action area may be isolated from each other due to the beetle's limited dispersal ability and fragmented riparian habitat where elderberry shrubs are found. However, limited data suggest that beetles appear to persist in locations that are occupied (Holyoak and Koch-Munz 2008).

The main threat to valley elderberry longhorn beetle in the action area is the loss and degradation of its habitat. The invasive Argentine ant has also been identified as a threat to the beetle. Argentine ants may attack and consume beetle eggs and larvae and potentially interfere with adult behavior. The range of Argentine ants in the Central Valley is likely to expand unless methods of successful control become available (Service 2019c). Threats such as pesticide use, climate change, and invasive plants may also threaten the valley elderberry longhorn beetle.

*Species Habitat Model.* Modeled habitat for the valley elderberry longhorn beetle includes the valley oak woodland and riverine/riparian land cover types below 650 feet in elevation. The host plant of the beetle is elderberry, which typically occurs in riparian forests and within oak woodlands. Individual elderberry shrubs are too small to map individually; therefore, modeled habitat includes the two land cover types that typically support the shrubs. There are 6,367 acres of modeled habitat in the action area.

### **2.9.11 Vernal Pool Fairy Shrimp**

The action area is located within the Southeastern Sacramento Valley Vernal Pool Region and encompasses the Western Placer County Core Area described in the Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon (Service 2005). Designated critical habitat for vernal pool fairy shrimp occurs in the action area (see Section 2.9.14.1 below). The Southeastern Sacramento Valley Vernal Pool Region includes portions of Yuba, Nevada, Placer, Sutter, Sacramento, El Dorado, San Joaquin, Amador, and Calaveras Counties (Service 2005). Northern Hardpan vernal pools are the most common in the Southeastern Sacramento Valley Vernal Pool Region, but a few Northern Volcanic Mudflow vernal pools occur in Placer County (Service 2005). Vernal pool habitats throughout the California Central Valley have been mapped several times, beginning in the 1970's and most recently using aerial mapping in 2005 (Holland 2009). Placer County included just 5% of the total area of vernal pool grassland mapped in the Central Valley in 2005 (Holland 2009). Of the vernal pool grassland mapped in Placer County in 1994, about 35 percent had been lost by 2005. Most of this loss was due to urban development (approximately 88 percent), and some agricultural conversion (approximately 12 percent) (Holland 2009).

The Western Placer County Core Area stretches across the central part of the action area. The Western Placer County Core Area is east of the rice agriculture that is prevalent along the western edge of the County, and west of the Foothills. The core area covers approximately 31,000 acres, almost all of which is in Placer County. There is a small, 90-acre portion of the core area that extends into northwestern Sacramento County. Much of the core area is within Plan Area A, but approximately 5,200 acres is located within Plan Area B. While some parcels have been developed or converted into incompatible agriculture, there are some relatively large areas of extant vernal pool habitat with documented occurrences of vernal pool fairy shrimp within or near the core area (Service 2007a). The western edge of Placer County is primarily in rice production and no longer contains substantial vernal pool habitat. A recovery goal from the Vernal Pool Ecosystem Recovery Plan (Service 2005) is the protection of at least 85 percent of the Western Placer County Core Area.

There are 63 California Natural Diversity Database records of vernal pool fairy shrimp in the action area (California Natural Diversity Database 2019); some of these occurrences likely represent the same populations. Most documented occurrences are located in the Valley portion of the Plan Area in vernal pools of the northern hardpan and north volcanic mudflow types (see Appendix D of the Plan for locations of documented occurrences). However, most vernal pool habitat in the action area has not been surveyed for vernal pool fairy shrimp, and the number of occupied vernal pools in the action area is unknown. Within the action area, most surveys for the species have been conducted on parcels proposed for urban development or sites proposed as

mitigation for urban development, which biases the distribution of records towards those areas that have been targeted for surveys.

One of the largest threats to vernal pool fairy shrimp within the action area is habitat loss and fragmentation. The cities of Roseville and Lincoln are in an area noted for having relatively high densities of vernal pools (Service 2007a) and urban growth in this area has resulted the loss and fragmentation of important high-density vernal pool habitat. Agricultural activities in the action area have also degraded and fragmented vernal pool habitat, particularly in the western portion of the County. Vernal fairy shrimp are also threatened by the encroachment of non-native annual grasses and altered hydrology (Service 2007a). Non-native grasses maintain dominance at pool edges, sequestering light and soil moisture, promoting thatch build-up, and shortening inundation periods (Service 2007a).

Western Placer County has numerous existing open-space, wetland mitigation, and other preserves. Approximately 8,700 acres of vernal pool complex have been preserved throughout western Placer County, of which approximately 5,400 acres are within the Western Placer Core Area. There are multiple sites within the action area that are protected for the benefit of vernal pool species, including the Orchard Creek Vernal Pool Conservation Bank, Twelve Bridges Preserve, Sheridan Conservation Bank, and Yankee Slough Conservation Bank. The U.S. Air Force's Lincoln Communication Facility, which is part of the McClellan Air Force Base, is now part of the 220-acre Western Placer Schools Conservation Bank (Service 2007a).

*Species Habitat Model.* Modeled habitat for vernal pool fairy shrimp is vernal pool complex land cover type. Fairy shrimp occur and persist in vernal pools and other aquatic features that have the correct microhabitat characteristics and hydroperiod to support the species. Individual pools that have the features to support fairy shrimp cannot be mapped on a landscape scale and, consequently, the modeled habitat may overestimate the amount of habitat that has the microhabitat necessary to support the species.

There are 2,230 acres of modeled vernal pool constituent habitat and 44,278 acres of modeled vernal pool complex in the action area. The Plan categorized vernal pool complex as either having high, medium or low density of vernal pool constituent habitats (see Plan figure 3-13 for locations and Plan Section 3.3.1.2.4 for additional details). High-density vernal pool complex is defined as having a greater than 5 percent density of vernal pool constituent habitat; intermediate density vernal pool complex has between 1 and 5 percent vernal pool constituent habitats; and low density vernal pool complex is less than 1 percent vernal pool constituent habitat. The Plan also characterized vernal pool complex land by three levels of disturbance: minimal, moderate, and high disturbance. Disturbance is primarily from past agricultural uses such as disking or overgrazing. Nearly half (49.6%) of the extant vernal pool complex in the action area has had minimal disturbance.

### **2.9.12 Vernal Pool Tadpole Shrimp**

Vernal pool tadpole shrimp and vernal pool fairy shrimp can co-occur in vernal pool constituent habitat and recovery goals for these species are addressed together in the recovery plan. Therefore, the description of the Southeastern Sacramento Valley Vernal Pool Region and Western Placer County Core Area as well as descriptions of vernal pool habitat and associated

threats provided above for vernal pool fairy shrimp also apply to vernal pool tadpole shrimp. No designated critical habitat for vernal pool tadpole shrimp is located within the action area.

The historical distribution of vernal pool tadpole shrimp in the action area is not known, but is thought to have been patchy. The action area likely represents the eastern edge of their distribution. There are only four known populations of vernal pool tadpole shrimp in the action area, although they may occur at additional locations that have not been surveyed. Vernal pool tadpole shrimp occur in greater numbers in counties to the north, south and west of the action area. The greatest concentration of known populations is located to the south of the action area within the vernal pool complexes of Sacramento County (Service 2005).

Within the action area, one occurrence of tadpole shrimp is on an established conservation bank, one has been extirpated by development, and two are threatened by development. Tadpole shrimp require turbid pools with a particularly long hydroperiod, which may be uncommon in the action area. Urban development and agriculture may have fragmented tadpole shrimp habitat and isolated populations. These isolated populations may have been more vulnerable to stochastic events.

*Species Habitat Model.* Modeled habitat for vernal pool tadpole shrimp is the same as that for vernal pool fairy shrimp, described above. However, because tadpole shrimp occur and persist in vernal pools and other aquatic features that have specific microhabitat characteristics and require a long hydroperiod to complete their life cycle, the modeled habitat overestimates the amount of habitat suitable to support the species. There are 2,230 acres of modeled vernal pool constituent habitat and 44,278 acres of modeled vernal pool complex in the action area.

### **2.9.13 Conservancy Fairy Shrimp**

The Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon (Service 2005) does not identify the Southeastern Sacramento Valley Vernal Pool Region as being important to conservancy fairy shrimp and does not set any recovery criteria for conservancy fairy shrimp in the Western Placer County Core Area. No designated critical habitat for conservancy fairy shrimp is located within the action area.

There is only one occurrence of conservancy fairy shrimp in the action area at Mariner Ranch Conservation Bank. There is currently not sufficient information to determine whether this occurrence represents a population or an anomaly, and further monitoring is needed to determine whether this locality represents a sustainable population of this species (Service 2012).

Conservancy fairy shrimp typically occur in large, turbid playa pools that persist for a long time each year, which are generally not found in the action area. Development in the action area may have resulted in the loss, degradation and fragmentation of pools that have the correct abiotic characteristics to support conservancy fairy shrimp, such as hydroperiod, temperature and turbidity. Agricultural activities may have also impacted conservancy fairy shrimp in the action area.

*Species Habitat Model.* There is no modeled habitat for this species in the Plan; instead, pools downstream of the occupied pool within the same watershed are considered potential habitat.

## **2.9.14 Critical Habitat**

### **2.9.14.1 Vernal Pool Fairy Shrimp**

Two designated critical habitat units for vernal pool fairy shrimp, units 12a and 12b, are within the action area. These two units total 2,580 acres; however, based on land cover mapping for the Plan, only approximately 1,800 acres of designated critical habitat is mapped as vernal pool complex and is therefore likely to support the Primary Constituent Elements for vernal pool fairy shrimp critical habitat defined above in Section 2.8.13 (ICF International 2014). Although vernal pool constituent habitats could be found in other land cover types, mapping conducted for the Plan found that 91 percent of vernal pool constituent habitat falls within areas mapped as vernal pool complex. Even if vernal pool constituent habitat is present in land cover types other than vernal pool complex within the critical habitat units, these land cover types are unlikely to have the topographical features described in Primary Constituent Element 1 for vernal pool fairy shrimp critical habitat.

Based on the mapping used in the Plan to designate low, medium and high categories of vernal pool constituent habitat density within vernal pool complex in the action area (see Plan Section 3.4.3.1, *Land Cover Types* for a description of each of these categories), most of the critical habitat (1,260 acres) is categorized as having a low density (0-1 percent) of vernal pool constituent habitat. Approximately 430 acres of designated critical habitat has a medium density (1-5 percent) of vernal pool constituent habitat, and approximately 110 acres supports high densities (>5 percent) of vernal pool constituent habitat (ICF International 2014).

Of the 1,800 acres of vernal pool complex within designated critical habitat, 850 acres is within the Potential Future Growth Area. Approximately half of the critical habitat in the Potential Future Growth Area (440 acres) has a low density of vernal pools. However, most of the high-density vernal pool complex is within the Potential Future Growth Area (95 acres). Another 560 acres of vernal pool complex within designated critical habitat is located within the Reserve Acquisition Area, and approximately 390 acres of this are protected within existing open space (ICF International 2014). Analysis conducted for the Plan found that most vernal pool complex within the critical habitat in the Potential Future Growth Area shows signs of moderate to high levels of disturbance while vernal pool complex located in the Reserve Acquisition Area showed lower levels of disturbance (see Plan Section.3.4.3.1, *Land Cover Types* for a description of disturbance levels) (ICF International 2014).

## **2.10 Effects Analysis Development**

This Biological Opinion uses a programmatic approach to evaluate the effects of Covered Activities because details about individual Covered Activities are not known at this time, and because the Covered Activities will occur over a large and ecologically diverse area over the course of 50 years. Furthermore, the Reserve System, the foundation of the Plan's Conservation Strategy, will be assembled during implementation of the Plan. Consequently, the exact location of lands to be conserved in the Reserve System is not yet known, limiting the precision of effects analyses. Therefore, effects to Covered Species and critical habitat in this Biological Opinion draw from the assessment of effects described in Chapter 4, *Effects of Covered Activities* of the Plan and that are summarized below.

Note that estimates of effects are based on land-cover mapping described in Chapter 3, *Physical and Biological Setting* of the Plan, and on modeled habitat for Covered Species described in Appendix D of the Plan. The accuracy of the following effects analyses are subject to the error inherent in land cover mapping and estimates of associated constituent habitats. However, implementation of the Plan will be based on surveys of reserve lands and areas affected by Covered Activities; these detailed surveys will provide a more accurate accounting of actual take and conservation to ensure that actual effects do not exceed estimated maximum effects and that conservation is meeting the Stay Ahead Provision described in section 8.4.3 of the Plan. Maximum effects presented below are take limits, which cannot be exceeded without amending the permits and the Plan (Section 10.5.3 of the Plan)

### **2.10.1 Effects Mechanisms Producing Covered Species Responses**

For the purposes of effects analyses to Covered Species, this Biological Opinion evaluates the likely responses of Covered Species and critical habitat to three main types of effect mechanisms associated with implementation of Covered Activities: habitat loss and fragmentation, reduction in habitat function, and effects to individuals. Each of these mechanisms are described below.

The Plan's Conservation Strategy includes biological goals, objectives, and conservation measures (see Chapter 5 of the Plan) and Conditions on Covered Activities (see Chapter 6 of the Plan) that will avoid or minimize effects from these mechanisms. Beneficial effects that will result from implementation of the Conservation Strategy are described below in section 2.11 *General Effects Analysis* and in the *Conservation Actions* section for each Covered Species in Section 2.12. Effects to Covered Species.

### **2.10.2 Effects Analysis Methods**

This section provides a description of the methods used by the Conservation Plan to estimate effects of Covered Activities. For additional details about these methods, refer to Section 4.3 of the Plan.

#### **2.10.2.1 Habitat Loss from Land Conversion**

Within Plan Area A, the Plan used two methods to estimate habitat loss resulting from land conversion from development: one specific to the Valley (see Plan Section 4.3.1.1, *Land Conversion in the Valley*), and one specific to the Foothills (see Plan Section 4.3.1.2, *Land Conversion in the Foothills*). For the Valley, estimates of habitat loss from land conversion from development are not based on actual project plans, but on a growth scenario that uses estimated activity footprints and historical patterns of development (see Plan Appendix M *Growth Scenario Memo*).

In the Foothills, higher-density growth is projected in the south along the I-80 corridor and in unincorporated Granite Bay and portions of the Loomis Basin. Much lower-density, rural residential growth is projected to the north. In the higher-density portion of the Foothills Potential Future Growth Area, The Plan used the analysis described in Plan Appendix M, *Growth Scenario Memo*, to estimate growth in employment and housing. Then to estimate the amount of habitat loss resulting from covered urban and suburban growth, land use density factors were applied as further described in Plan Section 4.3.12. In low-density areas in the



foothills, estimates for habitat loss from land conversion were based on the amount of rural residential development that could be accommodated by available, subdividable lands.

Habitat loss in Plan Area B will result almost entirely from activities in Plan Area B1, *Permittee Activity in Non-participating City Jurisdiction* (see Plan Figure 1-2). Activities in this area include several specific projects such as Placer County Water Agency canals and new pipelines, a portion of Placer Parkway, the I-80/State Route 65 interchange, and operations and maintenance of miscellaneous County-owned facilities. Placer County Water Agency activities in Plan Area B2 are not expected to result in appreciable loss of habitat. The conservation actions in Plan Areas B3, B4, and B5 will have a net benefit on Covered Species and habitats (see Plan Section 4.4.7, *Conservation Programs*).

#### 2.10.2.2 Temporary Effects

Covered Activities will also result in temporary losses of habitat. The Plan considers a loss of habitat to be temporary if effects to that habitat last for less than one year and the disturbed area recovers to pre-project or ecologically improved conditions within one year. Most of the temporary effects anticipated to result from Covered Activities are related to urban development, including construction corridors for pipelines, utilities, roads, and other infrastructure and for flood control. Other examples of covered temporary effects include routine maintenance in stream channels for flood control, and maintenance along roadsides of highways. Estimates of temporary effects on natural communities in the Plan were based on a percentage of the total habitat loss allowed or estimated under the Plan (see Section 4.3.2 of the Plan for percentages used for specific natural communities).

#### 2.10.2.3 Indirect Effects

The Plan estimates indirect effects from Covered Activities in the Valley using the amount of land likely to fall within 250 feet of the outer edge of new development in areas that are not already subject to urban indirect effects. Existing indirect effects were estimated in GIS using the present pattern of development and key indicators of indirect effects (see section 4.3.3, *Methods to Estimate Indirect Effects in the Valley* of the Plan for additional details about methods and Tables 4-4A-C in the Plan for estimates of existing indirect effects in the Plan Area).

The Plan considers four categories of indirect effects from Covered Activities in the Valley. They include (1) off-site indirect effects that are adjacent to urban development projects in the Potential Future Growth Area; (2) off-site indirect effects that are adjacent to rural development in the Conservation and Rural Development Area; (3) new urban edge that would be established along the Potential Future Growth Area/Conservation and Rural Development Area border; and (4) on-site indirect effects on vernal pool wetlands.

In the Foothills, quantification of indirect effects associated with an increase in rural densities was based on the portion of predicted future growth that would result from the subdivision of parcels larger than 10 acres into parcels smaller than 10 acres. Where this subdivision occurs, the balance of the parcel is considered to be subject to indirect effects associated with fragmentation and human presence.

#### 2.10.2.4 Effects on Streams

Although the effects of urban development on the Stream System were captured in estimates of habitat loss, this calculation did not include impacts from in-stream Covered Activities such as bridge and flood-protection projects that will involve work directly in streams. The Plan used specifications of typical projects to estimate temporary and permanent disturbance for the in-stream program. The relative frequency of road crossings or other Covered Activities affecting the in-stream environment was extrapolated to total effects of all in-stream programs over the permit term (see Plan Section 4.3.5, *Methods for effects of Covered Activities on Streams* for additional details).

#### 2.10.2.5 Effects from Habitat Management, Enhancement, Restoration and Creation

Conservation measures for Covered Species involve the creation, enhancement, and restoration of habitat. These activities will result in temporary effects to habitat and in some cases convert one land-cover type to another. Management of Reserve System lands will also result in temporary effects to habitat. However, these activities will result in a net benefit to Covered Species and are described qualitatively rather than quantified (see Plan Section 4.3.7 for additional details).

### 2.11 General Effects Analysis

To minimize repetition in this Biological Opinion, we use a two-tiered approach to describe the effects of the proposed action. This Section describes the effects resulting from Covered Activities on natural communities. Sections 2.12.1-2.12.12 then identifies particular effects for each Covered Species, and Section 2.12.13 discusses effects to designated critical habitat.

#### 2.11.1 Habitat Loss and Fragmentation

This section describes habitat loss and fragmentation in the Plan Area as a whole and then provides detailed descriptions of habitat loss and fragmentation by natural community type. Although habitat fragmentation results in a reduction of habitat function, this effect mechanism is closely tied to habitat loss and is therefore described here rather than in Section 2.11.2, *Reduction in Habitat Function* below.

##### 2.11.1.1 Plan Area

Table 1 provides estimates of the acreage of natural community and constituent habitat that will be lost as a result of Covered Activities, including urban and rural residential development and regional public programs (see Section 2.2 above for a description of Covered Activities). The table also includes the total acreage of each natural community and constituent habitat currently within Plan Area A. Only a small amount of the habitat loss described in Table 1 is in Plan Area B where Covered Activities will affect less than 1 percent of the 50,636-acre land area of the non-participating cities.

In Table 1, habitat loss is expressed as either the maximum acreage of loss of a natural community, land cover type, or constituent habitat (maximum permanent effects), or as estimates of projected loss for some constituent habitats (i.e., flexible permanent effects). Temporary

effects are also defined as either maximum or flexible. Maximum effects are take limits, which cannot be exceeded without amending the permits and the Plan (Plan Section 10.5.3, *Amendments*). Flexible effects are reasonable estimates of land conversion, but actual effects may be greater or more limited as long as the maximum effects are not exceeded. Note that the relationship between natural community and constituent habitats is hierarchical, and constituent habitats are nested within natural communities (see Section. 2.9.1, above). For constituent habitats with flexible effects, maximum habitat loss is dictated either by the maximum effects for the natural community or for a group of constituent habitats within a natural community. For example, total maximum effects for vernal pool constituent habitats are 580 acres. Within the 580-acre limit, no more than 185 acres of loss of vernal pool wetlands is permissible. The allowable loss of other constituent habitats (seasonal wetlands in vernal pool complex and seasonal swales) are flexible, but effects that exceed the collective maximum effect of 580 acres for all vernal pool complex constituent habitats would not be covered.

As described in Section 2.2 above, Plan Area A is divided into the Valley and Foothills. The Plan further divides both the Valley and Foothills areas into a Potential Future Growth Area and a Conservation and Rural Development Area (see Plan Figures 1-5 and 2-4; note that Conservation and Rural Development Areas include the Reserve Acquisition Area and existing reserves/protected areas outside the Potential Future Growth Area). The Plan then sets maximum effects within each of these components. These limits are shown in Plan Table 4-1. By doing this, the Plan not only sets a maximum habitat loss for each natural community and all communities as a whole (as shown in Table 1), but also identifies where these effects will take place within the Plan Area. Note that in Plan table 4-1, the maximum effects for one community or constituent habitat are not necessarily additive across geographies. Generally, the maximum effects within the Valley subarea will be roughly the sum of effects in the Valley Potential Future Growth Area and the Valley Conservation and Rural Development Area or slightly smaller. For example, the maximum effect on vernal pool complex in the Valley is 12,200 acres in the Potential Future Growth Area and 280 acres in the Conservation and Rural Development Area; if actual land conversion from Covered Activities in the Conservation and Rural Development Area reached the 280-acre maximum effect, the maximum effect in the Potential Future Growth Area would be reduced to 12,120 acres so as to avoid exceeding the overall Valley vernal pool complex maximum effect of 12,400 acres.

The maximum acreage of habitat loss from Covered Activities within the Plan Area as a whole is 30,100 acres. The maximum acreage of temporary effects from Covered Activities in the Plan Area is 1,335 acres. Urban development in the Valley Potential Future Growth Area accounts for most of the loss of habitat from Covered Activities including 19,700 acres of land conversion. Within the Valley Conservation and Rural Development Area, only one percent of the total land area will be subject to land conversion from Covered Activities. This includes a loss of 280 acres of vernal pool complex, 200 acres of land currently in rice production, and 210 acres of other agriculture and grassland. In total within the Valley (i.e. within the Valley Potential Future Growth Area and Valley Conservation and Rural Development Area combined), 20,200 acres (approximately 33 percent) of natural communities will be subject to land conversion from Covered Activities.

Most habitat loss in the Foothills Potential Future Growth Area will result from rural residential development, with the majority of development anticipated to occur in the already built-up areas

around I-80, the city of Auburn, and State Route 49 to the north. An estimated 8,770 acres of habitat will be lost to Covered Activities within the Foothills Potential Future Growth Area. Within the Foothills Conservation and Rural Development Area, the Plan estimates 1,800 acres of habitat will be lost to Covered Activities, mainly rural residential development. In total within the Foothills (i.e. within the Foothills Potential Future Growth Area and Foothills Conservation and Rural Development Area combined), 9,600 acres (approximately 12 percent) of natural communities will be subject to land conversion from Covered Activities

Table 1. Extent of Natural Communities and the Maximum Allowable Loss (in acres; from Plan Tables 4-1, 4-3, 5-3, 5-4 and 5-5).

<b>Natural Community and Land Cover Type</b>	<b>Extent in Plan Area A</b>	<b>Maximum Permanent Effects</b>	<b>Flexible Permanent Effects</b>	<b>Maximum Temporary Effects</b>	<b>Flexible Temporary Effects</b>
<b>Grassland</b>	34,760	6,900	0	235	0
<b>Vernal Pool Complex</b>	45,065	12,550	0	455	0
Constituent Habitats	2,237	580	0	30	0
Vernal Pool	790	185	0	15	0
Seasonal Wetland	845	0	223	0	8
Seasonal Swale	602	0	172	0	7
Uplands	42,829	0	11,970	0	425
<b>Aquatic/Wetland Complex</b>	3,433	0	260	0	105
Constituent Habitats	2,850	260	0	105	0
Fresh Emergent Marsh	1,112	105	0	50	0
Lacustrine	1,061	0	103	0	28
Seasonal Wetland	677	0	52	0	27
Uplands	583	0	0	0	0
<b>Riverine/Riparian Complex</b>	6,685	0	490	165	0
Constituent Habitats	5,519	490	0	165	0
Riverine	868	0	115	0	50
Riparian	4,651	375	0	115	0
Uplands	1,166	0	0	0	0
<b>Oak Woodland</b>	50,870	6,210	0	180	0
<b>Valley Oak Woodland</b>	1,364	140	0	25	0
<b>Agriculture</b>	24,954	0	3,550	0	170
Rice	19,580	2,060	0	90	0
<b>Total</b>	<b>167,131</b>	<b>15,975</b>	<b>14,125</b>	<b>710</b>	<b>625</b>

Table 2. Maximum Allowable Loss by Geographic Area, in acres. Acreages in italics represent flexible allowable losses.

Communities and Constituent Habitats	Plan Area A						Plan Area B
	Valley Potential Future Growth Area	Valley Conservation and Rural Development Area	Total	Foothills Potential Future Growth Area	Foothills Conservation and Rural Development Area	Total	Total
<b>Vernal Pool Complex (VPC)</b>	<b>12,200</b>	<b>280</b>	<b>12,400</b>	<b>10</b>	<b>100</b>	<b>100</b>	<b>50</b>
Vernal Pool Complex Uplands	<i>11,640</i>	<i>270</i>	<i>11,830</i>	<i>10</i>	<i>100</i>	<i>100</i>	<i>40</i>
Vernal Pool Wetlands	560	10	570	-	-	-	10
Vernal Pools	180	10	180	-	-	-	5
Seasonal Wetlands in VPC	220	<i>10</i>	220	-	-	-	3
Seasonal Wetland Swales	<i>170</i>	<i>10</i>	<i>170</i>	-	-	-	2
<b>Grassland</b>	<b>3,400</b>	<b>110</b>	<b>3,500</b>	<b>3,000</b>	<b>500</b>	<b>3,300</b>	<b>100</b>
<b>Aquatic/Wetland Complex</b>	<b>120</b>	<b>10</b>	<b>120</b>	<b>110</b>	<b>30</b>	<b>130</b>	<b>10</b>
Fresh Emergent Marsh	50	10	50	40	10	50	5
Lacustrine	<i>50</i>	<i>10</i>	<i>50</i>	<i>40</i>	<i>10</i>	<i>50</i>	<i>3</i>
Non-VPC Seasonal Wetlands	<i>20</i>	<i>10</i>	<i>20</i>	<i>30</i>	<i>10</i>	<i>30</i>	<i>2</i>
<b>Riverine/Riparian Complex</b>	<b>150</b>	<b>10</b>	<b>150</b>	<b>310</b>	<b>20</b>	<b>330</b>	<b>10</b>
Riverine	80	<i>10</i>	80	<i>30</i>	<i>10</i>	<i>30</i>	5
Riparian	70	10	70	280	10	300	5
<b>Valley Oak Woodland</b>	<b>30</b>	<b>10</b>	<b>30</b>	<b>100</b>	<b>10</b>	<b>100</b>	<b>10</b>
<b>Oak Woodland</b>	<b>1,100</b>	<b>10</b>	<b>1,100</b>	<b>4,700</b>	<b>400</b>	<b>5,100</b>	<b>10</b>
<b>Agriculture</b>	<b>2,700</b>	<b>270</b>	<b>2,900</b>	<b>540</b>	<b>20</b>	<b>540</b>	<b>110</b>
Rice	1,800	200	2,000	-	-	-	60
Other Agriculture	<i>900</i>	<i>70</i>	<i>900</i>	<i>540</i>	<i>20</i>	<i>540</i>	<i>50</i>

Effects of in-stream programs (see Section 2.2.5.16 above for a description of these programs) were calculated separately from habitat loss totals shown in Table 1; in-stream effects are measured by the linear extent of stream habitat affected. Permanent effects to streams will result mainly from road crossings and, to a lesser extent, from flood protection projects. Both new construction and reconstruction of existing bridges will increase the area of the stream permanently subject to effect, even if the stream bottom itself is restored after construction. Permanent effects related to bridge construction and repair include the loss of riparian land cover and the loss of stream/riverine habitat to pilings, piers and/or footings. Permanent effects from flood protection projects include the installation of hardscape on banks for erosion/sediment control and bank stabilization and the conversion of natural or semi-natural land cover to flood detention/water retention basin. The Plan estimates that there will be 5.51 miles of permanent effects to streams resulting from all in-stream activities; this is equivalent to 1 percent of existing mapped streams. Temporary effects to in-stream habitat are most likely to occur during construction when use of heavy equipment may result in loss of vegetation associated with accessing a site and during dewatering activities. Activities such as minor vegetation, silt, and debris removal could also cause short-term temporary increases in turbidity. The Plan estimates that 36.51 miles of stream will be temporarily effected by in-stream activities; this is equivalent to 6.3 percent of existing mapped streams.

Although conservation actions in support of the Conservation Strategy will be implemented to benefit species and natural communities, some temporary effects to habitat will occur in the course of managing reserve lands and in implementing habitat restoration and creation. For example, restoration and creation activities will temporarily affect land cover surrounding the restored/created wetlands. Installing and maintaining fences may have temporary effects on land cover within and immediately adjacent to the fenceline. Riparian and in-stream restoration projects may involve vegetation removal, and the temporary dewatering of stream reaches. Prescribed burning or creation of fuel breaks in support of fuels management on reserve lands could temporarily effect grassland and woodland habitats. In addition, limited recreational facilities such as trails may be developed on future reserve lands (see Section 6.3.6.1, *Reserve Management Condition 1, Public Access and Recreation on Future Reserve Lands*) and result in permanent habitat loss. No more than 50 acres of trails (this equates to 70 miles of trail assuming a 6-foot width) may be created on future reserves. Habitat lost to trails on the Reserve System will count towards totals in Table 1.

In the case of restored or created habitat, some land-cover types will be converted from one type to another. In the Valley, the majority of restoration and creation of vernal pool complex and constituent habitats will take place on grasslands; approximately 2,700 acres of grasslands will be converted to vernal pool complex. In the Foothills, approximately 400 acres of grassland will be restored to oak woodlands, wetlands, and riparian habitat. In addition, up to 8,000 acres total of rice land or other agriculture land may be used for some other form of agriculture, and a portion (approximately 1,760 acres) may be used to restore natural communities such as fresh emergent marsh and other wetlands, riparian, valley oak woodland, and vernal pool complex. This conversion of land from one type to another will not result in an overall loss of habitat for Covered Species or cause habitat fragmentation. While temporary effects resulting from these conservation actions have not been quantified, they will be minimal, will be implemented in ways to avoid or minimize effects on Covered Species (see Section 5.3.2.1.2, *Content of Reserve Unit Management Plans*), and will ultimately provide a benefit to Covered Species.

The loss of habitat in the Valley and Foothills will fragment habitat for Covered Species in the action area. Construction of new roads or canals may create barriers that disrupt movements of Covered Species and other native wildlife among habitat areas. In addition, construction of new linear infrastructure (e.g., flood channels, levees/dikes, and canals) may create barriers for movement of wildlife species with limited mobility disrupting vital behavioral patterns such as migration, dispersal, or seeking food or shelter. Habitat fragmentation can also limit or prevent the dispersal of seeds, plant pollinators, cysts, eggs, and other propagules within and between populations. Because habitat fragments are smaller than the whole, they typically have diminished resources to sustain viable populations of Covered Species (Franklin et al. 2002) and are vulnerable to stochastic events and extirpation. Isolated fragments may also be less likely to be repopulated.

While development within the Valley Potential Future Growth Area will increase habitat fragmentation, habitat within the Valley Potential Future Growth Area is already highly fragmented (the Plan estimates that approximately 27 percent of vernal pool complex within the Potential Future Growth Area is currently within 250 feet of existing urban development), and much of the remaining habitat within the Potential Future Growth Area will be developed by the end of the permit term. The Plan allows only up to 2,000 acres of the Reserve System to be established in the Valley Potential Future Growth Area and only limited habitat is expected to remain in the Potential Future Growth Area at the end of the permit term. As a result, habitat fragmentation will likely not have as great an effect within the Valley Potential Future Growth Area as it will in other parts of the Plan Area where more habitat will remain and be susceptible to additional fragmentation.

Covered Activities will increase habitat fragmentation in the Valley Conservation and Rural Development Area where the majority of habitat will not be directly affected. Although the Valley Conservation and Rural Development Area is already significantly fragmented by roads, drainage features, and agriculture, Covered Activities will increase the extent of habitat fragmentation. Covered Activities will primarily increase habitat fragmentation at the interface between the Valley Potential Future Growth Area and Conservation and Rural Development Area, although certain transportation projects in the Valley Conservation and Rural Development Area that involve construction of new roads or widening of existing roads will also fragment habitat and create barriers for Covered Species.

Fragmentation is likely to have the greatest effect within the Foothills Potential Future Growth Area and Conservation and Rural Development Area where habitat loss will result mainly from rural development. The impact of fragmentation is higher in the rural setting in part because dispersed patterns of development maximizes the individual influence of each home (Lenth et al. 2006), and because the existing landscape is generally less disturbed. In addition, lengthy private roads and driveways are often required to access rural homes. These roads further fragment the landscape by splitting larger blocks of contiguous habitat into smaller blocks. New roads can potentially degrade movement corridors, introduce vehicle-related mortality, and create barriers to wildlife movement.

*Conservation Actions.* Within the 269,118- acre Plan Area, Covered Activities will result in the permanent loss of 30,100 acres and in the temporary loss of 1,335 acres of natural and semi-natural communities that could provide habitat for Covered Species and increase fragmentation



of remaining habitat. In order to minimize and mitigate for these effects, the Plan includes landscape-level biological goals intended to preserve and manage large interconnected blocks of land. As more specifically described in section 2.3.1 above, by the end of the 50-year permit term, an approximately 47,300-acre Reserve System will be established within the Plan Area (see Plan Table 5-3). The Reserve System will augment approximately 16,000 acres of existing reserves and protected areas in the action area and cumulatively, 38 percent of the present natural and semi-natural landscape in Plan Area A would ultimately be subject to conservation management.

In order to minimize the effects of habitat fragmentation and to preserve habitat connectivity within the action area, the Reserve System will mainly be located in the western and northern Valley and in the northern Foothills in the Reserve Acquisition Area, away from future urban and suburban growth. Only 1 percent of the total Valley Reserve Acquisition Area land area will be affected by development related Covered Activities. Within the Foothills Conservation and Rural Development Area, the establishment of 11,200 acres of reserves, combined with 6,000 acres of existing protected lands, will leave approximately half of the Foothills Conservation and Rural Development Area in private ownership and potentially available for very low-density residential development and large parcel subdivision.

In order to link and provide spatial diversity of protected communities, the Reserve System will be distributed across the Plan Area. See Section 2.3.1 above for a description of the five conservation zones considered in the Plan, Plan Section 5.3.1.3.2, *Conservation Zones* for a summary of the conservation that will occur in each zone, and Table 5-3 of the Plan for acreages to be protected within each Conservation Zone.

Impacts from habitat fragmentation will also be minimized through design of the Reserve System. See Plan Section *CMI L-2, Reserve Acquisition Strategy* for a description of reserve design principles that will guide reserve assembly. Habitat fragmentation will be minimized by preserving large areas and working to minimize edge to area ratios, by preserving habitat connectivity between new and existing preserves in the Plan Area, and by locating reserves on high-quality habitat between or adjoining existing preserves.

The following landscape level biological goals and objectives (and their associated conservation measures, which are not listed here, see Plan Table 5-8) from Chapter 5 of the Plan will reduce effects of habitat loss and fragmentation on the scale of the Plan Area as a whole:

- Goal L-1, A Reserve System with representative natural communities along a range of environmental gradients large enough to support ecosystem function, sustain populations of Covered Species, maintain or increase biological diversity of native species, and accommodate changing environmental conditions.
- Objective L-1.1, Establish a Large, Interconnected Reserve System.
- Goal L-2, Reserve System connectivity to sustain the effective movement and genetic interchange of organisms between natural communities in a manner that maintains the ecological integrity of the natural communities within the Plan Area.

- Objective L-2.1, Protect Habitat Linkages.
- Objective L-2.2, Maintain and Enhance Reserve System Permeability.
- Objective L-2.3, Establish East–West Corridors.
- Objective L-2.4, Conserve North–South Connectivity.
- Objective L-2.5, Conserve Upland Natural Communities Surrounding Aquatic/Wetlands Complex Natural Communities.

#### 2.11.1.2 Vernal Pool Complex and Grassland Communities

The Plan estimates that Covered Activities will result in the loss of 12,550 acres of vernal pool complex, which equates to approximately 28 percent of mapped vernal pool complex in the action area. About half of the vernal pool complex anticipated to be lost is mapped as having an intermediate or high density of vernal pool constituent habitat (see Plan Section 3.4.3.1, *Land Cover Types* for a description of density categories). The Plan estimates that Covered Activities will result in the loss of 6,900 acres of grassland in the Plan Area. The maximum extent of loss of vernal pool constituent habitats within the affected vernal pool complex and grasslands will be 580 acres, of which no more than 185 acres will be vernal pool wetlands.

In addition, temporary impacts to vernal pool complex and vernal pool constituent habitat will result from rural and urban development, regional public programs, and conservation actions that affect an area, but not to the extent that the effect persists for a year. Covered Activities will result in temporary effects to 30 acres of vernal pool constituent habitat within 455 acres of vernal pool complex that will be temporarily affected. No more than 15 acres of temporarily impacted vernal pool constituent habitat will be vernal pool wetlands. Up to 235 acres of grassland will be temporarily affected.

Most of the loss of vernal pool complex and grassland will occur in the Valley portion of the Plan Area. The maximum amount of loss for the Valley is 12,400 acres of vernal pool complex, and 3,500 acres of grasslands. The Valley is further divided into the Potential Future Growth Area and the Conservation and Rural Development Area (see Plan Figures 1-5 and 2-4; note the Valley Conservation and Rural Development Area equates to the Valley Reserve Acquisition Area and existing reserves outside the Potential Future Growth Area). Most loss of vernal pool complex (12,200 acres) and grassland (3,400 acres) will occur in the Valley Potential Future Growth Area as a result of land conversion from development.

More limited loss of vernal pool complex will occur in the Valley Conservation and Rural Development Area. Reserve acquisition will be focused on the Valley Conservation and Rural Development Area, where there are larger areas of intact natural communities, especially vernal pool complex and grasslands. Within the Valley Conservation and Rural Development Area, no more than 280 acres of vernal pool complex with 8 acres of vernal pool constituent habitats, and no more than 110 acres of grassland will be lost as a result of Covered Activities. However, actual loss of these habitats may be less because the total loss of vernal pool complex in the Valley Potential Future Growth Area and Conservation and Rural Development Area must not

exceed 12,400 acres and loss of grassland in the Valley must not exceed 3,500 acres (see Table 4-1 in the Plan for maximum loss of natural communities and constituent habitats by Plan Area).

Grassland in the Foothills represents a transition between the Valley grassland and the more heavily wooded uplands. Vernal pool complex is limited in the Foothills because, although some soils there can support vernal pool constituent habitat, the soils are generally better-drained, rolling landscapes that intergrade with oak savanna. A maximum of 10 acres of vernal pool complex will be lost in the Foothills Potential Future Growth Area, and no more than 100 acres of vernal pool complex will be lost in the Foothills Conservation and Rural Development Area. Loss of vernal pool complex in the Foothills Potential Future Growth Area and Conservation and Rural Development Area must not exceed a combined total of 100 acres and no vernal pool constituent habitat is anticipated to be lost in the Foothills. Grasslands are much more extensive in the Foothills, and Covered Activities are estimated to result in the loss of 3,300 acres of grassland. A total of 3,000 acres of grassland may be lost in the Foothills Potential Future Growth Area, and no more than 500 acres may be lost in the Foothills Conservation and Rural Development Area.

Effects from fragmentation of vernal pool complex and grassland will mainly take place within the Valley Conservation and Rural Development Area where the majority of habitat will not be directly affected. While there is already significant fragmentation resulting from roads and agriculture, Covered Activities will increase habitat fragmentation at the interface between the Potential Future Growth Area and Conservation and Rural Development Area in both the Valley and the Foothills as a result of some parcels being developed and others being protected or maintained in agriculture.

*Conservation Actions.* Listed below are biological goals and objectives from Chapter 5 of the Plan that will reduce and offset effects to vernal pool complex and grassland described above and that will result in beneficial consequences to Covered Species that use these habitats. See Plan Table 5-8 for specific conservation measures associated with these goals and objectives. Also, see Section 6.3 of the Plan for conditions on Covered Activities that will reduce effects to vernal pool complex and grassland. Beneficial effects as well as additional species-specific goals and objectives are described in Section 2.12 below where particular effects for each Covered Species are presented.

- Goal VPCG-1, Interconnected vernal pool complex and grassland natural communities with functional ecological process that sustain Native Species.
- Objective VPCG-1.1, Protect Existing Vernal Pool Complexes.
- Objective VPCG-1.2, Restore/Create Vernal Pools.
- Objective VPCG-1.3, Protect Grasslands.
- Objective-VPCG-1.4, Restore Grasslands.
- Objective VPCG-2.1, Enhance Vernal Pool Vegetation and Hydrology.

Implementation of these goals, objectives and conservation measures will protect 17,000 acres of vernal pool complex including 790 acres of vernal pool constituent habitat (of which at least 250 acres will be vernal pools), and in the restoration of 3,000 acres of vernal pool complex including 900 acres of vernal pool constituent habitat of which a minimum of 34 percent (326 acres) will be delineated as vernal pools. At least 50 percent of the vernal pool complex preserved will have high or intermediate density of vernal pool constituent habitat. Most of the habitat protected will be in the Valley Reserve Acquisition Area divided between the North Valley and South Valley Conservation Zones (see Plan Figure 5-1 and Table 5-3 of the Plan for acreages to be protected within each Conservation Zone) although up to 2,000 acres may be within the Potential Future Growth Area.

To help ensure that restoration is appropriately sited and likely to be successful, the Plan includes specific criteria for restoration sites where restoration of vernal pool complex and vernal pool constituent habitat may take place (see Plan CM VPCG-2, *Reserve Design for Vernal Pool Restoration/Creation*). The Plan also requires extensive monitoring of vernal pool restoration sites and describes criteria for determining whether restoration of vernal pool habitat is successful (see Plan Section 7.4.3.1.2, *Monitor Success of Vernal Pool Complex Restoration/Creation Measures*).

To help minimize temporal loss of habitat, the Plan includes a Stay-Ahead Provision (see Section 8.4.3 of the Plan) and milestones (see Plan Section 8.12), which will ensure habitat is protected, restored and created at a rate consistent with impacts. The Plan also includes an Advanced Acquisition obligation (see Plan Section 5.3.1.5.2) that must be met prior to year two of Plan implementation or prior to Covered Activities impacting more than 1,800 acres of vernal pool complex or 80 acres of vernal pool constituent habitat.

After restoration and creation is successfully completed, a total of 20,000 acres of vernal pool complex including 1,690 wetted acres of vernal pool constituent habitat will be protected, if the maximum impacts to vernal pool complex occur (restoration of vernal pool constituent habitat will occur at a 1.5:1 ratio of restored/created to affected habitat; see “dependent on effects commitments” in Table 5-4 of the Plan).

#### 2.11.1.3 Aquatic/Wetland and Riverine/Riparian Communities

The Plan’s Conservation Strategy includes the avoidance and minimization of impacts to the Stream System and other wetlands, and, as such, there are comparatively small impacts to these habitats from Covered Activities. Covered Activities will result in the loss of 260 acres of aquatic/wetland constituent habitat (fresh emergent marsh, lacustrine, and non-vernal pool seasonal wetland) and 490 acres of riverine/riparian complex (includes riverine and riparian constituent habitats); an additional 105 acres of aquatic/wetland habitat and 165 acres of riverine/riparian habitat will be temporarily affected by Covered Activities.

Effects to stream habitat from in-stream programs is estimated by linear extent rather than by acreage. Impacts to the stream system will generally occur in small segments (typically about 100 feet in extent) at multiple locations throughout the Plan Area. Four main classes of Covered Activities will have effects on streams: road crossings, pipelines not associated with road crossings, flood control, and fish passage enhancement projects. The total permanent direct

effect on streams is estimated to be 5.5 miles (approximately 1.0 percent of existing streams). Although Covered Activities will impact these habitats, in-stream Covered Activities generally will not convert these habitats and will leave the stream channel intact. An additional 36.5 miles (approximately 6.3 percent of existing streams) will be temporarily affected. On an annual basis, temporary effects will occur over an estimated 0.73 mile of stream. Best Management Practices and other conditions outlined in Chapter 6, *Program Participation and Conditions on Covered Activities*, will require minimization of temporary effects and rehabilitation of areas subject to construction disturbance.

*Conservation Actions.* Listed below are biological goals and objectives from Chapter 5 of the Plan that will reduce and offset effects to aquatic/wetland and riverine/riparian habitat described above and that will result in beneficial consequences to Covered Species that use these habitats. See Plan Table 5-8 for specific conservation measures associated with these goals and objectives. Also, see Section 6.3 of the Plan for conditions on Covered Activities that will reduce effects to aquatic/wetland and riverine/riparian habitat. Beneficial effects as well as additional species-specific goals and objectives are described in Section 2.12 below where particular effects for each Covered Species are presented.

- Goal AW-1, Reserve System sustaining functional fresh emergent marshes, seasonal wetland and lacustrine habitats (e.g., ponds), and the hydrologic processes that support them to benefit Covered Species and promote native biodiversity.
- Objective AW-1, Protect Aquatic/Wetland Complex Natural Community.
- Objective AW-2, Restore/Create Aquatic/Wetland Complex Natural Community.
- Goal RAR-1, Functional riverine and riparian communities that benefit Covered Species and promote native biodiversity in the Plan Area.
- Objective RAR-1.1, Protect Riverine/Riparian Complex.
- Objective RAR-1.2, Protect Riverine Constituent Habitat.
- Objective RAR-1.3, Restore Riverine/Riparian Complex.
- Objective RAR-1.4, Enhance Riparian Vegetation.
- Objective RAR-1.5, Remove or Modify Fish Barriers.
- Objective RAR-1.6, Modify Unscreened Water Diversions.
- Objective RAR-1.7, Enhance Streams.

Implementation of these goals, objectives, and conservation measures will result in the protection of 586 acres of aquatic/wetland complex and in the restoration of 410 acres of aquatic/wetland habitat if the maximum impacts to aquatic wetland occur (restoration of aquatic/wetland habitat will occur at a 1.5:1 ratio of restored/created to affected aquatic/wetland types; see “dependent

on effects commitments” in Table 5-4 of the Plan). In the Valley, at least 40 percent of the aquatic/wetland restoration dependent on effects will be fresh emergent marsh, and at least 50 percent of the restoration dependent on effects will be fresh emergent marsh in the Foothills. This will result in a net increase in the aquatic/wetland complex natural community in the action area.

Plan implementation will result in the protection of 2,200 acres of riverine/riparian complex and the restoration of 1,425 acres of riverine/riparian complex if the maximum impacts occur (restoration of riverine/riparian constituent habitat will occur at a 1.52:1 ratio of restored/created to affected habitat; see “dependent on effects commitments” in Table 5-4 of the Plan).

Riverine/riparian complex protected in the Reserve System will include at least 1,410 acres of riparian constituent habitat (960 acres in the Valley and 451 acres in the Foothills) and will include 88.6 linear miles of streams. Riverine/riparian complex in the Reserve System will include a mosaic of riverine/riparian habitat and closely associated communities, including fresh emergent wetlands, seasonal wetlands, off-channel wetlands, and stands of valley oak woodland; up to 22 percent of riverine/riparian complex restoration may include these closely associated communities. Priority will be given to protecting large intact riparian stands and riverine and riparian segments inhabited by Covered Species, and will focus on specific stream systems identified in the Plan (see Plan Section 5.3.1.5.4). The assembly of the Reserve System will increase the amount of protected riverine and riparian constituent habitats in the action area and will protect corridors for movement from the Valley to the Foothills. Specific measures will be taken to enhance stream reaches for covered fish species (see Plan Objectives RAR-1.5, RAR-1.6, and RAR-1.7).

#### 2.11.1.4 Oak Woodland Communities

The oak woodland natural community type includes blue oak, interior live oak, mixed oak woodland, and oak-foothill pine woodland. Valley oak woodland is represented as a separate community in order to emphasize this biologically important habitat. A maximum of 6,210 acres of oak woodland will be lost as a result of Covered Activities, and a maximum of 140 acres of valley oak woodland could be lost. The greatest effect on woodland communities will occur within the Foothills where the cumulative footprint of very low-density rural residential development may result in a direct loss of just over 5,100 acres of oak woodland and 100 acres of valley oak woodland. An additional 5,942 acres of oak woodland could be indirectly affected by Covered Activities (see Plan Table 4-5, *Indirect Effects in the Foothills- Increased Rural Density*)

*Conservation Actions.* Listed below are biological goals and objectives from Chapter 5 of the Plan that will reduce and offset effects to oak woodland communities described above and that will result in beneficial consequences to Covered Species that use these habitats. See Plan Table 5-8 for specific conservation measures associated with these goals and objectives. Also, see Section 6.3 of the Plan for conditions on Covered Activities that will reduce effects to oak woodland habitats. Beneficial effects as well as additional species-specific goals and objectives are described in Section 2.12 below where particular effects for each Covered Species are presented.

- Goal OW-1, Functional oak woodland communities, including the oak woodland community and valley oak woodland community that benefit Covered Species and promote native biodiversity.
- Objective OW-1.1, Protect Oak Woodlands.
- Objective OW-1.2, Restore Oak Woodlands.
- Objective OW-1.3, Maintain and Enhance Oak Woodlands.
- Objective OW-1.4, Protect Valley Oak Woodlands.
- Objective OW-1.5, Restore Valley Oak Woodlands.

Implementation of these goals, objectives, and conservation measures will result in the protection of 10,110 acres of oak woodland, the restoration of 100 acres of oak woodland, the protection of 190 acres of valley oak woodland, and the restoration of 225 acres of valley oak woodland. An additional 285 acres of valley oak woodland would be restored if maximum impacts to valley oak woodland occur (restoration of valley oak woodland will occur at a 1.5:1 ratio of restored to affected habitat for impacts within the Valley in Plan Areas A and B; see “dependent on effects commitments” in Table 5-4 of the Plan). In order to protect large habitat blocks, preservation of the oak woodland community will be focused in areas of the county with the fewest roads, the largest parcels and the largest assemblage of un-fragmented oak woodlands; restoration will be focused to expand and connect existing patches of oak woodland. In addition, because valley oak woodland is generally located within the stream system, stream system avoidance and minimization requirements (See Plan Section 6.3.3.1, *Stream System Condition 1, Stream System Avoidance and Minimization*) will result in additional protection of valley oak woodland. Protection of 190 acres of valley oak woodland, combined with avoidance of the stream system and restoration of valley oak woodlands will result in an increase in valley oak woodland in the action area by the end of the permit term.

#### 2.11.1.5 Rice and Field Agriculture (Semi-natural Communities)

Covered Activities will result in the loss of up to 3,350 acres of agricultural land in the action area. This includes 2,900 acres of agricultural land in Valley Plan Area A (including an estimated 2,000 acres of rice), 110 acres of agricultural land in Plan Area B (including 60 acres of rice), and 900 acres of other agricultural land-cover types in Valley Plan Area A. An additional 540 acres of other agricultural types will be lost in the Foothills. Although the category “other agricultural lands” includes a small amount of field agriculture that may be affected on a pro-rata basis, the types of agriculture that mostly comprise this community type are generally thought to provide little habitat value for Covered Species. Although some conversion of this type of agriculture is anticipated from Covered Activities (see Plan Table 4-1), it is not considered further in this Biological Opinion.

In the Valley, rice cultivation accounts for 90 percent of the extent of semi-natural communities, but most of this falls to the west of the Potential Future Growth Area so that only about 10 percent of rice lands will be subject to conversion due to covered future growth. Habitat

restoration during implementation of the Plan's Conservation Strategy could result in up to an additional 1,760 acres of rice land and 50 acres of field agriculture being restored to natural communities, such as fresh emergent marsh and other wetlands, riparian, valley oak woodland, and vernal pool complex.

*Conservation Actions.* Listed below are biological goals and objectives from Chapter 5 of the Plan that will reduce and offset effects to semi-natural communities described above and that will result in beneficial consequences to Covered Species that use these habitats. See Plan Table 5-8 for specific conservation measures associated with these goals and objectives. Also, see Section 6.3 of the Plan for conditions on Covered Activities that will reduce effects to these semi-natural communities. Beneficial effects as well as additional species-specific goals and objectives are described in Section 2.12 below where particular effects for each Covered Species are presented.

- Goal AO-1, Reserve System with integrated open space that precludes development, enhances Reserve System connectivity, and provides opportunities for protecting, restoring, and managing habitat for Covered Species and other native species.
- Objective AO-1.1, Protect Agricultural Lands and Other Open Space.

Implementation of these goals, objectives, and conservation measures will result in the protection of at least 8,240 acres of agricultural lands or natural communities in the Valley, including patches of natural vegetation, such as trees and shrubs that may be used by Covered Species, and provide large, contiguous blocks of open space. Implementation of Objective GGS-1.1 for giant garter snake will ensure that at least 2,000 of these 8,240 acres will be rice land (or wetland equivalent). The remaining 6,240 acres will not be required to be maintained in any particular crop type, and will not count toward permit requirements or habitat commitments for mitigation for any Covered Species. Although these lands will not count towards mitigation requirements, they will help preserve open space by preventing development and will allow for movement of some species through the agricultural landscape between patches of natural communities. Because there is no requirement for particular crop types on these 6,240 acres, the Placer Conservation Authority can also preserve natural communities rather than agricultural land to meet this commitment.

### **2.11.2 Reduction in Habitat Function**

Indirect effects from Covered Activities often reduce habitat function for Covered Species in natural communities adjacent to the Covered Activity, especially where natural communities are adjacent to urban development. Adverse indirect effects include changes in hydrology, increased human disturbance, increased levels of noise and lighting, increased numbers of urban-adapted predators (e.g., skunks and raccoons), increased numbers of domestic predators (e.g., dogs and cats), and increased vehicle-related disturbance. Increased human presence could also facilitate other indirect effects such as the spread of disease, increase in non-native invasive species, and increased risk of wildfire.

Roads, in particular, can result in disproportional indirect effects because of their large edge-to-area ratio, and because they often transect otherwise intact habitat. Roads can increase the risk



for wildfire and the spread of invasive species. New and expanded roads and associated traffic can create noise and light, and result in vehicle strikes. Streams and wetlands close to new roads may be indirectly affected by increased sedimentation or runoff of oil and grease or other pollutants.

*Hydrology.* Urban development, roads, and other related infrastructure can alter hydraulic conditions in vernal pool complex and grasslands by creating a barrier to flow, creating additional flow into existing vernal pool constituent habitats, and/or diverting flow into artificial channels. This alteration notably occurs at the edge of urbanization, where drainage or other engineered improvements are typically installed. Rural development and drainage control can also modify local hydrology, particularly in the relatively flat, agricultural land of the Valley where natural drainage is poor and where low relief makes it easy to alter natural drainage (see Plan Section 4.3.3.1 for details).

Indirect effects to aquatic/wetland and riverine/riparian communities include increased habitat fragmentation and sedimentation in aquatic habitat resulting from urban and rural development. In-stream structures (i.e., pilings, footings, culverts, etc.) could disrupt flows and result in changes in hydrology that result in adverse effects to riverine and riparian habitat. In addition to disrupting flow, in-stream structures can trap up-stream sediment and vegetation, which can further disrupt flow and may also result in increased erosion downstream. Although expansion of existing bridges or construction of new bridges may leave the stream channel intact, increased shading can lead to impacts to shaded stream and riparian habitat. New pedestrian bridges in areas open to recreation increase human access to habitats potentially occupied by Covered Species. In addition, Covered Activities in upper watersheds could result in effects to the amount and quality of water in aquatic habitat downstream.

*Light and Noise.* Light and noise can alter the ecology of habitat adjacent to development, especially if the edge-to-area ratio is high. Flashes of light can temporarily affect vision of some wildlife species and increase vulnerability to predation. Longer-term night lighting can be disorienting, and cause wildlife to modify their behavior (Longcore and Rich 2004). Increased noise can also render surrounding habitat less suitable. Continuous increased noise could interfere with the ability to detect important species-specific sounds, such as warning or mating calls (Dooling and Popper 2007, Francis and Barber 2013) and sporadic noise may act as a hazing agent to wildlife.

*Invasive Plants.* Ground disturbance from Covered Activities can provide areas for colonization by non-native invasive plant species, which can then invade adjacent habitat. Increased human presence adjacent to urban development and roadways can also result in the introduction of invasive plant species. Within areas used for recreation, trails can be a source of invasive plant species that are transported by trail users. Invasive plant species can outcompete and displace native plants, displace native wildlife, and alter the ecosystem processes of natural communities, such as nutrient cycling, soil hydrology, and frequency of wildfires (Bossard et al. 2000).

*Human Activity.* Increased human activity in habitat adjacent to urban development and in remaining habitat in rural areas can decrease habitat suitability. Human presence in these areas can trample vegetation, compact soil, introduce invasive plant species, increase disturbance to animals, and increase the risk of wildfire. Public use of parks and open space also increases

disturbance from human activity, particularly if used inappropriately (e.g., off-trail hiking, illegal dumping).

*Invasive Animals.* Habitat adjacent to urban development may see increases in urban-adapted native and non-native wildlife species, including increased numbers of raccoons, skunks, opossums, rats, house mice, crows, bullfrogs and feral cats and dogs. These types of species can thrive in fragmented, disturbed, or otherwise marginal habitats, and result in increased risk of disease and predation for native species; they may also outcompete native species for resources. Recreational use in open space can also result in increased presence of invasive animal species and recreational trails can facilitate predator movement.

See Section 2.10.2.3. *Indirect Effects* of this Biological Opinion for a summary of how the acreage of natural communities that will experience increased indirect effects such as those described above was estimated. Table 2 provides estimates of indirect effects on natural communities for the four categories of indirect effects that are quantified; these effects are further described below. Where it is not possible to quantify indirect effects, these effects are described qualitatively for each Covered Species.

Table 2. Estimated extent of indirect effects, in acres.

<b>Natural Community</b>	<b>Valley Potential Future Growth Area<sup>2</sup></b>	<b>Valley Conservation and Rural Development Area</b>	<b>Border between Conservation and Rural Development Area/Potential Future Growth Area in the Valley</b>	<b>Foothills Increased Rural Density</b>
Vernal Pool Complex	1,220	70	506	183
Grassland	340	28	91	4,802
Aquatic/Wetland Complex	12	3	37	303
Riverine/Riparian Complex	15	3	10	579
Valley Oak Woodland	3	3	0	102
Oak Woodland	110	3	1	5,942
Rice Agriculture	180	50	96	0
Field, Orchard and Vineyard Agriculture	90	18	4	704
All Communities	1,970	178	744	12,615

*Indirect Effects in the Valley Potential Future Growth Area.* If all future covered development in the Valley Potential Future Growth Area were to take place on natural communities with a low level of existing indirect effects, 1,970 acres that currently have low to no indirect effects would

<sup>2</sup> On-site indirect effects on vernal pool wetlands in avoided habitat within the Valley Potential Future Growth Area are considered separately and are not included here.

be subject to new indirect effects. However, many of the areas subject to off-site indirect effects within the Valley Potential Future Growth Area will ultimately be subject to direct effects or to on-site indirect effects. Therefore, these effects are assumed to be captured as direct and indirect effects associated with subsequent Covered Activities by the end of the permit term and are not considered further in this Biological Opinion.

*Indirect effects in the Valley Conservation and Rural Development Area.* Approximately 178 acres in the Valley Conservation and Rural Development Area will be adjacent to covered development and will be indirectly effected. If all 178 acres of indirect effects occur on lands not currently indirectly affected, this would represent a two percent increase in the area that the Plan categorizes as highly impacted by indirect effects.

*Border between Conservation and Rural Development Area/Potential Future Growth Area in the Valley.* The border between the Valley Potential Future Growth Area and the Valley Conservation and Rural Development Area will ultimately become the primary intersection of urban development in the Potential Future Growth Area and natural communities in the Conservation and Rural Development Areas, including natural communities in existing protected areas and the future Reserve System. Of the 1,651 acres of natural and semi-natural communities mapped along the border between the Potential Future Growth Area and the Conservation and Rural Development Areas (see Section 2.10.2.3, *Indirect Effects* of this Biological Opinion for methods used for mapping), the Plan estimates that 744 acres of land with low to moderate existing indirect effects will be subject to increased indirect effects from Covered Activities. Of this, not more than 185 acres of land with low existing levels of indirect effects would be affected by the end of the permit term.

*Indirect Effects from the Increase in Rural Density.* Covered Activities in the Foothills will increase rural densities resulting in indirect effects when parcels are subdivided. While the rural development footprint may not be as extensive as urban development, the resulting indirect effects are higher in rural areas than in urban areas because the existing landscape is generally less disturbed to begin with and because dispersed patterns of development maximize the individual influence of each home. In addition, rural and private roads create corridors for invasive plants to disperse along roadsides and attach to vehicles, thus affecting native vegetation. Rural roads, often privately constructed, can also contribute to erosion and sedimentation in the stream system. Over 6,000 acres of oak woodland and valley oak woodland may be subject to indirect effects from subdivision of the Foothills (see Table 2).

*On-site indirect effects on vernal pool wetlands.* Indirect effects from on-site avoidance of vernal pool wetlands is considered separately from the categories described above and is not included in Table 2. In some cases, Covered Activities may avoid affecting vernal pool constituent habitats on site if they comply with Plan *Community Condition 1.1, Avoidance for Vernal Pool Constituent Habitat Wetlands*. However, these avoided vernal pool constituent habitats may still be subject to indirect effects where their hydrology is affected by adjacent ground disturbance. In order to limit habitat fragmentation and isolation resulting from avoided areas that are adjacent to and/or surrounded by development, the Plan sets a cap on the acreage of indirect effects that may result from on-site avoidance. The maximum on-site indirect effects to vernal pool constituent habitats allowed under the Plan is 66 acres; this includes 56 acres within the Valley Potential Future Growth Area and 10 acres within the Valley Conservation and Rural Development Area.

*Conservation Actions.* Although conservation actions in support of the Conservation Strategy will be implemented to benefit species and natural communities, they may result in unintended reductions in habitat function. For example, equipment used during conservation actions could transport invasive species into new areas of the Reserve System. Maintenance of firebreaks could alter vegetation structure by allowing the encroachment of invasive species. The creation or restoration of vernal pools within a vernal pool complex with existing vernal pool constituent habitat could alter the hydrology of the existing pools. Plan *Conservation Measure 2, Manage and Enhance the Reserve System* describes how reserve unit management plans will be developed and include measures to minimize reductions in habitat function resulting from conservation actions. In addition, the Plan requires that vernal pools will only be created or restored in areas where they will be isolated hydrologically from existing pools, and when adequate amounts of surrounding upland habitat are protected. Indirect effects resulting from conservation actions are not quantified, but will be minimal based on the implementation of these measures.

Within the Valley, indirect effects will primarily be to vernal pool complex. In the Foothills, most indirect effects will be to oak woodlands. All indirect effects quantified in the sections above will be tracked by the Placer Conservation Authority to ensure estimates of these effects are not exceeded. However, the Conservation Strategy in the Plan only includes specific mitigation and stay ahead provisions for on-site indirect effects on vernal pool wetlands. Mitigation for off-site indirect effects is captured by the Plan's mitigation for regional development.

The Conservation Strategy includes measures to minimize indirect effects through actions such as the creation of buffer zones and development of design guidelines that reduce effects from development on natural lands (e.g., *General Condition 2, Conservation Lands: Development Interface Design Requirements*). Reserve management plans will be developed for each Plan reserve, with specific restrictions on recreation to avoid and minimize effects on Covered Species and their habitats (see Plan Section 5.3.2.1.2, *Content of Reserve Management Plans*).

In order to minimize and offset indirect effects, the Plan includes landscape level biological goals intended to reduce indirect effects that could result in the reduction of habitat function. The Reserve System will be developed according to reserve design principals to create a Reserve System consisting of large contiguous blocks of preserved habitat that buffer urban effects and reduce the urban-reserve interface boundary (see Plan Section 5.3.1.4, *CMI L-2, Reserve Acquisition Strategy*). The establishment of the Reserve System will not only reduce indirect effects to land within the Reserve System, but will preclude additional indirect effects from occurring on surrounding lands by preventing development on Reserve System lands. In the Foothills Conservation and Rural Development Area, the establishment of the Reserve System will significantly reduce subdivision potential. In addition, limiting avoidance of isolated patches of habitat within developed areas in the Valley Potential Future Growth Area will reduce the extent of indirect effects from Covered Activities.

The following landscape level biological goals and objectives (and their associated conservation measures, which are not listed here, see Plan Table 5-8) from Chapter 5 of the Plan will minimize reduction in habitat function within Plan Area as a whole:

- Goal L-1, A Reserve System with representative natural communities along a range of environmental gradients large enough to support ecosystem function, sustain populations of Covered Species, maintain or increase biological diversity of native species, and accommodate changing environmental conditions.
- Objective L-1.1, Establish a Large, Interconnected Reserve System.
- Goal L-2, Reserve System connectivity to sustain the effective movement and genetic interchange of organisms between natural communities in a manner that maintains the ecological integrity of the natural communities within the Plan Area.
- Objective L-2.1, Protect Habitat Linkages.
- Objective L-2.2, Maintain and Enhance Reserve System Permeability.
- Objective L-2.3, Establish East–West Corridors.
- Objective L-2.4, Conserve North–South Connectivity.
- Objective L-2.5, Conserve Upland Natural Communities Surrounding Aquatic/Wetlands Complex Natural Communities.
- Goal L-3, Ecological processes and conditions that sustain and reestablish natural communities and native species.
- Objective L-3.1, Implement Low Impact Development Standards. Implement Low-Impact Development Standards for Covered Activities in the Plan Area.
- Objective L-3.2, Reduce Invasive Non-native Species and Increase Native Species.
- Objective L-3.3, Manage Fire.

### **2.11.3 Effects on Covered Species Individuals**

Ground disturbance will be a primary cause of injury and mortality to Covered Species. The majority of ground disturbance from Covered Activities will be from urban and rural development. Within the development footprint, Covered Species could be crushed, buried, or otherwise injured or killed. Similarly, individuals inhabiting areas affected by temporary construction-related activities associated with development, such as staging, stockpiling, and driving could be injured or killed. The introduction of contaminants or inadvertent litter associated with construction-related activities could also result in injury, harm, or mortality to Covered Species that come into contact with introduced materials. Construction excavations may also trap some Covered Species, and could result in injury or mortality.

Covered Activities associated with Regional Public Programs such as transportation programs, road maintenance, water treatment and supply, park and trail maintenance, in-stream programs, and operation and maintenance activities (i.e., sediment removal and vegetation clearing) that involve the use of heavy equipment could also injure or kill Covered Species. Temporary

dewatering from in-stream activities could result in the need to handle and relocate Covered Species salvaged from the dewatered area, which could cause stress or mortality. Water fluctuations in canals as a result of cleaning and flushing activities could result in the loss of amphibian egg masses to desiccation or wash away eggs or juveniles of aquatic species. In general, the extent of these types of effects will be small relative to that anticipated for urban and rural development.

Although some individuals may survive initial site disturbance and habitat loss by escaping into adjacent areas, they may ultimately die as a result of starvation, exposure, or predation if such areas do not provide suitable habitat. Even if these animals reach other habitats, they may still face competition and reproductive exclusion if such habitats are already at carrying capacity. New or increased traffic associated with new developments or road construction also increases risks of injury or mortality to some Covered Species.

Although activities associated with the implementation of the Conservation Strategy may result in death, injury, or harm to Covered Species, effects to Covered Species individuals as a result of these activities will be minimal. Vegetation management to reduce fire hazard, eradicate exotic plants, or remove trees hazardous to recreationists may disturb or inadvertently injure or kill Covered Species. Covered branchiopod cysts may be translocated to restored and created pools on the Reserve System. Although collecting cysts from pools about to be affected by Covered Activities will prevent cysts from being destroyed by ground disturbance, translocation could cause injury or mortality. In addition, monitoring and research activities required by the Plan (see Plan Chapter 7, *Monitoring and Adaptive Management Program*) may affect Covered Species. For most species, surveys will primarily be conducted using visual and auditory detection. However, trapping and handling may be necessary to monitor some species, such as giant garter snake and vernal pool branchiopods. Trapping and handling could result in injury or death of individuals. However, the long-term benefits gained through conservation actions, monitoring, and limited recreation are anticipated to far exceed the effects of the incidental take that may occur.

Recreation in County and City parks and on some of the Plan's Reserve System lands may have effects to Covered Species. While the Plan includes a number of measures to prevent effects to Covered Species from recreation, in particular on Reserve System lands, they may not completely prevent it. The Plan covers take of Covered Species resulting from the initial construction and presence of recreational facilities. The Plan does not anticipate that legal and appropriate use of these recreational facilities will result in take of covered species from actual recreational users. Therefore, if there appears to be the possibility of take resulting from recreational use of facilities on Reserve System lands, that recreational use will need to be modified to ensure that take of Covered Species will not occur pursuant to this Plan or be discontinued. Take from recreational uses, if any, will be addressed separately.

*Conservation Actions.* In addition to the Plan's landscape-level biological goals to develop a Reserve System that will preserve and manage large interconnected blocks of land to offset impacts, by setting caps on the extent of natural communities that may be affected (see Table 1 and Plan Table 4-1), the Plan limits ground disturbance-related death, injury, and harm. Habitat enhancement, restoration, and creation will also help offset the effects of the loss of individuals by improving habitat conditions for Covered Species currently occupying marginal habitat, or by

creating colonization opportunities for Covered Species currently residing in adjacent areas. Improved habitat conditions will enhance breeding, sheltering, and feeding opportunities for future generations.

In addition, Plan Section 6.3.5, *Conditions to Minimize Effects on Covered Species* describes measures that are required when implementing Covered Activities in order to minimize the potential for Covered Species to be harmed, injured or killed. Specific goals, objectives and conditions relevant to a particular species are listed in the following sections.

## **2.12 Effects to Covered Species**

### **2.12.1 Swainson's Hawk**

*Habitat Loss and Fragmentation.* Covered Activities will result in the loss of nesting and foraging habitat for Swainson's hawk. Within the action area, grassland, vernal pool complex, and to a lesser extent, agricultural landscapes provide foraging habitat for Swainson's hawk. The Plan's model for Swainson's hawk foraging habitat includes vernal pool complex, grassland, pasture, and alfalfa and row crops in the Valley. Out of a total of 54,574 acres of modeled foraging habitat in the action area, 16,267 acres (approximately 30 percent) will be lost as a result of Covered Activities. An additional 602 acres of foraging habitat will be temporarily affected by Covered Activities.

The Plan's model for nesting habitat for Swainson's hawk includes riparian and valley oak woodland in the Valley. Modeled nesting habitat occurs mostly within the stream system. Other small woodlands and isolated trees could also provide suitable nest sites, but are not captured in modeled habitat as they occur at too small a scale to be included in land-cover mapping. Out of 1,968 acres of modeled nesting habitat, 149 acres (approximately 8 percent) will be lost to Covered Activities. Another 10 acres of nesting habitat will be temporarily affected.

The loss of foraging and nesting habitat as a result of Covered Activities will reduce the amount of habitat available for Swainson's hawk in the action area. The loss and fragmentation of foraging habitat, particularly foraging habitat near nest sites, can result in reduced carrying capacity and reduced reproductive success. Fragmentation of habitat may result in hawks needing to travel greater distances between nesting and foraging habitat, which can also reduce reproductive success. The loss of nesting habitat could result in higher competition for remaining nest sites and greater competition for other resources (i.e. foraging habitat or prey) if nest sites are located closer together potentially resulting in diminished survival and fecundity.

*Reduction in Habitat Function.* The quality of nesting and foraging habitat for Swainson's hawks adjacent to new urban or rural development may be reduced by the proximity to and associated activities from human activity, such as increased vehicle-related disturbance (e.g., of breeding habitat near roads), increased risk of wildfire, and increased noise and light pollution. Changes in land use that reduce the prey base for Swainson's hawks could also adversely affect Swainson's hawks. Covered Activities may result in up to 3,416 additional acres of grassland and field agricultural land being located within 250 feet of new urban development. In addition, when urban development surrounds nesting habitat, it is likely to render the avoided nesting habitat less functional by separating the nesting habitat from foraging habitat. Reproductive success of

Swainson's hawks nesting in urban areas is lower than those nesting in rural landscapes (England et al. 1995).

*Effects on Individuals.* With the implementation of Species Condition 1, *Swainson's Hawk* (see section 6.3.5.6 of the Plan) Covered Activities are unlikely to directly kill or injure any Swainson's hawk individuals. However, factors listed above (habitat fragmentation and degradation) could indirectly result in injury or mortality of individuals. Increased disturbance of nesting hawks in areas adjacent to new development could result in nest abandonment, potentially resulting in the loss of eggs or young. Increased traffic and additional above-ground transmission lines associated with covered projects could also result in injury or mortality from vehicle strikes or electrocution.

*Conservation Actions.* In addition to natural community-level goals and objectives from Chapter 5 of the Plan that will benefit Swainson's hawks, the following biological goal and objectives in the Plan and their associated conservation measures (see Plan Table 5-8) will further reduce and offset the effects to Swainson's hawk and will result in several beneficial consequences to Swainson's hawk:

- Goal SWHA-1, Habitat to provide for a sustained population of Swainson's hawks in the Plan Area.
- Objective SWHA-1.1, Protect Swainson's Hawk Nest Trees.
- Objective SWHA-1.2, Protect Swainson's Hawk Foraging Habitat.
- Objective SWHA-1.3, Enhance Foraging Habitat.
- Objective SWHA-1.4, Protect Isolated Trees.

Implementation of natural community-level goals and objectives will protect and restore riverine/riparian and valley oak woodland natural communities, such that a total of 1,268 acres of modeled Swainson's hawk nesting habitat will be protected and 720 acres of riparian habitat will be restored (see Plan Table 5-6). In addition, grasslands and vernal pool complexes that provide Swainson's hawk foraging habitat will be protected and restored such that a total of 17,003 acres of foraging habitat will be protected and an additional 3,920 acres of foraging habitat will be restored (see Plan Table 5-6). At least four active nest trees (a nest tree is considered active if it has been used for nesting by Swainson's hawks within the previous 5 years) will be protected within the Reserve System and at least 741 acres of modeled foraging habitat will be protected surrounding each protected active nest tree. The Placer Conservation Authority will also protect at least 20 isolated trees with the potential to be used as nesting sites for Swainson's hawk, and will enhance the quality of foraging habitat in the Reserve System.

Implementation of measures such as *General Condition 2, Conservation Lands: Development Interface Design Requirements* will minimize the effects of urban development on Swainson's hawk habitat and individuals within the Reserve System. The Plan's requirements to avoid effects to active nest sites (see *Species Condition 1, Swainson's Hawk* from Chapter 6 of the



Plan) will prevent Swainson's hawk individuals from being directly harmed, injured or killed by Covered Activities.

*Conclusion.* The action area is located along the eastern edge of the Swainson's hawk distribution in the Sacramento Valley and contains only a small portion of the range of the Central Valley population of Swainson's hawk. Most of the recorded nest sites in the action area are located within the Reserve Acquisition Area where most Reserve System land will be acquired, and no active nests have been documented within the Potential Future Growth Area since 2003 (California Natural Diversity Database 2019). In addition, most Swainson's hawk modeled nesting habitat in the action area is located within the Stream System and measures in the Plan to avoid impacts to the Stream System will also minimize the loss of Swainson's hawk nesting habitat.

While Covered Activities will result in a substantial loss of foraging habitat, and to a lesser extent in the loss of nesting habitat, the loss of habitat for Swainson's hawk will be offset by the preservation of large interconnected areas of foraging habitat in proximity to protected nesting habitat. These factors, combined with the relatively low density of Swainson's hawks in the action area, make it unlikely that the loss of habitat will appreciably reduce the Swainson's hawk population in the action area. Implementation of the Conservation Strategy will mitigate for effects resulting from Covered Activities and contribute to the conservation of the species in the action area.

### **2.12.2 California Black Rail**

*Habitat Loss and Fragmentation.* Covered Activities will result in the loss of California black rail habitat in the action area, specifically 105 acres of modeled habitat out of a total of 1,112 acres of modeled habitat in the action area. Covered Activities will also result in temporary effects to 41 acres of fresh emergent marsh. The loss of fresh emergent marsh will reduce the amount and extent of rail habitat across the landscape, potentially reducing the carrying capacity for black rail in the action area. The loss of suitable habitat will also fragment remaining habitat, potentially reducing the ability for rails to disperse throughout the action area and into other populations. Should existing populations become isolated due to habitat loss and fragmentation, the isolated population could become more susceptible to stochastic events. In addition, because black rails in the Sierra Nevada foothills, including within the action area, are thought to occur as a metapopulation, maintained, in part, through colonization of unoccupied sites (Richmond et al. 2008), the loss of unoccupied habitat could adversely affect the stability of the metapopulation.

*Reduction in Habitat Function.* The habitat quality for California black rail adjacent to new urban or rural development may be reduced by increased disturbance from people, by an increase in predators associated with development (e.g., house cats, raccoons), and by the use of pesticides and other vector control methods in developed areas that could reduce prey availability. Approximately 457 acres of aquatic/wetland complex will be indirectly effected by adjacent growth and urban edge in the Valley, and fragmentation in the Foothills. Rural and urban development will also increase demands on water, and could result in a decrease in the availability of surface water and groundwater, thereby reducing the amount of water in fresh emergent marsh habitat for California black rail. In addition, activities that remove emergent

vegetation, such as flood control maintenance and agricultural operations, may degrade wetlands by limiting the dense vegetation that rails require.

*Effects on Individuals.* With the implementation of Species Condition 2, described in Section 6.3.5.7 of the Plan, Covered Activities are unlikely to directly kill or injure black rail individuals. However, because black rails are resident within the action area, there is a risk to black rail individuals that occupy emergent wetland habitat that will be affected by Covered Activities. Eggs and chicks are most susceptible to injury and death as a result of land clearing, but adults are also susceptible to injury during molt in July and August when adults become flightless. Implementation of Species Condition 2 will limit clearing or dewatering of occupied habitat to between September 15 and February 1, thereby reducing the risk of injury or mortality from Covered Activities to these life stages. Increased disturbance of nesting rails in areas adjacent to new development could result in nest abandonment, potentially resulting in the loss of eggs or young. Use of pesticides is not a Covered Activity under the Plan; therefore, Covered Activities are not expected to result in injury or mortality to California black rail from contaminated prey.

*Conservation Actions.* In addition to the biological goals and objectives from Chapter 5 of the Plan listed in sections above for aquatic/wetland complex that will benefit California black rail, the following biological goal and objectives in the Plan and associated conservation measures (see Plan Table 5-8) will further reduce and offset the effects to California black rail and will result in several beneficial consequences to the rail:

- Goal BLRA-1, A Sustained Population of California Black Rail within the Plan Area.
- Objective BLRA-1.1, Protect, Restore/Create, and Manage and Enhance California Black Rail Habitat.

Implementation of these goals and objectives will protect and restore aquatic/wetland complex, such that a total of 256 acres of modeled California black rail habitat will be protected and 175 acres of habitat will be restored (see Plan Table 5-6). Of the modeled habitat that is protected and restored, a minimum of five fresh emergent marshes at least two acres in size must be protected and five marshes at least two acres in size must be restored. The Plan also sets various benchmarks for occupancy of black rail habitat in the Reserve System during the permit term and limits the take of occupied rail habitat based on the number of sites occupied by rails within the Reserve System (see requirements in Section 5.3.2.6.2, *California Black Rail* for details). At least half of the protected and restored marshes must be occupied by black rails by Year 45 of the permit term to achieve goal BLRA-1.

Implementation of measures such as *General Condition 2, Conservation Lands: Development Interface Design Requirements* will minimize the effects of urban development on black rail habitat and individuals within the Reserve System. Implementation of *General Condition 1, Watershed Hydrology and Water Quality* will minimize the effects of increased water demand on California black rail and its habitat. The Plan's requirements to avoid effects to occupied marshes during the breeding season (see *Species Condition 2, California black rail* from Chapter 6 of the Plan) will prevent black rail individuals from being directly harmed, injured or killed by Covered Activities.

*Conclusion.* The action area is located along the southern boundary of the Sierra Nevada Foothills metapopulation of California black rail, the core of which is located to the north in Yuba County. The action area supports a relatively low density of California black rail. While Covered Activities will result in a loss of habitat and reduction of habitat function for black rail, impacts to habitat will be offset by the preservation and restoration of habitat for black rail such that at least 10 fresh emergent marshes suitable for supporting California black rail are restored/created, protected, managed, and enhanced. Plan occupancy requirements will ensure that habitat occupied by black rails will be preserved to compensate for the loss of occupied rail habitat. It is anticipated that implementation of the Conservation Strategy will result in the persistence and potentially the expansion of the metapopulation of California black rails in the action area. This will mitigate for effects resulting from Covered Activities and contribute to the conservation of the species in the action area.

### **2.12.3 Western Burrowing Owl**

*Habitat Loss and Fragmentation.* Covered Activities will result in the loss of year-round habitat for western burrowing owl, which includes vernal pool complex, grassland, oak woodland savanna, pasture, and habitat adjacent to row crops, rice, and alfalfa. Of the total of 55,101 acres of modeled, year-round habitat for burrowing owl in the action area, Covered Activities will result in the permanent loss of 16,444 acres of habitat. Covered Activities will also result in temporary impacts to 609 acres of modeled habitat. The loss of foraging and nesting habitat as a result of Covered Activities will reduce the amount of habitat available for burrowing owl in the action area. The loss and fragmentation of foraging habitat, particularly foraging habitat near nest sites, can result in reduced carrying capacity and reduced reproductive success as a result of spending more time foraging and not tending to offspring. Fragmentation of habitat may result in owls needing to travel greater distances between nesting and foraging habitat, which can also reduce reproductive success. The loss of nesting habitat could result in higher competition for remaining nest sites and greater competition for other resources (i.e., foraging habitat or prey) if nests sites are located closer together, potentially resulting in diminished survival and fecundity.

*Reduction in Habitat Function.* The quality of habitat for burrowing owls adjacent to new urban or rural development may be reduced by increased disturbance from people, increased risk of wildfire, increased noise and/or light, habitat fragmentation, rodent abatement programs, and increased populations of predators that thrive in urbanized habitats. The assessment of new urban edge shows that as many as 3,416 acres of grassland and agricultural land in the Valley may have new urban development within the 250-foot disturbance radius used in that analysis. Owls may avoid areas with high levels of human disturbance, or high levels of noise and/or light. Rodent abatement programs reduce prey abundance, and may eradicate rodents from suitable foraging habitat.

*Effects on Individuals.* With the implementation of Species Condition 3, *Western Burrowing Owl* (see Section 6.3.5.8 of the Plan), Covered Activities are unlikely to directly kill or injure western burrowing owl individuals. However, measure Burrowing Owl 4, which describes passive exclusion of owls from burrows that cannot be avoided during the non-breeding season, could result in injury or death of individuals if they are not able to locate suitable habitat after being excluded from a project site. Additionally, factors listed above (habitat fragmentation and degradation) could indirectly result in injury or mortality to individuals. Increased disturbance of

nesting owls in areas adjacent to new development could result in nest abandonment, potentially resulting in the loss of eggs or young. Increased traffic associated with covered projects could also result in injury or mortality from vehicle strikes. Use of pesticides is not a Covered Activity under the Plan; therefore, Covered Activities are not expected to result in injury or mortality to burrowing owl from contaminated prey.

*Conservation Actions.* In addition to the biological goals and objectives from Chapter 5 of the Plan listed in sections above for natural communities that will benefit burrowing owls, the following biological goal and objective in the Plan and associated conservation measures (see Plan Table 5-8) will further reduce and offset the effects to burrowing owl and will result in several beneficial consequences to the owl:

- Goal BUOW-1, Habitat to maintain or increase the number of overwintering western burrowing owls, and to promote the expansion of a breeding population of burrowing owls.
- Objective BUOW-1.1, Protect and Manage Ground Squirrel Colonies.

Implementation of these goals and objectives will protect and restore vernal pool complex, grassland and oak woodland natural communities, such that a total of 17,129 acres of modeled burrowing owl habitat will be protected and 4,126 acres of habitat will be restored (see Plan Table 5-6). Recent nesting records for burrowing owl in the action area are located on Swainson's Preserve, which is proposed to be incorporated into the Reserve System. In addition, the Plan commits to either protecting ground squirrel colonies or installing and maintaining artificial burrows on reserve lands (see requirements in Plan Section 5.3.2.4.2, *Western Burrowing Owl* for details).

Implementation of measures such as *General Condition 2, Conservation Lands: Development Interface Design Requirements* will minimize the effects of urban development on burrowing owl habitat and individuals within the Reserve System. The Plan's requirements to avoid effects to active nest sites (see *Species Condition 3, Western Burrowing Owl* from chapter 6 of the Plan) will prevent burrowing owl individuals from being directly harmed, injured or killed by Covered Activities.

*Conclusion.* The action area is located along the eastern edge of the burrowing owl's distribution in the Sacramento Valley and contains only a small portion of the total range for western burrowing owl. There are few records of burrowing owl within the action area and the one documented breeding pair in the action area is located within an existing reserve. While Covered Activities will result in a substantial loss of modeled habitat for burrowing owl, the amount of habitat loss is likely overestimated because the habitat model is very broad and modeled habitat likely includes areas that do not support features necessary for burrowing owls that cannot be modeled on a regional scale (for example suitable burrows). The loss of habitat for burrowing owl will be offset by the preservation of large interconnected areas of foraging habitat in proximity to protected nesting habitat, and the provision of burrows suitable for use by owls within preserved habitat. While preservation of modeled habitat for burrowing owl may also represent an overestimate of preserved habitat that provides all the features necessary for burrowing owls, the implementation of Plan measures to protect and expand ground squirrel

populations and install and maintain artificial burrows will ensure that modeled habitat preserved for burrowing owls will include necessary habitat features. In addition, the Plan will prioritize the protection of sites known to be occupied by burrowing owls. These measures will help ensure that more suitable habitat for burrowing owl is preserved than is lost and that preserved habitat provides habitat features necessary to support occupancy by burrowing owls. The protection and enhancement of habitat for burrowing owls within the Reserve System is anticipated to provide sufficient habitat to maintain or increase the burrowing owl population within the action area. Implementation of the Conservation Strategy will mitigate for effects resulting from Covered Activities and contribute to the conservation of the species in the action area.

#### **2.12.4 Tricolored Blackbird**

*Habitat Loss and Fragmentation.* Covered Activities will result in the loss of nesting and foraging habitat for tricolored blackbird. The Plan's model for tricolored blackbird foraging habitat includes annual grasslands, vernal pool complexes, seasonal wetlands, riparian, and agricultural fields below 300 feet elevation. Out of a total of 60,974 acres of modeled foraging habitat in the action area, 17,015 acres (approximately 28 percent) will be lost as a result of Covered Activities. An additional 836 acres of foraging habitat will be temporarily affected by Covered Activities.

The Plan's model for nesting habitat for tricolored black bird includes the aquatic/wetland land cover type below 300 feet in elevation. However, breeding habitat for tricolored blackbird is difficult to model on a regional scale because breeding colonies require open accessible water within 1,500 feet of a colony site; a protected nesting substrate, including either flooded or thorny or spiny vegetation (e.g., cattails, bulrushes, and blackberries); and suitable foraging habitat providing adequate insect prey within a few miles of the nesting colony. Nesting habitat for tricolored blackbird is scattered in small patches throughout the Valley and lower Foothills and is usually associated with aquatic/wetland complex lands in the Stream System. Out of 633 acres of nesting habitat estimated to occur within the Plan Area, 55 acres (approximately 9 percent) will be lost to covered activities. Another 103 acres of nesting habitat will be temporarily affected. Species Condition 4, *Tricolored Blackbird*, will ensure that loss of nesting habitat being used by nesting colonies will not take place during the nesting season.

The loss of foraging and nesting habitat as a result of Covered Activities will reduce the amount of habitat available for tricolored blackbird in the action area. The effect of this loss on tricolored blackbird colonies will depend on the location of colony sites in relation to the habitat that is lost. Due to the patchy distribution of habitat in the action area and the mobility of this species, it is difficult to assess impacts of this habitat loss to tricolored blackbird colonies in the action area. However, five recently active colony sites have been documented in the Potential Future Growth Area, and Covered Activities are likely to directly or indirectly affect these colonies.

The loss and fragmentation of foraging habitat, particularly foraging habitat within 3 miles of breeding colony sites, can result in reduced carrying capacity and reduced reproductive success. In addition to the loss of nesting and foraging habitat, the loss of open water within 1,500 feet of colony sites can reduce the viability of a breeding site. Fragmentation of habitat could result in blackbirds needing to travel greater distances between nesting and foraging habitat, which could reduce reproductive success or result in colony failure.

*Reduction in Habitat Function.* The quality of nesting and foraging habitat for tricolored blackbird adjacent to new urban or rural development or other Covered Activities may be reduced if it results in increased populations of predators of eggs and chicks such as black-crowned night-herons (*Nycticorax nycticorax*), common ravens (*Corvus corax*), and coyotes (*Canus latrans*). Tricolored blackbirds may be sensitive to pesticides (Hosea 1986, Beedy and Hayworth 1992), and could be indirectly affected by mosquito or other pest control in rural and urban areas near occupied habitat. Other potential indirect effects to tricolored blackbirds and their habitat near urban and rural development include increased disturbance from people, increased vehicle-related disturbance (e.g., of breeding habitat near roads), increased risk of wildfire, and increased noise and light pollution. Up to 2,827 acres of grassland and agricultural land may have new urban development within the 250-foot disturbance radius by the end of the permit term.

*Effects on Individuals.* With the implementation of *Species Condition 4, Tricolored Blackbird* (see Section 6.3.5.9 of the Plan), Covered Activities are unlikely to directly kill or injure tricolored blackbird individuals. However, factors listed above (habitat loss, fragmentation and degradation) could indirectly result in injury or mortality to individuals. Increased disturbance of nesting colonies in areas adjacent to new development could result in nest abandonment, potentially resulting in the loss of eggs or young. Use of pesticides is not a Covered Activity under the Plan; therefore, Covered Activities are not expected to result in injury or mortality to tricolored blackbird from contaminated prey. Tricolored blackbirds are highly mobile and are unlikely to be injured or killed by equipment used for Covered Activities.

*Conservation Actions.* In addition to the biological goals and objectives from Chapter 5 of the Plan listed in sections above for natural communities that will benefit tricolored blackbird, the following biological goal and objectives in the Plan and associated conservation measures (see Plan Table 5-8) will further reduce and offset effects to tricolored blackbird and will result in several beneficial consequences to the species:

- Goal TRBL-1, Habitat for a sustained population of tricolored blackbird in the Plan Area.
- Objective TRBL-1.1, Protect, Manage, and Enhance Tricolored Blackbird Nesting Habitat.
- Objective TRBL-1.2, Protect, Restore, Manage, and Enhance Tricolored Blackbird Foraging Habitat.
- Objective TRBL-1.3, Protect Tricolored Blackbird Colony Sites.
- Objective TRBL-1.4, Protect, Restore, Manage, and Enhance Tricolored Blackbird Foraging Habitat near Colony Sites.
- Objective TRBL-1.5, Protect and/or Restore/Create Open Water near Tricolored Blackbird Colony Sites.
- Objective TRBL-1.6, Restore Tricolored Blackbird Nesting Habitat.

Achieving these goals and objectives will preserve at least 187 acres of nesting habitat for tricolored blackbird in the Valley portion of the Reserve System, and protect and restore at least 22,138 acres of foraging habitat located within three miles of protected nesting habitat within the Reserve System. Protection of foraging habitat used by tricolored blackbirds will be prioritized. An additional 87 acres of tricolored nesting habitat will be restored within the Reserve System. Of the 87 acres of nesting habitat to be restored, at least five fresh emergent wetlands that provide suitable nesting habitat for tricolored blackbird will be created or restored. Each of these will be at least 2 acres in size, within 1,640 feet of open water, and have at least 200 acres of preserved adjacent foraging habitat.

In order to achieve Objective TRBL-1.3, at least two tricolored blackbird nesting colonies must be protected within the Reserve System by year 15 of plan implementation and an additional three colonies must be protected by year 40 so that a total of five active or recently active colonies (i.e., colonies have been documented nesting at a site within the prior 10 years) are protected by the end of the permit term. All five protected breeding colony sites must support a minimum of 1,500 individuals in at least one season during the permit term. Open water habitat will be protected, restored or created within 1,640 feet of each protected nest colony site.

Implementation of measures such as *General Condition 2, Conservation Lands: Development Interface Design Requirements* will minimize the effects of urban development on tricolored blackbirds within the Reserve System. With implementation of *Species Condition 4, Tricolored Blackbird* (see Section 6.3.5.9 of the Plan), Covered Activities are unlikely to directly kill or injure any tricolored blackbird individuals.

*Conclusion.* The action area supports a significant portion of the statewide tricolored blackbird breeding population, is important for late season breeding attempts, and provides connectivity between populations/colonies. Of the 15 active or recently active colony sites found in Plan Area A, six are in the Reserve Acquisition Area, and three or four are already protected in existing reserves. Covered Activities will result in a substantial loss of foraging habitat, and to a lesser extent in the loss of nesting habitat, and will potentially directly or indirectly effect five nest colonies located within the Potential Future Growth Area. Loss of habitat will be offset by the protection, restoration/creation, and enhancement of suitable complexes of habitat for tricolored blackbird on the Reserve System, including the basic requirements for breeding colony sites. Areas known to be used for foraging by tricolored blackbirds will be prioritized for protection and implementation of the Conservation Strategy will ensure that at least 200 acres of foraging habitat is protected adjacent to or in close proximity to each protected breeding colony site. This will help ensure that the foraging habitat preserved for tricolored blackbird is located in areas that support use by the species. This is anticipated to support a sustained population of the species in the action area. This will mitigate for effects resulting from Covered Activities and contribute to the conservation of the species in the action area.

### **2.12.5 Giant Garter Snake**

*Habitat Loss and Fragmentation.* Covered Activities will result in the loss of aquatic and upland habitat for giant garter snake. Within the action area, wetland habitat and canals in the drainage network associated with agricultural fields in the western portion of the Valley provide habitat for giant garter snakes. The Plan's model for giant garter snake aquatic habitat includes ponds,

fresh emergent marsh, flooded rice land, and riverine habitats below an elevation of 100 feet. The model estimates a total of 19,511 acres of aquatic habitat for giant garter snake in the action area, most of which is rice agriculture in the western portion of the Valley. Of this, 1,438 acres (approximately 7 percent) will be lost as a result of Covered Activities. An additional 203 acres of aquatic habitat will be temporarily affected by Covered Activities.

The Plan models upland habitat for giant garter snake as annual grassland, pasture, alfalfa, irrigated pasture, other croplands, vernal pool complex, and row crop below an elevation of 100 feet and within 200 feet of the edge of aquatic habitats. Out of 3,537 acres of modeled upland habitat, 483 acres (approximately 14 percent) will be lost to Covered Activities. Another 22 acres of modeled upland habitat will be temporarily affected.

The loss of habitat as a result of Covered Activities will reduce the amount of habitat available for giant garter snake in the action area. In addition, the loss or fragmentation of suitable aquatic habitat could limit dispersal of snakes into the action area, precluding snakes from reaching suitable habitat and preventing expansion of the species into the action area.

*Reduction in Habitat Function.* Aquatic and upland habitat for giant garter snake could be degraded by rural and urban development and regional public programs that increase disturbance, introduce new predators or competitors, cause alterations in hydrology, and/or reduce water quality. Increases in severity and frequency of flooding could result from an increase of impervious surfaces related to urban and rural development. Increased flooding could inundate burrows used by overwintering snakes or force snakes to seek new flood refugia during their inactive period. Changes in floodplain configurations for flood control could also eliminate or reduce the availability of refugia for giant garter snakes and reduce dispersal opportunities.

Water quality would be affected by non-point source pollution from rural and urban development, or regional public programs that increase the extent of impervious surfaces that collect pollutants (e.g., fuels and oils) that become suspended in overland flows. Degradation of water quality could affect garter snakes directly through toxicity or indirectly by affecting vegetation or food availability. Runoff from developed areas could result in contamination and sedimentation of nearby giant garter snake aquatic habitat and erosion caused by Covered Activities could cause turbidity and sedimentation of aquatic habitat.

Human encroachment into giant garter snake habitat can result in reduced vegetation for cover or in reduced prey availability. In addition, snakes are sensitive to disturbance and avoid areas where there is high disturbance, especially at basking sites needed for thermoregulation. While suitable habitat adjacent to development may remain intact, increased disturbance could cause snakes to avoid the area or be less successful in the area. Domestic or feral pets, and some native species that compete with or predate on giant garter snakes could expand from development into adjacent suitable habitat and prevent giant garter snakes from becoming established. Because the location and extent of these types of indirect effects are currently unknown, and because giant garter snake is not currently known to occur in the action area, these effects have not been quantified.

*Effects on Individuals.* Injury or mortality of giant garter snakes is currently unlikely to result from Covered Activities because giant garter snake is not currently known to occur in the action



area. However, if giant garter snakes are found in the action area, or become established in the action area during the permit term, Covered Activities such as vegetation management may crush individuals in basking sites, fill or crush upland burrows or crevices, dewater habitat, and remove prey. Because giant garter snakes utilize small mammal burrows and soil crevices as retreat sites, giant garter snakes may be crushed, buried, or otherwise injured by Covered Activities that also affect adjacent uplands. Giant garter snakes may be struck by construction equipment or other vehicles accessing construction sites.

*Conservation Actions.* In addition to the biological goals and objectives from Chapter 5 of the Plan listed in sections above for natural communities that will benefit giant garter snakes, the following biological goal and objective in the Plan and associated conservation measures (see Plan Table 5-8) will further reduce and offset the effects to giant garter snake and will result in several beneficial consequences to giant garter snakes:

- Goal GGS-1, Protected suitable giant garter snake habitat to facilitate the expansion of giant garter snake into the Reserve System.
- Objective GGS-1.1, Protect and Manage Giant Garter Snake Habitat.

Achieving natural community and species-specific objectives will result in the protection of 2,000 acres of rice (or fresh emergent wetland), which will be managed to provide aquatic and adjacent upland habitat for giant garter snake (see descriptions in Objective GGS-1.1 for details about required management practices). Protection of 2,000 acres of rice and additional protection and restoration of aquatic and wetland natural communities to meet Plan biological objectives will result in the protection of 2,702 acres and restoration of 529 acres of aquatic habitat for giant garter snake and the protection of 1,763 acres and restoration of 449 acres of upland habitat for giant garter snake in the action area (see Plan Table 5-6).

The Plan's requirements to minimize effects to giant garter snake (see *Species Condition 5, Giant Garter Snake* from Chapter 6 of the Plan) will reduce the chance that giant garter snake will be harmed, injured or killed by Covered Activities.

*Conclusion.* Giant garter snakes are not currently known to occur in the action area and modeled habitat for giant garter snake is restricted to the western side of the Valley, which is largely designated as Reserve Acquisition Area, where there will be fewer impacts from Covered Activities and where acquisition of reserve lands will be focused. A limited amount of aquatic and upland habitat for giant garter snake will be lost as a result of Covered Activities compared with the amount of available habitat. Because giant garter snakes are not currently known to occur in the action area, the Plan's goal of protecting habitat for giant garter snake is intended to facilitate the expansion of this species into the Reserve System by protecting and enhancing habitat. This will mitigate for effects resulting from Covered Activities and contribute to the conservation of the species in the action area.

### **2.12.6 Western Pond Turtle**

*Habitat Loss and Fragmentation.* Covered Activities will result in the loss of suitable western pond turtle habitat in the action area. Western pond turtle mostly use aquatic habitat in the action

area, but also use upland habitat for nesting and occasionally overwintering habitat. Suitable aquatic habitat includes fresh emergent wetlands, seasonal wetland, riverine/riparian, and ponds, while suitable upland habitat is any natural community within 150 feet of suitable aquatic habitat. The proposed action will result in the permanent loss of 750 acres of modeled aquatic habitat and 1,407 acres of modeled upland habitat. Covered Activities will also temporarily affect 250 acres of modeled aquatic habitat and 40 acres of modeled upland habitat. The loss of habitat resulting from Covered Activities could reduce the connectivity between the action area and the populations of western pond turtle in the Central Valley (the action area is on the eastern edge of the species range).

*Reduction in Habitat Function.* The habitat quality for western pond turtle adjacent to new urban or rural development may be reduced by increased disturbance from people, and through an increase in predators associated with development (e.g., house cats, raccoons). The fragmentation of upland and aquatic habitat, especially by roads, may increase the distance that turtles have to travel to locate suitable nesting locations, increasing the risk of predation or collisions with vehicles on roads. Covered Activities that remove vegetation and basking sites from the edges of wetlands and riparian corridors reduces habitat quality for western pond turtles. In-stream projects may also have adverse effects on western pond turtle by reducing or eliminating flows in occupied stream habitat during summer months, temporarily eliminating western pond turtle habitat.

*Effects on Individuals.* Adult western pond turtles may be injured or killed, and eggs or hatchlings may be buried or damaged by equipment used to complete Covered Activities, especially those that occur in aquatic habitat or adjacent to aquatic habitat. Dewatering activities that result in a temporary loss of habitat may also result in injury or death of individuals as they attempt to relocate to other suitable habitat.

*Conservation Actions.* In addition to the biological goals and objectives from Chapter 5 of the Plan listed in sections above for aquatic/wetland complex and riverine/riparian complex that will benefit western pond turtle, the following biological goal and objectives in the Plan and associated conservation measures (see Plan Table 5-8) will further reduce and offset the effects to western pond turtle and will result in several beneficial consequences to the turtle:

- Goal WPT-1, Habitat for a sustained population of western pond turtle within the Reserve System.
- Objective WPT-1.1, Protect and Enhance Western Pond Turtle Habitat.
- Objective WPT-1.2, Restore Western Pond Turtle Habitat.

Implementation of these goals and objectives will protect and restore western pond turtle aquatic and upland habitat. A total of 2,800 acres of aquatic habitat and 3,859 acres of upland habitat will be protected, and 1,850 acres of aquatic habitat and 1,930 acres of upland habitat will be restored. Within this protected habitat, enhancements for western pond turtle (i.e., installation of basking sites, in-channel enhancement, and non-native turtle control measures) will be implemented at appropriate locations (see Plan *CM2 WPT-1, Western Pond Turtle Habitat Enhancement*). In order to maintain habitat connectivity, the Conservation Strategy will establish

an interconnected Reserve System that includes upland and aquatic habitat for western pond turtle, and that will enable movement and dispersal of western pond turtles.

There are no species-specific conditions on Covered Activities to avoid and minimize injury and mortality to individuals; however, *Community Condition 2*, *Stream System Condition*, and *Regional Public Projects Conditions 1-3* will reduce effects to individual western pond turtles. Implementation of Low Impact Development Standards will protect water quality for western pond turtle in its aquatic habitat.

*Conclusion.* Western pond turtles may have been historically abundant in the action area; however, there are few current records. The action area includes only a small portion of the total range of western pond turtle. Covered Activities will result in loss of aquatic and upland habitat for western pond turtle and potentially in habitat fragmentation. Impacts to habitat will be offset by the preservation, restoration and enhancement of large, interconnected areas of upland and aquatic habitat intended to support a sustained population of western pond turtle within the Reserve System. Implementation of the Conservation Strategy will mitigate for effects resulting from Covered Activities and contribute to the conservation of the species in the action area.

### **2.12.7 Foothill Yellow-legged Frog**

*Habitat Loss and Fragmentation.* Covered Activities will result in the loss of foothill yellow-legged frog habitat, which is defined as riverine land cover in the Foothills of the action area. The proposed action will result in the loss of 155 acres of habitat, including three stream miles. The proposed action will also result in temporary effects to 39 acres of habitat. Habitat loss is primarily a result of development and infrastructure projects, but may result from maintenance projects that render the stream unsuitable for the frogs.

*Reduction in Habitat Function.* Habitat quality for foothill yellow-legged frog may be impacted by runoff and invasive species associated with new development and infrastructure. Runoff may include petroleum, fertilizers and pesticides, which degrade water quality. Invasive plant species may outcompete native vegetation and alter the community structure within and next to streams. Invasive animal species could compete with frogs for resources, or may prey on the frogs. The loss of vegetation and substrate, especially cobbles, also reduces habitat quality. The loss of vegetation may result in higher and more variable water temperatures due to the lack of shade.

*Effects on Individuals.* Injury or mortality of foothill yellow-legged frogs is unlikely to result from Covered Activities because foothill yellow-legged frogs are not currently known to occur in the action area. However, it is possible they are present in scattered areas of the Foothills, or could expand into the action area during the permit term. Should foothill yellow-legged frogs occur in the action area, Covered Activities in streams could crush eggs, tadpoles or adults, or expose them to unsuitable conditions. Individuals could be crushed by equipment, buried, or desiccate from dewatering for in-stream work. Covered Activities that occur next to streams could also injure or kill frogs that occasionally move out of the stream into uplands next to the water. Petroleum, fertilizers and pesticides from runoff may be absorbed through the frog's permeable skin, which can affect growth, development, and survival.

*Conservation Actions.* In addition to the biological goals and objectives from Chapter 5 of the Plan listed in sections above for riverine/riparian complex that will benefit foothill yellow-legged frog, the following biological goal and objectives in the Plan and associated conservation measures (see Plan Table 5-8) will further reduce and offset the effects to foothill yellow-legged frog and will result in several beneficial consequences to the frog:

- Goal FYLF-1, Habitat to facilitate the expansion of foothill yellow-legged frog into the Plan Area.
- Objective FYLF-1.1, Protect Foothill Yellow-Legged Frog Riverine Habitat.
- Objective FYLF-1.2, Protect Foothill Yellow-Legged Frog Riparian Habitat.
- Objective FYLF-1.3, Restore Riparian Habitat for Foothill Yellow-Legged Frog.

Implementation of these goals and objectives will protect and restore foothill yellow-legged frog habitat. Specifically, 83 acres of riverine/riparian habitat will be protected, another 83 acres will be restored, and six miles of streams will be protected in the Foothills that provide habitat for foothill yellow-legged frog.

There are no species-specific conditions on Covered Activities to avoid and minimize injury and mortality to individuals; however, *Community Condition 2, Stream System Condition, and Regional Public Projects Conditions 1-3* will reduce effects to individual frogs.

*Conclusion.* The action area is west of the foothill yellow-legged frog's current known range in Placer County, and there are no records of foothill yellow-legged frog within the action area. The implementation of the Conservation Strategy will benefit the foothill yellow-legged frog by protecting and restoring habitat, and protecting water quality for foothill yellow-legged frog to allow for their expansion into the action area. This will mitigate for effects to suitable habitat resulting from Covered Activities, and contribute to the conservation of the species in the action area.

## **2.12.8 California Red-Legged Frog**

*Habitat Loss and Fragmentation.* Covered Activities will result in the loss of suitable California red-legged frog habitat in the action area. California red-legged frogs require aquatic habitat for most aspects of their life cycle, and upland habitat for dispersal to breeding locations. Aquatic habitat includes aquatic/wetland complex, riverine/riparian complex, and urban riparian in the Foothills portion of the action area. Upland habitat includes oak woodland, grassland, pasture and agriculture within 100 feet of modeled aquatic habitat. The proposed action will result in the loss of 672 acres of aquatic habitat and 8,551 acres of upland habitat for California red-legged frog. Covered Activities will result in temporary effects to 168 acres of aquatic habitat and 214 acres of upland habitats. Removal or degradation of upland habitat could fragment habitat and prevent individual California red-legged frogs from dispersing to other areas.

*Reduction in Habitat Function.* Indirect effects resulting from urban development and other Covered Activities could degrade aquatic habitat. Runoff into wetlands, ponds, and riverine habitats from urban and rural development and new or expanded roads may include petroleum,

fertilizers and pesticides, which degrade water quality and may injure or kill individuals. Invasive plant species may outcompete native vegetation and alter the community structure within or next to aquatic habitat. Invasive animal species could compete with frogs for resources, or may prey on the frogs. The loss of vegetation may result in higher and more variable water temperatures due to the lack of shade.

*Effects on Individuals.* Within the action area, California red-legged frogs are only known to occur at Big Gun Conservation Bank. Covered Activities are, therefore, unlikely to result in injury or mortality of the frogs. However, if the species is found in or expands into other parts of the action area during the permit term, some Covered Activities could affect individuals. California red-legged frogs may be injured or killed by Covered Activities that occur in occupied aquatic or upland habitat. Eggs and tadpoles are most vulnerable as they have limited mobility compared with adults and cannot survive in upland habitats. Eggs and tadpoles may be crushed by equipment, buried, or desiccate from dewatering for in-stream work. Frogs in upland habitat may be crushed by equipment, or buried in refugia. Increased vehicular traffic following road widening or creation of new driveways/access roads within dispersal habitat for California red-legged frog will increase the number of individuals that are killed or injured on roadways. Petroleum, fertilizers and pesticides from runoff may be absorbed through the frog's permeable skin, which can affect growth, development, and survival.

*Conservation Actions.* In addition to the biological goals and objectives from Chapter 5 of the Plan listed in sections above for natural communities that will benefit California red-legged frog, the following biological goal and objectives in the Plan and associated conservation measures (see Plan Table 5-8) will further reduce and offset the effects to California red-legged frog and will result in several beneficial consequences to the frog:

- Goal CRLF-1, Protected, occupied California red-legged frog habitat in the Plan Area.
- Objective CRLF-1.1, Protect Occupied California Red-Legged Frog Habitat.
- Goal CRLF-2, Protected and restored, suitable California red-legged frog habitat in the Plan Area.
- Objective CRLF-2.1, Protect Suitable California Red-Legged Frog Habitat.
- Objective CRLF-2.2, Restore Suitable California Red-Legged Frog Habitat.

Implementation of these goals and objectives will protect and restore California red-legged frog aquatic and upland habitat. Goal CRLF-1 will result in the protection of 2 acres of occupied habitat at Big Gun Conservation Bank. Additionally, 1,168 acres of aquatic habitat and 12,484 acres of upland habitat will be protected, and 1,241 acres of aquatic habitat and 160 acres of upland habitat will be restored.

There are no species-specific conditions on Covered Activities to avoid and minimize injury and mortality to California red-legged frog. However, implementation of *General Condition 1, Watershed Hydrology and Water Quality*, will minimize the effects of Covered Activities on

water quality in the action area. *Community Condition 2, Stream System Condition, and Regional Public Projects Conditions 1-3* will reduce effects to individual frogs

*Conclusion.* Within the action area, California red-legged frogs are only known to occur at the Big Gun Conservation Bank. Although the loss of habitat resulting from Covered Activities could reduce the potential for California red-legged frogs to expand into other parts of the action area, the implementation of the Conservation Strategy will benefit the California red-legged frog by protecting and restoring habitat, and protecting water quality. This will mitigate for effects to habitat resulting from Covered Activities and contribute to the conservation of the species in the action area.

### **2.12.9 Valley Elderberry Longhorn Beetle**

*Habitat Loss and Fragmentation.* Covered Activities will result in the loss of habitat for valley elderberry longhorn beetle. Within the action area, elderberry shrubs in riparian and valley oak woodlands provide habitat for the beetle. The Plan's model for valley elderberry longhorn beetle includes valley oak woodland and riverine/riparian natural communities up to 650 feet in elevation. Because the presence of elderberry plants could not be determined from the land-cover data, modeled habitat is likely an overestimate of available habitat. Out of a total of 6,367 acres of modeled habitat for valley elderberry longhorn beetle in the action area, 476 acres (approximately 8 percent) will be lost as a result of Covered Activities. An additional 18 acres of habitat will be temporarily affected by Covered Activities.

The loss of habitat could decrease the number of patches of habitat occupied by valley elderberry longhorn beetle in the action area, and reduce the ability of the beetles to disperse within the action area. Occupied elderberry shrubs tend to remain occupied, and removal of occupied shrubs may remove an entire or significant portion of a population. The loss of habitat could also limit the persistence of a population if there are too few remaining shrubs to support reproduction sufficient to sustain a population. Valley elderberry longhorn beetle are not known to disperse great distances, and the removal of habitat could create isolated populations if elderberry shrubs are spaced too far apart to allow for dispersal.

*Reduction to Habitat Function.* Covered Activities such as maintenance of culverts, road crossings and utilities, as well as in-stream projects that affect adjacent riparian habitat could impact elderberry shrubs without removing them (i.e., by trimming or compacting soil) and result in the degradation of habitat for valley elderberry longhorn beetle. Covered Activities could also result in indirect effects to shrubs and beetles from dust and vibrations, as well as fuel, lubricants, oils or other pollutants that affect shrubs or beetles. This could occur from activities adjacent to shrubs that result in damage such that the health and vigor of the elderberry shrub is compromised. Any beetles or larvae dependent on the impacted shrub may not have sufficient resources available to complete the life cycle. The loss of shrubs, therefore, would reduce the number of beetles, and the extent and connectivity of their occupied range.

In addition, the quality of habitat for valley elderberry longhorn beetle adjacent to new urban or rural development may be reduced by increased risk of wildfire and the spread of invasive plants and animals that could affect valley elderberry longhorn beetle. Invasive plants could affect valley elderberry longhorn beetle by out-competing host elderberry shrubs and reducing the

availability of suitable habitat for valley elderberry longhorn beetle. Invasive animals, such as the Argentine ant, could affect valley elderberry longhorn beetle through predation (Huxel 2000).

*Effects on Individuals.* The proposed action could result in injury and mortality of any valley elderberry longhorn beetle eggs, larvae, pupae, or adults on elderberry shrubs impacted by Covered Activities. Any life stage present on or in the elderberry shrub could be injured or killed if the shrub is removed or damaged by activities. Shrubs and beetles could be removed or crushed by construction-related equipment or suffer mortality from the accidental discharge of contaminants associated with equipment operation near shrubs.

*Conservation Actions.* In addition to the biological goals and objectives from Chapter 5 of the Plan listed in sections above for valley oak woodland and riverine/riparian natural communities that will benefit valley elderberry longhorn beetle, the following biological goal and objectives in the Plan and associated conservation measures (see Plan Table 5-8) will further reduce and offset the effects to valley elderberry longhorn beetle, and will result in several beneficial consequences to valley elderberry longhorn beetle:

- GOAL VELB-1, Habitat to support a sustained population of valley elderberry longhorn beetle within the Reserve System.
- Objective VELB-1.1, Restore Valley Elderberry Longhorn Beetle Habitat.

The proposed action would result in the protection of 2,313 acres and the restoration of 1,553 acres of modeled habitat for valley elderberry longhorn beetle in the action area. Elderberry shrubs would be planted in restored habitat and sited to reconnect isolated patches to increase connectivity between suitable patches of habitat for the beetle; areas adjacent to sites already occupied by valley elderberry longhorn beetle will be prioritized. Because beetles have poor dispersal capacity, it is essential to maintain riparian corridors with sufficient extent of elderberry shrubs so that populations of the beetle do not become isolated and vulnerable to stochastic events. Restoration of riparian habitat will include the planting of elderberry shrubs and associated riparian species sufficient to offset loss of valley elderberry longhorn beetle consistent with any current Service guidelines.

Effects to valley elderberry longhorn beetles resulting from Covered Activities will be minimized by *Species Condition 8, Valley Elderberry Longhorn Beetle*. In addition, measures in the Plan to avoid impacts to the Stream System will also minimize the impacts to habitat for valley elderberry longhorn beetle.

*Conclusion.* Valley elderberry longhorn beetle is known to occur in the action area within watersheds for which the Revised Recovery Plan for Valley Elderberry Longhorn Beetle (Service 2019c) sets recovery criteria for protection of habitat. While Covered Activities will result in loss of modeled habitat for valley elderberry longhorn beetle, the amount of habitat loss is likely overestimated because elderberry shrubs are too small to map individually and may not be present in all modeled habitat. Impacts to modeled habitat will be offset by the preservation, restoration and enhancement of habitat for valley elderberry longhorn beetle within the Reserve System; restored riparian habitat in the Reserve System will include appropriate habitat components for valley elderberry longhorn beetle. Sites adjacent to occupied valley elderberry

longhorn beetle will be prioritized for elderberry plantings and restoration will be sited to improve connectivity between habitat patches. This will contribute towards recovery plan criteria for protecting suitable habitat patches for valley elderberry longhorn beetle. Implementation of the Conservation Strategy will mitigate for effects resulting from Covered Activities and contribute to the conservation of the species in the action area.

### **2.12.10 Vernal Pool Fairy Shrimp**

*Habitat Loss and Fragmentation.* Covered Activities will result in the loss of habitat for vernal pool fairy shrimp; specifically 580 acres of vernal pool constituent habitat within 12,550 acres of vernal pool complex that will be lost as described in Section 2.9.1.2, *Vernal Pool Complex and Grassland* of this Biological Opinion. Vernal pool constituent habitat includes vernal pools, seasonal wetlands, and seasonal wetland swales (see Plan Section 3.4.3.2, *Constituent Habitats* for a description of how these habitats are differentiated). While vernal pools are the most suitable wetland type for vernal pool fairy shrimp, seasonal wetlands and seasonal wetland swales may also provide habitat and are important features in the landscape that facilitate the passive dispersal of individuals. Within the 580 acres of vernal pool constituent habitat that will be lost, no more than 185 acres may be vernal pools. Covered Activities will also result in temporary effects to 30 acres of vernal pool constituent habitat (no more than 15 acres of which may be vernal pools) within 455 acres of vernal pool complex that will be temporarily affected.

Because not all vernal pool constituent habitat is occupied by vernal pool fairy shrimp (see Section 2.9.11 for vernal pool fairy shrimp above), the loss of vernal pool complex and vernal pool constituent habitat would remove habitat occupied by vernal pool fairy shrimp as well as unoccupied habitat. The loss of occupied habitat will reduce the number of individuals and populations in the action area. The loss of occupied habitat could limit the genetic diversity and the ecological and geographic range of the species in the action area. The loss of vernal pool complex and vernal pool constituent habitat will also fragment remaining habitat. Habitat fragmentation and isolation could limit or prevent the dispersal of vernal pool fairy shrimp cysts within and between populations. In addition, populations of vernal pool fairy shrimp in small and/or isolated fragments may be more vulnerable to stochastic events and extirpation, and habitat fragments may be less likely to be repopulated.

*Reduction to Habitat Function.* Indirect effects to vernal pool complex and associated vernal pool constituent habitat described in Section 2.11.2, *Reduction of Habitat Function* of this Biological Opinion could result in changes to hydrology such that vernal pool fairy shrimp cannot complete their life cycle in habitat that is indirectly effected. Indirect effects will result from changes in land cover type, typically an increase in impervious surfaces, that affects the hydrology that supports vernal pool wetlands. Vernal pool wetlands usually fill from surface water flow across the surrounding uplands. Impervious surfaces may increase the amount of water, lower the water quality, or divert the water away from vernal pool wetlands. The inadvertent introduction of an invasive plant species by construction equipment, personnel, or contaminated seed or straw is another indirect impact that could reduce habitat quality for vernal pool fairy shrimp. Invasive plants can displace native vernal pool wetland plant species by outcompeting them for space, sun, and water. Invasive plant species can alter the hydrology of vernal pool wetlands to the extent that the hydroperiod is no longer sufficient to support the life cycle of vernal pool fairy shrimp.



Approximately 1,979 acres of vernal pool complex habitat is within the indirect effect radius of new urban and rural development. Covered Activities will result in indirect effects to 70 acres of vernal pool complex habitat for vernal pool fairy shrimp in the Valley Conservation and Rural Development Area, 506 acres along the border between the Valley Potential Future Growth Area and the Valley Conservation and Rural Development Area, and 183 acres in the Foothills that are currently subject to a low level of existing indirect effects. Based on an estimated average wetland density of 4.7 percent in vernal pool complex across all vernal pool constituent habitat density categories (see Plan section 4.7.11), within the 1,979 acres of vernal pool complex indirectly affected by new urban development approximately 93 acres of vernal pool constituent habitat could be indirectly affected. As described in Section 2.11.2, *Reduction in Habitat Function*, offsite indirect effects within the Potential Future Growth Area are not considered as these effects will ultimately be captured as effects associated with other Covered Activities. On-site indirect effects to vernal pool constituent habitats in avoided habitat (these are in addition to those indirect effects described above) will not exceed 66 acres; this includes 56 acres within the Valley Potential Future Growth Area and 10 acres within the Valley Conservation and Rural Development Area.

*Effects on Individuals.* The proposed action would result in injury or mortality to vernal pool fairy shrimp that occur in habitat where Covered Activities are implemented. Cysts could be buried or damaged by equipment that is operated in occupied vernal pool wetlands, or by the deposition of soil into or near the vernal pool constituent habitat during ground-disturbing activities, possibly preventing eggs from hatching the following wet season(s). Adults could be buried, injured or killed by equipment operated in inundated vernal pool wetlands, or if water quality is altered by sediment transport into occupied habitat during ground disturbing activities such that they die, have reduced survivorship, or reduced reproductive output. Dust and chemicals inadvertently released (e.g., fuel, lubricants, degreasers) during construction and subsequently deposited in vernal pool wetlands near or adjacent to Covered Activities could impact water quality and result in mortality, injury, or reduced reproductive success.

*Conservation Actions.* The biological goals and objectives from Chapter 5 of the Plan listed above in Section 2.11.1.2, *Vernal Pool Complex and Grassland* will reduce and offset effects to vernal pool fairy shrimp associated with habitat loss and fragmentation. The following biological objective in the Plan and its associated conservation measures (see Plan Table 5-8) will further reduce and offset the effects to vernal pool fairy shrimp and will result in several beneficial consequences to vernal pool fairy shrimp:

- Objective VPB-1.1, Maintain Vernal Pool Fairy Shrimp Occupancy in the Reserve System.

Implementation of the Conservation Strategy will protect 17,000 acres of vernal pool complex including 790 acres of vernal pool constituent habitat (of which at least 250 acres will be vernal pools) and will restore 3,000 acres of vernal pool complex including 900 acres of vernal pool constituent habitat of which a minimum of 34 percent (326 acres) will be delineated as vernal pools. To minimize the temporal loss of habitat, the Plan includes a stay ahead requirement (see Plan Section 8.4.3 for details), which will ensure habitat is protected, restored and created at a rate equal to impacts. The Plan also includes an Advanced Acquisition obligation (see Plan Section 5.3.1.5.2) that must be met prior to year two of Plan implementation or prior to Covered

Activities impacting more than 1,800 acres of vernal pool complex or 80 acres of vernal pool constituent habitat.

The preservation, restoration and enhancement of vernal pool complex will be concentrated in the Valley portion of the action area and in the Western Placer Core Recovery Area described in the Recovery Plan (Service 2005). Combined with existing protected vernal pool complexes in the Western Placer County Core Recovery Area (5,421 acres or 21 percent), implementation of the Plan will result in the protection of approximately 51 percent of vernal pool complexes in the Western Placer County Core Recovery Area. While this falls short of the 85 percent protection goal identified for this core area in the recovery plan, the recovery plan allows for flexibility to modify these goals on a case-by-case basis (Service 2005). By the end of the permit term, 27,068 acres of vernal pool complex will be protected and restored in the action area (within and outside of the core area), which is greater than the total core area acreage recommended for protection by the recovery plan for western Placer County (i.e., 85 percent of the suitable habitat in the core area, or approximately 26,420 acres).

The protection of vernal pool complex habitat will be guided by the Plan's reserve design criteria (see Plan Section 5.3.1.5.2, *Vernal Pool Complexes and Grassland Natural Communities*) to ensure the Reserve System will provide high quality habitat for vernal pool fairy shrimp. Implementation of *General Condition 2, Conservation Lands: Development Interface Design Requirements* will minimize the effects of urban development on vernal pool habitat within the Reserve System.

The Plan provides specific criteria for selecting restoration sites within the Reserve System to ensure that restoration is sited appropriately and likely to be successful (see Plan *CM VPCG-2, Reserve Design for Vernal Pool Restoration/Creation*). The Plan also requires extensive monitoring of vernal pool restoration sites and describes criteria for determining whether restoration of vernal pool habitat is successful (see Plan Section 7.4.3.1.2, *Monitor Success of Vernal Pool Complex Restoration/Creation Measures*). The response of vernal pool fairy shrimp to vernal pool restoration and creation will also be monitored (see Plan Section 7.5.11.3, *Evaluate Species' Response to Vernal Pool Restoration/Creation*).

Vernal pool habitat on reserve lands will be managed and enhanced to promote recruitment and occupancy of vernal pool fairy shrimp (see Plan Section 5.3.2, *Conservation Measure 2: Manage and Enhance the Reserve System*). The Plan requires that the Reserve System support an occupancy rate (the Occupancy Rate Standard) for vernal pool fairy shrimp that is equal to or greater than that of vernal pools that will be lost (Plan Section 5.3.1.6.10, *Vernal Pool Branchiopods*), and will prioritize protection of sites that are known to be occupied by vernal pool fairy shrimp. Monitoring will take place to make sure the Occupancy Rate Standard for vernal pool fairy shrimp is being met (see Plan Section 7.5.11.1.1, *Vernal Pool Fairy Shrimp and Vernal Pool Tadpole Shrimp* and Plan Section 5.3.1.6.10, *Vernal Pool Branchiopods*). The Occupancy Rate Standard applies to all protected, restored, and created pools on the Reserve System, combined.

*Conclusion.* The Plan's Conservation Strategy will contribute to the goals for vernal pool fairy shrimp in the Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon (Service 2005) including: protecting diverse vernal pool habitats in large habitat blocks;

protecting unoccupied pools within vernal pool complexes, protecting appropriate upland buffers around and between vernal pool complexes; and managing habitat to maintain hydrologic functions and prevent domination by invasive species.

Implementation of the Plan's Conservation Strategy will support the following elements in the recovery plan identified specifically for habitat conservation plans:

- Permanently protected vernal pool preserves within the Plan Area in large contiguous blocks of suitable habitat.
- Protection of the entire genetic range of each listed species within the Plan Area.
- Connectivity with other preserves within the Plan Area.
- Adaptive management of the preserves within the Plan Area to support the species addressed in this recovery plan.
- Sufficient funding for management, maintenance, and monitoring of the preserves in perpetuity.

While Covered Activities will result in a substantial loss of habitat for vernal pool fairy shrimp, the loss of habitat will be offset by the preservation, management and enhancement of large interconnected areas of vernal pool complex and vernal pool constituent habitats that provide high quality habitat and that are occupied by vernal pool fairy shrimp. Implementation of the Conservation Strategy will mitigate for effects resulting from Covered Activities and contribute to the conservation of the species in the action area.

#### **2.12.11 Vernal Pool Tadpole Shrimp**

*Habitat Loss and Fragmentation.* Covered Activities would result in the same amount of habitat loss and fragmentation as described above for vernal pool fairy shrimp. Vernal pool fairy shrimp and vernal pool tadpole shrimp can co-occur in vernal pool complex habitat and the Plan's habitat model for these two species overlaps completely. However, vernal pool tadpole shrimp are rare in the action area and most vernal pool constituent habitat is not occupied by vernal pool tadpole shrimp (see Section 2.9.12, above).

Because of the rarity of vernal pool tadpole shrimp in the action area, most of vernal pool complex and vernal pool constituent habitat that will be lost to Covered Activities will not be occupied by vernal pool tadpole shrimp. However, if occupied habitat is lost, it could significantly reduce the number of individuals and populations in the action area and could limit the genetic diversity and the ecological and geographic range of the species in the action area.

The loss of vernal pool complex and vernal pool constituent habitat will also fragment remaining habitat. Habitat fragmentation and isolation could limit or prevent the dispersal of vernal pool tadpole shrimp cysts within and between populations. In addition, populations of tadpole shrimp in small and/or isolated fragments may be more vulnerable to stochastic events and extirpation, and habitat fragments may be less likely to be repopulated.

*Reduction to Habitat Function.* Indirect effects to vernal pool complex and associated vernal pool constituent habitat described in Section 2.11.2, *Reduction of Habitat Function* of this Biological Opinion could result in changes to hydrology such that vernal pool tadpole shrimp cannot complete their life cycle in habitat that is indirectly effected. Indirect effects to vernal pool tadpole shrimp are the same as described above for vernal pool fairy shrimp

*Effects on Individuals.* Effects to individual vernal pool tadpole shrimp that are present within vernal pool constituent habitat in the Plan Area are the same as described above for vernal pool fairy shrimp.

*Conservation Actions.* The biological goals and objectives from chapter 5 of the Plan listed above in Section 2.11.1.2, *Vernal Pool Complex and Grassland* will reduce and offset effects to vernal pool tadpole shrimp associated with habitat loss and fragmentation. The following biological objective in the Plan and its associated conservation measures (see Plan Table 5-8) will further reduce and offset the effects to vernal pool tadpole shrimp and will result in several beneficial consequences to vernal pool tadpole shrimp:

- Objective VPB-1.2, Maintain Vernal Pool Tadpole Shrimp Occupancy in the Reserve System.

Because habitat models are the same for vernal pool fairy shrimp and vernal pool tadpole shrimp, the preservation, restoration/creation, and enhancement for vernal pool tadpole shrimp is the same as that described above for vernal pool fairy shrimp.

However, if surveys result in an Occupancy Rate Standard of less than 1 percent due to the rarity of the tadpole shrimp in the action area (see Plan Section 5.2.1.6.10), the Plan would instead require that one population of vernal pool tadpole shrimp be protected or restored either through the creation of an occupied vernal pool or through the purchase of a credit from a conservation bank in the action area.

*Conclusion.* Though the species is neither abundant nor widespread in the action area, the action area is part of the eastern edge of the tadpole shrimp's range and the action area is important to maintain the historical distribution of the species. The preservation, management and enhancement of large interconnected areas of vernal pool complex and vernal pool constituent habitats will maintain habitat for vernal pool tadpole shrimp in the action area. The conservation of occupied vernal pool tadpole shrimp habitat will ensure that the species persists in the action area. Implementation of the Conservation Strategy will mitigate for effects resulting from Covered Activities and contribute to the conservation of the species in the action area.

### **2.12.12 Conservancy Fairy Shrimp**

*Habitat Loss and Fragmentation.* There is no habitat model for conservancy fairy shrimp because the species is only known from one pool within the action area, which occurs on a mitigation bank. Therefore, the amount of habitat loss is not quantified and, unless additional occurrences are found, it is unlikely that Covered Activities will result in habitat loss for this species.

*Reduction to Habitat Function.* Because the only occurrence of conservancy fairy shrimp in the action area is located on a mitigation bank, no reduction to habitat function from Covered Activities is anticipated unless additional occurrences are found.

*Effects on Individuals.* Because the only occurrence of conservancy fairy shrimp in the action area is located on a mitigation bank, Covered Activities are not anticipated to have any effects on conservancy fairy shrimp individuals unless additional occurrences of conservancy fairy shrimp are found.

*Conservation Actions.* Due to the rarity of the species in the action area, surveys for conservancy fairy shrimp will be required in the two watersheds that surround the occurrence within the action area, and in any other watersheds in which the species is found in the future. Covered Activities may not take any Conservancy fairy shrimp until new occurrences are found and protected. For the first population lost, two other populations would be protected. For take of any other additional populations, three new populations would be protected.

*Conclusion.* The preservation, restoration, management and enhancement of large interconnected areas of vernal pool complex and vernal pool constituent habitats will maintain habitat for conservancy fairy shrimp in the action area. The conservation of new populations for each population removed would ensure that a metapopulation in the action area would be conserved, should it exist. Implementation of the Conservation Strategy will mitigate for effects resulting from Covered Activities and contribute to the conservation of the species in the action area.

### **2.12.13 Critical Habitat**

#### **2.12.13.1 Vernal Pool Fairy Shrimp Critical Habitat**

Vernal pool fairy shrimp critical habitat units 12a and 12b are within the action area. Of the approximately 2,580 acres within these two critical habitat units, 1,800 acres is mapped as vernal pool complex and, therefore, likely to support the Primary Constituent Elements for vernal pool fairy shrimp.

Of the 1,800 acres of vernal pool complex within critical habitat, Covered Activities will directly or indirectly affect 851 acres of vernal pool complex habitat. Although it is not possible to distinguish the amount of direct versus indirect effects at this time, it is assumed that these areas will no longer provide the Primary Constituent Elements for vernal pool fairy shrimp critical habitat. Of the 851 acres of vernal pool complex that will be affected, 440 acres are mapped as having a low density (0-1 percent) of vernal pool constituent habitat.; 316 acres are mapped as having a medium density (1-5 percent) of vernal pool constituent habitat, and 95 acres is mapped as having high densities (>5 percent) of vernal pool constituent habitat.

Implementation of the Plan's Conservation Strategy will include preservation and restoration of vernal pool fairy shrimp habitat. Approximately 560 acres of vernal pool complex within designated critical habitat in the action area is located in the Reserve Acquisition Area, where habitat acquisition for the Reserve System will be focused. Approximately 390 acres of this is currently protected in existing preserves, some of which may be incorporated into the Reserve System in the future. The loss of vernal pool complex within critical habitat within the action area is not likely to result in significant habitat fragmentation because habitat loss would occur

within the Potential Future Growth Area while preservation would be concentrated in the Reserve Acquisition Area where the Plan's acquisition design strategy will aim to protect large blocks of habitat and will implement measures to buffer effects along the urban-reserve interface boundary.

Vernal pool complex within the Reserve System will be managed and enhanced to reduce non-native species, increase native species diversity, and enhance and maintain the natural hydrology of vernal pool complexes. This would maintain or improve the condition of vernal pool complex within any Reserve System lands within designated critical habitat such that it would provide the Primary Constituent Elements for vernal pool fairy shrimp critical habitat. In addition, restoration of vernal pool constituent habitat could occur on Reserve System lands if they include areas appropriate for restoration as described in the Plan (see Plan CN3 VOCCG-1, *Vernal Pool Complex Restoration/Creation*). Restoration of vernal pool complex within critical habitat would result in new areas that support Primary Constituent Elements for vernal pool fairy shrimp critical habitat.

*Conclusion.* The loss of 851 acres of vernal pool complex within critical habitat in action area as a result of Covered Activities is small and discrete relative to the amount of critical habitat designated for the conservation of the vernal pool fairy shrimp. The amount of critical habitat to be lost that provides Primary Constituent Elements for vernal pool fairy shrimp is less than 0.1 percent of the designated critical habitat throughout the species' range. Implementation of the Conservation Strategy will maintain Primary Constituent Elements for vernal pool fairy shrimp critical habitat within Reserve System lands established in designated critical habitat for vernal pool fairy shrimp.

### **2.13 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 actions are not considered in this section because they require separate consultation pursuant to section 7 of the Act. Many projects, in particular development within non-participating cities, are reasonably certain to occur in the action area, yet will require future Federal actions and separate consultations under the Act and are thus not considered in the cumulative effects analysis.

The following are non-federal activities that are reasonably certain to occur in the action area that are unrelated to the proposed actions and could contribute to cumulative effects in the action area.

Ongoing and routine agricultural activities are not covered under the Plan. Construction and maintenance of agricultural roads and irrigation systems, overgrazing, and rodent control could degrade habitat for Covered Species. Conversion of crop types that provide habitat for Covered Species to crop types that do not (i.e., orchards or vineyards) could also result in loss and degradation of habitat. Use of pesticides could affect Covered Species via toxicity and result in decreased prey availability.

Continued human population growth in the action area (as a result of both Covered Activities and development within non-participating cities) will likely result in increased use of roads and recreational facilities in the action area. Take from use of roads, recreational facilities and trails is not covered under the Plan. Vehicular traffic on rural roads, in particular, could result in effects to Covered Species such as burrowing owl or giant garter snake that are susceptible to vehicle strike. Improper use of recreational facilities could degrade habitat through increased disturbance and illegal activities such as trash dumping.

Although water supply activities for the city of Lincoln and the Placer County Water Agency are Covered Activities, the activities of the Nevada Irrigation District and South Sutter Irrigation District are not covered under the Plan. These activities could result in changes to streamflow, changes in water quality, and effects to habitat for Covered Species from maintenance activities (i.e., vegetation removal, canal lining).

Anthropogenic factors, such as use of pesticides and spread of invasive species and disease, are expected to continue throughout the permit term. Use of pesticides is not covered under the Plan. However, development within the action area could result in increased use of pesticides (i.e., for mosquito control or pest control within developed areas) and potentially result in effects to Covered Species in adjacent habitats. Increased human presence can result in the introduction of invasive species and diseases (*Phytophthora*, for example) that can adversely affect Covered Species and/or their habitat.

Conditions in the Plan will limit impacts from recreation within the Reserve System, limit use of pesticides and rodent control within the Reserve System, and implement measures to control invasive plant and animal species. Changed circumstances in Plan Section 10.3, *Changed and Unforeseen Circumstances* describes responsive actions that will be triggered at certain thresholds for climate change, invasive species, wildfire, drought and other environmental changes (see Plan Table 10-1). Although these measures in the Plan will only apply to Covered Activities and within the Reserve System, they will help limit cumulative effects in the action area. In addition, the Plan's protection of a large interconnected Reserve System across a variety of environmental gradients will increase the permeability of the landscape to allow movement of Covered Species in response to climate change or other stressors.

## **2.14 Conclusion**

After reviewing the current status of the Swainson's hawk, California black rail, western burrowing owl, tricolored blackbird, giant garter snake, western pond turtle, foothill yellow-legged frog, California red-legged frog, valley elderberry longhorn beetle, vernal pool fairy shrimp, vernal pool tadpole shrimp, and conservancy fairy shrimp; the environmental baseline for the action area; the effects of the proposed actions, and the cumulative effects, it is the Service's Biological Opinion and Conference Opinion that the issuance of an incidental take permit pursuant to section 10(a)(1)(B) of the Act and implementation of the Placer County Conservation Program Clean Water Act 404 Permit Strategy is not likely to jeopardize the

continued existence of any of these species. The Service reached this conclusion because the proposed action's effects to the species, when added to the environmental baseline and analyzed in consideration of all potential cumulative effects, will not rise to the level of precluding recovery or reducing the likelihood of survival of these species based on the following reasons:

1. Implementation of the Conservation Strategy will mitigate for effects resulting from Covered Activities and contribute to the conservation of the Covered Species in the action area.
2. Natural community-level goals and objectives from Chapter 5 of the Plan will benefit Covered Species.
3. Biological goals and objectives in the Plan, and associated conservation measures, have been developed specifically for each Covered Species to ensure the Plan contributes to the conservation of these species in the action area.
4. Based on the mitigation proposed in the Plan's Conservation Strategy, the adverse effects to the Covered Species will be offset by the long-term preservation, adaptive management, and monitoring of the habitat within the Reserve System.
5. The Reserve Acquisition Area will aim to protect large blocks of habitat and will implement measures to buffer effects along the urban-reserve interface boundary.

After reviewing the current status of designated critical habitat for the vernal pool fairy shrimp, the environmental baseline for the action area, the effects of the proposed Covered Activities, and the cumulative effects, it is the Service's biological opinion that the issuance of an incidental take permit pursuant to section 10(a)(1)(B) of the Act and implementation of the Placer County Conservation Program Clean Water Act 404 Permit Strategy, as proposed, is not likely to destroy or adversely modify designated critical habitat. The Service reached this conclusion because the project-related effects to the designated critical habitat, when added to the environmental baseline and analyzed in consideration of all potential cumulative effects, will not rise to the level of precluding the function of the vernal pool fairy shrimp critical habitat to serve its intended conservation role for the species based on the following:

1. The adverse effects related to loss of critical habitat and Primary Constituent Elements are small and discrete relative to the entire area designated as vernal pool fairy shrimp critical habitat.
2. Implementation of the Conservation Strategy will maintain Primary Constituent Elements for vernal pool fairy shrimp critical habitat within Reserve System lands thereby ensuring fully functional vernal pool landscapes remain in the proposed preserves.
3. Avoidance and minimization measures have been incorporated to reduce indirect effects to PCEs during implementation of Covered Activities.
4. Restoration of vernal pool complex within critical habitat would result in new areas that support Primary Constituent Elements.



### 3. INCIDENTAL TAKE STATEMENT

Section 9 of the Act and federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harass is defined by Service regulations at 50 CFR 17.3 as an intentional or negligent act or omission which creates the likelihood of injury to wildlife 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. Harm is defined by the same regulations as an act which actually kills or injures wildlife. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavior patterns, including 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 the terms and conditions of this Incidental Take Statement.

The Western Placer County Habitat Conservation Plan/Natural Community Conservation Plan and its associated documents clearly identify anticipated effects on Covered Species and the measures that will be taken to minimize those effects. The Plan's Conservation Strategy (Chapter 5), Conditions on Covered Activities (Chapter 6), and monitoring and adaptive management program (Chapter 7), together with Plan Chapter 8 (Plan Implementation) are hereby incorporated by reference as reasonable and prudent measures and terms and conditions within this Incidental Take Statement pursuant to 50 CFR §402.14(i). Such terms and conditions are non-discretionary and must be undertaken for the exemptions under section 10(a)(1)(B) and section 7(o)(2) of the Act to apply. If the Permittees fail to adhere to these terms and conditions, the protective coverage of the section 10(a)(1)(B) permit and section 7(o)(2) may lapse. The anticipated amount or extent of the incidental take and associated reporting requirements are described in the Plan and its accompanying section 10(a)(1)(B) permit.

The Corps' proposed Placer County Conservation Program Clean Water Act 404 Permit Strategy will authorize a subset of activities covered by the Western Placer County Habitat Conservation Plan/Natural Community Conservation Plan. Only activities that comply with the Habitat Conservation Plan/Natural Community Conservation Plan and are Covered Activities under the Plan may receive authorization under Placer County Conservation Program Clean Water Act 404 Permit Strategy. Therefore, based on the foregoing analyses and conclusions presented above, this Incidental Take Statement addresses incidental take resulting from the Corps' proposed action. The Plan's Conservation Strategy (Chapter 5), Conditions on Covered Activities (Chapter 6), and monitoring and adaptive management program (Chapter 7), together with Plan Chapter 8 (Plan Implementation), are hereby incorporated by reference as reasonable and prudent measures and terms and conditions within this Incidental Take Statement pursuant to 50 CFR §402.14(i). Such terms and conditions are non-discretionary and must be undertaken for the exemptions under section 10(a)(1)(B) and section 7(o)(2) of the Act to apply. If the Corps fails to adhere to these terms and conditions, the protective coverage of the section 10(a)(1)(B) permit and section 7(o)(2) may lapse.

### **3.1 Amount or Extent of Take**

The Service anticipates incidental take of the following Covered Species, currently listed under the Act, as a result of Covered Activities under the Plan, including those needing authorization under the Corps' Permit Strategy during the 50-year permit term: vernal pool fairy shrimp, vernal pool tadpole shrimp, conservancy fairy shrimp, valley elderberry longhorn beetle, California red-legged frog, and giant garter snake. Incidental take in terms of numbers of individuals may be difficult to detect because of population dynamics, small body size, seasonal fluctuations in populations, and habitat type. However, take of these listed species can be anticipated by loss or degradation of habitat modeled under the Plan and the amount of take in the form of habitat loss can be used as a surrogate for number of individuals taken. In some cases, implementation of the avoidance measures from Chapter 6 of the Plan may prevent direct injury and mortality of individuals despite loss of habitat.

Similarly, the Service anticipates incidental take of the following Covered Species, currently not listed under the Act, during the 50-year permit term: foothill yellow-legged frog, western pond turtle, western burrowing owl, tricolored blackbird, Swainson's hawk, and California black rail. Incidental take in terms of numbers of individuals may be difficult to detect because of population dynamics, small body size, seasonal fluctuations in populations, and habitat type. However, take of these listed species can be anticipated by loss or degradation of habitat modeled under the Plan and the amount of take in the form of habitat loss can be used as a surrogate for number of individuals taken. In some cases, implementation of the avoidance measures from Chapter 6 of the Plan may prevent direct injury and mortality of individuals despite loss of habitat.

Table 3 establishes the maximum extent of take for each Covered Species (with the exception of conservancy fairy shrimp) in terms of habitat loss and sets a standard for determining when the authorized level of anticipated take has been exceeded. Conservancy fairy shrimp, for which the Plan does not model habitat, is discussed separately below. In some cases, the Plan quantifies reduction in habitat function for Covered Species, and these estimates set a standard for the maximum extent of take as a result of those effects. Specifically, the Plan estimates indirect effects to 70 acres of vernal pool complex habitat for vernal pool fairy shrimp and vernal pool tadpole shrimp in the Valley Conservation and Rural Development Area, 506 acres along the border between the Valley Potential Future Growth Area and the Valley Conservation and Rural Development Area, and 183 acres in the Foothills that are currently subject to a low level of existing indirect effects. On-site indirect effects to vernal pool constituent habitats will not exceed 66 acres; this includes 56 acres within the Valley Potential Future Growth Area and 10 acres within the Valley Conservation and Rural Development Area.

Table 3. Maximum take allowed for Covered Species, using acres of habitat as a surrogate.

<b>Species</b>	<b>Modeled Habitat Type (acres)</b>	<b>Maximum Permanent Effects (acres)</b>	<b>Maximum Temporary Effects (acres)</b>
Swainson's Hawk	Nesting	149	10
	Foraging	16,267	602
	Total	16,416	612
California Black Rail	Year-round	105	41
Western Burrowing Owl	Year-round	16,444	609
Tricolored Blackbird	Nesting	55	103
	Foraging	17,015	836
	Total	17,070	939
Giant Garter Snake	Aquatic	1,438	203
	Upland	483	22
	Rice	2,060	90
	Total	3,981	315
Western Pond Turtle	Aquatic	750	250
	Upland	1,407	40
	Total	2,157	290
Foothill Yellow-legged Frog	Year-round	155	39
California Red-legged Frog	Aquatic	672	168
	Upland	8,551	214
	Total	9,223	382
Valley Elderberry Longhorn Beetle	Year-round	476	18
Vernal Pool Fairy Shrimp and Vernal Pool Tadpole Shrimp	Vernal Pool Complex	12,550	455
	Vernal Pool Constituent Habitat	580 (and no more than 185 of vernal pools)	30

The Plan does not model habitat for conservancy fairy shrimp because they are only known to occur in one pool within the Permit Area. The occurrence is a single pool located in a conservation bank and no loss of habitat for this species is anticipated. However, in the unlikely event additional occurrences of conservancy fairy shrimp are found in the Permit Area, Covered Activities would have the potential to result in take of the species. The Plan addresses this possibility by applying conditions requiring species-specific surveys and specific protections described in Plan Section 6.3.5.14, *Species Condition 9, Conservancy Fairy Shrimp*, and by establishing a specific conservation objective in Chapter 5, Objective VPB-2.1, *Protect Conservancy Fairy Shrimp Occurrences*, which states that two previously unknown (at the time of Plan development) and unprotected conservancy fairy shrimp occurrences must be protected for the first occurrence of conservancy fairy shrimp taken, prior to such take occurring; and three additional occurrences must be protected for each additional occurrence taken, prior to such take occurring. These measures will ensure that more conservancy fairy shrimp occurrences within the Permit Area are protected than would be impacted by Covered Activities. Therefore, so long

as the requirements of Plan Condition 9, and Objective VPB-2.1 are met, there is not a specific acreage limit on the extent of take of habitat or individuals for conservancy fairy shrimp. However, the likelihood of take of any conservancy fairy shrimp is considered very low.

For the purposes of determining compliance with these requirements, an occurrence will be considered a vernal pool occupied by conservancy fairy shrimp. An occupied pool will be defined as described in Plan Section 5.3.1.6.10, *Vernal Pool Branchiopods* and Plan Section 6.3.5.15, Species Condition 10, *Vernal Pool Fairy Shrimp and Vernal Pool Tadpole Shrimp*. Specifically, an occurrence will be considered a vernal pool (as determined by wetland delineation; see Plan Section 6.2.4.4, *Item 4: Mapping HCP/NCCP Aquatic Features* for details) that is occupied by conservancy fairy shrimp. If a conservancy fairy shrimp is found within a pool, the entire vernal pool will be considered occupied.

Upon implementation of the reasonable and prudent measures below, incidental take, as identified in this Biological Opinion, of the Covered Species associated with the implementation of the Western Placer Habitat Conservation Plan/Natural Community Conservation Plan will become exempt from the prohibitions described in section 9 of the Act. No other forms of take are exempted under this opinion.

### **3.2 Effect of the Take**

In the accompanying Biological Opinion, the Service determined that this level of anticipated take is not likely to result in jeopardy to any of the Covered Species, or destruction or adverse modification of critical habitat.

### **3.3 Reasonable and Prudent Measures**

The Service believes that implementation of the entire Western Placer Habitat Conservation Plan/Natural Community Conservation Plan constitutes reasonable and prudent measures necessary and appropriate to minimize take of all the Covered Species. The following chapters of the Plan will specifically minimize the take of Covered Species:

- Conservation Strategy (Chapter 5)
- Program Participation and Conditions on Covered Activities (Chapter 6)
- Monitoring and Adaptive Management (Chapter 7)
- Plan Implementation (Chapter 8)

### **3.4 Terms and Conditions**

In order to be exempt from the prohibitions of section 9 of the Act, the following terms and conditions must be followed, which implement the reasonable and prudent measures, described above and outline required reporting/monitoring requirements. These terms and conditions are non-discretionary.

The Permittees will notify the Service within one (1) working day of finding any injured or dead listed species or within one (1) working day of any unanticipated damage to habitat. Injured listed species must be cared for by a licensed veterinarian or other qualified person(s), such as the Service-approved biologist. Dead individuals must be sealed in a resealable plastic bag

containing a paper with the date and time when the animal was found, the location where it was found, and the name of the person who found it, and the bag containing the specimen frozen in a freezer located in a secure site, until instructions are received from the Service regarding the disposition of the dead specimen. The Service contact person is the Manager of the Conservation Planning Division, at the Sacramento Fish and Wildlife Office at (916) 414-6600.

The Permittees shall conduct monitoring and adaptive management as described in Chapter 7 of the Plan and submit an annual report to the Service in accordance with Chapter 8 of the Plan. Annual reports will require synthesis of data and reporting on important trends such as land acquisition, fee collection, and habitat restoration. The report shall be submitted to the Manager of the Conservation Planning Division, at the Sacramento Fish and Wildlife Office, Endangered Species Division, 2800 Cottage Way, Room W-2605, Sacramento, 95825-1846.

The Corps will allow use of the Placer County Conservation Program Clean Water Act 404 Permit Strategy only for activities that fully comply with the Western Placer Habitat Conservation Plan/Natural Community Conservation Plan.

#### **4. 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 to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information. The Service has no conservation recommendations for the proposed action considered in this Biological Opinion.

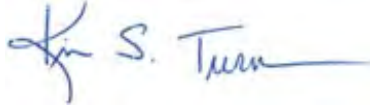
#### **5. REINITIATION—CLOSING STATEMENT**

This concludes formal consultation on the Western Placer County Habitat Conservation Plan/Natural Community Conservation Plan. As provided in 50 CFR §402.16(a), reinitiation of formal consultation is required and shall be requested by the federal agency or by the Service where discretionary federal involvement or control over the action has been retained or is authorized by law and:

- 1) If the amount or extent of taking specified in the incidental take statement is exceeded;
- 2) If new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered;
- 3) If the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion; or written concurrence, or
- 4) If a new species is listed or critical habitat designated that may be affected by the identified action.

If you have any questions regarding this Biological Opinion and Conference Opinion for the proposed Western Placer County Habitat Conservation Plan/Natural Communities Conservation Plan, please contact Stephanie Jentsch, Senior Biologist ([stephanie\\_jentsch@fws.gov](mailto:stephanie_jentsch@fws.gov)) or Eric Tattersall, Assistant Field Supervisor ([eric\\_tattersall@fws.gov](mailto:eric_tattersall@fws.gov)), at the letterhead address or at (916) 414-6496.

Sincerely,

A handwritten signature in blue ink that reads "Kim S. Turner". The signature is written in a cursive style with a long horizontal line extending to the right.

Kim S. Turner  
Acting Field Supervisor

Enclosures

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- Service. 2007a. Vernal pool fairy shrimp (*Branchinecta lynchi*) 5-year review: summary and evaluation. Sacramento Fish and Wildlife Office, Sacramento, California. September 2007. 76 pages.
- Service. 2007b. Vernal pool tadpole shrimp (*Lepidurus packardi*) 5-year review: summary and evaluation. Sacramento Fish and Wildlife Office, Sacramento, California. September 2007. 50 pages.
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## **APPENDIX A: Species List**



# United States Department of the Interior



FISH AND WILDLIFE SERVICE  
Sacramento Fish And Wildlife Office  
Federal Building  
2800 Cottage Way, Room W-2605  
Sacramento, CA 95825-1846  
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To:

May 11, 2020

Consultation Code: 08ESMF00-2020-SLI-1870

Event Code: 08ESMF00-2020-E-05798

Project Name: Western Placer County HCP/NCCP Section 7 Biological Opinion

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, under the jurisdiction of the U.S. Fish and Wildlife Service (Service) that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

[http://www.nwr.noaa.gov/protected\\_species/species\\_list/species\\_lists.html](http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html)

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan ([http://www.fws.gov/windenergy/eagle\\_guidance.html](http://www.fws.gov/windenergy/eagle_guidance.html)). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

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Attachment(s):

- Official Species List

## Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Sacramento Fish And Wildlife Office**

Federal Building

2800 Cottage Way, Room W-2605

Sacramento, CA 95825-1846

(916) 414-6600

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## Project Summary

Consultation Code: 08ESMF00-2020-SLI-1870

Event Code: 08ESMF00-2020-E-05798

Project Name: Western Placer County HCP/NCCP Section 7 Biological Opinion

Project Type: \*\* OTHER \*\*

Project Description: Evaluating permit issuance for the Western Placer County HCP/NCCP. The HCP/NCCP covers 14 state and federally listed species that occur in the Plan Area. The HCP/NCCP includes development, infrastructure and maintenance projects for 5 Applicants in accordance with the appropriate local planning documents over a 50-year permit term.

### Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/38.879748027374404N121.26436351311433W>



Counties: El Dorado, CA | Nevada, CA | Placer, CA | Sacramento, CA | Yuba, CA

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## Endangered Species Act Species

There is a total of 14 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

- 
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

## Reptiles

NAME	STATUS
Giant Garter Snake <i>Thamnophis gigas</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/4482">https://ecos.fws.gov/ecp/species/4482</a>	Threatened

## Amphibians

NAME	STATUS
California Red-legged Frog <i>Rana draytonii</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/2891">https://ecos.fws.gov/ecp/species/2891</a> Species survey guidelines: <a href="https://ecos.fws.gov/ipac/guideline/survey/population/205/office/11420.pdf">https://ecos.fws.gov/ipac/guideline/survey/population/205/office/11420.pdf</a>	Threatened
California Tiger Salamander <i>Ambystoma californiense</i> Population: U.S.A. (Central CA DPS) There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/2076">https://ecos.fws.gov/ecp/species/2076</a>	Threatened

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## Fishes

NAME	STATUS
Delta Smelt <i>Hypomesus transpacificus</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/321">https://ecos.fws.gov/ecp/species/321</a>	Threatened

## Insects

NAME	STATUS
Valley Elderberry Longhorn Beetle <i>Desmocerus californicus dimorphus</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/7850">https://ecos.fws.gov/ecp/species/7850</a> Habitat assessment guidelines: <a href="https://ecos.fws.gov/ipac/guideline/assessment/population/436/office/11420.pdf">https://ecos.fws.gov/ipac/guideline/assessment/population/436/office/11420.pdf</a>	Threatened

## Crustaceans

NAME	STATUS
Conservancy Fairy Shrimp <i>Branchinecta conservatio</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/8246">https://ecos.fws.gov/ecp/species/8246</a>	Endangered
Vernal Pool Fairy Shrimp <i>Branchinecta lynchi</i> There is <b>final</b> critical habitat for this species. Your location overlaps the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/498">https://ecos.fws.gov/ecp/species/498</a>	Threatened
Vernal Pool Tadpole Shrimp <i>Lepidurus packardii</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/2246">https://ecos.fws.gov/ecp/species/2246</a>	Endangered



## Flowering Plants

NAME	STATUS
El Dorado Bedstraw <i>Galium californicum ssp. sierrae</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/5209">https://ecos.fws.gov/ecp/species/5209</a>	Endangered
Layne's Butterweed <i>Senecio layneae</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/4062">https://ecos.fws.gov/ecp/species/4062</a>	Threatened
Pine Hill Ceanothus <i>Ceanothus roderickii</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/3293">https://ecos.fws.gov/ecp/species/3293</a>	Endangered
Pine Hill Flannelbush <i>Fremontodendron californicum ssp. decumbens</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/4818">https://ecos.fws.gov/ecp/species/4818</a>	Endangered
Sacramento Orcutt Grass <i>Orcuttia viscida</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/5507">https://ecos.fws.gov/ecp/species/5507</a>	Endangered
Stebbins' Morning-glory <i>Calystegia stebbinsii</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/3991">https://ecos.fws.gov/ecp/species/3991</a>	Endangered

## Critical habitats

There is 1 critical habitat wholly or partially within your project area under this office's jurisdiction.

NAME	STATUS
Vernal Pool Fairy Shrimp <i>Branchinecta lynchi</i> <a href="https://ecos.fws.gov/ecp/species/498#crithab">https://ecos.fws.gov/ecp/species/498#crithab</a>	Final

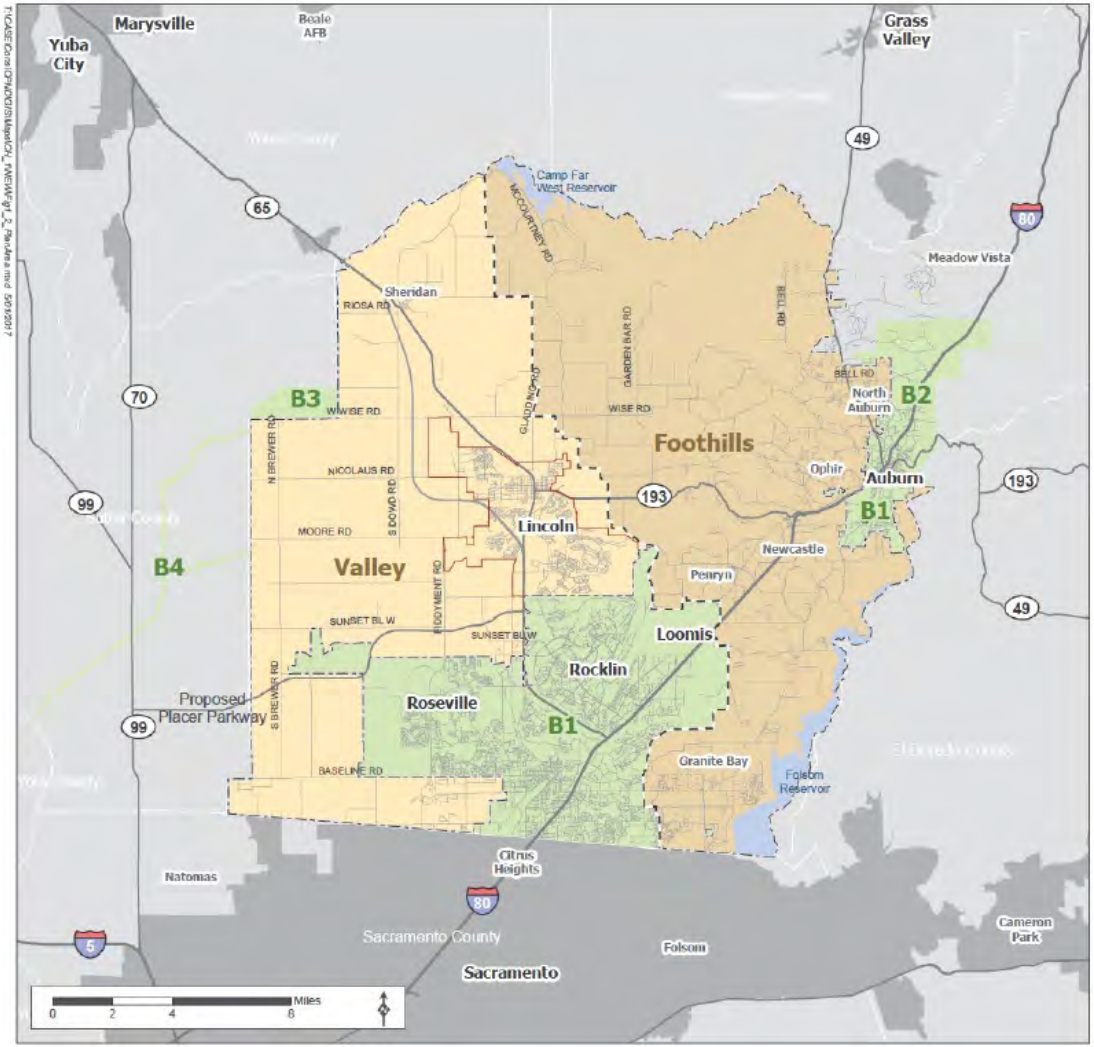
## **APPENDIX B Species Evaluation**

### **Sacramento Fish and Wildlife Office Intra-Service Section 7 Biological Evaluation Form**

#### **I. Project Location**

A. County where the project will occur: Placer County

B. Brief description of project area (include map): The project covers approximately 270,000 acres in western Placer County, and a small area in Sutter County. The Action Area also includes the Big Gun Conservation Bank near Michigan Bluff in central Placer County, where mitigation and conservation for California red-legged frog will occur. The Action Area includes two plan areas: Plan Area A, where most development will occur, and Plan Area B, where a few, specific Covered Activities will occur. The figure below shows both Plan Area A and Plan Area B.



## II. Species/Critical Habitat

A. Identify the species of concern that are or may be present in the action area and whether federally designated or proposed critical habitat is present within the project area. (Range, Status, Impact, Data).

Common Name	Scientific Name	Federal Status	Species or Habitat within Action Area	Proposed or Designated Critical Habitat Present in Action Area	Species Potentially Affected By Project
California red-legged frog	<i>Rana draytonii</i>	T	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>
California tiger salamander, Central California DPS	<i>Ambystoma californiense</i>	T	<b>Yes</b>	<b>No</b>	<b>No</b>
Delta smelt	<i>Hypomermus transpacificus</i>	T	<b>No</b>	<b>No</b>	<b>No</b>
Valley elderberry longhorn beetle	<i>Desmocerus californicus dimorphus</i>	T	<b>Yes</b>	<b>No</b>	<b>Yes</b>
Conservancy Fairy Shrimp	<i>Branchinecta conservation</i>	E	<b>Yes</b>	<b>No</b>	<b>Yes</b>
Vernal pool fairy shrimp	<i>Branchinecta lynchi</i>	T	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>
Giant garter snake	<i>Thamnophis gigas</i>	T	<b>Yes</b>	<b>No</b>	<b>Yes</b>
Vernal pool tadpole shrimp	<i>Lepidurus packardii</i>	E	<b>Yes</b>	<b>No</b>	<b>Yes</b>
El Dorado bedstraw	<i>Galium californicum ssp. sierrae</i>	E	<b>No</b>	<b>No</b>	<b>No</b>
Layne's butterweed	<i>Senecio layneae</i>	T	<b>No</b>	<b>No</b>	<b>No</b>
Pine Hill ceanothus	<i>Ceanothus roderickii</i>	E	<b>No</b>	<b>No</b>	<b>No</b>
Pine Hill flannelbush	<i>Fremontodendron californicum ssp. decumbens</i>	E	<b>No</b>	<b>No</b>	<b>No</b>
Sacramento Orcutt grass	<i>Orcuttia viscida</i>	E	<b>No</b>	<b>No</b>	<b>No</b>
Stebbin's morning-glory	<i>Calystegia stebbinsii</i>	E	<b>No</b>	<b>No</b>	<b>No</b>

### III. Description of Proposed Action

The Proposed Action is issuance of an incidental take permit for 14 species in western Placer County as a result of development, infrastructure improvements and conservation actions over 50 years. Details of the Covered Activities are described in Chapter 2 of the Western Placer County Habitat Conservation Plan/Natural Community Conservation Plan (Plan or Conservation Plan), and include growth and development projects described in the Placer County and City of Lincoln general plans. For information on the conservation strategy, please see chapters 5 and 6 of the Plan.

**IV. Recommended Determination(s) of Effect(s):** For all species and critical habitat identified in the action area, mark (X) the appropriate determinations.

X a) “No Effect”. List species for which this recommendation is applicable: Delta smelt, El Dorado bedstraw, Pine Hill ceanothus, and Pine Hill flannelbush.

X b) “May Affect, but is Not Likely to Adversely Affect” (includes beneficial effects). List species for which this recommendation is applicable: California tiger salamander, Layne’s butterweed, Sacramento Orcutt grass, and Stebbin’s morning-glory.

X c) “May Affect, and is Likely to Adversely Affect” (if checked, proceed with biological opinion). List species for which this recommendation is applicable: California red-legged frog, giant garter snake, conservancy fairy shrimp, vernal pool fairy shrimp, vernal pool tadpole shrimp, and valley elderberry longhorn beetle.

#### IV.a. Reasoning for Effects Determinations

The proposed action will have no effect on four of the species identified in the evaluation. Delta smelt occur downstream of the proposed action in the San Francisco Bay-Delta, and will not be affected by the project. The three other species – El Dorado bedstraw, Pine Hill ceanothus, and Pine Hill flannelbush – only occur on Gabbro soil types on or in the immediate vicinity of Pine Hill, in El Dorado County, California. Gabbro soils have a very limited distribution in the Sierra Nevada foothills, and do not occur in the Action Area.

The proposed action may affect, but is not likely to adversely affect another four species identified in the evaluation. There are no records of California tiger salamander from Placer County and the species is not known to have occurred there, although vernal pool complex habitat is present in the action area (Service 2017 – California tiger salamander recovery plan). The closest extant populations of California tiger salamander are found in western Yolo County and in southeastern Sacramento County, which are separated from the Action Area by the Sacramento and American Rivers, and extensive urban development. Layne’s butterweed are found from Yuba to Tuolumne Counties in serpentine and Gabbro soils, both of which are relatively rare in Placer County and occur outside of the Action Area. One population of Layne’s butterweed is known from Placer County east of the Action Area in Tahoe National Forest. Stebbin’s morning-glory is another species endemic to Gabbro and serpentine soils, and is only known Nevada and El Dorado Counties. Sacramento Orcutt grass is endemic to vernal pools in Sacramento County, and is not known from Placer County.

## V. Federally Designated and Proposed Critical Habitat

X a) “No Effect” to Critical Habitat. List critical habitat(s) for which the recommendation is applicable. California tiger salamander, delta smelt, conservancy fairy shrimp, vernal pool tadpole shrimp, and Sacramento Orcutt grass.

X b) “May Affect, but is not likely to Adversely Affect” List critical habitat(s) for which the recommendation is applied. California red-legged frog

X c) “May Affect, and is Likely to Adversely Affect” (if checked, proceed with biological opinion). List critical habitat(s) for which the recommendation is applied. Vernal pool fairy shrimp.

### V.a. Reasoning for Effects Determinations

There is only one unit of designated critical habitat that overlaps with the Action Area at Big Gun Conservation Bank. The proposed action will contribute to on-going conservation for the species at the Conservation Bank, and affects will be beneficial for the species and will not appreciably reduce the value of the critical habitat.

## VI. Signatures:

### Prepared by

Name/Title: Stephanie Jentsch, Senior Biologist

Signature:



Date: December 1, 2020

### Reviewed by

Name/Title: Eric Tattersall, Assistant Field Supervisor

Signature:

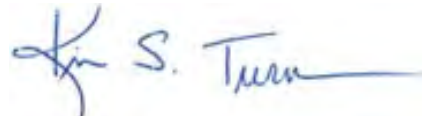


Date: December 1, 2020

### Approved by (Acting Field Supervisor)

Name/Title: Kim S. Turner, Acting Field Supervisor

Signature:



Date: December 1, 2020

# APPENDIX I

*NMFS Biological  
Opinion and EFH  
Consultation*



UNITED STATES DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
NATIONAL MARINE FISHERIES SERVICE  
West Coast Region  
1201 NE Lloyd Boulevard, Suite 1100  
PORTLAND, OREGON 97232

Refer to NMFS ECO#: WCRO-2020-03651

March 15, 2021

**MEMORANDUM FOR:** Placer County Habitat Conservation Plan Project File  
(Incidental Take Permit #25641)  
(ARN: 151422-WCR2021-SA00059)

**FROM:** Cathy Marcinkevage  
Assistant Regional Administrator  
California Central Valley Office

**SUBJECT:** Intra-Service Endangered Species Act section 7 Consultation  
(WCR-2020-00XXX) for the Issuance of section 10(a)(1)(B)  
Incidental Take Permit for the Placer County Conservation  
Program Habitat Conservation Plan authorizing take of California  
Central Valley steelhead (*Oncorhynchus mykiss*), Central Valley  
fall-run Chinook salmon (*O. tshawytscha*), and Central Valley late  
fall-run Chinook salmon (*O. tshawytscha*) and documentation of  
Magnuson-Stevens Fishery Conservation and Management Act  
Essential Fish Habitat Response

The attached biological opinion and essential fish habitat (EFH) consultation (Attachment 1) represent NOAA's National Marine Fisheries Service (NMFS) West Coast Region, Endangered Species Act sections 7(a)(2) and (a)(4) biological opinion on the Placer County Conservation Program Habitat Conservation Plan (PCCP), dated May 22, 2020. This consultation was conducted in accordance with the 2019 revised regulations that implement section 7 of the ESA (50 CFR 402; 84 FR 44976, 45016).

The attached also includes a Magnuson-Stevens Fishery Conservation and Management Act EFH consultation for the proposed activities. NMFS assessed the effects of the proposed issuance of an incidental take permit (ITP) to Placer County, which would authorize take of Covered Species for Placer County's Covered Activities, and result in the implementation of the habitat conservation plan (HCP). Implementation of the HCP will minimize and mitigate for adverse effects from Covered Activities on Covered Species to the maximum extent possible. The Covered Species addressed in this opinion are the distinct population segment of California Central Valley (CCV) steelhead, Central Valley (CV) fall-run Chinook salmon evolutionarily significant unit (ESU), and CV late fall-run Chinook salmon ESU.

NMFS has concluded that the proposed issuance of an ITP to Placer County and implementation of the PCCP is not likely to jeopardize the continued existence of CCV steelhead, CV fall-run



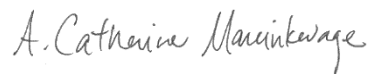


Chinook salmon, or CV late fall-run Chinook salmon nor is it likely to result in the destruction or adverse modification of its designated critical habitat.

NMFS also concludes that the issuance of an ITP to Placer County and implementation of the HCP will result in adverse effects to Pacific salmon EFH. However, these adverse effects will be offset to a degree with the implementation of best management practices and conservation measures in the HCP, such that additional conservation recommendations are not needed or provided.

Please contact Neal McIntosh at the NMFS California Central Valley Office at (916) 930-5647 or via email at [neal.mcintosh@noaa.gov](mailto:neal.mcintosh@noaa.gov), if you have any questions concerning this consultation, or if you require additional information.

Sincerely,



Cathy Marcinkevage  
Assistant Regional Administrator  
California Central Valley Office

Enclosure

cc: File: 151422-WCR2021-SA00059

Ms. Stephanie Jentsch, USFWS Senior Wildlife Biologist, [stephanie\\_jentsch@fws.gov](mailto:stephanie_jentsch@fws.gov)

Mr. Eric Tattersall, USFWS Acting Deputy Field Supervisor, [eric\\_tattersall@fws.gov](mailto:eric_tattersall@fws.gov)

Ms. Leah Fisher, USACE Senior Regulatory Project Manager,

[leah.m.fisher@usace.army.mil](mailto:leah.m.fisher@usace.army.mil)

Mr. Gregg McKenzie, Placer County Conservation Plan Manager,

[gamckenz@placer.ca.gov](mailto:gamckenz@placer.ca.gov)

Attachment (1)



UNITED STATES DEPARTMENT OF COMMERCE  
 National Oceanic and Atmospheric Administration  
 NATIONAL MARINE FISHERIES SERVICE  
 West Coast Region  
 1201 NE Lloyd Boulevard, Suite 1100  
 PORTLAND, OREGON 97232

**Endangered Species Act section 7(a)(2) Biological Opinion and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat (EFH) Response**  
 Placer County Conservation Program Habitat Conservation Plan

National Marine Fisheries Service (NMFS) Environmental Consultation Organizer Number:  
 WCR-2020-03651

Action Agencies: NMFS, United States Fish and Wildlife Service, United States Army Corps of Engineers

Affected Species and NMFS' Determinations:

ESA-Listed Species	Status	Is Action Likely to Adversely Affect Species?	Is Action Likely To Jeopardize the Species?	Is Action Likely to Adversely Affect Critical Habitat?	Is Action Likely To Destroy or Adversely Modify Critical Habitat?
California Central Valley steelhead ( <i>Oncorhynchus mykiss</i> ) Distinct Population Segment	Threatened	Yes	No	Yes	No
Central Valley (CV) fall-run Chinook salmon ( <i>O. tshawytscha</i> ) evolutionarily significant unit (ESU)	Not listed	Yes	No*	Yes**	No**
CV late fall-run Chinook salmon ( <i>O. tshawytscha</i> ) ESU	Not listed	Yes	No*	Yes**	No**

\* - If this species becomes listed during the permit term.

\*\* - If critical habitat for this species is designated during the permit term.

Fishery Management Plan That Identifies EFH in the Project Area	Does Action Have an Adverse Effect on EFH?	Are EFH Conservation Recommendations Provided?
Pacific Coast Salmon	Yes	No

**Consultation Conducted By:** National Marine Fisheries Service, West Coast Region

**Issued By:**

*A. Catharine Marcinkevage*

Cathy Marcinkevage  
 Assistant Regional Administrator for California Central Valley Office

**Date:** March 15, 2021

TABLE OF CONTENTS

**Table of Contents ..... ii**

**LIST OF ACRONYMS AND ABBREVIATIONS ..... iv**

**1. Introduction..... 1**

1.1. Background ..... 1

1.2. Consultation History ..... 2

1.3. Proposed Federal Action ..... 3

1.3.1. Placer County Conservation Program..... 4

1.3.2. Permittees and Participating Special Entities ..... 4

1.3.3. Covered Activities ..... 5

1.3.4. PCCP Conservation Strategy ..... 43

1.3.5. Program Participation and Conditions on Covered Activities ..... 56

1.3.6. Activities Not Covered by the PCCP..... 76

1.3.7. USACE Proposed Action..... 79

1.3.8. Cost and Funding ..... 81

**2. Endangered Species Act: Biological Opinion And Incidental Take Statement ..... 82**

2.1. Analytical Approach ..... 82

2.2. Rangewide Status of the Species and Critical Habitat ..... 83

2.2.1. Recovery Plan ..... 85

2.2.2. Global Climate Change..... 86

2.3. Action Area ..... **Error! Bookmark not defined.**

2.4. Environmental Baseline ..... 88

2.4.1. Status of the Covered Species and Critical Habitat in the Action Area..... 89

2.4.2. Factors Affecting Covered Species and Critical Habitat ..... 99

2.4.3. Recovery Plan for CCV Steelhead DPS ..... 111

2.5. Effects of the Action ..... 111

2.5.1. Effects of the Action to Covered Fish Species ..... 112

2.5.2. Effects of the Action to Critical Habitat and Covered Fish Habitat ..... 124

2.6. Cumulative Effects..... 125

2.6.1. Increased Urbanization ..... 125

2.6.2. Aquaculture and Fish Hatcheries ..... 125

2.6.3. Recreational Fishing ..... 126

2.6.4. Agricultural Practices..... 127

2.6.5.	Mining Activities .....	128
2.6.6.	Water Supply .....	128
2.7.	Integration and Synthesis .....	128
2.7.1.	Effects of the Proposed Action to Listed Species .....	129
2.7.2.	Effects of the Proposed Action to Critical Habitat and Covered Fish Habitat .....	129
2.7.3.	Survival and Recovery of the DPS/ESU .....	130
2.8.	Conclusion.....	131
2.9.	Incidental Take Statement.....	131
2.9.1.	Amount or Extent of Take .....	132
2.9.2.	Effect of the Take.....	134
2.9.3.	Reasonable and Prudent Measures.....	134
2.9.4.	Terms and Conditions .....	135
2.10.	Conservation Recommendations .....	136
2.11.	Reinitiation of Consultation.....	137
<b>3.</b>	<b>Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response.....</b>	<b>137</b>
3.1.	Essential Fish Habitat Affected by the Project.....	138
3.2.	Adverse Effects on Essential Fish Habitat .....	138
3.2.1.	Water Quality .....	139
3.2.2.	Physical Disturbance Effects .....	139
3.2.3.	Acoustic Effects from Impact Pile Driving .....	139
3.2.4.	Dewatering.....	139
3.2.5.	Land Conversion and Urbanization .....	140
3.2.6.	Water Quantity.....	140
3.2.7.	Disturbance to Riparian Habitat.....	140
3.2.8.	Disturbance to Riverine Habitat.....	140
3.3.	Essential Fish Habitat Conservation Recommendations.....	140
3.4.	Supplemental Consultation .....	140
<b>4.</b>	<b>Data Quality Act Documentation and Pre-Dissemination Review.....</b>	<b>141</b>
4.1.	Utility .....	141
4.2.	Integrity .....	141
4.3.	Objectivity.....	141
<b>5.</b>	<b>References.....</b>	<b>142</b>

## LIST OF ACRONYMS AND ABBREVIATIONS

ARPS – American River Pump Station  
BMPs – best management practices  
°C – degrees Celsius  
CARP – county aquatic resources program  
CCV – California Central Valley  
CDFG – California Department of Fish and Game  
CDFW – California Department of Fish and Wildlife  
CEQA – California Environmental Quality Act  
CESA – California Endangered Species Act  
CFR – Code of Federal Regulations  
cfs – cubic feet per second  
CRD – conservation and rural development  
CRMP – coordinated resource management plan  
CV – Central Valley  
CWA – Clean Water Act  
CWPP – community wildfire protection plan  
dB – decibel  
DO – dissolved oxygen  
DPS – distinct population segment  
DQA – Data Quality Act  
DWR – California Department of Water Resources  
EFH – essential fish habitat  
EIR – environmental impact report  
EIS – environmental impact statement  
EPA – Environmental Protection Agency  
ERP – ecosystem restoration plan  
ESA – Endangered Species Act  
ESU – evolutionarily significant unit  
EXR – existing reserves and other protected areas  
°F – degrees Fahrenheit  
FEIS/R – final environmental impact statement/environmental impact report  
FMP – Fishery Management Plan  
FR – Federal Register  
HAPC – habitat area of particular concern  
HCP – habitat conservation plan  
HGMP – hatchery and genetic management plans  
HUC – hydrologic unit code  
ILF – in-lieu fee  
ITS – incidental take statement  
IWM – instream woody material  
LIDS – low impact development standards  
LOPs – letters of permission  
MSA – Magnuson-Stevens Fishery Conservation and Management Act  
NCCP – natural community conservation plan  
NEPA – National Environmental Policy Act

NID – Nevada Irrigation District  
NMFS – National Marine Fisheries Service  
NPDES – national pollutant discharge elimination system  
NOAA – National Oceanic and Atmospheric Administration  
NTU – nephelometric turbidity units  
OHWM – ordinary high water mark  
opinion – biological opinion  
PAH – polycyclic aromatic hydrocarbon  
PBF – physical or biological feature  
PCA – Placer Conservation Authority  
PCCP – Placer County Conservation Program  
PCE – primary constituent element  
PCFCWCD – Placer County Flood Control and Water Conservation District  
PCWA – Placer County Water Agency  
PFG – potential future growth  
PG&E – Pacific Gas and Electric  
PGP – programmatic general permit  
RAA – reserve acquisition area  
RGP – regional general permit  
RMS – root mean square  
RPMs – reasonable and prudent measures  
SEL – sound exposure level  
SR – state route  
SSWD – South Sutter Water District  
SWPPP – stormwater pollution prevention plan  
USACE – United States Army Corps of Engineers  
USC – United States Code  
USGS – United States Geological Survey  
USFWS – United States Fish and Wildlife Service  
VSP – viable salmonid population  
WOUS – waters of the United States  
WPWMA – Western Placer Waste Management Authority  
WRSL – Western Regional Sanitary Landfill  
WWPI – Western Wood Preservers Institute  
WWTP – wastewater treatment plant

## 1. INTRODUCTION

This Introduction section provides information relevant to the other sections of this document and is incorporated by reference into sections 2 and 3, below.

### 1.1. Background

The National Marine Fisheries Service (NMFS) prepared the biological opinion (opinion) and incidental take statement (ITS) portions of this document in accordance with section 7(b) of the Endangered Species Act (ESA) of 1973 (16 USC 1531 *et seq.*), and implementing regulations at 50 CFR 402, as amended.

Section 10(a) of the ESA provides exceptions to the section 9 prohibitions on take of Covered Species via two kinds of permits (16 U.S.C. § 1531 *et seq.*). Section 10(a)(1)(A) permits authorize the take of listed species for scientific purposes or to enhance the propagation or survival of listed species. Section 10(a)(1)(B) permits authorize the incidental take of listed species caused by otherwise lawful activities.

Section 10(a)(2)(A) of the ESA, allows an applicant to develop a habitat conservation plan (HCP) that meets specific requirements identified in section 10(a)(2)(A) of the ESA. Any habitat conservation plan must specify: (i) the impact which will likely result from such taking; (ii) what steps the applicant will take to minimize and mitigate such impacts, and the funding that will be available to implement such steps; (iii) what alternative actions to such taking the applicant considered and the reasons why such alternatives are not being utilized; and (iv) such other measures that the Secretary may require as being necessary or appropriate for purposes of the plan.

If these statutory requirements are met, then the applicant can apply to NMFS for an Incidental Take Permit (ITP) pursuant to section 10(a)(1)(B) that would allow for the incidental take of ESA-listed species while carrying out an otherwise lawful activity. Under section 10(a)(1)(B), if the Secretary finds, after opportunity for public comment, with respect to a permit application and the related conservation plan that: (i) the taking will be incidental; (ii) the applicant will, to the maximum extent practicable, minimize and mitigate the impacts of such taking; (iii) the applicant will ensure that adequate funding for the plan will be provided; (iv) the taking will not appreciably reduce the likelihood of the survival and recovery of the species in the wild; and (v) the measures, if any, required under subparagraph (A)(iv) will be met; and the Secretary has received such other assurances as s/he may require that the plan will be implemented, the Secretary shall issue the permit. As described in the permitting provisions of the ESA, the permit shall contain such terms and conditions as the Secretary deems necessary or appropriate to carry out the purposes of this paragraph, including, but not limited to, such reporting requirements as the Secretary deems necessary for determining whether such terms and conditions are being complied with.

In August 2019, Placer County submitted an incidental take permit (ITP) application with their Placer County Conservation Program Habitat Conservation Plan (PCCP) and Natural Community Conservation Plan (NCCP) for potential future growth and conservation measures to mitigate for that growth for a 50-year permit term. The U.S. Fish and Wildlife Service (USFWS)

is the lead Federal agency on the PCCP, NMFS is a cooperating agency along with the U.S. Army Corps of Engineers (USACE) and the U.S. Environmental Protection Agency. On June 21, 2019, in accordance with the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA), the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) approved a draft HCP/NCCP and issued a draft joint environmental impact statement/environmental impact report (EIS/EIR) to evaluate the effects of the proposed action of issuing an ITP under section 10(a)(1)(B) of the ESA. USFWS solicited public comments on the draft EIS/EIR until August 20, 2019, and have addressed comments in the final EIS/EIR that was released on May 22, 2020, with a 30-day public comment period.

When considering issuance of an ITP, NMFS must consult internally under section 7 of the ESA to ensure that issuance of the permit, and subsequent implementation of the PCCP, does not appreciably reduce the likelihood of survival and recovery of ESA-listed species. In compliance with section 7(a)(2) of the ESA, in this opinion, NMFS analyzed the effects of the issuance of an ITP for the PCCP, exempting incidental take of ESA-listed California Central Valley (CCV) steelhead for the implementation of Covered Activities.

Central Valley (CV) fall-run and CV late fall-run Chinook salmon are not species listed under the ESA, and no Federal permit is needed to incidentally take them, but there may be a change in listing status during the permit period. If CV fall-run and CV late fall-run Chinook salmon, henceforth referred to as non ESA-listed salmonids, are listed as threatened or endangered in the future, then the ITP, which includes all Covered Species, would become effective immediately for these species.

NMFS also completed an essential fish habitat (EFH) consultation on the proposed action, in accordance with section 305(b)(2) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA) (16 U.S.C. 1801 *et seq.*) and implementing regulations at 50 CFR 600.

We completed pre-dissemination review of this document using standards for utility, integrity, and objectivity in compliance with applicable guidelines issued under the Data Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001, Public Law 106-554). The document will be available within two weeks at the NOAA Library Institutional Repository [<https://repository.library.noaa.gov/welcome>]. A complete record of this consultation is on file at the California Central Valley Office.

## **1.2. Consultation History**

- The applicants began developing the PCCP with assistance from USFWS in 2000.
- NMFS became involved in the PCCP in 2005 as a cooperating agency, due to the inclusion of CCV steelhead, CCV steelhead critical habitat, CV fall-run Chinook salmon, CV late fall-run Chinook salmon, and EFH for Pacific salmon in the plan.
- Between 2008-2012, Placer County paused development of the HCP.



- On June 21, 2019, USFWS published a notice of availability of a draft joint HCP/NCCP and draft EIS/EIR for this project to the Federal Register for public comment and review with a 60-day public comment period.
- USFWS published a final EIS to the Federal Register on May 22, 2020, with a 30-day public comment period.
- On December 2, 2020, USFWS signed their biological opinion for the PCCP. NMFS determined this constituted a complete initiation package, and consultation was initiated for the issuance of an ITP for the PCCP.

### **1.3. Proposed Federal Action**

Under the ESA, “action” means all activities or programs of any kind authorized, funded, or carried out, in whole or in part, by Federal agencies (50 CFR 402.02).

Under MSA, Federal action means any action authorized, funded, or undertaken, or proposed to be authorized, funded, or undertaken by a Federal Agency (50 CFR 600.910).

The proposed action is the issuance of an ESA ITP by NMFS. The ITP would require the implementation of the PCCP, which contains a series of conservation strategies to minimize and mitigate to the maximum extent practicable the effects of the Covered Activities on Covered Species during the duration of the ITP. The term of the proposed ITP is 50 years, unless the permit is terminated before its expiration and pursuant to applicable regulations.

The ITP would exempt incidental take of threatened CCV steelhead. If CV fall-run and late fall-run Chinook salmon are listed as threatened or endangered in the future, then the ITP would become effective immediately for these species. Within the PCCP and for the purposes of this BO, these three species are referred to collectively as the “Covered Species”.

The ITP would allow incidental take of the Covered Species resulting from the following covered actions: (1) activities described in the PCCP during the ITP duration (“Covered Activities”); and (2) activities associated with conservation strategies identified in the PCCP (Placer County 2020b), in accordance with the statutory and regulatory requirements of the ESA.

As a cooperating agency for the PCCP, USACE proposes to issue Clean Water Act (CWA) 404 permits for activities included in the Covered Activities for this HCP.

We considered, under the ESA, whether or not the proposed action would cause any other activities that would have consequences on listed fish species and their designated critical habitat. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. We determined that the proposed action would cause public use of trails and other park facilities. Public uses of trails and parks include hiking, running, biking, horseback riding, fishing, picnicking, wildlife viewing, and photography. The proposed action may also result in off-trail public use of areas within salmonid habitat, such as walking, wading, swimming, and playing with dogs.

### **1.3.1. Placer County Conservation Program**

The PCCP applies to western Placer County and specific areas where conservation activities will take place in neighboring Sutter County. The goal of the PCCP is to provide an effective framework to protect, enhance, and restore the natural resources in specific areas of western Placer County, while streamlining environmental permitting for Covered Activities. Within this framework, the PCCP will achieve conservation goals, comply with State and Federal environmental regulations, accommodate anticipated urban and rural growth, and permit the construction and maintenance of infrastructure needed to serve the county's population.

The PCCP includes three separate, complementary components that support two sets of State and Federal permits:

- Western Placer County Habitat Conservation Plan and NCCP, referred to by Placer County as the HCP/NCCP or “plan” and referred to in this opinion as PCCP. Placer County's plan is a joint HCP and NCCP that will protect fish, wildlife, and their habitats and fulfill the requirements of the Federal ESA and the California Natural Community and Conservation Planning Act (NCCP Act).
- Western Placer County Aquatic Resources Program, referred to by Placer County as the CARP. The CARP will protect streams, wetlands, and other water resources and fulfill the requirements of the Federal Clean Water Act (CWA) and analogous State laws and regulations.
- An in-lieu fee (ILF) program, which will provide wetland mitigation credits that can fulfill compensatory mitigation requirements under section 404 of the CWA by payment of a fee. The ILF will provide compensatory mitigation for impacts to aquatic resources for all projects and activities that are covered under the HCP/NCCP and the CARP.

The PCCP includes a conservation strategy to mitigate effects on Covered Species. The conservation strategy provides for the conservation and management of Covered Species and their habitats. The PCCP will allow issuance of ITPs under the ESA and the NCCP Act by NMFS, USFWS, and CDFW to the local jurisdictions. The permittees will then be able to use those permits for their own operations, maintenance, and capital projects. The permittees will also be able to extend the incidental take exemptions to private entities conducting activities covered by the PCCP and under their jurisdiction.

### **1.3.2. Permittees and Participating Special Entities**

Permittees for the PCCP are:

- Placer County
- City of Lincoln
- South Placer Regional Transportation Authority (SPRTA)
- Placer County Water Agency (PCWA)
- Placer Conservation Authority (PCA), which was created to implement the PCCP and the CARP on behalf of the other permittees

The PCCP allows entities that are not permittees to participate in the PCCP. This process, described in further detail in section 8.9.4 of the PCCP (USFWS and Placer County 2020), allows public agencies or private parties to receive exemptions for incidental take for defined activities by committing to comply with the PCCP and the permits under a binding agreement with the PCA. Public agencies and private entities may seek to become participating special entities over the life of the PCCP. The PCA will determine whether to extend exemptions for incidental take to potential participating special entities on a case-by-case basis, in accordance with the PCCP and its permits. Based on expressed interest the following three public agencies are likely to seek to become participating special entities for the PCCP:

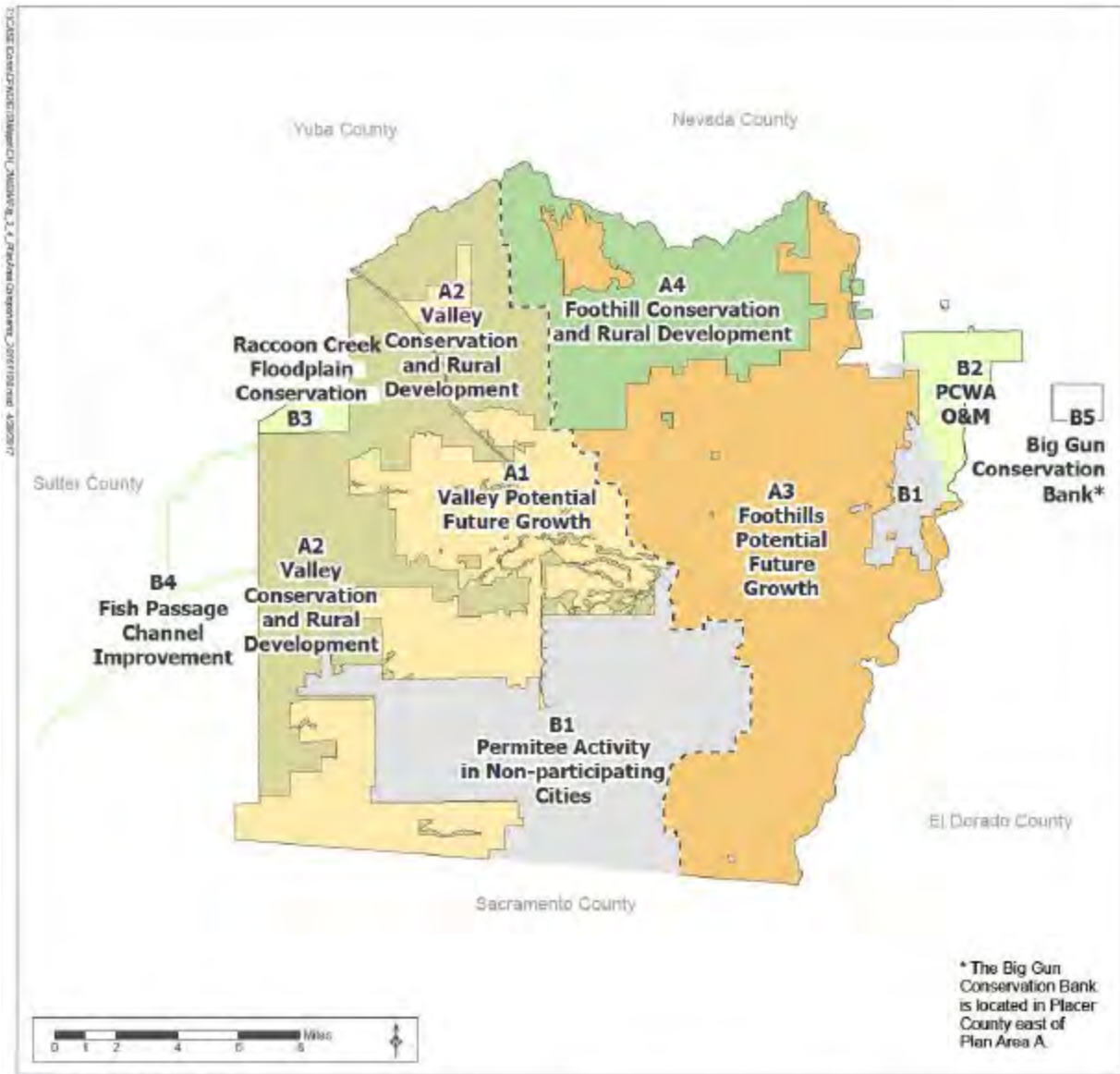
- Western Placer Waste Management Authority (WPWMA), referred to as “Authority” within the PCCP (Placer County 2020b)
- Placer County Flood Control and Water Conservation District (PCFCWCD), referred to as “District” within the PCCP (Placer County 2020b)
- City of Roseville

### **1.3.3. Covered Activities**

Covered Activities include programs or actions that occur repeatedly in one location or throughout the permit area as well as projects, which are well-defined actions that occur once in a discrete location. Covered Activities are based in part on geographical location. The plan area is split into two areas: Plan Area A and Plan Area B. Plan Area A, A1–A4, is the main focus of the PCCP and where all future growth and most of the Covered Activities will take place. Plan Area A will be covered by all of the PCCP permits and all Covered Activities may occur there. Plan Area B, B1–B5, includes several specific additional areas where only specific Covered Activities may occur. The entire plan area and its components are shown in Figure 1.

Covered Activities are split into seven categories by type and by geographical area. The PCCP includes the following categories:

- Valley Potential Future Growth (PFG)
- Valley Conservation and Rural Development (CRD)
- Foothills PFG
- Foothills CRD
- Regional Public Programs
- In-stream Programs
- Conservation Programs



Source: Placer County, 2014, MND | PPA 2010

- Plan Area A**
- A1. Valley Potential Future Growth
  - A2. Valley Conservation and Rural Development
  - A3. Foothills Potential Future Growth
  - A4. Foothill Conservation and Rural Development

- Plan Area B Components**
- B1. Permittee Activity in Non-Participating Cities: Public program or conservation activities undertaken by the Permittees.
  - B2. PCWA O&M: PCWA Zone 1: Operations and Maintenance (O&M) for existing facilities east of Auburn plus adjacent Lake Theodore reservoir.
  - B3. Raccoon Creek Floodplain Conservation: Watershed protection and stream restoration activities along Raccoon Creek floodplain in a portion of Sutter County.
  - B4. Fish Passage Channel Improvement: Fish Passage Channel Improvement. Selective in-stream work on a portion of 33 miles of channels west of Placer County in Sutter County.
  - B5. Big Gun Conservation Bank: Conservation actions for California red legged frog in Placer County on the Big Gun mitigation bank east of Auburn.

- - Valley/Foothill Divide

Figure 1. Western Placer County and the PCCP plan area, from figure 2-4 of the PCCP (Placer County 2020b).

### 1.3.3.1. Valley PFG (A1)

This category includes all ground- or habitat-disturbing projects and activities that occur in component A1, see Figure 1. This category includes public and private activities. It includes rural and urban land uses and the use, construction, demolition, rehabilitation, maintenance, and abandonment of typical public facilities, consistent with the implementation of local general plans, community plans, area plans, specific plans, and local, State, and Federal laws. Acquisition of reserve lands and conservation activities may occur in the Valley PFG, primarily in the PCCP-defined stream system.

Land uses consistent with urban and suburban general plan designations include the following:

- Urban development (*e.g.*, residential, commercial, office/professional, industrial, public/quasi-public);
- Transient lodging (*e.g.*, hotels/motels and recreational vehicle parks);
- Service uses (*e.g.*, banks and financial services, professional offices, medical services, daycare facilities, educational facilities, and business support services);
- Public facilities (*e.g.*, new fire stations, police/sheriff stations and substations, community policing centers, communications facilities (including antennae, towers, and equipment facilities), public administration centers, convention centers, theatres, community centers, concert venues, community gardens, and concession buildings);
- Recreational facilities (*e.g.*, regional parks, neighborhood parks, dog parks, soccer fields, golf courses, indoor and outdoor sports centers, recreational centers, trails, golf courses, racetracks, campgrounds, and associated infrastructure including roads, bridges, parking areas, and restrooms);
- Funeral/interment services (*e.g.*, mortuaries, crematorium, columbaria, mausoleums, and similar services when in conjunction with cemeteries);
- Other urban/suburban uses (*e.g.*, activities consistent with the local general plan and zoning ordinances of Placer County or the City of Lincoln, which are similar in nature to the uses listed above);
- Land use consistent with rural and agricultural general plan designations (*e.g.*, urban and suburban general plan designations also allow land uses listed in the valley CRD section below, also in table 2-7 of the PCCP (Placer County 2020b);
- Public facilities consistent with rural and agricultural general plan designations (*e.g.*, urban and suburban general plan designations also allow public facilities listed in the foothills PFG section below, also in table 2-8 of the PCCP (Placer County 2020b).

Public use of trails and other park facilities is not a Covered Activity of the PCCP, however it is considered in this opinion as an “other activity”, see section 1.3 above, as it would not occur but for the proposed action, and is reasonably certain to occur.

The City of Lincoln and Placer County have developed several planning documents that outline strategies and projects in accordance with current general plans. To the extent that these plans are consistent with the goals of the PCCP, implementation of these planning documents will be covered by the PCCP. Examples of current planning documents in the valley PFG include the following, which can be found at <http://www.ci.lincoln.ca.us/> or <http://www.placer.ca.gov/planning>:

- City of Lincoln General Plan
- Placer County General Plan
- Dry Creek/West Placer Community Plan
- Sunset Industrial Area Plan
- Sheridan Community Plan
- Placer Vineyards Specific Plan
- Regional University Specific Plan
- Riolo Vineyards Specific Plan
- City of Lincoln's Bikeways Master Plan
- 2001 Placer County Regional Bikeway Plan

Additional area plans, community plans, specific plans, and updates to comprehensive general plans will be developed over the course of the permit term. The general plans, specific plans, and implementing zoning may be changed within valley PFG (A1) over the course of the PCCP permit term to accommodate certain growth scenarios by allowing the following:

- Changes in allowed land use type;
- Increased land use intensity;
- Increased residential density.

#### ***1.3.3.2. Valley CRD (A2)***

This category includes all ground- or habitat-disturbing projects and activities that occur in the valley in the Valley CRD, A2, component of the PCCP area, see Figure 1. This represents the valley reserve acquisition area (RAA) and existing reserves and other protected areas (EXR), but excludes the Valley PFG. Covered Activities here include rural-residential uses and a few types of agriculture-related activities, which are subject to approval by the City of Lincoln or Placer County. The Valley CRD area is where most of the PCCP conservation objectives for the valley will be implemented. PCA acquisition and management of reserve lands in the RAA is a Covered Activity described in section 1.3.3.6, in-stream activities.

As stated in the PCCP (Placer County 2020b), activities in the Valley CRD area must be consistent with designations in the general plans of the City of Lincoln and Placer County. Rural development activities covered by the plan include:

- Rural residential (*e.g.*, single-family homes at a density less than one dwelling per 2.3 acres. This includes privately owned roads, bridges, driveways, emergency access roads, clearing land for a range of rural residential land use activities, and other features commonly associated with rural dwelling units and use of land in rural settings.);
- Public/private recreational facilities (*e.g.*, neighborhood parks, dog parks, soccer fields, golf courses, indoor and outdoor sports centers, recreational centers, open space and passive recreation facilities, trails, golf courses, racetracks, campgrounds, and associated infrastructure including roads, bridges, parking areas, and restrooms as well as maintenance facilities);
- Private facilities of public assembly (*e.g.*, churches, convention centers, theaters, rural recreational uses (*e.g.*, equestrian facilities), community centers, concert venues, community gardens, and concession buildings);
- Transportation facilities (*e.g.*, new capital facility construction, roads, road widening, shoulder improvements, bike lane construction, bridge replacement/widening, culverts, transit facilities, and park and ride facilities);
- Agricultural facilities and uses (*e.g.*, plant nurseries, greenhouses, wine production, wineries, equestrian facilities, farm equipment sales, community centers, and outdoor retail sales. This may include nurseries, Christmas tree farms, ornamental plant nurseries, dairies, and feedlots, if a discretionary permit is required.);
- Food production facilities (*e.g.*, industrial/manufacturing uses associated with food/beverage production and agricultural support services);
- Agricultural uses requiring conditional/minor use permits (*e.g.*, new intensive agriculture that requires a conditional/minor use permit consistent with local general plans, such as commercial equestrian facilities, dairy and swine operations, equestrian event facilities, and wineries);
- Fuel load modifications and treatments (*e.g.*, fuel load modifications and treatments consistent with Placer County Community Wildfire Protection Plan, Placer County Local Hazard Mitigation Plan, Placer County Strategic Plan for Biomass Utilization Program, local ordinances, and Public Resources Code 4291);
- Vegetation management (*e.g.*, fuel reduction (including hand and mechanized removal and controlled burns), tree removal and pruning, grazing activities, invasive vegetation control/removal, hazardous tree work, weed abatement, and algae control in ponds. Permittees may use herbicides and pesticides in accordance with best management practices described in chapter 6 of the PCCP (Placer County 2020b), but shall be responsible for ensuring no take of Covered Species occurs as a result of herbicide and pesticide uses);

- Public facilities (*e.g.*, new fire stations, police/sheriff stations and substations, community policing centers, libraries, public maintenance facilities (park maintenance and transportation corporation yards), public administration centers, and solid waste facilities including transfer stations and recycling centers);
- Non-residential development in rural areas (*e.g.*, telecom facilities and small utility facilities. Solar energy projects in rural areas are covered by the PCCP as long as their effects on Covered Species and natural communities are consistent with the effects evaluation in PCCP Chapter 4, Effects of Covered Activities (Placer County 2020b). Requires approval from Placer County or the City of Lincoln);
- Other rural uses (*e.g.*, other rural uses consistent with the local general plan and zoning ordinances of Placer County or the City of Lincoln, that are similar in nature to the uses listed above. Such proposed uses must share characteristics in common with the uses listed above and are not of greater intensity or density or generate more environmental effects.);
- Conservation activities (*e.g.*, acquisition or operation of land for use as a biological reserve or mitigation bank).

General plans, specific plans, and implementing zoning may be changed over the course of the PCCP permit to allow changes in allowed land use type in A2, Valley CRD, so long as the following terms are met:

- The land use remains rural or agricultural or compatible with rural or agricultural general plan designations,
- Land use intensity is not increased,
- Residential density is not increased.

Activities that do not meet the criteria listed above are not prohibited by the PCCP, but they are not specifically covered by the PCCP. Project proponents who seek approvals or entitlements inconsistent with the above criteria cannot receive take coverage under the PCCP and must apply for take authorization directly from the relevant State or Federal agencies.

### ***1.3.3.3 Foothills PFG (A3)***

This category includes all ground- and habitat-disturbing projects and activities that occur in A3, Foothills PFG, see Figure 1. Future growth in the foothills is expected to be lower in magnitude and density than valley future growth. Portions of the Interstate 80 (I-80) corridor and outlying areas around Auburn and along state route (SR) 49 will develop at urban densities with urban land use. Most of the Foothills PFG outside the urban core is zoned for very low-density, rural-residential, and agricultural development. It is expected that most of the land area subject to future growth will be rural residential. Acquisition of reserve lands and conservation activities may occur in the foothills PFG, primarily in the stream system to benefit covered fish.



Urban and suburban use activities that may occur in the Foothills PFG are the same as those listed for Valley PFG (section 1.3.3.1). Covered Activities for Foothills PFG also include ongoing rural and agricultural uses listed in Valley CRD (section 1.3.3.2). Public facilities consistent with rural and agricultural general plan designations include:

- Water supply facilities (*e.g.*, Placer County, PCWA, and city of Lincoln water supply and conveyance facilities and appurtenances to meet the needs of residential, commercial, office/professional, public/quasi-public, and industrial uses);
- Stormwater management facilities (*e.g.*, stormwater conveyance systems, low-impact development facilities, nonpoint source reduction, detention/retention facilities, outfall structures, and other drainage improvements);
- Wastewater management facilities (*e.g.*, sewage-treatment plants, sanitary sewer systems and rehabilitation, force main and effluent line construction and maintenance, effluent discharge and reclaimed water line installation and maintenance, and pump station construction);
- Solid waste management facilities (*e.g.*, landfills, transfer stations, material recovery facilities, small-scale energy production facilities (*i.e.*, landfill gas utilization), and recycling centers);
- Public and private utilities (*e.g.*, transmission lines, telecommunications lines, and gas lines subject to the authority of permittees);
- Other (*e.g.*, other public programs as described below in section 1.3.3.5).

Actions by Pacific Gas and Electric Company (PG&E), Sacramento Municipal Utilities District, and Northern California Power Agency that are not directly subject to the authority of permittees will not be covered under this opinion.

Current plans that apply to the foothills include the following:

- Granite Bay Community Plan
- Horseshoe Bar/Penryn Community Plan
- Ophir General Plan
- Auburn/Bowman Community Plan
- Bickford Ranch Specific Plan
- Placer County General Plan

Additional area plans, community plans, specific plans, and updates to comprehensive general plans will be developed over the course of the permit term of the PCCP. Activities in the Foothills PFG are based on designations in the Placer County General Plan and Community Plans. The general plan, specific plan, and implementing zoning may be changed over the course of the PCCP permit term to allow the following in foothills PFG (A3):

- Changes in allowed land use type,
- Increased land use intensity, and

- Increased residential density.

#### ***1.3.3.4 Foothills CRD (A4)***

This category includes all ground- or habitat-disturbing projects and activities that occur in the foothills RAA and EXR, collectively termed Foothills CRD (A4), see Figure 1. Most of the area consists of large parcels in woodland and rangeland and is currently zoned for large-parcel minimums. The category includes rural-residential uses and those agricultural activities that are subject to approval by Placer County. The Foothills CRD area is where most of the PCCP conservation objectives for the foothills will be implemented. PCA acquisition and management of reserve lands in the RAA is a Covered Activity described in section 1.3.3.6, in-stream activities.

Covered rural development activities are the same as those listed for Valley CRD (section 1.3.3.2). Covered public agency programs are the same as those listed for the Foothills PFG (section 1.3.3.3).

Covered rural development activities are based on designations in the Placer County General Plan. The general plan and implementing zoning may be changed over the course of the PCCP permit to allow changes in land use type in Foothills CRD (A4), so long as the following terms are met:

- The land remains in rural or agricultural use or is compatible with rural or agricultural general plan designations;
- Land use intensity is not increased; and
- Residential density is not increased.

Activities that do not meet the criteria listed above are not prohibited by the PCCP, but they are not specifically covered by the PCCP. Project proponents who seek approvals or entitlements inconsistent with the above criteria cannot receive exemptions for take under the PCCP and may not begin implementation of a project without obtaining permits from the relevant State or Federal agencies.

#### ***1.3.3.5 Regional Public Programs***

Regional public programs involve construction of new facilities and operation and maintenance (O&M) of new and existing facilities. These public projects will serve the existing and future Placer County and City of Lincoln residents during the permit term. The programs are typically funded through a variety of sources, and public projects are frequently listed as capital improvement programs in adopted plans or programs. Projects could be carried out by a public agency/utility district or private developer on behalf of a public agency/utility district.

All regional public programs in Plan Area A are covered under the PCCP. Specific activities/projects in permittee activity in non-participating city jurisdiction (B1) and PCWA Zone 1 O&M (B2) are covered, as noted below. Regional public programs are divided into six categories by public facility provider, such that similar activities are grouped together:

- Transportation

- Wastewater
- Water supply (surface and groundwater)
- Solid waste management
- Public parks
- Utilities

All activities will follow the best management practices (BMPs) and avoidance/minimization measures described below.

#### *1.3.3.5.1 Transportation*

Transportation programs activities covered under the PCCP may occur anywhere within Plan Area A and as permittee activity in non-participating city jurisdiction (B1). Covered transportation activities include:

- Placer County and City of Lincoln road projects, including new lanes, new connections, extensions, widening, and realignment projects. Projects may include trails for pedestrian and bicycle use.
- Placer County and City of Lincoln roadway safety and operational improvement projects to roads, including shoulder widening and straightening of curves. Modifications to vertical and horizontal alignments. Improvements at intersections and driveway encroachments, including constructing new turning lanes, adding signals, and lengthening existing turning lanes. Also, intersection level-of-service improvements, grade separations, and sound wall installations. Projects may improve access for pedestrians and cyclists.
- Placer County and City of Lincoln maintenance of new and existing transportation facilities, including appurtenant drainage and water quality infrastructure.
- New roads constructed in association with urban or rural development will usually be installed by the developer, and Placer County or the City of Lincoln will assume ownership and maintenance.
- Metropolitan Transportation Plan 2035 and subsequent metropolitan transportation plans (projects that are located in the plan area and under the jurisdiction of the permittees).
- Other, yet undesignated major regional transportation projects.

Two major transportation projects summarized below are already planned to occur within the permit term.

Placer Parkway is a new project for an east-west roadway linking SR 70/SR 99 in Sutter County to SR 65 in Placer County. The Placer Parkway and its interchanges will be covered by the PCCP, both in Plan Area A and within permittee activity in non-participating city jurisdiction (B1). Further details on this project can be found in the PCCP (Placer County 2020b) or at <http://pctpa.net/placerparkway/>.

SPRTA plans improvements to the I-80/SR 65 interchange. The I-80/SR 65 interchange project will be covered under the PCCP in permittee activity in non-participating jurisdiction (B1). A portion of this project has already occurred, was subject to ESA section 7 consultation in 2015 (NMFS 2015), and will not be covered under the PCCP. Further details on this project can be found in the PCCP (Placer County 2020b) or at <http://8065interchange.org/>.

In addition to the two projects above, as part of the general plan, the City of Lincoln anticipates the construction of three interchanges along SR 65 in Plan Area A.

All routine road maintenance activities by permittees that occur within Plan Area A and permittee activity in non-participating city jurisdiction (B1) are covered by the PCCP. Routine road maintenance work means work performed regularly, such as every one to five years, in the plan area. PCWA will also perform routine maintenance on its facilities, including canal maintenance roads and roadway/parking lots associated with its facilities. Routine maintenance work covered under this plan includes, but is not limited to:

- Road signage maintenance or replacement;
- Traffic control device maintenance or replacement;
- Guardrail, fence, or crash cushion inspection, maintenance, or replacement. Median or shoulder barriers will be replaced with structures that are safe for vehicles and, where applicable, wildlife-friendly barriers will be used as specified in chapter 6 of the PCCP (Placer County 2020b);
- Pavement maintenance or resurfacing, including replacement of striping and markers;
- Tree trimming or removal within the road right-of-way for safety;
- Debris collection and removal on roads, trash racks, and shoulders;
- Storm and natural disaster damage repair;
- Vehicle accident repair and cleanup;
- Weed control (the use of herbicides is not covered by the Federal permits and therefore its use cannot result in take of Covered Species);
- Mowing of medians and shoulders for fire hazard reduction;
- Grading of shoulders (up to 20 feet from the edge of paved or unpaved roadways);
- Grading of existing public dirt roadways;
- Repair or replacement of retaining walls;
- Roadside drainage ditch clearing;

- Maintenance of water quality facilities (*e.g.*, oil/grit separators or low-impact development features);
- Curb, gutter, and sidewalk maintenance, repair, retrofit, or replacement.

#### *1.3.3.5.2 Wastewater Programs*

Placer County and the City of Lincoln operate and maintain multiple wastewater treatment facilities, lift stations, and a network of collection and distribution pipelines for untreated wastewater, treated effluent for disposal, and reclaimed water for irrigation and other municipal purposes. Placer County is responsible for O&M of the sewer system in the community of Sheridan. Placer County serves areas that include unincorporated portions of North Auburn, Granite Bay, Horseshoe Bar/Folsom Lake, Penryn, Loomis, western Placer County (Dry Creek), Livoti Tract, Sunset Industrial Area, and Sheridan.

The City of Lincoln’s waste management activities are mainly in the established urban area, but will be extended to serve new urban growth, including growth in unincorporated areas covered by the PCCP. The City of Lincoln will also provide treatment of wastewater for the North Auburn, Bowman, Applegate, Christian Valley, and portions of the unincorporated communities in Meadow Vista through the Mid-Western Placer Regional Sewer Project. The Mid-Western Placer Regional Sewer Project will result in the closure of Placer County’s Sewer Maintenance District 1 Wastewater Treatment Plant and conveyance of untreated wastewater to the City of Lincoln’s Wastewater Treatment and Reclamation Facility. The maintenance of this regional pipeline, pump stations, and related infrastructure is considered a Covered Activity.

The PCCP will provide coverage for permittee wastewater projects including:

- Treatment plant construction or expansion, including installation of pipelines;
- O&M;
- Effluent discharge;
- Force main and effluent line construction and maintenance;
- Discharge and reclamation line installation; and
- Pump station construction.

Covered wastewater activities by Placer County may occur anywhere within Plan Area A or within permittee activity in non-participating city jurisdiction (B1). Wastewater projects that are currently planned can be found in table 2-9A of the PCCP (Placer County 2020b) and are incorporated by reference.

Sewer pipeline O&M includes activities within the plan area to prevent deterioration of infrastructure necessary for wastewater conveyance. Routine maintenance work is defined in the PCCP as work performed regularly, every one to five years, to maintain the functional and structural integrity of facilities. Maintenance activities will generally require trenching around existing pipelines and conducting repairs or replacing segments of pipeline. The pipelines are located in both urban and rural areas. Maintenance activities that are proposed for coverage under the PCCP include:

- Mechanical root removal, including the use of a drain snaking rotor with an auger that cuts at the tree root incursion with a rotating blade;
- Rehabilitation, repair, and/or replacement of pipelines and components including, but not limited to, air release valves, piping connections, joints, and appurtenances. Activities may include excavation to access pipelines;
- Sewer pipe sliplining is a trenchless rehabilitation of existing pipelines. Sliplining is used to repair leaks or restore structural stability to an existing pipeline. Sliplining is completed by installing a smaller “carrier pipe” into a larger “host pipe,” grouting the annular space between the two pipes, and sealing the ends;
- Replacement/repair of buried service valves, including valves within creek embankments that may require excavation and minor bank stabilization activities;
- Maintenance of pipeline turnouts, including access to pipelines;
- Replacement/repair of appurtenances, fittings, manholes, and meters;
- Wastewater vault maintenance, which includes minor repairs and debris removal;
- Wastewater meter inspections and repairs;
- Maintenance of pump stations, operation yards, utility yards, and corporation yards;
- Facility access road repairs and maintenance, which is limited to existing roads.

#### *1.3.3.5.3. Water Supply Programs*

Permittees PCWA, Placer County (for Sheridan community), and the City of Lincoln will supply present and future water users in the plan area and portions of the non-participating cities. The PCCP covers the collection and conveyance of raw water from surface and groundwater sources to treatment plants or directly to consumers. In most cases, the distribution of treated water does not require incidental take coverage. Two raw water suppliers in Placer County, Nevada Irrigation District (NID) and the South Sutter Irrigation District, are not permittees, but could participate with the PCA in a project and would be covered by the PCCP.

PCWA Covered Activities include O&M of its raw water distribution system, future capital improvement projects within the plan area, and future construction of PCWA water supply facilities to meet the needs of residential, commercial, public facility, and industrial construction within the plan area (*e.g.*, new water supply, treatment and delivery infrastructure, O&M of new water supply, treatment, and delivery infrastructure).

Covered PCWA water supply activities may occur anywhere within Plan Area A and permittee activity in non-participating city jurisdiction (B1). PCWA O&M of existing facilities is covered in PCWA Zone 1 O&M (B2). PCWA planned O&M and planned capital improvement projects are presented in Table 2-9B of the PCCP (Placer County 2020b) and are incorporated by reference.

PCWA uses a variety of canals, pipelines, and other infrastructure to distribute water to its customers throughout Placer County. Most of PCWA's raw water distribution is facilitated by gravity flow through the canal system. PCWA monitors regulating gates and staff gauges throughout the system. PCWA uses collected information to make water purchases and to adjust deliveries according to water demands and weather conditions.

Most of the water supplied by PCWA comes from surface water sources. The majority of water deliveries to PCWA's raw water distribution system depend wholly on PG&E's hydropower operations of the Drum-Spaulding hydroelectric system. PG&E's Drum-Spaulding water supply originates in the upper Yuba River basin, augmented by Bowman Lake and Lake Spaulding on the South Yuba River and Rollins Reservoir on the Bear River. Water is conveyed primarily via the Drum, Bear River, and Upper Boardman canals. PCWA has standing contracts for more than 125,000 acre-feet of water per year delivered at designated points for subsequent conveyance by PCWA to defined service areas.

The American River Pump Station (ARPS) provides an additional source of raw water. ARPS is used to pump water from the north fork of the American River into the Auburn Ravine Tunnel. The Auburn Ravine Tunnel discharges into Auburn Ravine, delivering water to downstream agricultural customers. Water can also be pumped out of the Auburn Ravine Tunnel to supply PCWA's water treatment plants.

The following O&M activities for raw water distribution are included under the PCCP:

- Adjusting or replacing orifices at delivery points;
- Yearly water delivery outages;
- Delivery schedule changes and routine flow adjustments throughout the canal system through use of check boards, temporary weirs, valve controls, and debris removal;
- Seasonal release of excess water at designated outlet locations for flood management during storm events.

PCWA performs scheduled maintenance in the canal system as needed and cleans canals on an annual basis. Maintenance activities associated with canals include clearing debris and sediment, lining leaky canal sections, repairing damaged pipes and/or flumes, and controlling vegetative growth in the canals and on the canal berms. The use of pesticides, including herbicides and rodenticides, is not covered by this opinion or by USFWS' opinion. Canal cleaning is performed during the winter months and is scheduled a month or more in advance. Canal lining is conducted throughout the year.

Other maintenance projects performed on an infrequent basis by PCWA include sediment removal from reservoirs and dams, as well as reservoir and canal berm maintenance related to damage by muskrats, beavers, and otters. The PCWA Natural Resource Management Plan, Appendix E of the PCCP (Placer County 2020c), does not consider these infrequent maintenance projects in its analyses so for this opinion, we assume that they will occur once every ten years. PCWA intends to have staff evaluate potential impacts to environmental resources from these maintenance projects and prepare environmental documents to satisfy CEQA requirements. If

these activities occur more often than once every ten years and impact covered fish species, additional ESA coverage may be required as well.

Occasionally, activities are necessary to ensure that water supplies are maintained and to prevent future problems from occurring. The maintenance activities described below are covered by the PCCP. Water supplies to the plan area come from the Yuba, Bear, and American Rivers. The Clover Valley, Ben Franklin, Caperton, Whitney, McCrary, and Mammoth Reservoirs lie within the plan area. These reservoirs contribute to the streamflows in Clover Valley Creek, Antelope Creek, Secret Ravine, and Miners Ravine. Activities that are covered under the PCCP include:

- Periodic outages for canal cleaning, repair, or sediment removal;
- Repair and replacement of treated and raw water distribution facilities, including pipeline flushing and meter replacement. These facilities include pipelines, flumes, culverts, siphons, outlet structures, flow control structures, customer delivery points, pressure-reducing stations, and appurtenances;
- Perform emergency repairs;
- Canal lining, usually with sprayed-on cementitious mortar, also known as shotcrete or gunite, and piping;
- O&M of water supply, treatment, and delivery infrastructure, including water storage tanks, pump stations, connecting transmission lines, and their appurtenances.

For PCWA emergency repairs, we assume that these will generally be of a similar scope to other repairs. If they exceed the scope of other Covered Activities and impact Covered Species in a manner not considered in this opinion, additional consultation may be required.

PCWA will undertake a number of capital projects for new surface and groundwater supply, treatment, storage, and delivery infrastructure over the term of the PCCP. These include water supply projects, groundwater wells, transmission and distribution pipelines, metering station installations, water treatment and storage facilities, corporation yards, pump stations, and facilities and administration buildings.

The largest of the capital improvement projects will be the West Placer water supply projects. This comprises the construction of water supply infrastructure components, including new or expanded diversions from the Sacramento and American Rivers, and new or expanded water treatment and pumping facilities, storage tanks, and major transmission and distribution pipelines.

The operations of the West Placer water supply projects are not a Covered Activity. However, development projects and associated public infrastructure within the plan area that will use this new water supply are covered. Therefore, the effects in the plan area associated with the West Placer water supply projects, such as effects of expansion of the water supply due to growth within the PCCP plan area, are covered by the PCCP.



O&M of Sheridan’s public water system, construction of a raw water transmission pipeline and related infrastructure, and the diversion of water will be Covered Activities under the PCCP. The Placer County Environmental Engineering and Utilities Division operates and maintains Sheridan’s public water system and provides design support as needed. As the Sheridan community grows, it may be necessary to construct a raw water transmission pipeline from either Bear River or Raccoon Creek to provide surface water for the Nader Road and Sheridan areas. The necessary capacity and resultant diversion from either of these surface water bodies will depend on the feasibility and need of the community in the plan area and will be evaluated as the need arises.

The City of Lincoln has been partnering with NID to develop a water supply system for the provisioning of treated water to future customers within the City of Lincoln General Plan boundaries and the NID service district. The source of water for the proposed project is Lake Combie, with a pipeline proposed to connect at the Combie-Ophir turnout and carry raw water west to a reservoir and treatment plant to be located in the western portion of the NID service district. The Covered Activities from the proposed project would involve the construction of approximately 16.3 miles of pipeline, raw water storage, and a water treatment plan and ongoing O&M of those facilities in Plan Area A.

#### *1.3.3.5.4 Solid Waste Management Facility Programs*

Solid waste management facility programs include O&M, expansion of existing facilities, and construction of new facilities. Covered solid waste management facility program activities may occur anywhere within Plan Area A, and transfer stations built or operated by Placer County are covered in permittee activity in non-participating city jurisdiction (B1).

The PCCP will also cover post-closure maintenance activities and the future property use as open space, which may include public recreation (*e.g.*, trails), agriculture, grazing, or other activities compatible with post-closure conditions that might be constructed in the future.

Solid waste management projects that are expected to occur within the PCCP permit term can be found in Table 2-9C of the PCCP (Placer County 2020b) and are incorporated by reference.

WPWMA, who may apply to be a participating special entity, operates the Western Regional Sanitary Landfill (WRSL). The WRSL is currently permitted for waste disposal through 2058. The landfill practices methane gas collection and WPWMA has contracted with Energy 2001 to use most of the gas to generate electricity. When the landfill reaches capacity, it will be capped to prevent liquids from coming into contact with the refuse. Landfill expansion that could take place on two adjacent properties is likely to occur during the PCCP permit term and is a Covered Activity. Solid waste activities that could take place on the existing facility property or either of the two adjacent properties as a result of the expansion include:

- Siting a new landfill;
- Producing energy through landfill gasification;
- Pyrolysis (*i.e.*, decomposition brought about by high temperatures);

- Anaerobic digestion (*i.e.*, breakdown of biodegradable material in the absence of oxygen);
- Other waste-conversion technology;
- Relocating the compost facility, recycling centers, or other drop-off facilities;
- Developing a solar array for on-site electricity demands;
- Creating an alternative fuel and/or electric vehicle fueling station;
- Providing pipeline compressed landfill gas/natural gas to third-party end users in and/or adjacent to the Sunset Industrial Area; or
- Establishing a rail spur to establish off-site transport of recyclables and household hazardous waste.

The materials recovery facility (MRF) is a WPWMA program to help Placer County communities meet California's Assembly Bill 341 mandated recycling goals of diverting at least 75 percent of the waste stream from landfills by 2020. The MRF receives and sorts through municipal and commercial waste to recover recyclable materials including wood, green waste, metals, plastics, glass, paper, junk mail, phonebooks, magazines, scrap paper, paperboard, and cardboard. Yard waste is converted to soil through a composting process. Materials that cannot be composted or recycled and marketed are disposed of at the WRS. Ongoing operations, relocation, or construction of a new MRF will be a Covered Activity.

The Placer County Department of Public Works owns and operates the Loomis Landfill, a closed unlined Class III landfill. The landfill was closed in 1986. A closure plan was adopted in 1996 and describes how corrective actions, final closure, and post-closure maintenance activities meet the requirements of the California Code of Regulations.

Corrective actions include:

- Installation of a low-permeability cover to reduce infiltration of rainwater;
- Installation of a vegetative layer to protect the low-permeability cover to reduce erosion and minimize cracking of the cover; and
- Installation of an in-fill landfill gas control system to eliminate or reduce migration of landfill gas.

Loomis Landfill was closed in 1998. Post-closure maintenance activities will be implemented for not less than 30 years after final closure (*i.e.*, until at least 2028). Post-closure maintenance activities include:

- Maintenance and monitoring activities for the final landfill cover;
- Drainage systems;

- Vegetative cover;
- Final grading;
- Landfill gas collection system;
- Leachate collection;
- Disposal.

The post-closure land use of Loomis Landfill will be consistent with the surrounding terrain, land uses, and zoning. The site is planned to be maintained as open space, most likely as annual grassland, and may allow for recreation activities.

#### *1.3.3.5.5. Public Recreation-serving Activities*

Permittees' recreation-serving activities, including establishing and maintaining public recreation facilities, are Covered Activities, although public use of the facilities is not. Public parks and recreation activities include construction of new parks, adaptation of existing public lands for enhanced recreational access, and O&M of all facilities. Many Placer County and most City of Lincoln parks and trail facilities will be within, or close to, urban areas. Covered public parks and recreation-serving activities may occur anywhere within Plan Area A.

Crossing of streams by trails will be discussed in the in-stream activities section below (section 1.3.3.6). Passive forms of recreation may be allowed on some lands acquired for the reserve system. Construction and maintenance of trail and other recreation facilities on the reserve system will be discussed in the conservation programs section below (section 1.3.3.7).

The construction of new parks is a Covered Activity. Placer County and City of Lincoln parks will include trails, recreation facilities, and other park infrastructure including restrooms, parking areas, maintenance facilities, wildlife observation platform facilities, and education kiosks. To the extent possible, recreational facilities will utilize existing infrastructure, such as existing trails and fire or ranch roads. The Auburn/Bowman, Dry Creek/West Placer, Granite Bay, and Horseshoe Bar/Penryn Community Plans, the Dry Creek Greenway Vision Plan, and the Placer County Regional Bikeway Plans propose trail networks that will be constructed over time. As each of these plans and the Placer County General Plan are updated, trail alignments will be modified as conditions warrant. The existing Placer County fairgrounds within the City of Roseville may relocate within western Placer County. A new fairground will include multiple venues for year-round use.

Placer County and City of Lincoln will maintain and manage park and open space areas as Covered Activities within the PCCP. This includes:

- Trail and road maintenance (*e.g.*, grading, clearing, brushing, erosion control, paving, re-paving and trail restoration);
- Installation of fencing;

- Facility maintenance;
- Prescribed burns;
- Pond maintenance (including draining and dredging); and
- Invasive vegetation management (including removal of invasive species, planting of native vegetation, and livestock grazing).

If a park is to be included as part of the reserve system, details for maintenance will be provided within the reserve management plan, as described in section 5.3.2.1 of the PCCP (Placer County 2020b).

Hidden Falls Regional Park is a 1,200-acre park located between north Auburn and the City of Lincoln. Expansion of park facilities will be included as a Covered Activity under the PCCP and will include additional roads, trails, staging and parking areas, maintenance and caretaker buildings, and a nature education center. Trail connections to Placer Land Trust and Bear Yuba Land Trust properties are anticipated and will also be a Covered Activity. Public uses of the parks are not covered. Public uses of the park include hiking, running, biking, horseback riding, fishing, picnicking, wildlife viewing, and photography. Park amenities currently include a paved access road, 50-space paved parking lot, equestrian staging area, utilities, restrooms, a 60-foot emergency access bridge over Deadman Creek, and a similar bridge over Raccoon Creek.

#### *1.3.3.5.6. Utility Line Construction and Facility Maintenance*

Numerous pipelines and cables in the plan area are maintained by the permittees or by public or private utilities, natural gas companies, petroleum companies, or telecommunications companies acting under permittee authority, including franchise and encroachment within permittee-owned roadway or other rights-of-way. These private companies also operate and maintain electric substations, gas valve stations, radio broadcasting towers, and cellular telephone towers, among other facilities. Covered utility line construction and facility maintenance activities may occur anywhere within Plan Area A (Plan Areas A and B are defined in section 2.3, Action Area).

Public and private utility actions that are directly subject to the authority of a permittee are Covered Activities. Public and private utility activities that are regulated by or subject to the authority of another entity, such as the California Public Utilities Commission, are not covered by the PCCP. Some energy or water utilities may already have their own endangered species permits for their activities (*e.g.*, PG&E is developing its own HCP for O&M activities) and will therefore not require coverage under the PCCP. A utility may request coverage under the PCCP for routine maintenance and repair of existing utilities within the plan area as a participating special entity.

Maintenance or repair of linear facilities may involve vegetation clearing (*e.g.*, mowing, disking, herbicide spraying, tree trimming) or excavation of underground utility lines for inspection, maintenance, or replacement. The routine maintenance of utility lines in the plan area is a Covered Activity under the PCCP, except for the use of pesticides, which is not covered by the federal permits. Coverage for utility line or facility maintenance that takes place in the reserve

system will be decided on a case-by-case basis and the permittee may need to consult with the resource agencies as needed.

### ***1.3.3.6 In-stream Activities***

This category addresses projects that occur within streams and may result in effects on a stream, reservoir, or on-stream pond. This category includes O&M activities in the stream channel, along the streambank, and on adjacent lands at top-of-bank within the riparian corridor. Covered in-stream activities may occur anywhere within Plan Area A.

In-stream activities covered under the PCCP include:

- Urban and rural development and public program activities described above under sections 1.3.3.1 to 1.3.3.5, valley PFG through regional public programs, that overlap with the stream system and the adjacent riparian corridor, including transportation, water supply, waste management, and stormwater management;
- Bridge construction, replacement, and repair, including vehicular, train, and pedestrian bridges;
- Flood control and stormwater management, including water retention/detention facilities construction, streambed and channel debris and vegetative control and removal, channel lining of canals, canal realignment, maintenance of access roads, beaver dam removal, stormwater conveyance facilities and outfall structures, erosion/sediment control, bank stabilization, and floodplain enhancement;
- Maintenance of existing flood protection and stormwater facilities, such as drainage improvements, existing dams, armored creeks, bypass channels, and stormwater ponds. Maintenance includes trail repair, trash removal, installation of fences, accumulated sediment removal (primarily in reservoirs), road, culvert, and minor bridge repair;
- Natural resource protection, such as bank stabilization projects, restoration to reduce erosion, and fish passage enhancements;
- Erosion control projects or storm damage prevention projects that do not create new permanent structures or hardscape on the creek bank or channel. This category includes temporary flood-fighting activities to prevent storm damage (*e.g.*, sandbagging and earth-fill levees);
- Vegetation management for invasive species removal and native vegetation plantings, including the use of livestock grazing and prescribed burns;
- Reservoir fluctuations including drawdown and filling for maintenance or operational purposes (*i.e.*, not associated with a capital project);
- In-stream gauge station monitoring (installation and maintenance);
- O&M of water system facilities that are located in-stream;

- Implementation of resource management plans;
- Water utility/water supply O&M activities associated with habitat enhancement and restoration that will be conducted inside and outside the reserve system are identified in section 1.3.3.7 conservation programs;
- Implementation of the riverine and riparian conservation and management strategies of the PCCP, including cleaning/removing sediment from gravel beds and augmenting gravel to streambeds, among other in-stream conservation activities.

Some in-stream projects are intended to mitigate, enhance, or restore stream and riparian functions. Since 2013, a number of restoration activities have been undertaken in the plan area and more are expected in the future.

#### *1.3.3.6.1. Bridge Construction and Replacement/Rehabilitation*

Placer County and the City of Lincoln operate and maintain bridges within the plan area and have permit authority over privately constructed and maintained stream crossings. The existing distribution of stream crossings is shown in figure 2-10 of the PCCP (Placer County 2020b).

The lifespan of a typical bridge is approximately 50 years. Most of the bridges within the plan area will be replaced or rehabilitated during the PCCP's permit term. Additionally, as development within rural and urban areas progresses, new bridges will need to be constructed. It is estimated that there will be construction of up to 75 new bridges over the 50-year permit term. New and rehabilitated bridges will be designed and constructed consistent with Federal and State guidelines. Bridge construction and replacement/rehabilitation activities covered by the PCCP may occur anywhere within Plan Area A and permittee activity in non-participating city jurisdiction (B1).

New construction, repair, and replacement, including expansion, for all existing bridges conducted by permittees within Plan Area A and Plan Area B1 are Covered Activities. Figure 2-10 of the PCCP (Placer County 2020b) shows the location of several planned major bridge projects. Other yet-unplanned stream crossings will be associated with future growth, mainly in the PFG areas where the density of stream crossings will increase, similar to the density of crossings in the built-up portion of non-participating cities, as shown in figure 2-10 of the PCCP (Placer County 2020b).

In most cases, replacement bridges will be wider than the bridges they replace, in compliance with changing regulations. Some roads may be widened to accommodate growth in vehicular traffic, bicycles, and pedestrians. Road widening will require adding imported borrow and new asphalt, concrete, and aggregate base for pavement.

Where free-span bridges are not feasible, bridges will be built on pile foundation, cast-in-drilled-hole pile, or spread-footing foundations. Excavation for foundations may be required. Where multiple span bridges are necessary, consideration will be made to locate the piers and foundations outside of the low-flow stream channel or away from other resources when feasible. Bridge repair and rehabilitation may be similar to bridge replacement in scope, often requiring roadway widening, new deck support structures, and seismic retrofitting.

Additional detail on the estimated extent of bridge and culvert work is provided in chapter 4 of the PCCP (Placer County 2020b).

#### *1.3.3.6.2. Flood Protection Projects*

The PCFCWCD was established in 1984 by the state legislature as a special district, separate from County government, to address flood control issues arising with growth. The PCFCWCD boundaries are the same as Placer County boundaries. Covered flood protection activities may occur anywhere within Plan Area A and permittee activity in non-participating city jurisdiction (B1). It is expected that PCFCWCD will become a participating special entity and, thus, will have activities covered under the PCCP.

PCFCWCD has several projects planned to address flood protection. These projects have been identified through various programs that provide different funding mechanisms and guiding principles of how projects will be planned and designed. Table 1 provides a list of flood control projects, including flood protection capital projects, anticipated to occur within the PCCP permit term.

**Table 1. Flood control projects anticipated to occur within the PCCP permit term.**

<b>Activity</b>	<b>Description</b>
Scilacci Farms Regional Retention Project	Stormwater retention project with wetlands and agricultural conservation easements located north and south of Raccoon Creek immediately east of the Sutter County line. Refer to section 2.6.6.2.1 of the PCCP (Placer County 2020b) for more details, which are incorporated by reference.
Regional Retention Projects within Cross Canal Watershed	Stormwater retention projects with wetlands and agricultural conservation easements within floodplain areas of stream within the general Cross Canal watershed, including Pleasant Grove Creek, Curry Creek, Auburn Ravine, Markham Ravine, and Raccoon Creek.
Dry Creek Watershed Flood Control Plan – Regional Detention Projects	Both on- and off-channel stormwater detention projects located throughout the Dry Creek watershed. Refer to section 2.6.6.2.3 of the PCCP (Placer County 2020b) for more details, which are incorporated by reference.
Dry Creek Watershed Flood Control Plan – Regional Floodplain Restoration Projects	Floodplain restoration/reconnection projects located throughout the Dry Creek watershed. Refer to section 2.6.6.2.3 of the PCCP (Placer County 2020b) for more details, which are incorporated by reference.
Dry Creek Watershed Flood Control Plan – Bridge/Culvert Replacement Projects	Bridge and culvert improvement projects throughout the Dry Creek watershed.
ALERT Flood Warning System of Precipitation and Stream Level Gages	Installation, monitoring, and maintenance of remote stream data sensors throughout Dry Creek and Cross Canal watersheds.
Dry Creek Watershed Stream Channel Maintenance Program	Stream channel clearing and conveyance maintenance activities throughout flood-prone locations within Dry Creek watershed.
Operations, Monitoring, and Maintenance Activities at PCFCWCD’s Miners Ravine Off-channel Detention Basin Facility	Routine annual maintenance and monitoring as well as non-routine maintenance and operation activities at PCFCWCD’s facility located in Roseville, California.

Flood control O&M activities that may occur throughout the plan area streams include, but are not limited to, installation, monitoring, and maintenance of remote stream data sensors; stream channel clearing; vegetation and debris removal; and conveyance maintenance activities.



Many of the planned flood control capital improvements incorporate design elements that provide on-site avoidance, minimization, and mitigation for both in-stream and riparian habitat. Enhancement and creation of riparian habitat will be coupled with the removal of invasive species and planting of native species. In-stream design elements could include fish passage improvement through the removal of fish barriers, placement of fish ladders, and other in-stream habitat enhancements. Additional design elements may be incorporated to protect in-stream water quality by reducing erosion, sedimentation, and turbidity, as well as removing unauthorized storm drain outfalls. The plans summarized below have been prepared to prioritize projects within the watersheds.

Changes in agricultural practices on the Scilacci Farms property are proposed to relieve flood pressures along levees in the Cross Canal. The 456-acre Scilacci Farms property currently consists of about 330 acres in rice production, 55 acres in wheat production, a remnant 39-acre riparian valley-oak and cottonwood-willow riparian forest, a 22-acre fallow rice field restorable to riparian forest, seven acres of wetlands, and other miscellaneous agriculturally managed areas. The property provides habitat for a variety of wildlife species, including amphibians, reptiles, birds, and mammals. The proposed project will be to place the property under a conservation/flood control easement and manage the land for agricultural production, ecological function, and flood protection. In addition to these goals, the project will allow for the realization of important restoration goals on the property. Both oak woodland enhancement and riparian restoration will be part of this project. The easement and restoration work intends to provide ecological benefits including flood protection, erosion control, and water quality enhancements. The Scilacci Farms project will utilize several of the strategies recommended in the ecosystem restoration plan (ERP) for the Raccoon Creek watershed.

The Lakeview Farms volumetric mitigation facility is a capital flood control project within the unincorporated portion of Placer County that will be constructed by the City of Lincoln. This project will help ensure the protection of life and property from flooding as the City of Lincoln and Placer County grow. The City of Lincoln has purchased 456 acres north of Waltz Road in the unincorporated portion of Placer County to construct an off-channel (off Raccoon Creek) retention facility for flood control purposes. The project is being constructed in phases to passively capture flood water during a 100-year event. Phase one of the project will be developed on 160 acres retaining an additional 1,570 acre-feet of water. The site will function as a retention basin only in extreme (100-year or greater) storm events during the rainy season of October through April and will remain in rice production from approximately March through September. Raccoon Creek's peak flows can range from several hundred cubic feet per second (cfs) to more than 22,000 cfs in a 100-year event. Because the stream channel is generally shallowly incised and meandering, high-flow events are not contained within the channel and extensive overland flow occurs. It is common for flood waters of one to two feet to occur on the Lakeview Farm property. Raccoon Creek includes 33.3 river miles of channel between the Cross Canal and Dry Creek Dam. The flood reduction benefits of the planned improvements are difficult to quantify without hydrologic modeling. The Raccoon Creek ERP found that stormwater runoff from developed areas is a major source of water quality degradation in Raccoon Creek. By protecting this property from future development, stormwater runoff from the site will not be degraded due to urbanization.

The Dry Creek Watershed Flood Control Plan (Placer County 2011) is to provide PCFCWCD and other governmental agencies in both Placer and Sacramento Counties with the information and policies necessary to manage flood waters within the Dry Creek watershed, which includes Miners Ravine, Linda Creek, Secret Ravine, Antelope Creek, Cirby Creek, Clover Valley Creek, and mainstem Dry Creek. The plan evaluates existing flooding problems and identifies flood management options, as well as a funding mechanism to achieve plan recommendations. Capital project elements within this plan include on- and off-channel stormwater detention projects located throughout the watershed, floodplain restoration and reconnections, bridge and culvert improvement projects, and improvements to underground conduits and artificial and natural channels.

The Cross Canal Watershed Flood Control Plan (Auburn Ravine, Coon, and Pleasant Grove Creeks Flood Mitigation) (CH2M Hill 1993) provides PCFCWCD and other governmental agencies in Placer, Sutter, and Sacramento Counties with the information and policies necessary to manage floodwaters within the Cross Canal watershed, which includes Pleasant Grove, Curry Creek, Auburn Ravine, Markham Ravine, and Raccoon Creek. Activities associated with this plan will be covered under the PCCP, including the following:

- Flood management;
- Stormwater retention projects;
- Conservation easements over existing agricultural and wetland areas, compatible with periodic flooding, that fall in Placer County.

The plan evaluates existing flooding problems and identifies flood management options, as well as a funding mechanism to achieve plan recommendations. State and Federal grant funding, will support PCFCWCD and its co-sponsors' efforts to acquire flood and habitat conservation easements to manage and improve the floodplain and associated natural communities within this watershed. PCFCWCD's pursuit of flood and conservation easements on rice production lands will complement efforts on nearby agricultural lands, including a site protected by the California Department of Water Resources (DWR) that also provides improved floodplain and riparian protection. These nearby properties include the 138-acre Lakeview Farms Conservation project, as well as the Lakeview Farms Natural Resources Conservation Service conservation easements that are part of a larger restoration effort within the Raccoon Creek watershed. Wetlands will be reconstructed to benefit waterfowl and migratory birds that are found in the area. Acquisition of flood and conservation easements in these areas will conserve agricultural lands adjacent to Auburn Ravine and Raccoon Creek in an area of increasing development pressure. The goals of the Cross Canal Watershed Flood Control Plan are as follows:

- Quickly and efficiently provide increased volumetric storage (retention) within the existing floodplain during a 100-year flood event;
- Preserve and maintain wetlands;
- Preserve open space, providing linkages with surrounding preserve areas;
- Benefit migratory birds and wildlife;

- Maintain habitat and connectivity for State and Federal species of concern;
- Provide flood control benefits quickly and at relatively low cost per acre-foot of storage.

#### *1.3.3.6.3. Streamside Trails and Crossings*

Placer County and the City of Lincoln, as well as other non-profit entities (*e.g.*, Placer Land Trust), lead or participate in programs to construct passive recreational trails in parks, as identified above in section 1.3.3.5.5., public recreation-serving activities. New trails are sited outside of the in-stream area to the extent possible to avoid effects on riparian vegetation and streams. However, some trails will need to cross streams and will require installation of bridges or other types of crossings. Trails may also be implemented as a component of other types of projects, such as flood protection projects or levee reconstruction. In such cases, trails will generally be sited along maintenance roads or in other disturbed areas and will not result in additional effects beyond those attributed to the main project. Streamside trail projects will be a Covered Activity under the PCCP. For more details on trail projects as a Covered Activity, see section 1.3.3.5.5., public recreation-serving activities, or section 2.6.5.5 in the PCCP (Placer County 2020b).

#### **1.3.3.7 Conservation Programs**

##### *1.3.3.7.1. PCCP Management Activities*

In addition to the projects and activities described above, the PCCP provides coverage for activities associated with the implementation of the conservation strategy. The management activities that will be used on the reserve system are described in detail in chapter 5 of the PCCP (Placer County 2020b), conservation strategy. Implementation of the conservation strategy may occur anywhere in the plan area, but most of these activities will take place within the reserve system assembled in Plan Area A. Some conservation activities may also occur outside of the reserve system, specifically as associated with in-stream conservation measures discussed above in section 1.3.3.6, in-stream activities, and in Plan Area B, Big Gun Conservation Bank (B5), for California red-legged frog.

##### 1.3.3.7.1.1. Habitat Enhancement, Restoration, Creation, Translocation, and Reserve Management

This category includes all management measures, including habitat restoration and creation, required by the PCCP or other measures that might be necessary to achieve PCCP biological goals and objectives, summarized below in section 1.3.4 and in PCCP chapter 5 (Placer County 2020b). The PCCP's conservation strategy sets forth requirements for habitat enhancement, restoration, and creation. Enhancement and management actions that will be used within the reserve system are described in detail in chapter 5 of the PCCP, conservation strategy (Placer County 2020b), which is incorporated by reference.

The PCCP includes a stay-ahead provision, detailed in PCCP section 8.4.3, which will minimize temporal loss of habitat. This will be demonstrated by showing that, at any given time, the cumulative conservation expressed as a percentage of the protection commitment is greater than the cumulative impact expressed as a percentage of the maximum extent of effects as proposed

in the PCCP. When PCCP implementation begins, the PCA will be establishing its structure, collecting implementation fees, and pursuing land acquisitions. To allow time for these start-up tasks to occur, the stay-ahead provision will not apply during the first 2 years of implementation (*i.e.*, during the first 2 years after implementation begins). After this time, the PCA will demonstrate compliance with the stay-ahead requirement. At the end of each calendar year, the PCA will show that the amount of each natural community and constituent habitat protected, restored, or created by the PCA is equal to or greater than the impacts on that community and constituent habitat for all Covered Activities (see section 8.4.3.2 of the PCCP, measure of compliance).

Restoration and creation are important components of the conservation strategy. Restoring and creating new wetlands will permanently affect existing, pre-restoration/creation habitat by converting that habitat, generally agricultural land, grasslands, or disturbed land cover, to wetlands and other natural communities (*e.g.*, valley oak woodland). Habitat restoration and creation activities will generally be disruptive only in the short term. These activities may include soil disturbance, removal of undesirable plants, and limited grading. All habitat restoration and creation is expected to result in a net long-term benefit for Covered Species and natural communities. These activities may have temporary or short-term adverse effects to Covered Species. All habitat enhancement, restoration, and creation activities may also be conducted outside the reserve system. If such activities occur and are consistent with the PCCP, they are covered by the ITP. Examples of such activities include restoration projects conducted as mitigation that require additional coverage beyond the self-mitigating aspects inherent to most restoration projects. Examples of habitat enhancement, restoration, creation, and reserve management activities include, but are not limited to:

- Management measures identified in PCCP chapter 5, conservation strategies (Placer County 2020b), intended to maintain, enhance, restore, and create habitat for Covered Species;
- Vegetation management, including management of invasive plants, using livestock grazing, mowing, manual labor, and/or prescribed burning. Pesticide use is permitted under the PCCP only to achieve biological goals and objectives (*e.g.*, invasive plant or invasive animal control), in accordance with label instructions, and in compliance with State and local laws. Pesticide use is only covered under the NCCP, not the ESA. Implementation of integrated pest management programs established by the local jurisdictions is only a Covered Activity if pesticides are used to achieve invasive plant or invasive animal control. Any pesticide use must comply with the U.S. Environmental Protection Agency's (EPA's) Endangered Species Protection Program;
- Relocation of Covered Species from affected sites and within the reserve system where effects are unavoidable and relocation has a high likelihood of success. This is expected to occur in very limited circumstances subject to NMFS review and approval;
- Demolition or removal of structures, roads, or man-made livestock ponds to increase public safety or to restore habitat;

- Control of introduced predators (*e.g.*, feral cats, feral dogs, pigs, non-native fish, bullfrogs);
- Surveys and monitoring for mitigation and restoration/habitat enhancement projects;
- Use of motorized vehicles for patrolling, maintenance, and resource management activities in the reserve system;
- Use of mechanized equipment for construction, maintenance, and resource management activities in the reserve system;
- Installation of wells, canals, irrigation lines, and other water conveyance facilities, the water from which will be used to fill stock ponds, troughs, and other storage facilities for cattle;
- Travel through the reserve system by habitat managers or wildlife agency personnel. Off-trail travel will be kept to the minimum amount necessary to perform maintenance, management, or patrol activities;
- Fire management including prescribed burning, mowing, and fuel-break establishment and maintenance;
- Repair of existing facilities damaged by floods, landslide, or fire;
- Restoration and enhancement projects in streams, riparian areas, wetlands, and uplands;
- Fish passage enhancements including removal of fish barriers, such as low-flow crossings, and development of fish screens, described further in section 1.3.3.7.2.1.

#### 1.3.3.7.1.2. Monitoring and Research

Biologists will conduct surveys for all Covered Species, natural communities, and other resources within the reserve system on a regular basis throughout the permit term for monitoring, research, and adaptive management purposes (see section 1.3.3.7.1.3.). Surveys will help to track the conservation goals of the PCCP and will contribute to the adaptive management process. These surveys may require physical capture and inspection of specimens to determine, identify, and mark individuals, or measure physical features, all of which may adversely affect Covered Species. Surveys for Covered Species will also be conducted on private land being considered for acquisition for the PCCP. Surveys for all Covered Species will be conducted by qualified biologists. All such survey activity associated with the PCCP will be covered by the ITP.

Research conducted by biologists on PCCP reserves associated with the PCCP is covered by the ITP, as long as the research projects have been determined by the PCA and/or the interagency working group (described below) to have minimal effects on populations of Covered Species. Research on PCCP reserves unrelated to the PCCP is not covered by the ITP because the nature and effects of these future research projects cannot be predicted at this time. Such researchers will be granted access to reserve system properties on a case-by-case basis and such access will be conditioned on compliance with the terms of the PCCP.

Plan Area streams within the reserve system in the Bear River, Raccoon Creek, Auburn Ravine, and Dry Creek watersheds supporting covered fish species will be surveyed to document the status of CCV steelhead, CV fall-run Chinook salmon, and CV late fall-run Chinook salmon. Ongoing efforts and existing plans in plan area watersheds (*e.g.*, monitoring by Dry Creek Conservancy, Auburn Ravine/Raccoon Creek Ecosystem Restoration Plan) can provide a framework for elements of the PCCP's survey approach. Status will be documented by quantifying the number of spawners returning to streams. Some plan area streams are currently surveyed periodically for CCV steelhead, CV fall-run Chinook salmon, and CV late fall-run Chinook salmon by CDFW, Dry Creek Conservancy, and other partners. The PCA will report acquisition of spawning and migration habitat and riparian and oak woodland habitat (stream miles, acres, and location) for covered fish.

The PCA will collaborate with the wildlife agencies (NMFS, USFWS, and CDFW), the Dry Creek Conservancy, and other partners to continue monitoring and documenting covered fish in these stream systems and expand monitoring efforts to key stream reaches within acquired PCCP reserves. The PCA will coordinate its activities with existing salmonid monitoring programs to ensure that efforts are not duplicated and are complementary.

Visual surveys may be used along key or targeted stream reaches to count live adults, carcasses, and/or redds, if appropriate. Visual surveys can be difficult for CCV steelhead and other winter spawners, due to increased turbidity and high flows. Surveys will be conducted before, during, and after the spawning season for each species (generally fall and winter months). Monitoring protocols will be adopted as feasible to ensure consistency with these local and regional monitoring efforts.

Surveys in acquired parcels will assess habitat condition, if necessary, to better understand the status of species. This habitat assessment may consist of the following components:

- Assess the habitat quality of streams that support covered fish. Habitat features that may be used to characterize habitat quality include, but are not limited to:
  - Water conditions (*e.g.*, temperature, flow, depth)
  - Presence, quantity, and condition of gravel substrate suitable for spawning and egg/alevin incubation for each species
  - Percent of fine sediment in spawning gravel
  - Percent of stream length with riffles, runs, and pools
  - Quantity of instream cover (*e.g.*, large woody material and cut-banks)
  - Percent overhanging vegetation
  - Miles of available off-channel and floodplain habitat
  - Pool attributes, such as frequency (riffle:pool ratio), area, and depth

- Channel width, configuration, and channelization features, including quantity of hardened (*e.g.*, rip-rapped) banks
- Barriers to movement (*e.g.*, beaver dams, waterfalls, and manmade dams)
- Assess condition of riparian habitat. Habitat features that may be used to characterize riparian habitat related to fish include, but are not limited to:
  - Off-channel/side channel habitat availability
  - Connectivity of stream to floodplain (*e.g.*, degree to which stream channel is incised)
  - Condition of streambanks
  - Percent canopy cover
  - Structural diversity

A number of biological goals and objectives were developed for fish, see section 5.2.7.9 of the PCCP, including several at the landscape, section 5.2.5 of the PCCP, and community level, see PCCP sections 5.2.6.2 and 5.2.6.3 (Placer County 2020b). The PCA will track compliance with these biological goals and objectives, including restoration of riverine/riparian habitat (especially migration and spawning habitat), removal or modification of fish barriers, and screening of water diversions.

The PCA will monitor the response of covered fish species to riparian restoration actions in target areas, including specific fish barrier removal sites and other selected in-channel enhancements, some of which are landscape or natural community goals and objectives. To do so, relative abundance of each species can be monitored before and after the action in or near the target reach and, as appropriate, compared to a nearby reference (control) site. The results of fish surveys before and after restoration will be compared. Responses by spawners can be measured as the total number of individual live fish, carcasses, and/or redds using visual counts. Responses by juveniles can be measured as the total number of individuals or catch per unit effort using snorkel surveys, nets, or other standard juvenile fish sampling techniques, depending on site-specific conditions. Restoration efforts will be focused on Raccoon Creek, Doty Ravine, and Auburn Ravine.

Many of the stream conservation measures involve removing or modifying barriers to increase connectivity for fishes and other species within riverine corridors. While barriers often restrict native species from moving within a riverine corridor, they can also restrict non-native species from invading otherwise pristine reaches. When barriers are removed within stream corridors that support native fish populations, the non-native competitor and predator fish populations will be monitored to determine how the barrier removal affects community dynamics and ultimately the relative abundances of covered fish species.

The Friends of Auburn Ravine, Dry Creek Conservancy, and others already have ongoing research/monitoring studies. PCA anticipates that through this ongoing work and additional

relationships, that PCA will work collectively and with the fish and wildlife agencies to design and implement studies in and around the West Placer salmonid streams. In terms of existing and ongoing studies, Placer County developed the Raccoon Creek Watershed Assessment (CBEC Inc. 2017), which identified several data gaps and study needs. As a result, Placer County has helped to fund and is tracking the progress of an eDNA study on Raccoon Creek and Doty Ravine. The second phase of that project will potentially utilize rotary screw traps. Placer County will work with William Jessup University, ECORP Consulting (study sponsors), and the wildlife agencies to potentially cover the study with the PCCP ITP to the extent it meets a fundamental PCCP study need. Otherwise ESA section 7 consultation with NMFS and other environmental permits will be necessary. The PCA intends to work with the fish and wildlife agencies to identify and implement additional research, monitoring, and grant funding opportunities.

Monitoring requirements for covered fish species include:

- Document presence of covered fish in the reserve system and at restoration and enhancement sites outside the reserve system.
- Report (acres and location) acquisition of spawning and migration habitat for covered fish.
- Report (acres and location) acquisition of oak woodlands for covered fish as part of compliance under the PCCP.
- Report (acres and location) actions to enhance habitat for covered fish that occur within and outside the reserve system.
- Track compliance with fish-specific management actions.
- Evaluate salmonid response to riparian enhancement.
- Monitor threats to covered fish.

#### 1.3.3.7.1.3. Adaptive Management

Adaptive management is a decision-making process that will be used during PCCP implementation to adjust future management actions based on new information. Adaptive management is based on a flexible approach whereby actions can be adjusted as uncertainties become better understood or as conditions change (see PCCP figure 7-1). Integrating adaptive management and monitoring is critical to the successful implementation of the PCCP conservation strategy. Monitoring is the foundation of an adaptive approach, and adaptive management actions are developed, in part, from the results of monitoring. See PCCP section 7.1.2, Adaptive Management for more details about how adaptive management will be conducted. PCCP section 7.6, Adaptive Management Program Implementation describes the elements and structure of the adaptive management program and lists the PCA's responsibilities for executing the program.

Adaptive management by the PCA will be advised by four groups: the wildlife agencies, science advisors, land managers, and the public. Wildlife agencies will provide feedback to the PCA



regarding proposed changes to PCCP implementation based on the results of monitoring and provide guidance on the biology and conservation of Covered Species. The primary forum in which these discussions will occur is the Interagency Working Group, which will include representatives from USFWS, NMFS, and CDFW, described in PCCP section 8.2.6.4, Interagency Working Group. The science advisors are an independent group of scientists retained by Placer County (see PCCP section 1.4.5, Science Advisors) that will be consulted by the PCA regularly regarding PCCP implementation. The PCA will share information with other land management agencies (*e.g.*, county parks, state parks) regarding resources and management across reserve boundaries and on a regional scale. Members of the public will be able to provide input to the PCA regarding adaptive management during periodic (at least annual) public hearings and regular meetings of the public advisory committee, which will be open to the public.

#### 1.3.3.7.1.4. Fuel Management

Each reserve system unit will have a fire management component included within the PCCP reserve management plans. The fire management component will describe site-specific conditions and actions required to:

- Reduce existing fuel loads;
- If permissible, re-introduce fire as a natural process of the ecosystem;
- Minimize environmental effects and protect sensitive resources; and
- Enhance and/or restore natural community characteristics.

Preservation of reserve lands in perpetuity will require that they be managed to reduce their susceptibility to catastrophic wildfire as well as to meet the ecological objectives of the PCCP.

Reduction of fuels has three main purposes:

- Reduce fire severity within reserves;
- Reduce the ability for a fire to spread from a reserve to adjacent lands; and
- Reduce the ability for a fire to spread from adjacent lands to a reserve.

Wildfire presents a significant threat to the sustainability of current and future conservation reserves. Wildfires that may start on conservation reserves pose a threat to adjacent properties.

Fuel treatments will be aimed at preventing or at least impairing the spread of fire and reducing fire severity. Fuel treatment zones include property boundaries, public roads, and the interior of reserve parcels. In oak woodlands, shaded fuel breaks may be used along roads, at property boundaries, and within parcels to impair fire spread. Fuel breaks can be used at the periphery of vernal pool grasslands. Fuel treatments in riparian woodlands should focus on the interface between the upland and riparian vegetation.

Within the reserve system, oak woodlands have the highest inherent wildfire risk. Overly dense riparian woodlands are second in degree of risk. Vernal pool grasslands have a relatively lower wildfire risk.

Several approaches will be used to reduce fuels. The choice of approach is affected by environmental constraints, costs, and other social and ecological considerations. The highest priority in the reserve system is to protect natural and semi-natural communities and Covered Species and their habitats. Any fuel treatment must meet this requirement. BMPs will be included in fuel treatments to prevent or minimize impacts on streams, cultural resources, wetlands, soils, wildlife, and PCCP Covered Species or other special-status species, see chapter 6 of the PCCP for more details (Placer County 2020b). The strategy should emphasize avoidance of effects to Covered Species and habitat.

#### 1.3.3.7.1.5. Recreation Facilities and Trails

The PCCP will develop limited recreation opportunities within the reserve system according to the requirements in the PCCP (Placer County 2020b), refer to section 5.3.2.2.1, Content of Reserve Unit Management Plans, and chapter 6, Program Participation and Conditions on Covered Activities, reserve management conditions 1 through 3, for further details. These activities are expected to be minimal, but may include trails and associated infrastructure. The PCCP limits future reserves, not including jump-start lands, to 70 miles of trails, with an average width of six feet, 50 acres total. All trails and recreation facilities will be constructed to minimize effects on Covered Species and vegetation communities and in compliance with the guidelines in the PCCP (Placer County 2020b), refer to section 5.3.2.1, Reserve Management Plans, for further details.

Recreational uses will only be allowed within the reserve system if the PCA determines that they are consistent with the biological goals and objectives of the PCCP and are consistent with a reserve unit management plan approved by the wildlife agencies. Allowed uses will be specified in the reserve unit management plan and may include hiking, non-motorized bicycle riding, walking, horseback riding, fishing, hunting, wildlife observation, photography, and environmental education and interpretation on designated trails at appropriate sites or other similar low-intensity activities.

#### 1.3.3.7.1.6. Reserve System Infrastructure

This category also includes construction, maintenance, and use of facilities needed to manage the reserve system including, but not limited to, reserve field offices, maintenance yards, maintenance sheds, workshops, storage space (*e.g.*, for machinery or vehicles), carports, driveways, roads, bridges, fences, gates, wells, stock tanks, stock ponds, and a native plant nursery to support restoration and enhancement projects. All reserve system management structures will be constructed to minimize effects on Covered Species and vegetation communities and in compliance with the guidelines in the PCCP (Placer County 2020b). Refer to section 5.3.2.1, Reserve Management Plans, and conditions on Covered Activities described in chapter 6, Program Participation and Conditions on Covered Activities for further details.

#### 1.3.3.7.1.7. Emergency Activities

An emergency is a situation involving disasters, casualties, national defense, or security emergencies and includes response activities that must be taken to prevent imminent loss of human life or property (USFWS and NMFS 1998). Responses to changed circumstances within PCCP reserves that may affect populations of Covered Species are covered under the PCCP. Foreseeable emergency activities include, but are not limited to:

- Firefighting of small wildfires or structure fires;
- Evacuation of injured persons or livestock;
- Minor hazardous materials remediation, including remediation and cleanup of illegal dumping prior to acquisition;
- Repair of existing facilities damaged by floods or fire;
- Use of motorized vehicles for conducting activities.

Emergency responses that exceed ecological surrogates, see section 2.9.1. below, or are outside the scope of other Covered Activities may require additional consultation with NMFS and/or other wildlife agencies.

#### *1.3.3.7.2. PCCP In-stream Conservation Activities*

The PCCP provides coverage for projects and activities associated with implementation of the conservation strategy. In-stream conservation activities are covered anywhere they may occur in Plan Area A or permittee activity in non-participating jurisdiction (B1), Raccoon Creek floodplain (B3), or fish passage channel improvement (B4). Components B3 and B4 are located in Sutter County, just west of Placer County (see Figure 1 above). According to the PCCP (Placer County 2020b), Raccoon Creek in Placer County and those Sutter County plan components are currently under study to identify the effect of hydrology, water quality, channel geomorphology, and riparian vegetation on salmonids.

PCCP in-stream conservation activities may occur on private and public lands outside the reserve system. These actions will require agreements to be reached with landowners to allow the installation and maintenance of conservation measures. Measures that are implemented outside the reserve system will occur primarily along stream and riparian areas.

In-stream conservation activities include:

- Stream barrier removal or modification;
- Vegetation management, including mechanical removal of invasive weeds in streams;
- Installation of woody debris or rocks to enhance aquatic habitat in streams;
- Gravel augmentation and gravel cleaning conducted to enhance or restore spawning sites for Covered Species;

- Actions to address invasive animal species or invasive plant species control beyond vegetation management;
- Restoration of in-stream and riparian habitats;
- Surveys and monitoring for mitigation and restoration/habitat enhancement projects;
- Monitoring of Covered Species (*i.e.*, salmonids, California red-legged frog, foothill yellow-legged frog, western pond turtle) and natural communities;
- Landowner outreach and education programs that target landowners along streams. Willing landowners may receive technical assistance from the PCA to reduce erosion and sedimentation into nearby streams.

Note that there is some overlap between in-stream conservation measures and those that will occur outside of the stream in the surrounding stream system.

#### 1.3.3.7.2.1. Stream Barrier Modification Projects

The PCCP conservation strategy provides for the removal of fish passage barriers and other projects that improve fish passage. These projects are based on recommendations from the Anadromous Fish Screening and Passage Opportunities in Western Placer County and Southern Sutter County report (Bailey and Buell 2005) and will include removal or modification of the following passage impediments:

- Hemphill Dam, including the construction of a fish ladder and/or removal of the dam and restoration of the riparian zone, owned by NID;
- Cottonwood Dam, including riparian restoration, privately owned;
- Culvert at Doty Ravine on Garden Bar Road, county owned;
- Nelson Lane Dam;
- Raccoon Creek and Waltz Road dam near the Sutter County line.

The removal or modification of these passage impediments will require the cooperation of private entities or public agencies that are not currently permittees of the PCCP. In the event these facilities cannot be modified or removed because they are not under the control of the permittees, alternative fish passage improvements will be recommended to the wildlife agencies for Doty Ravine, Raccoon Creek, Auburn Ravine, or salmonid streams in the Dry Creek watershed.

Other dams and diversion structures that could be removed or modified include the Lincoln Ranch Duck Club Dam, Coppin Dam, Davis Dam, New Moore Dam, Tom Glenn Dam, and Aitken Ranch Dam. The PCA may work with NID to improve fish passage at its facilities, including the NID Doty Ravine south diversion structure, Camp Far West Canal, and Goldhill Dam.

#### 1.3.3.7.2.2. In-channel Habitat Improvement

When opportunities exist, the PCA will remove or modify in-channel features within and outside of the reserve system to restore in-stream habitat. Potential restoration measures include removal of fish passage barriers; removal of features, such as riprap, dikes, and levees; setting back and/or stabilization of creek banks; and the re-establishment of historical stream morphology.

In-channel conservation measures may include the removal of anthropogenic features (*e.g.*, concrete, earthen, or otherwise engineered channels) as well as measures that modify specific elements of in-channel habitat. Methods to improve in-channel habitat include removing non-native vegetation and revegetating with native plants to influence physical processes; installing large woody debris and other in-stream structural elements, such as rocks and boulders, to improve channel complexity and to promote woody debris recruitment and enhance rearing habitat; and augmenting gravel within potential spawning grounds.

Channel restoration may entail reconstruction of a channel or incremental process restoration, installation of a natural structural feature to induce change in a channel. Channel restoration can also be used to restore bank stability and reduce bank erosion, thereby improving aquatic habitat and water quality.

Together, these enhancement and restoration techniques can serve to slow the movement of floodwaters, allow the deposition of sediment to improve channel and bank formation processes, reduce sediment loading in river and stream systems, and improve habitat for Covered Species, including the restoration of complex rearing habitat.

The reduction of fine sediment input to streams is a high priority in Auburn Ravine, Raccoon Creek, Doty Ravine, Miners Ravine, Secret Ravine, and the main stem of Dry Creek and a medium priority in Bear River, Pleasant Grove Creek, and Curry Creek (Placer County 2002, Placer and Sacramento Counties 2003, Foothill Associates 2006). The PCA will focus gravel cleaning and replenishment in high- and medium-priority streams. The PCA will identify specific stream reaches with degraded spawning habitat where cleaning or replenishment of gravels is the only feasible means to enhance habitat. These measures are not anticipated to occur regularly under the PCCP and would only be used as a temporary action to maintain habitat until the reach can be restored.

Gravel cleaning can be used to enhance and restore gravel beds that are already impaired due to excess fine sediment load. Gravel replenishment can be used in streams deficient in spawning gravel due to dams or other artificial structures that prevent gravel recruitment or transport. The use of gravel cleaning or replenishment measures will likely result in additional maintenance requirements because natural processes will not maintain post-cleaning conditions.

Gravel cleaning and replenishment can be effective where the cause and source of excessive fines, including upland sources, such as unpaved roads and land grading activities, have been controlled or remedied.

The PCA will employ invasive animal control measures for in-stream invasive species (*e.g.*, carp, bullhead, and bullfrog) on an as-needed basis. The need to control invasive species and methods to be used will be site-specific and evaluated within a monitoring and adaptive

management framework. The PCA will develop an invasive species control plan for the reserve system, and each reserve management plan will include a section on management of invasive plant and animal species.

Methods of invasive control will depend on site-specific conditions, including type of waterway and time of year, and will be done in close coordination with fish and wildlife agencies to avoid harm to non-target species.

#### 1.3.3.7.2.3. Riparian Restoration

The PCA will restore 330 acres of riparian habitat and an estimated additional 876 acres of riparian habitat to reestablish, reconnect, and expand existing riparian woodland; slow the movement of floodwaters; allow the deposition of sediment to improve channel and bank formation processes; and reduce sediment loading in river and stream systems. Details of the site selection process and methods can be found in section 5.3.1.5.4 of the PCCP (Placer County 2020b).

#### *1.3.3.7.3. Other Placer County Conservation Activities*

Placer County administers ongoing conservation and resource management programs (*e.g.*, management of wildfire fuel) that are separate from but complementary to the PCCP. The actions conducted by Placer County to implement the Placer Legacy Program and the Auburn Ravine/Raccoon Creek ERP, Dry Creek coordinated resource management plan (CRMP), Pleasant Grove/Curry Creek ERP, and Dry Creek Greenway Vision Plan are similar to many of those that will be conducted by the PCA to implement the PCCP conservation strategy. These actions will occur primarily outside the reserve system.

#### 1.3.3.7.3.1. Placer Legacy Program and Resource Management Plans

Placer County implements the Placer Legacy Program and CRMPs, which are complementary to the PCCP. The resource management plans focus on in-stream and riparian management and are discussed in section 1.3.3.6, In-stream Activities.

Placer County, in coordination with its public and private partners, will implement the goals and objectives of the Placer Legacy Program throughout the 50-year term of the PCCP's permits.

The Placer Legacy Program uses four main strategies to obtain its goals and objectives: land preservation, stewardship programs, public education, and restoration and enhancement. Conservation of agricultural lands is primarily accomplished through fee title acquisition, conservation easements, and Williamson Act agreements. Stewardship programs focus on agricultural product marketing, tax/estate planning assistance, sustainable practices education, and financial incentives. In addition, Placer County promotes stewardship by providing a long-term planning framework that is scientifically and geographically based, as well as by assisting public and private landowners with Federal and State agency permit application and consultations.

The act of acquiring land or promoting stewardship does not have direct, on-the-ground consequences that require coverage by the PCCP. Such actions have complemented and will

continue to complement the implementation of biological goals and objectives of the PCCP. However, the Placer Legacy Program's restoration and enhancement actions will have environmental effects that are covered by the PCCP.

Many Placer Legacy Program activities will be conducted in concert with PCA implementation of the PCCP. The Placer Legacy Program may, however, carry out activities independent of the PCCP that generally fall under the following categories:

- Introduction of recreation, such as hiking, bicycling, and horseback riding to previously inaccessible natural areas that support grassland, oak woodland, and riparian habitats;
- Creation of urban trails and trail connections as well as the building of interpretive nature and cultural appreciation centers;
- Restoration of riparian and in-stream habitats to benefit salmonid spawning, rearing, and migration life stages in the Raccoon Creek, Auburn Ravine, and Dry Creek watersheds;
- Protection and enhancement of floodplains to maximize water and sediment detention and restore natural stream morphology, including levee pull-backs, floodplain restoration, protection of floodplains from incompatible encroachment, bank stabilization, and other activities that protect existing natural floodplains or restore natural conditions to floodplains that have been modified (typically for agricultural production);
- Establishment of buffers and management of fuel loads to reduce wildfire potential;
- Restoration and enhancement of degraded forests in oak woodland and riparian habitats;
- Development of on-site water management storage features, such as ponds and swales to promote water conservation and improve water quality;
- Coordination of water delivery agencies to ensure the adequacy of future water deliveries for agriculture and native species habitat;
- Encouragement of the use of rice decomposition water to improve waterfowl habitat;
- Acquisition of property for scenic, historical, or agricultural conservation values.

#### 1.3.3.7.3.2. Community Wildfire Protection Plan

The Placer County Community Wildfire Protection Plan (CWPP) (Placer County 2012) provides a comprehensive analysis of wildfire-related hazards and recommendations designed to reduce the threat of wildfire-related damages to values at risk. The CWPP (Placer County 2012) provides a comprehensive analysis of wildfire-related hazards and risks in the wildland-urban interface areas covered by the greater Auburn area, Foresthill/Iowa Hill, Lincoln, and Placer Sierra fire safe councils. The wildland-urban interface is the area where human development and activity meets and intermixes with undeveloped vegetation. The PCCP defines specific fire hazards in designated areas, assesses the values at risk, and identifies and prioritizes specific projects to protect local communities.

Any fuel management activities, which include the creation of fire breaks, and fuel treatment and restoration, conducted by Placer County on private or public lands would be considered a Covered Activity. This activity would be consistent with the CWPP (Placer County 2012).

Note that private landowners clearing fuel on their own property is not a Covered Activity.

#### *1.3.3.7.4. Resource Management Plans*

The PCCP integrates three watershed plans, including the Dry Creek CRMP (Placer and Sacramento Counties 2003), the Auburn Ravine/Markham Ravine/Raccoon Creek ERP (Placer County 2002), and the Pleasant Grove/Curry Creek ERP (Foothill Associates 2006), into the conservation strategy. These watershed management plans were designed to help control pollution, manage stormwater, and restore and enhance stream system habitats and uplands that surround them. The watershed plans are comprehensive, ecosystem-based plans for the restoration and enhancement of riparian and in-stream habitats in western Placer County watersheds. The watershed plans were created in coordination with public and private stakeholders, including Placer County, water districts, non-profit conservation interests, agencies, and landowners. The watershed plans provide guidance for riparian and stream restoration and enhancement actions outlined in the Placer Legacy Program.

The PCA will use these restoration and management plans to help guide stream and riparian acquisition, enhancement, and restoration actions. The Placer Legacy Program's restoration and enhancement activities implemented by Placer County will occur on lands within and outside of the reserve system. Although these plans pre-date the preparation of the PCCP conservation strategy, they provide a watershed-level focus that is valuable; they represent stakeholder interests that are consistent with the spirit of State and Federal guidance on the preparation of HCPs and NCCPs. These plans have informed the development of the PCCP conservation strategy and monitoring and adaptive management program and will be used by the PCA to help guide PCCP acquisition, enhancement, and restoration actions for riverine and riparian systems. In no case will these plans supersede the conservation strategy of the PCCP. Their implementation is intended to inform and be covered by the PCCP and will supplement the conservation actions carried out by the PCCP.

The primary goal of these resource management plans is to improve riparian and aquatic habitat quality and connectivity for native biota. The main objectives of these plans are to protect, restore, and enhance riparian habitat; improve salmonid spawning and rearing habitat; restore the natural hydrography and morphology when and where possible; remove and/or modify in-stream barriers to salmonid migration; and improve water quality.

Those projects that are implemented as a result of the watershed planning process will be covered by the PCCP. Construction or restoration activities associated with implementation of the watershed plans may have temporary effects, but overall these projects will provide a net benefit to Covered Species and natural and semi-natural communities by improving ecosystem integrity, resiliency, and connectivity. The general types of projects that are expected to be implemented include the following:

- Control and/or removal of non-native, invasive riparian plant species;



- Creation, expansion, and enhancement of riparian forest and willow scrub natural communities to maximize ecosystem functions, such as shade and bank stabilization;
- Management of the riparian natural community adjacent to grazing areas to reduce sedimentation and fecal contamination;
- Enhancement of floodplain structure to reflect natural stream morphology and improve flood control;
- Control of invasive and/or nuisance animal species, such as bullfrogs, beavers, and bass, to minimize adverse effects on threatened and endangered species;
- Removal or modification of barriers to salmonid migration between spawning habitat and the American and Sacramento Rivers;
- Modification of water diversion structures to minimize juvenile salmonid entrapment;
- Improvement of salmonid spawning and rearing habitat by increasing or encouraging the formation of runs, riffles, and pools and reducing the concentration of finely sized sediment;
- Public education programs and partnerships with wastewater treatment plants to help reduce pollutant loads to streams and increase the use of biofiltering techniques, such as vegetated buffers and off-channel storage ponds in existing and future streamside development and agriculture;
- Management of upland activities to reduce peak runoff flows and sediment and contamination loads;
- Utilization and enforcement of BMPs and smart growth principles to improve water quality and minimize surface runoff discharge.

#### **1.3.4. PCCP Conservation Strategy**

Chapter 5 of the PCCP (Placer County 2020b) contains the conservation strategy for the PCCP. For this opinion, the parts of the conservation strategy that explicitly address stream habitat or salmonids are included in the following subsections. All other portions of the conservation strategy and the rest of chapter 5 of the PCCP (Placer County 2020b) are incorporated here by reference.

##### ***1.3.4.1. Conservation Strategy Components***

The PCCP's conservation strategy will be implemented by the PCA in partnership with the permittees and the wildlife agencies. The strategy has four main components:

- (1) Reserve system. The PCCP proposes to progressively establish a large system of interconnected blocks of land. Over the PCCP 50-year permit term, the PCA will acquire approximately 47,300 acres for natural and semi-natural community protection

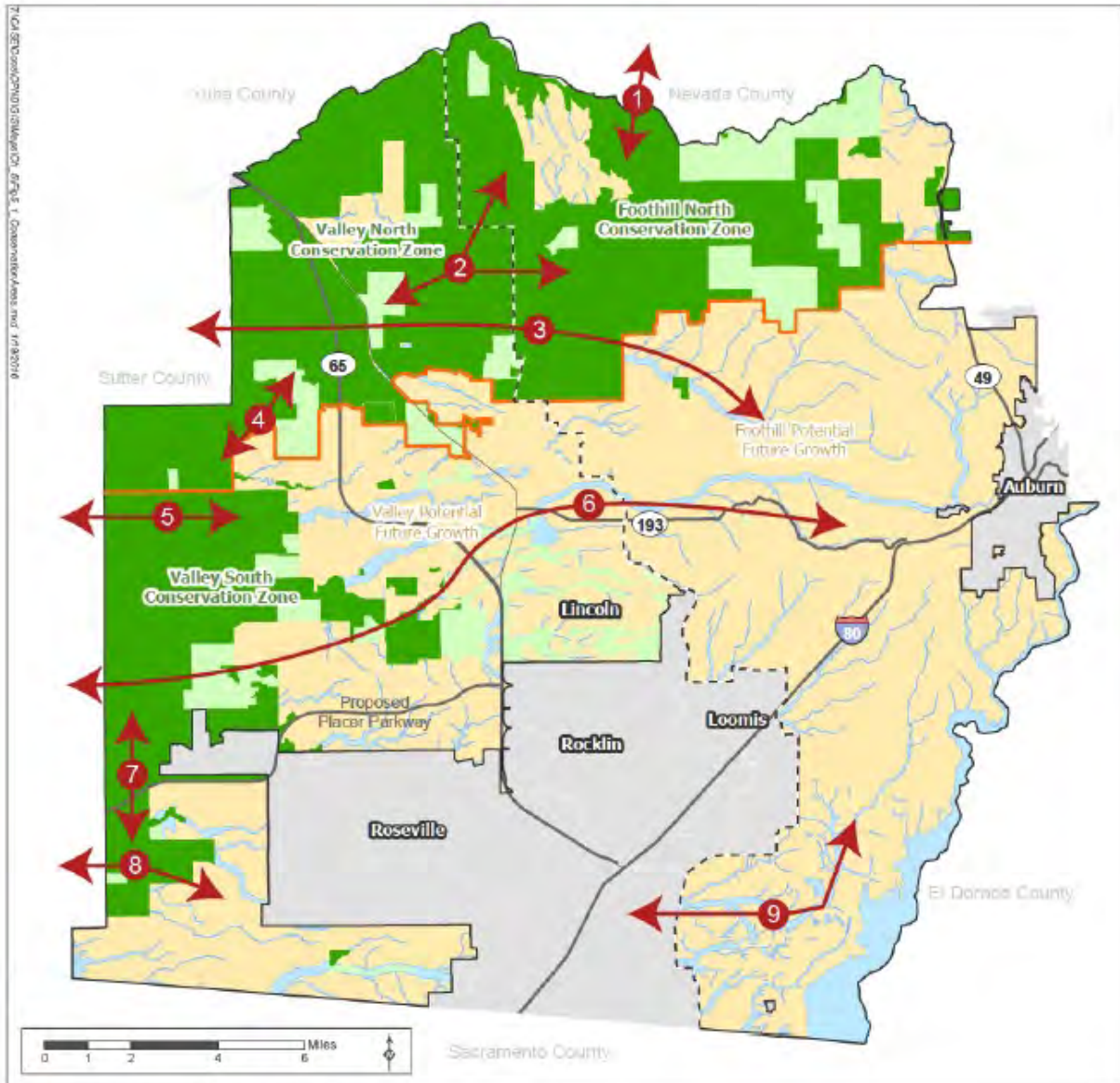
and restoration irrespective of impacts to species and/or habitat from Covered Activities. Within that land, the PCA will restore at least 4,405 acres of natural communities independent of mitigation for effects from Covered Activities, and 6,220 acres of natural communities if all allowable impacts to species and/or habitat from Covered Activities proposed under the PCCP occurs. These protected and restored lands will augment the approximately 16,000 acres of EXR. Cumulatively, 38 percent of the present natural and semi-natural landscape in Plan Area A will ultimately be subject to conservation management.

The reserve system will provide a means for protecting, managing, enhancing, and restoring or creating the natural and semi-natural communities and habitats that support the Covered Species. The reserve system will mainly be located in the western and northern valley and in the northern foothills, regionally separated from future urban and suburban growth. The geographic aspect of the conservation strategy is shown in Figure 2 and in PCCP figure 5-1 (Placer County 2020b).

- (2) Stream protection, enhancement, and avoidance. The conservation strategy protects the stream system everywhere in Plan Area A. Conservation measures in and avoidance of the stream system contribute both to Covered Species' habitats and connectivity in the reserve system. In-stream enhancement actions will occur inside and outside of the reserve system, in Plan Areas A and B. Such actions include, but are not limited to, removal and/or modification of barriers to fish passage, screening unscreened water diversions, improvement of in-channel features, and non-native animal species control.
- (3) Wetland conservation and no overall net loss of wetland functions and services. The PCCP provides for protection, enhancement, restoration, and creation of wetlands through the conservation measures for the vernal pool complex, riverine/riparian complex, and aquatic/wetland complex natural communities. The conservation strategy provides for the protection of surrounding upland necessary to sustain the hydrological function of protected, restored, and created wetlands.

The PCCP anticipates loss of wetlands, including vernal pool wetlands. Restoration and creation of wetlands will specifically provide in-kind compensatory habitat in the RAA or stream system in order to achieve conservation of the Covered Species and no overall net loss of wetland habitat through the 50-year permit term.

- (4) Avoidance and minimization. Covered Activities will avoid or minimize adverse effects by complying with specific conditions that apply to certain communities and species. See section 1.3.5 below and/or chapter 6 of the PCCP (Placer County 2020b) for more details. The PCCP proposes that: (1) conservation measures will take place on lands set aside for conservation purposes, (2) implementation of the conservation strategy will accomplish avoidance and minimization on a cumulative regional scale, and (3) avoidance and minimization in the PFG areas will be focused only on specific resources.



Source: Placer County, 2015; CDFW 2010; CalTrans 2010; MNG | ZPA 2016

- Existing Protected Area
- Reserve Acquisition Area
- Potential Future Growth Area
- Non-Participating City
- Valley/Foothill Divide
- North/South Conservation Zone Divide
- Stream System
- Major Road

↔ Linkage (Orientation)

1. **Bear River Watershed** (N-S) Connect PCCP oak woodland reserves to oak woodlands in Nevada County throughout the Bear River watershed.
2. **Yankee Slough - Raccoon Creek Watershed** (E-W) Connect Valley reserves to Foothill reserves.
3. **Raccoon Creek - Doty Creek corridor** (E-W) Connect existing protected areas and reinforce riparian protection for salmonids.
4. **Lower Raccoon Creek** Maintain connectivity between PCCP northern and southern conservation areas and linkage along lower Raccoon Creek in the Sutter County.
5. **Markham Ravine** (E-W) Connect PCCP reserves with scattered existing protected areas to the east; may play a role in giant garter snake dispersal.

6. **Auburn Ravine** (E-W) Connect PCCP reserves with scattered existing protected areas to the east; important for salmonids.
7. **Cross Placer Parkway** (N-S) Remediate barrier created by the proposed Placer Parkway. Connect Pleasant Grove Creek watershed to Curry Creek watershed; may play a role in giant garter snake dispersal.
8. **Curry Creek** (E-W) Connect PCCP reserve lands to Sutter County on the west and avoided stream systems to the east; may play a role in giant garter snake dispersal.
9. **Miners Ravine** (E-W) Connect Stream System reserve opportunities in Miners Ravine to tributaries of Dry Creek; important for salmonids.

Figure 2. PCCP Conservation Zones and Key Linkages, from figure 5-1 of the PCCP (Placer County 2020b).

### ***1.3.4.2. PCCP Conservation Goals, Objectives, and Measures that Address Stream Habitat or Salmonids***

#### ***1.3.4.2.1. PCCP Landscape-level Goal L-3***

Ecological processes and conditions that sustain and reestablish natural communities and native species.

- Objective L-3.1. Implement low impact development standards (LIDS) for Covered Activities in the plan area.
  - Rapidly moving stormwater erodes stream banks and scours stream channels, degrading or removing habitat for fish and other aquatic life. Using LIDS reduces the amount of stormwater reaching a surface water system and helps to maintain natural stream channel functions and habitat. This objective will be met through implementation of measures outside the reserve system where Covered Activities take place. The goal of LIDS is to mimic a site's predevelopment hydrology by using design techniques that infiltrate, filter, store, evaporate, and detain runoff close to its source (Placer County 2020b).
- Objective L-3.2. Reduce invasive non-native species and increase native species.
  - This is intended to increase native species diversity, which improves natural community resilience and resistance to disturbances, such as drought and flooding, by increasing the likelihood that species or strains with attributes to withstand these disturbances are present on the landscape. Additionally, vegetation biodiversity in riparian and other natural communities provides the structural diversity necessary to provide suitable habitat for many wildlife species. Increasing the relative cover of native plant species also potentially increases resistance to invasion by non-native plants and reduces the potential negative effects of non-native plants. This objective also intends to minimize the introduction and spread of invasive non-native species as described. The PCCP does not intend to control non-native species that are naturalized and are not adversely affecting native species in the plan area.

#### ***1.3.4.2.2. PCCP Goal Riverine and Riparian (RAR) 1***

Functional riverine and riparian communities that benefit Covered Species and promote native biodiversity in the plan area.

Several landscape-level goals will contribute to this goal. See section 5.2.6.3 of the PCCP for more details (Placer County 2020b).

- Objective RAR-1.1. Protect riverine/riparian complex. Protect 2,200 acres of riverine/riparian complex natural community, which will include at least 1,410 acres of

riparian constituent habitat (960 acres in the valley and 451 in the foothills). This portion of the reserve system will include 88.6 linear miles of streams/riverine habitat.

- Objective RAR-1.2. Protect riverine constituent habitat. Protect at least 88.6 linear stream miles of riverine within the riverine/riparian complex natural community.
  - The assembly of the reserve system will substantially increase the amount of protected riverine and riparian constituent habitats in the plan area. The riverine and riparian protection commitments are large enough, with objective RAR 1.3, to protect corridors for movement from the valley floor to the foothills.
  - The protection commitments for the riverine and riparian constituent habitats are intended to be large enough to protect, along with enhancement and restoration from objectives RAR 1.3, 1.4, 1.5, 1.6, and 1.7, functioning hydrologic systems that provide habitat value for native biota while continuing to meet urban requirements for flood control, drinking water, agriculture, and recreation. For western Placer County streams, this generally means providing the channel width and depth to convey most flood flows while maintaining both aquatic and terrestrial habitat complexity necessary to ensure water quality and suitable streambed conditions for all life stages of aquatic Covered Species.
  - The riverine and riparian commitment is intended to be large enough to ensure that extensive amounts of high quality spawning, rearing, and migrating habitat are protected for the covered salmonids within the Raccoon Creek, Doty Ravine, Auburn Ravine, and Dry Creek watersheds, consistent with the Recovery Plan for the Evolutionarily Significant Units of Sacramento River Winter-run Chinook Salmon and Central Valley Spring-run Chinook Salmon and the Distinct Population Segment of California Central Valley Steelhead (hereafter, recovery plan) (NMFS 2014b).
  - After restoration is successfully completed, at least 2,232 acres, and up to 3,625 acres if the proposed maximum allowable loss of riverine/riparian complex community occurs from Covered Activities, of riverine/riparian communities will be protected and restored on the reserve system. These protection and restoration commitments provide for the conservation and recovery of Covered Species in the plan area, in addition to mitigating consequences of the actions to 490 acres of the riverine/riparian complex natural community.
  - The protection of 88.6 miles of streams in Plan Areas A and B and restoration of fish passage both upstream and downstream of existing barriers (objective RAR 1.5), will provide for the conservation and recovery of riverine Covered Species in the plan area, in addition to mitigating consequences of the actions on 551 miles of streams in the plan area. The protection of these streams will overlap the riverine/riparian complex community protected.
- Objective RAR-1.3. Restore riverine/riparian complex. A minimum of 32 acres of riparian constituent habitat will be restored, independent of effects. In addition, impacts

on riverine/riparian constituent habitat and the stream system will be mitigated by restoration of riverine and riparian constituent habitat at a ratio of 1.52:1. If the proposed maximum allowable effects on riverine/riparian complex and the stream system occur (490 acres and 426 acres, respectively, for a total of 916 acres), up to an additional 1,425 acres of riverine/riparian complex will be restored. Of the 1,425 acres of riverine and riparian constituent habitat restoration, 1,250 acres must be restored as riparian constituent habitat. Effects on salmonid habitat (*i.e.*, spawning or migrating) will be mitigated in kind. Other natural communities interspersed within riverine/riparian complex may be restored as part of riverine/riparian upland complex (*e.g.*, valley oak woodland, fresh emergent wetlands).

- Riparian restoration will be focused on expanding and connecting existing fragments of riparian communities to restore corridors for movement in the plan area.
  - Achieving this objective will improve riparian-related ecosystem functions, such as providing shade that moderates water temperature in adjacent streams, slowing water velocities during flood events, reducing inputs of nutrients (*e.g.*, nitrogen) and pollutants into streams, providing habitat for terrestrial and aquatic invertebrates, prey species for covered salmonids and native biota, and stabilizing banks against erosion.
- Objective RAR-1.4. Enhance riparian vegetation. Enhance the cover, structural diversity, and native species diversity of the riparian constituent habitat in the reserve system.
  - Objective RAR-1.5. Remove or modify fish barriers. Initiate partnerships with managing agencies and remove or modify two high-priority fish passage barriers, including the barrier at Doty Ravine at Garden Bar Road and one other barrier identified in PCCP table 3-5 (Placer County 2020b) and adapted below in Table 2. When partnerships allow, remove or modify up to three more of the fish passage barriers identified in Table 2.

**Table 2. Summary of Fish Passage Barriers Considered in PCCP, adapted from PCCP Table 3-5.**

<b>Fish Passage Barrier</b>	<b>Watershed</b>	<b>Type/ Features</b>	<b>Assessment</b>	<b>Recommended Action</b>	<b>Location</b>
Hemphill Dam	Auburn Ravine	Seasonal flashboard dam; elevated sill, sloped apron; unscreened diversion	Significant barrier/ impediment; diversion needs screen	Dam: replace apron with pool-and-chute fishway; diversions: screen with vertical or oblique screen on bank	On Auburn Ravine within the Turkey Creek Golf Course approximately 1.5 miles upstream of the SR 193 crossing

<b>Fish Passage Barrier</b>	<b>Watershed</b>	<b>Type/ Features</b>	<b>Assessment</b>	<b>Recommended Action</b>	<b>Location</b>
Cottonwood Dam	Dry Creek; Miners Ravine	Dam has a rectangular notched weir but remains a barrier to fish passage	Significant barrier/ impediment	Remove dam and restore riverine and riparian habitat	Hidden Valley subdivision, Granite Bay
Doty Ravine at Garden Bar Road	Doty Ravine; Raccoon Creek	Perched 12-foot culvert	Significant impediment	Replace with natural bottom culvert with grade control or open-span bridge with fish passage baffles	Garden Bar Road crossing of Doty Ravine in the Raccoon Creek watershed
Nelson Lane Dam	Auburn Ravine	Seasonal flashboard dam	Minor impediment	Dam: concentrate flow; diversions: screen if needed	On Auburn Ravine approximately ¼ mile downstream of the Nelson Lane crossing
Gaging Station at Raccoon Creek at Waltz Road near Sutter County	Raccoon Creek	Additional study needed	Likely a minor impediment during low flows – additional study needed	Additional study needed	Raccoon Creek near Waltz Road close to the Placer-Sutter County line
Lincoln Ranch Duck Club Dam	Auburn Ravine	Seasonal flashboard dam	Seasonal barrier/ impediment; unscreened diversion	Dam: excavate sump; extend pump; vortex weirs; diversions: screen if needed	On Auburn Ravine approximately 1 mile upstream of the Brewer Road crossing

<b>Fish Passage Barrier</b>	<b>Watershed</b>	<b>Type/ Features</b>	<b>Assessment</b>	<b>Recommended Action</b>	<b>Location</b>
Coppin Dam	Auburn Ravine; Raccoon Creek	Seasonal flashboard dam and unscreened diversion	Seasonal barrier/ impediment	Screen diversion; possibly remove or provide fish passage	On the Cross Canal near the downstream end of the engineered portions of Auburn Ravine in Sutter County
Davis Dam	Auburn Ravine	Seasonal flashboard dam	Minor barrier; seasonal operation	Possibly remove or provide fish passage	On Auburn Ravine between the Pleasant Grove Road crossing and the Union Pacific Railroad tracks in Sutter county
Tom Glenn Dam	Auburn Ravine	Seasonal flashboard dam	Minor barrier; seasonal operation	Possibly remove or provide fish passage	On Auburn Ravine just east of Pleasant Grove Road in Sutter County
Ophir Tunnel Cataract	Auburn Ravine	Natural cataract	Significant impediment	Backwater lower portion with concrete sill series	Upstream of Lozanos Road on Auburn Ravine. Above NID 1 Dam, an impassable impediment
NID Doty Ravine south diversion structure	Doty Ravine	Concrete dam	Seasonal barrier	Screen diversion and add fish passage ladder	On Doty Ravine approximately ¼ to ½ mile downstream of Crosby Herold Road



<b>Fish Passage Barrier</b>	<b>Watershed</b>	<b>Type/ Features</b>	<b>Assessment</b>	<b>Recommended Action</b>	<b>Location</b>
Camp Far West Canal Dam	Raccoon Creek	Concrete dam with headgate	Significant barrier/ impediment	Fish ladder construction; screen intake	Approximately 1 mile downstream of the confluence of Orr and Dry Creek, which combine to form Raccoon Creek. The waterfall on Raccoon Creek is an impassable barrier such that salmonids may never access this dam
NID 1 Dam	Auburn Ravine	12 foot	Additional study needed	Additional study needed	2 miles upstream from Gold Hill Road

- Objective RAR-1.6. Modify unscreened water diversions. Screen, consolidate, relocate, remove, or otherwise modify all unscreened water diversions on salmonid streams in the reserve system.
  - Screening water diversions will reduce entrainment in plan area streams and improve survival of juvenile salmonids. The PCA expects to take over an unknown number of unscreened diversions as lands are acquired in fee title or conservation easement for the reserve system. As these unscreened diversions are brought into the reserve system they will be screened, removed, or otherwise modified to meet this objective and provide for the conservation of covered salmonids. Some unscreened diversions outside of the reserve system (*i.e.*, not protected through fee title or conservation easement) may be screened or removed as part of the fish barrier removal or modification projects, see objective RAR-1.5.
- Objective RAR-1.7. Enhance streams. Enhance stream reaches within the plan area to promote habitat complexity and function (*e.g.*, diversity of in-stream habitat, shaded riverine habitat, floodplain inundation). The PCA will improve in-channel features of plan area streams sufficient to meet a 1.5:1 ratio of enhanced to affected. In-channel enhancement measures will be located in the same watershed and salmonid habitat type

(*e.g.*, spawning, migrating) in which the effects occur. The enhancement measures may be implemented in streams on the reserve system and elsewhere within Plan Area A, Plan Area B3, Raccoon Creek floodplain conservation, and Plan Area B4, fish passage channel improvement.

- This objective intends to improve habitat complexity and function for Covered Species and native biota in Plan Area A and B streams. Increasing channel complexity contributes to biological diversity, richness, and sustainability of the aquatic ecosystem, and benefits salmonid rearing habitat. Increasing channel complexity will provide in-stream refuge cover for covered salmonids, amphibians, and native species. This will provide for more suitable natural conditions for fish and other aquatic species while moderating water temperatures, providing in-stream cover for fish and other aquatic species, and helping to create food sources for covered fish species. This will also facilitate the movement of animals and plants (*e.g.*, dispersal of seeds of riparian species) along riverine and riparian corridors that traverse the plan area.

#### *1.3.4.2.3. PCCP Goal FISH-1*

Increased spawning, rearing, and migratory success of covered salmonids in the Auburn Ravine, Raccoon Creek, and Dry Creek watersheds.

Several landscape- and community-level biological objectives will contribute to this goal, see PCCP section 5.2.7.9 for details (Placer County 2020b).

- Objective FISH-1.1. Protect salmonid spawning and migrating habitat. Of the 88.6 stream miles protected in the reserve system, objective RAR-1.2, protect 25 stream miles of salmonid spawning habitat and 10 miles of salmonid migrating habitat primarily on stream reaches along Raccoon Creek, Doty Ravine (a major tributary to Raccoon Creek), and Auburn Ravine.
- Objective FISH-1.2. Protect riparian habitat for fish. Of the riparian natural community protected in the reserve system (objective RAR-1.1), protect 558 acres of riparian habitat along salmonid spawning stream reaches and 342 acres of riparian habitat along salmonid migrating reaches, primarily along Raccoon Creek, Doty Ravine, and Auburn Ravine.
- Objective FISH-1.3. Protect oak woodlands for fish. Of the 12,490 acres of oak woodland and grassland protected in the foothills, protect 9,869 acres in the Raccoon Creek watershed to protect and improve water quality and watershed integrity in the Raccoon Creek watershed, the primary salmonid stream system within the RAA.
  - The Raccoon Creek watershed is the most intact, least fragmented watershed among the salmonid bearing watersheds in the plan area, particularly in the foothills, where spawning habitat is located. This objective intends to enhance watershed resiliency in Raccoon Creek by protecting and restoring large blocks of intact, high-quality oak woodlands, and foothills grasslands. Protecting the integrity of the upper Raccoon Creek watershed will help to improve in-stream

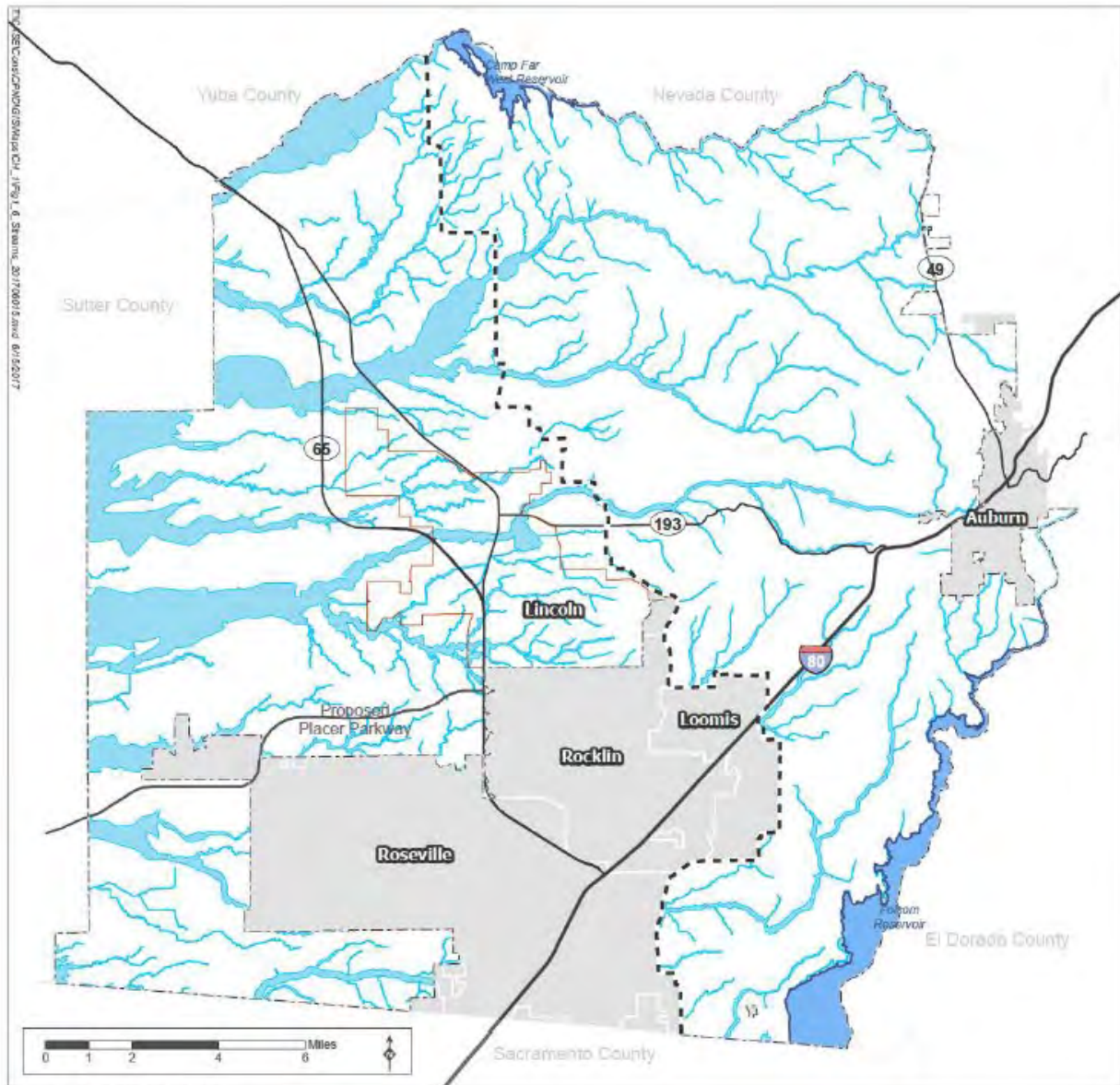
conditions downstream in the valley RAA through enhanced water quality and maintenance of necessary flows for salmonids.

*1.3.4.2.4. PCCP Conservation Measures that Address Stream Habitat or Salmonids*

1.3.4.2.4.1. PCCP Stream Systems

Protection of the stream system, which includes riparian communities, aquatic habitat, and other aquatic resources, is vital for ensuring the long-term viability of Covered Species. Figure 3 and figure 3-10 in the PCCP (Placer County 2020b) depict the location of the stream system. Only those areas protected as described in the PCCP goals and objectives will contribute toward the protection commitments in the biological goals and objectives.

In addition to protecting the stream system within the reserve system, Covered Activities will avoid or minimize effects within the stream system. Covered Activities that affect natural communities within the stream system boundary must contribute to restoration of the stream system at a ratio of 1.52:1 by paying a stream system fee. Covered Activities throughout the plan area must also implement LIDS.



Source: Placer County, 2014; MIG | TRA, 2014

- PCCP Stream System
- Reservoir
- Plan Area A
- City of Lincoln
- Valley/Foothill Divide
- Non-participating City

**Figure 3. PCCP Stream System, from PCCP figure 3-10 (Placer County 2020b)**

**1.3.4.2.4.2. Aquatic and Wetland Buffers**

Where aquatic and wetland constituent habitats are present in the reserve system, buffers are necessary to avoid the indirect effects from new development that may occur adjacent to the reserve system. The width of the buffers will be as specified in PCCP sections 6.3.2.1.2 and 6.3.2.2.1 (Placer County 2020b). Aquatic and wetland constituent habitats that do not have a sufficient buffer between the aquatic or wetland constituent habitat and new development will

not count toward meeting protection commitments because their proximity to development can greatly reduce their habitat value. Aquatic and wetland constituent habitats that do not have a sufficient buffer between the aquatic or wetland constituent habitat and existing development will count toward meeting the protection commitments. Except for areas subject to intensive fuel management, these aquatic and wetland buffer zones may count toward terrestrial (including riparian) community protection commitments.

#### 1.3.4.2.4.3. Conservation in Plan Area B

It is intended that the majority of the reserve system will be established within Plan Area A. Conservation activities may occur in portions of Plan Area B to achieve biological goals and objectives. Cooperative conservation measures in these areas could also benefit the reserve system by expanding the resources available for a reserve, increasing contiguous reserve size, or improving connectivity. Conservation opportunities could occur in Plan Areas B3 and B4. Lands that may meet these needs for stream habitat or salmonids throughout Plan Area B are:

- Raccoon Creek floodplain conservation (B3). Conservation activities in this area may focus on watershed protection, including acquisition, and stream restoration along the Raccoon Creek floodplain within Sutter County.
- Fish passage channel improvement (B4). Conservation activities in this area may focus on activities to improve fish passage and habitat enhancement within channels west of Placer County in Sutter County. These activities will primarily be one-time actions (*e.g.*, vegetation management, plantings); they do not include land acquisition.

Conservation measures performed by the permittees, including land acquisition, land management, and monitoring activities, within Plan Area B will count toward applicable PCCP commitments. These actions will be covered by the State and Federal permits.

#### 1.3.4.2.4.4. Conservation Zones that Address Stream Habitat or Salmonids

The PCCP consists of five conservation zones. More detail on these zones and their contribution to the overall PCCP conservation strategy can be found in section 5.3.1.3.2 of the PCCP, Conservation Zones (Placer County 2020b). The following includes how these zones address stream habitat or salmonids:

- (1) Valley north conservation zone. Includes the Bear River and Raccoon Creek watersheds and will provide the majority of valley aquatic/wetland complex. Riverine/riparian protection benefits covered salmonids. Reserves here will contribute to linkages with the foothills along the Bear River and Raccoon Creek, maintain connectivity between the valley north and valley south conservation zones, and protect linkages along lower Raccoon Creek in Sutter County.
- (2) Valley south conservation zone. Reserves in valley south will contribute to linkages along Auburn Ravine and Markham Ravine, which is important for salmonid habitat. Reserves in the southern portion of valley south will maintain or restore connectivity across the barrier, which will result from the Placer Parkway and will connect the Pleasant Grove Creek and Curry Creek watersheds.

- (3) Valley PFG. Includes approximately 2,350 acres of natural communities mapped in the stream system. These lands along Auburn Ravine and Dry Creek have direct biological values for salmonids and add to connectivity.
- (4) Foothills north conservation zone. This zone primarily protects oak woodland and the Bear River and Raccoon Creek stream systems.
- (5) Foothills PFG. Includes 3,614 acres of communities mapped in the stream system. These lands along Auburn Ravine and in the upper Doty Creek and Dry Creek watersheds provide spawning habitat for salmonids and provide east-west connectivity from the valley to the foothills.

The PCA will prioritize acquisitions that contribute to protection of the following linkages:

- Bear River Watershed. Connect oak woodland reserves to oak woodlands in Nevada and Yuba Counties throughout the Bear River watershed.
- Yankee Slough – Raccoon Creek watershed. Connect valley reserves to foothill reserves.
- Raccoon Creek – Doty Creek Corridor. Connect existing protected areas and reinforce riparian protection for salmonids.
- Lower Raccoon Creek. Maintain connectivity between the valley north and valley south conservation zones and provide a linkage along lower Raccoon Creek in Sutter County.
- Markham Ravine. Connect reserves with EXR to the east.
- Auburn Ravine. Connect reserves with EXR to the east; important for salmonids.
- Cross Placer Parkway. Remediate barrier created by the proposed Placer Parkway. Connect Pleasant Grove Creek watershed to Curry Creek watershed.
- Curry Creek. Connect reserve lands to Sutter County on the west and avoided stream systems to the east.
- Miners Ravine. Connect stream system reserve opportunities in Miners Ravine to tributaries of Dry Creek; important for salmonids.

### **1.3.5. Program Participation and Conditions on Covered Activities**

#### ***1.3.5.1. Categories of Conditions***

The PCCP groups conditions according to their purpose as follows.

- (1) General conditions. General conditions (1) apply to all/most Covered Activities and include the assessment of fees for land conversion and other effects and application of BMPs to reduce potential effects on Covered Species and natural communities.

- (2) Natural community conditions. Specific avoidance and minimization measures on Covered Activities in certain natural communities may apply.
- (3) Stream system conditions. Conditions to avoid and minimize effects on the stream system.
- (4) Rural public project conditions. Conditions that address public projects undertaken outside the Sacramento Valley portion of the plan area (valley PFG).
- (5) Species conditions. Where activities may affect Covered Species or where the potential for take can be avoided or reduced through specific actions, such as appropriate species surveys, application of BMPs, seasonal restrictions, or protective buffers.
- (6) Reserve management conditions. Conditions that apply to the management of reserve lands.

### ***1.3.5.2. Regional Approach***

The PCCP will follow a regional approach. The PCCP will systematically implement conditions to avoid and minimize effects and, where avoidance is not feasible, will require mitigation for the loss of Covered Species habitat, including aquatic resources, on a regional scale. The PCCP aims to ensure a comprehensive approach to conservation of Covered Species and natural communities by avoiding and minimizing impacts and concentrating protection where it has the greatest long-term value. By protecting and restoring wetland, vernal pools, oak woodlands, and riparian and other high-quality habitats, and restricting Covered Activities from areas of higher biological value, such as in stream systems, regional avoidance and minimization goals are supported.

Regional-scale avoidance and minimization reduces the need for individual projects to avoid and minimize effects at the project scale and allows streamlining of regulatory requirements. The PCCP assumes take will result from Covered Activities and mitigates the aggregate effects through the implementation of the conservation strategy described in chapter 5 of the PCCP (Placer County 2020b).

On-site avoidance and minimization are given a lower priority within the PFG, other than the stream system, where existing urban areas occur and where future development and infrastructure will be concentrated. However, natural community and species surveys may still be required in these areas to ensure that effects on sensitive resources, such as streams and wetlands, are avoided and minimized and to ensure compliance with other species regulations.

### ***1.3.5.3. Conditions on Covered Activities***

The PCCP contains many conditions on Covered Activities. For this opinion, those conditions that address stream habitat or salmonids are included in the following subsections. All other conditions in section 6.3 of the PCCP (Placer County 2020b) are incorporated by reference.

#### ***1.3.5.3.1. General Conditions that Address Stream Habitat and/or Salmonids***

#### 1.3.5.3.1.1. PCCP General Condition 1, Watershed Hydrology and Water Quality

All Covered Activities shall comply with the State of California General Construction Permit, including requirements to develop a project-based stormwater pollution prevention plan (SWPPP), and applicable national pollutant discharge elimination system (NPDES) program requirements as implemented by Placer County and the City of Lincoln.

The site design requirements, source control measures, and BMPs required by this condition will cumulatively benefit Covered Species by:

- Minimizing the potential impacts on Covered Species that are most likely to be affected by changes in hydrology and water quality,
- Reducing stream pollution by removing pollutants from surface runoff before it reaches local streams,
- Minimizing degradation of streams and maintaining or improving the hydrograph to maintain populations of Covered Species and enhance recovery,
- Reducing the potential for scour at stormwater outlets to streams by controlling the rate of flow into the streams.

The following BMPs are related to water quality objectives contained in the NPDES programs, but are more targeted to avoidance and minimization of effects on Covered Species and go beyond the typical requirements of an SWPPP. These BMPs apply to all Covered Activities:

- When possible, vehicles and equipment will be parked on pavement, existing roads, and previously disturbed areas. When temporary vehicle parking areas are to be established, the site will be recovered to pre-project or ecologically improved conditions within one year of the start of groundbreaking to ensure effects are temporary.
- Trash generated by Covered Activities will be promptly and properly removed from the site.
- Appropriate erosion control measures (*e.g.*, fiber rolls, filter fences, vegetative buffer strips) will be used on site to reduce siltation and runoff of contaminants into avoided wetlands, ponds, streams, or riparian vegetation.
  - Erosion control measures will be of material that will not entrap wildlife (*i.e.*, no plastic monofilament). Erosion control blankets will be used as a last resort because they tend to biodegrade slowly and trap reptiles and amphibians.
  - Erosion control measures will be placed between the area of disturbance and any avoided aquatic feature, within an area identified with highly visible markers (*e.g.*, construction and erosion-control fencing, flagging, silt barriers) prior to commencement of construction activities. Such identification will be properly maintained until construction is completed and the soils have been stabilized.



- Fiber rolls used for erosion control will be certified as weed free by the California Department of Food and Agriculture, or any agency that is a successor or receives delegated authority during the permit term.
  - Seed mixtures applied for erosion control will not contain California Invasive Plant Council designated invasive species (California Invasive Plant Council 2021) but will be composed of native species appropriate for the site or sterile non-native species. If sterile non-native species are used for temporary erosion control, native seed mixtures must be used in subsequent treatments to provide long-term erosion control and slow colonization by invasive non-natives.
- If the runoff from the development will flow within 100 feet of a wetland or pond, vegetated stormwater filtration features, such as rain gardens, grass swales, tree box filters, infiltration basins, or similar LID features to capture and treat flows, shall be installed consistent with local programs and ordinances.

For more details on this condition, see section 6.3.1.1. of the PCCP (Placer County 2020b).

#### 1.3.5.3.1.2. PCCP General Condition 5, Conduct Worker Training

If project-specific conditions for avoidance or minimization apply during construction, all project construction personnel will participate in a worker environmental training program that will educate workers regarding the Covered Species and their habitats, the need to avoid impacts, State and Federal protection, and the legal implications of violating environmental laws and regulations.

This condition applies to projects where compliance with the conditions described in chapter 6 of the PCCP (Placer County 2020b) would result in one or more avoidance or minimization requirements applied during construction (*e.g.*, maintenance of an avoidance buffer, placement of exclusion fencing). At a minimum, this training may be accomplished through “tailgate” presentations at the project site and the distribution of information brochures, with descriptions of sensitive biological resources and regulatory protections, to construction personnel prior to initiation of construction work.

#### *1.3.5.3.2. Community Conditions that Address Stream Habitat and/or Salmonids*

##### 1.3.5.3.2.1 PCCP Community Condition 2.1, Riverine and Riparian Avoidance

Covered Activities that avoid effects on the riparian constituent habitat by excluding construction or other ground disturbance from existing riparian vegetation are not subject to special habitat fees.

Effects to riparian habitat can be credited as avoided if the project does not modify any area within a buffer that extends 50 feet outward from the outermost bounds of the riparian vegetation. The riparian buffer does not include patches of invasive, non-native vegetation that extends beyond the riparian vegetation.

If a project cannot avoid effects on riparian vegetation and surrounding buffer, PCCP community condition 2.2 will apply. An avoidance buffer is not required for streams not otherwise addressed through the stream system conditions, PCCP section 6.3.3 (Placer County 2020b), however, all other community condition 2 requirements apply.

#### 1.3.5.3.2.2 PCCP Community Condition 2.2, Minimize Riparian and Riverine Effects

Project applicants are incentivized to avoid riverine and riparian constituent habitat, see PCCP sections 2.1 and 2.3 for more details (Placer County 2020b). Some Covered Activities will still occur within riverine and riparian constituent habitat. Therefore, projects will adhere to avoidance and minimization measures, as applicable.

The design requirements, avoidance and minimization measures (AMMs), and construction BMPs identified below reflect current and forthcoming regulations and guidance for in-stream project design. These BMPs will be updated as new information is available. Updated BMPs shall be at least as restrictive for protection of the species as those described here, and wildlife agencies will approve proposed changes to BMPs before they are applied to Covered Activities.

BMPs will apply to all Covered Activities in the stream system in the plan area, as well as to open canals, except for PCWA canals, which are addressed in PCCP section 2.4 (Placer County 2020b).

In-stream and stream system BMPs, as provided in the PCCP (Placer County 2020b) are as follows.

Project planning and design AMMs and BMPs:

- All Covered Activities shall minimize the area of disturbance in the stream system to the maximum extent practicable;
- Prior to final project design, site characteristics will be evaluated to determine if non-traditional designs, such as bioengineered bank treatments that incorporate live vegetation or other engineered habitat improvements, can be successfully utilized while meeting the requirements of the project;
- If structural changes to the channel bed are necessary as part of the project design, provisions for fish passage will be incorporated into the project design;
- To minimize the impact of new construction, existing access routes and levee roads shall be used;
- Removal of riparian vegetation shall be minimized, so the amount cleared will only be the amount necessary to accomplish the required activity and comply with public health and safety directives. Where riparian vegetation requires removal, removal will first be targeted in areas dominated by invasive vegetation;

- Maintenance of natural stream characteristics, such as riffle-pool sequences, riparian canopy, sinuosity, floodplain, woody debris, and a natural channel bed, will be incorporated into the project design;
- Stream bank repair design will first consider only use of compacted soil and will be re-seeded with native grasses or sterile non-native hybrids and stabilized with natural erosion control fabric. If compacted soil is not sufficient to stabilize the slope, bioengineering techniques must be used. No hardscape (*e.g.*, concrete or any sort of bare riprap) or rock gabions may be utilized in streams not managed for flood control (*i.e.*, streams where channel clearing, vegetation removal, debris removal, and conveyance maintenance activities are conducted), except in cases where infrastructure or human safety is threatened (*e.g.*, undercutting of existing roads);
- Rock riprap may only be used to stabilize channels experiencing extreme erosion or posing a threat to public safety. When used, rock riprap must be large enough, installed to withstand a 100-year flow event, and planted with native riparian species suitable for planting in such a manner;
- Limit removal of instream woody material (IWM) and vegetation in channels, on stream banks, and along levees and maintenance roads to only that necessary to meet the objective of the Covered Activity, or to meet regulatory requirements or guidelines;
- In streams not managed for flood control purposes (*i.e.*, streams where channel clearing, vegetation and debris removal, and conveyance maintenance activities are conducted), woody material (including live leaning trees, dead trees, tree trunks, large limbs, and stumps) will be retained unless it is threatening a structure, impeded reasonable access, or is causing bank failure and sediment loading to the stream;
- If debris blockages threaten bank stability and may increase sedimentation of downstream reaches, debris will be removed. When clearing natural debris blockages (*e.g.*, branches, fallen trees, soil from landslides) from the channel, only remove the minimum amount of debris necessary to maintain flow conveyance (*i.e.*, prevent significant backwatering or pooling). Non-natural debris (*e.g.*, trash, shopping carts) will be fully removed from the channel.
- To minimize the effect of increased local erosion due to in-channel vegetation removal, the top of the bank shall be protected by leaving vegetation in place to the maximum extent possible;
- Avoid access routes on slopes of greater than 20 percent used to access upland areas adjacent to streams and riparian areas. Any upland access across sloped areas shall be examined for evidence of instability and either revegetated or filled to prevent future landslide or erosion;
- Avoid activities in the active (*i.e.*, flowing) channel to the maximum extent practicable, especially during the migration, spawning, and egg incubation season for covered fish species, or before amphibians have undergone metamorphosis. If activities must be

conducted in the active channel, limit the use of equipment for in-water work to hand tools to the extent practicable;

- Bank stabilization site design shall evaluate hydrological effects immediately upstream and downstream of the work area to minimize downstream erosion caused by changes in water velocity. Design of bank stabilization projects shall incorporate similar roughness and characteristics of the bank surrounding the project area;
- Trails will be sited and designed with the smallest footprint necessary to cross through the stream system. Trail crossings of streams will be aligned perpendicular to the channel and be designed to avoid any potential for future erosion;
- Trail crossings of freshwater systems and drainages will adhere to the BMP above regarding the preference of bridges, or other over-water structures, to minimize disturbance. Culverts may also be used if that is the least environmentally damaging design;
- Trail design shall minimize the need for drainage structures, At the outfalls of drainage structures, erosion control measures shall be taken to prevent erosion;
- Whenever possible, the span of bridges will also allow for upland habitat beneath the bridge to provide undercrossing areas for wildlife species that will not enter the creek. Native plantings, natural debris, or scattered rocks will be installed under bridges to provide wildlife cover and encourage the use of crossings.

#### Dewatering AMMs and BMPs:

- While in-stream work is performed, the entire streamflow shall be diverted around the work area by a barrier, except where it has been determined by a qualified biologist that the least environmentally disruptive approach is to work in a flowing stream and fish and amphibian passage is not a concern at that time. Where feasible, water diversion techniques shall allow stream flows to gravity flow around or through the work site;
- Cofferdams for isolating in-channel activities shall be installed both upstream and downstream not more than 100 feet from the extent of the work areas to prevent seepage into or from the work area when dewatering of the entire channel is necessary. Otherwise, cofferdams shall affect no more of the stream channel than is necessary to support completion of the work. All water shall be discharged in a non-erosive manner (*e.g.*, through gravel or vegetated bars, or hay bales, on plastic, on concrete, or in storm drains when equipped with filtering devices) provided that it first has been properly treated to eliminate contaminants, including raw concrete. Treated water discharged to the channel shall be consistent with ambient conditions, including temperature and pH. Turbid water or water contaminated with other pollutants pumped out of cofferdams shall be discharged to upland areas (*e.g.*, grassy field) providing overland flow and infiltration and not allowed to re-enter the channel, or pumped to containers (*e.g.*, baker tanks) for disposal;

- In channels with low flows, small in-channel berms constructed of imported, non-erosive materials (*e.g.*, washed, rounded, spawning-sized gravel between 0.4 and 4.0 inches [10 to 100 millimeters] in diameter) or other temporary structures (gravel-filled sandbags, inflatable rubber cofferdams) that deflect water to one side of the channel during project implementation may be built. Following berm removal, the channel shall be restored to its original condition; gravel in contact with flowing water shall be left in place and allowed to disperse naturally by high winter flows;
- Sumps or basins may be used to collect water, where appropriate (*e.g.*, in channels with low flows). If pumps are used, a fish screen must be installed to prevent entrapment of small fish;
- To prevent increases in temperature and decreases in dissolved oxygen (DO), properly sized bypass pipes shall be used (*i.e.*, larger diameter pipes to better pass the flows). Creation of a low-flow channel or other methods to isolate the work area may be used to avoid the use of bypass pipes;
- Diversions shall not diminish the quantity or degrade the quality of discharged water, and shall maintain ambient stream flows below the diversion. When the work is completed, all de-watering materials placed in the channel shall be removed and normal flows shall be restored to the affected stream as soon as it is feasible and safe. To the extent, feasible, all temporary diversion structures and the supportive material shall be removed no more than 48 hours after work is completed; clean gravel in contact with flowing water shall be left in place and allowed to disperse naturally by high winter flows.

#### Construction AMMs and BMPs:

- The applicant shall maintain a copy of project conditions, as determined by the local jurisdiction and/or PCA, at the site. Site supervisors shall be familiar with all project conditions;
- A qualified biologist will train all personnel working within or adjacent to the stream system (*i.e.*, those people operating ground-disturbing equipment) regarding these avoidance and minimization measures and the permit obligations of project applicants working under the PCCP;
- Personnel shall utilize equipment that minimizes the area and degree of disturbance, such as appropriately-tired vehicles (either tracked or wheeled, depending on the situation), or avoidance of vehicles if possible;
- No vehicles other than necessary construction equipment shall be allowed within the stream system;
- All wetlands, other waters, and stream systems that are adjacent to a Covered Activity project site and that will be avoided shall be marked with bright construction fencing. Temporary fencing shall be removed upon completion of the project;

- Deep pools located outside and adjacent to the construction footprint shall be fenced or blocked with barriers to prevent encroachment of equipment and personnel from affecting deep-pool habitats, which are used as refuges for fish and wildlife;
- When practicable, avoid maintenance and construction activities at night. When night work cannot be avoided:
  - Minimize the use of temporary lighting,
  - Shield and focus lights on work areas,
  - Use the lowest intensity lighting necessary to complete the work;
- Wildlife entering the construction site shall be allowed to leave the area unharmed, or shall be flushed or herded humanely in a safe direction from the site;
- All utility pipe sections shall be capped or inspected for wildlife before being placed in a trench. Pipes within a trench shall be capped at the end of each day to prevent entry by wildlife;
- At the end of each workday all open trenches will be provided with a ramp of dirt or wood to allow trapped animals to escape;
- Staging and storage areas for equipment, stockpiled materials, fuels, lubricants, and solvents shall be located outside of the stream system. If site conditions prevent locating staging areas outside the stream system, at a minimum they shall be located outside the top of the bank, ideally on an existing disturbed area (*e.g.*, access road) or other area that can be readily returned to pre-project conditions at the conclusion of the activity;
- Handle and disposal of invasive plant species removed during Covered Activity implementation will be conducted in such a manner as to prevent further spread of the invasive species;
- To minimize the spread of pathogens, all staff working in aquatic systems (*i.e.*, streams, ponds, and wetlands), including site monitors, construction crews, and surveyors, will adhere to the most current guidance for equipment decontamination provided by the wildlife agencies at the time of activity implementation;
- Only herbicides registered with the California Department of Pesticide Regulation shall be used in streams, ponds, and lakes, and shall be applied in accordance with label instructions. A list of all pesticides that may be used in the project area shall be submitted to the PCA before use. The USFWS and NMFS do not issue incidental take permits for herbicide, pesticide, and rodenticide use; pesticide and rodenticide use, and resultant take of Covered Species, are not covered under the PCCP for the Federal permits;
- Avoid or minimize the amount of fertilizer used during hydroseeding to minimize introducing these materials into waterways.

#### Post-construction AMMs and BMPs:

- Temporary fills, such as for access ramps, diversion structures, or cofferdams, shall be completely removed upon finishing the work;
- The stream bed will be returned to as close to pre-project condition; considering such characteristics as elevations, profile, and gradient; as appropriate. Ecologically improved conditions shall be incorporated into project design when appropriate;
- Any disturbed soils will be revegetated with native plants; non-invasive species; or non-reproductive plants (*i.e.*, sterile hybrids) suitable for the altered soil conditions;
- Projects that cross beneath streams must provide a post-construction summary of any unanticipated effects (*e.g.*, stream channel disturbance due to a frac-out, where drilling mud is released through fractured bedrock) resulting from implementation of the project. Additional fees may be owed, based on the actual effects of the project;

#### Operations and maintenance AMMs and BMPs:

- For stream maintenance activities, only in-stream work that is necessary to maintain the channel consistent with designated management purposes (*e.g.*, flood control, groundwater recharge) will be conducted;
- When conducting vegetation management, retain as much understory brush and as many trees as feasible, emphasizing shade producing and bank stabilizing vegetation;
- Vegetation thinning and removal in streams managed for flood control will be phased to ensure that some riparian habitat remains at all times. Projects will be planned so that the least amount of riparian vegetation will be removed while still meeting the desired flood control needs;
- If a project alters the stream bed during stream maintenance, the stream low-flow channel shall be returned to its approximate prior location with appropriate depth for fish passage without creating a potential future bank erosion problem;
- Sediment removal in the stream channel shall use the approach with the least impact, such as phasing of removal activities or only removing sediment along one half of the channel bed, allowing the other half to remain relatively undisturbed;
- Maintenance and operation of pumps and generators placed in-stream will minimize impacts to water quality and aquatic species;
- Temporary crossings shall be installed no earlier than April 15 and shall be removed no later than October 15. This work window could be modified at the discretion of Placer County, the City of Lincoln, and/or the wildlife agencies;
- The following will be implemented to minimize noise effects on fish and wildlife during pile driving:

- Vibratory pile drivers, or other wildlife agency-approved methods, shall be used to drive piles, to the maximum extent practicable;
- Where feasible, the use of impact hammers to drive piles will be limited to areas outside of the stream channel or in dry cofferdams;
- Bubble curtains will be used to attenuate sound when it is necessary to drive piles with an impact hammer in water;
- The smallest pile driver and the minimum force necessary to complete the work will be used;
- All types of pile driving will be limited to daylight hours only to provide fish and wildlife with extended quiet periods;
- Prior to initiating pile driving with an impact hammer, an acoustic analysis using the most recent interagency standards and guidelines will be conducted to predict impacts of pile-driving noise on covered fish species;
- A hydroacoustic monitoring plan will be developed and implemented and underwater noise levels will be monitored during all impact pile driving on land, in dry cofferdams, and in water (using bubble curtains) to ensure that the peak and cumulative sound exposure levels do not exceed predicted values;
- Wood treated with oil-type preservatives (*e.g.*, creosote, pentachlorophenol) shall not be used in waterways. Wood treated with waterborne preservative chemicals shall be used instead, provided that the preservative being used has been approved by the Western Wood Preservers Institute (WWPI), and WWPI guidelines and BMPs to minimize effects on aquatic environments during implementation are followed (WWPI 2021);

Utility line installation AMMs and BMPs:

- Utility lines that cross waterways shall be attached to bridges when feasible;
- When it is necessary to bury utility lines beneath stream channels, a frac-out plan will be prepared and will include a plan for response and containment. In addition, the following factors shall be considered as part of project design:
  - Utility lines shall be buried below the maximum extent of channel bed scour and aligned as perpendicular as possible to the stream channel;
  - Avoid siting crossings at meander bends, braided stream segments, alluvial fans, active floodplains, other inherently unstable reaches, areas of groundwater upwelling, or locations with documented spawning habitat;
  - Trenching through stream banks and channels shall be avoided in favor of trenchless construction methods (*e.g.*, jack and bore, directional drilling), to the maximum extent practicable;



- If trenching is required:
  - Trench widths should be as narrow as feasible to accommodate the pipeline/utility line;
  - Trench excavation shall be conducted in the dry or in areas isolated from flowing water (*e.g.*, cofferdams, stream diversions) and other AMMs associated with cofferdams and water diversions described in this list shall be implemented;
- The amount of disturbance shall be kept to the minimum necessary to complete the work;
- Disturbed areas shall be returned to pre-project conditions prior to returning flow to the stream;
- If directional drilling is required:
  - Drill paths shall be designed at an appropriate depth below the stream channel to minimize the risk of frac-out where drilling mud is released through fractured bedrock;
  - Drill entry and exit points shall be located away from channel banks to minimize impact on the stream system and channel;
- Overland trenches shall be required to be backfilled with the native soils originally excavated from that area, as opposed to imported engineered fills, to the maximum extent feasible. Additionally, where technically feasible, topsoil shall be required to be stripped, stockpiled, and reapplied to original depth in all areas disturbed by construction over and adjacent to overland trenches.

#### 1.3.5.3.2.3. PCCP Community Condition 2.3, Riverine and Riparian Restoration

Covered Activities that affect riverine or riparian constituent habitat must contribute to restoration to compensate for loss of riverine or riparian constituent habitat.

Riverine restoration measures will be located in the same watershed and salmonid habitat type (*e.g.*, spawning or migrating) in which the effects occur.

Generally, restoration and replacement actions will be undertaken by the PCA and funded by additional fees imposed on projects. Riverine and riparian restoration to offset project effects may be implemented on-site to replace the functions of the riparian woodland degraded or lost to the Covered Activity. Riparian restoration implemented on-site will be credited to PCCP restoration targets, if the restoration helps to meet the biological goals and objectives of the PCCP. When it is deemed infeasible to implement restoration at the project site, in-kind restoration will be required at an off-site location or through the payment of fees to the PCA. Stream enhancement will be implemented in concert with PCCP community condition 2.2 (Placer County 2020b).

#### 1.3.5.3.2.4. PCCP Community Condition 2.4, PCWA Operations and Maintenance BMPs

PCWA will apply operations and maintenance BMPs in addition to any other applicable community and species conditions.

PCWA operates an extensive raw water distribution system that includes canals, ditches, flumes, and several small reservoirs.

When PCWA needs to conduct maintenance activities, it will follow pre-implementation BMPs to reduce potential adverse effects of PCWA O&M activities on natural resources in the plan area. These BMPs will be applied at facilities as maintenance needs arise, and will not be applied unless otherwise conducting ground-disturbing activities.

Pre-implementation BMPs:

- Improve canal bank stability and install sediment traps at canal outlets by:
  - Installing velocity dissipation devices at canal outlets;
  - Lining banks at canal outlets;
  - Installing erosion control blankets in areas of soil disturbance;
  - Installing temporary fiber rolls in areas of soil disturbance; and/or
  - Applying spray-on soil binders in areas of soil disturbance.
- Avoid potential wet-weather effects to natural resources in the plan area, such as erosion, by:
  - Patrolling canals and removing potential obstructions to prevent erosion;
  - Minimizing the amount of water purchased from water purveyors during periods of high precipitation;
  - Distributing flood releases from the canal system by releasing flows at numerous intermediate outlets;
  - Planning and designing projects to minimize land disturbance;
  - Installing erosion and sedimentation control measures prior to land-disturbing activities;
  - Identifying areas that are susceptible to erosion for future canal lining activities; and/or
  - Choosing canal crossing sites where erosion potential is low.

In order to prevent degraded water from entering streams after PCWA O&M activities are performed, the following ongoing or post-implementation BMPs will be applied, if applicable:

- Modifying canal operations to gradually restore reservoir releases to canals at a slower rate;
- Applying sediment traps at storm drains for dewatering before canal lining;
- Treating first-flush flows and other flushing to reduce downstream water quality effects, including minimizing sediment releases during the breeding seasons for covered amphibians and fish.

#### *1.3.5.3.3. Conditions to Avoid, Minimize, and Mitigate Effects on the Stream System*

The primary objective of stream system conditions is protection of watershed integrity, health and hydrology, by defining the stream system and providing incentive, via fee, for the project applicant to avoid land conversion within the stream system boundary. Projects where effects on riparian and riverine constituent habitat are unavoidable must also comply with community condition 2, riverine and riparian avoidance minimization.

A definition for the stream system boundary is provided in section 3.2.7 of the PCCP (Placer County 2020b). The stream system boundary is different from the watercourse structural setback requirements of local zoning codes.

The stream system boundary will be determined by a qualified biologist and approved by the permittee with jurisdiction over the Covered Activity.

##### 1.3.5.3.3.1. Stream System Condition 1, Stream System Avoidance and Minimization

Design and implement Covered Activities in such a way as to avoid and minimize adverse effects on the stream system.

This condition allows applicants to avoid portions of the stream system and therefore avoid paying fees, as described in stream system condition 2, stream system mitigation: restoration.

##### 1.3.5.3.3.2. Stream System Condition 2, Stream System Mitigation: Restoration

Where Covered Activities result in the permanent or temporary impacts on the stream system, regardless of the community or constituent habitat type affected, effects shall be mitigated by appropriate restoration or enhancement.

This measure works in concert with community condition 2.3, riverine and riparian restoration.

Projects that occur in the stream system, but do not avoid permanent effects, will pay the stream system fee. Projects in the stream system with only temporary effects do not pay the stream system fee. This will apply to all areas of the project that occur in the stream system boundary that is not otherwise assessed a special habitat fee, including affected upland communities within the stream system. See section 9.4.1.4 of the PCCP (Placer County 2020b) for more details.

Some Covered Activities are required to occur in the stream system and, as such, cannot meet the avoidance criteria described in stream system condition 1, stream system avoidance and minimization. Existing structures, uses, and activities; including legal non-conforming structures, uses, and activities; are exempt from the stream system fee unless subject to future modification that would require approval by a permittee. Maintenance activities may also be exempt pending approval of the permittee.

#### *1.3.5.3.4. Regional Public Programs Conditions that Address Stream Habitat or Salmonids*

The PCCP contains many conditions on regional public programs all of which are incorporated here by reference. The following subsections highlight some that will serve as AMMs or BMPs for covered fish species or covered fish habitat. Please refer to section 6.3.4 of the PCCP (Placer County 2020b) for more details and design guidance measures.

##### 1.3.5.3.4.1. Transportation and Other Infrastructure Projects

Design requirements:

- Enhance existing undercrossings;
- Implement minimum sizing of culverts;
- Install grating over tunnels/culverts for penetration of light;

Construction BMPs:

- For construction of new gravel roads, disconnect and disperse runoff flow paths, including roadside ditches, which might otherwise deliver fine sediment to stream channels;
- For construction of new gravel roads, prevent gullies by dispersing runoff from road surfaces, ditches, and construction sites by correctly designing, installing, and maintaining drainage structures (*e.g.*, road shape, rolling dips, out-sloped roads, culverts) and keeping streams in their natural channels. No single point of discharge from a road or other disturbed area should carry a flow that would be capable of creating gullies. If gullies continue to develop, additional drainage structures will be needed to disperse the runoff.
- When constructing or reconstructing a ditch, utilize designs for the outlet such that runoff is first filtered and/or spread to improve water quality and reduce flow velocity prior to the runoff entering surface waters, when practical. If not practical, implement sediment management BMPs to trap sediment before it reaches a stream. BMPs described in general condition 1, watershed hydrology and water quality, and community condition 2.2, minimize riverine and riparian effects, will be applied as appropriate;
- When designing or redesigning roads, evaluate, and where appropriate, implement, opportunities to restore natural drainage patterns. Install culverts or rolling dips to retain water in its drainage of origin, which will decrease the potential for erosion downstream.

On problem roads, evaluate, and where appropriate, implement, opportunities to reconstruct the road segment in order to improve and maintain natural drainage patterns; for example, add rolling dips, emergency water bars, and additional cross drains;

- Equipment storage, fueling, and staging areas will be sited on disturbed areas or on non-sensitive, non-native grassland land-cover types, when these sites are available, to minimize the risk of direct discharge into riparian areas or other sensitive land-cover types. When such sites are not available, staging will occur on the road used to access the site. BMPs must be utilized;
- No erodible materials will be deposited into watercourses. Brush, loose soils, or other debris material will not be stockpiled within stream channels, on adjacent banks, or where it may enter into any river, stream, or lake;
- Silt fencing or other sediment trapping methods will be installed below the grade of new road construction or road widening activities to minimize the transport of sediment off the site;
- Temporary barriers will be constructed to keep wildlife out of construction sites, as appropriate;
- On-site monitoring will be conducted by a qualified biologist throughout the construction period to ensure that disturbance limits, BMPs, and PCCP conditions/restrictions are being implemented properly;
- Active construction areas will apply standard dust control measures to minimize the effects of dust on adjacent vegetation and wildlife habitats, if warranted;
- Portions of the project that occur in streams (*e.g.*, bridge or culvert construction) will comply with community condition 2.2, minimize riverine and riparian effects;
- Following construction, the areas beyond road shoulders and inside the right-of-way will be returned to a natural state or pre-project conditions when a natural state is not achievable within one year of project groundbreaking. These actions will most likely be applied differently to each road project and will decrease the potential for the spread of invasive species;
- Invasive plants within the project area and any construction staging areas will be removed to prevent the spread of these species into nearby or adjacent reserves;
- Cut-and-fill slopes will be revegetated with native plants, if possible, or with non-invasive plants suitable for the altered soil conditions.
  - All temporarily disturbed areas, such as staging areas, will be returned to pre-project conditions or improved with native plants within one year of project groundbreaking;

- Vegetation and debris will be managed in and near culverts and under and near bridges to ensure that entryways remain open and visible to wildlife and that the passage through the culvert or under the bridge remains clear;
- Permittee shall conduct project activities in a manner that prevents the introduction, transfer, and spread of invasive species including plants, animals, and microbes (*e.g.*, algae, fungi, parasites, bacteria), from one project site and/or waterbody to another. Prevention BMPs and guidelines for invasive plants can be found on the California Invasive Plant Council's website at <http://www.cal-ipc.org/ip/prevention/index.php> (California Invasive Plant Council 2020) and for invasive mussels and aquatic species can be found at the Stop Aquatic Hitchhikers website at <http://www.protectyourwaters.net/> (Aquatic Nuisance Species Task Force 2017);
- Permittee shall inspect all vehicles, watercraft, tools, waders, boots, and other project-related equipment and remove all visible soil, mud, plant materials, and animal remnants prior to entering and exiting the project site and/or between each use in different waterbodies;
- Decontamination of project equipment;
- Decontamination of vehicles and watercraft;

#### Operation and maintenance BMPs:

- Projects occurring in streams or the stream system will also comply with stream system condition 1, stream system avoidance and minimization, and stream system condition 2, stream system mitigation: restoration, as appropriate;
- Silt fencing or other sediment control devices will be installed down-slope from maintenance activities that disturb soil to minimize the transport of sediment off site;
- In the course of rural road maintenance, no erodible materials will be deposited into watercourses. Brush, loose soils, or other debris material will not be stockpiled within stream channels, including roadside drainage ditches, or on adjacent banks where it could be washed into the channel or drainage ditch;
- Alternatives, such as mechanical control, shall be considered to substantially lessen any significant effect on the environment before using pesticides. Integrated pest management BMPs shall be used for all vegetation control;
- Regularly scheduled visual inspection of all roads shall be conducted to identify sites where erosion is contributing sediment to local streams and stabilize eroding areas;
- Annual clearing of flow lines (*e.g.*, culverts and ditches) shall be conducted such that flow lines are maintained free of debris;
- Existing roads shall be used for access and disturbed areas for staging as site constraints allow. Off-road travel will avoid sensitive communities.

#### 1.3.5.3.5. Conditions to Minimize Effects on Covered Species that Address Salmonids

Species condition 7 addresses CCV steelhead, CV fall-run Chinook salmon, and CV late fall-run Chinook salmon. This condition applies stream avoidance and minimization BMPs specific for salmonid habitat in the plan area.

Habitat for CCV steelhead, CV fall-run Chinook salmon, and CV late fall-run Chinook salmon will be protected, managed, and restored in the reserve system. See chapter 5 of the PCCP for more details (Placer County 2020b).

##### 1.3.5.3.5.1. Guidelines for Salmonid Passage at Stream Crossings

All Covered Activities within salmonid habitat will adhere to the NMFS Guidelines for Passage at Stream Crossings (NMFS 2001) or most current NMFS guidance, where feasible, unless noted in this section. In addition, the California Salmonid Stream Habitat Restoration Manual (California Department of Fish and Game 2011) will be consulted for specific in-stream design features and protocols to enhance habitat for salmonids.

- For stream crossings, the following structure types will be considered, listed in descending order of preference:
  - Free-span bridges that fully span, from top-of-bank to top-of-bank, the stream and allow for long-term dynamic channel stability;
  - Streambed simulation approaches, including a bottomless arch, embedded culvert design, or ford that maintains that natural streambed. The structure shall be sufficiently large and embedded deep enough into the channel to allow the natural movement of bedload and formation of a stable bed inside the culvert or structure. There should not be an excessive drop at the outlet or too high water velocity through the passage structure;
  - Non-embedded culvert, often referred to as a hydrological design, for use in low-gradient areas, that allows fish passage;
  - Baffled culvert, creases in the culvert create a series of short high-velocity runs and low-velocity backwater areas that allow the fish to swim in short bursts and then rest, for use in high-gradient areas, that allows fish passage.
- If the project's site is in an active salmonid spawning area, only free-span bridges or streambed simulations, culverts with a bed that simulates the natural streambed, are acceptable.
- Most stream crossings, regardless of the design (*i.e.*, bridge or culvert) or material used, will be designed to accommodate the 100-year peak floodflow with appropriate clearance to prevent structural damage to the crossing, where feasible. In the valley, the 100-year floodplain can be thousands of feet wide on some stream systems, so it may not be feasible to build stream crossings to accommodate the 100-year peak floodflow. Unless culverts are intentionally designed to be undersized for stormwater detention or retention,

culverts must, at a minimum, accommodate the 100-year flood without causing any adjacent flooding around the crossing that could result in mass erosion of the bank or the structural support of the crossing. This requirement will reduce the risk of channel degradation, stream diversion, and failure that may lead to adverse effects on salmonids over the lifespan of the crossing (NMFS 2001). Some State or local requirements may deem that the 200-year floodplain be considered for stream crossings, the conditions in this section do not supersede those requirements.

- For in-stream culvert installation or replacement projects that may affect stream hydrology, the project must be designed so that the elevations of surface waters in the stream reach exhibit gradual flow transitions, both upstream and downstream. Abrupt changes in water surface and velocities must be avoided, with no hydrologic jumps, turbulence, or drawdown at the entrance. Hydrologic controls may be necessary to provide resting pools, concentrate low flows, prevent erosion of streambed or banks, and allow passage of bedload material (NMFS 2001).
- If a free-span bridge is not feasible, bridge piers and footings will be designed to have minimum impact on the stream. This applies in all stream systems, not just active salmonid spawning areas. A hydrological analysis must be prepared that shows piers or footings will not cause significant scour or channel erosion. Whenever possible, the span of bridges will also allow for upland habitat beneath the bridge to provide undercrossing areas for wildlife species that will not enter the creek. Native plantings, natural debris, or large rocks (not riprap) will be installed under bridges to provide wildlife cover and encourage the use of crossings.
- All in-stream structures will be aligned with the stream, with no abrupt changes in flow direction upstream or downstream of the crossing. This requirement can often be accommodated by changes in road alignment or slight elongation of the culvert. Where elongation would be excessive, such a solution must be weighed against a better crossing alignment and/or modified transition sections upstream and downstream of the crossing. Project components that may result in disruption of stream hydrology and alterations to the natural streambed will be anticipated and mitigated in the project design (NMFS 2001).
- If structural changes to the channel bed are necessary as part of project design, provisions for fish passage will be incorporated into the project design. If the project applicant has the opportunity to incorporate new fish passage into the project design in an area where fish passage is currently lacking, the project applicant will work with the PCA to determine if new fish passage would support recovery of Covered Species.

#### 1.3.5.3.5.2. Applicable Measures

Salmonid 1. Fish passage design. Streamflow through new and replacement culverts, bridges, and over stream gradient control structures must meet the velocity, depth, and other passage criteria for salmonid streams as described by NMFS and CDFW guidelines or as developed in cooperation with NMFS and CDFW to accommodate site-specific conditions (NMFS 2001).



Salmonid 2. Fish passage during construction. Fish passage through dewatered channel sections shall be maintained at all times during the adult and juvenile migration season on streams with Covered Species to allow for unimpeded passage of migrating adults and juveniles. In addition, fish passage shall be maintained during summer on streams supporting summer rearing of Covered Species to allow for seasonal movement of resident fish when the natural channel segment within the vicinity of work areas also supports the movement of resident fish.

- To allow for fish passage, diversions shall:
  - Maintain continuous flows through a low-flow channel in the channel bed or an adjacent artificial open channel;
  - Present no vertical drops exceeding six inches and follow the natural grade of the site;
  - Maintain water velocities that shall not exceed 1.5 feet per second and provide velocity refugia, as necessary;
  - Maintain adequate water depths consistent with normal conditions in the project reach;
  - Be lined with cobble/gravel to simulate stream bottom conditions;
  - Be checked daily to prevent accumulation of debris at diversion inlet and outlet;
- A closed conduit pipe shall not be used for fish passage. Pipes may be used to divert flow through dewatered channel segments on streams that do not support migratory species, or during low-flow conditions when the channel segment within the vicinity of the work areas at the time of construction does not support the movement of fish.

Salmonid 3. Pre-construction relocation. Prior to the start of work or during the installation of water diversion structures, if covered fish species are present and it is determined that they could be injured or killed by construction activities, a qualified biologist will first attempt to gently herd covered fish species away from work areas and exclude them from work areas with nets, if practicable. If herding is not practicable or effective, a qualified biologist shall capture covered fish species and transfer them to another appropriate reach. In considering the relocation, the qualified biologist will determine whether relocation is ecologically appropriate using a number of factors including site conditions, system carrying capacity for potential relocated fish, and flow regimes if flows are managed. If covered fish species are will be relocated, the following factors will be considered when selecting release sites:

- Similar water temperature, within 3.6°F or 2°C, as capture location. In addition, fish must be held in water that is at the same temperature as release sites at time of release. If raising or lowering of water temperature in holding apparatus is required, water temperatures in holding apparatus with fish should not be changed at a rate that exceeds 1.8°F (1°C) every two minutes, and should not exceed 9°F (5°C) per hour;
- Ample habitat availability prior to release of captured individuals;

- Presence of others of the same species so that relocation of new individuals will not upset the existing prey/predation function;
- Carrying capacity of the relocation location;
- Potential for relocated individuals to transport disease;
- Low likelihood of fish reentering work site or becoming impinged on exclusion net or screen.

Capture and relocation of covered fish species is not required by the PCCP at individual project sites, as determined by the PCA and/or the interagency working group, when site conditions preclude reasonably effective operation of capture gear and equipment, or when the safety of the biologist conducting the capture may be compromised.

Salmonid 4. Spawning gravel cleaning. Spawning gravel cleaning and replacement activities should be timed to occur during the dry season and after fry have emerged from the gravel (generally July 1 through October 1). Applicants may submit requests for extension of this work window to the PCA for review by CDFW and NMFS. In streams that receive summer irrigation flows, spawning gravel cleaning and replacement activities should be timed to occur after the irrigation season has ended and stream flows are at a minimum to minimize the need for site dewatering and to minimize the potential for downstream turbidity and sedimentation effects. If dewatering is needed, other applicable AMMs shall be implemented prior to commencing spawning gravel cleaning and replacement activities. Gravel to be placed in streams shall be washed to remove fines, rounded (*i.e.*, non-angular), and spawning-sized, between 0.4 and 4.0 inches (10 to 100 millimeters) in diameter. For gravel augmentation projects, gravels should be placed such that high flows naturally sort and distribute the material.

Salmonid 5. Use of riprap when necessary. When riprap is required to be placed below the OHWM, it shall have a cleanliness value of no less than 85 percent and shall be covered with clean, uncrushed rock consistent with NMFS spawning gravel size requirements. Current standards are 98 to 100 percent of the clean, uncrushed rock must pass through a 4-inch sieve, and 60 to 80 percent must pass through a 2-inch sieve. Of the total volume of rock placed, 50 percent shall consist of clean, uncrushed rock. This measure may be updated with more current standards.

#### 1.3.5.3.5.3. Salmonid Stream Fees

Projects affecting riverine constituent habitat in a salmonid stream will be assessed a special habitat fee based on linear feet of impact. This will apply to both permanent and temporary impacts.

#### **1.3.6. Activities Not Covered by the PCCP**

The PCCP strives to cover a broad range of present and future activities over the permit term. Certain other activities are not appropriate for coverage under the PCCP, because of a lack of information, the speculative nature of the project, existing permits, acquisition of permits under a

separate program, or the risk that the project or activity is incompatible with the PCCP's conservation strategy. Categories of activities not covered by the PCCP are listed below.

- (1) Non-participating cities. Any ground-disturbing activities within the jurisdictions of Auburn, Loomis, Rocklin, and Roseville that are not specifically undertaken by a plan permittee are not covered.
- (2) Pesticide/herbicide/rodenticide application for the Federal permits. Pesticide, herbicide, and rodenticide uses are not activities permitted by USFWS or NMFS and will not be covered under the PCCP for Federal permits. All applicable injunctions stipulated during PCCP implementation will be adhered to until formal consultation between EPA, USFWS, and NMFS regarding the effects of pesticides on Covered Species is concluded. This activity is covered under the State permit.
- (3) Routine and ongoing agricultural activities. Routine agricultural activities are defined broadly as activities that occur in the normal course of existing farming or ranching operations, including crop planting, crop harvesting, livestock management, and pesticide application. These activities are not covered by the PCCP. Routine and ongoing agricultural activities that do not go through a county or city permitting process (*e.g.*, grading and/or building permit) would not be subject to local approval and therefore cannot be covered by the PCCP. New intensive agricultural activities, such as cut-flower nurseries, Christmas tree farms, ornamental plant nurseries, dairies, and feedlots, are not covered by the PCCP unless these activities receive permits from Placer County and the City of Lincoln.
- (4) Expansion of cultivated agriculture into natural lands. The expansion of cultivated agriculture into natural lands is not covered by the PCCP unless it is associated with an approved rural development project that is covered by the PCCP (*e.g.*, the expansion requires a grading permit). This category typically applies to new large-scale agricultural operations, such as row crops, vineyards, orchards, disking for winter grains, or pastures. If such agricultural projects do not require grading permits, they would typically not require local approvals by the permittees and, therefore, cannot be covered by the PCCP.
- (5) Timber harvest operations. Most timber harvesting occurs within the Sierra east of the plan area and is rare in western Placer County. Timber harvest plans are regulated through State and Federal agencies and are not included as a Covered Activity.
- (6) Quarries and other mining. Quarries and other mining were considered for inclusion in the PCCP. At the time of PCCP development, no specific projects were proposed for inclusion. Because of the potentially extensive effects associated with quarries and mining and the lack of understanding about what future projects might be proposed, the mining of sand or other aggregate material, or the mining of precious metals or other minerals is not covered by the PCCP.
- (7) Municipal power generation. PG&E, PCWA power generation on behalf of the Middle Fork Project Finance Authority, Roseville Electric, Northern California Power Agency

(generating power for multiple agencies), and Sacramento Municipal Utility District activities for power generation and transmission, including municipal wind and large-scale solar.

- (8) Present projects with their own ESA and CESA permits. Several development or infrastructure projects in the plan area in development during the preparation of the PCCP have obtained their own permits under the ESA and/or CESA. These projects will be bound by the terms of their separate permits, not by the PCCP, and will obtain incidental take coverage from those projects and not from the PCCP.
- (9) Land use intensification in the valley or foothills conservation and rural development components of Plan Area A. Placer County and City of Lincoln general plans, specific plans, and implementing zoning may be changed over the course of the PCCP's permit term to allow changes in allowed land use type so long as the land use remains rural or agricultural or is compatible with rural or agricultural general plan designations, land use intensity is not increased, and residential density is not increased. Activities that do not meet these criteria are not prohibited by the PCCP, but are not specifically covered by the PCCP. Applicants who seek entitlements in valley CRD (A2) or foothills CRD (A4) that are inconsistent with these criteria must apply for take authorization outside of the coverage provided by the PCCP.
- (10) Any private development that otherwise complies with CESA or ESA. The PCA, as the implementing entity, can determine that a proponent of a project under the jurisdiction of a permittee will not be required to comply with the conditions in chapter 6 of the PCCP, Program Participation and Conditions on Covered Activities (Placer County 2020b), or pay any fees if the proponent of the activity provides written confirmation to the PCA that CDFW and USFWS and/or NMFS have determined that the activity is not subject to the CESA and ESA, has already achieved the necessary take authorizations under the CESA and ESA, or has otherwise complied with the CESA and ESA. Under these circumstances, an activity will be deemed to be in compliance with the CESA and ESA by the PCA and thus be exempt from conditions in chapter 6 of the PCCP (Placer County 2020b) and fees if the proponent provides the following:
  - a. Letters from USFWS, NMFS, and/or CDFW that specifically refer to the activity and state that the activity is not likely to result in take of any federally or state-listed species individually or cumulatively, will not preclude successful implementation of the conservation strategy for all Covered Species, and the results for full protocol surveys, approved by CDFW, for state-listed species with the potential to occur on the site showing that no such species or habitat occurs on the site; or
  - b. A copy of an incidental take permit issued by CDFW for the activity and copies of incidental take statements or incidental take permits issued by USFWS and/or NMFS that authorize the proposed Covered Activity; or

- c. A combination of the letters as described above and/or incidental take authorizations from all wildlife agencies with jurisdiction.
- (11) Minor activities. Certain minor projects and activities are not subject to PCCP requirements and are not covered by the PCCP or the permits, because they are not expected to have adverse effects on Covered Species.
- a. Activities that do not require a construction permit. Private development that does not require a development permit, grading permit, building permit, or other construction permit. For purposes of this section, construction permits do not include: ministerial permits for activities that will cause less than 500 square feet of ground disturbance, setback verification permits, sign permits, plumbing/mechanical/electrical building permits, private/public well permits, septic system permits, underground storage tank permits, tree permits, administrative approvals of antennas, temporary outdoor event permits where no ground disturbance occurs, permits for building remodel additions under 500 square feet, or permits for design review remodels under 500 square feet.
  - b. Activities on existing non-natural lands. Activities entirely within managed water or urban land cover types (see sections 3.4.1.1, 3.4.1.3, and 6.2.4.3 of the PCCP for more information (Placer County 2020b)).
  - c. Activities on existing small parcels. Private activities on existing small parcels equal to or less than 20,000 square feet existing at the time of PCCP adoption.
  - d. Small additions to improved properties. Private development improvements of less than 5,000 square feet of new impervious surface to existing improved sites, regardless of parcel size. Includes new structural improvements and installation of roads, sidewalks, hardscape, and other impervious surfaces.

### **1.3.7. USACE Proposed Action**

The Sacramento District of the USACE is proposing to approve and implement the PCCP CWA 404 permit strategy, summarized below. For a comprehensive description of the proposed PCCP CWA 404 permit strategy, see Appendix C of the Placer County Conservation Program Final Environmental Impact Statement/Environmental Impact Report (PCCP FEIS/R) circulated for public review on May 22, 2020 (USFWS and Placer County 2020). The PCCP CWA 404 permit strategy includes USACE's proposed issuance of a programmatic general permit (PGP), two regional general permits (RGPs), and the establishment of abbreviated processes for issuing letters of permission (LOPs) and standard permits (these permits are described in more detail below).

The PCCP CWA 404 permit strategy provides an approach to authorizing the placement of dredged or fill material into waters of the United States (WOUS). within the plan area (see section 2.3 below for a description of the plan area), pursuant to section 404 of the CWA for Covered Activities as defined in the PCCP (see section 1.3.3 above below for a description of Covered Activities) that involve a discharge of dredged or fill material into WOUS. The PCCP CWA 404 permit strategy relies on the conservation strategy in the HCP/NCCP. For a

description of the conservation strategy, see section 1.3.4 above or chapter 5 of the PCCP (Placer County 2020b). This is mirrored in the CARP (Placer County 2020a) developed by the county as a basis for CWA 404 permitting. The CARP describes measures to avoid and minimize impacts to aquatic resources and to address compensatory mitigation requirements for Covered Activities with unavoidable impacts to aquatic resources, consistent with requirements of the HCP/NCCP.

The procedures and associated requirements for the CWA 404 permits will integrate with those contained in the Western Placer County HCP/NCCP, resulting in consistent implementation of the HCP/NCCP and CWA 404 permitting under the PCCP CWA 404 permit strategy.

Implementation of compensatory mitigation projects will be located on HCP/NCCP reserve lands and will be consistent with the plan's conservation strategy, including plan requirements regarding the re-establishment and establishment of aquatic resources. An ILF program will provide compensatory mitigation for impacts from Covered Activities. Payment of Western Placer HCP/NCCP fees into the ILF program to purchase credits will fulfill compensatory mitigation required for Covered Activities under the PCCP CWA 404 permit strategy.

The proposed RGP and PGP are valid for 5 years from the date of issuance (or reissuance). The LOP procedure and the abbreviated standard permit process will be applied to specific activities that do not qualify for inclusion in the RGP or PGP, and may be used throughout the HCP/NCCP permit term of 50 years. Because activities authorized through the CWA 404 permit strategy are a subset of Covered Activities of the Western Placer HCP/NCCP that are analyzed in this opinion, NMFS will consider this opinion valid for fifty years, unless new information reveals effects of USACE's proposed action may result in adverse effects to Covered Species or adverse modification of designated critical habitat in a manner not identified to date, or if a new species is listed that may be affected by the USACE's proposed action.

The PCCP CWA 404 permit strategy includes the following, see appendix C of the PCCP FEIS/R for complete drafts of the proposed permits (USFWS and Placer County 2020):

- A PGP founded on the CARP to be implemented via local ordinance, and designed to reduce duplication with that program, for activities with minimal individual and cumulative effects on the aquatic environment;
- An RGP for minimal impact activities conducted by PCWA under the Western Placer County HCP/NCCP;
- A procedure for issuing LOPs for activities with more than minimal but less than significant effects on the human environment, including aquatic resources;
- An abbreviated process for issuing standard permits for other activities consistent with the PCCP that may have a significant impact on the human environment, and require the preparation of an EIS under NEPA; and
- An RGP for minimal impact activities conducted under the PCCP ILF program.

### **1.3.8. Cost and Funding**

Chapter 9 of the PCCP describes how costs were estimated, budgets and funding sources, methods used to determine fee amounts, and how fee amounts will be adjusted over the permit term in order to ensure adequate funding (see PCCP section 9.2, Cost to Implement the Habitat Conservation Plan/Natural Community Conservation Plan, PCCP section 9.3, Cost Estimate Methodology and Assumptions, and PCCP section 9.4, Funding Sources and Assurances). Methods for calculating fees based on project impacts are described in PCCP section 9.4.1, Habitat Conservation Plan/Natural Community Conservation Plan Development Fees.

PCCP table 9-1, Summary of Capital and Total Cumulative Operating Costs through 50-year Permit Term shows anticipated costs of each cost category considered in developing cost estimates; PCCP appendix L, Cost Model and Assumptions provides additional detail. PCCP table 9-4, Funding Plan summarizes the expected revenues and their sources over the 50-year permit term. The funding plan fully funds the estimated cost of the PCCP. PCCP table 9-5, Chart of Effects and Development Fees provides a summary of the rationale for each of the development fees, the areas subject to each fee, and a description of how the fees will be used and tracked. PCCP tables 9-6, Land Conversion Fee Schedule and 9-7, Special Habitats Fee Schedule provide the fee amount for each development fee. Two mechanisms will be used to adjust fee levels over the permit term to ensure adequate PCCP funding: annual automatic adjustments based on indices (see PCCP table 9-8, Development Fee Adjustment indices), and periodic assessments conducted every five years. PCCP section 9.4.0.7, Adjustment of Development Fees provides the methods and specific timing for conducting these adjustments.

PCCP funding will come from sources in the following three categories: plan development fees, local funding, and State and Federal funding.

PCCP development fees include a land conversion fee for permanent effects, special habitat fees for effects specific to wetlands, streams, and other sensitive habitats, and temporary impact fees for temporary effects. These development fees and how they were derived are described in PCCP section 9.4.1, Habitat Conservation Plan/Natural Community Conservation Plan Development Fees.

PCCP section 9.4.1.9, Private Applicant Options to Pay Fees with Special Tax or Assessment District and PCCP section 9.4.1.10, Land Provided in Lieu of Development Fees describe alternatives to the payment of development fees and conditions that must be met in order to allow the use of these alternatives in place of paying all or a portion of fees. Also, see section 2.4.11 above and section 8.4.13, Land Dedication in Lieu of Land Conversion Fee for additional details.

Local funding will include other development funding for open space (*i.e.*, open space related fees separate from PCCP development fees), credit for dedication of existing open space, investment and interest income, and leases on rice land. Depending on the source, funding will be allocated to either mitigation or conservation actions. Local funding sources are described in PCCP section 9.4.2, Local Funding.

State and Federal funding will include federal and state grant programs. Most State and Federal funding can only be used to provide for conservation actions in the Plan Area and cannot be used for the mitigation share of PCCP costs. Potential State and Federal funding sources and restrictions on their use are described in section 9.4.3, State and Federal Funding. State and Federal funding will fund the acquisition of a maximum of 13,905 acres of the reserve system (this is the share of the reserve system that provides for the conservation, not mitigation, of Covered Species). State and Federal contributions can also provide funds for restoration and enhancement of wetland habitats that are independent of effects to Covered Species. PCCP section 9.4.3.3, Mitigation and Conservation Components provide guidance for delineating conservation versus mitigation under the PCCP.

## **2. ENDANGERED SPECIES ACT: BIOLOGICAL OPINION AND INCIDENTAL TAKE STATEMENT**

The ESA establishes a national program for conserving threatened and endangered species of fish, wildlife, plants, and the habitat upon which they depend. As required by section 7(a)(2) of the ESA, each Federal agency must ensure that its actions are not likely to jeopardize the continued existence of endangered or threatened species, or adversely modify or destroy their designated critical habitat. Per the requirements of the ESA, Federal action agencies consult with NMFS and section 7(b)(3) requires that, at the conclusion of consultation, NMFS provide an opinion stating how the agency's actions would affect listed species and their critical habitats. If incidental take is reasonably certain to occur, section 7(b)(4) requires NMFS to provide an incidental take statement (ITS) that specifies the impact of any incidental taking and includes non-discretionary reasonable and prudent measures (RPMs) and terms and conditions to minimize such impacts.

### **2.1. Analytical Approach**

This biological opinion includes both a jeopardy analysis and an adverse modification analysis. The jeopardy analysis relies upon the regulatory definition of "jeopardize the continued existence of" a listed species, which is "to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species" (50 CFR 402.02). Therefore, the jeopardy analysis considers both survival and recovery of the species.

This biological opinion relies on the definition of "destruction or adverse modification," which "means a direct or indirect alteration that appreciably diminishes the value of critical habitat as a whole for the conservation of a listed species" (50 CFR 402.02).

The designation of critical habitat for CCV steelhead uses the term primary constituent element (PCE) or essential features. The 2016 critical habitat regulations (50 CFR 424.12) replaced this term with physical or biological features (PBFs). The shift in terminology does not change the approach used in conducting a "destruction or adverse modification" analysis, which is the same regardless of whether the original designation identified PCEs, PBFs, or essential features. In this biological opinion, we use the term PBF to mean PCE or essential feature, as appropriate for the specific critical habitat.



The 2019 regulations define effects of the action using the term “consequences” (50 CFR 402.02). As explained in the preamble to the regulations (84 FR 44976), that definition does not change the scope of our analysis and in this opinion we use the terms “effects” and “consequences” interchangeably.

We use the following approach to determine whether a proposed action is likely to jeopardize listed species or destroy or adversely modify critical habitat:

- Evaluate the rangewide status of the species and critical habitat expected to be adversely affected by the proposed action.
- Evaluate the environmental baseline of the species and critical habitat.
- Evaluate the effects of the proposed action on species and their habitat using an exposure-response approach.
- Evaluate cumulative effects.
- In the integration and synthesis, add the effects of the action and cumulative effects to the environmental baseline, and, in light of the status of the species and critical habitat, analyze whether the proposed action is likely to: (1) directly or indirectly reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species, or (2) directly or indirectly result in an alteration that appreciably diminishes the value of critical habitat as a whole for the conservation of a listed species.
- If necessary, suggest a reasonable and prudent alternative to the proposed action.

## **2.2. Rangewide Status of the Species and Critical Habitat**

This opinion examines the status of each species that would be adversely affected by the proposed action (Table 3). The status is determined by the level of extinction risk that the listed species face, based on parameters considered in documents, such as recovery plans, status reviews, and listing decisions. This informs the description of the species’ likelihood of both survival and recovery. The species status section also helps to inform the description of the species’ “reproduction, numbers, or distribution” as described in 50 CFR 402.02. The opinion also examines the condition of critical habitat throughout the designated area, evaluates the conservation value of the various watersheds and coastal and marine environments that make up the designated area, and discusses the function of the PBFs that are essential for the conservation of the species.

Table 3. Description of species, current ESA listing classifications, and summary of species status

<b>Species</b>	<b>Listing Classification and Federal Register Notice</b>	<b>Status Summary</b>
CCV steelhead DPS	Threatened, 71 FR 834; January 5, 2006	According to the NMFS 5-year species status review (NMFS 2016), the status of CCV steelhead appears to have remained unchanged since the 2011 status review that concluded that the DPS was in danger of becoming endangered. Most natural-origin CCV populations are very small, are not monitored, and may lack the resiliency to persist for protracted periods, if subjected to additional stressors, particularly widespread stressors, such as climate change. The genetic diversity of CCV steelhead has likely been impacted by low population sizes and high numbers of hatchery fish relative to natural-origin fish. The life-history diversity of the DPS is mostly unknown, as very few studies have been published on traits, such as age structure, size at age, or growth rates in CCV steelhead.
CV Fall-run Chinook salmon evolutionarily significant unit (ESU)	Listing was found not warranted and the species were designated as a candidate species in 1999 (64 FR 50394). In 2004, the CV fall-/late fall-run Chinook salmon ESU was re-classified as a species of concern (69 FR 19975) due to specific risk factors.	According to CDFW’s GrandTab (CDFW 2020) compilation of escapement for estimates for CV fall-run Chinook in the Sacramento and San Joaquin watersheds seems to decline and rebound based on water year types. Recent trends for the Sacramento River populations show a decline in recent years as a result of drought years ( <i>i.e.</i> , 2014 -2015). The past five years have seen a declining trend for escapement in the Sacramento River watershed (excluding hatchery escapement abundances). In the San Joaquin River watershed, CV fall-run Chinook salmon escapement estimates have remained relatively stable, and general trends show an increase in escapement estimates into the San Joaquin tributaries (excluding hatchery escapement).
CV Late fall-run Chinook salmon ESU	Listing was found not warranted and the species were designated as a candidate species in 1999 (64 FR 50394). In 2004, the CV fall-/late fall-run Chinook salmon ESU was re-classified as a species of concern (69 FR	CDFW’s GrandTab (CDFW 2020) compilation of escapement estimates for CV late fall-run Chinook salmon in the Sacramento River watershed generally indicates a declining trend. There are no escapement or population estimates for CV late fall-run Chinook salmon in the San Joaquin watershed.

Species	Listing Classification and Federal Register Notice	Status Summary
	19975) due to specific risk factors.	

Table 4. Description of critical habitat, listing, and status summary.

Critical Habitat	Designation Date and Federal Register Notice	Description
CCV steelhead DPS	September 2, 2005; 70 FR 52488	<p>Critical habitat for CCV steelhead includes stream reaches of the Feather, Yuba, and American Rivers, Big Chico, Butte, Deer, Mill, Battle, Antelope, and Clear Creeks, the Sacramento River, as well as portions of the northern Delta. Critical habitat includes the stream channels in the designated stream reaches and the lateral extent as defined by the ordinary high-water line. In areas where the ordinary high-water line has not been defined, the lateral extent will be defined by the bankfull elevation.</p> <p>PBFs considered essential to the conservation of the species include: spawning habitat, freshwater rearing habitat, freshwater migration corridors, and estuarine areas.</p> <p>Although the current conditions of PBFs for CCV steelhead critical habitat in the Central Valley are significantly limited and degraded, the habitat remaining is considered highly valuable.</p>

### 2.2.1. Recovery Plan

In July 2014, NMFS released a final recovery plan for Sacramento River winter-run Chinook salmon, CV spring-run Chinook salmon, and CCV steelhead (NMFS 2014b). The recovery plan outlines actions to restore habitat, access, and improve water quality and quantity conditions in the Central Valley to promote the recovery of listed salmonids. Key actions for the recovery plan include conducting landscape-scale restoration throughout the Delta, incorporating ecosystem restoration into Central Valley flood control plans, that includes breaching and setting back levees, and restoring flows throughout the Sacramento and San Joaquin River basins and the Delta. Within the action area, recovery actions that have overlap with planned activities of the PCCP include removing fish passage barriers, consolidating and screening diversions, increasing floodplain connectivity, permanently protecting riparian habitat through easements and/or land acquisition, restoring riparian habitat, controlling non-native predators, providing gravel, and improving instream refuge cover for salmonids to minimize predation.

### 2.2.2. Global Climate Change

One major factor affecting the rangewide status of the threatened and endangered anadromous fish in the Central Valley and aquatic habitat at large is climate change. Warmer temperatures associated with climate change reduce snowpack and alter the seasonality and volume of seasonal hydrograph patterns (Cohen *et al.* 2000). Central California has shown trends toward warmer winters since the 1940s (Dettinger and Cayan 1995).

Projected warming is expected to affect Central Valley Chinook salmon. Because the runs are restricted to low elevations as a result of impassable rim dams, if climate warms by 5°C (9°F), it is questionable whether any Central Valley Chinook salmon populations can persist (Williams 2006).

Although CCV steelhead will experience similar effects of climate change to Chinook salmon, as they are also blocked from the vast majority of their historic spawning and rearing habitat, the effects may be even greater in some cases, as juvenile steelhead need to rear in the stream for one to two summers prior to emigrating as smolts. In the Central Valley, summer and fall temperatures below the dams in many streams already exceed the recommended temperatures for optimal growth of juvenile steelhead, which range from 14°C to 19°C (57°F to 66°F).

In summary, observed and predicted climate change effects are generally detrimental to the species (McClure 2011, Wade *et al.* 2013), so unless offset by improvements in other factors, the status of the species and critical habitat is likely to decline over time. The climate change projections referenced above cover the time period between the present and approximately 2100. While there is uncertainty associated with projections, which increases over time, the direction of change is relatively certain (McClure *et al.* 2013).

### 2.3. Action Area

“Action area” means all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action (50 CFR 402.02).

The PCCP plan area is the area within which Covered Activities will be implemented (see Figure 1, above). Placer County, California covers a total area of 1,500 square miles (962,000 acres) and stretches from the Sacramento Valley east to the Sierra Nevada mountains and the California-Nevada state line. The plan area includes two main parts and associated subcomponents:

- Plan Area A is the main focus of the PCCP and where all future growth and most of the Covered Activities will take place. Plan Area A is the City of Lincoln plus all incorporated lands within western Placer County. Plan Area A is divided into the valley, which is 100,698 acres, and the foothills, which is 109,134 acres, for a total of 209,832 acres.
- Plan Area B comprises several specific additional areas in Placer County and adjacent Sutter County where only specific Covered Activities may occur, see section 1.3.3 above or section 2.5.2 of the PCCP (Placer County 2020b) for more details.
  - B1, permittee activity in non-participating city jurisdiction, 50,636 acres

- B2, PCWA zone 1 operations and maintenance, 6,315 acres
- B3, Raccoon Creek floodplain conservation, 1,724 acres in Sutter County
- B4, fish passage channel improvement, 33 miles of channels in Sutter County
- B5, Big Gun Conservation Bank, 52 acres, not shown in figures

Nearly all of the plan area, approximately 95 percent, is in private ownership.

The PCCP plan area is primarily located in western Placer County, California with an incursion of 1,724 acres for floodplain restoration and 33 stream miles for fish passage improvements into Sutter County, California. As each year, the location, timing, and size of projects to be covered by the PCCP is unknown, it is difficult to determine the extent of all areas affected. Instead, the action area is determined by the PCCP plan area and it includes all streams, rivers, riparian areas, and hydrologically linked upslope areas within the PCCP plan area (see Figure 4, below). To account for water quality and acoustic effects that extend outward from Covered Activities, the action area includes an additional 1,000 feet upstream and downstream from all the PCCP plan area boundaries.

Western Placer County falls within four sub-basins at the U.S. Geological Survey (USGS) hydrologic unit code (HUC) level 8: upper Bear River, Raccoon Creek/Auburn Ravine (including Raccoon Creek, Markham Ravine, Auburn Ravine, and Pleasant Grove Creek), lower American River (which includes Dry Creek in the action area), and upper American River. Note that Raccoon Creek was previously known as Coon Creek and is referenced as such in supporting documents and maps including the NMFS recovery plan (NMFS 2014b), the PCCP updated their language for this creek and we have also updated the language in this opinion to Raccoon Creek anywhere that Coon Creek would have been referenced. Because Nimbus Dam blocks anadromy further downstream, the upper American River no longer supports salmonids and is outside of the action area. If the removal of dams or other fish passage barriers provides an increase in anadromous habitat, those areas will then be included in the action area. The action area includes, either in whole or in part, the following USGS quadrangles (quads): Wheatland, Camp Far West, Wolf, Lake Combie, Nicolaus, Sheridan, Lincoln, Gold Hill, Auburn, Verona, Pleasant Grove, Roseville, Rocklin, Pilot Hill, Rio Linda, Citrus Heights, Folsom, Clarksville.

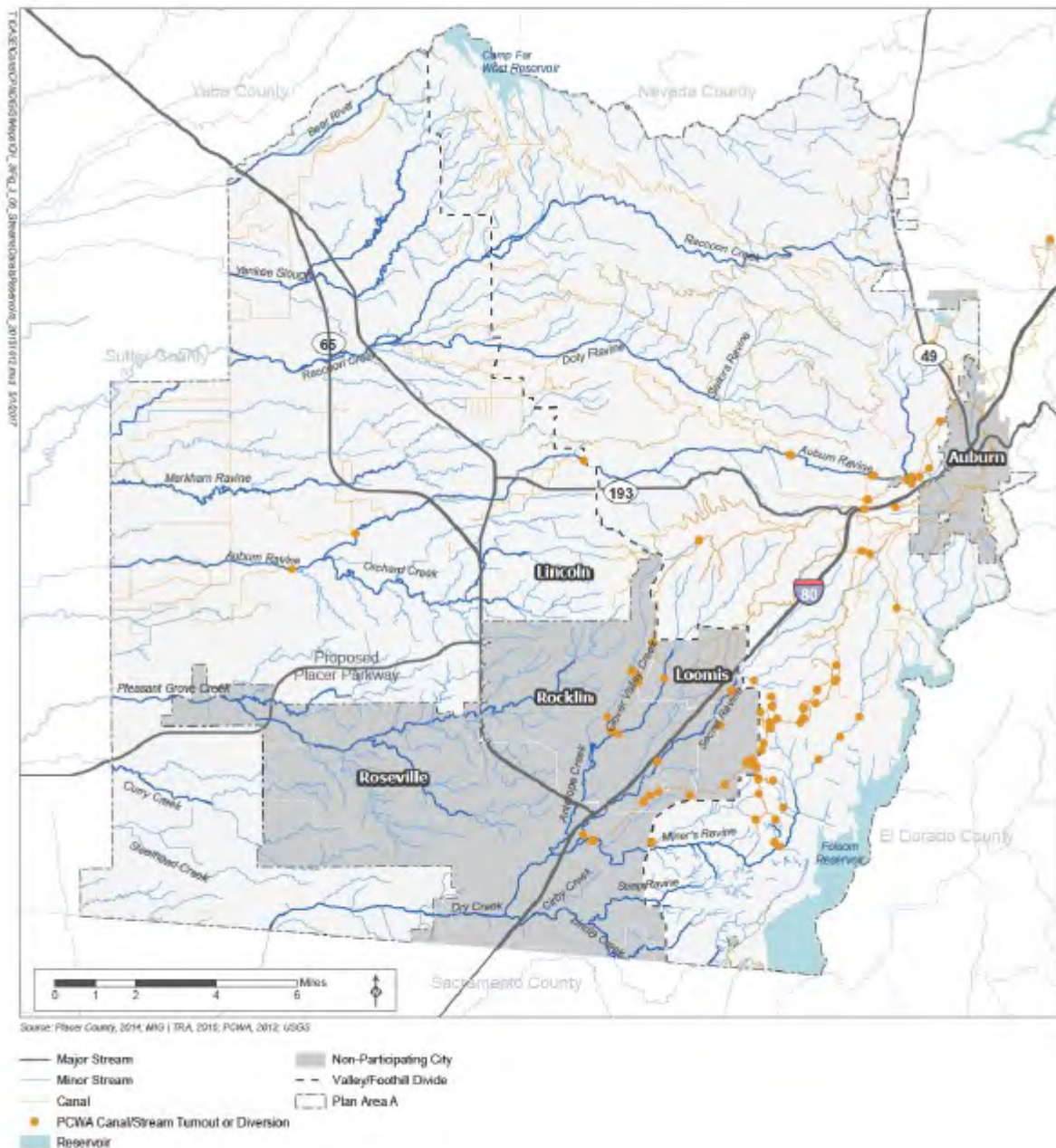


Figure 4. Streams, canals, and reservoirs in the PCCP plan area, from PCCP figure 1-6 (Placer County 2020b).

## 2.4. Environmental Baseline

The “environmental baseline” refers to the condition of the listed species or its designated critical habitat in the action area, without the consequences to the listed species or designated critical habitat caused by the proposed action. The environmental baseline includes the past and present

impacts of all Federal, State, or private actions and other human activities in the action area, the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early section 7 consultations, and the impact of State or private actions, which are contemporaneous with the consultation in process. The consequences to listed species or designated critical habitat from ongoing agency activities or existing agency facilities that are not within the agency’s discretion to modify are part of the environmental baseline (50 CFR 402.02).

**2.4.1. Status of the Covered Species and Critical Habitat in the Action Area**

The action area serves as habitat for anadromous CCV steelhead, CV fall-run Chinook salmon, and CV late fall-run Chinook salmon. CCV steelhead is federally listed as a threatened species, while CV fall-run Chinook salmon and CV late fall-run Chinook salmon are considered species of concern by NMFS. All are considered Covered Species for the PCCP. Designated critical habitat for CCV steelhead occurs within the action area.

Western Placer County has 738 miles of streams and 303 miles of irrigation supply and drainage canals mapped. Chinook salmon and CCV steelhead use 122 miles, or roughly 60 percent, of all major streams in western Placer County (Placer County 2020b). These species occur in the Bear River, Auburn Ravine, and Dry Creek and their tributaries (Table 5).

**Table 5. CCV steelhead, CV fall-run Chinook salmon, and CV late fall-run Chinook salmon habitat types across watersheds in western Placer County. Adapted from species maps 9 and 10 from PCCP Appendix D (Placer County 2020c)**

<b>Watershed</b>	<b>River/Stream</b>	<b>CCV Steelhead Habitat</b>	<b>CV Late Fall-run/CV Fall-run Chinook Habitat</b>
Bear River	Bear River	Spawning, rearing, and migration	Spawning, rearing, and migration
Auburn Ravine/Raccoon Creek	Raccoon Creek	Spawning, rearing, and migration – independent population	Spawning, rearing, and migration
	Doty Creek	Spawning, rearing, and migration	Spawning, rearing, and migration
	Auburn Ravine (upper)	Spawning, rearing, and migration – independent population	Spawning, rearing, and migration

<b>Watershed</b>	<b>River/Stream</b>	<b>CCV Steelhead Habitat</b>	<b>CV Late Fall-run/CV Fall-run Chinook Habitat</b>
	Auburn Ravine (lower)	Rearing and migration – independent population	Rearing and migration
Dry Creek	Clover Valley Creek	Spawning, rearing, and migration – other sources	Spawning, rearing, and migration – other sources
	Antelope Creek	Spawning, rearing, and migration – other sources	Spawning, rearing, and migration – other sources
	Secret Ravine	Spawning, rearing, and migration	Spawning, rearing, and migration
	Miners Ravine	Spawning, rearing, and migration	Spawning, rearing, and migration
	Linda Creek	Spawning, rearing, and migration – other sources	Spawning, rearing, and migration – other sources
	Cirby Creek	Spawning, rearing, and migration – other sources	Spawning, rearing, and migration – other sources
	Dry Creek	Rearing and migration	Rearing and migration

The Auburn Ravine watershed includes Auburn Ravine, Raccoon Creek, Doty Ravine, Sailor’s Ravine, Markham Ravine, and Pleasant Grove Creek. The Dry Creek watershed spans Placer and Sacramento Counties, draining approximately 101 square miles (Placer and Sacramento Counties 2003). The watershed contains four sub-watersheds: Cirby/Linda Creeks (including Strap Ravine), Antelope Creek (including Clover Valley Creek), Secret Ravine, and Miners Ravine. The main tributaries of the Bear River include Steephollow and Greenhorn Creeks above Rollins Lake, and Wolf and Little Wolf Creeks between Lake Combie and Camp Far West Reservoir (Placer County 2020c).



**2.4.1.1. CCV Steelhead**

The watersheds mentioned above function as spawning, rearing, and migratory habitat for CCV steelhead. Spawning adults, holding post-spawn adults, and rearing juveniles may utilize the area on their way to the estuary. Due to the life history timing of CCV steelhead, it is possible for one or more of the following life stages to be present within the action area throughout the year, including adult migrants, holding and spawning adults, eggs, rearing juveniles, or emigrating juveniles. CCV steelhead are known to be present in the plan area in Bear River, Coon Creek (including the Doty Ravine tributary), Auburn Ravine, and Dry Creek (including Secret Ravine and Miners Ravine tributaries) (Bailey 2003, NMFS 2014b, Placer County 2009).

CCV steelhead enter fresh water from August through April and hold until flows are high enough in tributaries to enter for spawning (Moyle 2002). Steelhead adults typically spawn from December through April, with peaks from January through March in small streams and tributaries where cool, well-oxygenated water is available year-round (Hallock *et al.* 1961, McEwan 2001). Hallock *et al.* (1961) found that juvenile steelhead in the Sacramento River basin migrate downstream during most months of the year, but the peak emigration period occurred in the spring, with a much smaller peak in the fall.

The recovery plan (NMFS 2014b) provides watershed profiles for Auburn Ravine, Dry Creek, and Bear River. The recovery plan identifies these watersheds within the action area as core 2 and core 3 watersheds within the Northern Sierra Nevada diversity group (Table 6).

**Table 6. Population presence, risk of extinction, and classification of watersheds for those watersheds containing CCV steelhead designated critical habitat within the action area.**

<b>River/Creek</b>	<b>Historic Population</b>	<b>Current Population</b>	<b>Population Extinction Risk (Lindley <i>et al.</i> 2007, Williams <i>et al.</i> 2011)</b>	<b>Classification*</b>
Auburn Ravine	No	Yes	Uncertain	Core 2
Dry Creek	Yes	Yes	Uncertain	Core 3
Bear River	Yes	Yes	Uncertain	Core 3

\*Classification of watersheds as identified in the recovery plan (NMFS 2014b).

Populations identified in the recovery plan as core 1 are those that possess the known ability or potential to support a viable population. Core 2 populations meet, or have the potential to meet, the biological recovery standard for moderate risk of extinction. These watersheds have lower potential to support viable populations than core 1 populations, due to lower abundance, or amount and quality of habitat. These populations provide increased life history diversity to the DPS and are likely to provide a buffering effect against local catastrophic occurrences that could affect other nearby populations, especially in geographic areas where the number of core 1

populations is lowest. Core 3 watersheds have populations that are present on an intermittent basis and require straying from other nearby populations for their existence. These populations likely do not have the potential to meet the abundance criteria for moderate risk of extinction, but are important because, like core 2 populations, core 3 populations aid in recovery of the species by providing genetic diversity and dispersal connectivity to the greater DPS.

#### *2.4.1.1.1. Auburn Ravine Watershed*

The streams within the Auburn Ravine watershed provide spawning, rearing, and migratory habitat for CCV steelhead. The upper reaches of Auburn Ravine serve as spawning habitat, while downstream areas are suitable for rearing and migration. California Department of Fish and Game found steelhead to be, on average, the most abundant fish species during both the winter 2004 and spring 2005 fish community survey sampling efforts in Auburn Ravine (Navicky 2008). Enough steelhead data were collected to estimate an average of 2,163 juvenile CCV steelhead present per river mile between the McBean Park and Wise Road sampling locations (Placer County 2020c). CDFW survey results indicate that Auburn Ravine may constitute a probable steelhead spawning area given the presence of very small juveniles during spring (NMFS 2014c). Auburn Ravine may represent a year-round rearing area for juvenile CCV steelhead, given the presence of both young-of-year and larger juveniles during November, December, and April. Data indicate that winter and spring water temperatures are suitable for successful anadromous fish spawning and juvenile rearing (Placer County 2020b).

Raccoon Creek contains good migration corridors for adult salmonids, patchy spawning habitat and good juvenile rearing habitat in the lower reaches, and good spawning habitat and juvenile rearing habitat in the upper reach (Placer County 2020b). Data indicate that winter and spring water temperatures in Raccoon Creek upstream of Gladding Road are suitable for anadromous fish spawning and rearing on an annual basis. CDFW sampling found juvenile steelhead in Raccoon Creek, although far fewer than in Auburn Ravine (Navicky 2008).

Doty Ravine, a tributary to Raccoon Creek, contains spawning habitat, good migration corridors, and juvenile rearing habitat; however, the quality of migration habitat has been reduced by barriers to upstream passage of adult and juvenile salmonids (Placer County 2020b).

#### *2.4.1.1.2. Dry Creek Watershed*

CCV steelhead utilize the mainstem Dry Creek as only a migratory corridor, while tributaries, such as Miners Ravine and Secret Ravine, provide spawning and rearing habitat. Current estimates of steelhead in the Dry Creek watershed number a few hundred fish, with most occurring in Miners and Secret Ravines (Placer and Sacramento Counties 2003). Juvenile steelhead have been collected in rotary screw traps immediately downstream of the confluence of Secret and Miners Ravines, as well as captured in Secret Ravine as recently as 2005 (Placer County 2020b). Limited spawning sites have been identified in Miners Ravine, and temperatures are sufficient for summer rearing of juvenile CCV steelhead (Placer County 2020b). Secret Ravine has the highest quality habitat within the Dry Creek watershed, providing spawning and rearing habitat for steelhead (Placer and Sacramento Counties 2003). Electrofishing and screw trap sampling conducted between the winter of 1998 and the summer of 2000 in Miners and Secret Ravine documented the presence of CCV steelhead in both Dry Creek tributaries (Bailey

2003). In addition, several steelhead smolts were caught in the spring of 1999 and 2000 just downstream of the confluence of Secret and Miners Ravine, suggesting the presence of a naturally spawning population. Linda Creek has two sites that might be suitable for spawning and rearing. Antelope Creek provides minimal habitat for CCV steelhead for the purposes of spawning and rearing.

The Dry Creek watershed has a potential to support a viable population of CCV steelhead despite the limited amount of suitable spawning habitat and year-round rearing habitats. Although habitat conditions within the action area are degraded, the importance of this area for the conservation of CCV steelhead is considered to be high. This is mainly because there is very little suitable CCV steelhead habitat remaining in the Central Valley and any habitat that is currently available is essential for sustaining the DPS.

#### *2.4.1.1.3. Bear River Watershed*

During periods of high flows, CCV steelhead are known to utilize the river for limited spawning (Jones & Stokes 2004). Because environmental conditions do not support a self-sustaining population of steelhead in the Bear River, those CCV steelhead that do spawn during high flow years have likely originated from the Feather River Fish Hatchery. The lower reach of the Bear River is narrow and incised, and downstream gravel recruitment is limited. In addition, the Camp Far West Reservoir may not provide releases of water temperatures suitable for salmonids downstream.

#### *2.4.1.1.4. Viability*

The recovery plan states that presently, no viable independent steelhead populations have been identified and all are at high risk of extinction (NMFS 2014b). The 2016 5-year status review states that the viability of CCV steelhead has changed little since the 2011 status review, and concerns raised in the previous status review remain (NMFS 2016). The 2016 viability assessment stated there has been no change in extinction risk since 2010 viability assessments and the CCV steelhead DPS continues to be at a high risk of extinction (Williams *et al.* 2016).

#### ***2.4.1.2. CV Fall-run Chinook Salmon and CV Late Fall-run Chinook Salmon***

CV fall-run Chinook salmon and CV late fall-run Chinook salmon spawn and rear in western Placer County streams, including Bear River, Raccoon Creek, Doty Ravine, Auburn Ravine, Dry Creek, Antelope Creek, Clover Valley Creek, Secret Ravine, and Miners Ravine (Jones & Stokes 2005). Bailey (2003) summarized data from multiple sources that found native and hatchery-origin fall-run Chinook to be present in the Raccoon Creek, Auburn Ravine, and Dry Creek watersheds, but they were absent from the Pleasant Grove and Curry Creek watersheds, likely due to their intermittent flow character. The Placer County populations are part of the State's most abundant fall-/late fall-run of Chinook salmon (PCCP appendix D).

CV fall-run Chinook salmon migrate from the Pacific Ocean to Central Valley rivers from approximately July to December. Within western Placer County stream, migration is dependent on adequate flows and suitable water temperatures, which usually occur following storm events in October or November (Jones & Stokes 2005). Fall-run Chinook salmon spawn from late September to December, with peak spawning during late October and November (Moyle 2002).

Egg incubation for fall-run Chinook salmon begins in September and can extend to March (Vogel and Marine 1991). Within western Placer County streams, juvenile CV fall-run Chinook salmon tend to migrate from February through June, with peak migration occurring from March to May (Placer and Sacramento Counties 2003).

Adult CV late fall-run Chinook salmon migrate from the Pacific Ocean to Central Valley rivers from approximately mid-October through mid-April. Late fall-run Chinook spawn from December to April, with peak spawning during February and March. Egg incubation for late fall-run Chinook salmon occurs from January through June (Vogel and Marine 1991). Juvenile rearing and migration occur from April to December.

Due to this life history timing, one or more life stages of CV fall-run Chinook salmon or CV late fall-run Chinook salmon may be present within the action area throughout the year.

CV fall-run Chinook salmon and CV late fall-run Chinook salmon do not have a recovery plan; however, recovery actions identified in the recovery plan (NMFS 2014b) would likely also apply to the recovery of CV fall-run Chinook salmon and CV late fall-run Chinook salmon. Stressors to Chinook salmon in the plan area include passage impediments/barriers affecting adult migration and spawning, low-flow conditions, limited instream gravel supply, water temperature and water quality issues from agricultural and urban runoff, loss of riparian habitat and instream cover, and predation (NMFS 2014b). Numerous hydropower, water storage, and flood-control projects have been built that block access to large areas that were historically used by salmon. This loss of habitat is widely recognized as a major factor in the decline of salmon populations throughout their range.

#### *2.4.1.2.1. Auburn Ravine Watershed*

The oldest known record from Auburn Ravine was a CDFG report summarized by Bailey (2003), which estimated that the stream had a run of approximately 300 Chinook salmon. Raccoon Creek and Doty Creek also had historic Chinook salmon runs (Bailey 2003, Placer County 2013). A 2004 – 2005 fish community survey performed by the California Department of Fish and Game in Auburn Ravine and Raccoon Creek documented one juvenile Chinook salmon in Auburn Ravine and 25 juvenile Chinook salmon in Raccoon Creek (Navicky 2008, Placer County 2020c). Additionally, three adult Chinook salmon were observed spawning at the Gladding Road site in December 2004 (Navicky 2008, Placer County 2020c). Juvenile, fall-run Chinook originating from the Feather River and Nimbus hatcheries are known to occur in the Raccoon Creek and Auburn Ravine watersheds (Bailey 2003). Chinook salmon were also found at the Hidden Falls Park after new gravel was placed as part of the construction of a new bridge over Raccoon Creek (Placer County 2013). Additional fall-run sized Chinook salmon were observed in Raccoon Creek near McCourtney Road in May 2015 (Placer County 2020c).

As part of the Placer County Legacy Program, the NID gaging station in the City of Lincoln impeding salmon movement in the Auburn Ravine watershed was modified to allow fish passage (Placer County 2013). Following the modification of the NID gaging station, nearly 300 Chinook salmon ascended the structure in November and December 2012 (Placer County 2013).

#### *2.4.1.2.2. Dry Creek Watershed*

The Dry Creek watershed supports annual runs of CV fall-run Chinook salmon and CV late fall-run Chinook salmon. CDFW conducted periodic Chinook salmon spawning escapement surveys in the Dry Creek watershed as far back as 1963, mostly upstream of the confluences with Miners and Secret Ravines (Placer and Sacramento Counties 2003). In 1964, the estimated Chinook salmon population was over 1,000 fish, with the majority of spawning occurring in Secret and Miners Ravines (Jones & Stokes 2005). Recent spawning surveys conducted by the Dry Creek Conservancy during winter months have documented fall-/late-fall run Chinook salmon spawning. Dry Creek is known to support a few hundred fish; however, most occur in Secret and Miners Ravines (Placer County 2020b).

The mainstem of Dry Creek is not suitable spawning or rearing habitat for anadromous fish, but is considered a migration corridor to the spawning and rearing habitat in upstream tributaries, despite degradation of habitat and lack of habitat complexity in channel. Riparian cover in upstream portions of the creek are intact. Throughout the creek, reaches have been altered, resulting in degraded habitat and water quality issues. Dry Creek is heavily influenced by urban development and runoff as well as fish passage barriers, such as Hayder Dam and a rubble dam just downstream of Watt Avenue.

Miners Ravine supports Chinook salmon, and limited spawning sites have been identified. Fall and winter temperatures are sufficient in Miners Ravine to support adult spawning and rearing of juvenile fall-run Chinook salmon. Salmon have been observed spawning in Miners Ravine in 2012 (Placer County 2020b).

Habitat in Secret Ravine has the highest probability of supporting salmonid populations within the watershed. Water temperatures appear to be suitable for Chinook salmon spawning and rearing throughout Secret Ravine. Since the late 1990s, adult Chinook salmon populations in Secret Ravine have averaged about 160 fish per year (Placer and Sacramento Counties 2003). From 1997 to 2002, outmigrating juvenile accounts from Secret Ravine averaged approximately 15,000 per year (Ayres *et al.* 2003).

Antelope Creek provides minimal habitat for Chinook salmon, which is highly degraded due to fish passage barriers, poor water quality, high sediment loads, and sediment size too small for spawning (Placer County 2020b). There are limited gravel areas within Antelope Creek that may be suitable for spawning. Water temperatures in Antelope Creek are suitable for fall-run Chinook salmon spawning and rearing; however, warm summer water temperatures may limit suitable habitat for salmon rearing. Fall-run Chinook salmon continue to be documented in Antelope Creek during the annual one-day salmon count coordinated by the Dry Creek Conservancy (Placer County 2020c). In 2003, 44 live Chinook salmon and 7 carcasses were observed in Antelope Creek (Placer County 2020c). Fall-run Chinook salmon have been documented spawning in Antelope Creek over the last 40 years; therefore, fall-run Chinook are believed to persist in the creek (Bailey 2003).

Salmonids have been observed in Linda Creek, which provides spawning and rearing habitat (Placer County 2020b). Data from 1999–2004 counted a total of 251 live salmon and 226 salmon carcasses observed in Linda Creek. Most of the habitat is degraded with steep eroding banks and high summer water temperatures. The PCCP (Placer County 2020b) specifies that two sites may be suitable for spawning and rearing: one upstream of Cherry Avenue and the other was near the

Old Auburn Road crossing of Linda Creek (Placer and Sacramento Counties 2003). Cirby Creek is heavily urbanized and likely no longer supports salmonids.

Counts of Chinook adults and redds performed by the Dry Creek Conservancy (2009) indicate a negative trend in all Dry Creek watershed tributaries surveyed (Miners Ravine, Secret Ravine, Antelope Creek, Linda/Cirby Creek, and the main stem of Dry Creek), with fewer adults and redds observed from 2003 to 2008 (Dry Creek Conservancy 2009, Placer County 2020c). Factors contributing to the decline of Chinook salmon include increased sediment, altered flow regimes, reduced access to habitat, and toxicity (Ayres *et al.* 2003).

#### *2.4.1.2.3. Bear River Watershed*

The Bear River watershed comprises a small portion of northeastern Placer County, and is the second largest tributary to the Feather River. The Bear River historically hosted a “substantial” Chinook run (Reynolds *et al.* 1993). Currently, the Bear River supports an occasional run of adult fall-run Chinook salmon in years when flows are sufficient to provide passage (Yoshiyama *et al.* 1996, Placer County 2013).

#### *2.4.1.3. Status of Critical Habitat*

Critical habitat for CCV steelhead is designated within the action area. CV fall-run Chinook salmon and CV late fall-run Chinook salmon are not currently federally listed, and, therefore, do not have designated critical habitat. Habitat features essential for survival and conservation of these salmon runs are similar to those for CCV steelhead and those described for spring-run Chinook salmon in the recovery plan (NMFS 2014b).

Within the action area, locations on Raccoon Creek, Doty Ravine, Auburn Ravine, Cross Canal, Dry Creek, Miners Ravine, Secret Ravine, and Bear River are located in designated critical habitat for CCV steelhead. Many other creeks within the action area do not contain designated critical habitat, but CCV steelhead may still be present. CCV steelhead may be present in Cirby Creek, Linda Creek, Clover Valley Creek, Antelope Creek, and Strap Ravine, despite non-designated critical habitat.

The PBFs of CCV steelhead designated critical habitat within the action area include freshwater spawning habitat, freshwater rearing habitat, and freshwater migration corridors. The essential features of these PBFs include: water quality and forage, water quantity and floodplain connectivity, water temperature, riparian habitat, natural cover, migration corridors free of obstruction and excessive predation, and water quantity and quality conditions and substrate supporting spawning, incubation, and larval development. However, the condition and function of this habitat have been severely impaired through several factors, including mining, agriculture, urbanization, and removal of riparian vegetation. Such activities throughout these watersheds have resulted in degradation of these PBFs across the entire region. Although the current conditions of PBFs are significantly limited and degraded, the habitat remaining is considered highly valuable to the conservation of the species.

#### *2.4.1.3.1. Auburn Ravine Watershed*

The headwaters of Auburn Ravine are characterized by high gradient, steep banks, large boulder and cobble substrates, and abundant riparian vegetation. In the middle reaches, the gradient and substrate size decrease and bank erosion increases, but there is still riparian vegetation and large woody debris. The gradient of Auburn Ravine is very low as it flows through the city of Lincoln, and it is dominated by sandy substrates and a relatively open tree canopy (Placer County 2020b). Further downstream, ranches and farms border the stream. Levees, grazing, and channel maintenance restrict riparian vegetation. High sediment loads, discharge from wastewater treatment plants, and a lack of riparian buffer in the downstream reaches of Auburn Ravine elevate water temperature and diminish habitat quality (Placer County 2020b). In the winter, flows in Auburn Ravine are dominated by runoff and effluent from the City of Auburn WWTP, which contributes discharge year-round (Placer County 2020b). Summer flows are high relative to natural conditions due to water imports from the Bear, Yuba, and American Rivers by NID, PCWA, and PG&E (Placer County 2020b).

The NID Lincoln Gaging Station below has been modified to provide fish passage, and it successfully provides passage, if water conditions are right. Chinook salmon have been observed ascending the structure in 2012 (Placer County 2013). Hemphill Dam currently presents a seasonal barrier to salmonid movement and has not been modified for year-round fish passage.

#### *2.4.1.3.2. Dry Creek Watershed*

Historical land uses within the Dry Creek watershed include placer mining, quarry development, agricultural development, and urbanization. Throughout Dry Creek, reaches have been straightened, floodplain areas reduced, reaches dredged, and riparian vegetation removed. This has resulted in eroding banks, sediment deposition, lack of cover, lack of pools and riffles, lack of sediment deposition, and barriers to anadromous fish movement. Sewer and water line crossings create low-flow migration barriers. Hayder Dam and a rubble dam just downstream of Watt Avenue create a partial barrier to anadromous fish migration (PCCP appendix D).

Tributaries within the Dry Creek watershed are known to support anadromous salmonids and other areas likely historically supported anadromous salmonids, but now either have passage barriers or severely degraded habitat. Dry Creek supports a relatively healthy riparian corridor upstream of Folsom Road to the confluence with Miners and Secret Ravines (Placer and Sacramento Counties 2003). Below the confluence with Secret and Miners Ravines, aquatic habitat is characterized by low gradient, slow moving water, dominated by sand/silt substrate. Available fish habitat is limited to undercut banks, overhanging vegetation, and some instream woody material. The mainstem of Dry Creek is not ideal fish habitat, but is considered to be a migratory corridor.

Data from the 2004/2005 surveys conducted by CDFW are consistent with previous studies and anecdotal information suggesting that Dry Creek is utilized as a migratory corridor for anadromous salmonid passage to spawning and rearing habitat in the upstream tributaries (Secret Ravine and Miners Ravine) (NMFS 2014c). Habitat is much more complex in Secret Ravine, with an abundance of pool habitat, large woody material, and suitable spawning habitat. All spawning habitat and accounts of spawning anadromous salmonids have been reported to be located upstream of the Dry Creek Wastewater Treatment Plant.

Miners Ravine still supports salmonids, however, many reaches are heavily degraded. Limited spawning sites have been identified in Miners Ravine, but Miners Ravine would likely support more CCV steelhead and CV fall and late fall-run Chinook salmon if fish passage to spawning sites was improved. Throughout Miners Ravine, reaches have been straightened, floodplain areas reduced, reaches dredged, and riparian vegetation removed resulting in eroding banks, sediment deposition, lack of cover, lack of pools and riffles, lack of sediment deposition, and barrier to anadromous fish movement (Placer County 2020b). High sediment loads and poor water quality limit distribution and success of salmonids. Miners Ravine has a history of placer mining, the mining of stream bed (alluvial) deposits for minerals, which accelerated stream incision down to the bedrock in the upper reaches.

Secret Ravine also still supports salmonids and has the highest quality fisheries habitat in the Dry Creek watershed (Placer and Sacramento Counties 2003). Habitat is complex in Secret Ravine with an abundance of pool habitat, large woody debris, and suitable spawning habitat. Water temperature data from Secret Ravine shows that only the upper portion of the watershed may have suitable conditions for summer rearing of steelhead, but water temperatures are suitable for Chinook salmon spawning and rearing throughout Secret Ravine. Utility pipeline crossings present obstacles to migration.

Linda Creek has two sites that might be suitable for spawning and rearing; however, most of the habitat is generally degraded with steep eroding banks, sedimented streambed, and high summer water temperatures. Cirby Creek is heavily urbanized and likely no longer supports salmonids (Placer and Sacramento Counties 2003).

Antelope Creek provides minimal habitat for the purposes of spawning and rearing. It has limited areas that may be suitable for spawning. Rock dams act as barriers to fish passage in Antelope Creek, degrading migratory habitat, although a few fish have been found in this tributary. Although much of Antelope Creek is degraded and characterized by low water levels, high temperatures, and fine sediment, these factors do not preclude its use for CCV steelhead juvenile rearing. The PCCP (Placer County 2020b) identifies the Antelope Creek stream channel as having the potential for good habitat with some restoration. Clover Valley Creek, a tributary of Antelope Creek, is similarly degraded, with high sediment loads, poor water quality, and rock dam barriers (Placer County 2020b).

#### *2.4.1.3.3. Bear River Watershed*

The Bear River watershed contains spawning and migration habitat, and salmonids continue to be found in the Bear River below Camp Far West Dam (Placer County 2020b). The upstream limit of anadromous fish access in the Bear River is the South Sutter Irrigation District's diversion dam, approximately 15 miles above the confluence with the lower Feather River (USFWS 1995). The lower Bear River continues to support remnant and/or “stray” wild and/or hatchery-sustained salmon, and in the past it supported both steelhead and sturgeon as well (Placer County 2020c). Inadequate streamflow in the Bear River prevents the establishment of a self-sustaining steelhead population (Jones & Stokes 2004).



## 2.4.2. Factors Affecting Covered Species and Critical Habitat in the Action Area

Key stressors identified in the recovery plan (NMFS 2014b) for CCV steelhead and critical habitat in the Auburn Ravine (1), Dry Creek (2), and Bear River (3) are listed below, with numbers corresponding to the watersheds for which they were identified as stressors. These factors also affect the other non-listed salmonids that may migrate, spawn, and rear in these watersheds.

- Passage impediments/barriers (1, 2)
- Flow conditions (*i.e.*, low flows, flow fluctuations) associated with attraction and migratory cues affecting adult immigration spawning, embryo incubation, and/or juvenile rearing and outmigration (1, 2, 3)
- Physical habitat alteration associated with limited supplies of instream gravel, habitat suitability and spawning habitat availability affecting adult spawning (1, 2, 3)
- Flow-dependent habitat availability affecting juvenile rearing and outmigration (1, 2, 3)
- Water temperature and water quality (*e.g.*, agricultural and urban runoff) affecting adult immigration and holding, spawning and embryo incubation, and/or juvenile rearing and outmigration (1, 2, 3)
- Entrainment at individual diversions affecting juvenile rearing and outmigration (1, 3)
- Loss of natural morphology, riparian habitat, floodplain habitat, and instream cover affecting juvenile rearing and outmigration (1, 2, 3)
- Predation associated with non-site-specific and structure-related habitats affecting juvenile rearing and outmigration (1)

These stressors also affect other anadromous species, including CV late fall-run Chinook salmon and CV fall-run Chinook salmon. Watersheds within western Placer County have been degraded from their historic condition and many anthropogenic and naturally occurring factors have led to the decline of anadromous fish in the surrounding ecosystems.

### 2.4.2.1. Fish Passage Barriers

Impassable dams block access to most of the historical headwater spawning and rearing habitat of CCV steelhead. Table 2 (section 1.3.4.2.2) describes many of the barriers to fish passage within western Placer County, including several dams and diversions. Dams and other passage barriers altered flows and temperatures from their natural and historic regimes. In addition, dams impede movement of aquatic organisms. Affected water quality results in long-term changes to downstream channels, riparian zones, and floodplains (Nilsson and Dynesius 1994, California Department of Water Resources 2002). The availability of steelhead habitat in the Central Valley has been reduced by as much as 95% or more by barriers to movement (*i.e.*, dams). Entrainment of emigrating juvenile salmonids results from unscreened or poorly screened water intakes on

irrigation pumps or hydroelectric generators, and it can be partially mitigated by proper screening.

To facilitate Auburn Ravine water deliveries to users, there are approximately 10 small seasonal diversion dams installed throughout Auburn Ravine. Most of the dams are less than 10 feet high, and they pond water for diversion into agricultural areas. Larger dams also divert water into major canals. Installation of the seasonal dams during the spring and removal during the fall reportedly can affect the upstream migration of some fish species (*e.g.*, CCV steelhead and CV fall-run Chinook salmon) (NMFS 2014c). Despite plans for retrofitting, Hemphill Dam has not been modified for fish passage. There are currently several proposed alternatives to allow for fish passage.

Tributaries within the Dry Creek watershed are known to support salmonids or have historically supported anadromous fish, but many have passage barriers or contain habitat that has been so degraded that they no longer support fish. Migratory access for adult salmonids through Dry Creek and its main tributaries, Antelope Creek, Secret Ravine, and Miners Ravine may be restricted by infrastructure in combination with low flow in the fall (Jones & Stokes 2005). Due to the construction of Cottonwood Dam, as well as various other barriers to passage, flows and temperatures within Miners Ravine have been altered from their natural and historic regimes. Dams convert riverine habitat into pools, which alters downstream flow rates for water and sediment. In addition, dams impede movement of aquatic organisms. The migratory corridor along Antelope Creek has been reduced for adult and juvenile fish by barriers to upstream passage (Jones & Stokes 2005). The percentage of stream flows removed by diversions along Dry or Antelope Creeks have not been documented. However, there are three dams on Dry Creek and the associated diversions are probably active and unscreened (Jones & Stokes 2005). Additionally, there is a dam on Antelope Creek whose associated diversions may be active.

The Bear River Watershed has also been heavily influenced by water management.

Though beavers and their dams are sometimes characterized as nuisances, beavers are native to California (Fountain 2014). Beavers and salmonids co-existed in the same rivers and streams for thousands of years. The impact of beaver dams on salmonids can be complex, with both positive and negative effects depending on conditions (Bouwes *et al.* 2016). Beaver dams may act as potential barriers to fish movement. However, beaver dams have very different hydraulics from man-made structures, so typical fish passage criteria (*e.g.*, height guidelines) may not be appropriate (Pollock *et al.* 2019). Pollock *et al.* (2019) demonstrated that juvenile steelhead are capable of passing beaver dams. However, beaver dams may not be passable by all life stages under all flow conditions. Taylor *et al.* (2010) provides an example of how, in a low flow year, beaver dams can block spawning habitat. Beaver dams generally have greater impact in narrow channels and under low flows, and they are more likely to significantly impact fish in heavily urbanized and engineered channels (Kemp *et al.* 2012). Conversely, beaver activity can increase habitat complexity and produce pools in otherwise dry areas, providing a benefit to juvenile salmonids including some protection from drought conditions (Pollock *et al.* 2019, Wathen *et al.* 2019). Beaver dam analogs have even been implemented as habitat restoration, including in Pacific Northwest steelhead habitat, with observed benefits to salmonids (Bouwes *et al.* 2016, Lautz *et al.* 2019). Beaver dams have been documented in multiple streams within the action area

(Jones & Stokes 2005). However, the effects on fish, including the extent to which these dams may constitute passage barriers for particular life stages or under certain flows, is unknown.

#### **2.4.2.2. Unscreened Water Diversions**

Water diversions for irrigated agriculture, municipal and industrial use, and managed wetlands are found within the action area. Depending on the size, location, and season of operation, these unscreened diversions entrain and kill many life stages of aquatic species, including juvenile listed anadromous species (Mussen *et al.* 2013, Mussen *et al.* 2014). Table 2 (section 1.3.4.2.2) notes some of the unscreened diversions within the action area.

There are ongoing efforts to improve fish passage throughout the salmonid watersheds in Placer County. For example, in 2015, the South Sutter Water District (SSWD) installed two cone fish screens on the 80 cfs gravity diversion at the entrance of the Pleasant Grove Canal along Auburn Ravine. The installation of fish screens helps prevent fish species in Auburn Ravine from being diverted into the Pleasant Grove Canal, which is used to provide irrigation water to SSWD customers. Presence of unscreened diversions is a risk to Covered Species, particularly rearing juveniles; however, screening diversions decreases the risk of entrainment.

#### **2.4.2.3. Flow Conditions**

Inter-basin transfers artificially augment streamflow in most western Placer County watersheds (Placer County 2020b). Water is delivered to the various watersheds for agriculture, domestic, and commercial use. The main entities involved in the delivery of water in western Placer County include the SSWD, NID, PG&E, and the PCWA.

The present system of dams, diversions, and augmented flows results in abnormal flow fluctuations, in contrast to historical natural seasonal flow variations. Altered flow regimes can influence migratory cues, water quality (including contaminants, dissolved oxygen, and nutrients for primary productivity), sedimentation, and water temperature. Low flows limit habitat area and adversely affect water quality by elevating water temperatures and depressing dissolved oxygen, which stress incubating eggs and rearing juvenile steelhead. Low flows may affect migration of juvenile and adult steelhead by inhibiting adult passage and impeding the downstream movement of juveniles. Low flows in combination with diversions may result in higher entrainment losses (NMFS 2014c). Low flows can confuse or detain migrating juveniles, resulting in higher entrainment at diversions. Reynolds *et al.* (1993) noted that declines in CCV steelhead stocks are due mostly to water development resulting in inadequate flows, flow fluctuations, blockages, and entrainment into diversions. Flows dictate water depth, which must be sufficient to cover spawning fish. Flow volume is also important in maintaining suitable water temperature, a critical variable in successful reproduction, rearing, and survival.

Auburn Ravine receives water imports from the Bear, Yuba, and American Rivers and is used by PG&E, NID, and PCWA as a conveyance feature (Placer County 2020b). In Raccoon Creek, most of the streamflow present during the late spring through early fall consists of imported water en route to downstream agricultural diversions (Placer County 2002). The creek currently receives a daily discharge of around 2 cfs from the Placer County Sewer Maintenance District #1 Wastewater Treatment Plant (WWTP) (Placer County 2020b). Flow in Raccoon Creek is

controlled by releases from Orr Creek Reservoir, operated by NID (Placer County 2020b). Doty Ravine also receives water from deliveries by NID.

Several historically intermittent drainages within the Dry Creek watershed (*e.g.*, Strap Ravine, upper portions of many tributaries) are currently perennial drainages due to nuisance flows (*e.g.*, flows from artificial outfalls, irrigation runoff, and irrigation drainage). These flows may contribute to water quality degradation through associated pollutants and higher water temperatures. A major facility discharging into the Dry Creek mainstem is the Roseville WWTP. Discharges from the Roseville WWTP have minimal impacts to Dry Creek during wet months, however, they can compose a high proportion of flows during dry months (*i.e.*, greater than 50% of total flow at the Vernon Street Bridge) (Placer County 2020b). As development continues to expand within this region, treated effluent discharges will likely increase. Summer stream flows are generally composed of flow from springs and urban runoff, and irrigation drainage and effluent from wastewater treatment systems.

Flows in Bear River are currently largely controlled by the NID system and PG&E (Placer County 2020c). In the 1960s, when growth in the foothills area increased, some of the original water and hydropower infrastructure was replaced or expanded while several new dams, powerhouses, and conveyance works were added. Throughout this period, the Bear River became the region's hydraulic workhorse, conveying water for consumption and energy generation from the upper Yuba, upper American, and its own headwaters and tributaries into the middle and lower Bear, the lower American, and the associated foothill creek-ravine region (Placer County 2020c). Habitat for Chinook salmon and steelhead is limited in Bear River by inadequate streamflow and the high incidence of fine sediment. Inadequate streamflow in the Bear River prevents the establishment of a self-sustaining steelhead population.

#### ***2.4.2.4. Limited Suitable Spawning Habitat***

Dams, diversions, and dewatering from irrigation limit the access to spawning habitat for salmonids in the Central Valley. Salmonids require specific size gravel for spawning substrate. Sand and silt substrate, as well as boulder-sized riprap, are not suitable for spawning. Proper substrate conditions depend largely on conditions in the upper watershed; sedimentation resulting from logging, development, agriculture, or other activities degrades spawning areas (Placer County 2020c).

The limiting factor for steelhead in the Auburn Ravine system is suitable spawning habitat. Due to the current out-of-basin water imports and related flow regimes, these streams provide spawning and rearing habitats that would otherwise be limited or absent. Rainbow trout (non-anadromous *O. mykiss*) are known to spawn here; however, steelhead spawning has not been confirmed. If suitable spawning habitat were to be established, it is possible that there would be more active use of this creek by CCV steelhead.

Dry Creek substrates are generally composed of a high percentage of fine sediment and spawning habitat appears to be limited (Placer and Sacramento Counties 2003). Dry Creek was not included in the spawning gravel surveys conducted by Jones & Stokes (2005), as CCV steelhead spawn primarily in its tributaries (Placer and Sacramento Counties 2003). However, the percentage of fine sediment in Antelope Creek would likely result in relatively high mortality

of eggs and larvae in all tributary streams. Antelope Creek has two potential CCV steelhead spawning areas and one good resting pool near Antelope Creek's confluence with Dry Creek (Placer and Sacramento Counties 2003), but further concludes these areas are degraded. The PCCP (Placer County 2020b) identifies the Antelope Creek stream channel as having the potential for good habitat with some restoration. Urban development and public access to Antelope Creek, especially in spawning habitat and at potential barriers, translates to a relatively high potential for harassment of spawning adults resulting in reduced fecundity (Jones & Stokes 2005).

#### **2.4.2.5. Water Temperatures**

Elevated water temperatures can impact multiple life stages of CCV steelhead, CV fall-run Chinook, and CV late fall-run Chinook salmon. Egg survival is reduced when elevated water temperatures reduce oxygen availability in the gravel. Elevated water temperatures and low dissolved oxygen are a hazard for eggs, fry, and juveniles (Rombough 1988). Increased temperatures also result in increased predation by non-native fish species, reduced growth rates of juveniles (Cech and Myrick 1999, Myrick and Cech 2005, Zillig *et al.* 2018), and cause smoltification to fail (Adams *et al.* 1975) for steelhead. Water temperatures can also prevent migration (Keefer *et al.* 2009). Temperatures that rise to unsuitable levels may limit rearing success and overall survival (Myrick and Cech 2004). Sub-lethal effects on salmonids from high water temperature include increased stress and altered feeding behavior, which leads to decreased fitness and survival.

From June through September in Dry Creek, water temperatures recorded above and below the effluent outfall for the Roseville WWTP have exceeded the water quality standards established for the effluent. In October through December, water temperatures warm downstream of the outfall and exceed the required water quality standards (Placer and Sacramento Counties 2003). Levels of shade in the areas of the watershed are minimal or nonexistent, resulting in higher and potentially harmful water temperatures (Jones & Stokes 2005).

Camp Far West Reservoir may not be able to provide releases or through-flows when needed (*i.e.*, during late summer and early fall) at water temperatures that are suitable to salmonids downstream; the result will depend upon the particular reservoir storage and mixing, as well as the volume, timing, source, and temperature of any upstream flow improvements (Placer County 2020c).

#### **2.4.2.6. Water Quality**

Pollutants, in the form of organic material from livestock, fertilizers and pesticides from agriculture, and heavy metals, pesticides, and other toxins from municipal and industrial wastes, impact CCV steelhead and CV fall-/late fall-run Chinook salmon. Due to construction of dams and other passage barriers, flows and temperatures have been altered from their natural and historic regimes. Altered flow regimes can influence water quality, including contaminants, dissolved oxygen, and nutrients for primary productivity. Affected water quality results in long-term changes to downstream channels, riparian zones, and floodplains (Nilsson and Dynesius 1994, California Department of Water Resources 2002).

One of the results of urbanization within Placer County is an increase in wastewater discharge into the streams, which has contributed to the decline of water quality (Placer County 2021a). In particular, Dry Creek receives effluent from the Roseville WWTP and Dry Creek WWTP, as well as inflow from a sewage disposal pond near Rio Linda Central Park and a sewage disposal area near Midtown Park. In addition, it also receives substantial urban runoff. Because this area is being rapidly developed, there is an anticipated increase over time of effluent discharge released to the stream. There is evidence that excessive nutrient loads are due to the WWTP and urban and agricultural runoff (Placer and Sacramento Counties 2003). Unnaturally elevated nutrient inputs can alter biotic communities, result in heavy infestations of invasive species, and present a threat to species' biochemical and hydrologic requirements. Available data on the benthic macroinvertebrate community of Antelope Creek collected by the Dry Creek Conservancy during 2000 and 2001 are consistent with the expectation that contaminants are adversely affecting the aquatic ecosystem. In these samples, the dominant organisms catalogued in the benthic macroinvertebrate community were pollutant-tolerant forms (Bailey 2003).

Continued high levels of mercury in present day Bear River sediments indicate that the majority of the estimated 2.5 million pounds of heavy metals that were discharged into the Bear River watershed during 32 years of hydraulic mining are still present, trapped in the 1.5 billion cubic yards of sediment stripped from hillsides (Placer County 2020c). Mercury can affect the immune, respiratory and cardiovascular systems, reproductive organs, nervous systems, digestive systems, and the blood in fish (Morcillo et al. 2017).

#### ***2.4.2.7. Physical Habitat Modification***

The loss and degradation of habitat is a major threat to steelhead and Chinook salmon. Human activities, in particular mining and water development activities, have resulted in a loss of salmonid habitat (Reynolds *et al.* 1993). Habitat problems include lack of access to spawning areas, changes in stream conditions, and loss of floodplain rearing habitat.

Throughout these watersheds, there have been numerous activities with negative outcomes for fish: reaches have been straightened, floodplain area reduced, reaches dredged, and riparian vegetation removed, resulting in eroding banks, sediment deposition, lack of cover, lack of pools and riffles, lack of riparian vegetation, and barriers to fish passage. The streams have been largely confined to narrow channels and the riparian plant community reduced to a narrow band along the banks. Stream channels have been converted to irrigation/flood canals, with some riparian vegetation within a generally open grassy levee system. Numerous canals, aqueducts, siphons, reservoirs, ponds, dams, pipelines, and other natural and non-natural water features significantly influence local hydrology within the watersheds. Modification of the watershed's hydrology is compounded by modification of the instream configuration by channelization, levees, dredging, and reduced floodplain area. These modifications also result in altered stream flow where flow is faster in some areas (*i.e.*, channelized conveyances), contributing to erosion and faster peak flow timing, but slower in other areas (*i.e.*, behind dams and other impeding structures), contributing to flooding and sediment deposition. Bank modification (*i.e.*, construction embankments and bank armoring) has changed the geomorphic processes and the success of riparian vegetation.

Riparian vegetation and habitat throughout these watersheds have been removed or degraded. Trees have been removed for firewood, construction materials, and to facilitate grazing and farming (Placer County 2002). Riparian vegetation provides a large host of ecosystem services and its removal has diminished habitat value within the action area. Riparian vegetation plays a key role in the conservation value of rearing habitat for all salmonid life stages. It provides shading to lower stream temperatures and provides overhanging cover for rearing fish; increases the recruitment of large woody material into the river, increasing habitat complexity; provides shelter from predators and; enhances the productivity of terrestrial and aquatic invertebrates, which contribute to the fish food base (Anderson and Sedell 1979, Pusey and Arthington 2003). It has also been shown to directly influence channel morphology and may be directly correlated with improved water quality in aquatic systems (Schlosser and Karr 1981, Dosskey *et al.* 2010). The result of these changes has been the reduction in quantity and quality of several essential features of migration and rearing habitat required by CCV steelhead and Chinook salmon to grow and survive.

#### **2.4.2.8. Predation**

Predation on juvenile salmon by non-native fish has been identified as an important threat to fall- and late fall-run Chinook salmon in areas with high densities of non-native predators (Lindley and Mohr 2003). Predation on steelhead parr and smolts by both native and non-native predators is highly likely both in their natal rivers and during their migration through the lower rivers in the Delta. Warm water temperatures cause stress, suppress growth, and increase susceptibility to pathogens and parasites, all of which increase vulnerability to predators. Moreover, non-native fish are adapted to warmer water temperatures; their predatory efficiency is increased by the same condition that heightens the vulnerability of juvenile steelhead (PCCP appendix D). Low flows can be caused by drought conditions, but they are more likely to result from dams and diversions that restrict and regulate streamflow. Loss of riparian vegetation results from clearing riparian areas for agriculture or flood control. Dam removal and water management for a more natural flow regime and riparian restoration can help mitigate these problems.

In Dry Creek, spotted bass (*Micropterus punctulatus*) and Sacramento pikeminnow (*Ptychocheilus grandis*), both of which prey on juvenile salmonids, are commonly found (Placer and Sacramento Counties 2003). Bluegill (*Lepomis macrochirus*), green sunfish (*Lepomis cyanellus*), and smallmouth bass (*Micropterus dolomieu*) have also been observed in Dry Creek, and these species also prey on juvenile salmonids (Bailey 2003). Species that have been observed in Antelope Creek include black bullhead catfish (*Ameiurus melas*), brown bullhead catfish (*A. nebulosus*), common carp (*Cyprinus carpio*), and green sunfish (Bailey 2003). HDR snorkel surveys in 2015 also revealed the presence of bullfrogs (*Lithobates catesbeianus*) and crayfish (*Cambarus* spp.) along the creek. All of these species except Sacramento pikeminnow are non-native species, and all could potentially prey on juvenile salmonids.

#### **2.4.2.9. Agriculture Operations**

Agricultural and ranch land within Placer County are used for fruit and nut crops, irrigated field crops (such as rice), nursery stock, non-irrigated pasture, and livestock, including approximately 11,900 head of cattle and 9,000 sheep. Agricultural use has altered the watershed and can have adverse effects. The dominant land use in the portion of the watersheds west of Lincoln is rice

farming. This land use drives the current water management practices and the timing and flow volumes of water that is delivered during the spring, summer, and early fall (Placer County 2002). Lower elevations within the Auburn Ravine watershed, which were once dominated by marshlands, have been largely converted to irrigated agriculture, resulting in a loss of these wetland habitats. Historic vernal pool grasslands have been largely replaced by farmland. Upstream, streams flow through non-native grassland (often grazed) and agricultural fields, with a thin margin of mixed native and non-native riparian species along the creeks (Placer County 2002). Adverse effects of agricultural operations also include bank destruction from livestock compaction and decline in water quality due to agricultural and fertilizer runoff.

#### ***2.4.2.10. Hydraulic Mining Impacts***

Portions of Auburn Ravine, Dutch Ravine, Doty Ravine, and Raccoon Creek were placer mined—mining the stream bed for minerals—in the mid-to-late 1800s (Placer County 2002). This activity resulted in removal of riparian vegetation, excavation of soil, and redeposition of tailings. Hydraulic mining is a form of placer mining using a powerful jet of water to dislodge minerals. Large quantities of sediment generated by hydraulic mining were washed into stream channels and most of this sediment was deposited on the valley floor. The Dry Creek watershed also has a history of riparian and streambed augmentation due to mining. Placer mining in Secret, Strap, and Miners Ravines accelerated stream incision down to the bedrock in the upper reaches.

The Bear River was far more heavily impacted by hydraulic mining than the Yuba or American Rivers and contains a large volume of mining sediment stored in its main channel, which is subjected to continual erosion. The Bear River contains an estimated 125 million cubic meters (160 million cubic yards) of mining sediment, which, in combination with restricting levees, has caused the lower Bear River to change from wide and shallow to deeply incised (Placer County 2020c). In addition, mercury imported from the Coastal Ranges is found in sediments within the historic gold mining areas downstream of Spaulding Reservoir on both the Yuba and Bear Rivers (May *et al.* 2000).

#### ***2.4.2.11. Urban and Suburban Development***

Watersheds in Placer County have undergone significant urbanization. Streams receive surface runoff from adjacent developed areas via culverts and sheet flow from residential areas. Construction of impervious hardscape cover within a 100-foot buffer of the streams can result in loss of in-stream cover, bank stability, and affect percent of silt, sand, and fine gravel in the watershed. These changes can also result in higher water temperatures. Some bridges within the action area have in-channel abutments within critical habitat, reducing quality and quantity of habitat. Impervious cover (in this case, a proxy for urban development) is a source of aquatic life impairment in urbanized watersheds, which can result in reduction of habitat quality and quantity for CCV steelhead and Chinook salmon.

Many homes have landscaped backyards that come to the edges of streams. The run-off from landscaped yards may contain chemicals from fertilizers, animal waste, and other contaminants that have a detrimental effect on water quality, which could affect all life stages of salmonids (California Department of Water Resources 2002). These residential influences also affect the



natural process of erosion, which, in turn, decreases the recruitment of gravel back into the system. Creek banks near homes are typically buffered with riprap, which allows only fine sediment to enter the creek (California Department of Water Resources 2002).

Auburn Ravine flows through the middle of the city of Auburn, where it is channelized and passes through a variety of culverts. The land adjacent to this portion of the watershed is highly urbanized. Immediately west of Auburn, the character of the channel changes, adjacent land uses change, and water from various sources is discharged into the channel (Placer County 2002). The primary ecological and land use concern in the Auburn Ravine and Raccoon Creek watersheds is the conversion of existing land uses from agriculture to urban and suburban development. Stream and riparian zone areas will face further ecological stress due to the conversion of adjacent upland habitats to urban and suburban development. Additionally, it is anticipated that water quality will decline with urbanization of the surrounding watersheds. Urbanization can contribute to declines in water quality due to increased sedimentation, fertilizer and pesticide use, automobile chemical leakage and tire wear, and increased runoff from impermeable surfaces carrying pollutants (Katz *et al.* 2013, NMFS 2014b, Tian *et al.* 2021).

Auburn Ravine is experiencing the greatest pressures from urban encroachment with the expansion of housing tracts in the Lincoln area. Development could be a major constraint on fishery restoration as most land in the watershed is in private ownership and has no permanent protection (Placer County 2020c). Due to large parcel sizes, particularly along Raccoon Creek upstream of Gladding Road, blue oak woodlands are relatively intact and unfragmented, thus providing large patch sizes for terrestrial species. The Auburn Ravine upper watershed is more fragmented with smaller land parcels under a single owner.

Dramatic levels of urbanization have occurred in the Dry Creek watershed since the 1950s, particularly in the Roseville and Rocklin areas. Many roads traverse the stream valleys, modifying floodplain areas and channels where bridges and culverts have been installed for crossings. Streams have been channelized, moved or straightened to fit floodplain developments, and riparian vegetation has been removed mechanically or by use of herbicides, resulting in bank instability and erosion (Placer and Sacramento Counties 2003). Generally, the middle portion of the Dry Creek watershed has been subject to extreme development pressure by relatively recent growth, primarily within the cities of Roseville and Rocklin. The upper and lower portions of the watershed are anticipated to experience similar growth in the coming years. Such development generally has been perceived to have exacerbated normal historical flooding conditions lower in the watershed, particularly in Sacramento County, by contributing greater and faster flood flows during storm events. In addition, water quality concerns have arisen, due to the perceived increase in sedimentation and potential contamination from non-point sources.

Within the Dry Creek watershed, much of the native vegetation has been removed and either replaced with non-native species (*e.g.*, landscaping, agriculture), developed, or left bare. The reduction in native vegetation has contributed to significant degradation of the watershed water resources. Reduction of riparian habitat and/or replacement with non-native species (*e.g.*, ornamentals) occurs within all tributaries of the watershed. Historically, livestock compaction and off-road recreational vehicle activities have contributed to bank destruction. This has contributed to bank destabilization and erosion, higher water temperatures, and reduction in suitable habitat for aquatic life. In many areas, channels have been deepened, straightened,

and/or relocated to accommodate roads, to create agricultural land, for sewage treatment ponds, to convey flows, and for other developments. This channelization and reconfiguration has resulted in reduced area for overbank flow and reduced channel meandering. Whether by erosive processes, historical placer mining or channel reconfiguration, these deepened channels have lowered the shallow groundwater table, particularly in the upper tributary reaches (Placer and Sacramento Counties 2003).

#### ***2.4.2.12. Restoration Activities***

A number of restoration activities have been undertaken in the action area and more are expected in the future. These restoration efforts include the Auburn Ravine Fish Passage Project, the SSWD Pleasant Grove Canal fish screen project, Sundance-Lakeview Farms Restoration Project, and the Miners Ravine Restoration Project.

The Auburn Ravine Fish Passage Improvement project entailed construction of a fish ladder to enhance Chinook salmon and steelhead trout passage over the Nevada Irrigation District's stream gaging structure located in the Lincoln Crossing Nature Preserve, 1,000 feet downstream of Highway 65 in Lincoln (McKenzie 2020). This is a "nature-like fishway" consisting of a series of constructed rock chutes and armored step pools in a way that mimics the morphology of a natural channel. The constructed chutes and pools span the channel downstream of the existing gaging station and are designed to dissipate stream power over the drop from the facility's existing concrete flume to the streambed below. It provides upstream passage for adult fish to access spawning habitat located above the gaging station and downstream passage for migrating juvenile fishes while maintaining the ability to accurately measure stream flows occurring during the typical irrigation season (April 15–October 15). Permitting and construction were completed in 2011, and Chinook salmon ascended the fish ladder at the gaging station site in November 2012 (Johnson 2013).

The SSWD Pleasant Grove Canal fish screen project was completed in December 2015. The canal is an 80 cubic feet per second gravity canal located off of the Auburn Ravine in Placer County (McKenzie 2020). The project was screened with two 14-foot diameter Intake Screens, Inc. (ISI) cone screens and necessary screen components. As a part of the project, a PG&E power line was also installed to power the fish screen system through the Aitken Ranch Mitigation Bank.

The goal of the Sundance-Lakeview Farms Wetlands Restoration Project was to enhance existing wildlife habitat on its approximately 440-acre property in western Placer County (Placer County 2021b). Work was limited to a 60-acre parcel north of Coon Creek and adjacent to Dowd Road and its 380-acre hunting preserve, which is under a conservation easement held by the National Resource Conservation Service. The scope of work encompasses 7.04 acres of riparian area restoration within a setback levee as well as 2,527 linear feet of stream restoration. Project work included widening of the riparian habitat along the stream channel, biotechnical bank stabilization (through installation of native sedges, rushes, grasses, and trees) to create a habitat corridor, and expansion of the floodplain. Work was completed in November 2008.

Miners Ravine Restoration Project occurred across three sites within the Placer County-owned Miners Ravine Nature Preserve (Placer County 2011). The Miners Ravine Nature Preserve is on

Auburn Folsom Road north of Douglas Boulevard in Granite Bay. The Miners Ravine Preserve restoration project included debris removal, floodplain creation/restoration, public education, re-contour and stabilization of stream banks, and revegetation of native riparian species. Initial work commenced in late September 2002 and was substantially completed by December 1, 2002.

#### **2.4.2.13. Fish Hatcheries**

Artificial propagation programs (*i.e.*, hatchery production) for steelhead, fall-run Chinook salmon, and late fall-run Chinook salmon in the Central Valley present multiple threats to wild populations (NMFS 2014b). During spawning, hatchery- and natural-origin salmonids may compete for habitat, and interbreeding may reduce genetic integrity. Throughout juvenile rearing and outmigration, hatchery- and natural-origin salmonids may compete for habitat and food. When larger, juvenile, hatchery-origin steelhead are released into the river and may predate on smaller natural-origin salmonids. Hatchery programs in the Central Valley are currently operated to mitigate for natural habitats that have already been permanently lost as a result of dam construction. The loss of this available habitat results in dramatic reductions in natural population abundance, which is mitigated for through the operation of hatcheries. These hatchery programs are also intended to supplement natural spawning populations and contribute to commercial and recreational fisheries. Hatcheries in the California Central Valley that produce steelhead, fall-run Chinook salmon, and/or late fall-run Chinook salmon are Coleman National Fish Hatchery, Feather River Hatchery, Nimbus Fish Hatchery, Mokelumne River Hatchery, and Merced River Hatchery. Coleman National Fish Hatchery is run by USFWS and Nimbus Fish Hatchery is funded by the U.S. Bureau of Reclamation, so these hatcheries will be considered part of the environmental baseline. Feather River Hatchery, Mokelumne River Hatchery, and Merced River Hatchery are state-run hatcheries and will be considered in the cumulative effects, section 2.6.2.

Increases in the proportion of hatchery fish relative to naturally produced fish, the use of out-of-basin stocks for hatchery production, and the straying of hatchery-produced adults have degraded the genetic integrity of Chinook salmon and steelhead populations in the Central Valley through reductions in genetic diversity and increases in hatchery influence (NMFS 2014b). Threats related to hatchery programs in the Central Valley include the mortality of natural-origin steelhead in fisheries targeting hatchery-origin fish, disease transmission, genetic introgression by hatchery-origin fish that spawn naturally and interbreed with natural populations, and competition for food and spawning areas (NMFS 2014b). Recent evaluations of these hatchery programs and hatchery and genetic management plans (HGMPs) have proposed or recommended changes in hatchery policies and management to address these impacts (California Hatchery Scientific Review Group 2012).

The genetic impacts of artificial propagation programs in the Central Valley are primarily caused by straying of hatchery fish and the subsequent interbreeding of hatchery fish with wild fish. Practices such as transferring eggs between hatcheries and trucking hatchery-produced smolts to distant sites for release contribute to elevated straying levels (California Hatchery Scientific Review Group 2012). To maximize survival, and as a result of the degraded conditions of downstream migration corridors in the Central Valley, most Chinook salmon hatchery production has been routinely released off-site, significantly downstream of the hatchery or in the estuary. The exception is Coleman National Fish Hatchery, where hatchery managers have

consistently implemented in-river releases to reduce straying (NMFS 2014a). This approach was temporarily suspended during the 2014–2015 drought when environmental conditions in Battle Creek and the upper Sacramento River were likely to result in adverse impacts and significant mortality. In order to circumvent these unfavorable conditions, the majority of the Chinook salmon produced at Coleman National Fish Hatchery and other Central Valley hatcheries were trucked and released offsite. Although this offsite release practice has improved survival rates and resulted in increased ocean harvest of hatchery fish, it has also led to widespread straying of hatchery fish throughout the Sacramento-San Joaquin system (California Hatchery Scientific Review Group 2012).

Genetic effects are expected to be greatest when hatchery stocks originate from outside of the basin in which they are released and are adapted to environmental conditions atypical of the Central Valley. For example, Nimbus Fish Hatchery on the American River rears steelhead that originate from coastal streams (Eel/Mad Rivers) and releases them into the Sacramento River basin. Adult steelhead from the Nimbus Fish Hatchery that do not return to the hatchery but instead spawn naturally in the Central Valley would be expected to pass along traits associated with improving fitness in coastal streams, which may differ dramatically from conditions in the Central Valley. One of the recommendations in the California Hatchery Scientific Review Group (2012) report was to identify and designate new local sources of steelhead broodstock to replace the current out-of-basin steelhead stock at Nimbus Fish Hatchery.

Hatchery-origin fish can also pose a threat to wild Chinook salmon and steelhead stocks through the spread of disease, genetic impacts, competition for food and other resources between hatchery and wild fish, predation of hatchery fish on wild fish, and increased fishing pressure on wild stocks as a result of hatchery production (Waples 1991). The steady production of Chinook salmon and steelhead in Central Valley hatcheries, concomitant with decreased levels of natural production, has led to a reversal of the relative numbers of hatchery and natural salmonid stocks in the Central Valley. For example, the Chipps Island midwater trawl data provide information on the trend in abundance for the CCV steelhead DPS as a whole. Updated through 2019, the trawl data indicate that the production of natural-origin steelhead remains very low relative to hatchery production. Catch-per-unit effort has fluctuated and generally increased over the past decade, but the proportion of the catch that is adipose fin-clipped (100% of hatchery-origin steelhead production have been adipose fin-clipped starting in 1998) has risen steadily, exceeding 90% in recent years and reaching 96% during the drought in 2015. This suggests that the vast majority of steelhead outmigrating from the Delta are of hatchery-origin. The lack of improved natural production as estimated by exit at Chipps Island, and low abundances coupled with large hatchery influence is a cause for concern.

Impacts of hatchery fish can occur in both freshwater and marine ecosystems. Limited marine carrying capacity has implications for naturally produced fish experiencing competition with hatchery production (Hatchery Scientific Review Group 2004). Increased salmonid abundance in the marine environment may also decrease growth and size at maturity, and reduce fecundity, egg size, age at maturity, and survival (Bigler et al. 1996). There may be years when hatchery production may be in excess of the marine carrying capacity, placing depressed natural fish at a disadvantage by directly inhibiting their opportunity to recover (Hatchery Scientific Review Group 2004).

### **2.4.3. Recovery Plan for CCV Steelhead DPS**

The recovery plan (NMFS 2014b), included recovery delisting criteria and diversity group priorities. For CCV steelhead, these include the following: two viable populations in the Basalt and Porous Lava diversity group (Battle Creek and reintroduction into the McCloud River, as well as maintaining core 2/dependent populations in Cow Creek, and other tributaries); one viable population in the Northwestern California diversity group (Clear Creek, and maintaining core 2 population in Cottonwood/Beegum Creek); four viable populations in the Northern Sierra Nevada diversity group (Antelope, Deer, and Mill Creeks, and reintroduction in the Yuba River upstream of Englebright Dam), as well as maintaining core 2 populations (lower Yuba River, Butte Creek, Feather River, Big Chico Creek, Auburn Ravine, and the American River); and two viable populations in the Southern Sierra Nevada diversity group. Currently, none of these populations are considered viable.

The PCCP action area includes a portion of priority watersheds in the Northern Sierra Nevada diversity group identified for the recovery of CCV steelhead. Improvements to habitat for these populations would support recovery.

### **2.5. Effects of the Action**

Under the ESA, “effects of the action” are all consequences to listed species or critical habitat that are caused by the proposed action, including the consequences of other activities that are caused by the proposed action. A consequence is caused by the proposed action if it would not occur but for the proposed action and it is reasonably certain to occur. Effects of the action may occur later in time and may include consequences occurring outside the immediate area involved in the action (see 50 CFR 402.17). In our analysis, which describes the effects of the proposed action, we considered 50 CFR 402.17(a) and (b).

Of the proposed Covered Activities, some types are expected to have only beneficial effects to covered fish species and habitat. These types include protection of riparian habitat, protection of riverine habitat, protection of oak woodlands for fish, and riparian habitat restoration activities that will occur outside of the wetted channel and without disturbance to existing riparian. The PCCP plans to protect 2,200 acres of riverine/riparian habitat consisting of at least 1,410 acres of riparian and 88.6 linear miles of streams/riverine habitat. Maximum adverse effects presented below are limits, which cannot be exceeded without amending the permits and the plan (section 10.5.3 of the PCCP).

Many of the Covered Activities will have temporary or permanent effects to covered fish species and habitat, most of which will be mitigated for through the conservation activities. Specifically, the assessment will consider the potential short- and long-term impacts related to covered fish species and their habitat resulting from the construction, operation, maintenance, and research and monitoring associated with Covered Activities, as well as any other activities expected to occur as a result of Covered Activities (*i.e.*, public use of trails), including:

- contaminants or hazardous materials entering the water;
- increased turbidity and suspended sediment;

- physical disturbance effects;
- acoustic effects from pile driving;
- temporary and permanent loss of riparian vegetation;
- temporary and permanent loss of riverine habitat;
- injury or death resulting from dewatering;
- fish capture and relocation;
- disturbance and contaminants resulting from increased urbanization; and
- disturbance from use of new trails by the public.

### **2.5.1. Effects of the Action on Covered Fish Species**

#### ***2.5.1.1. Water Quality***

Water quality may be impaired by Covered Activities including land conversion and urbanization. This threat includes dissolved oxygen, heavy metals, disturbed sediments, and agricultural and urban runoff. Impacts to water quality may adversely affect adult immigration, staging, and spawning; eggs; and juvenile rearing and outmigration from or through the action area. Impaired water quality may lead to reduced growth, survival probability, reproductive success, and/or lifetime reproductive success.

Water quality encompasses the physical, chemical, and biological properties of aquatic environments. Physical properties include temperature, turbidity, and dissolved gases. Chemical properties include pH, hardness, organic and inorganic contaminants, and metals. Biological properties include pathogens, fishes, insects, algae, and other organisms (Karr and Dudley 1981).

##### ***2.5.1.1.1. Contaminants and Pollution-related Effects***

Some of the Covered Activities described in the proposed action will involve heavy construction equipment and many potential sources of hazardous material contamination in the action area. Potential sources of pollutants include hazardous material spills, petroleum product leaks in construction equipment, introduction of metals from the operation of equipment and vehicles, stormwater drainage, cleaning of irrigation channels, fire retardant use, and the disturbance of sediments that may contain hazardous suspended particulates. BMPs will be implemented, minimizing the probability of spills, but some pollutant incursion into the action area is likely from non-spill sources. Unlike sedimentation, turbidity, and other short-term effects, potential pollution-related effects may be persistent in the action area and may affect multiple life stages if they were to occur.

Incursion of contaminants into the action area has the potential to adversely affect CCV steelhead, CV fall-run Chinook salmon, and/or CV late fall-run Chinook salmon that may be migrating, rearing, or spawning/incubating in the action area at or after the time of a pollution

event. Construction equipment and heavy machinery will be present in the action area, and metals may be deposited through their use and operation (Paul and Meyer 2008).

Metals, such as copper and aluminum, may also be deposited within the action area due to cleaning and flushing of channels in the PCWA channel system. Metals have been shown to alter juvenile salmonid behavior through disruptions to various physiological mechanisms, including sensory disruption, endocrine disruption, neurological dysfunction, and metabolic disruption (Scott and Sloman 2004).

Oil-based products used in combustion engines are known to contain polycyclic aromatic hydrocarbons (PAHs), which have been known to bio-accumulate in other fish taxa, such as flatfishes (order Pleuronectiformes) and have carcinogenic, mutagenic, and cytotoxic effects (Johnson *et al.* 2002). The exact toxicological effects of PAHs in juvenile salmonids are not well understood, although studies have shown that increased exposure of salmonids to PAHs reduced immunosuppression, increasing their susceptibility to pathogens (Arkoosh *et al.* 1998, Arkoosh and Collier 2002).

Covered fish species are expected to be present in the action area during construction activities in low numbers and would likely be exposed if a pollution event occurred. If contaminants were to settle within the substrate in the action area, fish could be adversely affected later in time when the substrate becomes disturbed and contaminants resurface.

Avoidance and minimization measures are described in section 1.3.5 and will aid in reducing the potential risk of exposure to contaminants. However, small amounts of pollutants or contaminants may be introduced to small localized portions of the action area during the 50-year permit term. Fish present in areas exposed to contaminants would be expected to experience harm through physiological impacts, temporary displacement, reduced feeding, and increased predation, and a very small proportion could die as a result of increased contaminants. Expected effects of contaminants include behavioral effects, physical injury, or death to all life stages of fish unable to leave the area subjected to contaminants. Juvenile fish and eggs will be more vulnerable to these effects than adult fish due to their smaller size, longer time spent in the action area, and decreased or lack of mobility and swimming speed.

#### *2.5.1.1.2. Increased Sedimentation and Turbidity*

Increased sedimentation and turbidity may result from Covered Activities in and along the river banks. Sedimentation and high turbidity levels are expected to have varying effects among different covered fish species and different life stages present in the action area during in-water work. High levels of suspended sediment reduce the ability of fish to feed and respire, resulting in increased stress levels and reduced growth rates, and reduced tolerance to fish diseases and toxicants (Waters 1995). Spawning occurs within the action area, so impacts to egg life stages by sedimentation and turbidity may also occur. In a lab study, juvenile steelhead were found to occupy a parcel of water by choice between 57 and 77 nephelometric turbidity units (NTU) (Sigler *et al.* 1984). This result suggests that juvenile salmonids may not exhibit avoidance behavior in low to moderate turbidity levels during migration. One effect of high turbidity levels that has important implications for juvenile salmonids is that predator avoidance behavior has been shown to decrease at increased levels of turbidity (Gregory 1993). Decreased growth and

survival amidst increased sediment and turbidity levels have also been shown to result from reduced prey detection and availability and physical injury due to increased activity, aggression, and gill fouling (Sigler *et al.* 1984, Suttle *et al.* 2004, Kemp *et al.* 2011).

Fish responses to increased turbidity and suspended sediment can range from behavioral changes (*e.g.*, alarm reactions, abandonment of cover that could lead to predation, and avoidance) to sublethal effects (*e.g.*, reduced feeding rate), and, at high suspended sediment concentrations for prolonged periods, lethal effects (Newcombe and Jensen 1996). Temporary spikes in suspended sediment may result in behavioral avoidance of the site by fishes; several studies have documented active avoidance of turbid areas by juvenile and adult salmonids (Bisson and Bilby 1982, Sigler *et al.* 1984, Lloyd *et al.* 1987, Servizi and Martens 1992). Individual salmonids that encounter increased turbidity or sediment concentrations will likely move away from affected areas into suitable surrounding habitat (Sigler *et al.* 1984).

High turbidity and suspended sediment levels can lead to reduced growth, survival, and reproduction due to reduced foraging ability, impaired disease resistance, or interference with cues necessary for orientation in homing and migration (Lloyd *et al.* 1987). Laboratory studies have demonstrated that chronic or prolonged exposure to high turbidity and suspended sediment levels can lead to reduced growth rates in juvenile salmonids. For example, Sigler *et al.* (1984) found that steelhead exhibited reduced growth rates and higher emigration rates in turbid water (25–50 NTU) compared to clear water.

Increases in turbidity associated with instream work are likely to be brief and remain localized to approximately 300 feet downstream, attenuating downstream as suspended sediment settles out of the water column. Also, avoidance and minimization techniques will be implemented during Covered Activities as well as BMPs to minimize sedimentation and turbidity increases (described in section 1.3.5). These actions will reduce the extent of adverse effects associated with Covered Activities. Due to their use of the nearshore habitat in the action area, juvenile covered fish in close proximity to construction activities are expected to be subject to mobilized sediment and short-term increases in turbidity. Sedimentation and turbidity are expected to cause behavioral effects, physical injury, or death to all life stages of fish unable to leave the area subjected to high levels of sedimentation and turbidity. Juvenile fish and eggs will be more vulnerable to these effects than adult fish due to their smaller size, longer time spent in the action area and in nearshore habitat, and decreased or lack of mobility and swimming speed.

#### *2.5.1.1.3. Erosion Control*

Erosion control is part of the conservation strategy. These actions may temporarily increase sedimentation and turbidity within the action area as described above, but will eventually improve water quality for the long term. Erosion control will reduce sedimentation and turbidity, which can lead to improved growth, survival, and reproduction due to increased foraging ability, predator detection, and egg survival.

#### *2.5.1.2. Physical Disturbance*

Physical disturbance of aquatic habitat may occur during construction activities and the placement of materials in streams. Physical disturbances have the potential to result in injury or



death to covered fish species. Physical disturbance may include debris falling into the active channel, placement of structures in streams, tools and/or equipment falling into the active channel, or noise generated by displaced rock and sediment and the operation of construction machinery. Any life stages of covered fish species present during in-water work would be affected by physical disturbance. BMPs, avoidance, and minimization techniques will be implemented, reducing the probability and magnitude of physical disturbance effects in the action area.

Adult and juvenile covered fish species could potentially encounter falling debris, be hit, or become trapped by equipment as work occurs, which could cause physical injury or death. Physical disturbance noise may alter behavior, which may result in displacement from a position normally occupied in their habitat for short or long durations. Depending on the innate behavior that is being disrupted, the effects could be varied. This is of particular concern for juvenile fish as there are innate behaviors that are essential to their maturation and survival, such as feeding, sheltering, and migratory patterns. For example, construction activities could cause cessation or alteration of migratory behavior. In the context of the action area, the migratory and rearing behavior of juvenile salmonids may be affected by various physical disturbance effects.

Avoidance and minimization measures are described in section 1.3.5 and will aid in reducing the potential risk and magnitude of effects of physical disturbance. The primary expected effects of physical disturbances is behavioral effects, however physical injury, or death is also expected to occur in low numbers. Juvenile fish and eggs will be more vulnerable to these effects than adult fish due to their smaller size, longer time spent in the action area, and decreased or lack of mobility and swimming speed.

### ***2.5.1.3. Acoustic Effects from Pile Driving***

#### ***2.5.1.3.1. Vibratory Pile Driving***

Pile driving for Covered Activities will use vibratory hammers instead of impact hammers to the maximum extent practical. Vibratory hammers use counter-rotating eccentric weights to transmit vertical vibrations into the pile, causing the sediment surrounding the pile to liquefy and allow the pile to penetrate the substrate. The vibratory hammer produces sound energy that is spread out over time and is generally 10 to 20 decibels (dB) lower than impact pile driving for the same type and size pile (Buehler *et al.* 2015). Based on the results of hydroacoustic monitoring of vibratory hammer pile installations (Buehler *et al.* 2015), the sound levels generated by vibratory hammer use will be considerably below the injury and mortality thresholds for both single strike and cumulative sound exposure level (SEL). Pile-driving activities by vibratory hammer are expected to result in noise that startles covered fish. Startled fish may hide, move to adjacent suitable habitat, or cease activities, such as feeding or holding station, until the disturbance has ended. In addition, sound associated with vibratory pile driving may mask environmentally relevant noise that could prevent covered fish from detecting predators or conspecifics. Those fish exposed to vibratory hammer activity are expected to experience behavioral responses.

#### ***2.5.1.3.2. Impact Pile Driving***

Piles that are driven into streambed substrate propagate sound vibrations through the water that can damage a fish's swim bladder and other organs by causing sudden rapid changes in pressure. This causes the swim bladder to resonate (vibrate), thus rupturing or hemorrhaging tissue in the swim bladder directly or in tissues adjacent to the organ (Gisiner 1998, Popper *et al.* 2006). The swim bladder is the primary physiological mechanism that controls a fish's buoyancy. A perforated or hemorrhaged swim bladder has the potential to compromise the ability of a fish to orient itself both horizontally and vertically in the water column. This can result in a diminished ability to feed, migrate, and avoid predators. Sensory cells and other internal organ tissue may also be damaged by noise generated during pile-driving activities as sound reverberates through a fish's viscera (Gaspin 1975). In addition, morphological changes to the form and structure of auditory organs (sensory cilia and inner ear otoliths within the saccule, utricle, and lagena) have been observed after intense noise exposure (Hastings 1995). It is important to note that acute injury resulting from acoustic impacts should be scaled based on the mass of a given fish. Juveniles and fry have less inertial resistance to a passing sound wave and are therefore more at risk for non-auditory tissue damage (Popper and Hastings 2009).

Fish can also be injured or killed when exposed to lower sound pressure levels for longer periods of time. Hastings (1995) found death rates of 50 percent and 56 percent for gouramis (*Trichogaster* sp.) when exposed to continuous sounds at 192 dB (re 1  $\mu$ Pa) at 400 Hz and 198 dB (re 1  $\mu$ Pa) at 150 Hz, respectively, and 25 percent for goldfish (*Carassius auratus*) when exposed to sounds of 204 dB (re 1  $\mu$ Pa) at 250 Hz for two hours or less. Hastings (1995) also reported that acoustic "stunning," a potentially lethal effect resulting in a physiological shutdown of body functions, immobilized gourami within eight to thirty minutes of exposure to the aforementioned sounds.

Multiple studies have shown responses in the form of behavioral changes in fish due to human-produced noise (Wardle *et al.* 2001, Slotte *et al.* 2004, Popper and Hastings 2009). Instantaneous behavioral responses may range from slight variations (mild awareness) to a startle response. Fish may also exhibit movements that displace them from a position normally occupied in their habitat for short or long durations. Depending on the innate behavior that is being disrupted, the adverse effects could be varied. This is of particular concern for juvenile fish as there are innate behaviors that are essential to their maturation and survival, such as feeding, sheltering, and migratory patterns. An example of an adverse effect would be cessation or alteration of migratory behavior. In the context of the implementation of the Covered Activities, the migratory behavior of juvenile salmonids is expected to be affected by acoustic impacts of pile driving. Though pile driving may affect migratory behavior, it is not expected to prevent salmonids from passing upstream or downstream, because pile driving will not be continuous through the day and will not occur at night, when the majority of fish migrate.

Cumulative acoustic effects are expected for any situation in which multiple strikes are being made to an object with a single strike peak dB level above the effective quiet threshold of 150 dB. NMFS currently uses a dual metric criteria to assess onset of injury for fish exposed to pile-driving sounds (Fisheries Hydroacoustic Working Group 2008). Specifically, this includes a peak level of 206 dB and an accumulated SEL of 187 dB for fish equal to or greater than 2 grams or 183 dB for fish less than 2 grams. If either threshold is exceeded, then physical injury is assumed to occur. There is uncertainty as to the decibel level at which fish exhibit a behavioral response to high levels of underwater sound produced when driving piles in or near water. Based

on the information currently available, and until new data indicate otherwise, NMFS uses a 150 dB RMS threshold for behavioral responses in salmonids. Though the dB value is the same, the 150 dB RMS threshold for behavioral effects is unrelated to the 150 dB effective quiet threshold.

Avoidance and minimization measures (described in section 1.3.5) for pile driving include limiting pile driving to daylight hours to minimize exposure as it allows migration through the area at night, vibrating piles to the maximum extent possible, using the smallest driver and minimum force necessary to complete work, and the use of attenuation methods. Distances to the thresholds for acoustic effects will vary under different construction scenarios depending on the type and size of piles, the number of strikes per pile, and the type of attenuation used. As a result, pile driving with an impact hammer is expected to result in behavioral effects, physical injury, or death to all life stages of fish unable to leave the area subjected to impact pile driving. Smaller fish and eggs will be more vulnerable to these effects due to their smaller size, and thus greater sensitivity to acoustic impacts, and decreased or lack of both mobility and swimming speed.

#### ***2.5.1.4. Dewatering***

Some Covered Activities may employ temporary dewatering of a portion of a stream associated with the activity. Any dewatering activities will result in a temporary reduction in the amount of available habitat to in-stream species, including covered fish species. During the installation of temporary diversion systems, covered fish species may swim away from the noise and activity, resulting in displacement from preferred habitat and altered behavior. If covered fish species are expected to be present based on project timing, fish will be captured and relocated. Covered fish species that evade capture and remain in the construction area may be injured or killed from construction activities. This includes desiccation if fish remain in the dewatered area, or death if fish are crushed by personnel or equipment. Redds that are dewatered may lead to desiccation and death of eggs. However, because experienced biologists will be collecting fish, most fish are expected to be removed from the area before construction and redds are expected to be avoided.

Avoidance and minimization measures are described in section 1.3.5 and will aid in reducing the potential risk and magnitude of dewatering effects. Those fish that evade capture and remain in the area to be dewatered are expected to be injured or killed. Adult fish will likely be able to move out of the construction area, but small numbers of juveniles are more likely to be stranded in smaller pools and remain undetected.

#### ***2.5.1.5. Fish Capture***

##### ***2.5.1.5.1. Fish Capture from Dewatering Activities***

For some Covered Activities where dewatering will occur, any fish present will first be captured and removed from the area to be dewatered. Fish capture and relocation may cause stress, injury, or death, even though it will be conducted by a qualified fish biologist and intends to prevent stress, injury, or death from Covered Activities. Adult fish will likely be able to move out of the construction area and are not expected to be captured/relocated. Juvenile fish are expected to be captured and handled in small numbers due to longer time spent in the action area and decreased swimming speed. A small proportion of fish captured are expected to be injured or killed, as well as a small proportion killed due to remaining undetected in the dewatered area.

#### *2.5.1.5.2. Fish Surveys and Capture for Research, Monitoring, and Adaptive Management*

Fish surveys and capture are planned to occur as part of research or monitoring activities that support conservation programs and inform adaptive management. Fish surveys and capture for research and monitoring will occur in the reserve system and potentially on land being considered for acquisition. Visual surveys will be conducted for spawning adult salmonids. This may include counting live adults, carcasses, and/or redds, and may also include using rotary screw traps, nets, snorkel surveys, and other methods to determine juvenile salmonid abundances.

Access to streams to conduct research/monitoring may cause temporary disturbances to riparian habitat, physical disturbances within the stream, sedimentation, and increased turbidity. Visual surveys for adults, carcasses, and redds may lead to physical disturbance within the stream, sedimentation, and turbidity. These may cause behavioral changes to spawning adults and could potentially impact eggs.

Juvenile fish captured for research/monitoring will be handled, measured, marked, and tagged. Exact numbers of fish expected to be captured for research and monitoring are currently unknown as baseline data for the action area is sparse and surveys are still in the preliminary planning process, but targets will be a very small proportion of the population. NMFS will be involved in the research/monitoring planning process following PCCP implementation. Research and monitoring efforts will also aid in adaptive management of the PCCP, which is expected to benefit covered fish species and habitat. The capture and handling of fish for research and monitoring purposes will cause stress, injury, or death to a moderate number of fish over the permit term, even though it will be conducted by a qualified fish biologist. Adult fish will not be targeted and are expected to evade capture by juvenile sampling equipment so will likely be captured in extremely low numbers. Approximately 100 juveniles of each of the three covered fish species, are expected to be captured throughout the action area per survey year, a small proportion of which may be injured or killed.

Avoidance and minimization measures are described in section 1.3.5 and will aid in reducing the potential risk and magnitude of injury or death.

#### *2.5.1.6. Water Quantity*

Some of the Covered Activities are expected to use ground and surface water. These uses may decrease the amount of water available in streams for covered fish species. Reduced flows may impact covered fish species' ability to migrate and get past barriers, and may increase water temperatures. These impacts may affect spawning, migrating, and/or rearing salmonids. Some PCCP conservation actions will reduce existing issues related to water quantity and will improve the ability of covered fish species to move up or downstream. Effects to water quantity as a result of Covered Activities are expected to be minimal.

#### *2.5.1.7. Disturbance to Riparian Habitat*

The PCCP described the expected extent of effects to riverine and riparian habitat, by combining the two, see PCCP 3-16 (Placer County 2020b). The maximum amount of temporary effects to riverine/riparian habitat is estimated at 165 acres, with a maximum of 115 acres that can be

effects to riparian habitat. The maximum amount of permanent effects to riverine/riparian habitat is estimated at 490 acres of riverine/riparian habitat with a maximum of 375 acres that can be riparian habitat. Assuming an even distribution of the maximum amount of riparian habitat effects over the 50-year permit term, an average of 2.3 acres per year will be temporarily impacted and 7.5 acres per year will be permanently impacted.

The PCCP defined temporary effects as disturbed areas that must recover to pre-project or ecologically improved conditions within 1 year. Further, the PCCP describes that if the same permittee does the same project every ten years on the same piece of land and temporarily impacts the same two acres, that area will only be counted as two acres of temporary impacts. Temporary effects will be subject to a temporary effect fee (see section 9.4.1.5 of the PCCP, Temporary Effect Fee). Most construction projects will not qualify as temporary effects under the PCCP due to their size and their level of land disturbance, which usually cannot conform to the required 1-year timeframe for complete restoration. Most of the temporary effects anticipated to occur under the PCCP relate to urban development, such as construction corridors for pipelines, utilities, roads, and other infrastructure for flood control. The PCCP estimated the extent of temporary effects as a proportion of the estimate of permanent effects. For future in-stream flood management and future new and replaced stream crossings, temporary effects were calculated as follows:

- 35 percent for aquatic/wetland and riverine/riparian complex in the valley, A1 and A2
- 25 percent for aquatic/wetland and riverine/riparian complex in the foothills, A3 and A4
- 200 percent for aquatic/wetland and riverine/riparian complex in Plan Area B

Examples of permitted temporary effects include routine maintenance in stream channels for flood control, maintenance along roadsides for highways, and short-term disturbance of the landscape for a linear project, such as a pipeline. Because of the way a project site is determined (see PCCP section 6.2), most disturbed areas associated with urban development will be included in the permanent site footprint and assessed as permanent effects.

Impacts to riparian habitat will be avoided to the maximum extent practicable. Temporary and permanent loss of riparian habitat is expected to occur as a result of Covered Activities. Disturbed riparian areas, not intended for future road access or gravel placement, will be revegetated with native plant species within a year following the completion of construction activities. Areas that are revegetated within a year are expected to have multiple years of impacts to fish, until vegetation returns to full growth (typically 2–5 years for riparian habitat), and will be considered permanent effects under the PCCP. Permanent loss of riparian habitat will be mitigated for by restoration of riparian habitat at a ratio of 1.52:1. Effects on salmonid habitat will be mitigated in kind (for example, impacts to riparian habitat in spawning areas will be mitigated by restoration of spawning area riparian habitat within the plan area). Temporary loss of riparian habitat will be assessed a temporary effect fee, see section 9.4.1.5 of the PCCP for more details (Placer County 2020b).

Loss of riparian vegetation is expected to impact covered fish species by reducing instream cover, which may lead to increased water temperatures, reduced access to food input, and

reduced escape cover for juveniles from predators. Juvenile life stages of covered fish species are most likely to be impacted by disturbance to riparian vegetation. Loss of riparian habitat is likely to result in reduced fitness, reduced growth, and/or reduced survival. However, these impacts are expected to be offset through mitigation. The stay-ahead provision of the PCCP requires that within each calendar year the amount of habitat protected, restored, or created is equal to or greater than that type of habitat loss from Covered Activities.

Avoidance and minimization measures are described in section 1.3.5 and will aid in reducing disturbance to riparian habitat.

#### ***2.5.1.8. Disturbance to Riverine Habitat***

Since the PCCP combined estimated impacts to riverine and riparian habitat, there is no maximum for temporary or permanent impacts to riverine habitat, other than the combined maximum for riverine/riparian habitat. So, if the maximum temporary effects to riparian habitat occurs, up to 50 acres of riverine habitat may be temporarily affected. However, if less than the 115 acres of temporary effects to riparian habitat are expressed, more impacts to riverine habitat can occur up to the maximum for riverine/riparian habitat of 165 acres. This same concept holds for the permanent impacts to a total of 490 acres of riverine/riparian habitat of which a maximum of 375 acres can be to riparian habitat. So, if the maximum permanent impacts to riparian habitat occur, 115 acres of riverine habitat may be permanently affected. If less than the 375 acres of permanent effects to riparian habitat are expressed, more impacts to riverine habitat can occur up to the maximum for riverine/riparian habitat of 490 acres. Assuming an even distribution of the maximum amount of riverine habitat effects over the 50-year permit term, an average of 3.3 acres per year will be temporarily impacted and 9.8 acres per year will be permanently impacted.

Impacts to riverine habitat will be avoided to the maximum extent practicable. Permanent loss of riverine habitat will be mitigated by restoration of riverine habitat at a ratio of 1.52:1. Effects on salmonid habitat will be mitigated in kind.

The PCCP estimates effects from in-stream programs by the linear extent of riverine habitat affected, which are summarized in Table 7. The PCCP plan area contains 576.15 total stream miles; 68.17 of those miles are spawning/rearing habitat for salmonids, and 24.49 of those miles are migration/rearing habitat for salmonids. Temporary effects to 21.5 miles are expected from all road crossings, of which 3.6 miles are in spawning/rearing habitat and 0.38 in migration/rearing habitat. PCWA pipelines outside of roadways are expected to temporarily affect 0.19 miles of streams, 0.03 in spawning/rearing habitat and 0.01 in migration/rearing habitat. Flood control projects are expected to temporarily impact 14.82 total stream miles of which 4.72 will be in spawning/rearing habitat and 2.45 in migration/rearing habitat.

**Table 7. Temporary and permanent effects to streams and salmonid habitat.**

	Temporary Effects (miles)				Permanent Effects (miles)			
	All Streams	Spawning/ Migration/ Rearing Habitat	Migration/ Rearing Habitat	All Salmonid Habitat	All Streams	Spawning/ Migration/ Rearing Habitat	Migration/ Rearing Habitat	All Salmonid Habitat
All Road Crossings	21.5	3.6	0.38	3.98	4.75	0.77	0.09	0.86
PCWA Pipelines Outside Roadway	0.19	0.03	0.01	0.04	0.02	0.01	0.01	0.02
Flood Control	14.82	4.72	2.45	7.17	0.74	0.24	0.12	0.36
All In-Stream Activities	36.51	8.35	2.84	11.19	5.51	1.02	0.22	1.24
Total Stream Miles	576.15	68.17	24.49	92.66	576.15	68.17	24.49	92.66
Proportion of Existing Streams	6.3%	12.3%	11.6%	12.1%	1.0%	1.5%	0.9%	1.3%

Adapted from PCCP tables 4-7A and 4-7B (Placer County 2020b).

All in-stream activities together are expected to temporarily impact 36.51 miles, 8.35 miles in spawning/rearing habitat and 2.84 in migration/rearing habitat or 12.3% and 11.6%, respectively. Total salmonid habitat temporary effects will be 11.19 miles.

Permanent effects to 4.75 miles are expected from all road crossings, 0.77 miles in spawning/rearing habitat and 0.09 in migration/rearing habitat. PCWA pipelines outside of roadways are expected to permanently affect 0.02 miles of streams, 0.01 in spawning/rearing habitat and 0.01 in migration/rearing habitat. Flood control projects are expected to permanently impact 0.74 total stream miles of which 0.24 will be in spawning/rearing habitat and 0.12 in migration/rearing habitat.

All in-stream activities together are expected to permanently impact 5.51 miles, 1.02 miles in spawning/rearing habitat and 0.22 in migration/rearing habitat or 1.5% and 0.9%, respectively. Total salmonid habitat permanent effects will be 1.24 miles. Loss of riverine habitat is expected to impact covered fish species by reducing available instream habitat, creating obstructions resulting in blocked or delayed migration, and decreasing habitat for aquatic insects that serve as prey for fish. Loss of riverine habitat is likely to result in reduced fitness, reduced growth, and/or reduced survival. However, these impacts are expected to be offset through mitigation. The stay-ahead provision of the PCCP requires that within each calendar year the amount of habitat protected, restored, or created is equal to or greater than that type of habitat loss from Covered Activities.

Avoidance and minimization measures are described in section 1.3.5 and will aid in reducing disturbance to riverine habitat.

### **2.5.1.9. Riparian Habitat Restoration**

Riparian habitat restoration will occur as part of the conservation strategy and as mitigation for Covered Activities that impact riparian habitat. Restoration activities that will occur outside of the wetted channel and without disturbance to existing riparian vegetation are expected to have only beneficial effects to covered fish species and their habitat. Restoration activities that occur within the wetted channel or disturb existing riparian vegetation will have temporary impacts on covered fish species and their habitat, such as sedimentation, turbidity, and temporary loss of riparian habitat, as described in the sections above.

A minimum of 32 acres of riparian habitat will be restored. Additionally, impacts from other Covered Activities will be mitigated by the restoration of riparian habitat at a ratio of 1.52:1 up to an additional 1,425 acres of combined riverine/riparian complex. Effects on salmonid habitat will be mitigated in kind. Enhancement of riparian habitat will also occur as part of the conservation strategy. Vegetation management, including the removal of invasive weeds, may also be employed to help improve riparian habitat. Restoration of riparian vegetation will provide increased temperature refugia and increased instream cover for juvenile covered fish species. These improvements are expected to increase juvenile growth and survival.

#### ***2.5.1.10. Riverine Habitat Restoration and Stream Enhancement***

Riverine habitat restoration will occur as mitigation for Covered Activities that impact riverine habitat. Some restoration activities will have temporary impacts on covered fish species and their habitat, such as sedimentation, increased turbidity, and temporary loss of riparian habitat.

Impacts from other Covered Activities will be mitigated by the restoration of riverine habitat at a ratio of 1.52:1 up to an additional 1,425 acres of combined riverine/riparian complex. Effects on salmonid habitat will be mitigated in kind. Enhancement of riverine habitat will also occur as part of the conservation strategy. Vegetation management, including the removal of invasive weeds in streams, may also be employed to help improve riverine habitat. Effects within the stream system will be mitigated by stream enhancements. Stream enhancements may include actions, such as removing or modifying barriers to fish passage, screening unscreened water diversions, improvement of in-channel features, and control of non-native animal species.

##### ***2.5.1.10.1. Fish Passage Improvements***

As part of the conservation strategy and as mitigation for effects within the stream system, fish passage improvements to barriers and diversions will occur. Several potential barriers to fish passage have been identified and will be removed or improved. The PCA will remove or modify two high-priority fish passage barriers: the barrier at Doty Ravine at Garden Bar Road and one other barrier identified in Table 2. As partnerships allow, the PCA will remove or modify up to three more of the fish passage barriers identified in Table 2. If the PCA is successful in negotiating with partners to remove and/or create reliable fish passage at Hemphill Dam on Auburn Ravine that would remove a significant barrier to fish passage and allow improved passage for at least six miles up Auburn Ravine. Fish passage improvements will have some temporary effects to covered fish species and their habitat, such as physical disturbance effects, sedimentation and turbidity, and temporary loss of riparian habitat, as described in the sections above. Barrier removal projects will ultimately benefit covered fish species, as they will improve upstream and downstream migration for salmonids. Some of the fish barriers currently limit anadromy, so removal of those will increase habitat availability and survival for fish.

The PCA aims to modify all unscreened diversions on salmonid streams in the reserve system. Modifications to unscreened diversions, including installation of fish screens, would result in short-term construction effects to fish, such as physical disturbance effects, sedimentation and turbidity, dewatering, fish capture/relocation, and temporary loss of riparian habitat. Unscreened diversions present a risk of entrainment and death to covered fish species, so screening currently unscreened diversions will improve migration for salmonids and improve survival in and through



the action area. Juvenile fish are most susceptible to entrainment and death due to unscreened diversions, so screening previously unscreened diversions will increase their survival within the action area.

#### *2.5.1.10.2. Control of Introduced Predators*

The control of introduced predators may have temporary impacts on covered fish species and their habitat. Gaining access to streams and capturing predators may cause effects, such as sedimentation, turbidity, dewatering, covered fish species capture/relocation, and temporary loss of riparian habitat. As introduced predators decrease the survival of covered fish species, the control of introduced predators will benefit covered fish species in the action area. Since juvenile fish are most susceptible to predation, removal of predators will increase their survival within the action area.

#### *2.5.1.10.3 Improvement of In-channel Features*

Improvements to in-channel features, such as those described above in section 1.3.3.7.2.2, may have temporary impacts on covered fish species and their habitat. Gaining access to streams and moving features to improve in-channel habitat may cause effects, such as physical disturbance, dewatering, fish capture, sedimentation, increased turbidity, and temporary loss of riparian and/or riverine habitat. Improvements to in-channel features will eventually benefit covered fish species by providing additional and improved habitat and protection from predators. These improvements are expected to improve adult spawning success, egg survival, and juvenile growth and survival.

#### *2.5.1.10.4. Floodplain Enhancement*

Floodplain enhancement activities, such as levee setbacks and grading, may have temporary impacts on covered fish species and their habitat, such as physical disturbance, sedimentation, turbidity, and temporary loss of riparian habitat, as described in the sections above. These improvements will eventually benefit covered fish species by providing additional and improved juvenile rearing habitat and protection from predators. These improvements are expected to increase juvenile growth and survival.

#### *2.5.1.11. Adaptive Management*

Adaptive management is a decision-making process that will be used during PCCP implementation to adjust future management actions based on new information. Adaptive management is based on a flexible approach whereby actions can be adjusted as uncertainties become better understood or as conditions change. Integrating adaptive management and monitoring will help successfully implement the PCCP conservation strategy. Adaptive management actions are developed, in part, from the results of monitoring.

Effects to fish will include those for fish capture and handling for research, monitoring, and adaptive management, described above in section 2.5.1.2. The adaptive management aims to reduce impacts to Covered Species and habitat over the permit term. The PCA will share information gained through the adaptive management process to other county and State agencies,

so these decisions will help to improve survival for all life stages of fish present in the plan area and potentially beyond as information is shared with other entities.

#### ***2.5.1.12. Effects from Other Activities***

A maximum of 70 miles of new trails will be created within the reserve system, an addition of approximately 50 acres of trails. Creation of the trails is a Covered Activity, but public use of new trails created as part of the PCCP is considered here as an “other activity” that would not occur but for the proposed action. Increased human recreation activity is expected to occur, resulting in new disturbances to covered fish species in areas previously inaccessible. Introduction of human-generated noise, litter, pets, and in-stream foot traffic into previously inaccessible areas is expected to occur with the creation of recreational trails in acquired open space areas. In-stream foot traffic by people and pets is expected to lead to physical disturbance, sedimentation, and turbidity. Greater access to streams by the public is expected to lead to infrequent disturbance of spawning adults, rare destruction of redds and eggs, and disturbance to rearing juveniles resulting in behavioral modifications (leaving the area).

#### **2.5.2. Effects of the Action on Critical Habitat and Covered Fish Habitat**

Covered Activities are expected to have short- and long-term effects on habitat quantity and quality, including effects to the PBFs of designated critical habitat of CCV steelhead and analogous features for CV fall-run and CV late fall-run Chinook salmon. The PBFs within the action area for CCV steelhead are: (1) freshwater rearing sites; (2) freshwater migration corridors; and (3) spawning habitat. While critical habitat has not been designated for CV fall-run or CV late fall-run Chinook salmon, their habitat uses and needs are similar to CCV steelhead, so effects to PBFs for CCV steelhead will be similar to the analogous features of CV fall-run and CV late fall-run Chinook salmon habitat and will be discussed together.

The PCCP split salmonid habitat into spawning/rearing and migrating/rearing throughout the PCCP (Placer County 2020b). Since migration will also occur in and through spawning areas, this opinion will consider protections to both the PCCP’s spawning/rearing habitat and migrating/rearing habitat as protections to migration habitat.

Temporary effects to rearing, migration, and spawning habitat PBFs for covered fish species include dewatering, changes in water quality, and changes in water quantity. Permanent effects to habitat include incursion of new structures into streams, changes to flow, increased urban and suburban runoff, protection of riverine and riparian habitat, restoration of riverine and riparian habitat, fish passage improvements, stream enhancement, floodplain enhancement, and control of non-native species. The PCCP will protect 900 acres of riparian habitat along salmonid habitat and 35 miles of riverine habitat. These protections include 558 acres of riparian habitat along salmonid spawning habitat and 25 miles of riverine habitat in salmonid spawning habitat. Additionally, permanent effects to salmonid habitat due to Covered Activities will be mitigated for in kind at a ratio of 1.52:1 for riverine/riparian effects, and streams will be enhanced to promote habitat complexity and function at a ratio of 1.5:1 for affected stream habitat.

## **2.6. Cumulative Effects**

“Cumulative effects” are those effects of future state or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation (50 CFR 402.02 and 402.17(a)). 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 ESA.

Some continuing non-Federal activities are reasonably certain to contribute to climate effects within the action area. However, it is difficult if not impossible to distinguish between the action area’s future environmental conditions caused by global climate change that are properly part of the environmental baseline vs. cumulative effects. Therefore, all relevant future climate-related environmental conditions in the action area are described in the environmental baseline (section 2.4).

### **2.6.1. Increased Urbanization**

Increases in urbanization and housing developments that are not a part of PCCP Covered Activities due to being in non-participating cities or that are upstream of the action area could impact habitat by altering watershed characteristics and changing both water use and stormwater runoff patterns within the action area. Increased growth will place additional burdens on resource allocations, including natural gas, electricity, and water, as well as on infrastructure, such as wastewater sanitation plants, roads and highways, and public utilities. Some of these actions, particularly those which are situated away from water bodies, will not require Federal permits, and thus will not undergo review through the ESA section 7 consultation process with NMFS. Increased urbanization and development will result in increased traffic as the state and cities continue to build roads to access the buildout areas. These activities will result in construction disturbance, noise, and increased runoff from roads, which can degrade water quality.

Increased urbanization of nearby areas may also increase recreational activities in the action area. Among the activities expected to increase in volume and frequency is recreational boating. Boating activities typically result in increased wave action and propeller wash in waterways. This potentially will degrade riparian and wetland habitat by eroding channel banks and mid-channel islands, thereby causing an increase in siltation and turbidity. Wakes and propeller wash also churn up benthic sediments thereby potentially re-suspending contaminated sediments and degrading areas of submerged vegetation. This will reduce habitat quality for the invertebrate forage base required for the survival of juvenile salmonids and green sturgeon moving through the system. Increased recreational boat operation is anticipated to result in more contamination from the operation of gasoline and diesel-powered engines on watercraft entering the associated water bodies.

### **2.6.2. Fish Hatcheries**

More than 32 million fall-run Chinook salmon, 2 million spring-run Chinook salmon, 1 million late fall-run Chinook salmon, 0.25 million winter-run Chinook salmon, and 2 million steelhead are released annually from six hatcheries producing anadromous salmonids in the Central Valley. All of these facilities are currently operated to mitigate for natural habitats that have already been

permanently lost as a result of dam construction. The loss of this available habitat results in dramatic reductions in the abundance of natural populations, which is mitigated for through the operation of hatcheries. Production of non-listed Central Valley fall-run Chinook salmon is the largest contributor of hatchery-origin Chinook salmon in the state, with a total combined release of nearly 30 million smolts annually. These fish originate from the following five hatchery facilities: Coleman National Fish Hatchery, Feather River Hatchery, Nimbus Fish Hatchery, Mokelumne River Hatchery, and Merced River Hatchery. Coleman National Fish Hatchery is run by USFWS and Nimbus Fish Hatchery is funded by the U.S. Bureau of Reclamation, so these hatcheries were considered in the environmental baseline, section 2.4.2.13. Releasing large numbers of hatchery fish can pose a threat to natural-origin Chinook salmon populations through genetic impacts, displacement, competition for food and other resources, predation of hatchery fish on natural-origin fish, and increased fishing pressure on natural-origin stocks as a result of hatchery production (Waples 1991).

The relatively low number of adult spawners needed to sustain a hatchery population can result in high harvest-to-escapement ratios in waters where fishing regulations are set according to hatchery population. California salmon fishing regulations are set according to the combined abundance of hatchery and natural stocks, which can lead to over-exploitation and reduction in the abundance of natural-origin populations existing in the same system as hatchery populations due to incidental bycatch (McEwan 2001). Currently, hatchery-produced fall-run Chinook salmon comprise the majority of fall-run adults returning to Central Valley streams. Hatcheries in the Central Valley follow a 25 percent constant fractional marking/tagging regime for hatchery-produced fall-run Chinook salmon juveniles. Any returning populations with adipose fin-clipped adult escapement greater than 25 percent, would indicate that hatchery-produced fish are the predominate source in those spawning populations.

More localized impacts of hatcheries may also affect salmonid populations in the action area. Recent evaluations of these hatchery programs have proposed or recommended changes in hatchery policies and management to address these impacts (California Hatchery Scientific Review Group 2012). However, the lack of approved HGMPs for a number of Central Valley hatchery programs has been identified as a potential risk to ESA-listed salmonids in the Central Valley. The California Hatchery Scientific Review Group (2012) recommends that the funding entities for each hatchery facility provide the necessary resources to prepare and implement HGMPs for all California anadromous fish hatchery programs. The detailed descriptions and operational protocols provided in HGMPs are expected to help to guide adaptive management decisions made at the hatchery and provide accountability for deviations from established operational protocols. Until HGMPs are completed and approved for all hatchery programs in the Central Valley, the production of hatchery-origin Chinook salmon and steelhead are expected to remain at current levels and off-site releases will continue for a proportion of the annual production, which may result in straying to streams within the action area.

### **2.6.3. Recreational Fishing**

While hatchery CCV steelhead and Chinook salmon are targeted in recreational fisheries, incidental catch of naturally produced CCV steelhead can occur in portions of the action area that do not have seasons timed to protect CCV steelhead (NMFS 2014b). Since 1998, all hatchery CCV steelhead have been marked with an adipose fin clip, allowing anglers to tell the

difference between hatchery and wild CCV steelhead. Current regulations restrict anglers from keeping non-clipped CCV steelhead in Central Valley streams, except in the upper Sacramento River.

Current sport fishing regulations do not prevent wild CCV steelhead from being caught and released many times over while on the spawning grounds, where they are more vulnerable to fishing pressure. Studies on hooking mortality based on spring-run Chinook salmon have found a 12 percent mortality rate for the Oregon in-river sport fishery (Lindsay *et al.* 2004). Applying a 30 percent contact rate for Central Valley rivers (*i.e.*, the average of estimated Central Valley harvest rates), approximately 3.6 percent of adult steelhead die before spawning from being caught and released in the recreational fishery. Studies have consistently demonstrated that hooking mortality increases with water temperatures. Mortality rates for steelhead may be lower than those for Chinook salmon, due to lower water temperatures.

In addition, survival of eggs is reduced by anglers walking on redds in spawning areas while targeting hatchery CCV steelhead or salmon. Roberts and White (1992) identified up to 43 percent mortality from a single wading over developing trout eggs, and up to 96 percent mortality from twice daily wading over developing trout eggs. Salmon and trout eggs are sensitive to mechanical shock at all times during development (Leitritz and Lewis 1980). While state angling regulations have moved towards restrictions on selected sport fishing to protect listed fish species, hook-and-release mortality of steelhead and trampling of redds by wading anglers may continue to cause a threat.

Fish that were caught and released within the action area may be killed, injured, or stressed and less able to handle other effects. Migrating fish that were caught or released upstream or downstream of the action area may have reduced survivability to further effects as they continue their migrations through the action area.

#### **2.6.4. Agricultural Practices**

Non-Federal actions that may affect the action area include ongoing agricultural activities. Farming and ranching activities within, adjacent to, or upstream of the action area may have negative effects on water quality due to runoff laden with agricultural chemicals. Ongoing ranching operations, such as road construction, road maintenance, or intensive livestock grazing, may limit or degrade habitat for species. Stormwater and irrigation discharges related to agricultural activities contain numerous pesticides and herbicides that may adversely affect salmonid reproductive success and survival rates (King *et al.* 2014). Grazing activities from cattle operations can degrade or reduce suitable critical habitat for listed salmonids by increasing erosion and sedimentation, as well as introducing nitrogen, ammonia, and other nutrients into the watershed, which then flow into the receiving waters of the associated watersheds. Agricultural practices in the action area may adversely affect riparian and wetland habitats through upland modifications of the watershed that lead to increased siltation or reductions in water flow.

#### **2.6.5. Non-agricultural Pesticide Use**

Though pesticide use will not be covered by the Federal permits, it will be covered by the State permits, so will occur within the action area. As covered by the State PCCP permits, pesticides

will be used to achieve invasive plant or invasive animal control. Any pesticide use must comply with the EPA's Endangered Species Protection Program. In areas downstream of pesticide/herbicide use, stormwater and irrigation discharges may contain pesticides and herbicides. Pesticides and herbicides may adversely affect salmonid reproductive success and survival rates (King *et al.* 2014).

#### **2.6.6. Mining Activities**

Increased water turbidity levels for prolonged periods of time may result from adjacent mining activities and increased urbanization and/or development of riparian habitat, which could adversely affect the ability of young salmonids to feed effectively and result in reduced growth and survival. Turbidity may cause harm, injury, or mortality to juvenile anadromous fish in the vicinity and downstream of the project area. High turbidity levels can reduce the ability of covered fish to feed and respire, resulting in increased stress levels and reduced growth rates, and reduce tolerance to fish diseases and toxicants. Mining activities may adversely affect water quality, riparian function, and stream productivity.

#### **2.6.7. Water Supply**

The PCCP proposes that the permits cover the actions of two water suppliers (the PCWA and the City of Lincoln), while two other water suppliers—NID and South Sutter Irrigation District—also have a network of irrigation canals and use some of the same creeks for water transport. NID and South Sutter Irrigation District are not permittees to the PCCP, and, therefore, unless they apply through Placer County or the City of Lincoln to have their projects covered, they are not included as part of the Federal action.

Water transportation and diversions can affect the upstream migration of salmonids (*e.g.*, CCV steelhead and CV fall-run Chinook salmon), while low flows can impede fish passage (NMFS 2014c). Altered flow regimes can influence migratory cues, water quality, sedimentation, and water temperature. Low flows limit habitat area and adversely affect water quality by elevating water temperatures and depressing dissolved oxygen, which stress multiple fish life stages. Low flows can also confuse or detain migrating juveniles, resulting in entrainment at diversions.

### **2.7. Integration and Synthesis**

The Integration and Synthesis section is the final step in our assessment of the risk posed to species and critical habitat as a result of implementing the proposed action. In this section, we add the effects of the action (section 2.5) to the environmental baseline (section 2.4) and the cumulative effects (section 2.6), taking into account the status of the species and critical habitat (section 2.2), to formulate the agency's biological opinion as to whether the proposed action is likely to: (1) Reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing its numbers, reproduction, or distribution; or (2) appreciably diminish the value of designated or proposed critical habitat as a whole for the conservation of the species.

CCV steelhead DPS, CV fall-run Chinook salmon ESU, and CV late fall-run Chinook salmon ESU have experienced significant declines in abundance and available habitat in the California Central Valley relative to historical conditions. The status of the species (section 2.2) details the

current range-wide status of these ESUs and DPS and CCV steelhead critical habitat, indicating the status of CCV steelhead appears to have remained unchanged since 2011 and the DPS was in danger of becoming endangered, and CV fall-run Chinook salmon and CV late fall-run Chinook salmon populations have shown a decline in recent years. The environmental baseline (section 2.4) describes the current baseline conditions found in the action area. Factors affecting Covered Species in the action area include passage barriers, entrainment and low flows due to diversions, and loss of riparian and floodplain habitat. Section 2.2.1 discusses the vulnerability of listed species and critical habitat to climate change projections in the California Central Valley and specifically in the action area. Reduced summer flows and increased water temperatures will likely be exacerbated by increasing surface temperatures in the action area. Some watersheds within the action area are manipulated systems with flow and temperature regimes that differ drastically from their historical condition. Cumulative effects (section 2.6) are likely to include effects of aquaculture and fish hatcheries, recreational fishing, agricultural practices, mining activities, decreased water supply, and increased urbanization that is not part of Covered Activities.

### **2.7.1. Summary of Effects of the Proposed Action to Listed Species**

Minimal or minor effects to all life stages are expected to occur as a result of the proposed action, including short-term localized increases in turbidity, or water levels, resulting in behavioral modification. Small proportions of populations are expected to be harassed during Covered Activities, and small numbers of juvenile or adult covered fish species are expected to be injured or killed when they are captured and relocated from areas to be dewatered or captured for research and monitoring. However, the avoidance and minimization measures proposed will minimize the extent of injuries and mortalities to listed salmonids. Impact pile driving is expected to result in behavioral effects, injury, or death from acoustic effects. Behavioral effects from pile driving would include temporary disruptions in the feeding, sheltering, and migratory behavior of adult and juvenile covered fish species, resulting in reduced growth and increased susceptibility to predation. Though pile driving will likely result in delay in fish passage, it is not expected to prevent fish species from passing upstream or downstream, because pile driving will not be continuous through the day, and will not occur at night when the majority of fish migrate.

Covered fish species are expected to be adversely affected through general physical disturbance effects, sedimentation and increased turbidity, and pollution and contamination. With the avoidance and minimization measures included in the PCCP, potential injuries or mortalities associated with these activities are expected to be reduced.

Beneficial effects to fish will include adaptive management, fish passage improvements, screening of previously unscreened diversions, control of introduced predators, improvement of in-channel features, and floodplain enhancement. These improvements will increase survival of covered fish species within the action area.

### **2.7.2. Effects of the Proposed Action to Critical Habitat and Covered Fish Habitat**

The PCCP combines the anticipated effects to riverine and riparian habitat within designated critical habitat or covered fish habitat. The maximum amount of temporary effects to riverine/riparian habitat is 165 acres of which a maximum of 115 acres can be to riparian habitat.

If the maximum temporary effects to riparian habitat are expressed, up to 50 acres of riverine habitat may be temporarily affected. However, if less than the 115 acres of temporary effects to riparian habitat are expressed, more impacts to riverine habitat can occur up to the total impacts to riverine/riparian habitat of 165 acres. This same concept holds for the permanent impacts to a total of 490 acres of riverine/riparian habitat, of which a maximum of 375 acres can be to riparian habitat. So, if the maximum permanent impacts to riparian habitat occur, 115 acres of riverine habitat may be permanently affected. If less than the 375 acres of permanent effects to riparian habitat are expressed, more impacts to riverine habitat can occur up to the total impacts to riverine/riparian habitat of 490 acres. The expected result of these temporary and permanent effects to PBFs of riverine and riparian habitat is a decrease in fitness, reduced growth, and/or reduced survival for fish species.

To offset these impacts to habitat, the project will implement restoration of a minimum of 32 acres of riparian habitat. Temporary effects to riparian and riverine habitat will be returned to pre-project conditions within one year of construction activities. Permanent impacts to riparian and riverine habitat will be mitigated for via conservation activities at a ratio of 1.52:1. So, if the maximum amount of permanent effects to riparian habitat occur, there will be a net addition of an additional 570 acres of riparian habitat. If the maximum amount of permanent effects to riparian/riverine habitat occur 174.8 to 744.8 acres of riverine habitat will be restored, depending on the extent of permanent riparian effects. The stay-ahead provision of the PCCP requires that within each calendar year the amount of habitat protected, restored, or created is equal to or greater than that type of habitat loss from Covered Activities. This offset of impacts is expected to result in an increase in fitness, increased growth, and/or increased survival for fish species.

Removal of fish passage barriers and screening of previously unscreened diversions will increase available habitat for fish and increase survival during migration. These improvements will result in an increase in fitness and increased survival for fish species.

### **2.7.3. Survival and Recovery of the DPS/ESU**

The action area contains spawning populations of CCV steelhead, CV fall-run Chinook salmon, and CV late fall-run Chinook salmon, making it an important area in terms of range-wide conservation or recovery for these species. The recovery plan (NMFS 2014b) identified Auburn Ravine as a core 2 population and Dry Creek and Bear River as core 3 populations for CCV steelhead. The recovery plan does not classify Raccoon Creek on its own, but often groups Raccoon Creek with Auburn Ravine.

Delisting criteria for CCV steelhead is described in the recovery plan (NMFS 2014b), and includes establishing and maintaining nine viable populations (core 1) for the DPS, none of which are currently viable. Core 1 populations have a known ability or potential to support independent viable populations. Core 2 populations meet, or have the potential to meet, the biological recovery standard for moderate risk of extinction. These watersheds have lower potential to support viable populations than core 1 populations, due to lower abundance, or amount and quality of habitat. These populations provide increased life history diversity to the DPS and are likely to provide a buffering effect against local catastrophic occurrences that could affect other nearby populations, especially in geographic areas where the number of core 1 populations is lowest. Core 3 watersheds have populations that are present on an intermittent



basis and require straying from other nearby populations for their existence. These populations likely do not have the potential to meet the abundance criteria for moderate risk of extinction, but are important because, like core 1 populations, core 3 populations aid in recovery of the species by providing genetic diversity and dispersal connectivity to the greater DPS.

We expect Covered Species to use available habitat in adjacent areas, because the majority of effects are minimized through the use of AMMs, and the area of permanent impacts is fairly small compared to the available habitat in the action area and the range-wide DPS/ESU. Further, any permanent effects to salmonid habitat will be mitigated for in kind, so that permanent effects will lead to a net increase in available quality habitat over the permit term of 50 years.

The addition of adverse and minimal effects to CCV steelhead, CV fall-run Chinook salmon, and CV late fall-run Chinook salmon within the action area to the environmental baseline and the cumulative effects, taking into account the status of the species and critical habitat, is not expected to (1) reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing its numbers, reproduction, or distribution; or (2) appreciably diminish the value of designated critical habitat as a whole for the conservation of the species.

## **2.8. Conclusion**

After reviewing and analyzing the current status of the covered fish species and critical habitat, the environmental baseline within the action area, the effects of the proposed action, the effects of other activities caused by the proposed action, and cumulative effects, it is NMFS' biological opinion that the proposed action is not likely to jeopardize the continued existence of CCV steelhead, CV fall-run Chinook salmon, or CV late fall-run Chinook salmon, nor destroy or adversely modify designated critical habitat for CCV steelhead. No critical habitat has been designated or proposed for CV fall-run Chinook salmon or CV late fall-run Chinook salmon, however, if critical habitat is designated in the action area in the future, the proposed action is not likely to destroy or adversely modify designated critical habitat.

## **2.9. Incidental Take Statement**

Section 9 of the ESA and Federal regulations pursuant to section 4(d) of the ESA prohibit the take of endangered and threatened species, respectively, without a special exemption. "Take" is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. "Harm" is further defined by regulation to include significant habitat modification or degradation that actually kills or injures fish or wildlife by significantly impairing essential behavioral patterns, including breeding, spawning, rearing, migrating, feeding, or sheltering (50 CFR 222.102). "Incidental take" is defined by regulation as takings that result from, but are not the purpose of, carrying out an otherwise lawful activity conducted by the Federal agency or applicant (50 CFR 402.02). section 7(b)(4) and section 7(o)(2) provide that taking that is incidental to an otherwise lawful agency action is not considered to be prohibited taking under the ESA if that action is performed in compliance with the terms and conditions of this ITS.

NMFS anticipates incidental take of the following Covered Species, currently not listed or proposed for listing under the ESA, during the 50-year permit term: CV fall-run and CV late fall-

run Chinook salmon. There are no take prohibitions under the ESA for these salmon runs at the time of writing this biological opinion. The incidental take statement and ITP shall become effective for CV fall-run and CV late fall-run Chinook salmon if they become listed under the ESA during the terms of this opinion and the ITP.

For any USACE permits required for construction components under the Covered Activities, and to the extent this opinion satisfies the level of detail needed to analyze the associated effects, this biological opinion satisfies the requirements for the USACE to consult with NMFS under section 7 of the ESA.

### **2.9.1. Amount or Extent of Take**

In the biological opinion, NMFS determined that incidental take is reasonably certain to occur as follows:

NMFS anticipates that covered fish species will be harassed, harmed, or killed due to impacts related to impaired water quality, physical disturbance effects, acoustic effects from pile driving, dewatering, and fish capture and relocation.

NMFS cannot precisely quantify and track the amount or number of individuals per species that are expected to be taken incidentally as a result of Covered Activities. This is due to the variability and uncertainty associated with the exact number and nature of Covered Activities to occur in anadromous streams, the response of listed species to the effects of Covered Activities, the varying population size of each species, annual variation in the timing of migration, individual habitat use within the action area, and difficulty in observing injured or dead fishes. However, it is possible to estimate the extent of incidental take by designating as ecological surrogates, which are those elements of the project that are expected to result in incidental take. Ecological surrogates are more predictable and/or measurable and monitoring those surrogates will determine the extent to which incidental take is occurring.

Incidental take will occur during trapping and handling of covered fish species for research and monitoring within the reserve system and on land being considered for acquisition into the reserve system. Approximately 100 juveniles of each of the three covered fish species, are expected to be captured throughout the action area per survey year, a small proportion of which may be injured or killed. Harassment, harm, or death resulting from capture, handling, measuring, or marking fish is expected to occur. Incidental mortality is expected to be less than 5% of fish captured and released. If more than five CCV steelhead juveniles or ten Chinook salmon are killed in any survey year, the anticipated incidental take levels described are also exceeded, triggering the need to reinitiate consultation.

Harassment, harm, or death resulting from fish capture and relocation due to Covered Activities that include dewatering. Fish present and unable to avoid the fish capture location would be harassed, harmed, or killed during fish capture and relocation. Incidental mortality is expected to be less than 3% of fish captured and released. If mortality greater than 3% occurs, the anticipated incidental take levels described are also exceeded, triggering the need to reinitiate consultation.

The most appropriate threshold for most of the incidental take associated with the PCCP are ecological surrogates of temporary and permanent habitat disturbance during Covered Activities.

The ecological surrogate for covered fish species responses that result from habitat disturbance is described as follows. If permanent physical disturbance of 655 acres or temporary disturbance of 165 acres of combined riparian/riverine habitat is exceeded, the anticipated incidental take levels described are also exceeded, triggering the need to reinitiate consultation. NMFS anticipates incidental take due to habitat disturbance from the following:

- (1) Harassment, harm, or death resulting from habitat-related disturbances during construction activities, resulting in the incursion of contaminants into the action area. Increases in contaminants are reasonably certain to result in harm to the species through modification or degradation of the PBFs for rearing, spawning, and migration that will result in physiological impacts (*i.e.*, to the gills of fishes), temporary displacement of individuals, reduced feeding, and increased predation. A very small proportion of fish present would be expected to die as a result of contaminant increases.
- (2) Harassment, harm, or death resulting from habitat-related disturbances during construction activities, resulting in turbidity increases extending up to 100 feet from the bank and 300 feet downstream. Increases in turbidity are reasonably certain to result in harm to the species through modification or degradation of the PBFs for rearing and migration that will result in physiological impacts (*i.e.*, to the gills of fishes), temporary displacement of individuals, reduced feeding, and increased predation. A very small proportion of fish present would be expected to die as a result of turbidity increases.
- (3) Harassment, harm, or death during construction 100 feet beyond the construction footprint in all directions on the stream side of Covered Activities, including moving, removal, or addition of material into the active channel during construction, modification, or removal of structures. Fish present in the action area would startle and move to adjacent deeper water resulting in increased predation and reduced survival. Fish present and unable to avoid the construction site activities would be crushed and killed.
- (4) Harassment, harm, or death resulting from exposure to temporary high noise levels (> 206 dB peak) or sustained exposure to lower sound levels (>183 or >187 dB SEL, depending on fish size) within the water column during pile driving with impact hammers. Fish present and unable to avoid waters that reach the 206 dB peak may be harmed or killed, and juvenile and adult fish present and unable to avoid waters that reach the 183 or 187 dB SEL, respectively, may be injured or killed.
- (5) Harm from temporary and permanent physical disturbance to a total area of up to 490 acres of riparian habitat. The maximum amount of temporary effects to riparian habitat is 115 acres. The maximum amount of permanent impacts to riparian habitat is 375 acres. Removal of vegetation is reasonably certain to result in harm to the species through modification or degradation of the PBFs for spawning, rearing, and migration that will result in temporary displacement of individuals, loss of cover, increased predation, and reduced growth due to decreased food inputs.
- (6) Harm from temporary and permanent physical disturbance to a total area of up to 655 acres of riverine habitat. The maximum amount of temporary effects to riverine habitat

is 165 acres. The maximum amount of permanent impacts to riverine habitat is 490 acres. Disturbance to riverine habitat is reasonably certain to result in harm to the species through modification or degradation of the PBFs for spawning, rearing, and migration that will result in temporary displacement of individuals, loss of cover, and increased predation.

Harassment, harm, or death resulting from other activities (recreation). Fish or eggs present and unable to avoid people or dogs in the water will be harassed, harmed, or killed. A maximum of 70 miles of new trails will be created within the reserve system, an addition of approximately 50 acres of trails. If this is exceeded, the anticipated incidental take levels described are also exceeded, triggering the need to reinitiate consultation.

### **2.9.2. Effect of the Take**

In the biological opinion, NMFS determined that the amount or extent of anticipated take, coupled with other effects of the proposed action, is not likely to result in jeopardy to the covered fish species or destruction or adverse modification of critical habitat.

### **2.9.3. Reasonable and Prudent Measures**

“Reasonable and prudent measures” are nondiscretionary measures that are necessary or appropriate to minimize the impact of the amount or extent of incidental take (50 CFR 402.02).

NMFS believes that implementation of the entire PCCP constitutes measures appropriate to minimize take of all covered fish species. The following chapters of the PCCP will specifically minimize the take of covered fish species:

- Conservation Strategy (Chapter 5)
- Program Participation and Conditions on Covered Activities (Chapter 6)
- Monitoring and Adaptive Management (Chapter 7)
- Plan Implementation (Chapter 8)

Additionally, NMFS includes the following reasonable and prudent measure:

- (1) The permittees shall take measures to ensure that individual Covered Activities authorized annually through the PCCP will minimize incidental take of covered fish species, will monitor and report incidental take of covered fish species, and where feasible, obtain specific project information to better assess the effects and benefits of Covered Activities authorized through the PCCP.

#### 2.9.4. Terms and Conditions

The terms and conditions described below are non-discretionary, and NMFS or any applicant must comply with them in order to implement the RPMs (50 CFR 402.14). NMFS or any applicant has a continuing duty to monitor the impacts of incidental take and must report the progress of the action and its impact on the species as specified in this ITS (50 CFR 402.14). If the entity to whom a term and condition is directed does not comply with the following terms and conditions, protective coverage for the proposed action would likely lapse.

- (1) The following terms and conditions implement reasonable and prudent measure 1:
  - a. In order to monitor the impact and track incidental take of covered fish species, the permittees, which are responsible for administration of the PCCP, must annually submit to NMFS a report of the previous year's Covered Activities. The annual report shall include a summary of the specific type and location of each project, stratified by individual project, 5th field HUC, affected species, and ESU/DPS. Further, the report shall include:
    - i. Summary narrative detailing fish relocation and survey activities, including the number and species of fish captured and the number and species injured or killed. Any capture, injury, or mortality of adult covered fish species will be noted in the monitoring data and report. Any injuries or mortality from a fish relocation site that exceeds 3 percent of the affected Covered Species shall have an explanation describing why. Any injuries or mortality from a fish survey that exceeds 5 percent of the affected Covered Species shall have an explanation describing why.
    - ii. The amount of aquatic habitat disturbed at each project site, in linear feet and/or acres.
    - iii. The total number and species of fish captured and the total number and species injured or killed during the previous three years of PCCP implementation.
    - iv. The number and type of instream structures implemented within salmonid stream channels.
    - v. The number and type of fish passage barriers that have been remediated or removed including screening of previously unscreened diversions, fish ladders built, dams removed, etc. including the number of miles of restored access to unoccupied salmonid habitat.
    - vi. The annual and running total amounts of riparian habitat temporarily impacted, permanently impacted, and restored.
    - vii. The annual and running total amounts of riverine habitat temporarily impacted, permanently impacted, and restored.

- b. The annual report(s) shall be filed not later than July 1st, covering the previous calendar year. The report should be submitted (preferably by email) to the following:

Assistant Regional Administrator  
California Central Valley Office  
National Marine Fisheries Service  
650 Capitol Mall, Suite 5-100  
Sacramento CA 95814  
Phone: (916) 930-3600  
Fax: (916) 930-3629  
Email: [cevo.consultationrequests@noaa.gov](mailto:cevo.consultationrequests@noaa.gov)

## **2.10. Conservation Recommendations**

Section 7(a)(1) of the ESA directs Federal agencies to use their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of the threatened and endangered species. Specifically, conservation recommendations are suggestions regarding discretionary measures to minimize or avoid adverse effects of a proposed action on listed species or critical habitat or regarding the development of information (50 CFR 402.02).

- (1) All permittees and participating special entities should conduct in-water work only during the recommended work window of June 1 to October 31.
- (2) All permittees and participating special entities should minimize any potential take whenever possible, and implement practices that avoid or minimize negative impacts to salmon, steelhead, and their critical habitat.
- (3) All permittees and participating special entities should support and promote aquatic and riparian habitat restoration within Placer County, especially those with listed aquatic species. Practices that avoid or minimize adverse effects to listed species should be encouraged.
- (4) All permittees and participating special entities should work cooperatively with State and Federal agencies, private landowners, governments, and local watershed groups to identify opportunities for cooperative analysis and funding to support salmonid habitat restoration projects and implement high priority actions in the NMFS Central Valley Salmon and Steelhead Recovery Plan.
- (5) All permittees and participating special entities should encourage and post interpretative signage near critical habitat and waters that may contain Covered Species to inform land users of the endangered and threatened salmon and steelhead that occur within Placer County and actions that they can take to help and/or prevent further harm to those species. Signage could include information about the months when Covered Species are present or spawning, appearance of redds, notice to avoid redds, how to avoid impact to species, etc.

- (6) All permittees and participating special entities should work cooperatively with State and Federal agencies, private landowners, governments, local watershed groups, and any other applicable entities to maintain flows and water temperatures in Auburn Ravine to sustain the Covered Species.
- (7) All permittees and participating special entities should consider alternative management options to beaver and beaver dam removal where dams could positively affect salmonids and their habitat. These management options could include protecting culverts by screening the entrance, notching beaver dams rather than removing, or attracting beavers to other locations where they could be beneficial. All permittees should stay informed on best management and conservation practices for beavers and their dams. The PCA should stay informed on research on beavers' impacts on salmonid habitat. The PCA should consider working with partners to conduct or fund similar research within the reserve system.

In order for NMFS to be kept informed of actions minimizing or avoiding adverse effects or benefitting listed species or their habitats, NMFS requests notification of the implementation of any conservation recommendations.

### **2.11. Reinitiation of Consultation**

This concludes formal consultation for the Placer County Conservation Program Habitat Conservation Plan.

As 50 CFR 402.16 states, reinitiation of consultation is required and shall be requested by the Federal agency or by the Service 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 taking specified in the ITS 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 identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion, or (4) a new species is listed or critical habitat designated that may be affected by the action.

## **3. MAGNUSON-STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT ESSENTIAL FISH HABITAT RESPONSE**

Section 305(b) of the MSA directs Federal agencies to consult with NMFS on all actions or proposed actions that may adversely affect EFH. Under the MSA, this consultation is intended to promote the conservation of EFH as necessary to support sustainable fisheries and the managed species' contribution to a healthy ecosystem. For the purposes of the MSA, EFH means "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity", and includes the physical, biological, and chemical properties that are used by fish (50 CFR 600.10). Adverse effect means any impact that reduces quality or quantity of EFH, and may include direct or indirect physical, chemical, or biological alteration of the waters or substrate and loss of (or injury to) benthic organisms, prey species and their habitat, and other ecosystem components, if such modifications reduce the quality or quantity of EFH. Adverse effects on

EFH may result from actions occurring within EFH or outside of it and may include site-specific or EFH-wide impacts, including individual, cumulative, or synergistic consequences of actions (50 CFR 600.810). Section 305(b) of the MSA also requires NMFS to recommend measures that can be taken by the action agency to conserve EFH. Such recommendations may include measures to avoid, minimize, mitigate, or otherwise offset the adverse effects of the action on EFH [CFR 600.905(b)].

This analysis is based, in part, on the EFH assessment determined by NMFS and descriptions of EFH for Pacific Coast salmon (Pacific Fishery Management Council [PFMC] and NMFS 2014b) contained in the fishery management plans developed by the PFMC and approved by the Secretary of Commerce.

NMFS completed this EFH consultation on the proposed issuance of an ITP by NMFS for the PCCP, in accordance with section 305(b)(2) of the MSA (16 U.S.C. 1801 et seq.) and implementing regulations at 50 CFR 600.

NMFS has completed pre-dissemination review of this document using standards for utility, integrity, and objectivity in compliance with applicable guidelines issued under the Data Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001, Public Law 106-554). The document will be available within two weeks at the [NOAA Library Institutional Repository](#). A complete record of this consultation is on file at NMFS' California Central Valley Office.

### **3.1. Essential Fish Habitat Affected by the Project**

EFH is designated under the Pacific Coast Salmon FMP, which includes the action area of the proposed action. EFH in the action area consists of adult migration habitat, spawning habitat, and juvenile rearing and migration habitat for two Chinook salmon runs (fall- and late fall-run Chinook salmon). Habitat areas of particular concern (HAPCs) that may be either directly or indirectly adversely affected include: (1) complex channels and floodplain habitats, (2) thermal refugia, and (3) spawning habitat. The other HAPCs for Pacific Coast Salmon: (4) estuaries, and (5) marine and estuarine submerged aquatic vegetation, are not present in the action area.

### **3.2. Adverse Effects on Essential Fish Habitat**

Chinook salmon EFH affected by the PCCP includes Covered Activities that are unable to avoid impacts to riparian and/or riverine habitat. The action area provides three general habitat functions essential to one or more life stages, including freshwater spawning and egg incubation, juvenile rearing, and juvenile and adult migration for Chinook salmon. The relative value of these habitats is based on the condition of the habitat itself and the functions that they provide. With regard to the proposed action, and where the specific action components are expected to cause a change in habitat conditions, the changes are identified based on flow, water temperature, and the availability of spawning, rearing, and migration habitats. Long-term effects of Covered Activities are expected to include a loss of approximately 490 acres of EFH within the action area. Temporary effects of Covered Activities are expected to impact 165 acres of EFH. A minimum of 32 acres of riparian habitat will be restored. Additionally, impacts from other Covered Activities will be mitigated by the restoration of riparian habitat at a ratio of



1.52:1 up to an additional 1,425 acres of combined riverine/riparian complex. Therefore, up to 1,457 acres of combined riverine/riparian complex may be restored, which would be a net increase in EFH of up to 967 acres.

Consistent with the ESA portion of this document, which determined that aspects of the proposed action would result in impacts to covered fish species and covered fish habitat, we conclude that aspects of the proposed action would also adversely affect EFH for Chinook salmon. Effects to the HAPCs listed in Section 3.1 were described in Section 2.5 and subsections. A list of temporary and permanent adverse effects to EFH HAPCs is included in this EFH consultation. We conclude that the following adverse effects on EFH designated for Pacific Coast Salmon are reasonably certain to occur (affected HAPCs are indicated by number, corresponding to the HAPCs listed above in Section 3.1).

### **3.2.1. Water Quality**

#### ***3.2.1.1. Contaminants and Pollution-related Effects***

- Degraded water quality (1, 2, 3)
- Reduction in aquatic macroinvertebrate production (1)

#### ***3.2.1.2. Sedimentation and Turbidity***

- Reduced habitat complexity (1)
- Degraded water quality (1, 2, 3)
- Reduction in aquatic macroinvertebrate production (1)

### **3.2.2. Physical Disturbance Effects**

- Reduced habitat complexity (1)
- Degraded water quality (1, 2, 3)

### **3.2.3. Acoustic Effects from Impact Pile Driving**

- Ensonification of eggs (3)

### **3.2.4. Dewatering**

- Reduced habitat complexity (1)
- Degraded water quality (1, 2, 3)
- Reduction in aquatic macroinvertebrate production (1)

### **3.2.5. Land Conversion and Urbanization**

- Reduced habitat complexity (1)
- Degraded water quality (1, 2, 3)
- Reduction in aquatic macroinvertebrate production (1)

### **3.2.6. Water Quantity**

- Reduced habitat complexity (1)
- Degraded water quality (1, 2, 3)
- Reduction in aquatic macroinvertebrate production (1)

### **3.2.7. Disturbance to Riparian Habitat**

- Reduced habitat complexity (1)
- Degraded water quality (1, 2, 3)
- Reduction in aquatic macroinvertebrate production (1)

### **3.2.8. Disturbance to Riverine Habitat**

- Reduced habitat complexity (1)
- Degraded water quality (1, 2, 3)
- Reduction in aquatic macroinvertebrate production (1)

## **3.3. Essential Fish Habitat Conservation Recommendations**

The restoration and conservation planned by the PCCP will offset adverse effects to EFH, so no further conservation recommendations are provided. Therefore, the statutory response requirement will be met through the reporting requirements as outlined in the terms and conditions of this opinion.

## **3.4. Supplemental Consultation**

NMFS must reinitiate EFH consultation with itself if the proposed action is substantially revised in a way that may adversely affect EFH, or if new information becomes available that affects the basis for NMFS' EFH Conservation Recommendations (50 CFR 600.920(l)).

#### 4. DATA QUALITY ACT DOCUMENTATION AND PRE-DISSEMINATION REVIEW

The Data Quality Act (DQA) specifies three components contributing to the quality of a document. They are utility, integrity, and objectivity. This section of the opinion addresses these DQA components, documents compliance with the DQA, and certifies that this opinion has undergone pre-dissemination review.

##### 4.1. Utility

Utility principally refers to ensuring that the information contained in this consultation is helpful, serviceable, and beneficial to the intended users. The intended users of this opinion are NMFS, USACE, USFWS, and PCCP permittees. Other interested users could include Placer County, City of Lincoln, SPRTA, PCWA, PCA, CDFW, DWR, Central Valley Regional Water Quality Control Board, U.S. Environmental Protection Agency (EPA), Friends of Auburn Ravine, Save Auburn Ravine Salmon and Steelhead. Individual copies of this opinion were provided to NMFS, USFWS, USACE, and Placer County. The document will be available within two weeks at the NOAA Library Institutional Repository [<https://repository.library.noaa.gov/welcome>]. The format and naming adheres to conventional standards for style.

##### 4.2. Integrity

This consultation was completed on a computer system managed by NMFS in accordance with relevant information technology security policies and standards set out in Appendix III, 'Security of Automated Information Resources,' Office of Management and Budget Circular A-130; the Computer Security Act; and the Government Information Security Reform Act.

##### 4.3. Objectivity

Information Product Category: Natural Resource Plan

**Standards:** This consultation and supporting documents are clear, concise, complete, and unbiased; and were developed using commonly accepted scientific research methods. They adhere to published standards including the NMFS ESA Consultation Handbook, ESA regulations, 50 CFR 402.01 et seq., and the MSA implementing regulations regarding EFH, 50 CFR 600.

**Best Available Information:** This consultation and supporting documents use the best available information, as referenced in the References section. The analyses in this opinion and EFH consultation contain more background on information sources and quality.

**Referencing:** All supporting materials, information, data and analyses are properly referenced, consistent with standard scientific referencing style.

**Review Process:** This consultation was drafted by NMFS staff with training in ESA and MSA implementation, and reviewed in accordance with West Coast Region ESA quality control and assurance processes.

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## **6. APPENDICES**