

FINAL

WESTERN PLACER COUNTY IN-LIEU FEE PROGRAM ENABLING INSTRUMENT

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WESTERN PLACER COUNTY IN-LIEU FEE PROGRAM ENABLING INSTRUMENT

This In-Lieu Fee Program Enabling Instrument (“Instrument”) for the Western Placer County In-Lieu Fee Program (“ILF Program” or “Program”), dated ____ day of _____, 2018, is made by and among the County of Placer (“Program Sponsor”), the Sacramento District of the U.S. Army Corps of Engineers (“USACE”), Region IX of the U.S. Environmental Protection Agency (“USEPA”), and the Central Valley Regional Water Quality Control Board (“Central Valley Water Board”) (collectively, the “Parties,” and each individually, a “Party”). The USACE, USEPA, U.S. Fish and Wildlife Service (“USFWS”), the California Department of Fish and Wildlife (“CDFW”), and Central Valley Water Board comprise the Interagency Review Team for the Program, as hereinafter defined (collectively, the “IRT,” and each individually, an “IRT Member”). This Instrument sets forth the agreement of the Parties regarding the establishment, use, operation, and maintenance of the Program.

RECITALS

- A. Program Sponsor is responsible for establishing and operating the Program in accordance with this Instrument.
- B. USACE and USEPA have jurisdiction over Waters of the U.S. pursuant to the Clean Water Act, 33 U.S.C § 1251 *et seq.* Waters of the U.S. include jurisdictional wetlands.
- C. USEPA is responsible for protecting and regulating the quality of Waters of the U.S., as hereinafter defined, under the Clean Water Act, 33 U.S.C. § 1251 *et seq.*
- D. USFWS and NMFS have jurisdiction over the conservation, protection, restoration, enhancement and management of fish, wildlife, native plants and their habitats under various federal laws, including the federal Endangered Species Act (“FESA”), the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. §§ 1801 *et seq.*), and the Fish and Wildlife Coordination Act (16 U.S.C. §§ 661-666(c)).
- E. CDFW has jurisdiction over the conservation, protection, restoration, enhancement and management of fish, wildlife, native plants and habitat necessary for sustainable populations of those species under various California laws, including but not limited to the California Endangered Species Act (“CESA”), the Natural Community Conservation Planning Act (“NCCPA”), the Native Plant Protection Act (Cal. Fish & G. Code §§ 1900 *et seq.*), fully protected species statutes (Cal. Fish & G. Code §§3511, 4700, 5050, and 5515) and California Fish and Game Code sections 1600 *et seq.*, 1802, and 3500.
- F. Central Valley Water Board is responsible for protecting and regulating the quality of Waters of the State, as hereinafter defined, under the Porter-Cologne Water Quality Control Act, Cal. Water Code § 13000 *et seq.*, and preventing, reducing, and eliminating pollution under the CWA, 33 U.S.C. §1251 *et seq.*
- G. The IRT will oversee the establishment, use, operation, and maintenance of the ILF Program.

AGREEMENT

NOW, THEREFORE, in consideration of the foregoing Recitals, the Parties hereby agree as follows:

I. Purpose, Framework, and Authorities

A. Purpose

The purpose of this Instrument is to establish guidelines, responsibilities, and standards for the establishment, use, operation, and maintenance of the Program. The primary goal of the Program is to provide an in-lieu fee option for effective Compensatory Mitigation for Impacts to Aquatic Resources, including Waters of the U.S. and Waters of the State, authorized by IRT Members in western Placer County.

Specifically, the Program will be used for Compensatory Mitigation for impacts to Aquatic Resources, including:

1. Unavoidable Impacts to Waters of the U.S. that result from activities authorized under sections 401 and 404 of the CWA; and
2. Unavoidable Impacts to Waters of the State that result from activities authorized under the Porter-Cologne Water Quality Control Act. Objectives

The objectives of the Program are to:

1. Provide an in-lieu fee option for Compensatory Mitigation for Impacts to Aquatic Resources authorized under individual, nationwide, and programmatic permits, certifications, and other approvals or authorizations, including impacts authorized under the proposed Western Placer County Habitat Conservation Plan and Natural Community Conservation Plan ("HCP/NCCP"), from large-scale and linear infrastructure projects (e.g., roads, levee and canal operation and maintenance, pipelines, transmission lines), and other large- and small-scale development projects;
2. Apply fee revenues with economies of scale and flexibility to serve the greatest Aquatic Resource needs of the Program Area and track with sufficient detail the types of Aquatic Resources impacted and mitigated to enable assessment of Program effectiveness;
3. Achieve ecological success on a watershed basis by:
 - a. Siting ILF Projects, as hereinafter defined, using the best available decision support tools; and
 - b. Aligning Compensatory Mitigation with Program conservation priorities and HCP/NCCP conservation goals and objectives, once the HCP/NCCP is approved and implemented.
4. Coordinate implementation of Compensatory Mitigation under the Program with the implementation of the HCP/NCCP and the CARP, once they are approved;
5. Engage various partners, such as non-profit conservation organizations, private entities, federal, state, tribal, and local aquatic resource management and regulatory authorities, and others with knowledge of Aquatic Resource needs within the Program Area; and

6. Operate a technically, operationally, and financially feasible and accountable Program that meets the requirements of the 33 C.F.R. Parts 325 and 332; 40 C.F.R. Part 230 ("Mitigation Rule").

B. Framework

This Instrument establishes the Program Area for western Placer County, which is also the geographic service area for all credit types, to provide Compensatory Mitigation for permitted Impacts. (See **Exhibit A.**) The Program Area is coextensive with the proposed HCP/NCCP area. The Program Area includes areas within cities that are not participating in the proposed HCP/NCCP only for the purpose of providing Compensatory Mitigation for projects and activities proposed for coverage under the draft HCP/NCCP, which may be constructed or implemented, in part, in such non-participating cities. The Program establishes the following Credit types: Vernal Pool Complex, Vernal Pool, Aquatic/Wetlands Complex, Fresh Emergent Marsh, Non-vernal Pool Seasonal Wetlands, Lacustrine, Riverine and Riparian Complex, Riparian Wetlands, Riverine with Riparian, and Riverine without Riparian. Program Credits are described in greater detail in the Compensation Planning Framework and **Exhibit B.**

For each ILF Project, the Program Sponsor will submit a site-specific Mitigation Plan, as defined and further described below, for review and approval as amendments to this Instrument through the process outlined in **Exhibit F.** Upon approval of each Mitigation Plan, Program Sponsor may implement the ILF Project and Generate Credits in accordance with the Mitigation Plan and, upon Release of such Credits, sell or otherwise use the Credits, as set forth in this Instrument.

1. Federal Authorities

The establishment, use, operation and maintenance of the Program will be carried out in accordance with the following federal authorities, as applicable:

- a. Clean Water Act (33 U.S.C. § 1251 et seq.);
- b. National Environmental Policy Act (42 U.S.C. § 4321 et seq.);
- c. Federal Endangered Species Act (16 U.S.C. § 1531 et seq.; 50 C.F.R. Part 402);
- d. Fish and Wildlife Coordination Act (16 U.S.C. § 661 et seq.);
- e. Magnuson-Stevens Fishery Conservation and Management Act, Essential Fish Habitat for Chinook salmon in Amendment 14 of the Pacific Salmon Fishery Management Plan pursuant to such Act (16 U.S.C. § 1801 et seq.);
- f. National Historic Preservation Act (16 U.S.C. § 470);
- g. Regulatory Program of the USACE (33 C.F.R. Parts 320-332);
- h. Guidelines for Specification of Disposal Sites for Dredged and Fill Material (40 C.F.R. Part 230);
- i. Compensatory Mitigation for Losses of Aquatic Resources (33 C.F.R. Parts 325 and 332; 40 C.F.R. Part 230);
- j. Executive Order 11990 - Protection of Wetlands;
- k. Executive Order 11988 - Floodplain Management;

- I. Memorandum of Agreement between the U.S. Environmental Protection Agency and the Department of the Army concerning the Determination of Mitigation Under the Clean Water Act, § 404(b)(1) Guidelines (February 6, 1990), as amended, and
- m. Interagency Cooperation – Endangered Species Act of 1973 (50 C.F.R. Part 402).

2. California Authorities

The establishment, use, operation and maintenance of the Program will be carried out in accordance with the following state authorities, as applicable:

- a. Porter-Cologne Water Quality Control Act (Cal. Water Code § 13000 et seq.);
- b. California Water Board Regulations (Cal. Code Regs., tit. 23, divs. 3-5);
- c. Section 1600, et seq., of the California Fish and Game Code;
- d. California Environmental Quality Act (CEQA) (Public Resources Code § 21000, et seq.) and State CEQA Guidelines (Tit. 14 Cal. Code Regs., Ch. 3);
- e. California Endangered Species Act (Fish and Game Code § 2050, et seq.);
- f. California Natural Community Conservation Planning Act (Fish and Game Code § 2800, et seq.); and
- g. Conservation of Wildlife Resources (Fish and Game Code § 1800, et seq.).

II. Definitions

The initially-capitalized terms used in this Instrument are defined as set forth below.

“Adaptive Management” means an approach to natural resource management which incorporates changes to management practices, including corrective actions as determined to be appropriate by the IRT in discussion with the Program Sponsor, based upon Annual Report results and IRT review of overall Program performance and compliance.

“Advance Credits” means any Program Credits that are available for Transfer by the Program Sponsor prior to being Fulfilled in accordance with an approved Mitigation Plan.

“Annual Report” means the annual report provided by Sponsor pursuant to Section VII.A of this Instrument.

“Aquatic Resources” mean Waters of the U.S.; Waters of the State; stream systems; vernal pools; and sensitive riparian habitats, including upland components that are supported by stream hydrology within Placer County.

“Closure” means termination of the Program as provided in Section VIII.

“Compensation Planning Framework” means the document established in Section IV.C and attached as **Exhibit D**.

“Compensatory Mitigation” means the restoration (re-establishment or rehabilitation), establishment (creation), enhancement, and/or in certain circumstances preservation of Aquatic Resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved.

“Conservation Easement” means a perpetual conservation easement, as defined by California Civil Code §815.1, substantially in the form of **Exhibit C**.

“Credit” is a unit of measure representing the accrual, attainment, or protection of Aquatic Resources on an ILF Project site in accordance with this Instrument. One credit is equivalent to one acre, or as otherwise defined in **Exhibit D**.

“Credit Release” means a determination that Credits associated with an approved Mitigation Plan are available for Fulfillment of Advance Credit Transfers.

“Fulfill” and “Fulfillment” mean application of Released Credits in accordance with a Credit Release schedule in an approved Mitigation Plan to satisfy the compensatory mitigation requirements represented by the Advance Credits. Only after any Advance Credit Transfers have been fulfilled through the application of Released Credits from an ILF Project (in accordance with the Credit Release schedule in an approved Mitigation Plan), may additional Released Credits from that ILF Project be Transferred.

“Functions” mean the physical, chemical, or biological processes that occur in ecosystems.

“HCP/NCCP” means the Western Placer County Habitat Conservation Plan and Natural Community Conservation Plan.

“Impacts” means adverse effects.

“ILF Project” or “Project” means Compensatory Mitigation funded or implemented by the Program Sponsor, its designee, consultants or contractors, for the purpose of establishing Credits for the Program in accordance with this Instrument, including the Compensation Planning Framework.

“Interim Management” means the management, monitoring, Adaptive Management, reporting, and other activities to be undertaken at an ILF Project site during the Interim Management Period.

“Interim Management Period” means the period from the date of Mitigation Plan approval and Instrument Amendment until all the Performance Standards in an approved Mitigation Plan have been met and the final Credit Release has occurred in accordance with Section VI.E.1.

“Interim Management Plan” means the document that describes the Interim Management to be implemented by the Program Sponsor during the Interim Management Period. Interim Management Plans are a component of Mitigation Plans.

“Long-Term Management Period” means the period beginning upon conclusion of the Interim Management Period for an ILF Project, and continuing in perpetuity, during which the ILF Project site is to be managed, monitored, and maintained pursuant to a Long-term Management Plan.

“Long-Term Management Plan” means the document that identifies site-specific land management activities that are required to be performed at each of the ILF Project sites, including, but not necessarily limited to, biological monitoring, improvements to biological carrying capacity, enforcement measures, and other actions designed to protect or improve

the habitat values of the ILF Project site, substantially in the form of **Exhibit L**. Each Mitigation Plan will include a Long-Term Management Plan.

“Management Account” means the financial account established by the Program Sponsor as provided in Section IV.D.2, which is dedicated to funding the long-term, perpetual management, maintenance, and monitoring of ILF Project sites, consistent with the Mitigation Plan for each site.

“Mitigation Plan” means the document that formally establishes an ILF Project and stipulates the terms and conditions of its construction and habitat establishment activities required to be conducted on the ILF Project site to establish Credits. Each approved Mitigation Plan will be bound by the terms and conditions of the Instrument by reference.

“Performance Standards” means the minimum standards set forth to define the successful development of Aquatic Resources.

“Permittee” means a person or entity to which Program Sponsor has Transferred a Credit, or proposes to Transfer a Credit, to fulfill a legal obligation to provide Compensatory Mitigation under a permit, approval, or authorization issued by an IRT Member.

“Program Account” means the account established by the Program Sponsor at a financial institution that is a member of the Federal Deposit Insurance Corporation (FDIC) or any successor organization to the FDIC, and that is used by the Program Sponsor for the purpose of receiving, managing, and administering funds received from Credit Transfers to provide Compensatory Mitigation pursuant to this Program, as provided in **Exhibit E**.

“Program Area” means the geographical boundary of the Program and aligns with the geographical Service Area for all Program Credits, as depicted in **Exhibit A**.

“Program Establishment Date” is the date determined pursuant to Section IV.A, on which the Program is established and after which the Transfer of Credits may begin.

“Property Assessment” means the written ILF Project site evaluation signed by the Program Sponsor, substantially in the form attached in **Exhibit I**.

“Released Credits” means the Credits that have been generated by the Program Sponsor’s successful implementation of an ILF Project and have been authorized for Transfer by the IRT, in accordance with an IRT approved Credit Release schedule.

“Remedial Action” means any measures needed to remedy any failure to achieve Performance Standards or any injury or adverse impact to an ILF Project site, as provided in Section V.C.1.a.

“Restore” or “Restoration” means the manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic Functions to a former or degraded Aquatic Resource. For the purpose of tracking net gains in Aquatic Resource area, restoration is divided into two categories: re-establishment and rehabilitation.

“RIBITS” means the Regulatory In-lieu Fee and Bank Information Tracking System (RIBITS) a web-based application that provides information to the IRT, Bank Sponsors, agencies, and

the general public on mitigation banks and in-lieu fee programs, associated documents, credit availability, service areas, and information on policies and procedures that affect mitigation bank and in-lieu fee development and operation.

“Services” mean the benefits that human populations receive from Functions that occur in ecosystems.

“Service Area” means the geographic area within which Impacts to Aquatic Resources that occur may be mitigated or compensated through Transfer of Program Credits. The Program’s Service Area is the Program Area.

“Transfer” means the use, sale, or conveyance of Credits by the Program Sponsor.

“Waters of the State” means any surface water or groundwater, including saline waters, saline waters within the boundaries of the State of California.

“Waters of the U.S.” means all waters and wetlands over which the USACE and the USEPA are granted jurisdiction in the Clean Water Act, 33 U.S.C. § 1251, *et seq.* as defined in 33 C.F.R. Part 328.

III. Stipulations

A. Disclaimer

This Instrument does not in any manner limit the legal authorities or responsibilities of any Party.

B. IRT Member Participation

IRT Member participation in the IRT will be based on each Member’s statutory authority and responsibilities. Where the Instrument requires IRT approval, review, comment, advice, recommendations, proposals, or other input from the IRT, it is referring to the IRT Members who represent a Party to this Instrument and who have applicable statutory authority and responsibilities, as determined by each IRT Member. If an IRT Member concludes based on its statutory authority and responsibilities that its approval and input are not required, it may so inform the other IRT Members and the IRT may proceed without that IRT Member’s input or approval.

C. Exhibits

The following Exhibits are attached to and incorporated by this reference into this Instrument:

1. Exhibit A – Program Area Maps
 - a. A-1 Map Showing Program Area and Regional Vicinity
 - b. A-2 Narrative description and explanation of Program Area
2. Exhibit B– Credit Release, Transfer, and Tracking
 - a. B-1 Credit Transfer Agreement Template
 - b. B-2 Credit Ledger
3. Exhibit C – Conservation Easement Template
4. Exhibit D – Compensation Planning Framework

5. Exhibit E – Program Account Terms and Procedures
6. Exhibit F – Mitigation Plan Review Process
7. Exhibit G – Mitigation Plan Template
8. Exhibit H – Fee Schedule
9. Exhibit I – Property Assessment
10. Exhibit J – Advance Credit Analysis
11. Exhibit K – List of Approved ILF Projects
12. Exhibit L – LTMP Template

IV. Program Structure and Implementation

A. Program Establishment

The Program Establishment Date will occur and Transfer of Advance Credits may begin once the Instrument has been fully executed by all of the Parties and the Program Account has been established. Within 30 days of the Program Establishment Date, the Program Sponsor shall upload the final, signed Instrument (including all of its Exhibits) to RIBITS and provide an electronic copy to each IRT Member.

B. Service Area

In accordance with 33 C.F.R. 332.8(d)(6)(ii)(A), this Instrument establishes the Program Area as the Service Area of the Program for all credit types (see **Exhibit A**). Credits are available within the Program Area for permitted Impacts to Aquatic Resources.

C. Compensation Planning Framework

In accordance with 33 CFR 332.8(d)(6)(iv)(A), the Compensation Planning Framework for the Program is attached as **Exhibit D**.

D. Program Account

In accordance with 33 C.F.R. 332.8(d)(6)(ii)(D) and 33 C.F.R. 332.8(i), the Program Sponsor will establish a dedicated Program Account as set forth in **Exhibit E** as a condition of establishment of the Program. The Program Account will be a financial account dedicated to the management and administration of funds received from the Transfer of Released Credits and disbursed to implement ILF projects and generate Released Credits under the Program. Revenues from the Transfer of Credits will be deposited in the Program Account and will be used only for the comprehensive costs associated with site selection, design, acquisition, implementation, and management of ILF Projects, and administrative costs for the Program Sponsor. All interest and earnings from the Program Account will also remain in the account and will be used only for such costs. The Program Account will be held in a financial institution that is a member of the Federal Deposit Insurance Corporation or any successor organization. All interest and earnings from the Program Account will remain in the account for the purpose of implementing ILF projects and generating Released Credits.

Upon request, the Program Sponsor will provide to any requesting IRT Member copies of any audited financial statements for any completed fiscal year. In accordance with 33 CFR

332.8(i)(4), the IRT may inspect, copy, and audit Program Account records by giving fourteen (14) days advance written notice to the Program Sponsor. When so requested, the Program Sponsor will make available for inspection all books, accounts, reports, files, and other records relating to the Program Account.

A portion of the funds received from the Transfer of Credits will be used by the Program Sponsor to cover the cost of administering the Program. The percentage of funds to be used by the Program Sponsor to cover administrative costs is set forth in **Exhibit E**.

1. Disbursements for Implementation of ILF projects

The Program Sponsor may disburse funds from the Program Account to cover the costs of implementing ILF Projects. Each ILF project will be implemented in accordance with a Mitigation Plan approved by the IRT. Each Mitigation Plan will include a detailed budget, and Program Sponsor's disbursements from the Program Account will be made in accordance with the budget. IRT approval will be required for any disbursement of Program Account funds in excess of ten percent of the approved budget for an ILF Project, as further described in **Exhibit E**.

The Program Sponsor may enter into contracts with third parties for the development, implementation, and/or long-term stewardship of individual ILF Projects. The Program Sponsor will pay third parties performing work to implement an ILF project in accordance with the budget included in the approved Mitigation Plan for the ILF project.

2. Funding for Long-Term Management and Maintenance of ILF project Sites

Funds for Long-term Management and Maintenance of ILF projects sites will be held in a Long-term Management and Maintenance Fund ("Management Account") that is a separate account within the Program Account. The Program Sponsor will establish a sub-account within the Management Account for each ILF project for the long-term management and maintenance of the ILF project site.

The Management Account and each ILF project sub-account will be tracked and reported separately in the Program Account report in each Annual Report. The Program Sponsor will disburse funds from the Management Account to the land manager for its performance of land management activities on the ILF project site in accordance with the Long-Term Management Plan for the site.

3. Reporting and Accounting

Annual Program Account reports shall be uploaded to RIBITS and emailed to the IRT by March 1. Reports will include detailed summaries of Program Account deposits and disbursements for each ILF Project made over the previous calendar year, in accordance with Section VII. A.4.

The Program Sponsor will apply generally accepted accounting principles (GAAP) to accounts including the Program Account. GAAP is a uniform set of minimum standards, supplemented by written guidelines, applicable to financial accounting and reporting in the United States.

The Financial Accounting Standards Board and the American Institute of Certified Public Accountants (AICPA) are authorized to establish these standards and guidelines. Importantly, under the AICPA Code of Professional Conduct, accountants such as the Program Sponsor's auditors can represent that an entity's financial statements are "in conformity with GAAP" only if those financial statements do not contain any departures from accounting principles promulgated by (or by a designee of) the AICPA. The Program Sponsor's conformance with GAAP will thus be reviewed on an ongoing basis as part of the Program Sponsor's annual independent financial review.

V. ILF Project Establishment and Operation

Program Sponsor will establish and operate ILF projects as provided in this Section. All ILF projects will require the approval of the IRT, and each ILF project will be proposed by the Program Sponsor and reviewed by the IRT as provided in this Section. The steps that will be required for review of ILF projects are illustrated in **Exhibit F**.

A. Establishment of ILF Projects

The Program Sponsor will evaluate potential ILF project sites using the prioritization criteria set forth in section D.3.7. ("Prioritization Strategy") of the Compensation Planning Framework (**Exhibit D**). If Advance Credits have been Transferred, and Program Sponsor has not yet satisfied its obligation to Fulfill such Advance Credits in accordance with Section VI.B, ILF Project sites that would help to satisfy that responsibility will be prioritized. The Program Sponsor will submit a proposed Instrument amendment to the IRT, consistent with 33 CFR 332.8(d)(2), along with a Mitigation Plan, for each proposed ILF Project. The ILF Project evaluation and approval process is as follows and is included as **Exhibit F**:

B. ILF Project Permits

The Program Sponsor or third parties under contract or agreement with the Program Sponsor will obtain all permits and authorizations required to construct, operate, and maintain an approved ILF Project. This Instrument does not constitute any such permit or authorization that may be required from any of the IRT Members for an ILF Project.

C. Operation of ILF Projects

Upon approval of a Mitigation Plan for an ILF Project, the Program Sponsor will be responsible for implementing the Mitigation Plan in accordance with this Section.

1. Interim Management and Monitoring

Program Sponsor will include a description of Interim Management activities in each Mitigation Plan for an ILF Project. Upon approval of the Mitigation Plan by the IRT, the Program Sponsor will be responsible for conducting management and monitoring activities according to the Mitigation Plan until the end of the Interim Management Period.

2. Remedial Action Plan

- a. If prior to program closure, any Party discovers any failure to achieve the Performance Standards or any injury or adverse impact to the ILF Project Site, the Party making the discovery will notify the other Parties. The IRT may require, by written notice, the Program Sponsor to develop and implement a Remedial Action plan to remedy such condition, as described below. The annual report required under Section VII.A will identify and describe any Remedial Action proposed, approved, or performed and, if any Remedial Action has been completed, evaluate its effectiveness.
- b. Within sixty (60) days of the date of written notice from the IRT, the Program Sponsor must develop a Remedial Action plan and submit it to each member of the IRT for written approval. The Remedial Action plan must describe proposed actions to achieve the Performance Standards or to remedy the injury or adverse impact to the ILF Project site and set forth a schedule within which the Program Sponsor will implement those actions. The Program Sponsor will implement the Remedial Action plan approved by the IRT. During the Interim Management Period, the cost to complete any Remedial Action will be limited to ILF Project contingency funds and the financial assurances established for that ILF Project. During the Long-Term Management Period, the cost to complete any Remedial Action will be limited to the funds in the sub-account established for the long-term management and maintenance of the ILF Project site pursuant to Section IV.D.2.
- c. Should the Program Sponsor and IRT agree that it is impracticable or infeasible to complete Remedial Actions on the ILF Project site, the Program Sponsor must propose an appropriate reduction in Credits to be generated by the ILF Project, or propose an alternative site or mechanism to replace any acreage or Aquatic Resource values and services that were impacted or did not achieve the described Performance Standards. Limitations on the cost of Remedial Actions do not affect Program Sponsor's obligation to Fulfill Advance Credits that have been Transferred in accordance with Section VI.B.
- d. The Program Sponsor will implement the necessary and appropriate Remedial Action in accordance with the Remedial Action plan approved by the IRT, subject to the limitations of this Section. In the event the Program Sponsor fails to submit a Remedial Action plan to the IRT or fails to implement a Remedial Action plan in accordance with this Section, the IRT may notify the Program Sponsor of a potential default in accordance with Section IX.B and pursue remedies for such default.

3. Long-Term Management and Monitoring

The Program Sponsor will be responsible for preparing Long-term Management Plans for ILF Projects in accordance with 33 CFR 332.4(c)(11). ILF Projects will be designed, to the maximum extent practicable, to be self-sustaining once Performance Standards have been achieved. Once the Interim Management Period is completed, Program Sponsor will manage and monitor the ILF Project site in perpetuity to preserve its habitat and conservation values in accordance with this Instrument, the Conservation Easement, the Long-term Management Plan, and, following approval of the HCP/NCCP, the HCP/NCCP and related take permits.

Each Long-term Management Plan will include a description of long-term management needs, annual cost estimates for these needs, and identify the funding mechanism that will be used to meet those needs. Appropriate long-term financing mechanisms include endowments, trusts, contractual arrangements with future responsible parties, and other appropriate financial instruments.

Each Long-term Management Plan will also provide for the implementation, in consultation with the IRT, of remedial actions to address any injury or direct or indirect impact to natural resources on the ILF Project site using funds for the Long-term Management and Maintenance of the site in the Management Account.

The Program Sponsor will itself perform long-term management activities on each ILF Project site or may transfer the long-term management responsibilities of the ILF Project site to a land stewardship entity, such as a public agency, non-governmental organization, or private land manager, after review and written approval by the IRT.

The IRT and the Program Sponsor, or the designated long-term land managers, will meet and confer upon the request of any one of them to consider mutually agreeable revisions to the Long-term Management Plan that would better conserve the habitat and conservation values of the ILF Project site.

4. Long-Term Ownership and Protection

The Program Sponsor will be responsible for ensuring long-term protection of each ILF Project, in accordance with 33 C.F.R. 332.7(a) and 332.8(t)(2), the details of which will be provided in the Mitigation Plan for each ILF Project. Long-term land stewards could include non-profit organizations, private entities, governmental entities, and others with knowledge of the Program Area willing to own the ILF Project site(s) and/or hold Conservation Easements on them.

The Program Sponsor will ensure that a Conservation Easement is in place prior to the first release of Released Credits. A draft Conservation Easement will be submitted to the IRT for review and approval (see **Exhibit C**). The form of Conservation Easement will provide for applicable IRT Members to have third-party enforcement rights, as appropriate. A copy of the recorded Conservation Easement will be furnished to the IRT and will become part of the official Program record. If any action is taken to void or modify an ILF Project Conservation Easement, Program Sponsor must notify the USACE in writing.

5. Inspections

With reasonable advance written notice provided to the Program Sponsor, at the request of the IRT, the Program Sponsor will provide for access to ILF Project sites to the IRT at reasonable times, as necessary to conduct inspections and compliance monitoring with respect to the requirements of this Instrument. In conducting inspections, IRT Members will not unreasonably disrupt or disturb activities on the ILF Project site.

VI. Generation and Release of Credits

In accordance with 33 CFR 332.8(d)(6)(iv)(B) and (C), Program Credits are available for Transfer by the Program Sponsor as provided in this Instrument to satisfy Compensatory Mitigation requirements set forth in permits issued by the IRT Members. The IRT will determine the number of Credits necessary to fulfill a Permittee's Compensatory Mitigation requirements, and will also determine the number of Released Credits that each ILF project will generate as it is completed, based on the achievement of applicable Performance Standards as reflected in the ILF project's Credit Release schedule.

A. Advance Credits

On the Program Establishment Date, Program Sponsor may Transfer _____ Advance Credits. The number of Advance Credits that are approved for Transfer was developed in coordination with the USACE and IRT and is based on (1) the percentage of the projected mitigation opportunities within the Service Area as outlined in the Compensation Planning Framework in **Exhibit D**, (2) the Program Sponsor's past performance for implementing compensatory mitigation activities within the Service Area, and (3) the projected financing necessary to begin planning and implementation of ILF Projects. Based on the considerations set forth in **Exhibit J**, this Instrument shall operate automatically to grant the Program Sponsor the Advance Credits identified in Table D-3 (Credit Types and Regulatory Nexus) in Exhibit J.

Once the Program Sponsor has Transferred all of the Advance Credits, no more Advance Credits may be Transferred until the Advance Credits have been Fulfilled. As Program Sponsor Fulfills Advance Credits, it may request IRT approval of additional Advance Credits for Transfer.

B. Program Sponsor's Obligation to Fulfill Advance Credits

Program Sponsor will be obligated to Fulfill all Advance Credits that are Transferred. To Fulfill Advance Credits, Program Sponsor must do one of the following.

1. Generate Released Credits of the same type as, and in an amount equal to or greater than, the Transferred Advance Credits, in accordance with Section VI.D.
2. Assign the obligation to Fulfill the Transferred Advance Credits to an IRT-approved third party under terms and conditions approved by the IRT (i.e., purchase of credits from a mitigation bank).

Unless otherwise agreed to by the IRT, Program Sponsor will complete land acquisition and initial physical and biological improvements with respect to an ILF Project needed to Fulfill Advance Credits by the end of the third full growing season (generally defined as the period between October 15 and May 15) after the Transfer of the Advance Credits. Completion of physical improvements will be achieved once the initial physical and biological improvements proposed in the Mitigation Plan for such ILF Project are implemented, as verified by the IRT. If Program Sponsor fails to meet these deadlines, the USACE, in consultation with the IRT, must either make a determination that more time is needed to plan and implement an ILF Project or, if doing so would not be in the public interest, direct the Program Sponsor to disburse funds from the Program Account to provide alternative Compensatory Mitigation to Fulfill those compensation obligations.

C. Determination of Credits

Each approved Mitigation Plan will include the method for determining the Credits generated by the individual ILF Project. Program Sponsor may only generate Credits from an ILF Project when there is a net benefit to Aquatic Resources at the site as determined by the difference between pre- and post-ILF Project site conditions. Credits may also be proposed for preservation or improvements of riparian areas, buffers, uplands, or any combination of the three, if they are essential to maintain the ecological viability of Aquatic Resources. The CDFW will determine on a case-by-case basis whether Preservation Credits and Buffer Credits can be generated.

D. Generation of Released Credits

Credits will be generated when an ILF Project achieves Performance Standards and other performance-based milestones according to the Credit Release Schedule included in the Mitigation Plan for the ILF Project. Each Mitigation Plan approved by the IRT will include the specific method for determining the Released Credits to be generated by the individual ILF project.

E. Credit Releases

Each Mitigation Plan approved by the IRT will include a Credit Release schedule, linked to the achievement of Performance Standards, as described in Section VI.E.1. As milestones in a Credit Release schedule are reached, Advance Credits are converted to Released Credits, and Advance Credits are thereby Fulfilled. If the ILF Project does not achieve the performance-based milestones, the IRT may modify the Credit Release schedule, including reducing the number of Credits that will be Released.

Credits will be Released in accordance with this Instrument once all of the following have occurred:

1. The IRT has approved the Mitigation Plan for the ILF project;
2. Applicable milestone(s) in the Credit Release schedule have been achieved;

3. Program Sponsor has submitted a written request for Credit Release to the IRT, along with documentation substantiating that the relevant milestones have been achieved; and
4. The IRT has provided written confirmation of Credit Release.

The IRT will provide written confirmation of Credit Release, or will explain in writing why a confirmation of Credit Release will not be provided, within thirty (30) days of Program Sponsor's submittal of a request for Credit Release, unless Program Sponsor and the IRT mutually agree to a longer period of time. The IRT's failure to respond within thirty (30) days in accordance with this Section does not obviate the requirement to obtain the IRT's written confirmation prior to the Transfer of credits tied to a particular Release. If an IRT Member fails to respond in accordance with this Section, any IRT Member, or the Program Sponsor, may initiate the dispute resolution procedure in accordance with Section IX.A. Upon each Credit Release, USACE will enter the number of Credits Released into RIBITS.

1. Credit Release Schedule

Credit Release schedules may vary based on the details and circumstances of individual proposed ILF Projects. In general, Credits will be released as follows:

a. Credit Release 1

15% of an ILF Project's total proposed Credits will be Released when all of the following have occurred:

- i. The IRT has approved the Mitigation Plan.
- ii. A Conservation Easement has been recorded and a copy uploaded to the Cyber Repository in RIBITS.

b. Credit Release 2

Up to an additional 25% (40% cumulative total) of an ILF Project's total proposed Credits will be Released when all of the following have occurred:

- i. Credit Release 1 has occurred.
- ii. The Program Sponsor has provided, and the IRT has approved in writing, the ILF Project's as-built drawings. Unless otherwise specifically provided in the ILF Project's Mitigation Plan, as-built drawings must be submitted to the IRT no later than ninety (90) calendar days following completion of construction and must include full size construction plans, with as-built conditions clearly shown, and accurate maps of the established, enhanced, and/or restored Aquatic Resources. The as-built drawings and any attachments must describe in detail any minor deviations from the approved Mitigation Plan.
- iii. The IRT has been provided an opportunity to conduct a site inspection during the appropriate time of year, if requested
- iv. Program Sponsor has deposited into the Management Account a minimum of forty percent (40%) of the amount required to fund long-

term management for the ILF Project into the Management Account, in accordance with the Mitigation Plan.

c. Credit Release 3

Up to an additional 15% (55% cumulative total) of an ILF Project's total proposed Credits will be Released when all of the following have occurred:

- i. Credit Release 2 has occurred.
- ii. Two years of monitoring have been conducted since all Credit Release 2 requirements were met.
- iii. Program Sponsor has submitted all required monitoring reports in accordance with the Mitigation Plan.
- iv. Program Sponsor has submitted the Annual Report for the most recent reporting period, in accordance with Section VII.A.
- v. The IRT has been provided an opportunity to conduct a site inspection during the appropriate time of year, if requested.
- vi. Year-two Performance Standards have been achieved in accordance with the Mitigation Plan.
- vii. Program Sponsor has deposited into the Management Account a minimum of fifty-five percent (55%) of the amount required to fund long-term management for the ILF Project, in accordance with the Mitigation Plan.

d. Credit Release 4

Up to an additional 15% (70% cumulative total) of an ILF Project's total proposed Credits will be released when all of the following have occurred:

- i. Credit Release 3 has occurred.
- ii. One-year of monitoring has been conducted since all Credit Release 3 requirements were met.
- iii. Program Sponsor has submitted all required monitoring reports in accordance with the Mitigation Plan.
- iv. Year-three Performance Standards have been achieved in accordance with the Mitigation Plan.
- v. Program Sponsor has submitted the Annual Report for the most recent reporting period, in accordance with Section VII.A.
- vi. The IRT has been provided an opportunity to conduct a site inspection during the appropriate time of year, if requested.
- vii. Program Sponsor has deposited into the Management Account a minimum of seventy percent (70%) of the amount required to fund long-term management for the ILF Project, in accordance with the Mitigation Plan.

e. Credit Release 5

Up to an additional 15% (85% cumulative total) of an ILF Project's total proposed Credits when all of the following have occurred:

- i. Credit Release 4 has occurred.
- ii. One-year of monitoring has been conducted since all Credit Release 4 requirements were met.
- iii. Program Sponsor has submitted all required monitoring reports in accordance with the Mitigation Plan.
- iv. Program Sponsor has submitted the Annual Report for the most recent reporting period, in accordance with Section VII.A.
- v. The IRT has been provided an opportunity to conduct a site inspection during the appropriate time of year, if requested.
- vi. Year-four Performance Standards have been achieved in accordance with the Mitigation Plan.
- vii. Program Sponsor has submitted a delineation of Aquatic Resources to the IRT in accordance with the Mitigation Plan.
- viii. Program Sponsor has deposited in the Management Account a minimum of eighty five percent (85%) of the amount required to fund long-term management for the ILF Project, in accordance with the Mitigation Plan.

f. Final Credit Release

Any and all remaining Credits will be released when all of the following have occurred:

- i. Credit Release 5 has occurred.
- ii. One-year of monitoring has been conducted since all Credit Release 5 requirements were met.
- iii. Program Sponsor has submitted all required monitoring reports in accordance with the Mitigation Plan.
- iv. Program Sponsor has submitted the Annual Report for the most recent reporting period, in accordance with Section VII.A.
- v. The IRT has been provided an opportunity to conduct a site inspection during the appropriate time of year, if requested.
- vi. Final Performance Standards have been achieved in accordance with the Mitigation Plan.
- vii. Any required Remedial Actions are completed.
- viii. Program Sponsor has deposited in the Management Account all (100%) of the amount required to fund long-term management for the ILF Project, in accordance with the Mitigation Plan.

F. Fee Schedule

The Program Sponsor will establish Program fee amounts per unit of Advance Credit that reflect the estimated costs associated with the generation and Release of Credits. These cost

estimates must be based on full cost accounting, and include, as appropriate, expenses such as land acquisition (including, without limitation, options to purchase), ILF Project planning and design, construction, plant materials, labor, legal fees, monitoring, and remediation or Adaptive Management activities, a contingency amount that accounts for uncertainties in construction and real estate costs, as well as administration of the Program. The cost estimates must also take into account the funding necessary for interim and long-term management, and the cost of monitoring and enforcing the Conservation Easement. This list is not meant to be exhaustive and may include other categories, as appropriate, as determined by the Program Sponsor on a case-by-case basis. In addition, the estimated cost per unit of Advance Credit must include any financial assurances necessary to ensure successful completion of ILF Projects.

For Credits that have been generated and Released, the fee amount will be based on the full, actual costs of generating the Credits.

The Program Sponsor may include other costs or charges in Program fee amounts, as it determines necessary or appropriate. Program Sponsor will review Program fee amounts at least annually and update them as appropriate. The Program's Fee Schedule is provided in **Exhibit H**. IRT review and approval will be required for any reductions in the minimum fee amounts reflected in **Exhibit H**. Any revisions to **Exhibit H** will require an amendment of this Instrument.

G. Balance of Credits

The Program will have available for Transfer the number of available Advance Credits, plus any Released Credits beyond those required to Fulfill Advance Credits that have been Transferred.

H. Transfer of Credits

1. Each IRT Member retains the discretion to determine whether Credits may be used to fulfill Compensatory Mitigation requirements established by the IRT Member, in accordance with applicable laws and regulations. This Instrument does not guarantee that any IRT Member will accept the use of Credits for a proposed project.
2. The responsibility to provide Compensatory Mitigation remains with each Permittee unless and until Credits are Transferred from the Program. The Program Sponsor assumes all legal responsibility for fulfilling Compensatory Mitigation requirements for USACE-authorized Impacts for which Credits have been Transferred. The transfer of liability is established by: a) the approval of this Instrument; b) receipt by the USACE of a Credit Transfer Agreement that is signed by the Program Sponsor and the Permittee and dated (see **Exhibit B-1**); and c) the transfer of fees from the Permittee to the Program Sponsor. A copy of each certificate will be retained in the administrative and accounting records for the Program. Other than what is described in this paragraph, no other legal responsibility for the permit will transfer to the Program Sponsor.

3. Program Sponsor shall notify all members of the IRT upon any Credit Transfer in accordance with Section VII of this Instrument. Upon Transfer of Credits, the Program Sponsor shall enter the Credit Transfer into RIBITS.
4. If an ILF Project site is injured or adversely impacted, and such injury or impact materially impairs Waters of the U.S. or habitat values on the ILF Project site, the Program Sponsor shall comply with Section V.C.1.a. Failure to comply shall constitute default, and the IRT will take action accordingly.
5. Once a Credit is Transferred, Program Sponsor may cancel a Credit Transfer and allow a permittee to relinquish or return such Credit, subject to an administrative fee, if the permittee's project is not approved or implemented, or if the project is modified so as to avoid the Impacts for which such Credit was Transferred. Any such relinquishment or return will be subject to IRT approval and will be entered into RIBITS by the Program Sponsor.
6. Each Credit may be used only once, for one project.

I. *Limitation of Liability*

Notwithstanding any other provision of this Instrument, to the maximum extent permitted by law, Program Sponsor's maximum financial obligation and liability for the Program, including providing Compensatory Mitigation thereunder, is at all times limited to the funds in the Program Account.

VII. Program Reporting

In accordance with 33 C.F.R. 332.8(d)(6)(ii)(E) and 33 C.F.R. 332.8(i)(3), this Instrument establishes the reporting protocols set forth in the subsections below.

A. *Annual Report*

Program Sponsor will submit an Annual Report summarizing the previous calendar year's Program implementation to each IRT Member, and will upload the report to RIBITS, on or about March 1 following the reporting year. The Annual Report will include all of the information required in this Section.

1. ILF Project Development

The Annual Report will summarize the progress of each ILF Project in the Program Area, including:

- a. The degree to which each ILF project is meeting its Performance Standards;
- b. Any deficiencies in attaining and maintaining Performance Standards and any Remedial Action plan proposed, approved, or performed;
- c. Any Remedial Actions that have been completed, and the effectiveness of such actions;

2. Interim Management and Monitoring

The Annual Report will contain an itemized account of the management tasks conducted in accordance with the Interim Management or Long-term Management Plan for each ILF Project, including the following:

- a. The time period covered, i.e. the dates “from” and “to”;
- b. A description of each management task conducted, the dollar amount expended and time required;
- c. The total dollar amount expended for management tasks conducted during the reporting period; and
- d. A description of the overall condition of each ILF Project site during its Interim Management Period, including color photographs documenting the status of the ILF Project site and a map documenting the location and direction of the photo points.

3. Credit Ledger Report

The Annual Report will include a current credit ledger (see **Exhibit B-2**), showing, for each ILF Project and for the Program as a whole, the beginning and end balance of available Advance Credits and Released Credits all Credit Releases and Transfers, and any other changes in Credit availability (e.g., Credit Transfers cancelled, Credits relinquished).

4. Program Account

The Annual Report will include a financial activity report for the Program Account, which includes:

- a. All income received from Transfers of Released Credits and investment earnings accrued by the Program Account;
- b. Any other deposits to the Program Account during the reporting period;
- c. A description of disbursements and expenditures from the Program Account, such as the costs of land acquisition, planning, construction, monitoring, maintenance, contingencies, Adaptive Management, and administration; and
- d. The balance of the Program Account and all sub-accounts, including but not limited to the Management Account.

5. Compensatory Mitigation Tracking

The Annual Report will list and summarize:

- a. All permits for which Credits were Transferred (including applicable permit numbers);
- b. The amount of authorized Impacts giving rise to such Transfers of Credits;
- c. The amount of required Compensatory Mitigation;
- d. The amount paid to the Program for Transfers of Advance Credits and Released Credits;

- e. The date(s) the funds were received from applicable Permittees for such Credits; and
- f. The amount of Compensatory Mitigation generated by the Release of Credits through ILF projects.
- g. A summary of new GIS Data.

B. GIS Data

The Program Sponsor will maintain a database of relevant GIS data and will update the database on a regular basis, as determined by Program Sponsor. The GIS database and updated data layers will be made available to RIBITS and to IRT Members upon request. The GIS database will include, at a minimum, the following.

- 1. The location of each permitted project or activity for which a Credit was Transferred; and
- 2. Each ILF project location, size, and Aquatic Resource acreages restored, established, enhanced, or preserved.

C. Credit Transfer Reporting

Upon the Transfer of each and every Credit, the Program Sponsor will provide the IRT with the applicable Credit Transfer Agreement (see **Exhibit B-1**) and will enter the applicable Credit Transfer information and executed Credit Transfer Agreement into RIBITS.

D. Other Information Deemed Necessary by the IRT

The Program Sponsor will also provide to the IRT other information as required for compliance with applicable legal and regulatory requirements.

VIII. Termination of Participation and Program Closure

- A. Any Party to this instrument may terminate its participation in this agreement by giving 90 days written notice to the other Parties. The written notice shall include the reason(s) the Party proposes to terminate its participation in this Instrument. The Parties shall meet and confer during the 90 (ninety) day period prior to termination to attempt to resolve the reason(s) for termination. If the Parties resolve the reason(s) for termination, the Party proposing termination shall provide a written withdrawal to the other Parties and the Parties shall amend or modify this Instrument as necessary. If the Parties fail to resolve the reason(s) for termination during the 90 (ninety) day meet and confer period, the termination shall become effective 90 (ninety) days after the written notice.
- B. Program Sponsor shall remain responsible for fulfilling these obligations until such time as the long-term funding obligations have been met and the long-term ownership of all ILF Project sites has been transferred to the party responsible for ownership and all long-term management of the site(s).
- C. Funds remaining in the Program Accounts after these obligations are satisfied must continue to be used for the Restoration, establishment, enhancement, and/or Preservation of Aquatic Resources within the Service Area.

The USACE shall direct the Program Sponsor to identify alternative third-party mitigation, such as securing available credits from another in-lieu fee program, mitigation bank, or another entity such as a governmental or non-profit natural resource management entity willing to undertake the compensation activities.

The funds should be used, to the maximum extent practicable, to provide Compensatory Mitigation for the amount and type of Aquatic Resource Impacts for which the Credits were Transferred.

- D. In the event the Program Sponsor elects to terminate its participation in this Instrument, the Program Sponsor shall submit a termination plan to the IRT, for written review and approval, that addresses all of the following: the proposed mechanism to transfer ILF Sites, including long-term management responsibilities; the proposed plan for disposition and future management of the funds remaining in the Program Account and subaccounts; and plan for fulfilling any unfulfilled advanced credits. The IRT may terminate this Instrument if the Program Sponsor sells or conveys the Program or an ILF Project Site without the prior written concurrence of the IRT.
- E. The USACE, USEPA, and Central Valley Regional Water Quality Control Board may each terminate its participation in this Instrument upon thirty (30) calendar days' written notice to all other Parties, on the condition that each of the following has occurred:
 - a. Program Sponsor has defaulted on one or more covenants, terms or conditions of this Instrument.
 - b. Program Sponsor has received notice of such default from the terminating Party.
 - c. Program Sponsor, as applicable, has failed to cure its default to the satisfaction of the terminating IRT agency.
- F. If any Party so requests, the Party proposing to terminate participation in the Instrument agree to meet with the other IRT members to discuss the reason(s) for such termination, prior to the termination taking effect. Notice of a request for such meeting shall be made by the requesting Party not later than fifteen (15) calendar days from receipt of the notice of termination.
- G. Termination by any Party from this Instrument shall not terminate this Instrument or affect the relationship between the remaining members of the IRT, toward each other or the Program Sponsor, under this Instrument. Remaining Credits under the authority of the terminating agency will no longer be available for Transfer.
- H. Program Sponsor may terminate its participation in this Instrument by giving sixty (60) days written notice to the other Parties. Termination by Program Sponsor shall terminate this Instrument and the Program.
- I. In the event termination of the Program occurs, the Program Sponsor agrees to fulfill its pre-existing obligations to perform all establishment, monitoring, maintenance, management, and remediation responsibilities that arise directly from Credits that were Transferred at the time of termination.
- J. Nothing in this Section is intended or shall be construed to limit the legal or equitable remedies (including specific performance and injunctive relief) available to the

USACE, USEPA, and Central Valley Regional Water Quality Control Board in the event of default by the Program Sponsor.

IX. Other Provisions

A. *Dispute Resolution*

1. The Parties agree to work together in good faith to resolve disputes concerning this Instrument. Unless a Party has initiated legal action in connection with the particular dispute, any Party may elect ("Electing Party") to employ an informal dispute resolution process whereby:
 - a. The Electing Party shall notify all other Parties to this Instrument of the dispute through a Dispute Notice. The Dispute Notice shall identify the Parties against which the Electing Party is commencing the informal dispute resolution process ("Implicated Parties"), the position of the Electing Party (including, if applicable, the basis for contending that a violation has occurred), and the resolution the Electing Party proposes.
 - b. Each Implicated Party shall have forty-five (45) calendar days after receipt of the Dispute Notice (or such other time as the Parties may mutually agree) to respond to the electing Party. During this time, any Party to this Instrument that received the Dispute Notice may seek clarification of the Dispute Notice.
 - c. Within forty-five (45) calendar days after each Implicated Party's response was provided or due, whichever is later, the Electing Party and the Implicated Parties shall confer and negotiate in good faith toward a mutually satisfactory resolution, or shall establish a specific process and timetable to seek such resolution.
 - d. The dispute resolution process may be terminated by the Electing Party or any Implicated Party upon written notice to all other Parties to this Instrument.

B. *Default*

Program Sponsor shall be in default if it fails to observe or perform any obligations or responsibilities required of it by this Instrument. In the event of default, the IRT shall issue a notice of default to Program Sponsor, which includes direction and specified time period to cure the default. If the Program Sponsor fails to remedy the default within the allotted time, the IRT will take appropriate action, which includes but is not limited to, suspending Credit sales, adaptive management, decreasing available Credits, utilizing financial assurances, and terminating the Instrument. This Section shall not be construed to modify or limit any specific right, remedy, or procedure in any Section of this Instrument or any remedy available under applicable State and/or Federal law.

C. *Modification and Amendment of Instrument*

This Instrument, including its Exhibits, may be amended or modified only with the written approval of Program Sponsor and any other applicable Parties. Instrument modifications that would add or revise Mitigation Plans for ILF Projects will follow the process outlined in **Exhibit F**. The USACE may use a streamlined modification review process for changes reflecting Adaptive Management of an ILF Project site, Credit Releases, changes in Credit Releases and Credit Release schedules, and changes that the USACE determines are not significant.

D. *Controlling Language*

The Parties intend the provisions of this Instrument and each of the documents incorporated by reference in it to be consistent with each other, and for each document to be binding in accordance with its terms. To the fullest extent possible, these documents will be interpreted in a manner that avoids or limits any conflict between or among them. However, if and to the extent that specific language in this Instrument conflicts with specific language in any document that is incorporated into this Instrument as an exhibit, the specific language of the Instrument will control. The captions and headings of this Instrument are for convenient reference only, and will not define or limit any of its terms or provisions.

E. *Entire Agreement*

This Instrument, and all its Exhibits, and all appendices, schedules, and agreements incorporated by reference, constitute the final, complete and exclusive statement of the terms of the agreement between and among the Parties pertaining to the Program, and supersede all prior and contemporaneous discussions, negotiations, understandings, or agreements of the Parties. No other agreement, statement, or promise made by the Parties, or to any employee, officer, or agent of the Parties, which is not contained in this Instrument, will be binding or valid. No alteration or variation of this instrument will be valid or binding unless made in writing in accordance with Section IX.C. Each of the Parties acknowledges that no representation, inducement, promise or agreement, oral or otherwise, has been made by any of the other Parties or anyone acting on behalf of any of the Parties unless the same has been embodied herein.

F. *Reasonableness and Good Faith*

Except as specifically limited elsewhere in this Instrument, whenever this Instrument requires any Party to give its consent or approval to any action on the part of another Party, such consent or approval will not be unreasonably withheld or delayed. If any Party disagrees with any determination covered by this provision and reasonably requests the reasons for that determination, the determining Party will furnish its reasons in writing and in reasonable detail within thirty (30) days following the request.

G. *Partial Invalidity*

If a court of competent jurisdiction holds any term or provision of this Instrument to be invalid or unenforceable, in whole or in part, for any reason, the validity and enforceability of the

remaining terms and provisions, or portions of them, will not be affected unless an essential purpose of this Instrument would be defeated by loss of the invalid or unenforceable provision.

H. Notices

Any notice, demand, approval, request, or other communication permitted or required by this Instrument will be in writing and deemed given when delivered personally or sent by recognized overnight delivery service, addressed as set forth below, or five (5) days after deposit in the U.S. mail, postage prepaid, and addressed as set forth below.

Notice by any Party to any other Party will be given to all Parties. Such notice will not be effective until it has been received by all Parties in accordance with this Section.

Addresses for purposes of giving notice are set forth below. Any Party may change its notice address by giving notice of change of address to the other Parties in the manner specified in this Section.

County of Placer

Attn: PCCP Administrator

3091 County Center Drive

Auburn, California 95603

Telephone: 530-745-3074

Fax: 530-745-3120

U.S. Army Corps of Engineers

Sacramento District

Attn: Chief, Regulatory Division

1325 J Street, Room 1350

Sacramento, California 95814

Telephone:

Fax:

U.S. Environmental Protection Agency

Region IX

75 Hawthorne Street

San Francisco, CA 94105

Attn: Supervisor, Wetlands Section

Telephone: 415- 972-3483

Fax: 415-947-3537

California Regional Water Quality Control Board, Region _____

Address

City, State, Zip code

Attn: Executive Officer

Telephone:

Fax:

I. *Counterparts*

This Instrument may be executed in multiple counterparts, each of which will be deemed an original and all of which together will constitute a single executed agreement.

J. *No Third Party Beneficiaries*

Except to the extent expressly stated herein, this Instrument will not create any third party beneficiary hereto, nor will it authorize anyone not a Party hereto to maintain any action, suit or other proceeding, including, without limitation, for personal injuries, property damage or enforcement pursuant to the provisions of this Instrument. The duties, obligations and responsibilities of the Parties to this Instrument with respect to third parties will remain as otherwise provided by law as though this Instrument had never been executed.

K. *Availability of Funds*

Implementation of this Instrument by the IRT is subject to the requirements of the Anti-Deficiency Act, 31 U.S.C. § 1341, and the availability of appropriated funds. Nothing in this Instrument may be construed to require the obligation, appropriation, or expenditure of any money from the U.S. Treasury, the California State Treasury, or the Placer County General Fund. No Party is required under this Instrument to expend any appropriated funds unless and until an authorized official affirmatively acts to commit to such expenditures as evidenced in writing.

L. *No Partnerships*

This Instrument will not make or be deemed to make any Party to this Instrument an agent for or the partner or joint venture of any other Party.

M. Governing Law

This Instrument will be governed by and construed in accordance with the Clean Water Act, 33 U.S.C. § 1251 et seq., and other applicable federal and state laws and regulations, including those referenced in Section I.C. However, nothing in this Instrument is intended or will be construed as a waiver of sovereign immunity beyond that which has been granted by the United States legislature in applicable federal laws.

N. Headings and Captions

Any paragraph heading or captions contained in this Instrument will be for convenience of reference only and will not affect the construction or interpretation of any provisions of this Instrument.

O. No Contract

USACE approval of this Instrument constitutes the regulatory approval required for the Western Placer County In-Lieu Fee Program to be used to provide compensatory mitigation for Department of the Army permits pursuant to 33 C.F.R. 332.8(a)(1). This Instrument is not a contract between the Program Sponsor and USACE or any other agency of the federal government. Any dispute arising under this Instrument will not give rise to any claim by any Party for monetary damages. This provision is controlling notwithstanding any other provision or statement in the Instrument to the contrary.

X. Execution

Each of the undersigned certifies that he or she has full authority to enter into this Instrument. This Instrument shall be deemed executed on the date of the last signature by the Parties. Within thirty (30) calendar days of Instrument execution, the Program Sponsor shall upload the final signed Instrument, including all of its Exhibits, to the appropriate folders in RIBITS and provide an electronic copy to each IRT Member.

Program Sponsor

By: _____
Todd Leopold
County Executive Officer

_____ Date

U.S. Army Corps of Engineers, Sacramento District

By: _____
[Name]

_____ Date

District Engineer

Central Valley Regional Water Quality Control Board

By: _____

[Name]

Executive Officer

Date

U.S. Environmental Protection Agency, Region IX

By: _____

[Name]

Supervisor, Wetlands Section

Date

XI. Exhibits

- A. Exhibit A – Program Area Maps
- B. Exhibit B– Credit Release, Transfer, and Tracking
 - a. B-1 Credit Transfer Agreement Template
 - b. B-2 Credit Ledger
- C. Exhibit C – Conservation Easement Template
- D. Exhibit D – Compensation Planning Framework
- E. Exhibit E – Program Account Terms and Procedures
- F. Exhibit F – Mitigation Plan Review Process
- G. Exhibit G – Mitigation Plan Template
- H. Exhibit H – Fee Schedule
- I. Exhibit I – Property Assessment
- J. Exhibit J – Advance Credit Analysis
- K. Exhibit K – List of Approved ILF Projects
- L. Exhibit L – LTMP Template

M. Governing Law

This Instrument will be governed by and construed in accordance with the Clean Water Act, 33 U.S.C. § 1251 et seq., and other applicable federal and state laws and regulations, including those referenced in Section I.C. However, nothing in this Instrument is intended or will be construed as a waiver of sovereign immunity beyond that which has been granted by the United States legislature in applicable federal laws.

N. Headings and Captions

Any paragraph heading or captions contained in this Instrument will be for convenience of reference only and will not affect the construction or interpretation of any provisions of this Instrument.

O. No Contract

USACE approval of this Instrument constitutes the regulatory approval required for the Western Placer County In-Lieu Fee Program to be used to provide compensatory mitigation for Department of the Army permits pursuant to 33 C.F.R. 332.8(a)(1). This Instrument is not a contract between the Program Sponsor and USACE or any other agency of the federal government. Any dispute arising under this Instrument will not give rise to any claim by any Party for monetary damages. This provision is controlling notwithstanding any other provision or statement in the Instrument to the contrary.

X. Execution

Each of the undersigned certifies that he or she has full authority to enter into this Instrument. This Instrument shall be deemed executed on the date of the last signature by the Parties. Within thirty (30) calendar days of Instrument execution, the Program Sponsor shall upload the final signed Instrument, including all of its Exhibits, to the appropriate folders in RIBITS and provide an electronic copy to each IRT Member.

Program Sponsor

By: Todd Leopold

Todd Leopold

County Executive Officer

2/8/19

Date

U.S. Army Corps of Engineers, Sacramento District

By: _____

[Name]

Date

District Engineer

Central Valley Regional Water Quality Control Board

By:  14 March 2019

Patrick Pulupa

Executive Officer

Date

U.S. Environmental Protection Agency, Region IX

By: _____

[Name]

Supervisor, Wetlands Section

Date

XI. Exhibits

- A. Exhibit A – Program Area Maps
- B. Exhibit B– Credit Release, Transfer, and Tracking
 - a. B-1 Credit Transfer Agreement Template
 - b. B-2 Credit Ledger
- C. Exhibit C – Conservation Easement Template
- D. Exhibit D – Compensation Planning Framework
- E. Exhibit E – Program Account Terms and Procedures
- F. Exhibit F – Mitigation Plan Review Process
- G. Exhibit G – Mitigation Plan Template
- H. Exhibit H – Fee Schedule
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- K. Exhibit K – List of Approved ILF Projects
- L. Exhibit L – LTMP Template

District Engineer

Central Valley Regional Water Quality Control Board

By: _____

[Name]

Executive Officer

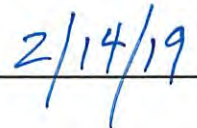
Date

U.S. Environmental Protection Agency, Region IX

By:  _____

[Name]

Supervisor, Wetlands Section

 _____

Date

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Program Sponsor

By: _____

[Name] Date

[Title, if applicable]

U.S. Army Corps of Engineers, Sacramento District

By:  _____ 2/22/2019

~~[Name]~~ FOR Michael S. Jewell, Chief
Regulatory Division

Date

A.1 Narrative Description and Explanation of Service Area/Program Area

The ILF Program Service Area or Program Area (Figure A-1) will service approximately 269,000 acres of western Placer County. This area is aligned with the Draft Western Placer County Habitat Conservation Plan/Natural Community Conservation Plan (Draft HCP/NCCP) which includes 209,832 acres of which are aligned with watersheds where most development and mitigation will occur (e.g., Plan Area A of the Draft HCP/NCCP) and 59,000 acres of which are aligned with other areas with limited development and fewer covered activities (e.g., Plan Area B of the Draft HCP/NCCP). Data on land cover types is only presented only for the 209,832 acre area because this is where ILF projects will be developed. Within the 59,000 acre area, the HCP/NCCP covers impacts from Placer County Water Agency (PCWA) operations and maintenance, fish channel improvements, and conservation within the Big Gun Conservation Bank, but impacts and mitigation for activities in this area conducted by entities that are not participants in the Draft HCP/NCCP are not covered. Approximately half of the Service Area is within the Central Valley and half is in the Sierra foothills. The valley region consists of the urban and suburban areas and unincorporated areas surrounded by agricultural uses and natural grassland, riparian and stream floodplains, and vernal pool communities. The foothills region is located generally east of the City of Lincoln and Highway 65, and along Interstate 80. The foothills region consists of lower-density suburban, rural residential development and low density rural residential development associated with agricultural operations, grazing lands, natural woodland communities, and higher gradient streams with typically narrow floodplains in the north foothills.

This Service Area was selected because it aligns with the Draft HCP/NCCP and the Western Placer County Aquatic Resources Program (CARP). Further, there has been extensive watershed and ecosystem planning conducted over the past 20 years in this area and the Draft HCP/NCCP for this area is expected to be finalized in 2019. Further, the Service Area is under extensive development pressure but also has intact aquatic resources, that with ILF projects, will enhance and sustain important local and regional aquatic values.

There are four hydrologic unit code (HUC)-8 watersheds in the ILF Program Area: North Fork American (HUC: 18020128), Lower American (HUC: 18020111), Upper Coon-Upper Auburn (HUC: 18020161), and Upper Bear (HUC: 18020126) and seven HUC-10 watersheds: Bear River (HUC:), Coon Creek (HUC: 1802016102), Pleasant Grove Creek – Cross Canal (Markham Ravine) (HUC: 1802016103), Auburn Ravine (HUC: 1802016101), Pleasant Grove Creek – Cross Canal (Pleasant Grove Creek) (HUC: 1802016103), Dry Creek (HUC: 1802011101), and American (HUC: 1802012806). These are depicted in Exhibit D. *Compensation Planning Framework*.

Given the growth and conservation anticipated in this region under Draft HCP/NCCP and the aquatic resource protection that is expected under the Draft HCP/NCCP and CARP, a Service Area covering the same area is appropriate. Wetland and aquatic resource credits authorized under the ILF Program will be lumped in this Service Area because the regional aquatic resource establishment and reestablishment that are contemplated under these programs are expected to result in lasting landscape, wetland and aquatic resource conservation.

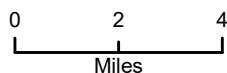
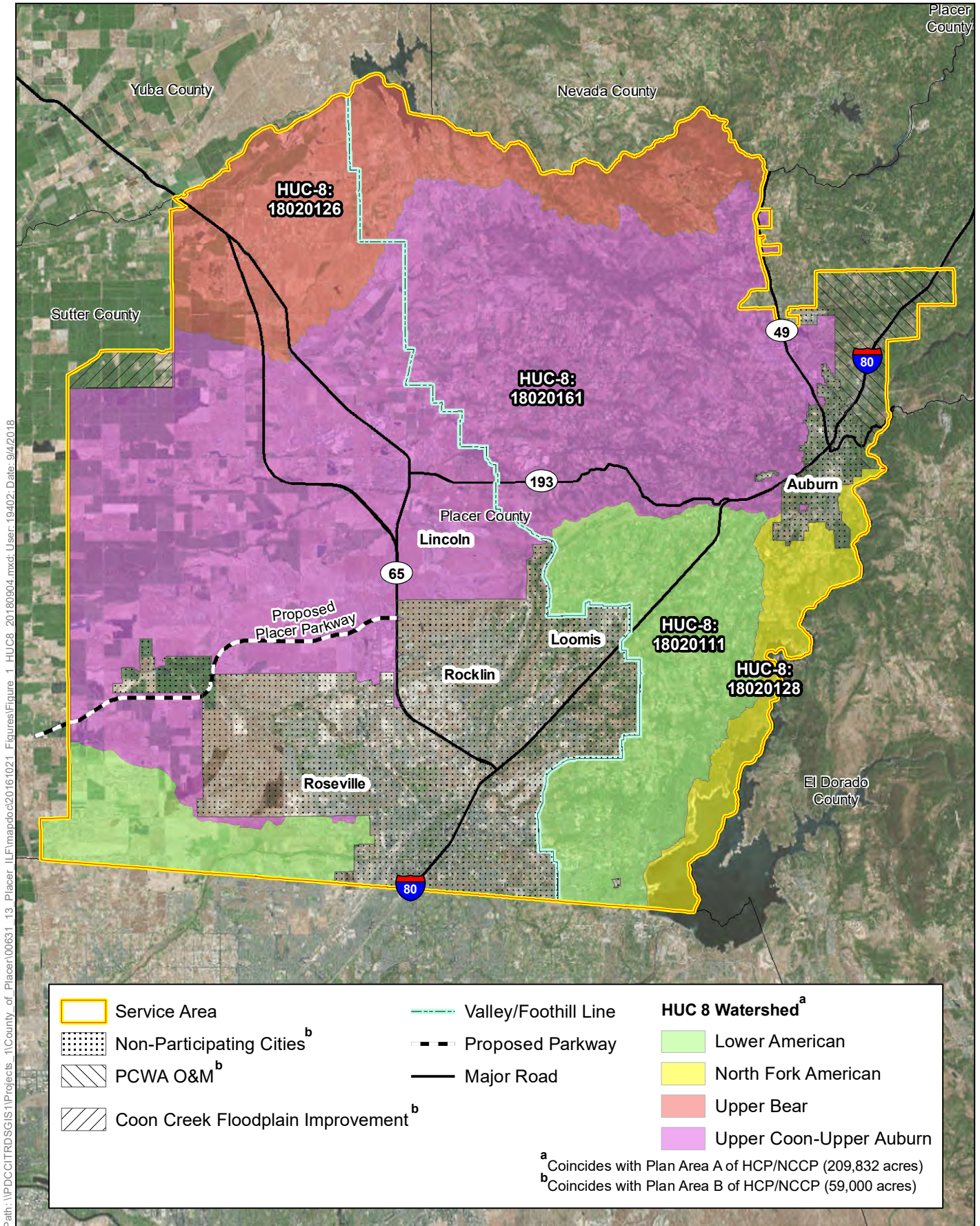


Figure A-1
Placer In-Lieu Fee Program
Service Area

Exhibit B

Credit Release, Transfer, and Tracking

Exhibit B.1

Credit Transfer Agreement Template

B.1.1 Credit Transfer Agreement

Contract #: [ILF Program Transfer Number]

This Credit Transfer Agreement (“**Agreement**”) is entered into by and between THE COUNTY OF PLACER (“**Program Sponsor**”) and _____ (“**Project Applicant**”), jointly referred to as the “**Parties**.”

B.1.2 Recitals

The Program Sponsor has developed the Western Placer County In-Lieu Fee Program (“**ILF Program**”) covering western Placer County.

The ILF Program was approved by the Sacramento District of the U.S. Army Corps of Engineers (“**USACE**”), Region IX of the U.S. Environmental Protection Agency (“**USEPA**”), and the Central Valley Regional Water Quality Control Board (“**Central Valley Water Board**”) (jointly referred to as “**Agencies**”) [add/delete agencies as appropriate] on [enter date approved], and is currently in good standing with the Agencies.

The ILF Program has received approval from the Agencies to offer Aquatic Resource Credits pursuant to the ILF Program Instrument (“**ILF Instrument**”), as compensation for impacts to aquatic resources regulated by the Agencies.

Project Applicant is seeking to implement the project described on **Attachment A** attached hereto (“**Project**”), which would adversely impact [enter aquatic resources to be impacted by the project], and seeks to compensate for such impact by purchasing credits from the ILF Program.

Project Applicant has been authorized according to the following permit(s) [enter regulatory agency name and permit #(s)] to purchase from the ILF Program [enter number of credits and credit type] Credits upon confirmation by the Program Sponsor of credit availability.

Project Applicant desires to purchase from the ILF Program and the Program Sponsor desires to transfer to Project Applicant [enter number of credits and credit type] Credits.

Now, therefore, the Parties agree as follows:

1. The Program Sponsor hereby agrees to transfer to Project Applicant from the ILF Program [enter number of credits and credit type] Credits for the purchase price of [enter purchase price] (“**Purchase Price**”). This Agreement is expressly conditioned upon the Program Sponsor’s receipt of the Purchase Price for said Credits, in accordance with this Agreement.
2. The sale and transfer of the Credits shall not be construed as a sale or transfer to Project Applicant of a security, license, lease, easement, or possessory or non-possessory interest in real property, nor the granting of any interest in any of the foregoing.

3. The sale and transfer of the Credits shall not obligate Project Applicant to support, pay for, monitor, report on, sustain, continue in perpetuity, or otherwise make Project Applicant obligated to ensure, or liable for, the success or continued expense or maintenance in perpetuity of the Credits transferred, or the ILF Program. The Program Sponsor shall be solely responsible for satisfying any and all conditions placed on the Credits transferred and the ILF Program.
4. The Credits sold and transferred to Project Applicant shall be non-transferable and non-assignable, and shall not be used as compensatory mitigation for any other Project or purpose, except as set forth herein.
5. Project Applicant must make payment of the Purchase Price to Project Sponsor by cashier's check or wire transfer (in accordance with written instructions to Project Applicant from Program Sponsor) within thirty (30) days of the date the Parties entered into this Agreement, or this Agreement shall be null and void.
6. Upon receipt of the Purchase Price, Program Sponsor shall effectuate transfer the Credits specified in Section 1 above by delivering to Project Applicant an executed Bill of Sale in the form attached hereto and marked **Attachment B**. The Program Sponsor shall submit to each member of the ILF Program Interagency Review Team a copy of: this Credit Transfer Agreement; the Bill of Sale; the Payment Receipt (**Attachment C**); and an updated credit ledger reflecting the transfer of Credits to the Project Applicant.

IN WITNESS WHEREOF, the Parties enter into this Agreement on [date] as follows.

The County of Placer (Program Sponsor)

By: _____ Date: _____

Title: _____

[Enter name of project applicant] (Project Applicant)

By: _____ Date: _____

Title: _____

Attachment A Project Description

[Name of Project (Regulatory permits and permit No's. _____)], _____ County, California

[Insert project description, including map showing location of project.]

Attachment B

Bill of Sale Western Placer County In-Lieu Fee Program

Contract # [ILF Program Transfer Number]

In consideration of \$_____, receipt of which is hereby acknowledged, the County of Placer ("**Program Sponsor**") does hereby sell and transfer to _____ ("**Project Applicant**"), _____ Credits, which has been approved by the Sacramento District of the U.S. Army Corps of Engineers ("**USACE**"), Region IX of the U.S. Environmental Protection Agency ("**USEPA**"), and the Central Valley Regional Water Quality Control Board ("**Central Valley Water Board**"), (jointly referred to as "**Agencies**") [add/delete agencies as appropriate]. Program Sponsor, represents and warrants that the ILF Program is in good standing with the Agencies, has available the specified number of _____ Credits, and has authorization from the Agencies to transfer the Credits to the Project Applicant. Project Sponsor also represents and warrants to the Project Applicant that it has all right, title, and interest in the Credits necessary to transfer them to the Project Applicant.

DATED: _____

County of Placer, Program Sponsor

By: _____

Title: _____

Attachment C

Payment Receipt Western Placer County In-Lieu Fee Program

PROJECT APPLICANT INFORMATION

Name: _____

Address: _____

Telephone: _____

Contact: _____

PROJECT INFORMATION

Project Description: _____

Project Location: _____

County/Address: _____

Agency File Number(s): _____

Credits Transferred: _____

Payment Amount: _____

PAYMENT INFORMATION

Payee: _____

Payer: _____

Amount: _____

Method of payment:

Wire Transfer _____

Check No. _____

Money Order No. _____

Received by: _____

Date: _____

Name: _____

Title: _____

Exhibit B.2

Placer ILF Credit Ledger Final

[illegible]

Exhibit C Conservation Easement

RECORDING REQUESTED BY AND)
WHEN RECORDED MAIL TO:)
)
)
[Easement Holder])
[Easement Holder's Address])
Attention: _____)

Space Above Line for Recorder's Use Only

TEMPLATE NOTES:

- *This template is prepared for use on privately-owned fee lands. Certain of the provisions below will likely require modification for conservation easements covering Permittee- or other public entity-owned properties (i.e. management plan, recreational uses, and condemnation provisions.)*
- *Consistent with the PCCP, this template assumes the Placer Conservation Authority will hold the conservation easements over privately-owned fee lands. Unless and until the HCP/NCCP is approved, Placer County will hold conservation easements for purposes of the ILF Program. Italicized bracketed language is included below for insertion in conservation easements Placer County/the Placer Conservation Authority determines, in consultation with the IRT Agencies, will be held by another nonprofit organization.*
- *This template does not identify recreational/public access as allowable uses. Additional provisions (i.e. specific restrictions and allowed uses, as well as reference to "recreation plan" contemplated by PCCP) would need to be included if any recreational uses are contemplated for the Easement Area/Property [use Easement Area or Property, as applicable depending on whether part or all of a legal parcel is being committed to the reserve area, selection made in Recital A].*
- *This template also assumes Placer County/the Placer Conservation Authority, and not the Landowner, will conduct the management and monitoring activities set forth in the Management Plan.*

C.1 CONSERVATION EASEMENT DEED

THIS CONSERVATION EASEMENT DEED ("Conservation Easement") is made as of the _____ day of _____, 20____, by [*insert full legal name(s) of Grantor*] ("**Grantor**"), in favor of [*The County of Placer, a subdivision of the State/Placer Conservation Authority, a California Joint Powers Authority*] ("**Grantee**"), with reference to the following facts:

C.1.1 RECITALS

A. Grantor is the sole owner in fee simple of certain real property containing approximately _____ acres, located in the County of Placer, State of California, more particularly described in **Exhibit A** attached hereto and incorporated herein by this reference (the "**Property**") and depicted on the map attached hereto as **Exhibit B** and incorporated herein by reference.

OR

Grantor is the sole owner in fee simple of certain real property located in the County of Placer, State of California, more particularly known as Assessor's Parcel Number(s) **XXXXXX**. Grantor intends to grant this Conservation Easement over approximately **XXX** acres of the Property (the "**Easement Area**"), as described in **Exhibit A** attached hereto and incorporated herein by this reference and depicted on the map attached hereto as **Exhibit B** and incorporated herein by reference.

B. This Conservation Easement is granted to satisfy certain habitat conservation requirements set forth in the following documents (collectively the "**PCCP Instruments**"): [*Include the following, as applicable.*]

1. The Placer County Habitat Conservation Plan and Natural Community Conservation Plan ("**Plan**"), dated _____, prepared by County of Placer ("**County**"), City of Lincoln ("**City**"), and Placer County Water Agency ("**PCWA**"), and approved by the United States Fish and Wildlife Service ("**USFWS**") and the National Marine Fisheries Service ("**NMFS**") under Section 10 of the federal Endangered Species Act of 1973 (16 U.S.C. Section 1531 et seq., as it may be amended from time to time) ("**ESA**"), and by California Department of Fish and Wildlife ("**CDFW**") under the California Natural Community Conservation Planning Act (California Fish and Game Code Section 2800 et seq., as it may be amended from time to time) ("**NCCPA**"); and
2. Implementing Agreement for the Placer County Habitat Conservation Plan and Natural Community Conservation Plan (the "**Implementing Agreement**"), dated _____, by and among USFWS, NMFS and CDFW (collectively, the "**Wildlife Agencies**"), Placer Conservation Authority, a Joint Powers Authority ("**PCA**"), County, City, and PCWA (collectively, PCA, County, City, and PCWA, are referred to herein as "**Permittees**"); and
3. The federal incidental take permits issued by USFWS and NMFS to Permittees for the Plan pursuant to Section 10 of ESA; and

4. The state incidental take permit issued by CDFW to Permittees for the Plan pursuant to the NCCPA.
5. The Placer County In-Lieu Fee Program Enabling Instrument, dated _____, by and among the County, the U.S. Environmental Protection Agency ("USEPA") and U.S. Army Corps of Engineers ("USACE"), the Central Valley Regional Water Quality Control Board ("CVRWQCB"), USFWS, NMFS, and CDFW (the "IRT Agencies").

[Include the following 3 recitals as applicable, depending on whether the HCP/NCCP has been approved.]

C. CDFW has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants and the habitat necessary for biologically sustainable populations of these species pursuant to California Fish and Game Code Section 1802. CDFW is authorized to hold easements for these purposes pursuant to California Civil Code Section 815.3, Fish and Game Code Section 1348, and other provisions of California law.

D. The USFWS, an agency within the United States Department of the Interior, and the NMFS, an agency within the United States Department of Commerce, have jurisdiction over the conservation, protection, restoration and management of fish, wildlife, native plants, and the habitat necessary for biologically sustainable populations of these species within the United States pursuant to the federal Endangered Species Act, 16 U.S.C. Section 1531, et seq., and other provisions of federal law.

E. The USACE and the USEPA have jurisdiction over waters of the United States pursuant to the federal Clean Water Act, 33 U.S.C. Section 1251, et seq.

F. Grantee is *[a county government/a California joint powers authority]* and is authorized to hold conservation easements pursuant to, among other provisions of law, California Civil Code Section 815.3.

G. In addition to serving as the holder of the conservation easement, the *[County/PCA]* is responsible for overseeing implementation of the PCCP Instruments, including carrying out planning and design, habitat and aquatic resource restoration, monitoring, adaptive management programs, and periodic coordination with USACE, USEPA, CVRWQCB, USFWS, NMFS and CDFW. *[The term "Grantee" is used herein specifically to refer to the County/PCA as the initial holder of the conservation easement, as well as any other qualified successor or assignee to which the conservation easement has been transferred in accordance with the terms and conditions set forth below.]* ***[TEMPLATE NOTE: The italicized language above will require revision if the County/PCA is not the Grantee.]***

H. The *Easement Area/Property* possesses wildlife, habitat value, and associated open space values of great importance to Grantee, the people of Placer County, and the people of the State of California and of the United States (the "**Conservation Values**"). The Property provides, or will provide high-quality natural, established, restored and/or enhanced habitat for *[specify listed and sensitive plant and/or animal species]* and contains, or will contain, *[list habitats; native and/or non-native]*, *[include the following phrase only if there are jurisdictional wetlands: and restored, created, enhanced and/or preserved jurisdictional waters of the United States]*. Individually and collectively, these wildlife and habitat values comprise the "Conservation Values" of the Property. The "**Initial Conservation Values**", described in **Exhibit C** attached hereto and

incorporated herein by reference, are those Conservation Values that are identified in the Plan and present on the *Easement Area/Property* at the time of the execution of the Conservation Easement.

I. Following recordation of this Conservation Easement, the *Easement Area/Property* will be incorporated into the PCCP Reserve System (as such term is defined in the Plan) (“**Reserve System**”) and will count toward the land acquisition commitments set forth in the Plan.

J. The [County/PCA] has developed a management plan, known as “_____,” that applies to the Easement Area/Property (the “**Management Plan**”). The Management Plan has been developed in accordance with the applicable requirements of the PCCP Instruments [and *identify any applicable reserve unit management plans*].

K. The Management Plan [is] [upon completion, will be] incorporated herein by reference. Grantor and Grantee recognize that changes (e.g., in weather cycles, natural resource management technologies, conservation practices) may dictate an adaptation in the management of the *Easement Area/Property*, consistent with the purposes of this Conservation Easement and the PCCP Instruments. It may be revised from time to time with the written approval of the Grantor, Grantee, and the IRT Agencies, so long as the revisions are consistent with the requirements of the PCCP Instruments [and *identify applicable reserve unit management plans*]. A full and complete copy of the current Management Plan, including any such revisions, shall be kept on file at the offices of the [County/PCA]. [if the Management Plan has not been developed as of the effective date of the Conservation Easement, explain whether and how it will be incorporated in the Conservation Easement and add the following, if applicable: The *Easement Area/Property* will be managed in accordance with the applicable requirements of the Plan until the Management Plan is developed.]

L. All section numbers referred to in this Conservation Easement are references to sections within this Conservation Easement, unless otherwise indicated.

C.2 COVENANTS, TERMS, CONDITIONS AND RESTRICTIONS

In consideration of the above and mutual covenants, terms, conditions and restrictions contained herein, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, and pursuant to the laws of the United States and the State of California, including California Civil Code Section 815, *et seq.*, Grantor hereby voluntarily grants and conveys to Grantee a conservation easement in perpetuity over the *Easement Area/Property* described in Exhibit A and depicted in Exhibit B (the “**Conservation Easement**”), subject to the terms and conditions set forth herein, restricting forever the uses which may be made of the *Easement Area/Property*.

1. Purpose.

The purpose of this Conservation Easement is to ensure that the Property will be retained forever in its [insert the following as appropriate for the specific site: *natural, restored, or enhanced*] condition for the values and associated wildlife and habitat values as contemplated by the [if post HCP say HCP and management plan; if pre HCP say mitigation plan], preventing any use of the *Easement Area/Property* that would impair or interfere with the Conservation Values. Grantor intends that this Conservation Easement will confine the use of the *Easement Area/Property* to activities that are consistent with the purposes set forth herein, including,

without limitation, those involving the preservation, restoration and enhancement of the *Easement Area/Property's* Covered Species and their habitats.

2. Baseline Documentation Report.

A Baseline Documentation Report (the “**Report**”) has been prepared for the *Easement Area/Property* and approved in writing by Grantor and Grantee. A copy of the Report is on file with Grantor and Grantee at their respective addresses for notices set forth below. The Report contains an accurate representation of the biological and physical condition of the *Easement Area/Property* at the time this Conservation Easement was recorded in the Official Records of Placer County (“**Official Records**”), including a full inventory of all of the *Easement Area/Property's* Covered Species and natural communities found thereon. Notwithstanding the foregoing, if a controversy arises with respect to the nature and extent of the physical or biological condition of the *Easement Area/Property* or the allowed uses of the *Easement Area/Property*, Grantor and Grantee shall not be foreclosed from utilizing any and all other relevant documents, surveys or other evidence or information to assist in the resolution of the controversy.

3. Rights of Grantee and Third Party Beneficiaries.

To accomplish the purposes of this Conservation Easement, Grantor hereby grants and conveys the following rights to Grantee:

- (a) To preserve, protect, sustain, restore, and enhance the Conservation Values for the *Easement Area/Property* described in Exhibit C or which develop on the *Easement Area/Property* in accordance with the Management Plan and the terms and conditions of this Conservation Easement;
- (b) To enter upon the *Easement Area/Property* to monitor Landowner's compliance with, and to otherwise enforce the terms of, this Conservation Easement, and for scientific research necessary to support monitoring and in order to support adaptive management of the Conservation Values; provided, that Grantee shall not unreasonably interfere with Grantor's allowed uses and quiet enjoyment of the *Easement Area/Property*;
- (c) To enter upon the *Easement Area/Property* to carry out, at Grantee's sole cost and expense, those management and monitoring requirements applicable to the *Easement Area/Property* that are set forth in the Management Plan, [including, without limitation, installation and maintenance of fencing around the perimeter of the *Easement Area/Property* to the extent referenced in the Management Plan as necessary to protect the Conservation Values;] provided, that Grantee shall use reasonable good faith efforts to conduct such management and monitoring activities in a manner that does not unreasonably interfere with Grantor's allowed uses and quiet enjoyment of the *Easement Area/Property*;
- (d) To prevent any activity on or use of the *Easement Area/Property* that is inconsistent with the purposes of this Conservation Easement and to require the restoration of such areas or features of the *Easement Area/Property* that

may be damaged by any act, failure to act, or any use or activity that is inconsistent with the purposes of this Conservation Easement;

- (e) To require that all mineral, air and water rights held by Grantor that Grantee deems necessary to preserve and protect the biological resources and Conservation Values of the *Easement Area/Property* shall remain a part of and be put to beneficial use upon the *Easement Area/Property*, consistent with the purposes of this Conservation Easement; and
- (f) All present and future development rights allocated, implied, reserved or inherent in the *Easement Area/Property*; such rights are hereby terminated and extinguished, and may not be used on or transferred to any portion of the *Easement Area/Property*, nor any other property adjacent or otherwise. Nothing in this Conservation Easement relieves Grantor of any obligation or restriction in relation to the development or use of the *Easement Area/Property* imposed by law, including but not limited to local land use restrictions.

Except where there is an imminent threat to the *Easement Area/Property* or its Conservation Values, Grantee and its employees, contractors or agents will only enter the *Easement Area/Property* at reasonable times and with at least forty-eight (48) hours advance notice to Grantor. Grantor may waive these requirements in whole or in part by written notice to Grantee.

4. Prohibited Uses.

Any activity on or use of the *Easement Area/Property* that adversely affects the purposes of this Conservation Easement is prohibited. Without limiting the generality of the foregoing, Grantor, Grantor's personal representatives, heirs, successors, assigns, employees, agents, lessees, licensees and invitees are expressly prohibited from doing or allowing any of the following uses and activities on the *Easement Area/Property*, unless, and then only to the extent that, a generally prohibited activity set forth below is: (i) an allowed use or practice (e.g., agricultural, rangeland or recreational uses) set forth on **Exhibit D** attached hereto and incorporated herein by reference; (ii) a management practice set forth in the Management Plan; or (iii) otherwise necessary to maintain or enhance the Conservation Values:

- (a) Unseasonable watering;
- (b) Use of fertilizers, pesticides, biocides, herbicides rodenticides, fungicides, or other agents or chemicals;
- (c) Use of off-road vehicles and use of any other motorized vehicles except on existing roadways, excepting off-road vehicle use required to conduct any allowed management practice set forth in the Management Plan;
- (d) Agricultural uses, including, without limitation, vineyards, nurseries, or intensive livestock use (e.g., dairy, feedlot) except as may be provided for in the [pick one: Management Plan or Mitigation Plan] (e.g., prescribed grazing).
- (e) Depositing or accumulation of soil, trash, ashes, refuse, waste, bio-solids or any other materials;
- (f) Planting, introduction, or dispersal of nonnative or exotic plant or animal species;
- (g) Filling, dumping, excavating, draining, dredging, mining, drilling, removing, or exploring for or extraction of minerals, loam, soil, sands, gravel, rocks, or other material on or below the surface of the Easement Area/Property, and granting or authorizing any surface entry for any of these purposes;
- (h) Removing, destroying, or cutting of trees, shrubs, or other vegetation;
- (i) Manipulating, impounding, or altering any water course, body of water, or water circulation on the Easement Area/Property, and activities or uses detrimental to water quality, including but not limited to degradation or pollution of any surface or subsurface waters; and
- (j) Without the prior written consent of Grantee, which Grantee may reasonably withhold, transferring, encumbering, selling, leasing or otherwise separating the mineral, air or water rights for the Easement Area/Property owned by Grantor; changing the place or purpose of use of the water rights owned by Grantor; abandoning or allowing the abandonment of, by action or inaction, any water or water rights, ditch or ditch rights, spring rights, reservoir or storage rights, wells, ground water rights or other rights in and to the use of water historically used on or otherwise appurtenant to the Easement Area/Property that are owned by Grantor, including but not limited to: (i) riparian water rights; (ii) appropriative water rights; (iii) rights to waters which are secured under contract with any irrigation or water district, to the extent such waters are customarily applied to the Easement Area/Property; and (iv) any water from wells that are in existence or may be constructed in the future on the Easement Area/Property.
- (k) Any use or activity that may violate, or fail to comply with, relevant federal, state, or local laws, regulations, or policies applicable to Landowner, the Property, or the use or activity in question.

[TEMPLATE NOTE: Section 4 “Prohibited Uses” for any Conservation Easement may include additional prohibited uses, or refinements of the above, to address specific site conditions, landowner preferences and operations, and species and habitat needs, as approved by the

County/PCA and the IRT Agencies. Additionally, this prohibited uses section may require modification to address public access and recreation uses to the extent contemplated or required at the Easement Area/Property under the Management Plan.]

5. Unlawful Entry.

Grantor shall undertake all reasonable actions to prevent the unlawful entry and trespass on the *Easement Area/Property* by persons whose uses or activities may degrade or harm the Conservation Values or are otherwise inconsistent with the purposes of this Conservation Easement.

6. Grantor's Reserved Rights; Allowed Uses.

Grantor reserves to itself, and to its personal representatives, heirs, successors, and assigns, all rights accruing from its ownership of the *Easement Area/Property*, including without limitation, the following (collectively, the “**Allowed Uses**”):

- (a) Those specific uses and activities identified in the Management Plan(s) or detailed in Exhibit D attached hereto, and
- (b) All other uses of the *Easement Area/Property* that are not expressly prohibited or limited by this Conservation Easement, and are consistent with the purposes of this Conservation Easement as set forth in Section 1.

Grantor shall have the right to exercise any of the Allowed Uses directly or to allow or invite others to engage in any of the Allowed Uses. While Grantor is not obligated under this Conservation Easement to perform the management and monitoring actions set forth in the Management Plan(s), Grantor's exercise of the Allowed Uses shall be conducted in a manner that is consistent with the Management Plan(s) and Conservation Values.

7. Grantee's Remedies.

If Grantee or any Third-Party Beneficiary (as defined in Section 7(d) below) determines there is a violation of the terms of this Conservation Easement or that such violation is threatened, written notice of such violation and a demand for corrective action sufficient to cure the violation shall be given to Grantor, with a copy provided to Grantee and each other Third-Party Beneficiary. The notice of violation shall specify the measures the Grantor must take to cure the violation. If Grantor fails to cure the violation within thirty (30) days after receipt of written notice and demand from Grantee or any Third-Party Beneficiary, as applicable; or if the cure reasonably requires more than thirty (30) days to complete and Grantor fails to begin the cure within such thirty (30) day period; or Grantor fails to continue diligently to complete the cure, Grantee or any Third-Party Beneficiary may bring an action at law or in equity in a court of competent jurisdiction to enforce the terms of this Conservation Easement, to recover any damages to which Grantee and the Third-Party Beneficiaries may be entitled for violation of the terms of this Conservation Easement or for any injury to the Conservation Values, to enjoin the violation, ex parte as necessary, by temporary or permanent injunction without the necessity of proving either actual damages or the inadequacy of otherwise available legal remedies, or for other equitable relief, including, but not limited to, the restoration of the *Easement Area/Property* to the condition in which it existed prior to any such violation or injury. Without limiting Grantor's liability therefor, any damages recovered may be applied to the cost of undertaking any

corrective action on the *Easement Area/Property* at the election of the party receiving such damages.

If Grantee or any Third-Party Beneficiary, each in its sole discretion, determines that circumstances require immediate action to prevent or mitigate damage to the Conservation Values, Grantee and/or any Third-Party Beneficiary may pursue its remedies under this section without prior notice to Grantor or without waiting for the period provided for cure to expire. The rights of Grantee and the Third-Party Beneficiaries under this section apply equally to actual or threatened violations of the terms of this Conservation Easement. Grantee shall notify the Grantor and Third-Party Beneficiaries within 30 days of such an occurrence. Grantor agrees that Grantee's and Third-Party Beneficiaries' remedies at law for any violation of the terms of this Conservation Easement are inadequate and that Grantee and/or any Third-Party Beneficiary shall be entitled to the injunctive relief described in this section, both prohibitive and mandatory, in addition to such other relief to which Grantee and the Third-Party Beneficiaries may be entitled, including specific performance of the terms of this Conservation Easement, without the necessity of proving either actual damages or the inadequacy of otherwise available legal remedies. Remedies described in this section shall be cumulative and shall be in addition to all remedies now or hereafter existing at law or in equity, including but not limited to, the remedies set forth in California Civil Code Section 815, et seq., or applicable federal law. The failure of Grantee or any Third-Party Beneficiary to discover a violation or to take immediate legal action in response to such action shall not bar such party from taking legal action at a later time.

(a) Costs of Enforcement.

Any reasonable costs incurred by the Grantee or any Third Party Beneficiary, where it is the prevailing party, in enforcing the terms of this Conservation Easement against the Grantor, including, but not limited to, costs of suit and attorneys' and experts' fees, and any costs of restoration necessitated by Grantor's negligence or breach of this Conservation Easement shall be borne by Grantor. In any action where an agency of the United States is a party, the right to recover fees and costs shall be governed by federal law.

(b) Enforcement Discretion.

Enforcement of the terms of this Conservation Easement against Grantor shall be at the respective discretion of Grantee and each of the Third-Party Beneficiaries, and any forbearance by any such party to exercise its rights under this Conservation Easement in the event of any breach of any term of this Conservation Easement shall not be deemed or construed to be a waiver by such party of such term or of any subsequent breach of the same or any other term of this Conservation Easement or of any of such party's rights under this Conservation Easement. No delay or omission by Grantee or any Third-Party Beneficiary in the exercise of any right or remedy upon any breach shall impair such right or remedy or be construed as a waiver.

(c) Acts Beyond Grantor's Control.

Nothing contained in this Conservation Easement shall be construed to, or shall entitle, Grantee or any Third-Party Beneficiary to bring any action against Grantor for any injury to or change in the Easement Area/Property resulting from (i) any natural cause beyond Grantor's control, including, but not limited to, climate change, fire not caused by Grantor, flood, storm, and earth movement, or any prudent action taken by Grantor under emergency conditions to

prevent, abate, or mitigate significant injury to the *Easement Area/Property* resulting from such causes; (ii) acts by Grantee or any Third-Party Beneficiary or any of their employees, contractors or agents; or (iii) acts by persons that entered the *Easement Area/Property* unlawfully or by Trespass whose activities degrade or harm the Conservation Values of the *Easement Area/Property* or whose activities are otherwise inconsistent with this Conservation Easement where Grantor has undertaken all reasonable actions to prevent such activities *[for public agencies only: or (iii) acts by persons that entered the Easement Area/Property lawfully or unlawfully whose activities degrade or harm the Conservation Values of the Easement Area/Property, or whose activities are otherwise inconsistent with this Conservation Easement, where Landowner has undertaken all reasonable actions to discourage or prevent such activities]*.

(d) Third Party Beneficiary Rights.

The PCA (during any such period, if any, that PCA does not also constitute Grantee) and the applicable IRT Agencies (collectively, “**Third-Party Beneficiaries**”) shall be a third-party beneficiary of this Conservation Easement. All rights and remedies conveyed to Grantee under this Conservation Easement shall extend to and are enforceable by each of the Third-Party Beneficiaries in accordance with the terms hereof. Grantor and Grantee acknowledge that Third-Party Beneficiaries shall have the same rights of access to the *Easement Area/Property* granted to Grantee in Section 3 above, and with rights to enforce all of the provisions of this Conservation Easement. If at any time in the future Grantor uses, allows the use, or threatens to use or allow use of, the *Easement Area/Property* for any purpose that is inconsistent with or in violation of this Conservation Easement then, notwithstanding the provisions of California Civil Code Section 815.7, the California Attorney General and each Third-Party Beneficiary has standing as an interested party in any proceeding affecting the Conservation Easement. These rights are in addition to, and do not limit, the rights of enforcement under the PCCP Instruments. In addition, if the applicable IRT Agencies reasonably determine in writing that the *Easement Area/Property* is, for a prolonged period, not being held, monitored, or stewarded for conservation purposes in the manner specified in this Conservation Easement or the Management Plan/Mitigation Plan, the Conservation Easement shall revert to the State of California or, subject to approval by the applicable IRT Agencies, another entity as described in California Government Code Section 65967, subdivisions (b) and (c).

8. Public Access.

Nothing contained in this Conservation Easement gives or grants to the public a right to enter upon or use the *Easement Area/Property* or any portion thereof. Nor shall this Conservation Easement extinguish any public right to enter upon or use the *Easement Area/Property*.

9. Costs and Liabilities.

Except for those specific obligations to be undertaken by Grantee under Section 3 above, Grantor shall retain all responsibilities and shall bear all costs and liabilities of any kind related to Grantor’s ownership, operation, management, and maintenance activities on and relating to the *Easement Area/Property*. Grantor agrees that neither the Grantee nor Third Party Beneficiaries shall have any duty or responsibility for the operation or maintenance of the *Easement Area/Property*, the monitoring of hazardous conditions thereon, or the protection of

Grantor, the public or any third parties from risks relating to conditions on the *Easement Area/Property*. Each of Grantor and Grantee shall remain responsible for obtaining any applicable governmental permits and approvals for its activity or use allowed on the *Easement Area/Property* under this Conservation Easement, and each of Grantor and Grantee shall undertake all allowed activities and uses of the *Easement Area/Property* in accordance with all applicable federal, state, local and administrative agency statutes, ordinances, rules, regulations, orders and requirements. Grantor shall pay before delinquency all taxes, assessments, fees, and charges of whatever description levied on or assessed against the *Easement Area/Property* by competent authority (collectively "taxes"), including any taxes imposed upon, or incurred as a result of, this Conservation Easement, and shall furnish Grantee with satisfactory evidence of payment upon request. Grantor and Grantee shall keep the *Easement Area/Property* free from any liens, including those arising out of any obligations incurred by either for any labor or materials furnished or alleged to have been furnished to it or for its use on the *Easement Area/Property*.

10. Indemnification.

(a) Indemnification by Grantor.

Grantor shall hold harmless, protect and indemnify Grantee and the Third-Party Beneficiaries, and their respective members, directors, officers, employees, agents, contractors, and representatives and the heirs, personal representatives, successors and assigns of each of them (each a “**Grantor Indemnified Party**” and, collectively, the “**Grantor Indemnified Parties**”) from and against any and all liabilities, penalties, costs, losses, damages, expenses (including, without limitation, reasonable attorneys' and experts' fees and costs), causes of action, claims, demands, orders, liens or judgments (each a “**Claim**” and, collectively, “**Claims**”), arising from or in any way connected with: (i) the activities of Grantor on the *Easement Area/Property*; (ii) the inaccuracy of any representation or warranty made by Grantor in this Conservation Easement; (iii) the breach by Grantor of any provision of this Conservation Easement; (iv) any injury to or the death of any person, or physical damage to any *Easement Area/Property* resulting from any act, omission, condition, or other matter related to or occurring on or about the *Easement Area/Property*, unless such injury or death or physical damage to any *Easement Area/Property* relates to an activity on, or use of, the *Easement Area/Property* by Grantee, including without limitation, those activities performed under the Management Plan, or is solely due to the negligent or willful misconduct of the Grantor Indemnified Party; or (v) any violation of, or failure to comply with, any state, federal or local law, regulation or requirement, by Grantor, or by any entity, other than one of the Grantor Indemnified Parties, acting at the time upon permission from Grantor, in any way affecting, involving or relating to the *Easement Area/Property*. If any action or proceeding is brought against any of the Grantor Indemnified Parties by reason of any such Claim, Grantor shall, at the election of and upon written notice from Grantee and the Third-Party Beneficiaries, defend such action or proceeding by counsel reasonably acceptable to the Grantor Indemnified Party.

(b) Indemnification by Grantee.

Grantee shall hold harmless, protect, and indemnify Grantor and the Third-Party Beneficiaries, and their respective members, directors, officers, employees, agents, contractors, and representatives and the heirs, personal representatives, successors and assigns of each of them (each, an “**Grantee Indemnified Party**,” and collectively, the “**Grantee Indemnified**

Parties”) from and against any and all Claims arising from or in any way connected with: (a) the activities of Grantee on the *Easement Area/Property*, including without limitation the Grantee’s performance of management and monitoring activities set forth in the Management Plan; (b) breach by Grantee of any provision of this Conservation Easement; (c) any injury to or the death of any person, or physical damage to any *Easement Area/Property* occurring on or about the *Easement Area/Property* resulting from any act, omission, condition, or other matter related to, an activity on, or use of, the *Easement Area/Property* by Grantee, including without limitation, those performed under the Management Plan, unless due solely to the negligence or willful misconduct of the Grantee Indemnified Party; and (d) any violation of, or failure to comply with, any state, federal or local law, regulation or requirement, by Grantee in any way affecting, involving or relating to the *Easement Area/Property*. If any action or proceeding is brought against any of the Grantee Indemnified Parties by reason of any such Claim, Grantee shall, at the election of and upon written notice from Grantor, defend such action or proceeding by counsel reasonably acceptable to the Grantee Indemnified Party.

11. Extinguishment.

This Conservation Easement constitutes a property right, and the terms and conditions of this Conservation Easement shall be effective in perpetuity. Liberal construction is expressly required for purposes of effectuating the Conservation Easement in perpetuity, notwithstanding economic hardship or changed conditions of any kind. This Conservation Easement cannot be terminated or extinguished, in whole or in part, except by judicial proceedings in a court of competent jurisdiction. In addition, no such extinguishment shall affect the value of Grantee’s interest in the *Easement Area/Property*, and if the *Easement Area/Property*, or any interest therein, is sold, exchanged or taken by power of eminent domain after such extinguishment, Grantee shall be entitled to receive the fair market value of the Conservation Easement at the time of such extinguishment. If such extinguishment occurs with respect to fewer than all acres of the *Easement Area/Property*, the amounts described above shall be calculated based on the actual number of acres subject to extinguishment.

12. Condemnation.

The purposes of this Conservation Easement are presumed to be the best and most necessary public use as defined in California Code of Civil Procedure Section 1240.680 notwithstanding Code of Civil Procedure Sections 1240.690 and 1240.700. [**TEMPLATE NOTE: If Easement Holder is CDFW or another state agency, substitute the preceding sentence with the following: This Conservation Easement is a “wildlife conservation easement” acquired by an agency of the State of California, the condemnation of which is prohibited except as provided in California Fish and Game Code Section 1348.3.**]

13. Transfer of Conservation Easement.

This Conservation Easement may be transferred by Grantee upon written approval of the Third-Party Beneficiaries, which approval shall not be unreasonably withheld or delayed; provided, that Grantee shall give Grantor and Third-Party Beneficiaries at least sixty (60) calendar days prior written notice of the proposed assignment or transfer. Grantee may transfer its rights under this Conservation Easement only to an entity or organization: (a) authorized to acquire and hold conservation easements pursuant to California Civil Code Section 815.3 and California Government Code Section 65967(c) (and any successor or other provisions then

applicable); and (b) otherwise reasonably acceptable to the Third-Party Beneficiaries. Grantee shall require the transferee to record the conveyance in the Official Records of the County where the *Easement Area/Property* is located. The failure of Grantee to perform any act provided in this section shall not impair the validity of this Conservation Easement or limit its enforcement in any way. Any transfer under this section shall be subject to the requirements of Section 17 below.

14. Transfer of Easement Area/Property.

Grantor agrees to incorporate the terms of this Conservation Easement by reference in any deed or other legal instrument by which Grantor divests itself of any interest in all or any portion of the *Easement Area/Property*, including, without limitation, a leasehold interest. Grantor further agrees to give written notice to Grantee and the Third-Party Beneficiaries of the intent to transfer any interest at least sixty (60) calendar days prior to the date of such transfer. Grantee and the Third-Party Beneficiaries shall have the right to prevent subsequent transfers in which prospective subsequent claimants or transferees are not given notice of the covenants, terms, conditions and restrictions of this Conservation Easement. The failure of Grantor to perform any act provided in this section shall not impair the validity of this Conservation Easement or limit its enforceability in any way. Any transfer under this section is subject to the requirements of Section 17. Any successor in interest of Grantor, by acceptance of a deed, lease, or other document purporting to convey an interest in the *Easement Area/Property*, shall be deemed to have consented to, reaffirmed and agreed to be bound by all of the terms, covenants, restrictions, and conditions of this Conservation Easement.

15. Notices.

Any notice, demand, request, consent, approval, or other communication that Grantor, Grantee, or Third-Party Beneficiary desires or is required to give to the others shall be in writing and be served personally or sent by recognized overnight courier that guarantees next-day delivery or by first class United States mail, postage fully prepaid, addressed as follows: ***[Include the following notice information as appropriate, depending on whether the HCP/NCCP has been approved.]***

To Grantor: [Grantor name]

[Grantor address]

Attn: _____

To Grantee:

[Grantee name]

[Grantee address]

Attn: _____

To [*County/PCA*]:

[name]

[address]

Attn: _____

To CDFW:

[Department of Fish and Wildlife]

North Central Region

[REGION ADDRESS]

[Attn: Regional Manager]

With a copy to:

Department of Fish and Wildlife

Office of General Counsel

1416 Ninth Street, 12th Floor

Sacramento, CA 95814-2090

Attn: General Counsel

To USFWS:

United States Fish and Wildlife Service

Sacramento Field Office

2800 Cottage Way, Room W-2605,

Sacramento, CA 95825

Attn: Field Supervisor

To USACE:

U.S. Army Corps of Engineers

Sacramento District

1325 J Street -- Room 1350

Sacramento, CA 95814

Attn: Chief, Regulatory Division

To USEPA:

U.S. Environmental Protection Agency, Region IX

75 Hawthorne Street

San Francisco, CA 94105

Attn: Director, Water Division

To Central Valley Regional Water Quality Control Board:

[address]

Attn: _____

or to such other address a party shall designate by written notice to the others. Notice shall be deemed effective upon delivery in the case of personal delivery or delivery by overnight courier or, in the case of delivery by first class mail, five (5) days after deposit into the United States mail.

16. Amendment.

This Conservation Easement may not be amended, modified or otherwise changed in any manner, except by a written amendment executed by the parties hereto, or their successors in interest, it being understood that no Grantee or Grantor will ever be obligated to negotiate or enter into any such amendment; and no discretionary approval that this Conservation Easement may allow to be made from time to time by a party will operate to amend or modify any of the terms of this Conservation Easement to any extent or in any manner. Any such amendment shall be subject to the prior written consent of the Third-Party Beneficiaries; any amendment made without such consent is void and without effect. Any such amendment shall be consistent with the purposes of the Conservation Easement and California law governing conservation easements, and shall not affect the perpetual duration of the Conservation Easement. Any such amendment must refer to this Conservation Easement by reference to its recordation data, and must be recorded in the Official Records of the County where the *Easement Area/Property* is located. Grantee shall promptly provide a conformed copy of the recorded amendment to the Third-Party Beneficiaries.

17. Merger.

The doctrine of merger shall not operate to extinguish the Conservation Easement if the Conservation Easement and the *Easement Area/Property* become vested in the same party. If, despite this intent, the doctrine of merger applies to extinguish the Conservation Easement then, a replacement conservation easement, with a new Grantee identified by the PCA and approved by the Third-Party Beneficiaries, containing the same protections embodied in this Conservation Easement shall be recorded against the *Easement Area/Property*.

18. No Hazardous Materials Liability.

Grantor represents and warrants that, after reasonable review of Grantor's records as of the date of this Conservation Easement, Grantor has no knowledge or notice of any Hazardous Materials (as defined below) or underground storage tanks existing, generated, treated, stored, used, released, disposed of, deposited or abandoned in, on, under, or from the *Easement Area/Property*, or transported to or from or affecting the *Easement Area/Property* [except as disclosed in the Report]. [Insert site-specific conditions, if applicable.] Grantor further represents and warrants that Grantor shall comply with all Environmental Laws (as defined below) in using the *Easement Area/Property* and that Grantor shall keep the *Easement Area/Property* free of any material environmental defect, including, without limitation, contamination from Hazardous Materials (as defined below). Without limiting the obligations of

Grantor under this Conservation Easement, Grantor hereby releases and agrees to indemnify, protect and hold harmless the Grantor Indemnified Parties (as defined in Section 10(a)) from and against any and all Claims (as defined in Section 10(a)) arising from or connected with any Hazardous Materials or underground storage tanks present, alleged to be present, or otherwise associated with the *Easement Area/Property* at any time, except any Hazardous Materials placed, disposed or released by Grantor Indemnified Parties, or their employees or agents. This release and indemnification includes, without limitation, Claims for (a) injury to or death of any person or physical damage to any *Easement Area/Property*; and (b) the violation or alleged violation of, or other failure to comply with, any Environmental Laws (as defined below). If any action or proceeding is brought against any of the Grantor Indemnified Parties by reason of any such Claim, Grantor shall, at the election of and upon written notice, defend such action or proceeding by counsel reasonably acceptable to the Grantor Indemnified Party.

Despite any contrary provision of this Conservation Easement, the parties do not intend this Conservation Easement to be, and this Conservation Easement shall not be, construed such that it creates in or gives to Grantee or the Third Party Beneficiaries any of the following:

- (a) The obligations or liability of an "owner" or "operator," as those terms are defined and used in Environmental Laws (as defined below), including, without limitation, the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended (42 U.S.C. Section 9601 et seq.; hereinafter, "**CERCLA**"); or
- (b) The obligations or liabilities of a person described in 42 U.S.C. Section 9607(a)(3) or (4); or
- (c) The obligations of a responsible person under any applicable Environmental Laws; or
- (d) The right or duty to investigate and remediate any Hazardous Materials associated with the *Easement Area/Property*; or
- (e) Any control over Grantor's ability to investigate, remove, remediate or otherwise clean up any Hazardous Materials associated with the *Easement Area/Property*.

The term "**Hazardous Materials**" includes, without limitation, (a) material that is flammable, explosive or radioactive; (b) petroleum products, including by-products and fractions thereof; and (c) hazardous materials, hazardous wastes, hazardous or toxic substances, or related materials defined in CERCLA, the Resource Conservation and Recovery Act of 1976 (42 U.S.C. Section 6901 et seq.; hereinafter "**RCRA**"); the Hazardous Materials Transportation Act (49 U.S.C. Section 6901 et seq.; hereinafter "**HTA**"); the Hazardous Waste Control Law (California Health & Safety Code Section 25100 et seq.; hereinafter "**HCL**"); the Carpenter-Presley-Tanner Hazardous Substance Account Act (California Health & Safety Code Section 25300 et seq.; hereinafter "**HAS**"), and in the regulations adopted and publications promulgated pursuant to them, or any other applicable Environmental Laws now in effect or enacted after the date of this Conservation Easement.

The term "**Environmental Laws**" includes, without limitation, CERCLA, RCRA, HTA, HCL, HSA, and any other federal, state, local or administrative agency statute, ordinance, rule, regulation, order or requirement relating to pollution, protection of human health or safety,

the environment or Hazardous Materials. Grantor represents, warrants and covenants to Grantee and Third-Party Beneficiaries that all activities upon and use of the Property by Grantor, its agents, employees, invitees and contractors will comply with all Environmental Laws.

19. Representations and Warranties.

(a) Authority.

Grantor has good and sufficient title to the *Easement Area/Property* (including all appurtenances thereto, including, without limitation, [*all minerals and mineral rights and all water and water rights*], and Grantor has full right and authority to grant the Conservation Easement to Grantee. There are no monetary liens and encumbrances recorded against the *Easement Area/Property* except as expressly identified in **Exhibit E**. All deeds of trust and mortgages recorded against the *Easement Area/Property*, or any portion thereof, are and shall continue to be subordinated to this Conservation Easement; documentation of such subordinations are contained in Exhibit E.

(b) Compliance with Laws.

Grantor has not received notice of, and has no knowledge of, any material violation of any federal, state, county or other governmental or quasi-governmental statute, ordinance, regulation, law or administrative or judicial order with respect to the *Easement Area/Property* [*except as disclosed in the Report*]. [*Insert site-specific conditions, if applicable.*]

(c) No Litigation.

There is no action, suit or proceeding which is pending or threatened against the *Easement Area/Property* or any portion thereof relating to or arising out of the ownership or use of the *Easement Area/Property*, or any portion thereof, in any court or in any federal, state, county, or municipal department, commission, board, bureau, agency or other governmental instrumentality.

20. General Provisions.

(a) Controlling Law.

The interpretation and performance of this Conservation Easement shall be governed by the laws of the State of California, disregarding the conflicts of law principles of such state, and by applicable federal law.

(b) Liberal Construction.

It is the intent of this Conservation Easement to preserve the condition of the *Easement Area/Property* and each of the Conservation Values protected thereon, notwithstanding economic or other hardship or changes in circumstances or conditions. The provisions of this Conservation Easement shall be liberally construed to effectuate the purposes of the Conservation Easement and to allow Grantor's use and enjoyment of the *Easement Area/Property* to the extent consistent with such purposes. Liberal construction is expressly required for purposes of effectuating this Conservation Easement in perpetuity, notwithstanding changed conditions of any kind. The Conservation Easement created by this Conservation Easement is the intended best and most productive use of the *Easement Area/Property*. No remedy or election given by any provision in this Conservation Easement shall be deemed

exclusive unless so indicated, but it shall, wherever possible, be cumulative with all other remedies at law or in equity. The parties acknowledge that each party and its counsel have had the opportunity to review and revise this Conservation Easement and that no rule of construction that ambiguities are to be resolved against the drafting party shall be employed in the interpretation of this Conservation Easement. In the event of any conflict between the provisions of this Conservation Easement and the provisions of any use and zoning restrictions of the State of California, the county in which the *Easement Area/Property* is located, or any other governmental entity with jurisdiction, the more restrictive provisions shall apply. If any provision in this instrument is found to be ambiguous, an interpretation consistent with the purposes of this Conservation Easement that would render the provision valid shall be favored over any interpretation that would render it invalid.

(c) Severability.

If a court of competent jurisdiction voids or invalidates on its face any provision of this Conservation Easement, such action shall not affect the remainder of this Conservation Easement. If a court of competent jurisdiction voids or invalidates the application of any provision of this Conservation Easement to a person or circumstance, such action shall not affect the application of the provision to any other persons or circumstances.

(d) Entire Agreement.

This instrument sets forth the entire agreement of the parties and the Third Party Beneficiaries with respect to the Conservation Easement and supersedes all prior discussions, negotiations, understandings, or agreements relating to the Conservation Easement. No alteration or variation of this Conservation Easement shall be valid or binding unless contained in an amendment in accordance with Section 16.

(e) No Forfeiture.

Nothing contained in this Conservation Easement will result in a forfeiture or reversion of Grantor's title in any respect.

(f) Successors.

The covenants, terms, conditions, and restrictions of this Conservation Easement shall be binding upon, and inure to the benefit of, the parties and their respective personal representatives, heirs, successors, and assigns, and shall constitute a servitude running in perpetuity with the *Easement Area/Property*.

(g) Termination of Rights and Obligations.

A party's rights and obligations under this Conservation Easement terminate upon transfer of the party's interest in the Conservation Easement, except that liability for acts, omissions or breaches occurring prior to transfer shall survive transfer.

(h) Captions.

The captions in this instrument have been inserted solely for convenience of reference and are not a part of this instrument and shall have no effect upon its construction or interpretation.

(i) Additional Easements.

Grantor shall not grant any additional easements, rights of way or other interests in the Property (other than a security interest that is subordinate to this Conservation Easement), or grant or otherwise abandon or relinquish any mineral, air, or water right or agreement relating to the Property, without first obtaining the written consent of Grantee and the Third-Party Beneficiaries. Grantee and any of the Third-Party Beneficiaries may withhold such consent if it determines that the proposed interest or transfer is inconsistent with the purposes of this Conservation Easement or may impair or interfere with the Conservation Values. This section shall not prohibit transfer of a fee or leasehold interest in the *Easement Area/Property* that is subordinate to this Conservation Easement and complies with Section 14. Grantor shall provide a copy of any grant or Transfer document to the Grantee and Third-Party Beneficiaries.

(j) Recording.

Grantee shall record this Conservation Easement in the Official Records of the County in which the *Easement Area/Property* is located, and may re-record it at any time as Grantee deems necessary to preserve its rights in this Conservation Easement. Grantee shall provide a copy of the recorded Conservation Easement to the Third Party Beneficiaries within thirty (30) calendar days of recordation.

(k) Counterparts.

The parties may execute this Conservation Easement in two or more counterparts, which shall, in the aggregate, be signed by both parties; each counterpart shall be deemed an original instrument as against any party who has signed it. In the event of any disparity between the counterparts produced, the recorded counterpart shall be controlling.

IN WITNESS WHEREOF Grantor and Grantee have executed this Conservation Easement the day and year first above written.

Grantor:

Name: _____

Title: _____

Grantee:*[County/Placer Conservation Authority]*

By: _____

Name: _____

Title: _____

EXHIBITS:

Exhibit A -- Legal Description of the *Easement Area/Property*

Exhibit B -- Map of the *Easement Area/Property*

Exhibit C -- Initial Conservation Values

Exhibit D -- Allowed Uses

Exhibit E -- Title Encumbrances

Exhibit D

Compensation Planning Framework

D.1 Background

The Western Placer County In-Lieu Fee Program (ILF Program) would operate over a regionally and watershed-based Service Area covering the 269,000 acres of western Placer County (Figure 1), including parts of seven primary watersheds within the American Basin Hydrologic Unit (e.g., American River, Auburn Ravine, Bear River, Coon Creek, Dry/Steelhead Creek, Markham Ravine, and Pleasant Grove). This Service Area is coincident with the Plan Area for the Draft Western Placer County Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP), which is in development (www.placercounty.ca.gov). The County ILF Program would provide compensatory mitigation for permits issued for unavoidable impacts on aquatic resources of Placer County while also implementing the conservation strategy developed in the Placer County Conservation Plan (PCCP). The PCCP has three components: (1) the Draft HCP/NCCP, (2) the ILF Program, and (3) the Draft Western Placer County Aquatic Resources Program (CARP).

Placer County has been engaged in the development of several regional and watershed-based resource planning efforts from which data and documentation are being utilized to develop the ILF Program. The Draft HCP/NCCP provides the basis for streamlined permitting and compensatory mitigation for impacts on protected species and habitat by the U.S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), and California Department of Fish and Wildlife (CDFW) pursuant to the federal Endangered Species Act (FESA) Section 10, California ESA (CESA), and the California Natural Community Conservation Planning Act. The Draft CARP is being developed as a multidisciplinary, watershed-based approach for identifying, classifying, ranking, and protecting the aquatic resources of western Placer County. These waters and other aquatic resources are collectively referred to herein as “aquatic resources of Placer County.” The CARP is being designed to provide a process through which the County’s conservation strategy for aquatic resources would be implemented, once approved by resource and regulatory agencies. The HCP/NCCP outlines a comprehensive conservation strategy that conserves sensitive plants, wildlife, and aquatic and terrestrial natural communities in western Placer County. The planning information developed for these programs provides key information used in the development of this ILF Program and guides how compensatory mitigation projects will be selected and prioritized during implementation. The Western Placer County ILF Program will use fees paid to implement compensatory mitigation projects within a framework of regional and watershed-planning approaches for unavoidable impacts authorized by the U.S. Army Corps of Engineers (USACE or Corps), Regional Water Quality Control Board (Waterboard), and California Department of Fish and Wildlife (CDFW).

Within its broad geographic reach, the Placer County ILF Program is intended to establish a mechanism for the mitigation of impacts associated with development projects within the Service Area. This Program will enhance the efficiency of mitigation efforts undertaken in Placer County and enable the acquisition of larger and more strategic reserve properties than would be possible if mitigation were done on a property-by-property basis; these properties will also serve as the reserve system for the HCP/NCCP which provides the foundation for the conservation goals and objectives in the PCCP. ILF Program projects will result in establishment, re-establishment and

rehabilitation, and preservation of aquatic resources of Placer County, including wetlands, riverine systems, vernal pools, and other aquatic resources. The term “creation” used in the Draft HCP/NCCP is synonymous with the USACE term “establishment” used in this ILF, and the HCP/NCCP term “restoration” is as synonymous with the USACE terms re-establishment and rehabilitation.

The Mitigation Rule (33 Code of Federal Register [CFR] Parts 325 and 332, and 40 CFR Part 230) has established requirements for the approval and timing of mitigation sites, including evaluation of the proposed location, design, size, monitoring and management activities (e.g., performance standards, short- and long-term management plans and schedules), real estate protection mechanisms (e.g., conservation easements, restrictive covenants), and funding mechanisms for management in perpetuity (e.g., endowments). The Corps has compliance and enforcement responsibilities to ensure the mitigation is sustained in perpetuity. The Interagency Review Team (IRT), comprised of the Corps, USFWS, NMFS, CDFW, U.S. Environmental Protection Agency (EPA), the Central Valley Regional Water Quality Control Board (Waterboard) and the State Water Resources Control Board (State Board), have responsibilities to review and approve all projects proposed under the ILF Program subject to their jurisdictional authority. By providing the up-front identification, design, and approval of large-scale mitigation sites that meet the requirements of the Mitigation Rule, as well as the mitigation requirements adopted or that may be adopted by the County for various development projects within the program area that fulfill the County’s planning obligations (i.e., consistency with the Draft HCP/NCCP and CARP once adopted), the Western Placer County ILF Program is intended to expedite and streamline permitting and compliance efforts by the agencies. This program also provides a targeted approach to selecting and prioritizing compensatory mitigation within the Service Area to maximize success and contributions of mitigation projects to the needs of each watershed.

D.2 Objectives

The objectives of the ILF Program are to:

- Provide an in-lieu fee option for compensatory mitigation for impacts to aquatic resources authorized under individual, nationwide, and programmatic permits, certifications, and other approvals or authorizations, associated with impacts from covered activities under the proposed HCP/NCCP, from large-scale and linear infrastructure projects (e.g., roads, levee and canal operation and maintenance, pipelines, transmission lines), and other large- and small-scale development projects;
- Apply fee revenues with economies of scale and flexibility to serve the greatest aquatic resource needs of the program area and track with sufficient detail the types of wetlands impacted and mitigated to enable assessment of Program effectiveness;
- Achieve ecological success on a watershed basis by:
 - siting ILF Projects using the best available decision support tools;
 - aligning compensatory mitigation with Program conservation priorities and HCP/NCCP conservation goals and objectives;
 - coordinating the implementation of compensatory mitigation under the Program with the implementation of the HCP/NCCP and the CARP;

- engaging various partners, such as non-profit conservation organizations, private entities, federal, state, tribal, and local aquatic resource management and regulatory authorities, and others with knowledge of aquatic resource needs within the program area.
- Operate a technically, operationally, and financially feasible and accountable Program that meets the requirements of the compensatory mitigation rule.

D.3 Compensation Planning Framework

This Compensation Planning Framework was prepared using existing information collected in preparation of the Draft HCP/NCCP and CARP to ensure a consistent regional approach to compensatory mitigation in the Program Area. This framework is based on the conservation strategy in the Draft HCP/NCCP and addresses the following 10 elements required by the Mitigation Rule at 33 CFR 332.8(c)(2):

1. The geographic Service Area(s), including a watershed-based rationale for the delineation of each Service Area.
2. A description of the threats to aquatic resources in the Service Area(s), including how the ILF program will help offset impacts resulting from those threats.
3. An analysis of historic aquatic resource loss in the Service Area(s).
4. An analysis of current aquatic resource conditions in the Service Area(s), supported by and appropriate level of field documentation.
5. A statement of aquatic resource goals and objectives for each Service Area, including a description of the general amounts, types and locations of aquatic resources the program will seek to provide.
6. A prioritization strategy for selecting and implementing compensatory mitigation activities.
7. An explanation of how any preservation objectives identified in 33 CFR 332.8(c)(2)(v) and addressed in the prioritization strategy in paragraph 33 CFR 332.8(c)(2)(vi) satisfy the criteria for use of preservation in §332.3(h).
8. A description of any public and private stakeholder involvement in plan development and implementation, including, where appropriate, coordination with federal, state, tribal, and local aquatic resource management and regulatory authorities.
9. A description of the long-term protection and management strategies for activities conducted by the ILF program sponsor.
10. A strategy for periodic evaluation and reporting on the progress of the program in achieving the goals and objectives above, including a process for revising the planning framework as necessary.
11. Any other information deemed necessary for effective compensation planning by the district engineer.

D.3.1 Geographic Service Area

The ILF Program Service Area or Program Area (Figure 1) will service approximately 269,000 acres of western Placer County. This area is aligned with the Draft HCP/NCCP which includes 209,832

acres of which are aligned with watersheds where most development and mitigation will occur (e.g., Plan Area A of the Draft HCP/NCCP) and 59,000 acres of which are aligned with other areas with limited development and fewer covered activities (e.g., Plan Area B of the Draft HCP/NCCP). Data on land cover types is only presented only for the 209,832 acre area because this is where ILF projects will be developed. Within the 59,000 acre area, the HCP/NCCP covers impacts from Placer County Water Agency operations and maintenance, fish channel improvements, and conservation within the Big Gun Conservation Bank, but impacts and mitigation for activities in this area conducted by entities that are not participants in the Draft HCP/NCCP are not covered. Approximately half of the Service Area is within the Central Valley and half is in the Sierra foothills. The valley region consists of the urban and suburban areas and unincorporated areas surrounded by agricultural uses and natural grassland, riparian and stream floodplains, and vernal pool communities. The foothills region is located generally east of the City of Lincoln and Highway 65, and along Interstate 80. The foothills region consists of lower-density suburban, rural residential development and low density rural residential development associated with agricultural operations, grazing lands, natural woodland communities, and higher gradient streams with typically narrow floodplains in the north foothills.

This Service Area was selected because it aligns with the Draft HCP/NCCP and the CARP. Further, there has been extensive watershed and ecosystem planning conducted over the past 20 years in this area and the Draft HCP/NCCP for this area is expected to be finalized in 2019. Further, the Service Area is under extensive development pressure but also has intact aquatic resources, that with the implementation of ILF projects, will enhance and sustain important local and regional aquatic values.

There are four hydrologic unit code (HUC)-8 watersheds in the ILF Program area: North Fork American (HUC: 18020128), Lower American (HUC: 18020111), Upper Coon-Upper Auburn (HUC: 18020161), and Upper Bear (HUC: 18020126)(Figure 1) and seven HUC-10 watersheds: Bear River (HUC:), Coon Creek (HUC: 1802016102), Pleasant Grove Creek – Cross Canal (Markham Ravine) (HUC: 1802016103), Auburn Ravine (HUC: 1802016101), Pleasant Grove Creek – Cross Canal (Pleasant Grove Creek) (HUC: 1802016103), Dry Creek (HUC: 1802011101), and American (HUC: 1802012806) (Figure 2). The key watershed features within these watersheds are summarized in Table D-1. The Program area was based on these watersheds because it is aligned with the Western Placer County Habitat Conservation Plan and Natural Community Conservation Plan (HCP/NCCP). By being aligned with the HCP/NCCP, the Program area contributes to broader watershed, habitat and species conservation goals.

Table D-1. Acres of Natural Communities in Service Area by Watershed

	HUC-8 Watersheds							
	Upper Bear (HUC: 18020126)	Upper Coon-Upper Auburn (HUC: 18020161)				Lower Am. (HUC: 18020111)	North Fork Am. (HUC: 18020128)	
	HUC-10 Watersheds							
	Bear River (HUC: 1802012605)	Coon Creek (HUC: 1802016102)	Pleasant Grove Creek - Markham Ravine (HUC: (1802016103)	Auburn Ravine (HUC: 1802016101)	Pleasant Grove (HUC: 1802016103)	Dry Creek (HUC: 1802012806)	North Fork American (HUC: 1802012806)	All Community
Natural Community								
Natural Communities								
Vernal Pool Complex	10,502	6,070	5,288	8,427	8,366	6,413	-	45,065
Grassland	3,764	15,731	2,102	6,461	713	5,203	788	34,760
Aquatic/Wetland Complex	940	929	574	476	128	359	26	3,433
Riverine/Riparian Complex	660	1,821	357	1,992	92	1,637	125	6,685
Oak Woodland	10,400	18,560	199	8,223	166	9,450	3,872	50,870
Valley Oak Woodland	128	143	13	211	12	769	88	1,364
Subtotal Natural	26,393	43,255	8,534	25,790	9,477	23,831	4,899	142,179
Semi-natural Communities								
Rice Agriculture ^a	2,433	3,397	4,725	4,304	4,160	561	-	19,580
Field Agriculture	93	486	4	1,526	125	412	111	2,757
Subtotal Semi-natural	2,526	3,883	4,729	5,830	4,285	973	111	22,337
Other Agriculture								
Orchard and Vineyard Agriculture	1,307	493	48	324	-	374	71	2,618
Subtotal Other Agricultural	1,307	493	48	324	-	374	71	2,618
Urban (Non-natural) Communities								
Managed Open Water	912	28	52	212	27	92	3,995	5,317
Rural Residential	1,037	2,608	952	3,462	454	9,803	556	18,871
Urban	1,364	1,828	2,860	6,690	977	4,560	230	18,510
Subtotal Urban	3,313	4,464	3,864	10,364	1,458	14,455	4,781	42,698
Grand Total	33,540	52,094	17,174	42,309	15,220	39,633	9,862	209,832

Notes:

^a Aquatic resources may be present in this land cover type.

Source: MIG|TRA, 2015

Table D-2. Key Features of ILF Watersheds (by Percent)

	HUC-8 Watersheds								
	Upper Bear (HUC: 18020126)	Upper Coon-Upper Auburn (HUC: 18020161)					Lower Am. (HUC: 18020111)	North Fork Am. (HUC: 18020128)	
	HUC-10 Watersheds								
	Bear River (HUC: 1802012605)	Coon Creek (HUC: 1802016102)	Pleasant Grove Creek- Markham Ravine (HUC: 1802016103)	Auburn Ravine (HUC: 1802016101)	Pleasant Grove (HUC: 1802016103)	Subtotal	Dry Creek (HUC: 1802012806)	North Fork American (HUC: 1802012806)	All Community
Natural Community									
Natural Communities									
Vernal Pool Complex	23%	13%	12%	19%	19%	62%	14%	0%	100%
Grassland	11%	45%	6%	19%	2%	72%	15%	2%	100%
Aquatic/Wetland Complex	27%	27%	17%	14%	4%	61%	10%	1%	100%
Riverine/Riparian Complex	10%	27%	5%	30%	1%	64%	24%	2%	100%
Oak Woodland	20%	36%	0%	16%	0%	53%	19%	8%	100%
Valley Oak Woodland	9%	10%	1%	15%	1%	28%	56%	6%	100%
Semi-natural Communities									
Rice Agriculture ^a	12%	17%	24%	22%	21%	85%	3%	0%	100%
Field Agriculture	3%	18%	0%	55%	5%	78%	15%	4%	100%
Other Agriculture									
Orchard and Vineyard Agriculture	50%	19%	2%	12%	0%	33%	14%	3%	100%
Urban (Non-natural) Communities									
Managed Open Water	17%	1%	1%	4%	1%	6%	2%	75%	100%
Rural Residential	5%	14%	5%	18%	2%	40%	52%	3%	100%
Urban	7%	10%	15%	36%	5%	67%	25%	1%	100%
Notes:									
^a Aquatic resources may be present in this land cover type.									

D.3.2 Current Aquatic Resource Condition

D.3.2.1 Overview

At a landscape scale, the Coon Creek and Bear River watersheds and the western third of the Markham Ravine/Auburn Ravine/Pleasant Grove watershed contain the largest and least-fragmented aquatic resources in the Service Area and present Placer County with the best aquatic resource restoration opportunities that are not present in other watersheds. The Dry Creek watershed is fragmented and impacted to such an extent that establishment and re-establishment opportunities are limited, and the long-term viability of established, re-established or preserved resources is less certain. Impervious surface cover in the Dry Creek watershed has been studied extensively between 2003 and 2011 and is projected to be 28% of the watershed at build-out. Furthermore, a GIS evaluation of roads and fragmentation in the Service Area determined that the Coon Creek and lower Bear River watersheds are a mostly intact natural environment in a relatively un-fragmented landscape but will become fragmented if not protected. Additionally, the Coon Creek and lower Bear River watersheds provide the only opportunity for foothill to valley floor connectivity. The Bear River watershed also provides connectivity to other conservation lands in Yuba and Nevada Counties and public lands in the Sierra Nevada foothills. (Placer County Conservation Program, 2018.)

D.3.2.2 Vernal Pool Complexes

Vernal pool complexes, as described in the Draft HCP/NCCP, comprise 445,065 acres within the Service Area; vernal pool complexes by watershed are shown in Tables D-1 and D-2. The majority of the vernal pool complexes are located in the Upper Coon-Upper Auburn watershed (63%), with 23% in the Upper Bear watershed, and 14% in the Lower American watershed (Figure 3).

Vernal pools are seasonally inundated wetlands that form in relatively shallow soil depressions underlain by a water-restricting layer such as clay, cemented alluvium, or volcanic basalt at or near the surface. These depressions fill with rainwater, near surface groundwater and/or runoff from adjacent areas during the winter and may remain inundated until spring or early summer, sometimes filling and emptying multiple times during the wet season. Vernal pools are typically characterized by endemic plants species.

Vernal pools annually undergo four distinct phases: (1) the wetting phase occurs in the fall and early winter with the first rains; (2) the aquatic phase when persistent inundation occurs; (3) the drying phase, when many plants flower and produce seed and many animals disperse; and finally (4) the drought phase when the soil dries, and the plants go dormant, as seed or underground roots (Zedler, 1987).

The conditions of these aquatic resources vary substantially throughout the Service Area. Many are degraded as they have been heavily grazed and farmed, though some remain undisturbed. Additional information is provided below in Section D.3.3 *Threats to Aquatic Resources* and Section D.3.4, *Historic Aquatic Resource Loss*.

D.3.2.2.1 Mapping Vernal Pool Complexes

In conjunction with the Placer County Planning Services Division, North Fork Associates (Jeff Glazner) initially mapped vernal pool complexes along the Valley floor of western Placer County in 2002 using 1999 and 2000 aerial photography. A spring 2002 aerial photo was also used to evaluate

spring/wet conditions for potential vernal pool complexes. Vernal pools and vernal pool complexes were then identified, based on a two-dimensional interpretation of these sub-meter aerial photographs. To reflect more current conditions in 2006, the original vernal pool mapping was updated along with the overall land-cover map.

North Fork Associates remapped vernal pool complexes in the Valley floor of western Placer County in 2009 using high-resolution photography from summer 2007 and fall 2008 and evaluated disturbance and re-establishment potential along with density.

In 2009, Placer County convened a number of vernal pool and wetland experts to evaluate the mapping conducted to date and provide input to improve the mapping. A meeting was coordinated by Dr. Michael Barbour of the University of California, Davis that included various members of the academic community and resources agencies. Several vernal pool experts, including Carol Witham (California Native Plant Society), Dr. Bob Holland, and Dr. Michael Barbour, indicated that the vernal pool complexes were “under mapped” in the Service Area (Snow pers. comm.; Glazner pers. comm.).

In 2011, new aerial photography was commissioned by Placer County that showed the correct seasonal period. This new photography, from April 11, 2011, occurred when the wetlands were drying down and the low-moisture areas, which were beginning to dry out, were most visible against the more mesic, green grasslands. As a result, the overall vegetation was highly interpretable with use of the aerial photography (Glazner pers. comm.). The 2012 mapping was completed by Jeff Glazner (currently with Salix Consulting) with use of this new aerial photography. The 2012 GIS data were integrated into the land-cover GIS to analyze the effects of Covered Activities and develop the conservation strategy. The following describes the methods used to remap vernal pool complexes.

All land-cover types that could support vernal pools in western Placer County below the 200-foot contour were identified through photo interpretation. Once identified, all land-cover types and vernal pool complexes were digitized at a scale of 1 inch equal to 200 feet utilizing ArcGIS 9.3. The final data were produced in survey feet, North American Datum 1983, State Plane California Zone II.

The majority of vernal pools occurred in the annual grassland and pasture land-cover types. Vernal pools are often clustered in hydrologically connected complexes. For the purpose of this mapping effort, a complex was defined as a grouping of two or more vernal pools that occur in relatively high density and separate from other complexes. Each polygon of vernal pools was mapped by drawing a tight line around the outer pools of the complex. Where available, wetland delineation data were used to draw the boundaries around complexes. This mapping methodology is based on the vernal pool complex description from the Science Advisory Team (ECORP Consulting 2004).

Air photo interpretation for vernal pools was used to map vernal pool complexes based on density. Hydrological information for identifying linked vernal pools complexes could be inferred in some locations but was not definitive. The edge of a complex was generally drawn to minimize the perimeter length while remaining roughly 250 feet from the majority of the pools within the complex.

Individual vernal pools and other vernal pool constituent habitats are not easily discerned from aerial imagery and cannot be mapped directly. Three types of features within vernal pool complexes were considered vernal pool constituent habitats: vernal pool wetland, seasonal wetland in vernal pool complex, and seasonal swales.

Vernal Pool Wetland: Vernal pools are seasonally inundated wetlands found in depressions that have a shallow impervious layer such as a clay pan or indurated hardpan (an aquatard). The

aquardard layer perches water and prevents percolation so that water loss from vernal pools occurs only through evaporation and evapotranspiration. Vernal pools are inhabited by a suite of specialized plants such as Vasey's coyote thistle (*Eryngium vaseyi*), slender popcorn flower (*Plagiobothrys stipitatus*), Fremont's goldfields (*Lasthenia fremontii*), and downingia (*Downingia* spp.) which are able to tolerate several months of inundation and anaerobic conditions followed by months of hot, dry weather. Vernal pools are sometimes difficult to separate from other types of seasonal wetlands; hydrology and flora are used to make the distinction.

Seasonal Wetland in a Vernal Pool Complex: Seasonal wetland is a general term for seasonally saturated wetlands that are not defined as vernal pools or other specific wetland types. They are often depressional or bermed wetlands that have wetland hydrology lasting until early or mid-spring but become dry before emergent marsh species can become established. Seasonal wetlands often support the same species as wetland swales in addition to generalist species such as hyssop loosestrife (*Lythrum hyssopifolia*), rushes (*Juncus* spp.), and Italian ryegrass. Wetlands defined as seasonal wetlands in a vernal pool complex for the purpose of the HCP/NCCP are seasonal wetlands that occur within the vernal pool/grassland matrix but do not typically inundate for a long enough period to support typical vernal pool flora. They often consist of wetland features that were historically vernal pools but have been degraded as a result of past activities such as agricultural disking.

Seasonal Swales: Wetland swales are conveyance systems that occur on sloped topography. Water may flow during rainy periods in wetland swales, but not with enough intensity or duration to create the bed-and-bank morphology that defines riverine systems. Wetland swales are usually dominated by species that can occur in either wetlands or uplands, such as Italian ryegrass (*Lolium perenne* [*Festuca perennis*]) and curly dock (*Rumex crispus*). Upland swales lack extended soil saturation and have an upland flora that is not dominated by plant species dependent on wetlands or typical of vernal pools. Seasonal swales in a vernal pool complex are those that convey water within the vernal pool/grassland matrix.

Vernal pool land cover was grouped into three main categories based on estimated density of vernal pools and vernal pool seasonal wetlands:

- High density (more than 5 percent)
- Intermediate density (1 to 5 percent)
- Low density (wetlands present but density less than 1 percent)

These density levels reflect the wetland density found within the vernal pool complex community type. This information can be used to infer functional capacity (e.g., higher density complexes assumed to be higher functioning than low density), but it also helps ensure that the County understands what resources could be affected in what densities, and how to design mitigation in appropriate densities.

Highly altered landscapes that may have previously supported vernal pools but have been altered beyond any historic landform were scored or categorized as having no vernal pools present. These landscapes were typically leveled, irrigated pasture.

In general, rice lands were assumed to no longer support vernal pools and vernal pool complexes. Some fallow rice lands (e.g., contoured versus laser-leveled rice lands) or rice lands that are no longer in production show residual topography and vernal pool signatures and were included as vernal pool complexes when corroborated by several photographic sources.

D.3.2.2.2 Vernal Pool Complex – High Density

As described, vernal pool land cover was grouped into three main categories, one of which is vernal pool complex – high density. This land-cover type is a mapping unit that represents the mosaic of vernal pool wetlands, seasonal wetlands, swales, and uplands. This land-cover type contains, on average, more than 5 percent density of “vernal pools.” For the purposes of establishing high-, intermediate-, and low-density land-cover types, vernal pools were identified using the bounded wetland and include both vernal pool wetland and seasonal wetland constituent habitat. Areas mapped as vernal pool complex – high density are estimated on average to comprise 4.5 percent vernal pool wetlands, 4.0 percent seasonal wetlands, and 2.0 percent seasonal swales, for a total of 10.5 percent of vernal pool constituent habitats. It should be noted that these percentages are approximate and there could be soil series that support a higher or lower densities. Site-specific data will be collected during implementation of the ILF Program to inform establishment and re-establishment efforts.

D.3.2.2.3 Vernal Pool Complex – Intermediate Density

As stated above, this land-cover type includes a suite of vernal pool habitat types. It contains 1 to 5 percent wetland density within the vernal pool complex natural community. Areas mapped as vernal pool complex – intermediate density have roughly half of the wetland density as vernal pool complex – high density.

D.3.2.2.4 Vernal Pool Complex – Low Density

This land-cover type contains less than 1 percent wetland density within the vernal pool complex natural community. The vernal pool complex – low density land-cover type is intended to capture the large amount of Valley annual grasslands and pasture lands that retain small but appreciable vernal pool ecological function. In the Valley, areas mapped as vernal pool complex – low density are most likely, on average, to show 0.2 percent delineated vernal pools and larger amounts of seasonal wetlands or seasonal swales. In the Foothills, the fringe of grasslands on the extreme western edge adjoining the Valley has topographic conditions that may allow a very low density of vernal pool-type constituent habitats. Of over 25,000 acres of grassland and pasture mapped in the Foothills, about 3 percent of it is considered to be vernal pool complex – low density, with a wetland factor half of that of the Valley.

D.3.2.3 Aquatic/Wetland Complex

The aquatic/wetland complex community consists of marsh complexes and ponds, composed of fresh emergent marsh, lacustrine and non-vernal pool seasonal wetland habitats. The aquatic/wetland complex community includes approximately 3,433 acres in the Service Area (27% in the Upper Bear River, 61% in the Upper Coon-Upper Auburn, 10% in the Lower American, and 1% in the North Fork American watershed). This community does not include aquatic vegetation associated with riverine, riparian or vernal pool communities. The complex is defined by the two mapped land-cover types: marsh complex and pond.

D.3.2.3.1 Marsh Complex

The marsh complex land-cover type is a mapping unit that represents the mosaic of wetlands and uplands found around year-round water. This mapping unit merges areas that were previously mapped by Placer County as fresh emergent wetland and seasonal wetland because it was found

that the boundary between those two types varied, depending on the season of the aerial photography, and was not reproducible.

D.3.2.3.2 Pond

The pond land-cover type is a mapping unit that represents small patches of open water and most closely represents lacustrine ecosystems, which are considered a constituent habitat and discussed below. Nearly all of the ponds in the Service Area are artificial impoundments, and therefore, the pond land-cover type includes small reservoirs, stock ponds, and off-stream impoundments.

The pond land-cover type is distinct from the reservoir land-cover type, which the Plan includes in the managed open water community. The distinction reflects the marked difference in ecological function and the value of small ponds as habitat for Covered Species (e.g., those species proposed for coverage in the HCP/NCCP). Ponds in the Service 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 the area mapped as the marsh complex land-cover type. Because of the close spatial and ecological relationship between ponds and marsh complex they are included together in the conservation strategy as the aquatic/wetland complex community.

Early land-cover mapping for the Plan defined the lacustrine type and attempted to map features as small as 0.1 acre. However, aquatic features less than 0.1 acre, such as small stock ponds, are found throughout the Service Area, and these shallow features could not be mapped as lacustrine ecosystems due to limitations of scale in the aerial photography. For this reason, the current land-cover type classification uses the term *pond* and considers it to be part of the aquatic/wetland complex, which is more reliably mapped.

Fresh Emergent Marsh

Fresh emergent marsh is distinguished from deepwater aquatic habitats and wet meadows or grassland habitats by the presence of tall, perennial grass-like plants that are rooted in soils and permanently or seasonally flooded or inundated. The boundary between fresh emergent marsh and deepwater (i.e., lacustrine and riverine) habitats is roughly a depth of 6 feet (Cowardin et al. 1979 in Jones & Stokes Associates 2004). Fresh emergent marsh ecosystems can occur in basins or depressions at all elevations, aspects, and exposures, but they are most common on level to gently rolling topography (Mayer and Laudenslayer 1988 in Jones & Stokes Associates 2004). They are often associated with small human-made ponds and natural drainageways that are enhanced by intentional or unintentional releases of irrigation water. Fresh emergent marsh can also occur as a fringe around reservoirs where the slopes are gentle enough to create a rim of shallow water and where water levels do not fluctuate widely; this condition is mapped as the pond land-cover type.

Unmaintained roadside and agricultural ditches can also support these ecosystems. Small marshes can also be found along low-gradient reaches of rivers and streams in backwater areas or ponded overflow channels. In the Foothills, flood irrigation often creates small wetlands that form around drainageways or small basins.

The hydric soils that characterize fresh emergent marshes are typically clayey, silty, or peaty and often have a sulphur-like odor caused by the anaerobic conditions that develop in saturated soil conditions (Environmental Laboratory 1987 in Jones & Stokes Associates 2004). Cattail (*Typha* spp.) and common tule (*Schoenoplectus acutus* var. *occidentalis*) marshes often exhibit this characteristic.

Plant species composition of fresh emergent marsh ecosystems can vary both between marshes and within a given marsh depending on the basin contours that influence the depth and duration of flooding (Mayer and Laudenslayer 1988 in Jones & Stokes Associates 2004). For example, deeper portions of a marsh are generally dominated by taller species, primarily cattails and bulrushes. Near the upper edge of the marsh zone, grasses, sedges, and rushes measuring 1 to 3 feet tall and occasional tree or shrub species are more common. In western Placer County, characteristic species include broadleaf cattail (*Typha latifolia*), common tule, common spikerush, common rush (*Juncus effusus*), Baltic rush (*Juncus balticus*), floating water-primrose (*Ludwigia peploides*), lanceleaf water-plantain (*Alisma lanceolatum*), and water pepper (*Persicaria hydropiperoides*). Goodding's black willow (*Salix gooddingii*) and sandbar willow (*Salix exigua*) are woody plants that tolerate flooding and are occasionally found around the margins of fresh emergent marshes.

Fresh emergent marshes are found throughout California at all elevations, but they are most common below about 7,500 feet. Fresh emergent marsh ecosystems are recognized throughout California as important natural communities because of their limited extent compared to historical distributions, their importance to dependent plant and wildlife species, and threats facing remaining wetland areas. The state's most extensive wetlands are in the Sacramento Valley, San Joaquin Valley, Klamath Basin, Sacramento–San Joaquin Delta region, and Imperial Valley–Salton Sea (Holland 1986; Mayer and Laudenslayer 1988 in Jones & Stokes Associates 2004).

In western Placer County, fresh emergent marsh occurs at a range of elevations throughout the Valley and the Foothills. Most individual occurrences of fresh emergent marsh in the county are less than 1 acre in extent; some larger, restored fresh emergent marshes exist in the western part of Service Area near Sheridan.

The conditions of these aquatic resources vary substantially throughout the Service Area. Some are degraded as they have been heavily grazed and farmed, though some persist due to multiple swales and channels throughout each watershed. Additional information is provided below in Section D3.3 *Threats to Aquatic Resources* and Section D.3.4, *Historic Aquatic Resource Loss*.

Non-vernal Pool Seasonal Wetland

Seasonal wetlands are defined as isolated wetlands and swales that pond water or have saturated soil during the rainy season. Seasonal wetlands are typically not found in well-defined depressions but occur in a variety of topographic situations, such as shallow basins in annual grassland or along ephemeral drainageways and swales. They also occur as transitional zones between fresh emergent marsh and annual grassland in small shallow valleys that are gradually exposed as water levels fall during the dry season.

Where seasonal wetlands occur within vernal pool complexes, they form hydrological complexes composed of vernal pools, swales, and seasonal wetlands within an upland grassland matrix. This condition is considered to be part of the vernal pool constituent habitat (described above) and an attribute of the vernal pool complex community, not the aquatic/wetland complex community.

Seasonal wetlands occur throughout western Placer County. Individual seasonal wetlands are typically small, and most occur within grazed annual grassland and irrigated pasture ecosystems. Some larger areas occur adjacent to fresh emergent marshes in agricultural settings in the western part of the Service Area.

Seasonal wetlands support a lower diversity of plant species than adjacent fresh emergent marsh and have a higher proportion of non-native species. Typical plant species characteristic of seasonal

wetland ecosystems in western Placer County include Mediterranean barley (*Hordeum marinum* ssp. *gussoneanum*), perennial ryegrass, curly dock, Baltic rush, and hyssop loosestrife. During the summer, seasonal wetlands may support late-season upland plants such as common spikeweeds (*Centromadia* spp.), tarweeds (*Hemizonia* spp.), vinegar weed (*Trichostema lanceolatum*), and turkey-mullin (*Eremocarpus setigerus*).

The conditions of these aquatic resources vary substantially throughout the Service Area. Some are degraded as they have been heavily grazed and farmed, though some persist due to multiple swales and channels throughout each watershed. Additional information is provided below in Section D3.3 *Threats to Aquatic Resources* and Section D.3.4, *Historic Aquatic Resource Loss*.

Lacustrine

Lacustrine ecosystems are defined as inland natural ponds and lakes as well as artificial features such as stock ponds or small reservoirs. The relatively calm waters of lakes and ponds contrast sharply with those of riverine ecosystems. The oxygen content of lakes is relatively low compared to that of running water due to a combination of decomposition occurring at the bottom of lakes and the comparatively smaller quantity of water in direct contact with air. The gradations of oxygen, light, and temperature in lakes, along with currents and wave action (seiche), greatly influence the vertical distribution of lake and reservoir organisms (Mayer and Laudenslayer 1988 in Jones & Stokes Associates 2004).

Phytoplankton are the tiny suspended photosynthesizing organisms, such as diatoms, desmids, and filamentous green algae, that dominate deepwater (6.6 feet deep) aquatic habitats (i.e., too deep for emergent plants). Because these tiny organisms alone carry on photosynthesis in open water, they are the basis upon which the rest of limnetic life depends (Mayer and Laudenslayer 1988 in Jones & Stokes Associates 2004). The plants found in the littoral zone¹ vary with elevation and water depth, with a distinct zonation apparent from the shoreline to the deeper water of the littoral zone.

There are small ponds throughout the Service Area. Most are human created and were built to support grazing and farming in the region. Additional information is provided below in Section D3.3 *Threats to Aquatic Resources* and Section D.3.4, *Historic Aquatic Resource Loss*.

D.3.2.4 Riverine/Riparian Complex

Riverine and associated riparian ecosystems are present in a diverse mosaic around the streams and rivers in the Service Area. This mosaic is mapped as a single riverine/riparian complex land-cover type, which also defines the community and includes approximately 6,685 acres (10% in the Upper Bear River, 64% in the Upper Coon-Upper Auburn, 24% in the Lower American, and 2% in the North Fork American watershed. Other closely associated land-cover types and constituent habitats are interspersed within the riverine/riparian complex including grasslands, valley oak woodland, fresh emergent wetland, off-channel wetlands (not mapped as a land-cover type, but included within riverine), and seasonal wetlands.

The riverine/riparian complex community has strong associations with the riverine and riparian constituent habitat. Therefore, the discussion of this community appears below under these constituent habitats.

¹ The littoral zone is the area near shore where sunlight penetrates to the sediment, allowing aquatic plants to grow.

The riverine aquatic habitat nominally represents the entire stream ecosystem for aquatic species including the covered salmonids. Mapping establishes the area of patches of land-cover types. Because of the difficulty in mapping the narrow stream course itself, riverine/riparian land-cover type appears discontinuously, which inadequately represents the continuity of the stream environment. For this reason, riverine habitat is also represented by the linear measure of streams; there are 576 miles of stream in the Service Area.

There are numerous rivers and riparian courses throughout the Service Area. The quality of these systems varies from highly impaired and channelized, to fragmented, to natural and connected. Riverine and riparian areas in the lower watershed, particularly in the Lower American watershed have been adversely affected by urban growth. Similarly, the southern half of the Upper-Coon Upper-Auburn watershed has some urban encroachment. Many of the rivers in the lower watersheds have impoundment facilities to manage flood runoff. The most natural and connected riverine systems are in the northern half of the Service Area. Additional information is provided below in Section D3.3 *Threats to Aquatic Resources* and Section D.3.4, *Historic Aquatic Resource Loss*.

D.3.2.4.1 Land-cover Mapping

Initial land-cover mapping in 2002 identified creeks (riverine) separately from the valley foothill riparian woodland land-cover type. Subsequent mapping and compilation of land cover and other spatial data into GIS showed that the distinctions between riverine and riparian forest were difficult to discern from aerial photography. Much of the area mapped as forest was riparian vegetation that did not meet the definition of the valley foothill riparian woodland CWHR. In the Valley, this was often due to the extensive disturbance in the Stream System where channelization, and braided channels made it difficult to identify the strictly riverine open water component and differentiate it from the disturbed, grazed, or shrubby riparian component. In the Foothills, the boundary between riparian and other woodland was often difficult to draw without reference to topography. Most deciduous trees appear as facultative riparian species in the largely intermittent streams in the Foothills.

The small patch size of these biological resources and linear nature of the streams led to spatial misregistration between the mapped stream line and the mapped land-cover types and the overlay of political boundaries needed to assess Plan effects. It was concluded that the mapping and resultant spatial analysis for the Plan would be more accurate if these biological resources were mapped as a complex and identified as constituent habitats.

Riverine

Riverine systems occurring in western Placer County include perennial, intermittent, and ephemeral streams. As the term implies, perennial streams sustain flows year-round. The larger streams in the Service Area and vicinity such as the Bear River and American River are perennial today and always have been perennial. Intermittent streams receive some input from groundwater discharge in addition to precipitation runoff and seasonal flow. They typically do not flow in the late summer and fall. Some streams in the Service Area were historically intermittent but have been changed to perennial because of inter-basin water transfers, urban runoff, treated effluent discharges, and inputs of water destined for downstream uses (e.g., Pleasant Grove Creek, Coon Creek). Ephemeral streams receive no input from groundwater and flow only during and following storm events in response to precipitation runoff. The flow regime in a stream profoundly affects its ecology, in particular its ability to support fish and other aquatic organisms.

Riparian

These ecosystems include widely distributed riparian habitats in western Placer County. Riparian constituent habitat includes the more narrow definition of the CWHR class valley foothill riparian woodland as stands of deciduous trees near perennial streams and the broader definition of riparian vegetation, which includes herbs, forbs, and shrubs occurring in the riparian corridor without a woodland overstory. These ecosystems are dependent on surface and subsurface water sources (e.g., groundwater) in streams and floodplains. Riparian ecosystems are often characterized by highly variable successional stages of vegetation that are influenced by frequent disturbances due to flooding, droughts, and grazing.

Mature riparian habitat is often dominated by willows (*Salix* spp.), Fremont cottonwood (*Populus fremontii*), or white alder (*Alnus rhombifolia*). In drier settings, riparian habitat can be dominated by stands of valley oak. Interior live oak can also be an important associated species in some riparian ecosystems. Other associated species in mature riparian habitat include big-leaf maple (*Acer macrophyllum*) at higher elevations, incense-cedar (*Calocedrus decurrens*), black oak (*Quercus kelloggii*), or blue oak. Two or more age classes may be present in valley oak, Fremont cottonwood, or mixed riparian forests. Age classes and structural diversity are reduced in riparian forests that are heavily grazed by livestock, affected by development adjacent to the stream, or dominated by noxious weeds such as Himalayan blackberry, red sesbania, tree-of-heaven, or giant reed.

Early successional stages of riparian habitat are often dominated by sparse or dense stands of herbs and forbs such as willowherb (*Epilobium ciliatum* ssp. *ciliatum*), tall flatsedge (*Cyperus eragrostis*), torrent sedge (*Carex nudata*), horsetail (*Equisetum* spp.), and common rush. Common shrubs include mulefat (*Baccharis salicifolia*) and low-growing willows.

Species composition in a riparian corridor is determined largely by the depth of the summer water table and the frequency of flooding. On frequently flooded low terraces at or near the active channel, common riparian species in western Placer County include sandbar willow, water smartweed (*Persicaria amphibia*), willowherb, tall flatsedge, torrent sedge, horsetail, common rush, occasional white alder, and, at the lowest elevations, mulefat.

Higher floodplain surfaces and terraces may support more diverse riparian habitat. The tall, dense canopies of mature valley oak and Fremont cottonwood riparian forest in the Central Valley and Sierra Nevada foothills typically have a subcanopy tree layer of white alder, Oregon ash (*Fraxinus latifolia*), several species of willow, and California black walnut (*Juglans californica*). Occasionally, lianas of wild grape (*Vitis vinifera*) up to 50 feet high contribute further to the habitat values (Mayer and Laudenslayer 1988 in Jones & Stokes Associates 2004). White alder is a common sub-canopy component of mixed riparian forests of western Placer County, but at higher elevations, it frequently occurs in pure stands. Where interior live oaks are dominant, common understory species include poison-oak (*Toxicodendron diversilobum*), California buckeye (*Aesculus californica*), hoary coffeeberry (*Frangula californica* ssp. *tomentella*), blue elderberry (*Sambucus nigra* ssp. *caerulea*), and coyote brush (*Baccharis pilularis*). Two non-native cottonwood species, silver poplar (*Populus alba*) and Lombard poplar (*Populus nigra*), can be abundant in riparian habitats in urbanized stream reaches and near old town or mining sites.

Common shrubs associated with multi-layered riparian habitat include Himalayan blackberry as well as native species such as snowberry (*Symphoricarpos* spp.), wild rose (*Rosa* spp.), blue elderberry, poison-oak, spice bush (*Calycanthus occidentalis*), western ninebark (*Physocarpus capitatus*), California blackberry (*Rubus ursinus*), and shrubby willows.

Characteristic forbs and grasses include Douglas's mugwort (*Artemisia douglasiana*), Santa Barbara sedge (*Carex barbarae*), clustered field sedge (*Carex praegracilis*), blue wild rye, deer grass (*Muhlenbergia rigens*), common yarrow (*Achillea millefolium*), bracken fern (*Pteridium aquilinum*), and stinging nettle (*Urtica dioica*) as well as weedy non-native species such as common verbena (*Verbena lasiostachys*), velvet grass, Bermuda grass, and pennyroyal (*Mentha pulegium*). The herbaceous layer of riparian habitat is often sparse due to a well-developed and sometimes diverse shrub layer, often containing quantities of downed wood and debris from previous flood events. In areas where the shrub layer has been removed or grazed, these ecosystems may have a grassy understory of both native and non-native grasses, sedges (*Carex* spp.), rushes (*Juncus* spp.), and forbs.

Riparian ecosystems are recognized throughout California as important natural communities because of their limited extent compared to historical distributions, their importance to dependent plant and wildlife species, and the threats facing remaining stands. Riparian habitat occur along rivers and creeks in the Central Valley and lower foothills of the Sierra Nevada, Cascades, Coast Ranges, and Transverse Ranges (Mayer and Laudenslayer 1988 in Jones & Stokes Associates 2004).

In western Placer County, riparian habitat occurs on the American and Bear River corridors and along Coon Creek, lower Auburn Ravine, and lower Dry Creek. Significant stands are generally restricted to low-gradient depositional reaches with some floodplain development. Along most other creeks in western Placer County, this ecosystem occurs as narrow and generally discontinuous bands of trees, rarely occurs on intermittent streams, and never occurs on ephemeral streams that only flow during storm events. On high-energy, bedrock-constrained river systems, the riparian corridors are patchy and quite narrow, limited laterally by steep side slopes, and usually not more than one tree canopy wide. Willow scrub is generally persistent but in an early successional stage that is eventually over-topped by valley oak, cottonwood, or alder in mature riparian habitat (Mayer and Laudenslayer 1988 in Jones & Stokes Associates 2004).

D.3.2.5 Existing Protected Lands

Protected lands include lands that are protected by conservation easement or land use regulations and are managed to maintain ecological services. Existing protected lands are located primarily in two watersheds: Upper Coon-Upper Auburn watershed which contain over 10,500 acres of protected lands (65%) and the Upper Bear watershed which contains over 5,300 acres of protected lands (33%) (Figure 5). There are over 200 acres of protected lands (1%) in the Lower American watershed. The North Fork American does not have protected lands, though the North Fork American River is protected by land use regulations and a portion of Folsom Lake is included in this ILF Service Area.

D.3.3 Threats to Aquatic Resources

D.3.3.1 Vernal Pool Complex

Vernal pool complex lands are particularly susceptible to development and fragmentation, modification to inundation and hydro period due to changes in the hydrology of surface flows and perched groundwater flows, conversion to intensive agricultural uses, tilling or disking of soils, intensive grazing by livestock, non-native vegetation (including annual grasses and noxious weeds), effects from recreational use, effects to water quality, non-native predators, and decreased

pollination and dispersal of vernal pool species due to effects on adjacent uplands (U.S. Fish and Wildlife Service 2005).

Virtually all of the existing vernal pool complexes and annual grasslands in the Valley have been managed for various forms of agriculture, primarily grazing and dry pasture. More intensive agricultural practices, including disking and laser leveling, have also affected the vernal pool landscapes in the Service Area, some of which still show signatures of remnant vernal pools in wet season aerial photographs. Although the Draft HCP/NCCP's landscape-level assessment of disturbance to vernal pool complexes does not identify specific causes of disturbance, it does reflect the effects these threats have had on vernal complexes as a whole.

Vernal pool complexes are extremely vulnerable to development and fragmentation because they occur on level or gently rolling terrain that is accessible and suitable for development (Cheatham 1976 in Jones & Stokes Associates 2004). Although agricultural conversions—including conversion to orchards, vineyards, rice, “ranchettes,” “hobby farms,” fallow agricultural land, irrigated pasture—account for most of the total loss of vernal pool throughout the Valley, in Placer County, there is a relatively high proportion of loss due to conversion to urban development (Holland 2009).

Surface flows to and from vernal pools can be affected by manipulation of nearby terrain due to land disturbance. If poorly planned, such manipulations can result in the loss of hydrological connections that sustain the vernal pools, and can lead to a reduction in hydroperiod. Reduced hydroperiod can cause decreased native plant and invertebrate taxa richness. This is because pools with short hydroperiods tend to be occupied solely by species with rapid development cycles; the pools dry up before longer-lived species are able to complete their life cycles (King et al. 1996). This shift in hydrology can also have important implications for the threatened and endangered species that might otherwise inhabit the vernal pools. For example, vernal pool tadpole shrimp requires habitats that are wet for at least 7 weeks (Gallagher 1996 in Jones & Stokes Associates 2004); adult tadpole shrimp are left exposed to predation and desiccation when their habitat dries up before they are able to complete their life cycle.

Alternatively, vernal pools can be subject to increased periods of inundation due to nearby irrigation, outfall discharge, or runoff from development (California Department of Fish and Wildlife 2016). Increased periods of inundation can reduce habitat suitability for the vernal pool fairy shrimp because they are commonly found in only the smaller, shorter-lived pools (Eriksen and Belk 1999).

In many vernal pool habitats, especially those on duripan or claypan in the Central Valley, perched aquifers keep most water on or near the surface. These perched aquifers buffer the vernal pools against water loss due to evapotranspiration (Williamson et al. 2005; Rains et al. 2006 in U.S. Fish and Wildlife Service 2007). In these vernal pools, the perched groundwater and the seasonal surface water hydrologically connect the uplands, vernal pools, and streams at the catchment scale. These vernal pools have naturally longer hydroperiods, meaning that they remain inundated for longer periods, than if they were recharged only by precipitation. In fact, for some vernal pools, the greater watershed can supply 25 to 60 percent of the water needed to fill pools to the margin. Accordingly, changes in adjacent land use may have considerable effects to vernal pools by affecting both surface flows and the perched groundwater, although the degree to which such changes affect pools is poorly understood (Rains et al. 2006 in U.S. Fish and Wildlife Service 2007).

Vernal pool hydrology can be altered by non-native grasses and invasive plants. Non-native annual grasses and invasive plants reduce the cover of native vernal pool plants, most of which are forbs.

When non-native grasses and invasive plants dominate pool edges, they sequester light and soil moisture, promote thatch build-up, and shorten hydroperiods. As the increased thatch layer decomposes, oxygen becomes depleted and sediment toxicity can increase (Lee 2007 in U.S. Fish and Wildlife Service 2007). Depletion of dissolved oxygen can cause complete mortality of gill-breathing aquatic organisms (Horne and Goldman 1994 in U.S. Fish and Wildlife Service 2007; Rogers 1998).

Although the mechanism responsible for hydroperiod reduction due to non-native grasses and invasive plants is not documented, it is thought to be due to the overall increase in vegetative matter, and a subsequent increase in evapotranspiration (Marty 2005). Livestock grazing as a substitute for grazing by native wildlife is an important tool for reducing the cover of non-native grasses, invasive plants, and the resulting thatch and decreasing evapotranspiration. However, in many areas, cattle grazing has been discontinued in anticipation of land use changes (Martz pers. comm. in U.S. Fish and Wildlife Service 2007). Vernal pool inundation has been reduced by 50 to 80 percent in the southeastern Sacramento Valley when grazing is discontinued (Marty 2005). Therefore, the change in vernal pool hydroperiod due to loss of grazing is noted as an emerging threat for vernal pool species, especially in the Sacramento Valley (Martz pers. comm. in U.S. Fish and Wildlife Service 2007).

Although grazing is an important tool for vernal pool management, overgrazing can threaten vernal pools by increasing sedimentation and nutrient inputs (U.S. Fish and Wildlife Service 2007). The proportion of non-native plants may be higher in vernal pools subject to heavy livestock grazing (Jones & Stokes Associates 2002 in Jones & Stokes Associates 2004). In addition, excessive organic waste oxidizes the water, which can reduce the amount of oxygen available for gill-breathing invertebrates (Rogers 1998 in U.S. Fish and Wildlife Service 2005). Cattle can trample rare vernal pool plants (Griggs 2000) and vernal pool fairy shrimp, which appear to be easily crushed (Hathaway et al. 1996). The impacts of overgrazing seem to be greatest in the warm spring months when the cattle walk into the drying pools to soak their hooves in the mud and escape the bites of the heel-fly (Griggs 2000) and when the cattle may be attracted to the green plants in and around a vernal pool after the upland grasses have begun to turn brown (Barry 1998).

Prescribed fire is being employed at some sites to substitute for, and supplement, prescribed grazing to reduce invasive plants and non-native annual grasses. However, the benefits of prescribed burning can be ephemeral (Marty 2005). In vernal pools where vegetative material is relatively sparse, fairy shrimp cysts do not appear to be negatively affected by fire, but in regions where thatch has built up or vegetative material is dense, fire may have deleterious effects on cyst viability (Wells et al. 1997 in U.S. Fish and Wildlife Service 2007). In addition, application of fire retardant can contaminate pools, leading to temporary losses of chydorids, daphnids, ostracods, and rotifers within vernal pools (Angeler et al. 2006).

Water quality in vernal pools may be degraded over large portions of the Central Valley due to pesticide overspray and residues. The runoff and precipitation that fill the pools can include pesticides (i.e., herbicides, insecticides, fungicides). Toxic levels of some compounds accumulate in aquatic stream sediments within the Central Valley (Weston et al. 2005; Amweg et al. 2005) and, therefore, may also be a problem in vernal pools. In addition, herbicides are sometimes used on some preserved vernal pool habitats to control invasive plant species (e.g., Center for Natural Lands Management 2004 in U.S. Fish and Wildlife Service 2007).

Pesticides that are found in vernal pools due to atmospheric deposition have been found to be toxic to some vernal pool branchiopods (U.S. Fish and Wildlife Service 2007). Herbicide formulations,

although presumably less toxic to invertebrates than insecticides, may lead to retarded growth and concomitant reductions in fecundity for exposed wildlife, particularly fairy shrimp (Brausch et al. 2006). Pesticide effects can be accentuated by the effects of the surfactants formulated with the active ingredient (U.S. Fish and Wildlife Service 2007).

Bullfrogs, fish, and crayfish (Families: Astacoidea and Parastacoidea) have been noted as potential threats to vernal pool species at several national wildlife refuge holdings (California Department of Fish and Wildlife 2016). Predation of vernal pool branchiopods by non-native bullfrogs potentially increases the threat of predation beyond that found naturally. Bullfrogs require permanent water for breeding; however, during the rainy season juvenile bullfrogs disperse readily into vernal pool complexes from permanent waters and can spend several weeks or more at pools consuming aquatic invertebrates. In such cases, bullfrogs have been documented to selectively prey on macrocrustaceans (e.g., vernal pool tadpole shrimp and California clam shrimp [*Cyzicus californicus*]) and coleopterans (beetles), even when other prey is more abundant (U.S. Fish and Wildlife Service 1994; Balfour and Morey 1999).

Under natural conditions, California streams and rivers sustained wide annual fluctuations in water volume and generally were not permanent in nature, thereby preventing influxes of non-native aquatic species (Moyle and Light 1996). Opportunities for bullfrog dispersal into vernal pool ecosystems have increased as permanent-water habitat has been created in canals, in streams augmented by urban runoff and irrigated agriculture, and in stock ponds and other impoundments. All of the major stream drainage systems in western Placer County contain irrigation water, urban runoff or a combination of the two. Vernal pool branchiopods lack predator-avoidance mechanisms and are continuously moving their phyllopods, so they may be particularly susceptible to predation by bullfrogs and other visual predators. Bullfrogs also prey upon adult and tadpole stages of native amphibians, including those of endangered species. Vernal pools in reserves that are close to permanent waters may be invaded by other non-native predators, such as mosquitofish (*Gambusia affinis*) and non-native game fish.

Off-trail use that crosses through vernal pools and the uplands around the pools (hiking, bicycling, horse-back riding, and vehicle use) can damage vernal pools by causing erosion and crushing or displacing organisms in the pools. These activities are especially damaging since they alter pool topography and hydrology, destroy vegetation and crush organisms in the pools. Because vernal pool fairy shrimp cysts appear to be easily crushed (Hathaway et al. 1996), the species is particularly susceptible to off-trail vehicle disturbance (U.S. Fish and Wildlife Service 2007). Although these activities are not prevalent in western Placer County today, they have contributed to the overall decline of the species.

The CARP and other existing local, state, and federal permitting requirements will help offset these threats by protecting vernal pools and focusing development in areas with lower density vernal pools (as documented through aquatic resource delineations verified by the Corps). The CARP will help ensure hydrology is maintained to existing vernal pools and other threats are minimized by requiring avoidance and minimization of aquatic resources, where practicable. through. The ILF Program will ensure that aquatic resource losses are mitigated in larger, more intact areas that are less likely to be subject to the indirect effects of development.

D.3.3.2 Aquatic Resource/Wetland Complex

Threats to the aquatic/wetland community include conversion to land uses such as agriculture, urban development, pollution, grazing, changes in hydrologic regime, invasion by non-native species, and natural processes such as fire or flood. Wetlands in western Placer County, especially seasonal wetlands in the Valley, are vulnerable to destruction and/or fragmentation by urban and suburban development, agriculture, or road maintenance. Fertilizer and pesticides contribute to pollution and result in a decrease in oxygen, which can kill vegetation within wetlands.

Grazing disturbs the vegetation around wetlands and can result in invasion of non-native plant species into wetlands (Holland and Keil 1995). Urban ornamental landscape species (e.g., weeping willow [*Salix babylonica*] and red sesbania [*Sesbania punicea*]) and common aquarium species that are transported or reseeded within drainages and watersheds can establish and spread, ultimately finding their way into downstream wetlands.

The construction of dams and weirs, extraction of groundwater, and establishment of artificial drainages can change hydrologic regimes. In addition, increased stormwater runoff from impermeable surfaces can flow so rapidly into adjacent wetlands that it causes excessive scour and a loss of wetland habitat. Excessive sediment deposition following fire can fill in wetlands, thereby burying vegetation. Modifications to hydrological conditions that provide water year-round to seasonal wetlands can convert seasonal wetlands to perennial fresh emergent marsh.

The CARP and other existing local, state, and Federal permitting requirements will help offset these threats by requiring: the protection of wetlands, wetland setbacks, and focusing development in areas with lower quality resources. The ILF Program will help ensure hydrology is maintained, and other threats are minimized.

D.3.3.3 Riverine/Riparian Complex

D.3.3.3.1 Riverine

The degradation and loss of riverine ecosystems are the primary cause for the decline of many species of aquatic invertebrates, fish, and amphibians in the Sierra Nevada and Central Valley (Moyle 1996 in Jones & Stokes Associates 2004). Factors that contribute to the deterioration of riverine ecosystems include changes in the timing and volume of streamflows (e.g., the effects of reservoir operations, surface water diversions, the construction of levees and other flood control facilities, groundwater pumping, urban and agricultural runoff), dams that impede movement of fish, changes in water quality, reductions in riparian and stream channel structural complexity (e.g., the loss of riparian trees and stream channelization), siltation, and invasions of non-native species (Meehan 1991 in Jones & Stokes Associates 2004). The loss of riparian vegetation results in decreased shading, increased water temperatures, reduced cover, and decreased input of nutrients. Trash and other pollutants that are washed into streams may degrade water quality to the point that aquatic life cannot persist. Aquatic invertebrates, which are often sensitive to water quality, may die off, thereby disrupting the food chain.

High flows cause erosion, unless channels have been armored. Typical flood control entails channel modifications, such as rock riprap and concrete linings, that result in a decrease of riparian vegetation and aquatic habitat for fish and other species. This practice has not been prevalent in western Placer County, but the application of channel modifications tends to increase as population

growth encroaches on Stream Systems and increases the property value subject to loss during flood events. Pollution sources along the channels can degrade water quality within riverine systems.

Permanent dams and seasonal irrigation dams (e.g., flashboards) alter flow and sediment transport regimes, adversely affecting the amount of habitat for some species (e.g., spawning gravel) and habitat quality (e.g., water temperature and fine sediment loading). Permanent dams block upstream and downstream movement and migration to spawning and rearing habitat. Seasonal irrigation dams may or may not block upstream and downstream movement and migration, depending on whether the timing of the placement or removal of the impoundment feature is linked to the migratory behavior of a particular species.

The in-stream reservoirs commonly found in western Placer County (including smaller in-stream ponds) can flood stream reaches, changing environmental conditions necessary to support stream-dependent native species. In addition to loss of habitat, fish populations may become isolated, fragmenting populations and adversely affecting their genetic integrity. Reservoirs may also increase human use, affecting populations of native species within reservoirs and in adjacent areas. Dams on major rivers have blocked access by spring-run Chinook salmon to more than 95 percent of historic spawning and holding habitat and greatly reduced access to spawning habitat of other runs of salmon, steelhead, and Pacific lamprey (Moyle et al. 1996 in Jones & Stokes Associates 2004).

Reservoirs are also sediment sinks, obstructing the natural sediment transport of streams and transport of large woody material. Through natural processes, streams erode sediment from streambanks and move it downstream. In an unimpeded setting, sediment carried from the upper watershed is deposited along the length of the stream. When a dam is built across a stream, all but the finest sediment transported from the upper watershed drops out of suspension in the reservoir where velocities are too low to maintain the sediment load. The result is that downstream reaches are sediment starved, and no new sediment is available to replace eroded sediment downstream of the dam. This triggers down-cutting and deepening of the stream channel and also results in a reduction in gravels suitable for steelhead and salmon spawning downstream of reservoirs. In addition, large reservoirs fill with and store large amounts of turbid storm runoff. Settling of the finer clay and silt particles may take months, resulting in persistent releases of turbid water in winter and early spring. The slowly settling materials may also result in much higher turbidities near the bottom outlet valve than in the surface waters. Although the natural streams upstream of reservoirs rapidly clear between storms, the streams downstream of reservoirs may be persistently turbid and interfere with feeding by steelhead and salmon in winter and spring, reducing their growth and potential survival once they reach the ocean. Slow release of fine sediments may result in silty substrate below the reservoirs, reducing survival of eggs in spawning gravels and affecting the abundance of insects.

Reservoirs also disrupt the natural flow cycle of streams by releasing water during the summer and fall to augment dry-season base flows. Because the reservoirs are deep and store cool winter runoff, the water released out of the bottom of the reservoir can be much cooler than the surface water and also cooler than the stream upstream of the reservoir in late spring and summer.

Rivers and streams altered by human disturbance tend to be more likely to become dominated by non-native fish species (Baltz and Moyle 1993 in Jones & Stokes Associates 2004). Reservoirs provide environmental conditions that generally favor non-native species. Established non-native species can then invade stream reaches both upstream and downstream of the reservoir.

Non-native and invasive species are often introduced to the vast network of ponds, reservoirs, and associated canals throughout western Placer County. These include many aquatic invertebrates (e.g., insects, snails, clams, and crayfish), non-native fish species, and bullfrogs. During times of high rainfall or streamflow, non-native species can be flushed from ponds and reservoirs into stream and river systems where they colonize and compete with or prey upon native species. Bullfrogs and several species of bass are known to prey upon the eggs and tadpoles of foothill yellow-legged frog, California red-legged frog, and western pond turtle as well as western pond turtle hatchlings or juveniles (Moyle 1973; Holland 1991 in Jones & Stokes Associates 2004). Hatchlings of wood ducks (*Aix sponsa*), mallards, and Canada geese often fall prey to largemouth bass.

D.3.3.3.2 Riparian

Seedling establishment and growth in riparian systems are heavily dependent on access to surface water or shallow groundwater during the majority of the year (Sacchi and Price 1992). As such, water operations and land alterations that result in reduced stream baseflows and/or increased depth to the water table will have a significant negative effect on this land-cover type.

Non-native animals that may occur in these woodlands include European starling, wild turkey, Virginia opossum (*Didelphis virginiana*), and wild pig. Livestock operations attract brown-headed cowbirds (*Molothrus ater*), a native North American species that expanded its range in California in the early 1900s. Brown-headed cowbirds parasitize the nests of other native songbirds and reduce their reproductive success (Grinnell and Miller 1944; Beedy and Granholm 1985; Gaines 1992 in Jones & Stokes Associates 2004). In riparian habitat of western Placer County, brown-headed cowbirds are most common in disturbed areas and in early successional stands, especially where livestock are present within about 4 miles of breeding areas (Rothstein et al. 1984 in Jones & Stokes Associates 2004).

Livestock grazing can substantially degrade riparian habitat when cattle and other livestock have unrestricted access to Stream Systems and stocking rates are high. Riparian systems that have been disturbed by historical or current grazing also have a significantly higher proportion of noxious weeds in the understory. Himalayan blackberry, in particular, forms a dense blanket that can dominate many miles of a stream and river corridor, crowding out native vegetation and reducing its diversity and wildlife habitat values.

In addition to Himalayan blackberry, which is a dominant species in many riparian areas, other noxious weeds and non-native plants in riparian habitat in western Placer County include black locust (*Robinia pseudoacacia*), tree-of-heaven, periwinkle (*Vinca major*), English ivy (*Hedera helix*), poison hemlock, bull thistle, red sesbania, pampas grass, edible fig (*Ficus carica*), giant reed, spotted knapweed, Canada thistle (*Cirsium arvense*), wild fennel, velvet grass, and purple loosestrife.

The CARP and other existing local, state, and Federal permitting requirements will help offset threats to other waters through requiring: protection of avoided waters, setbacks, and focusing development in areas with lower quality resources. The CARP will also help ensure hydrology is maintained within the disturbed areas, and other threats are minimized through requiring minimization measures (e.g. best management practices and low impact development techniques).

D.3.4 Historic Aquatic Resource Loss

D.3.4.1 Vernal Pools

Vernal pools have been degraded in western Placer County and throughout their range by direct disturbance, invasion of nonnative species, and by alteration of hydrological patterns. Vernal pool complexes have also been degraded by the lack of grazing, which allows nonnative grasses in the surrounding uplands to invade swales and the margins of vernal pools, altering microhabitat and the abundance and distribution of native species, including covered plants (USFWS 2005). For many complexes, habitat re-establishment may be necessary to regain proper functioning of a vernal pool ecosystem (USFWS 2005).

Conversion of rangeland to intensive agriculture and urban and residential development have been the two largest factors responsible for vernal pool losses. Dr. Robert Holland, the wetland biologist who developed multiple California-wide vernal pool maps, compared the extent of vernal pool habitat between 1987 and 1994 and determined that Placer County lost more than 17,000 acres of vernal pool habitat. (AECOM 2009). An additional 2,100 acres was converted in Placer County between 2005 and 2012 (Witham et. al., 2014).

The Corps also evaluated cumulative impacts to waters of the United States within the PCCP area and determined that the past, present and reasonably foreseeable future actions reviewed in the PCCP area have resulted in a net gain of 133.26 acres (1.49%) of waters of the U.S. 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 waters of the U.S. within the PCCP area. When looking at waters of the U.S. cumulative impacts by 8-digit HUC watershed within the PCCP 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 (U.S. Army Corps of Engineers, 2016).

D.3.4.2 Aquatic/Wetland Complex

Marshes have decreased dramatically since the turn of the century in the Service Area due to drainage and conversion to other uses, primarily agriculture (Mayer and Laudenslayer 1988, as cited in Jones & Stokes 2004). Natural lakes did not occur in the foothill and Central Valley region of the Sierra Nevada due in large part to the absence of glaciated landscapes; essentially all the deepwater lakes and ponds in the foothills are artificial (Mayer and Laudenslayer 1988, as cited in Jones & Stokes 2004).

D.3.4.3 Riverine/Riparian Complex

Rivers and creeks are among the most altered ecosystems in the Sierra Nevada. Two major impacts are the more than 400 dams and associated impoundments (25 feet or more in height) present on rivers and creeks and the significant amounts of hydraulic mining debris that passed through these systems in the 1800s up until the early 1900s (Kattelmann 1996, as cited in Jones & Stokes 2004). All riverine systems within the Service Area have been further altered by establishment of permanent or temporary barriers (e.g., road crossings and dams), authorized and unauthorized water diversions, channelization, flood control projects, loss of riparian vegetation, and increased rates of sedimentation. These impacts reduce habitat complexity and habitat quality, affecting

ecosystem characteristics such as pool/riffle relationships, level of dissolved oxygen, and substrate composition.

Riparian communities have similarly been adversely affected by land development, water diversions and grazing. Flood control activities, cultivated agriculture, aggregate mining, and urban development have all significantly reduced the extent of riparian areas.

D.3.5 Overview of the Draft HCP/NCCP Conservation Strategy

The Draft HCP/NCCP conservation strategy was designed in accordance with principles of conservation biology and reflects the recommendations of a group of Science Advisors convened at the beginning of the planning process (Brussard et al. 2004). The strategy addresses regional conservation needs at a descending level of scale, identifies biological goals and objectives to encompass ecological processes, environmental gradients, biological diversity, connectivity between habitat patches, and proposed conservation measures to implement these goals and objectives.

The Draft HCP/NCCP sets quantitative commitments for land acquisition, protection, and natural and semi-natural community re-establishment. The natural and semi-natural community commitments were developed to provide for the conservation needs for Covered Species, natural and semi-natural communities, and constituent habitats and to provide mitigation for Covered Activities. The conservation strategy identifies key natural communities that define the major biological values of the Draft HCP/NCCP and are most strongly representative of Covered Species' habitats:

- Vernal pool complex and grassland natural communities
- Riverine and riparian natural communities
- Aquatic/Wetlands complex natural communities
- Oak woodland natural communities

The conservation strategy also includes biological goals and objectives and conservation measures for agriculture and other open space. Overall the Draft HCP/NCCP conservation strategy is intended to establish a reserve system that will include preservation, management, enhancement, re-establishment and establishment of natural communities/habitat to achieve the Draft HCP/NCCP landscape, natural community and species level biological goals and objectives. These measures, particularly the wetland goals and objectives, are intended to align with the ILF Program. Draft HCP/NCCP Table 5-8, provided as Attachment A and edited to include only aquatic resources, provides details on the goals, objectives, conservation measures and monitoring commitments associated with the Draft HCP/NCCP that would guide how aquatic resource compensation will be selected and prioritized

D.3.6 ILF Program Aquatic Resource Goals and Objectives

The ILF Program is designed to ensure that compensatory mitigation will be located where it is most likely to accomplish the following goals:

- Successfully replace lost functions and values consistent with the local, state and federal “no net loss” policies;

- Consider watershed-scale features such as aquatic habitat diversity, habitat connectivity, and relationships to hydrologic sources (including the availability of water rights);
- Recognize trends in land use planning and compatibility with adjacent land uses; and
- Consider out-of-kind compensatory mitigation for aquatic resource impacts when larger landscape-level goals and objectives may be met by doing so.

Watershed planning focuses on a geographic area that is defined by a drainage basin and that is large enough to ensure adequate mitigation of impairments and threats to the impacted water body. The general intent is to avoid a focus on single waterbody segments or other narrowly defined areas that do not provide an opportunity for addressing watershed impacts in a rational, efficient, and economical manner. At the same time, the scale should not be so large that it hampers the ability of the resource to recover and negatively affect biodiversity.

The Western Placer perennial streams (e.g., Dry, Pleasant Grove, Markham Ravine, Auburn Ravine, and Coon Creek) within the ILF Program area share a common landscape with a similar set of challenges and stressors, although these challenges and stressors have a great deal of variability in terms of their severity from one watershed to another.

The goal of this watershed approach is to maintain and improve the quality and quantity of aquatic resources within the watersheds. To do this in a way that protects the most important aquatic resources, a conservation strategy has been developed that selects compensatory mitigation sites in the watersheds with the greatest long-term value based on goals and objectives for the ILF Program area as a whole. These goals, objectives, and measures preserve critical aquatic functions in all watersheds by preserving important aquatic resources.

D.3.6.1 Overview of Prioritization by Watershed

The ILF Program strategy, focuses on compensatory mitigation and conservation activities in the Coon Creek and Bear River watersheds and the western third of the Markham Ravine/Auburn Ravine/Pleasant Grove watershed because they contain the largest and least-fragmented aquatic resources in the ILF Program area, and they present Placer County with aquatic resource re-establishment opportunities that are not present in the other watersheds (Figure 5). Urban growth in these areas will fragment these watersheds and inhibit the long-term conservation objectives of the ILF Program and Draft HCP/NCCP. In addition, the conservation strategy is designed to establish a large interconnected reserve system that will greatly reduce the opportunity for future fragmentation of wetlands and associated natural communities by urban, suburban and rural residential land uses that have a greater potential to occur in watersheds central to existing or future growth areas. Focusing compensatory mitigation and conservation activities on large parcels (e.g., 200 acres or greater, unless located adjacent to the Draft HCP/NCCP Reserve Acquisition Area (the area designated by the HCP/NCCP within which the Draft HCP/NCCP reserve system will be assembled), an existing reserve (either a PCCP reserve or a non-PCCP reserve protected in perpetuity), or riparian areas in unfragmented portions of the watershed. The 200 acres may be composed of semi-natural, other agriculture, and non-natural communities if they are able to be restored to a natural community or communities, based on discussions with the IRT. The targeted size of ILF sites will ensure appropriate hydrologic conditions and ecosystem functions and values are maintained and enhanced to sustain the hydrological function of protected, restored, and created wetlands and associated natural communities.

Existing and projected land uses limit the suitability for large-scale aquatic resource preservation and re-establishment projects in the following watersheds: Pleasant Grove/Curry Creek, upper reaches of Markham Ravine, Dry Creek and the upper reaches of Auburn Ravine. These areas are highly fragmented and are under more imminent plans for development. These areas are not prioritized for conservation because there are many fewer 200 acre parcels in these watersheds and finding and connecting large mitigation sites in these watersheds is extremely challenging.

Compensatory mitigation in the Dry Creek Watershed is a relatively low priority since the aquatic resources in the Dry Creek Watershed have been fragmented and impacted to such an extent that substantive preservation and re-establishment opportunities are limited, lack connectivity and the long-term viability of preserved and restored resources is less certain. Impervious surface cover in the Dry Creek Watershed exceeds approximately 23% of the watershed land base and is projected to be 28% of the watershed at build-out. As impervious surfaces increase, stormwater runoff increases in quantity, speed, temperature, and pollutant load. When impervious surfaces reach 10-20% of local watershed area, surface runoff doubles and continues to increase until, at 100% impervious surface coverage, runoff is five times that of a forested watershed (Arnold et. al. 1996). Pleasant Grove Creek and Curry Creek will likely exceed these estimates at buildout. A Placer County likely future condition analysis, an analysis of what the landscape will look like at build-out, of the Pleasant Grove Creek and Curry Creek watersheds reinforce this conclusion. Future, though less intensive, land use development trends in the upper reaches of the Auburn Ravine watershed further reinforce Placer County's assertion that Coon Creek/lower Bear River watersheds are the principal watersheds in which landscape-level conservation should occur.

This analysis suggests that existing and projected land uses in the Auburn Ravine, Dry Creek, Pleasant Grove Creek and Curry Creek watersheds limit their suitability for large-scale aquatic resource preservation and re-establishment from compensatory mitigation projects.

When compared to other watersheds in western Placer County, the Coon Creek/lower Bear River watershed has the greatest assemblage of large parcels (> 200 acres), the least amount of roads, the least amount of existing or projected urban/suburban land uses, the largest area of a relatively unfragmented intact landscape, connectivity to other conservation efforts in Placer County and adjacent jurisdictions (e.g., Nevada and Yuba Counties), the absence of an effluent discharge, and the greatest number of sites that are suitable for re-establishment within a larger matrix of existing and future conserved lands. The Coon Creek/lower Bear River watersheds have been extensively studied and found to be a priority for conservation (e.g., the Auburn Ravine/Coon Creek Ecosystem Restoration Plan, June 2002, the Conservation Assessment for the Yuba River Watershed Foothills, October 2008) and the draft Coon Creek Watershed Assessment, 2016,

Hence Placer County will focus the conservation efforts of the ILF Program, and the PCCP/CARP landscape level compensatory mitigation conservation strategy on the Coon Creek/lower Bear River watersheds.

Finally, mitigation in these priority areas (i.e., Coon Creek and lower Bear River) within the ILF Program area will be guaranteed to provide similar wetland functions and values to that of wetlands impacted. This is based on the County's commitment to restore, enhance, create and preserve overall wetland functions related to hydrology, biochemistry and habitat suitability. By maintaining surface and shallow subsurface water storage and exchange, and maintaining landscape hydrologic connections, as is best achieved by large parcels in unfragmented watersheds, the ILF Program will protect hydrology. By protecting wetlands in undisturbed and unfragmented landscape the ILF

Program will continue to ensure biogeochemical functions such as nutrient cycling and carbon export continue within protected areas. Similarly, restoring, enhancing, creating and preserving wetland habitat in the priority watersheds of the ILF Program will ensure that wildlife and plant communities are maintained to the benefit of common, rare, threatened, and endangered species. Overall, ILF projects will support the hydrology, biochemistry, and habitat values via landscape-scale conservation strategy.

D.3.6.2 Prioritization Strategy by Watershed

As described above, landscape-scale compensatory mitigation and conservation activities are focused in the Coon Creek and lower Bear River watersheds because they contain the largest and least-fragmented aquatic resources in the Service Area and provide the best aquatic resource re-establishment opportunities. Approximately 64% of the conservation efforts will be focused on the Upper Coon-Upper Auburn watershed and approximately 33% of the conservation efforts will be focused on the Upper Bear watershed (Table D-2). Both watersheds are designated as essential fish habitat (EFH) for Chinook salmon by the NMFS and provide important spawning habitat for anadromous steelhead. Compensation activities will occur to a lesser degree in the lower Auburn Ravine (a prime steelhead stream), Markham Ravine, Pleasant Grove, and Curry Creek watersheds. The Dry Creek watershed is surrounded by urban/suburban and rural residential development. Despite the indirect effects of development, the Dry Creek watershed provides suitable spawning habitat for Chinook salmon. The remaining 2-3% of the conservation efforts will be focused on the Lower American watershed, and possibly North Fork American watershed.

The ILF Program is designed to address watershed-specific resource conditions and each watershed's relative potential for landscape-level ecosystem management. The ILF Program's conservation strategies for each watershed are summarized below. In instances where protection and preservation are described, they are intended to serve larger watershed functions and values and may not directly result in ILF credits for permitted impacts authorized under the Clean Water Act.

D.3.6.2.1 Upper Coon-Upper Auburn

Coon Creek

- Establishment of a large interconnected reserve system within the Coon Creek/lower Bear River watersheds.
- Landscape level establishment/re-establishment/enhancement.
- Facilitation of fish passage through barrier removal or barrier modification.
- Enhancement/re-establishment of covered fish species habitat.
- For Coon Creek, identification of sources of water quality impacts (including water temperature) and implementation of remedial actions to improve water quality.

Markham Ravine

- Stream system protection.
- Restoration and preservation in the western reaches of the watershed where development is not projected to occur.

Auburn Ravine

- Stream system protection.
- Restoration of the stream system where feasible.
- Facilitation of fish passage through barrier removal or barrier modification.
- Landscape-scale conservation of the floodplain and adjoining uplands in the western reaches of the watershed.
- Enhancement/re-establishment of covered fish species habitat.

Pleasant Grove/Curry Creek

- Stream system protection to the extent possible for Pleasant Grove and Curry Creeks.
- Restoration of Pleasant Grove Creek in the western reaches of the watershed west of the boundaries of the non-participating cities (Roseville and Rocklin).
- Establishment and re-establishment of wetland riparian habitat in the Curry Creek watershed except for the upper portion of the watershed located in the non-participating cities.

D.3.6.2.2 Upper Bear

- Conservation of the majority of the Coon Creek/lower Bear River watersheds.
- Landscape level re-establishment/enhancement.
- Enhancement/re-establishment of covered fish species habitat.
- For Coon Creek, identification of sources of water quality impacts (including water temperature) and implementation of remedial actions to improve water quality.

D.3.6.2.3 Lower American

- Stream system conservation for Dry Creek and its major tributaries including Linda Creek, Strap Ravine, Miners Ravine, Secret Ravine, Antelope Creek, Clover Valley Creek, and Cirby Creek (outside of the boundaries of non-participating cities).
- Restoration of the stream system where feasible.
- Facilitation of fish passage through barrier removal or barrier modification.
- Enhancement/re-establishment of fish species habitat.

D.3.6.2.4 North Fork American

- Stream system conservation.
- Restoration of the stream system where feasible.
- Enhancement/re-establishment of fish species habitat.

D.3.6.3 Wetland Goals

D.3.6.3.1 Vernal Pool Complex

The main goal for conservation and management of vernal pool resources is to maintain interconnected vernal pool complex and grassland natural communities with functional ecological processes that sustain native species. The County will establish/re-establish, restore, enhance, and protect functional vernal pool complexes as part of the ILF Program. The goals of the ILF Program are to establish/re-establish, restore, enhance and protect as much vernal pool habitat as soon as possible in the Service Area; total acreage will be driven by project impact needs.

The following objectives designed to achieve this goal are derived from Draft HCP/NCCP natural community level biological goals and objectives for vernal pool complex and grassland natural communities (see Attachment A).

- Protect existing vernal pool complexesⁱ.
 - Protect 17,000 acres with 790 acres of vernal pool constituent habitat
 - Establish/restore 3,000 acres of vernal pool complexes
 - Establish/restore 30 wetted acres of vernal pools
 - Restore 870 acres of constituent habitat, 326 wetted acres of vernal pools, as mitigation
- Restore/establish vernal pool complexes.ⁱⁱ
- Enhance and maintain vernal pools, vernal pool grassland complexes, and grasslands by protecting grassland, restoring grassland, promoting regeneration and recruitment of covered species, controlling invasive species, and promoting hydrological and other natural processes to support native biodiversity and populations of covered species.ⁱⁱⁱ

The overall strategy is to enhance the ecological benefit of vernal pools in the Service Area. Establishment, re-establishment, restoration, and preservation objectives will be done in coordination with the IRT and in relation to the implementation of the goals and objectives outlined in Attachment A.

D.3.6.3.2 Aquatic/Wetlands Complex

The main goal for conservation and management of aquatic/wetlands complex natural communities is sustaining functional fresh emergent marshes, seasonal wetlands, and lacustrine habitats (e.g., ponds), and the hydrologic processes that support them to benefit species and promote native biodiversity.

The following objectives designed to achieve this goal are derived from Draft HCP/NCCP natural community level biological goals and objectives for aquatic/wetland complex (see Attachment A).

- Protect at least 600 acres of aquatic/wetlands complex (400 acres in the Valley and 200 acres in the Foothills) which include 586 acres of fresh emergent marsh, lacustrine, and non-vernal pool seasonal wetland, and with at least 256 acres of fresh emergent marsh.^{iv}
- Restore up to 410 acres of three types of aquatic resources, consisting of approximately 196 acres as fresh emergent marsh, 144 acres of lacustrine, and 71 acres of non-vernal pool seasonal wetland.^v

- Maintain and enhance wetlands and ponds to maintain and enhance hydrological functions, native biodiversity, and habitat within the Service Area.^{vi}

ILF projects will be identified and developed based upon the types of aquatic resources likely to be affected. The overall strategy is to enhance the ecological benefit of aquatic/wetland complexes in the Service Area. Establishment and re-establishment objectives will be done in coordination with the IRT and in relation to the implementation of the goals and objectives outlined in Attachment A

D.3.6.3.3 Riverine and Riparian Complex

The main goal for conservation and management of riverine and riparian complex communities is to maintain functional riverine and riparian communities that benefit species and promote native biodiversity. The conservation strategy identified in the Draft HCP/NCCP for riverine and riparian complex habitats was designed to enhance, maintain, and restore a functioning system that provides habitat value for native biota while continuing to meet urban requirements for flood control, drinking water, agriculture, and recreation.

The following objectives designed to achieve this goal are derived from Draft HCP/NCCP natural community level biological goals and objectives for riverine and riparian complex (see Attachment A).

- Preserve up to 2,200 acres of riparian wetland complex, which will include at least 1,410 acres of riparian woodland (an estimated 960 acres in the Valley and 450 acres in the Foothills).^{vii}
- Preserve up to 88.6 linear miles of riverine habitat.^{viii}
- Restore up to 1,425 acres of riverine/riparian complex (74% as riparian woodland).^{ix}
- Enhance riparian vegetation, enhance streams, remove or modify fish barriers, and modify unscreened water diversions to promote habitat complexity and function.

The overall strategy is to enhance the ecological benefit of riverine and riparian complexes in the Service Area. Establishment and re-establishment objectives will be done in coordination with the IRT and in relation to the implementation of the goals and objectives outlined in Attachment A

D.3.6.3.4 Upland Buffers

Upland areas will be protected through vernal pool complex, aquatic/wetland complex, and riverine and riparian complex acquisitions occurring as part of the ILF Program and ultimately through the Draft HCP/NCCP. The ecological relationship between aquatic resource features and uplands are important to document as they provide watershed protection for wetlands. Upland buffers will be accounted for by tracking the extent of upland protected within 250 feet of vernal pools. Upland buffers for other credit types (aquatic/wetland complex, riverine and riparian and other) would be decided on a case-by-case determination on site specific conditions. These buffers may be used to mitigate impacts on upland areas adjacent to aquatic features to mitigate for impacts under Fish and Game Code 1600.

D.3.6.4 Accounting

The ILF proposes to use the accounting framework illustrated in Table D-3. This framework is intended to make use of standard wetland classifications and allow for standard tracking of wetland values as mitigation parcels are proposed and habitat is created and restored.

Table D-3. Wetland Groups and Credit Types

Wetland Groups and Credit Types	Authority
Vernal Pool Complex	
Vernal Pool	CWA Section 404 and 401
Vernal Pool Complex ^a	CWA Section 404 and 401
Aquatic/Wetlands Complex	
Fresh Emergent Marsh	CWA Section 404 and 401
Non-vernal Pool Seasonal Wetlands/Swales	CWA Section 404 and 401
Lacustrine	CWA Section 404 and 401
Riverine and Riparian Complex	
Riparian Wetlands	CWA Section 404 and 401
Riverine with riparian	CWA Section 404 and 401
Riverine without riparian	CWA Section 404 and 401

Notes:

^a May off-set authorized impacts for seasonal wetlands and swales within vernal pool complex. Credit for vernal pool species under ESA Section 10 and Fish and Game Code 2835 will be provided as part of the Draft HCP/NCCP.

Placer County will maintain detailed accounting of the extent of habitat established, re-established, rehabilitated, enhanced, and preserved as part of the ILF Program. Wetland credits will be tracked and maintained reported to the Regulatory In-lieu Fee and Bank Information Tracking System (RIBITS). Additional detail on the Program account is describe in the instrument.

D.3.7 Prioritization Strategy

Overall, the ILF's prioritization strategy for compensatory mitigation for impacts to Waters of the U.S. will be based the landscape-scale conservation efforts outlined above. The strategy will focus on establishing, re-establishing, and preserving vernal pool wetland complexes. It will also focus on establishing, re-establishing, and preserving fresh emergent marsh, lacustrine, and non-vernal pool seasonal. Finally, the strategy will focus on establishing, re-establishing, creating and preserving riverine and riparian systems.

The Sponsor may select and prioritize projects to bring to the IRT by:

- Prioritizing sites in the Coon Creek and Bear River watersheds
- Prioritizing conservation of large parcels
- Building on existing conservation lands
- Identifying and targeting degraded parcels in priority conservation areas that have good potential for wetland establishment/re-establishment and functional lift
- Maintaining stream and watershed connectivity
- Integrating establishment, re-establishment and preservation efforts with other local conservation efforts (e.g., Draft HCP/NCCP and CARP)
- Considering the forecast of impacts and proposing projects that offset those effects

Additional selection criteria and considerations are described below. This approach is consistent with other local efforts such as the Draft HCP/NCCP and CARP because the same background materials were used to identify and prioritize conservation in these areas.

D.3.7.1 Vernal Pool Complex

The County will work to restore vernal pools with a diversity of characteristics (e.g., size, depth, inundation period, etc.) to ensure provision of habitat for all covered species. Areas acquired to establish, re-establish and rehabilitate vernal pools and vernal pool grassland complexes should follow these guidelines:

- In general, the minimum area for an acquisition of a vernal pool complex is 200 acres if the area that is within a potential future growth area and is not contiguous with other reserve lands, the Reserve Acquisition Area, or the Stream System. The area may consist of one or more properties. Smaller parcels may also be acquired if they are occupied by a covered species (e.g. Conservancy Shrimp or California black rail) in the Draft HCP/NCCP.
- Areas to be acquired or incorporated will have onsite and offsite hydrological conditions that ensure that vernal pool resources can be maintained, enhanced, and/or restored to function in perpetuity. Offsite hydrological conditions that detrimentally impact vernal pools on the site to be acquired must be restored before preservation credits can be allotted.
- No outfall or similar storm drainage facility can be directed to, or constructed within, areas to be acquired for protection and re-establishment of vernal pool complexes unless such facilities are directed to intermittent or perennial streams or storm drainage facilities and where such discharges do not affect the hydrology of protected vernal pools and swales. The purpose of this stipulation is to avoid inundation of vernal pools beyond the natural hydroperiod.
- Lands acquired to protect vernal pool complexes must include a means to control invasive species and to ensure ecological integrity.
- The interface between urban/suburban land uses and Reserve lands should be minimized to decrease edge effects.

Established, re-established and rehabilitated vernal pools will be located in sites that provide suitable hydrologic conditions that will meet success criteria (e.g., average wetted area, size and depth of pools to provide habitat for covered species, etc.).

- Sites will be prioritized where there is evidence that the targeted natural communities occurred there in the past.
- The site provides sufficient physical processes and hydrologic, geomorphic, and soil conditions to ensure successful establishment, re-establishment, or rehabilitation can occur and be self-sustaining.
- The establishment, re-establishment, or rehabilitation site is able to support covered species, support implementation of species-specific conservation measures, and meet species-specific biological goals and objectives.
- The site is close to habitat occupied by Covered Species associated with each of the restored natural community types.
- The site will expand and/or connect existing natural communities.

- Placer County will prioritize vernal pool establishment, re-establishment, or rehabilitation sites that have evidence of historical vernal pools based on soils, remnant topography, remnant vegetation, historical aerial photos, or other historical or site-specific data.
- The site supports suitable soils and landforms for vernal pool establishment, re-establishment or rehabilitation.
- Any sites identified for establishment, re-establishment, or rehabilitation will not affect any vernal pools on-site.
- The adjacent land use is compatible with establishment, re-establishment, or rehabilitation and long-term management to maintain natural community functions (e.g., not within 250 feet of urban or rural residential areas or potential future growth areas). To minimize edge effects from adjacent urban and suburban land, vernal pools or seasonal wetlands will not be created/restored within 250 feet from the boundary of any development, unless Placer County can demonstrate that a location closer than 250 feet will still provide for maintenance of adequate hydrology and protection from indirect effects in the event of future development. Sites that contribute to establishment of a large, interconnected vernal pool complex reserve system (e.g., adjacent to existing protected vernal pool complex) will be prioritized. All re-establishment or establishment activities will require IRT approval.
- Sufficient land is available for protection to provide the necessary vernal pool complex establishment, re-establishment, or rehabilitation, including surrounding grasslands, to ensure the local watershed is sustaining vernal pool hydrology.
- Vernal pool density is representative of intact vernal pool complex in the vicinity of the establishment, re-establishment, or rehabilitation site. Restoration will not result in a density of vernal pools greater than 10 percent density, unless it can be demonstrated by historical or other data (e.g., aerial photograph) that a higher density is appropriate. The intention is to mimic historic conditions for high value vernal pool complexes.
- The site is close to known populations of covered vernal pool species.

Restored and created vernal pools must be able to function based upon existing hydrology without augmentation. Site-specific design must allow these wetlands to be inundated multiple times throughout the wet season with inundation occurring regularly depending upon the precipitation amount and duration of each storm cycle.

Site-specific mitigation plans must meet clearly defined objectives with enforceable ecologically-based success criteria. These will be developed utilizing the requirements identified in the Draft HCP/NCCP in an ILF project. The draft HCP/NCCP vernal pool guidelines described in Chapter 5, section 5.3.2.3.1 and in 5.3.3.3 will be used in development of ILF project. Each project will include the following monitoring requirements:

- Requirements for survival of planted stock (or inoculum if appropriate).
- Requirements for plant density or percent cover by hydrophytic plants over time.
- Requirement of a target percent cover, density, or height of native species over time.
- Requirement of a target vegetative species richness amount.
- Use of reference wetlands or other aquatic resources sites as a benchmark.
- Requirements specifically limiting occurrence of exotic and nuisance plant species.

- Requirements that the site operate within natural hydrologic process parameters.
- Requirements that water quality is maintained on-site.

For each project, the Sponsor will coordinate with the IRT to discuss proposed site design. The Sponsor will also coordinate with the IRT to ensure that scientifically-based and site-specific re-establishment methods are implemented while restoring the hydrological and ecological processes in the vernal pool and upland habitats of each site.

Monitoring efforts of existing vernal pool re-establishment projects in the Service Area indicate that future re-establishment in the Service Area has a high potential for success. The Sponsor will utilize information from successful re-establishment projects in the Service Area with similar physical and landscape conditions to inform proposed vernal pool re-establishment projects in the ILF Program.

D.3.7.2 Aquatic/Wetlands and Riverine and Riparian Complex

The Program Sponsor will identify aquatic/wetland and riverine and riparian complex re-establishment sites based on the site selection guidelines described below, first for riparian wetlands, then for other wetland types, and ultimately through implementation of the Draft HCP/NCCP. There are potential re-establishment opportunities along upper and lower Coon Creek, upper and lower Yankee Slough, lower Markham Ravine, lower Auburn Ravine, lower Pleasant Grove Creek, and lower Curry Creek. The ILF Program will utilize the Dry Creek Coordination Resource Management Plan, the Auburn Ravine/Coon Creek Ecosystem Restoration Plan, the Coon Creek Watershed Assessment and the Pleasant Grove/Curry Creek Ecosystem Restoration Plan to help identify potential stream and riparian acquisition, enhancement, and re-establishment actions in these watersheds. These plans provide guidance for riparian and stream re-establishment and enhancement actions outlined in the Placer Legacy Open Space and Agricultural Conservation Program (Placer County 2012). Fish passage enhancement areas have been identified within the creeks listed above, but also within the potential future growth areas within the Auburn Ravine and Dry Creek Watershed. Additional opportunities for riparian re-establishment would be identified through site assessments.

Restoration and enhancement sites may be selected according to the following general criteria that include but are not limited to:

- Moderate to high potential for success of activities, based on the geographic setting (location in the watershed relative to other aquatic resources, quality and management of the upstream watershed); physical setting (quality of soils and geology); and hydrology (availability of water and secure water rights); and the level of effort needed to restore the site for the increase in functions and services.
- Moderate to high potential to support covered species after restoration, including fish passage through proper stream hydrology and hydraulics, in-stream morphology, and floodplain connectivity.
- The target land-cover type is representative of the historic condition.
- The re-establishment area is proximate to intact riparian corridors that support, or are likely to support, covered species.
- The extent and quality of existing habitats (e.g., percent of native vegetation).

- The use of existing habitat by wildlife and the potential for adverse effects of the restoration project.
- The potential for a net increase in the extent and condition of habitat.
- The restoration project will have a net positive effect on existing native biota.
- The restoration project will have a net positive effect on the quality of the riverine and riparian community.
- The ability of the restoration project to contribute to the conservation goals of regional and watershed-based habitat connectivity as described in the Draft HCP/NCCP and appropriate watershed resource management plans.

The County will also work in consultation with the appropriate watershed group (e.g., Save Auburn Ravine Salmon and Steelhead, Auburn Ravine/Coon Creek Coordinated Resource Management Plan Group [currently not active], American Basin Council of Watersheds, Dry Creek Conservancy, and the Pleasant Grove-Curry Creek Ecosystem Restoration Project Group [currently not active], Trout Unlimited, and the member organizations of the Central Valley Joint Venture) and the IRT to identify restoration sites.

For freshwater emergent marsh, seasonal and spring/seep wetlands, potential re-establishment and establishment sites will be identified and selected based on their hydrologic, geomorphic, and soil conditions to ensure the success of re-establishment and to minimize the need for long-term management of geomorphic and hydrologic conditions. Suitable sources of water must be available to restore or create desired hydrologic conditions and to provide habitat for desired plants and animals.

Restoration sites will also be selected based on their ability to support covered species and to meet species-specific biological goals and objectives in the Draft HCP/NCCP.

D.3.8 Public and Private Stakeholder Involvement

The success of the ILF Program will depend on close coordination and collaboration with the IRT. As the primary public stakeholders, IRT members will be engaged in the development, review, and approval process for ILF Program mitigation projects, and their knowledge of the geography, ecology, and aquatic resources within the Service Area can help inform mitigation proposals and result in better projects.

The Sponsor will develop ILF projects with input from the public. They will use existing watershed plans and the goals and objectives outlined in the Draft HCP/NCCP and CARP to direct future establishment and re-establishment efforts. The Sponsor will go to notice plans in its reports to the Board of Supervisors and will go to bid for the construction of these projects, thereby making each ILF project public.

Private stakeholders can be involved by writing IRT member agencies or the Corps directly. If approved, the Draft HCP/NCCP Interagency Working Group will regularly engage with the IRT to ensure consistent approaches to compensation occur across the Service Area and the Public Advisory Committee will provide a forum for public involvement. Owners of land proposed for development or mitigation in Placer County may also play a critical role in the early stages of this Program by providing appropriate sites for mitigation projects to be implemented under the Program.

D.3.9 Long-Term Protection and Management Strategies

The ILF Program provides for the long-term preservation and management of the ILF project sites through direct acquisition of land and/or conservation easements. The County may work with other partners who will own and manage the land in cooperation with the IRT and the County, under certain conditions. The County anticipates that conservation easements will be recorded on all preserve lands and that the County will own many of the conservation easements. The conservation easement template is included in Exhibit C. Each mitigation project covered by the ILF Program will meet the appropriate ownership and stewardship requirements to insure its long-term management and protection. Conservation easements or equivalent protection measures will be recorded on mitigation project sites before the final release of mitigation project credits. Project sites will be managed to maintain and protect the aquatic resources that are established or re-established. Over the short-term, these areas will be managed consistent with the requirements of the project proposal. Interim management strategies will address wetland restoration success, site protection, and site maintenance. Over the long-term, these areas will be integrated into the County's reserve system that will be established as part of the HCP/NCCP. The project sites will be managed in accordance with the long-term management plan that is developed under the HCP/NCCP. The long-term management plan is designed to account for multiple project locations, site management and maintenance across multiple parcels.

D.3.10 Evaluation and Reporting

The County proposes to meet with the IRT biannually to report on progress toward achieving the ILF Program's goals and objectives; additional meetings may be needed to discuss mitigation projects and progress on establishment, re-establishment and enhancement activities. A formal ILF Program monitoring report will be generated and submitted to the IRT as described in the instrument; to extent possible this report will be integrated with or supplement reporting on the Draft HCP/NCCP once it begins implementation. Additional information on the annual report is provided in the instrument.

D.4 References Cited

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Attachment A

Biological Goals and Objectives Summary Table from the Draft HCP/NCCP

As the ILF Program and the Draft HCP/NCCP are intended to be consistent. This table is provided to help guide implementation of the wetland commitments for the ILF Program.

Table D-4. Biological Goals, Objectives, and Conservation Measures (May 2018 Draft)

Biological Goals and Objectives	Conservation Measures ²	Monitoring
<i>Natural Community-level Goals and Objectives</i>		
Vernal Pool Complex and Grassland Natural Community		
Goal VPCG-1: Interconnected vernal pool complex and grassland natural communities with functional ecological processes that sustain native species.		
Objective VPCG-1.1. <i>Protect Existing Vernal Pool Complexes.</i> Protect 17,000 acres of existing vernal pool complex, including 790 wetted acres of vernal pool constituent habitat ³ to build a vernal pool Reserve System in large, contiguous blocks based on reserve units (minimum size of 200 acres unless agreed to by the Wildlife Agencies), primarily in the Valley RAA, and provide for the conservation of the covered vernal pool branchiopods in the Plan Area.	CM1, Establish Reserve System <ul style="list-style-type: none"> CM1 VPCG-1, Vernal Pool Protection 	<ul style="list-style-type: none"> Report number of acres protected each year and map locations with a geographic information system (GIS). Establish occupancy rate during years 1 through 5. Cross check occupancy in subsequent years per guidelines in Chapter 7, <i>Monitoring and Adaptive Management Program</i>.
Objective VPCG-1.2. <i>Restore/Create Vernal Pool Complexes.</i> In addition to the protection of 17,000 acres of existing vernal pool complex, restore/ create 3,000 acres of vernal pool complex in the Reserve System by Year 35, independent of effects. Within the 20,000 acres of protected and restored/created vernal pool complex, restore/create vernal pool constituent habitats to provide habitat for covered vernal pool branchiopods. At least 30 wetted acres of vernal pools will be restored/created independent of effects. Assuming all effects occur, an additional 870 acres of vernal pool constituent habitat will be restored as mitigation. If the proposed maximum allowable effect occurs, restoration totals will be 900 acres of vernal pool constituent habitat, of which a minimum of 326 acres would be delineated as vernal pool wetlands. At least 34 percent of all effects on vernal pool constituent habitat will be mitigated as vernal	CM1, Establish Reserve System <ul style="list-style-type: none"> CM1 NC-1, Siting Restoration CM1 VPCG-2, Reserve Design for Vernal Pool Restoration/Creation CM3, Restore or Create Natural Communities and Covered Species' Habitat <ul style="list-style-type: none"> CM3 VPCG-1, Vernal Pool Complex Restoration/creation 	<ul style="list-style-type: none"> Report number of acres of vernal pools restored and created annually (7.4.3) Measure effectiveness of restoration/creation against success criteria established for the site (7.4.3)

² These conservation measures are detailed in Section 5.3, *Conservation Measures*.

³ Vernal pool constituent habitat includes delineated vernal pools, seasonal wetlands, and seasonal swales when seasonal wetlands and seasonal swales are a component of vernal pool complex.

Biological Goals and Objectives	Conservation Measures ²	Monitoring
pool wetlands (up to 290 acres). The proportion of vernal pool wetlands to seasonal wetlands that will be restored/created will be equal to or greater than the proportion lost as a result of Covered Activities.		
Objective VPCG-1.3. <i>Protect Grasslands.</i> Protect 2,740 acres of grassland natural community (i.e., non-vernal pool complex grassland), including 350 acres in the Valley RAA and 2,390 acres in the Foothills RAA.	CM1, <i>Establish Reserve System</i> • CM1 VPCG-3, <i>Grassland Protection</i>	• Report acres and location of grassland natural community acquired (7.4.3)
Objective VPCG-1.4. <i>Restore Grasslands.</i> In addition to the protection of 2,740 acres of existing grassland natural community, restore 1,000 acres of grassland in the Reserve System in the Valley, independent of effects.	CM1, <i>Establish Reserve System</i> • CM1 NC-1, <i>Siting Restoration</i> CM3, <i>Restore or Create Natural Communities and Covered Species' Habitat</i> • CM3 VPCG-2, <i>Grasslands Restoration</i>	• Report acres and location of grassland restored (7.4.3) • Measure effectiveness of restoration or creation against success criteria established for the site (7.4.3)
Goal VPCG-2. Vernal pool complex and grassland communities managed and enhanced to promote regeneration and recruitment of Covered Species and support native biodiversity.		
Objective VPCG 2.1. <i>Enhance Vernal Pool Vegetation and Hydrology.</i> Enhance the vegetation and hydrology of degraded vernal pools and seasonal wetlands in the Reserve System to a self-sustaining natural hydroperiod (timing, frequency, and duration of inundation), and to sustain the vernal pool complex natural community, including associated covered vernal pool species.	CM2, <i>Manage and Enhance the Reserve System</i> • CM2 L-1, <i>Vegetation Management and Invasive Plant Control</i> • CM2 VPCG-1, <i>Vernal Pool Complex and Grassland Vegetation Management</i> • CM2 VPCG-2, <i>Vernal Pool Complex Enhancement of Hydrologic Conditions</i>	• Report all measures taken to enhance vegetation and hydrology of degraded vernal pools and seasonal wetlands in the Reserve System (7.4.3) • Measure effectiveness of enhancement activities against success criteria (7.4.3)
Objective VPCG 2.2. <i>Increase Ground Squirrel Population.</i> Within protected and restored vernal pool complex and grassland communities, increase the population of ground squirrels to enhance prey populations and habitat value for wildlife species.	CM2, <i>Manage and Enhance the Reserve System</i> • CM2 VPCG-3, <i>Ground Squirrel Population Enhancement</i>	• Document efforts to increase ground squirrel populations in the Reserve System (7.4.3) • Document ground squirrels population trend in the Reserve System (7.4.3)

Biological Goals and Objectives	Conservation Measures ²	Monitoring
Aquatic/Wetlands Complex Natural Communities		
Goal AW-1. A Reserve System sustaining functional fresh emergent marshes, seasonal wetlands, ⁴ and lacustrine habitats (e.g., ponds), and the hydrologic processes that support them to benefit Covered Species and promote native biodiversity.		
Objective AW-1.1. <i>Protect Aquatic/Wetland Complex Natural Community.</i> Protect 600 acres of aquatic/wetlands complex natural community (400 acres in the Valley and 200 acres in the Foothills). The 600 acres of aquatic/wetlands complex will include at least 586 acres of wetlands (e.g., fresh emergent marsh, lacustrine, non-vernal pool seasonal wetland), of which at least 256 acres will be fresh emergent marsh.	CM1, Establish Reserve System <ul style="list-style-type: none"> CM1 AW-1, Aquatic/Wetlands Complex Protection 	<ul style="list-style-type: none"> Report acreage, location, and wetland type of acquired aquatic/wetlands complex natural community (7.4.3)
Objective AW-1.2. <i>Restore/Create Aquatic/Wetland Complex Natural Community.</i> In addition to the protection of 600 acres of existing aquatic/wetland complex, restore and create aquatic/wetland natural community by restoring fresh emergent marsh, lacustrine, and non-vernal pool seasonal wetland constituent wetlands. At least 20 acres of fresh emergent marsh will be restored independent of effects. Additional restoration/creation will occur dependent on effect at a 1.5:1 ratio of restored/ created to affected aquatic/wetland types. In the Valley, at least 40 percent of the restoration dependent on effects will be fresh emergent marsh. In the Foothills, at least 50 percent of the restoration dependent on effects will be fresh emergent marsh. The remaining 10 percent may occur in the Valley or the Foothills. Restoration dependent on effect may result in an additional 390 acres of aquatic/wetland type wetlands restored/ created as mitigation. If the proposed maximum allowable effect on aquatic/wetland complex occurs, independent and dependent restoration will total 410 wetted acres of aquatic/wetland complex community of which a minimum of 196 acres would be delineated as fresh emergent marsh.	CM1, Establish Reserve System <ul style="list-style-type: none"> CM1 NC-1, Siting Restoration CM3, Restore and Create Natural Communities and Covered Species' Habitat <ul style="list-style-type: none"> CM3 AW-1, Aquatic/Wetlands Complex Restoration/Creation 	<ul style="list-style-type: none"> Report acres, location, and wetland type of fresh emergent marsh, lacustrine, and non-vernal pool seasonal wetland constituent wetlands grassland restored (7.4.3) Measure effectiveness of restoration against success criteria established for each wetland type (7.4.3)

⁴ The wetland and pond natural community includes seasonal wetlands that are not components of vernal pool complexes. Seasonal wetlands that are associated with vernal pool complexes are included within the Vernal Pool Complex and Grassland natural community.

Biological Goals and Objectives	Conservation Measures ²	Monitoring
Objective AW-1.3. Maintain and Enhance Wetlands and Ponds. Maintain and enhance hydrological functions, native biodiversity, and habitats for populations of Covered Species in all protected aquatic/wetland complexes within the Reserve System.	CM2, Manage and Enhance the Reserve System <ul style="list-style-type: none"> • CM2 AW-1, Aquatic/Wetlands Complex Vegetation Control • CM2 AW-2, Fencing Wetlands and Ponds • CM2 AW-3, Sediment Removal • CM2 AW-4, Non-native Predator Control • CM2 AW-5, Basking Habitat Enhancement • CM2 AW-6, Provision of Vegetative Cover • CM2 AW-7, Maintenance of Water Depths and Hydrological Cycles • CM2 AW-8, Maintenance and Enhancement of Water Quality 	<ul style="list-style-type: none"> • Report all measures taken to enhance hydrological functions, native biodiversity, and habitats for populations of Covered Species in protected fresh emergent marsh aquatic and wetland land-cover types within the Reserve System (7.4.3) • Measure effectiveness of enhancement activities against success criteria for each wetland type (7.4.3)
Riverine and Riparian Complex Natural Communities		
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. Protect 2,200 acres of riverine/riparian natural community, which will include at least 1,410 acres of riparian constituent habitat (960 acres in the Valley and 451 acres in the Foothills). This portion of the Reserve System will include 88.6 linear miles of streams (riverine).	CM1, Establish Reserve System <ul style="list-style-type: none"> • CM1 RAR-1, Riverine and Riparian Protection 	<ul style="list-style-type: none"> • Report acreage and location of riverine/riparian complex acquired (7.4.3)
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.	CM1, Establish Reserve System <ul style="list-style-type: none"> • CM1 RAR-1, Riverine and Riparian Protection 	<ul style="list-style-type: none"> • Report linear stream miles and location of riverine constituent habitat acquired (7.4.3)

Biological Goals and Objectives	Conservation Measures ²	Monitoring
<p>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 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 estimated effect 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. Also see Table 5-4. 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).</p>	<p>CM1, Establish Reserve System</p> <ul style="list-style-type: none"> • CM1 NC-1, Siting Restoration • CM1 RAR-2, Reserve Design for Riparian Vegetation Restoration <p>CM3, Restore and Create Natural Communities and Covered Species' Habitat</p> <ul style="list-style-type: none"> • CM3 RAR-1, Riparian Natural Community Restoration 	<ul style="list-style-type: none"> • Report acres and location of riverine/riparian complex acquired and restored (7.4.3) • Compare number of restored acres to number of affected acres (7.4.3) • Measure effectiveness of restoration and creation against success criteria established for riparian community (7.4.3)
<p>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.</p>	<p>CM2, Manage and Enhance the Reserve System</p> <ul style="list-style-type: none"> • CM2 RAR-1, Riparian Vegetation Management 	<ul style="list-style-type: none"> • Measure effectiveness of enhancement activities against success criteria for riparian vegetation (7.4.3)
<p>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 Table 3-5. When partnerships allow, remove or modify up to three more of the fish passage barriers identified in Table 3-5.</p>	<p>CM2, Manage and Enhance the Reserve System</p> <ul style="list-style-type: none"> • CM2-RAR-2, Removal and/or Modification of Barriers to Fish Passage 	<ul style="list-style-type: none"> • Track number of fish barriers removed (7.4.3)
<p>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.</p>	<p>CM2, Manage and Enhance the Reserve System</p> <ul style="list-style-type: none"> • CM2 RAR-3, Modify Unscreened Water Diversions 	<ul style="list-style-type: none"> • Track number of unscreened water diversions that have been modified (7.4.3) • Check condition of screens (7.4.3)

Biological Goals and Objectives	Conservation Measures ²	Monitoring
<p>Objective RAR-1.7. Enhance Streams. Enhance stream reaches within the Plan Area to promote habitat complexity and function (e.g., diversity of instream 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, if the effects occur in a salmonid stream) 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, <i>Coon Creek Floodplain Conservation</i>, and Plan Area B4, <i>Fish Passage Channel Improvement</i> (see Figure 5-4 for Plan Area B locations).</p>	<p>CM2, Manage and Enhance the Reserve System</p> <ul style="list-style-type: none"> • CM2-RAR-2, Removal and/or Modification of Barriers to Fish Passage • CM2 RAR-4, Improvement of In-channel Features • CM2 RAR-5, Non-native Animal Species Control 	<ul style="list-style-type: none"> • Track number of fish barriers removed (7.4.3) • Track response of covered fish to barrier removal (7.5.9) • Track in-channel enhancements and measure results against success criteria (7.5.9 and 7.4.3) • Track effectiveness of non-native animal control against success criteria (7.4.3)

^a From Section 5.2.4, Framework for Biological Goals and Objectives and Conservation Measures

^b CM2, Develop an Invasive Species Control Program, is not shown in this table because it provides for development but not implementation of an invasive species control plan. The plan is implemented under CM9, Improve Protection and Management on Existing Public and Easement Habitat Lands to Maintain or Enhance Covered Species Occurrences and Habitat.

^c Some values may not sum exactly to the total due to rounding.

LIDS = Low Impact Development Standards; PCA = Placer Conservation Authority; RAA = Reserve Acquisition Area; USFWS = U.S. Fish and Wildlife Service

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- iv PCCP Objective AW-1.1.
 - vi Combines PCCP Objectives VPCG 1.3 (protect grasslands) VPCG 1.4 (restore grasslands), VPCG 2.1 (enhance vernal pool vegetation and hydrology), and VPCG 2.2 (increase ground squirrel population)
 - v PCCP Objective AW-1.2.
 - vi Combines PCCP Objectives VPCG 1.3 (protect grasslands) VPCG 1.4 (restore grasslands), VPCG 2.1 (enhance vernal pool vegetation and hydrology), and VPCG 2.2 (increase ground squirrel population)
 - vi PCCP Objective AW-1.2.
 - vii PCCP Objective RAR-1.1.
 - viii PCCP Objective RAR-1.2.
 - ix PCCP Objective RAR-1-3.

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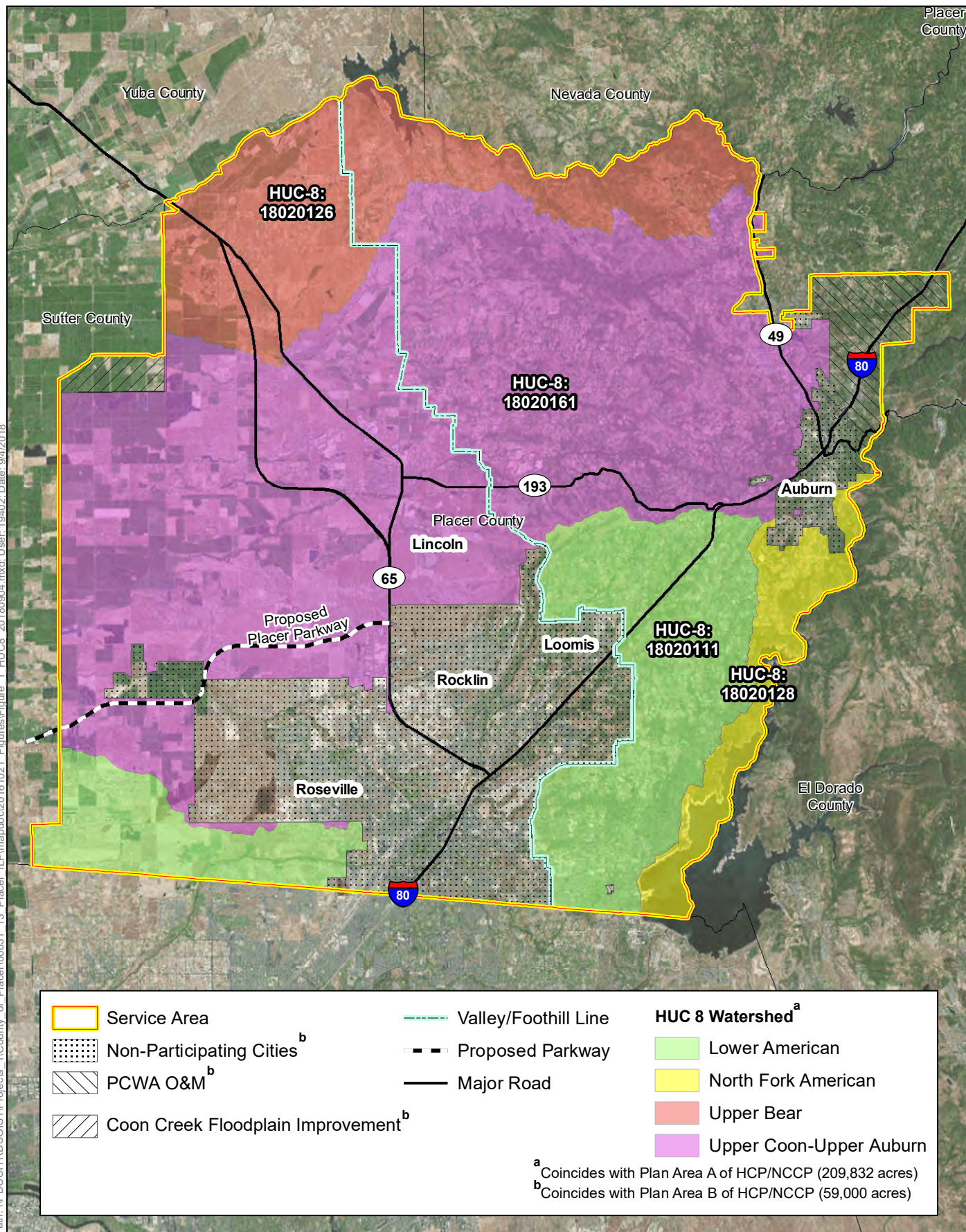
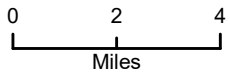


Figure 1
HUC 8 Watersheds



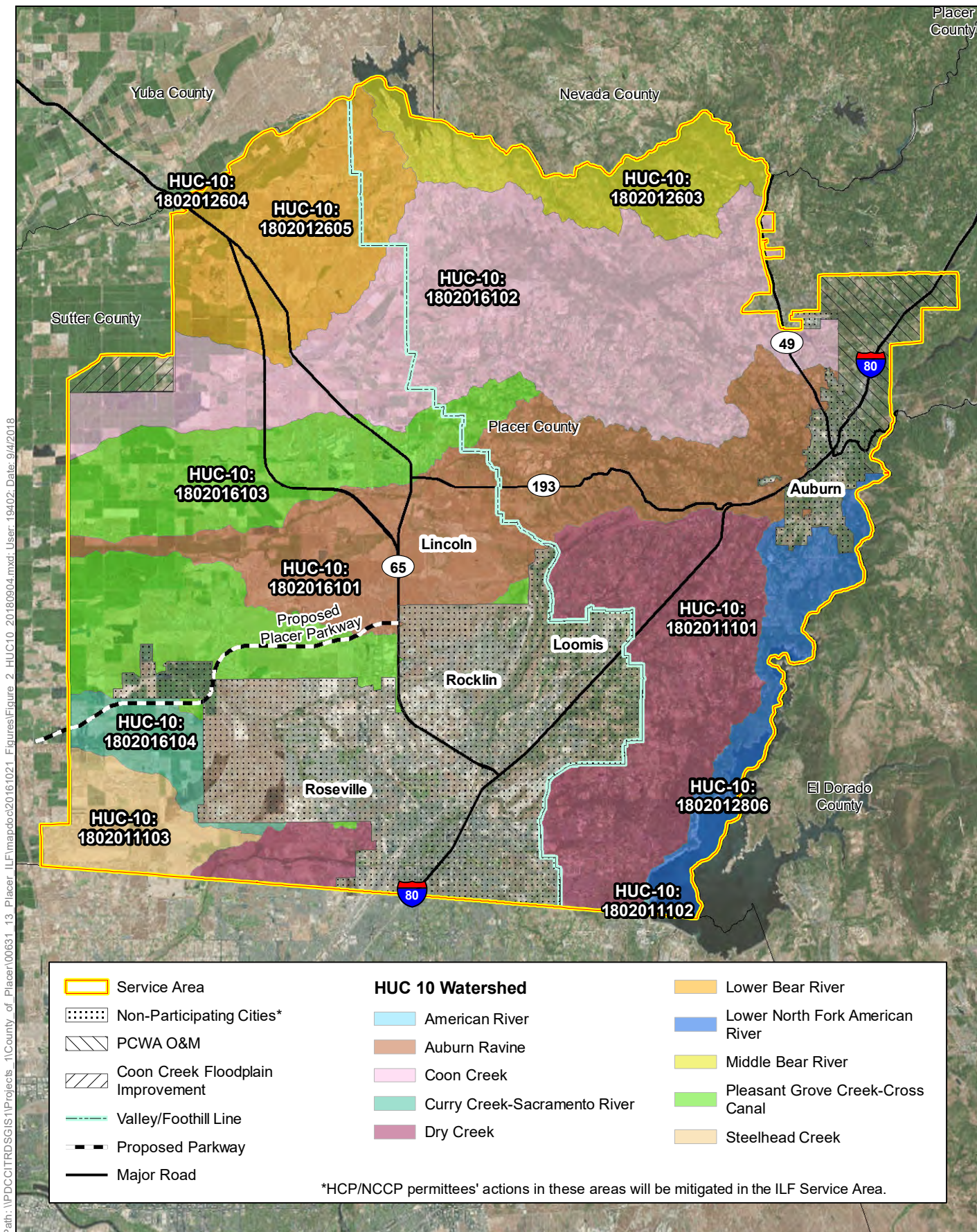
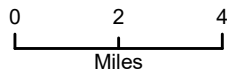


Figure 2
HUC 10 Watersheds



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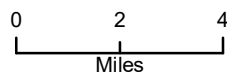
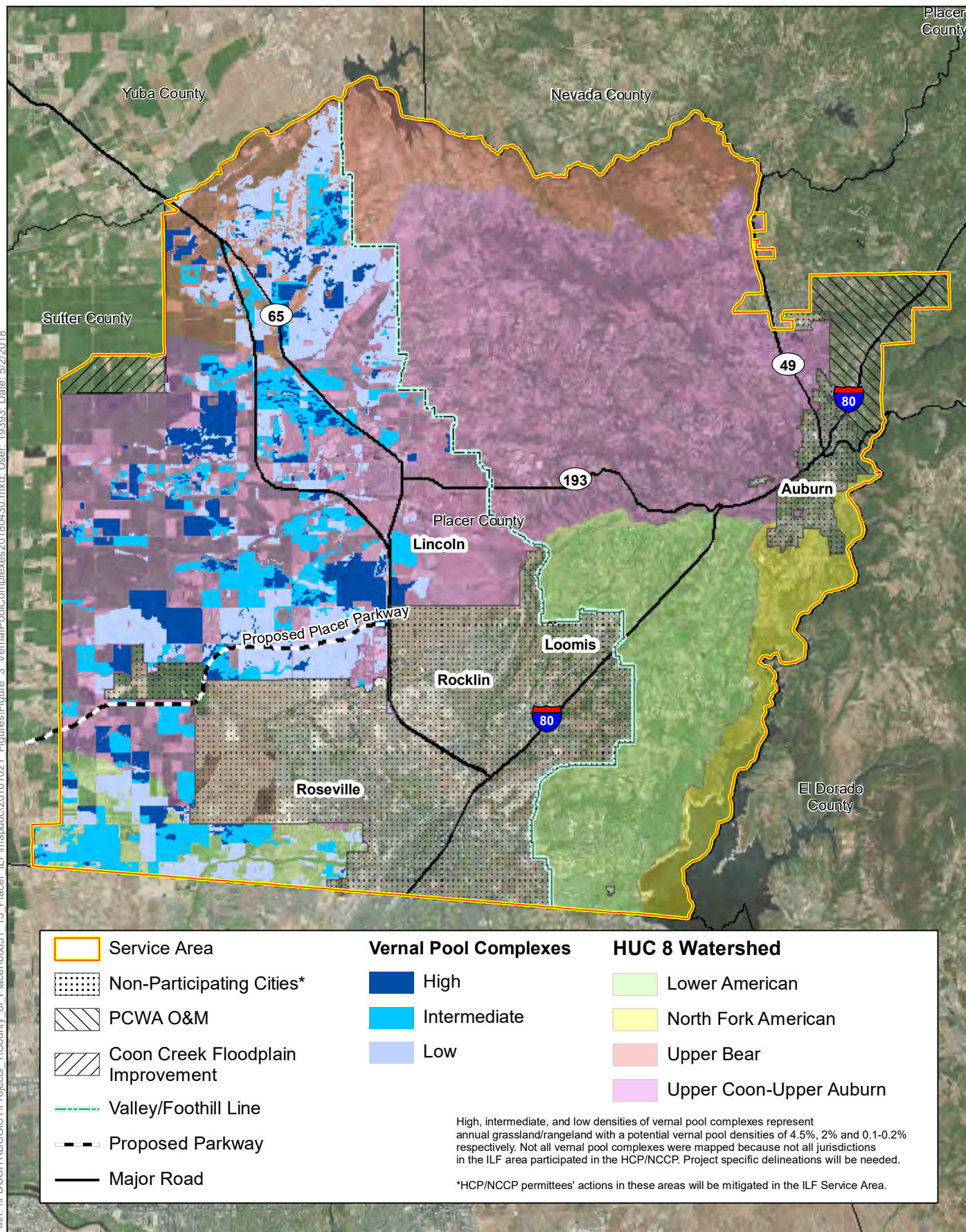
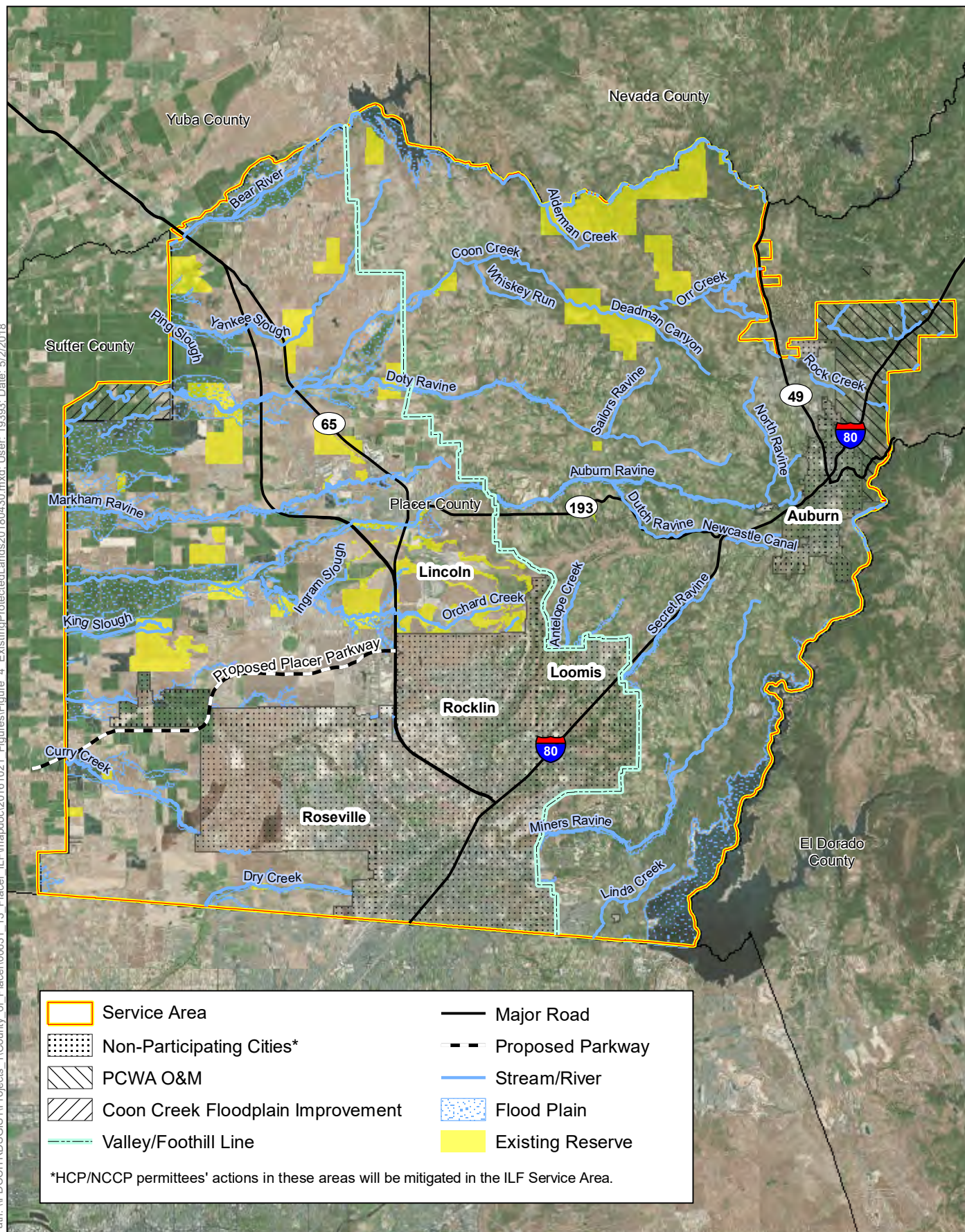


Figure 3
Vernal Pool Complexes by Watershed

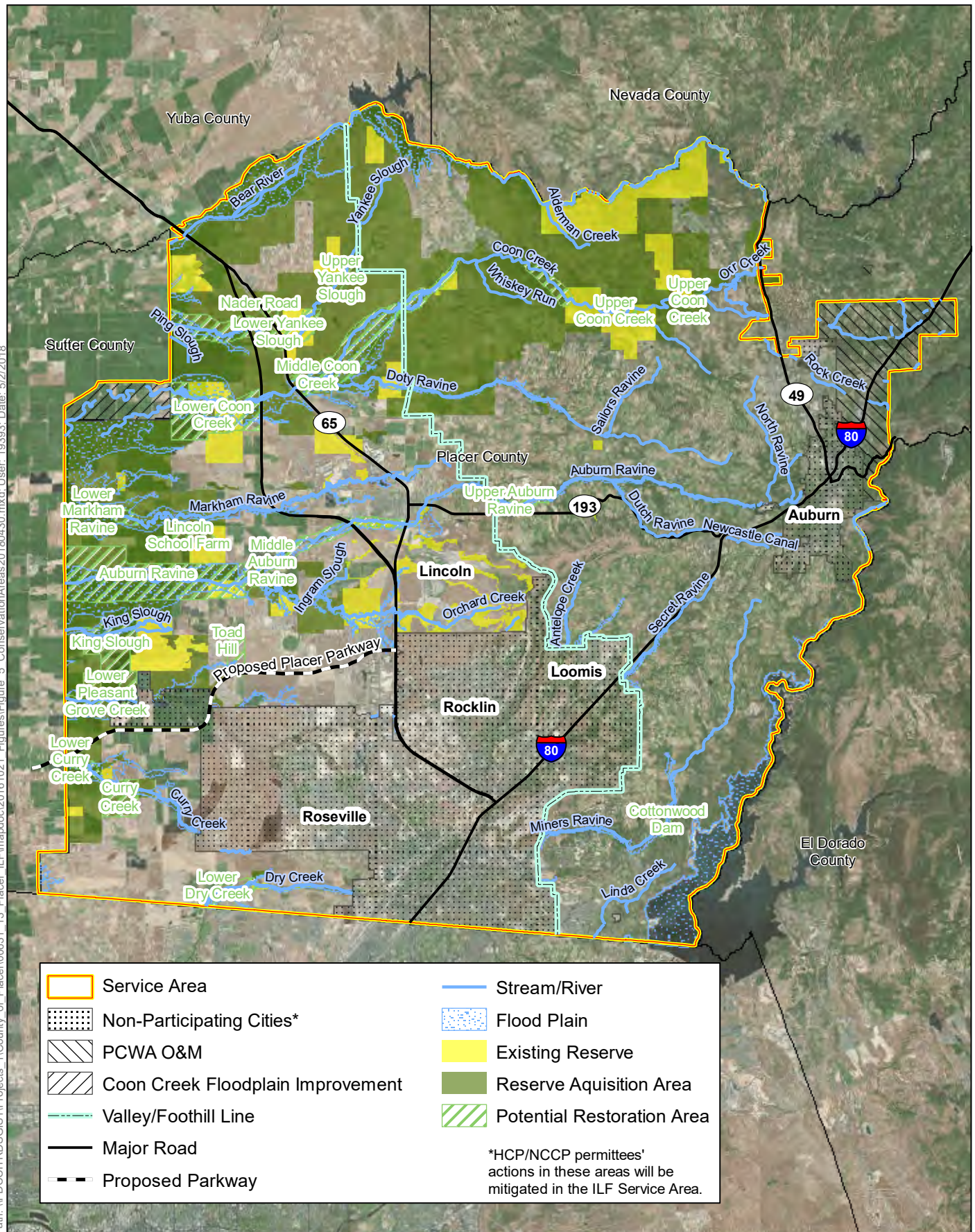
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0 1.75 3.5
Miles

Figure 4
Existing Protected Lands

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0 1.75 3.5
Miles

Figure 5
Conservation Areas

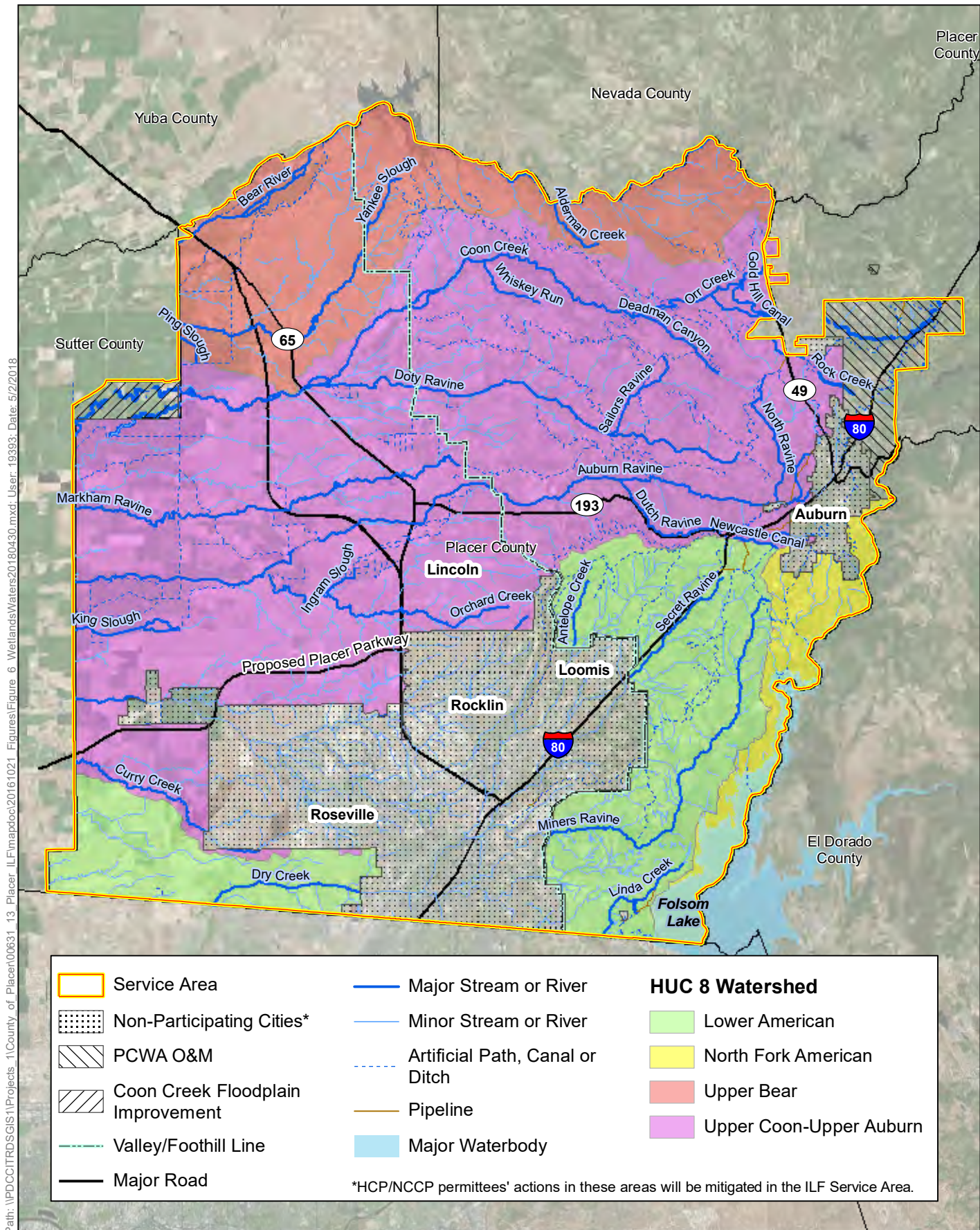


Figure 6
Wetlands and Other Waters



0 1.75 3.5
Miles

E.1 Background

The Placer County In-Lieu Fee Program (“ILF Program”) will serve an approximately 269,000 acre area of western Placer County. Approximately half of the Service Area is within the Central Valley and half is in the Sierra foothills.

The Program area is coextensive with the proposed Placer County Aquatic Resources Program (“CARP”) and Western Placer County Habitat Conservation Plan and Natural Community Conservation Plan (“HCP/NCCP”).

E.1.1 Federal Statutory Requirements

E.1.1.1 Program Account

In accordance with 33 C.F.R. 332.8(d)(6)(ii)(D) and 33 C.F.R. 332.8(i), the Program Sponsor will establish a dedicated West Placer In Lieu Fee Program Account. The Program Account will be a financial account dedicated to the management and administration of funds received from the Transfer of Credits and disbursed to implement ILF Projects under the Program. The Program Account will be maintained in an interest-bearing account of the County Treasury as an Operating Trust Fund Account with funds deposited into a financial institution that is a member of the Federal Deposit Insurance Corporation, the Securities Investor Protection Corporation, or any successor organization to such organizations. All interest and earnings from the Program Account will be reinvested in the account for the purpose of implementing Mitigation Projects and generating Released Credits.

The Endowment and Year 1 – 50 Operations and Management Funds (e.g. funds to be expended during the Interim Management Period) will be tracked and reported separately. An Annual Report will be prepared and available for inspection on or before the first business day of the month of March for the prior fiscal year and will include a financial activity report for the Program Account, which includes:

- All income received from Transfers of Released Credits and investment earnings accrued by the Program Account; and,
- A description of disbursements and expenditures from the Program Account, such as the costs of land acquisition, planning, construction, monitoring, maintenance, contingencies, adaptive management, and administration.

Program Sponsor will include in each Annual Report a Program Account report that accounts for all funds in the Program Account, including funds for specified purposes. Upon request, the Program Sponsor will provide to any requesting IRT Member copies of its audited financial statements for any completed fiscal year. The IRT may inspect and review Program Account records by giving thirty (30) days advance written notice to the Program Sponsor. When so requested, the Program Sponsor will make available for inspection all books, accounts, reports, files, and other records

relating to the Program Account in accordance with Section IV(D) of the instrument and 33 CFR 332.8(i)(4).

E.1.1.1.1 Placer County Program Account

Fee revenues collected from the transfer of each specific credit type will be deposited into the Program Account and earmarked as follows:

Restoration & Enhancement

- Vernal Pool Complex Sub-Account
 - Vernal Pool
 - Seasonal Swales
 - Seasonal Wetlands in a Vernal Pool Complex
- Aquatic/Wetlands Complex Sub-Account
 - Fresh Emergent Marsh
 - Non-Vernal Pool Seasonal Wetlands
 - Lacustrine
- Riverine and Riparian Complex Sub-Account
 - Riparian Wetlands
 - Riverine with Riparian
 - Riverine without Riparian

ILF Projects will be developed and implemented with funds deposited into specific sub-accounts. These sub-accounts will be tracked separately from Draft HCP/NCCP financial reporting requirements. The Restoration and Enhancement sub-accounts are limited to and fund 100% of the cost to design, build, permit, construct, maintain and monitor until the ILF Project meets its performance requirements (see Exhibit H).

The Program Sponsor will charge additional fee amounts equal to the additional cost of land, operations and management, endowment, and other related costs including administration and contingency. These fee amounts are designed to be consistent with and implement the conservation strategy of the Draft HCP/NCCP. Fee revenues to fund these costs include each of the following:

1. Land Acquisition Sub-Account (Incl. Preservation & Buffer Credits): 38.4%
2. Operations and Management (Year 1 – 50 Costs): 54%
3. Endowment: 5.3%
4. Reimbursement Costs: 2.3%
5. Contingency Sub-Account (percentage of fee allocations 1, 2, 3 above)

*Percentages shall be subject to adjustment with fees based on annual review of the fee schedule. Fee amount allocations will also be adjusted to reflect case-specific differences in where impacts occur and where mitigation projects are located within the Service Area.

The endowment and operations and management funds will be deposited into separate specified fund accounts under the Program Account, as explained further below.

Disbursements for Implementation of ILF Projects

Program Sponsor may disburse funds from the Program Account to cover the costs of implementing ILF Projects after written approval from IRT. Each ILF Project will be implemented in accordance with a Mitigation Plan approved by applicable IRT Members in accordance with the process described in Exhibit F. Each Mitigation Plan will include a detailed budget, and Program Sponsor's disbursements from the Program Account will be made in accordance with the IRT-approved budget.

Administrative Costs

Program Sponsor may use up to 10.4 percent of the funds received from the additional fee revenues (for land acquisition, etc.) as part of the Transfer of Released Credits to cover the cost of administering the Program.

Contract Administration

Program Sponsor may enter into contracts with third parties for the development, implementation, and/or interim and long-term stewardship of individual ILF Projects. The Program Sponsor will pay third parties performing work to implement ILF Projects in accordance with the budget included in the approved Mitigation Plan for the Mitigation Project.

Contingency Sub-Account

Contingencies that may arise from time to time in implementing the ILF Program will be addressed using funds deposited into the Program Contingency Sub-Account. The Program Contingency Sub-Account shall serve as a reserve fund and financial security for the Program. Contingencies that may be addressed through funding from the Program Contingency Sub-Account may include, without limitation, such circumstances as funding unanticipated costs associated with ILF Project implementation, funding to accelerate ILF Project implementation to address temporal concerns, and other unforeseen funding needs. The use of these funds shall be subject to the approval of the IRT, based upon written proposals submitted by the Program Sponsor. Contingency costs are funded at an initial rate of 7.5% of the fee revenues for Restoration and Enhancement, 3% for all other costs except Land Acquisition (which is 5% due to land price variability) (see Exhibit H).

Endowment - Long-Term Maintenance & Monitoring

Endowment funds for Long-term Management and Maintenance of ILF Project sites beyond the Interim Management Period will be placed in a separate endowment custodial funding account, the Long-term Management and Maintenance Fund ("Management Account"). The Management Account will be a separate account initially held within the Placer County Treasury. The Management Account could alternatively be established with a community foundation, congressionally chartered foundation as defined in California Government Code section 65965, or other IRT approved third party through an amendment of the ILF. The Program Sponsor will manage and invest Management Account funds as part of the Placer County Treasury or, alternatively, under contract with such a community foundation, congressionally chartered foundation, or other IRT approved third party, subject to approval of a separate ILF amendment.

Program Sponsor will establish a sub-account within the Management Account for each ILF Project for the long-term management and maintenance of the ILF Project site. The Management Account and each ILF Project earmark or sub-account will be tracked and reported separately in the Program Account report in each Annual Report. The Program Sponsor will disburse funds from the Management Account to the land manager for its performance of land management activities on the ILF Project site in accordance with the Long-Term Management Plan for the site. If either (a) the value of the Endowment Fund has decreased to levels that may threaten its continued existence as a source of perpetual funding for long-term management, whether due to unexpected investment performance or otherwise; or (b) if long-term management expenses exceed those estimated in the IRT-approved budget, the Sponsor and land manager shall consult with the IRT. During the Long-term Management Period, the Sponsor shall be responsible for submitting annual reports to each member of the IRT. The Sponsor shall upload all reports into RIBITS and furnish a hard copy to each IRT member.

Management Account Accounting

The Program Sponsor will use **Fund Accounting** for fiduciary funds as defined by **Generally Accepted Accounting Principles ("GAAP")**, which includes endowment funds from above. Fiduciary funds are used to account for resources that the Program Sponsor holds as a trustee or agent on behalf of an outside party and that cannot be used to support the trustee's other programs.

Program Sponsor will hold the Management Account as an agency fund. Agency funds represent clearing-type funds, where the assets are greater than or equal the liabilities as defined by GAAP.

Payments from agency funds can only be made by issuing warrants from the liability account.

The Program Sponsor has the following responsibilities for all custodial funds assigned to the Management Account:

- Ensure that there are internal controls to protect the account's assets. Specifically, the duties for the fund must be adequately separated among employees so that the work of one employee acts as a check on the work of another employee. Additionally, the procedures for the account's cash receipts and cash disbursements should conform to the cash handling procedures.
- Maintain subsidiary records sufficient to support the ownership of all assets of the custodial fund(s).
- During each accounting period, the Program Sponsor will reconcile the subsidiary records to the General Ledger. If the reconciliation identifies an error occurred in the General Ledger, a correction will be made.

Accounts Receivable

The Program Sponsor is responsible for maintaining subsidiary ledgers of its accounts receivable and should review the accounts receivable aging on a monthly basis to determine whether accounts have become delinquent and need further action as described below.

Annually, during the year-end closing process, the Program Sponsor will ensure the accounts receivable in the subsidiary ledgers are recorded in the General Ledger at net realizable value by recording the gross accounts receivable amount and then recording an offsetting allowance for doubtful accounts in the Program Sponsor's financial system.

Financial Investment

Funds in the Program Account and all earmarks or Sub-Accounts will be invested pending disbursement in accordance with the Program Sponsor's then-prevailing investment policy statement on cash management, which at all times will be available for review upon request by the IRT. The Program Sponsor believes this is the appropriate investment strategy for Program Account funds (separate from the Management Account) since the funds will generally be expected to be disbursed or obligated within three years of receipt. Accordingly, the cash management investment account will generally seek to achieve investment returns at least equal to the rate of inflation such that the "purchasing power" of the funds will be maintained. At the same time, the cash management investment portfolio will reflect a relatively conservative asset allocation profile so as to minimize risk while seeking the relevant return. As between the objective to maintain purchasing power and the objective to preserve the principal of all Program Account funds, the latter (i.e., preservation of principal) shall take precedence in order to best ensure the financial security of the ILF Program.

The Program Sponsor shall ensure that the Management Account (Endowment) is managed, invested, and disbursed in furtherance of the long-term stewardship of ILF Project sites by:

- Managing endowment funds efficiently.
- Achieving a reasonable long-term rate of return on investment of endowment funds similar to those of other prudent investors for endowment funds.
- Achieving a long-term rate of return that at a minimum is equal to a capitalization rate of 3.25%, after deducting inflation.
- Fully funding the endowment by allocating a fixed percentage of each fee payment to the endowment.
- Managing and investing endowment funds in good faith and with the care an ordinarily prudent person in a like position would exercise under similar circumstances, consistent with the Uniform Prudent Management of Institutional Funds Act (Part 7 (commencing with Section 18501) of Division 9 of the Probate Code).
- Utilizing generally accepted accounting practices as promulgated by either the Financial Accounting Standards Board or any successor entity for nonprofit organizations or the Governmental Accounting Standards Board or any successor entity for public agencies, to the extent those practices do not conflict with any other requirements of law.
- Disbursing endowment funds on a timely basis and only for the long-term stewardship of ILF Project sites.

Fee Schedules

As stated in the 2008 Rule, "The cost of compensatory mitigation credits provided by a mitigation bank or in-lieu fee program is determined by the sponsor." (See 33 CFR Part 332.8(o)(5) and 40 CFR Part 230.98(o)(5).) Program Sponsor has determined that the minimum prices for Credits under the ILF Program will be as set forth in the fee schedules included in the In Lieu Fee Program.

The fee schedules are premised on the fundamental principle that adequate funding is essential to the ILF Program's ability to function and to develop, implement, and provide for long-term protection of ILF Projects, and address contingencies. The ILF Program is intended to be fully funded by Credit Transfers, and to the extent Program Sponsor has invested its own resources in the

development of the ILF Program, such investments will be recovered through a portion of the proceeds from Credit Transfers. Therefore, the Credit prices are intended to cover the full cost of Program expenses in accordance with the 2008 Rule. An additional critical factor is that the pricing of Credits within an in-lieu fee program is, by necessity, based on modeling and estimates. This reflects the very nature of in-lieu fee programs, in which funds are generated through Credit sales *prior to or concurrent with* the identification and implementation of actual projects with actual budgets.

Base Price

There are numerous variables that affect ILF Project costs, including: the size and location of the ILF Project site, the land costs in that area, the acreage of habitat that may be restored, wetland type and complexity of restoration. Overall, large projects may have a relatively high ILF Project price, but may result in a relatively low per-credit cost. However, the ILF Program is targeting restoration that has the greatest functional lift for the Program Area, and the type of ILF Projects may vary by location and by year. In addition, the variability in potential costs escalates as time between planning and implementation increases, based on the potential for lands costs, inflation, and market prices for labor and fuel to rise. The activities may focus on the overall ILF Program or may be associated with activities related to undifferentiated ILF Projects. They include, without limitation, the following:

- fiduciary functions
- accounting functions
- investment oversight
- human resources management
- office management
- internet technology management
- contract management and oversight
- internal and external audits
- agency coordination
- legal support or enforcement
- stakeholder and partner coordination
- ILF Project site selection process
- reporting

Program Sponsor is a Public Agency and cannot subsidize the cost to compensatory mitigation for impacts or effects from private or public projects with staffing contributions or other funding sources. Therefore, the cost to administer the Program must fully cover all costs each fiscal year, including certain fixed administrative costs that are associated with each Credit Transfer regardless of size, as well as other fixed and variable costs of administration and management of implementing the Program.

Financial Assurances

Financial assurances are used to ensure a high level of surety that compensatory ILF Projects are successfully completed and meet the performance standards (i.e., “short-term” financial assurances), and to ensure the long-term sustainability of the compensatory mitigation (i.e., “long-term” financial assurances).

The ILF provides that site-specific short-term mitigation costs will be described in the final site-specific ILF Project budget. In accordance with the mitigation rule (33 CFR 332.3(n)(2)) short-term mitigation cost estimates will include planning, design, construction, construction monitoring, post-construction surveys, post-construction compliance requirements including monitoring and annual reporting, and contingency. These costs are proposed to be funded fully through the collection of Credit Fees.

Beyond the immediate short-term mitigation costs, the costs to manage, monitor and report through Year 50 are also proposed to be funded directly through fees. These fees are designed to work collectively and consistently with the draft HCP/NCCP requirements above and beyond performance-based monitoring and management.

Under the ILF, long-term funding beyond Year 50 will be assured through the endowment funds described above. Financial assurances for perpetual management of ILF Projects are to be provided through establishment of the endowment at a rate of 5.3% of the separate fees collected and transferred to a separate Endowment and invested with a minimum capitalization target rate of 3.25%.

The draft HCP/NCCP includes a detailed Cost and Funding Model used to support the implementation of the ILF Program, including restoration, enhancement and preservation actions. This cost information was prepared and verified by economic planning consultants with a nexus study to be adopted by Placer County and accepted by the Placer Conservation Authority (PCA) upon formation and adoption.

The cost model includes two mechanisms for adjusting fee levels to ensure costs and revenue keep pace over time: automatic adjustments and periodic assessments. The PCA will perform both adjustments, with periodic assessments performed in coordination with the IRT, and will provide the results as part of the annual reporting requirements.

Every 5th year, the PCA will complete a fee assessment in coordination with the IRT to review the costs and the underlying assumptions developed as part of the original funding plan, as well as estimate the remaining costs to implement the Program. The review could include comparing appropriate land sales, as well as aquatic resource restoration and enhancement costs, with the original land cost assumptions. Also, the actual costs of operating the Program, and maintaining, managing, and monitoring the ILF Projects will be compared to the original estimates of these costs to determine the actual change in all costs other than land acquisition. Finally, direct effects subject to the fee will be compared to permit limits, and fees adjusted as necessary to fully fund the mitigation costs associated with that fee. The PCA will adjust fees based on this analysis to ensure full funding of the mitigation share of remaining costs, including endowment contribution and other costs. Automatic annual fee adjustments will resume after the periodic fee assessment and will continue until the next periodic assessment.

Exhibit F

ILF Project Approval Process

F.1 Process for ILF Project Selection

- Program Sponsor will evaluate potential ILF Project opportunities on an ongoing basis. Program Sponsor will evaluate and compare potential ILF Project sites using the prioritization criteria set forth in section D.3.7. ("Prioritization Strategy") of the Compensation Planning Framework (Exhibit D).
- If sufficient funding is present and Program Sponsor proposes to acquire land for an ILF Project site, Program Sponsor will approach property owners to explain the potential interest in acquiring land through conservation easement or fee title. With landowner's permission, Program Sponsor will conduct a pre-acquisition assessment of the site for consistency with the Compensation Planning Framework. The pre-acquisition assessment will identify: location, quantity, quality, and presence of aquatic resources, other existing conditions or infrastructure, and the potential to establish/re-establish aquatic resources that would advance or conflict with the CPF.
- Program Sponsor may submit a request to the IRT for expenditure of Program Account funds for the site acquisition, baseline studies, or other ILF Project development costs. As soon as all approving IRT Members notify the USACE that they do not object to such approval the USACE will provide a written response approving/denying the request per 33 CFR to the Sponsor within 5 days of the receipt of the request.
- IRT may attend any pre-acquisition site visits as needed to facilitate early coordination for ILF Project Review.
- Program Sponsor will present to the IRT the highest priority ILF Project(s) that Program Sponsor determines to be feasible and practicable, and that can be implemented with available funds. The presentation will be in the form of a Mitigation Plan (as described in further detail below), including an estimated budget for each such proposed ILF Project(s), which Program Sponsor will submit to the IRT. Alternatively, to obtain IRT guidance before developing a full Mitigation Plan, and to obtain IRT approval for use of Program Account funds to develop it, Program Sponsor may first present an ILF Project Prospectus to the IRT for review (as described in further detail below).

F.2 IRT Review of Prospectus (Optional)

- If Sponsor elects to submit an ILF Project Prospectus, it will submit the ILF Project Prospectus, including the information required in Section III, by uploading the proposal to the Cyber Repository in RIBITS. As soon as possible, and no later than fifteen (15) days from receipt of a complete Prospectus, each IRT Member will notify the USACE and Program Sponsor in writing whether it will participate or abstain from review of the proposed ILF Project.
- As soon as possible, and no later than thirty (30) days from receipt of the Prospectus, the IRT will provide a written evaluation of the proposed ILF Project's potential to provide compensatory mitigation and any other comments the IRT deems appropriate. (33 CFR

332.8(d)(5)) The Program Sponsor may address IRT comments in revisions to the Prospectus and resubmit to the IRT.

- If a Prospectus is found to be generally acceptable to the IRT in its written evaluation, and the IRT approves use of Program Account funds to develop a full Mitigation Plan for the proposed ILF Project, then as of the date of the IRT's written evaluation, the Program Sponsor may access and expend funds in the Program Account, in accordance with the estimated budget for preparation of the Mitigation Plan as set forth in the Prospectus. If in the course of preparing the Mitigation Plan, the Program Sponsor discovers that the expenditures will exceed the budget by more than 10%, the Program Sponsor will notify the IRT in writing and propose a budget augmentation for the IRT's consideration and written approval. The expenditure of such funds is intended to allow the Program Sponsor to develop and finalize, based on the foundation of the Prospectus, a full Mitigation Plan for the proposed ILF Project.
- Once finalized, the Mitigation Plan will be submitted to the IRT as a formal request for an amendment to the Instrument in accordance with the Mitigation Plan Review Process set forth in Section IV.

F.3 Required Information for a Complete Prospectus

Each Prospectus must include the following information, in addition to the applicable requirements for a complete prospectus at 33 CFR 332.8(d)(2), to enable the IRT to evaluate the proposed ILF Project and consider whether or not to approve the use of Program Account funds for preparation of a Mitigation Plan:

- Property location and ownership;
- ILF Project conceptual proposal describing benefits to aquatic resources, species, and habitat;
- Narrative explanation of how the proposed ILF Project complies with the Compensation Planning Framework;
- Project partners and other funding sources (if applicable);
- Number and type of proposed Released Credits to be generated by the ILF Project;
- Proposed budget (including any other funding sources to implement the project) for Mitigation Plan development; project implementation; including interim management and monitoring; and long-term management and monitoring; and
- Current preliminary title report (if applicable).¹

F.4 Mitigation Plan Review Process

- Program Sponsor may expend Program Account funds to develop a Mitigation Plan in accordance with the approved budget, as provided above. If Program Sponsor develops a Mitigation Plan without using Program Account funds, Program Sponsor may include Mitigation Plan development costs as part of the budget for the proposed ILF Project. Upon IRT approval of the Mitigation Plan, Program Sponsor may expend funds in the Program Account to reimburse Mitigation Plan development costs.

¹ Prepared within one year of submittal to the IRT. If the ILF Site was acquired by the Program Sponsor prior to submittal of the Mitigation Plan the most-current title report must be provided.

- The review and approval of Mitigation Plans for proposed ILF Projects will be conducted by the IRT in accordance with procedures in 33 C.F.R. 332.8(g)(1) and processed as modifications of the Instrument.
- Accordingly, the Program Sponsor will submit to the IRT a Mitigation Plan and a request for modification of the Instrument in accordance with procedures in 33 C.F.R. 332.8(g)(1). In accordance with 33 C.F.R. 332.8(d)(6)(i), this request for modification will consist of a draft amendment to the Instrument that adds the ILF Project to the list of approved ILF Projects in Exhibit K.
- The Mitigation Plan will include the following information, with a level of detail commensurate with the scale and scope of the proposed ILF Project:
 - Mitigation Plan prepared in accordance with Exhibit G of the Instrument with associated maps and project drawings prepared in accordance with the South Pacific Division's Regional Mapping Standards;
 - Estimate of proposed amount and type of Credits to be generated by the ILF Project;
 - Proposed credit release schedule consistent with Section VI.E of the Instrument;
 - Description of existing aquatic resource functions and services and how they will be improved or enhanced through proposed project activities;
 - Functional/condition assessment data (if applicable);
 - Project budget, including interim and long-term management funding estimates and justification;
 - Description of interim- and long-term management activities required to sustain the conservation values of the ILF Site;
 - Proposed performance standards prepared in accordance with the requirements of Chapter 8 of the Draft HCP/NCCP;
 - Current title report (if applicable);
 - Draft Conservation Easement or recorded Conservation Easement, as applicable;
 - Property Assessment and Warranty; and
 - Other information as requested by the IRT based on review of the Prospectus, if applicable.
- The Program Sponsor will submit the Mitigation Plan and other required information, along with a formal request for an Instrument amendment, to the IRT by uploading the proposal to the Cyber Repository in RIBITS. Within thirty (30) days of receipt of Program Sponsor's formal request for an Instrument amendment, the USACE will notify Program Sponsor whether the draft amendment to the Instrument is complete. The IRT will specify and request from the Program Sponsor any information necessary to make the draft amendment complete. Once any additional information is submitted, the IRT must notify the Program Sponsor if the Prospectus is complete within thirty (30) days. (33 C.F.R. 332.8(d)(6)(i))
- As soon as possible, and no later than fifteen (15) days from receipt of the complete Mitigation Plan and draft amendment, the USACE will issue a public notice of the Mitigation Plan providing a thirty (30) day public comment period.

- Within thirty (30) days after the close of the public comment period, the USACE must notify the Program Sponsor of the status of the IRT review, i.e., whether Mitigation Plan is generally acceptable and what changes, if any, are needed. (33 C.F.R. 332.8(d)(7))
- If the USACE notifies the Program Sponsor that any changes are needed to the Mitigation Plan, the Program Sponsor must incorporate such changes and may submit a revised Mitigation Plan and Instrument amendment to the IRT for approval, along with supporting documentation that explains how the final Mitigation Plan and instrument amendment addresses the changes identified by the IRT (33 C.F.R. 332.8(d)(8)). The Program Sponsor will submit the revised information to the Cyber Repository in RIBITS.
- If no changes are needed to the Mitigation Plan (or revised Mitigation Plan), within thirty (30) days of receipt of the Mitigation Plan and instrument amendment, the USACE will notify the IRT Members whether or not the USACE intends to approve the amendment. Alternatively, if no IRT Member objects within forty-five (45) days of receipt of this notice, the USACE will notify the Program Sponsor of its intent to approve/not approve the proposal. (33 C.F.R. 332.8(d)(8))
- The Program Sponsor will upload the final Mitigation Plan and amendment request to the Cyber Repository in RIBITS for applicable IRT member.

Exhibit G

**Placer County In-Lieu Fee Program Mitigation Plan
Template**

PLACER COUNTY IN-LIEU FEE PROGRAM MITIGATION PLAN TEMPLATE

NAME OF PROPOSED MITIGATION PARCEL

Prepared for:
Placer County
3091 County Center Drive
Auburn, CA 95603
Gregg McKenzie or Jennifer Byous
530-745-3000

U.S. Army Corps of Engineers
14325 J Street, Suite 1350
Sacramento, CA 95814
Krystel Bell
916-557-7745

Prepared by:
Name of Firm
Address
City, State Zip
Name of Preparer
Phone

Date

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[Name of Parcel]

Monitoring Report Form (SPD placeholder)

I. Summary and Overview

This section must include a 2-3 paragraph summary of the proposed ILF project site, why it is appropriate for mitigation, and any proposed enhancement, creation, or restoration efforts. It should include the following information: size, number of acres, acres of various land-cover types, including wetlands, a narrative description of the location, and a spatial description of the location (i.e., latitude/longitude, Assessor's Parcel Number (APN), Township/Range/Section). All maps and drawings shall comply with the SPD map and drawing standards. Once the Placer County Conservation Program (PCCP) is approved, the standards and guidelines from the PCCP will be integrated into this Mitigation Plan template.

Include a table similar to that below.

Table 1. Existing Land Cover and Proposed Credit Types at the Mitigation Site

Land-Cover Type	Existing	Proposed
Upland		
Annual Grassland		
In Vernal Pool Complexes		
Not Vernal Pool Complexes		
Agricultural		
Developed/Roads		
Other		
Credit Types		
Vernal Pool		
Vernal Pool Complex		
Aquatic/Wetlands Complex		
Fresh Emergent Marsh		
Non-Vernal Pool Seasonal Wetlands/Swales		
Lacustrine		
Riverine and Riparian Complex		
Riparian Wetlands		
Riverine with Riparian		
Riverine w/o Riparian		
Total		

II. Objectives

This section must include a description of the resource type(s) and amount(s) that will be provided, the method of compensation (i.e., restoration, establishment, enhancement, and/or preservation), and the manner in which the resource functions of the compensatory mitigation project will address the needs of the watershed, ecoregion, physiographic province, or other geographic area of interest. See 33 CFR § 332.4(c)(2) also see SPD MMGs Section 4.8.6.

The objectives associated with developing mitigation at this site are:

- Establish/Re-establish/Restore/enhance X acres of aquatic resources (describe types proposed)
- Preserve Y acres of uplands
- Ensure population stability and sustainability of covered species: (list covered species)

Describe why this is important.

III. Site Selection

This section must include a description of the factors considered during the site selection process. This should include consideration of watershed needs, onsite alternatives where applicable, and the practicability of accomplishing ecologically self-sustaining aquatic resource restoration, establishment, enhancement, and/or preservation at the compensatory mitigation project site. (See 33 CFR § 332.3(d), 332.4(c)(3), and 40 CFR § 230.93(d).)

The site was selected because it is an important part of fulfilling Placer County's HCP/NCCP conservation goals and objectives. Describe how this is accomplished and pre-acquisition approval from the Inter-Agency Working Group.

Elaborate on where and how this project fits in terms of the watershed needs, and how it will be sustainable. See SPD MMGs Section 4.8.7.

IV. Baseline Information

This section must include a description of the ecological characteristics of the proposed compensatory mitigation project site. This may include descriptions of historic and existing plant communities, historic and existing hydrology, soil conditions, a map showing the locations of the impact and mitigation site(s) or the geographic coordinates for those site(s), and other site characteristics appropriate to the type of resource proposed as compensation. The baseline information should also include a delineation of waters of the United States on the proposed compensatory mitigation project site. See 33 CFR § 332.4(c)(5) and SPD MMGs Section 4.8.8 for required information to be included in this bank.

Substantial baseline information has been collected for the project including:

List baseline studies and resources.

Elaborate on this information to provide context and address requirements above.

V. Determination of Credits

This section must include a description of the number of credits to be provided, including a brief explanation of the rationale for this determination. (See 33 CFR § 332.4(c)(6), 332.3(f), and 40 CFR § 230.93(f).) It should include the number and resource type of credits to be secured and how these were determined.

Include a table similar to that below.

Table 2. Number and Resource Types of Credits Proposed

Land-Cover Type Restored	Acres Re-Established	Acres Established	Acres Preserved	Credits Proposed
Vernal Pool Complex				
Vernal Pool				
Vernal Pool Complex (Seasonal Wetlands/Swales)				
Aquatic/Wetlands Complex				
Fresh Emergent Marsh				
Non-Vernal Pool Seasonal Wetlands/Swales				
Lacustrine				
Riverine & Riparian Complex				
Riparian Wetlands				
Riverine w/o Riparian				
Grand Total				

VI. Site Protection Instrument

A description of the legal arrangements and instrument, including site ownership, that will be used to ensure the long-term protection of the compensatory mitigation project site (see 33 CFR § 332.4(c)(4) and 40 CFR § 230.97(a)).

IRT-approved conservation easement (CE) will be used to protect the site.

The site will either be owned by ____ (landowner) _____ with a conservation easement granted to Placer County/Placer Conservation Authority (PCA), or owned by Placer County/PCA with a conservation easement granted to an organization approved by the County/PCA and IRT, all of which will include the applicable IRT member agencies designated as 3rd party beneficiaries.

The site will be managed by ____ landowner ____ and Placer County/PCA, and/or other qualified organization approved by the Sponsor and IRT.

VII. Mitigation Work Plan

This section must include detailed written specifications and work descriptions for the compensatory mitigation project, including, but not limited to, the geographic boundaries of the project; construction methods, timing, and sequence; source(s) of water, including connections to existing waters and uplands; methods for establishing the desired plant community; plans to control invasive plant species; the proposed grading plan, including elevations and slopes of the substrate; soil management; and erosion control measures. For stream compensatory mitigation projects, the mitigation work plan may also include other relevant information, such as planform geometry, channel form (e.g., typical channel cross-sections), watershed size, design discharge, and riparian area plantings. (See 33 CFR § 332.4(c)(7) also see SPD MMGs Section 4.8.9.)

From SPD MMGs: The work plan (or “development plan” for mitigation banks and ILF programs) should consist of the practical “how-to” details necessary to take the compensatory mitigation project from a design on paper to “in-the-ground” implementation.

These should include the following as applicable:

- Geographic boundaries of the project.
- Construction methods.
- Timing (implementation schedule).
- Sequence.
- Source(s) of water, including connections to existing waters and uplands.
- Methods for establishing the desired plant community, including the proposed source(s) of seed/plants.
- List of species to be planted/seeded in table format.
- Planting plan describing where and when species will be planted.
- Plans to control invasive exotic plant species.
- The proposed grading plan, including elevations and slopes of the substrate
- Soil management.
- Erosion control measures.
- Itemized budget including total estimated cost of proposed compensatory mitigation. The budget should include, at a minimum, costs for:
 - Land acquisition
 - Planning and engineering
 - Legal fees.
 - Mobilization
 - Construction.
 - Monitoring
- For stream compensatory mitigation projects:
 - Rosgen classification (including bankfull depth (mean and max), floodprone width, width/depth ratio, channel slope, and sinuosity).
 - Planform geometry.
 - Channel form (e.g., typical channel cross-sections).
 - Longitudinal profile
 - Characterization of sediment grain sizes.
 - Watershed size.
 - Design discharge

- Discussion of use of native materials and bioengineering.
- Riparian area plantings.
- Description of any riffle-pool complexes and/or other special aquatic sites present.

Discussion of the aquatic fauna, such as the resident fish with their times of breeding and spawning. Avoidance measures: description of measures to be taken to avoid any non-impacted aquatic resources or other sensitive resources within the compensatory mitigation site (e.g., use of construction monitor, flagging, fencing, contractor training, etc.).

Avoidance measures: description of measures to be taken to avoid any non-impacted aquatic resources or other sensitive resources within the compensatory mitigation site (e.g., use of construction monitor, flagging, fencing, contractor training, etc.).

VIII. Maintenance Plan

This section must include a description and schedule of maintenance requirements to ensure the continued viability of the aquatic resources once initial construction is completed. (See 33 CFR § 332.4(c)(8).)

XI. Performance Standards

This section must include ecologically-based standards that will be used to determine whether the compensatory mitigation project is achieving its objectives. (See 33 CFR § 332.4(c)(9) and 332.5 and 40 CFR §230.95.) Performance standards must also be summarized in a table format.

Table 3. Performance Standards

Performance Standard	Monitoring Year									
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
<i>(Habitat Type 1)</i>										
Hydrology-1:										
Vegetation-1:										
<i>(Habitat Type 2)</i>										
Hydrology-1:										
Vegetation-1:										

X. Monitoring Requirements

This section must include a description of parameters to be monitored in order to determine if the compensatory mitigation project is on track to meet performance standards and if adaptive management is needed. A schedule for monitoring and reporting on monitoring results to the

district engineer must be included. (See 33 CFR § 332.4(C)(10), 332.6, and 40 CFR § 230.96 and SPD MMGs Section 6.)

Table 4. Monitoring Schedule

Monitoring Activity	Monitoring Year									
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10

XI. Long-Term Management Plan

This section must include a description of how the compensatory mitigation project will be managed after performance standards have been achieved to ensure the long-term sustainability of the resource, including long-term financing mechanisms and the party responsible for long-term management. (See 33 CFR § 332.4(c)(11), 332.7(d), and 40 CFR § 230.97(d) and SPD MMGs section 4.8.15)

Long-term monitoring is intended to ensure the long-term sustainability of the mitigation site. As the mitigation project will be part of a larger conservation program, long-term monitoring is intended to support overarching regional conservation objectives. Ultimately, long-term management planning is anticipated to be integrated with specific regional reserve unit management plans.

The County/PCA will be obligated to arrange for the management and monitoring of the Mitigation Project site in perpetuity to preserve its aquatic resources, habitat and conservation values in accordance with the instrument, the conservation easement, and the long-term management plan. For this site, the following long-term management is anticipated:

- Describe what is proposed and what is budgeted for including:
 - Habitat evaluation (frequency and specifics [i.e., grass levels, wetland changes, etc.])
 - Site inspection (frequency and specifics [i.e., determination if there is encroachment or management issues])
 - Monitoring (frequency and specifics [i.e., every 5 years])
 - Other management issues and considerations

XII. Adaptive Management Plan

This section must include a management strategy to address unforeseen changes in site conditions or other components of the compensatory mitigation project, including the party or parties responsible for implementing adaptive management measures. The adaptive management plan will guide decisions for revising compensatory mitigation plans and implementing measures to address

both foreseeable and unforeseen circumstances that adversely affect compensatory mitigation success. (See 33 CFR § 332.4(c)(12), 332.7(c), and 40 CFR § 230.97(c).)

As described above, long-term management planning is anticipated to be integrated with specific regional reserve unit management plans. Similarly, long-term adaptive management will be part of the overall reserve unit system. Adaptive management tasks are listed below.

- If management actions are not resulting in the desired effect, implement a targeted study to identify alternative management actions.
- If monitoring protocols are not providing definitive results, evaluate efficacy of monitoring protocols using appropriate targeted studies methods, such as conducting pilot projects before making large-scale or long-term changes.
- Incorporate best available scientific information from recent literature into management.
- Adaptive management may be needed if the site experiences fire, flood, drought, or other conditions that could affect the long-term viability of the mitigation site. This includes management and restoration responses to these conditions.

XIII. Financial Assurances

This section must include a description of financial assurances that will be provided and how they are sufficient to ensure a high level of confidence that the compensatory mitigation project will be successfully completed, in accordance with its performance standards (see 33 CFR § 332.4(C)(13) and 40 CFR § 230.93(n) and SPD MMGs Section 3.5).

The project's financial assurances are intended to be provided from the Program's mitigation account. The County will use development-based fees paid to meet federal permitting requirements. Fees will generate sufficient funding to offset costs including endowment contributions to fund all post-permit activities in perpetuity and reimbursement of the local share of plan preparation costs. This proportionate share is based on the cost of mitigation that will offset losses of land-cover types, Covered Species' habitat, and other biological values, as well as benefits related to open space and fuels management. These fees pay for the full cost of mitigating project effects on species and natural communities (see **Error! Reference source not found.**, *Development Fee Schedule*, for a list of development fees and their amounts).

XIV. Other Information

The district engineer may require additional information as necessary to determine the appropriateness, feasibility, and practicability of the compensatory mitigation project. See 33 CFR § 332.4(C)(14) and SPD MMGs Section 4.8.19.

[Name of Parcel]

Monitoring Report Form (SPD – Mitigation Monitoring Report Form)

A draft fee schedule is provided below. The schedule for each credit category represents a range of fees that might be charged to acquire, develop, endow, and manage an ILF Project site. Actual fee amounts will be based on current cost information and estimates based on experience with ILF Project implementation, but will not be less than the lower limit. ILF fees may also be adjusted based on inflation and other economic considerations.

H.1 ILF Project Land Costs

The ILF project cost model estimates land related costs and resultant fees based upon the HPC/NCCP Cost and Funding model. The following information is derived from the model and revised for the purposes of the ILF.

The cost of land necessary to implement ILF projects is based upon the best available current real estate market information. Actual land costs and easement values will vary significantly around these averages, depending on numerous parcel-specific factors.

Fee title land cost assumptions are based on analysis of property values in the Service Area conducted by the appraisal firm, Bender Rosenthal, Inc. (BRI), in 2011 with more recent updates. The analysis evaluated transactions occurring in the 2008-to-2011 time period. In 2012 and 2013, the land cost assumptions were updated with analysis of more recent land transaction records from the Placer County Assessor's Office, information from real estate brokers, and records of transactions involving conservation land in the general vicinity. *Trends in Agricultural Land and Lease Values California and Nevada*, published annually by the California Chapter of the American Society of Farm Managers and Rural Appraisers (ASFMRA), was another source of information for the land cost factors. A 2015 peer review commissioned by a Placer County Landowners Group found no reason to change the land cost assumptions. In an ongoing effort to ensure credit pricing is consistent and covers costs, in 2017 land cost factors for the Valley were updated based on observed recent trends in agricultural land values. Information on rural residential values in the Foothills indicates that prices have been generally stable over this period. Construction, materials, labor, equipment, and other directly related costs will be evaluated with each project and updated routinely.

The 2011/2012 analysis and the 2013 review by the Landowners indicated that land prices appeared to be stabilizing after the speculative volatility of the mid-2000s. Over time, land acquisition costs will be influenced by scarcity considerations, particularly for key mitigation land-cover types (e.g., vernal pool grasslands). The scarcity premium could be as much as 25 percent in the Valley and 10 percent in the Foothills. This cost model assumes an even higher premium applies to wetland land-cover types (vernal pool grasslands, aquatic and wetland, and riparian land-cover types) reflecting their particular value. A separate factor applies to rice, reflecting agricultural market values. Applying the scarcity factors to the average cost factors indicated above and adjusting the original land cost factors in the Valley for recent trends in values results in the following land cost factors for fee title acquisitions in the cost model:

- All natural communities except wetlands and rice, larger parcels of 100 acres or more in the Valley: \$7,685 per acre
- All natural communities except wetlands and rice, larger parcels of 100 acres or more in the Foothills: \$6,600 per acre
- All natural communities except wetlands and rice, smaller parcels of 20 to 80 acres in the Valley: \$8,745 per acre
- All natural communities except wetlands and rice, smaller parcels of 20 to 80 acres in the Foothills: \$11,500 per acre
- Wetlands: \$13,250 per acre
- Rice: \$10,250 per acre

Although land costs per acre are likely to increase over time during certain points in the real estate cycle, the cost model assumes no *real* increase in per-acre land values. All costs are expressed in 2017 dollars assuming costs keep pace with inflation. During ILF implementation, actual costs, including changes in the land market, will be fully evaluated with each project and updated routinely using appropriate indices.

H.2 Transaction Costs

Transaction costs include costs for appraisals, title reports, property line surveys, and preparing legal descriptions, negotiating easement terms, and other due diligence activities such as Phase 1 environmental site assessments for hazardous materials. These costs can vary significantly depending on the size of the site, the conditions present on the property and the complexity of the land transaction. For the purposes of this cost estimate, based on the experience of local entities acquiring and managing habitat lands, these costs are assumed to be 3.75 percent of the acquisition cost.

Administration costs are separate from the actual restoration and enhancement costs outlined below and are expenses directly related to the cost of administering the ILF. Administrative costs are anticipated to be approximately 10.4% of all program costs.

For the purpose of estimating administration costs, the cost model assumes that the Program Sponsor will administer the ILF with a cost structure similar to that for Placer County departments with comparable responsibilities and staffing. This assumption ensures that the model does not understate potential costs of staffing and plan administration. There may be alternative management structures that result in cost savings. For example, the Program Sponsor may instead contract with non-profit land managers or researchers working in the Program Area to accomplish some of the work identified for Program Sponsor staff positions, especially in the early phase of implementation. The Program Sponsor may also leverage existing resources of agencies already working in the Service Area to use funding as efficiently as possible. Examples include sharing facilities and equipment. Any such savings would be reflected in the periodic financial review of Program implementation.

H.3 ILF Project Restoration & Enhancement Costs

Separate from the cost of land, restoration and enhancement costs have been estimated and project specific costs incorporated where actual costs are known. ILF Project related costs include the following:

- Surveys to select sites, delineate wetlands, and prepare detailed habitat maps and species reports for restoration/creation plans
- Soil sampling or geomorphologic mapping
- Design of restoration and creation projects
- Development of plans, specifications, and engineering documents
- Construction bid assistance
- Pre-construction surveys
- Restoration and creation of habitat (construction activities)
- Construction oversight and monitoring
- Post-construction monitoring and maintenance
- Restoration repair necessary to meet success criteria specified in each reserve unit management plan (monitoring component) and site restoration plans
- Costs associated with using contractors to assist or do any of the restoration and creation components identified in the items above or payments to partner agencies for restoration and creation activities consistent with this Plan on behalf of the PCA
- Costs associated with field and technical staff management and oversight of the work of contractors or partner agencies
- Management and long-term monitoring of the restored/created habitat during and after the permit term (see Exhibit E Program Account)
- Research studies to reduce the level of uncertainty related to restoration/creation activities and species goals and objectives
- Contingency of 7.5 percent to account for the greater uncertainty in these costs

The following table presents restoration cost factor assumptions by credit type to be restored. Projects will be completed by contractors or alternatively by third-party partners that have access to the necessary labor, vehicles and equipment. The Program Sponsor is not planning to maintain in-house the types of labor resources and specialized equipment needed for projects. For large-scale projects, a great deal of labor is typically required, (e.g., grading, planting seedlings, cuttings, or container stock for riparian restoration projects), which specialized contractors are best-equipped to provide. Staff time is included in this cost category to account for the time needed to prepare restoration management plans and to hire and oversee contractor designs, specifications, and construction.

The cost estimates assume all land to be restored will require biological surveys and planning. Construction cost factors are expressed per acre and cover construction labor and materials.

Construction costs for vernal pool–type wetlands and aquatic/wetland type habitat reflect different assumptions about the activities required to restore or create the various types of aquatic resources.

H.3.1.1 Model Cost by Credit Type

Restoration Cost Element	Vernal Pool Group			Aquatic Resource Group			Riverine and Riparian Group
	Vernal Pool	Seasonal Wetland in Vernal Pool Complex	Seasonal Swales	Fresh Emergent Marsh	Lacustrine	Non-Vernal Pool Seasonal Wetland	Riparian and Riverine Type
Pre-construction restoration planning surveys	\$141	\$141	\$141	\$141	\$141	\$141	\$141
Plans, specifications, and engineering	\$5,688	\$3,120	\$4,550	\$4,675	\$3,125	\$2,490	\$4,150
Bid assistance	\$244	\$208	\$195	\$281	\$188	\$166	\$332
Construction activity	\$16,250	\$10,400	\$13,000	\$18,700	\$12,500	\$8,300	\$16,600
Inoculum salvage, transportation, storage, and placement	\$6,800						
Construction biological monitoring	\$139	\$139	\$139	\$139	\$139	\$139	\$139
Construction oversight	\$10,888	\$4,160	\$7,150	\$12,529	\$8,375	\$3,320	\$8,300
Post-construction restoration monitoring & maintenance	\$60,938	\$6,240	\$7,800	\$11,220	\$7,500	\$4,980	\$19,920
Total per acre, before contingency	\$101,086	\$24,407	\$32,974	\$47,684	\$31,967	\$19,535	\$49,581
Restoration contingency	\$7,581	\$1,831	\$2,473	\$3,576	\$2,398	\$1,465	\$3,719
Total per acre, including contingency	\$108,667	\$26,238	\$35,448	\$51,260	\$34,364	\$21,001	\$53,300

Other restoration costs are estimated as a function of the base construction cost, with adjustment factors reflecting the type of restoration and the level of monitoring assumed to be required. The costs for post-construction maintenance and monitoring of restoration projects apply during a 5-year period for all restoration activity except vernal pool complex, where a 10-year post-restoration maintenance and monitoring period is assumed.

Costs for post-construction monitoring and maintenance include the costs to monitor and replant restoration sites in the event that plantings fail due to site conditions, human error, animal browsing, or other factors. The cost model calculated these costs as 8.5 to 30 percent of the cost to restore an acre, depending on type. Repair costs will be unnecessary once performance standards are met. Repair costs do not include costs associated with responsive measures for changed circumstances, which apply to the destruction of restoration sites from unforeseeable natural disasters such as flooding, fire and climate change.

Placer County In Lieu Fee Program (October 2018 Draft)	
<i>AQUATIC RESOURCE FEES (1:1 Credit)</i>	Per credit
Vernal Pool Complex (Vernal Pools, Swales, Seasonal Wetlands)	\$160,000 - \$350,000
Aquatic/Wetlands Complex (Emergent Marsh, Seasonal Wetlands, Lacustrine)	\$100,000 - 250,000
Riverine & Riparian Complex (Riparian, Riverine with Riparian, Riverine w/o Riparian)	\$100,000 - 250,000

Exhibit I

Property Assessment and Warranty for [Insert ILF Project Name]

This Property Assessment and Warranty ("Property Assessment") is made as of this ____ day of ____, 20__, by **[insert property owner full legal name(s)]** ("Property Owner"), for the benefit of **[add/delete name(s) of any of the following agencies which is or is not a party:** the Sacramento District of the U.S. Army Corps of Engineers, Region IX of the U.S. Environmental Protection Agency, the Sacramento Valley Field Office of the U.S. Fish and Wildlife Service, and the California Department of Fish and Wildlife, North Central Region, which agencies are jointly referred to in this Property Assessment as the "Signatory Agencies." Property Owner acknowledges that this Property Assessment and the statements in it may be conclusively relied upon by the Signatory Agencies in entering into the In-Lieu Fee Program Instrument.

This Property Assessment provides a summary and explanation of each recorded or unrecorded lien or encumbrance on, or interest in, the Property (as defined below), including, without limitation, each exception listed in the Preliminary Report issued by **[insert title company name]**, **[insert title report date]**, **[insert title report number]** (the "Preliminary Report"), covering the Property, as described in **Attachments 1 and 2** attached hereto and incorporated by this reference. Specifically, this Property Assessment includes a narrative explaining each lien, encumbrance or other exception to title and the manner in which it may affect the conservation easement to be recorded against the Property (the "Conservation Easement") pursuant to the In-Lieu Fee Program Instrument.

Property Owner covenants, represents and warrants to each of the Signatory Agencies as follows:

1. Property Owner is the sole owner in fee simple of certain real property containing approximately _____ acres located in the City of _____ **[insert city name]**, County of Placer, State of California, designated as Assessor's Parcel Number(s) **[insert parcel number(s)]** (the "Property"), as legally described in the Preliminary Report. Property Owner has, and upon the recordation of the Conservation Easement Property Owner shall have, good, marketable and indefeasible fee simple title to the Property subject only to any exceptions approved in advance of recordation, in writing, by the Signatory Agencies.
2. The Property is available to be burdened by the Conservation Easement for the conservation purposes identified in the Conservation Easement, in accordance with the **[BEI or CBEI]**.
3. The Property includes legal access to and from **[insert name of public street or road]**. [If special access rights are required to reach the Property, those access rights must also be addressed in this Property Assessment.]
4. A true, accurate and complete listing and explanation of each recorded or unrecorded lien or encumbrance on, or possessory or non-possessory interest in, the Property is set forth in **Attachment 3** attached to and incorporated by reference in this Property Assessment. Except as disclosed in **Attachment 3**, there are no outstanding mortgages, liens, encumbrances or other interests in the Property (including, without limitation, mineral interests). **Attachment 4**, attached hereto and incorporated by reference in this Property Assessment, depicts all relevant and plottable property lines, easements, dedications, etc. on the Property.

5. Prior to recordation of the Conservation Easement, Property Owner shall certify to the Signatory Agencies in writing that this Property Assessment remains true, accurate and complete in all respects.
6. Property Owner has no knowledge or notice of any legal or other restrictions upon the use of the Property for conservation purposes, or affecting its Conservation Values, as described in the Conservation Easement, or any other matters that may adversely affect title to the Property or interfere with the establishment of an ILF Project Site thereon.
7. Property Owner has not granted any options, or committed or obligated to sell the Property or any portion thereof, except as disclosed in writing to and agreed upon in writing by the Signatory Agencies.
8. The following Appendix and attachments are incorporated by reference in this Property Assessment:
 - a. Attachment 1 – Preliminary Report
 - b. Attachment 2 - Encumbrance Documents
 - c. Attachment 3 – Summary and Explanation of Encumbrances
 - d. Attachment 4 - Map(s).

[**Note: Attachment 2** shall include copies from the Official Records of the county recorder's office of all recorded exceptions to title (e.g. leases or easements). **Attachment 4** shall include a map(s), preferably in GIS Format, illustrating the area of the Property affected by each exception to title.]

PROPERTY OWNER

[Insert property owner full legal name(s)]

Date

Attachment 3

Sample Format for: Summary and Explanation of Encumbrances

Monetary Liens

Note: Any deeds of trust or other monetary lien(s) must be released or subordinated to the Conservation Easement by a recorded Subordination Agreement approved by the Signatory Agencies.

- Preliminary Report Exception or Exclusion #:
- Amount or Obligation secured:
- Term:
- Date:
- Trustor:
- Trustee:
- Beneficiary:
- Description:
 - ___ acres of Property subject to lien
 - ___ acres of Property *not* subject to lien

Easements And Rights Of Way

- Preliminary Report Exception or Exclusion #:
- Date:
- Grantor:
- Grantee:
- Holder (if different from Grantee):
- Description:
- Analysis: [*whether and how this exception will affect the Conservation Easement or the Conservation Values of the Property*]
 - ___ acres of Property subject to easement
 - ___ acres of Property *not* subject to easement

Leases

- Preliminary Report Exception or Exclusion #:
- Date:

- Landlord/Lessor:
- Tenant/Lessee:
- Premises:
- Term:
- Description:
- Analysis: [whether and how this exception will affect the Conservation Easement or the Conservation Values of the Property]
 - ____ acres of Property subject to lease
 - ____ acres of Property *not* subject to lease

Covenants, Conditions, Restrictions And Reservations

- Preliminary Report Exception or Exclusion #:
- Dated:
- Grantor or Declarant:
- Grantee (if applicable):
- Description:
- Analysis: [*whether and how this exception will affect the Conservation Easement or the Conservation Values of the Property*]
 - ____ acres of Property subject to exception/exclusion
 - ____ acres of Property *not* subject to exception/exclusion

Other Interests (Including Mineral Or Other Severed Interests)

- Holder
- Description: [*must address whether or not the interest includes any surface rights and, if applicable, a description of those rights*]
- Analysis: [*whether and how this exception will affect the Conservation Easement or the Conservation Values of the Property*]
 - ____ acres of Property subject to interest
 - ____ acres of Property *not* subject to interest

Exhibit J

Advance Credit Analysis

The Western Placer In-lieu Fee Program is being established by the County of Placer. As a California local government, the County cannot benefit from private investment funds for speculative purposes and compete in the open market for mitigation land. This being the case, the County cannot operate similar to a private mitigation banking company or invest general fund tax revenue to build and perfect compensatory mitigation projects in advance of collecting fees. Therefore, advance credits provide the County with the ability to collect ILF fees and begin using the program as soon as possible. The County, with IRT approval, will use the funds to acquire land, design restoration sites, and construct and manage compensatory mitigation projects to meet performance objectives outlined in the ILF instrument.

In accordance with 33 CFR 332.8(d)(6)(iv)(B) and (C), Program Credits are available for Transfer by the Program Sponsor as provided in the instrument to satisfy compensatory mitigation requirements issued by the IRT Members.

Central to the purpose of establishing this ILF Program, the IRT members have chosen to utilize the ILF as part of their Permitting Strategy for pending large projects. The Placer Vineyards Specific Plan (PVSP) project proposes to purchase ILF Credits to offset unavoidable losses of waters of the U.S. As such, Placer County is requesting advance credits sufficient to meet the first year of project related effects to aquatic resources.

PVSP is expected to begin implementation and construct the initial backbone infrastructure and begin Phase 1 of the project in the 2018 – 2019 construction season. PVSP has provided an initial estimate of effects to waters including 47.8 acres of vernal pool type wetlands, 7.07 acres of Riverine/Riparian, and 1.5 acres of Aquatic Wetlands through the conversion of approximately 1,100 acres of land from natural and semi-natural conditions to urban uses.

In addition, there are a number of reasonably foreseeable projects approved or pending approval of various Federal, state, and local permits that could use the ILF Program to offset unavoidable impacts to aquatic resources. Since the status and amount of aquatic resources potentially impacted under these permits is difficult to estimate with certainty, for the purposes of the Advance Credit analysis the estimated acreage is supported by the cumulative impact analysis prepared by the Corps covering the Service Area.

The Corps cumulative impact analysis (dated January 6, 2016) was conducted as part of the PCCP's Environmental Impact Statement/Environmental Impact Report (EIS/EIR) and CWA 404 Permit Strategy Aligned with the PCCP (Permitting Strategy).

The Corps' analysis was compiled across the four 8-digit Hydrologic Unit Code (HUC) watersheds in the Service Area between 1989 and 2015. A total of 348 permit actions were refined down to 159 past, present, and reasonably foreseeable projects in the Service Area for the purposes of the analysis. Of the 159 projects, 47 were reasonably foreseeable. For the overall 159 projects, the estimated loss of Aquatic Resources was 552.16 acres, including approximately 109.19 acres of vernal pools, approximately 242.26 acres of seasonal wetland/swale, approximately 101.83 acres of other wetlands, and approximately 98.88 acres of other aquatic resources.

Although the analysis did not differentiate reasonably foreseeable project impact acreage from other past or present projects, of the 159 projects roughly 30 were reasonably foreseeable. For the purposes of this analysis, if the reasonably foreseeable projects resulted in a proportional loss of aquatic resources, the net anticipated reasonably foreseeable loss would be approximately 165.65 acres of WOUS that could potentially add to the initial demand for credits under the ILF Program.

In order to meet this anticipated demand and to begin implementation of the ILF at the earliest possible date, the requested advance credits are summarized in Table J-1:

Table J-1. Credit Types and Regulatory Nexus

Credit Types	Authority	Advanced Credits
Vernal Pool	CWA Section 404 and 401	100
Vernal Pool Complex ^a	CWA Section 404 and 401	50
Fresh Emergent Marsh	CWA 404 and 401	5
Seasonal Wetlands (Non-Vernal Pool)	CWA 404 and 401	25
Lacustrine	CWA 404 and 401	5
Riparian Wetlands	CWA 404 and 401	20
Riverine with Riparian	CWA 404 and 401	5
Riverine without Riparian	CWA 404 and 401	0

Notes:

^a May off-set authorized impacts for seasonal wetlands and swales within vernal pool complex.

- Vernal Pool Credits
 - Vernal Pools - 100 Advance Credits
 - Vernal Pool Complex - 50 Advance Credits
- Aquatic Resource Credits
 - Fresh Emergent Marsh– **5 Advance Credits**
 - Seasonal Wetland (non-Vernal Pool) – **25 Advance Credits**
 - Lacustrine – **5 Advance Credits**
- Riverine Riparian Credits
 - Riparian Wetlands – **20 Advance Credits**
 - Riverine With Riparian– **5 Advance Credits**
 - Riverine without Riparian - **0 Advance Credits**

The ILF Program includes one appended restoration project, the Markham Ravine Mitigation Project that will result in 297.17 acres of total conservation, within which approximately 24.01 acres of vernal pool Released Credits, 11.23 acres of seasonal wetland and swale Released Credits, and 17.0 acres of riparian wetland Released Credits will be generated (Exhibit K).

Beginning on the Program Establishment Date, this initial allocation of Advance Credits shall be available for Transfer in accordance with Section VII.F. Once the Program Sponsor has Transferred

all of the Advance Credits granted in this initial allocation, no additional Advance Credits shall be available for Transfer until Program Sponsor has satisfied its responsibility to provide Compensatory Mitigation with respect to the initial allocation of Advance Credits.

Exhibit K

List of Approved Mitigation Plans

Exhibit L

Long Term Management Plan Template

This management plan placer holder template is a companion document to the Placer County Conservation Program conservation or agriculture easement templates and are intended to provide a general outline to assist in the development of site-specific long-term management plans for properties (i.e., Reserve Units) included in the Placer County Conservation Program Reserve System.

