

PLACER COUNTY IN-LIEU FEE PROGRAM PROSPECTUS, PLACER COUNTY, CALIFORNIA

PREPARED FOR:

Placer County Planning Services Division
3091 County Center Drive
Auburn, CA 95603
Contact: Jennifer Byous
530-745-3008
jbyous@placer.ca.gov

PREPARED BY:

ICF International
630 K Street, Suite 400
Sacramento, CA 95814
Contact: Brad Norton
916-231-9599
brad.norton@icfi.com

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Acronyms and Abbreviations

CARP	Draft County's Aquatic Resource Program
CDFW	California Department of Fish and Wildlife
CESA	California ESA
CFR	Code of Federal Register
Corps	U.S. Army Corps of Engineers
CVRWQCB	Central Valley Regional Water Quality Control Board
CWA	Clean Water Act
EPA	Environmental Protection Agency
FESA	federal Endangered Species Act
GAAP	generally accepted accounting principles
HCP	Habitat Conservation Plan
HGM	Hydrogeomorphic
IRT	Interagency Review Team
LEDPA	Least Environmentally Damaging Practicable Alternative
NCCP	Natural Community Conservation Plan
NFWF	National Fish and Wildlife Fund
NMFS	National Marine Fisheries Service
PCCP	Placer County Conservation Plan
PDP	Project Development Plan
PFG	planned future growth
Placer County ILF Program	Placer County proposes to establish an in-lieu fee program
PVSP	Placer Vineyards Specific Plan
RAA	Reserve Acquisition Area
SWRCB	State Water Resources Control Board
USFWS	U.S. Fish and Wildlife Service
Wildlife Agencies	USFWS and CDFW

Placer County Aquatic Resource In-Lieu Fee Program Prospectus

1.0 Executive Summary

Pursuant to the Environmental Protection Agency (EPA) and U.S. Army Corps of Engineers (Corps) regulations governing compensatory mitigation for losses of aquatic resources (“Mitigation Rule,” 33 Code of Federal Register [CFR] Parts 325 and 332, and 40 CFR Part 230), Placer County proposes to establish an in-lieu fee program (Placer County ILF Program) that will provide compensatory mitigation for projects affecting waters of the United States, including wetlands, and waters of the state, including riparian wetland areas and associated upland riparian buffer habitats within the stream zone. These waters and other aquatic resources are collectively referred to herein as “aquatic resources of Placer County.” The 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 Corps.

The Placer County 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 (7) 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 Placer County Conservation Plan (PCCP), which is in development (www.placercounty.ca.gov). The County ILF Program is proposed as a standalone program that would provide compensatory mitigation for permits issued for unavoidable impacts on aquatic resources of Placer County and would complement the PCCP.

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.

Placer ILF Program mitigation projects will result in establishment (creation), reestablishment and rehabilitation (restoration), and preservation of aquatic resources of Placer County, including wetlands, riverine systems, vernal pools, and other aquatic resources. ILF programs provide up-front identification, design, and approval of large-scale mitigation sites that are implemented within a required timeframe from when the fee is first collected. This limits the time lag between permit issuance and implementation of the mitigation site and ensures compliance with the watershed approach by providing large, higher-functioning mitigation lands. Providing advanced credits expedites agency permitting by eliminating the responsibility of individual applicants to identify, execute, monitor, and manage compensatory mitigation projects that meet the strict requirements of the Mitigation Rule. Up-front planning of mitigation also alleviates a substantial amount of work for the regulatory agencies by eliminating the detailed project-by-project analysis required of project managers and legal staff to review and approve individual mitigation sites proposed by applicants.

The Mitigation Rule has established requirements for the approval and timing of mitigation sites, including evaluation of the proposed location, design, size, monitoring and management activities

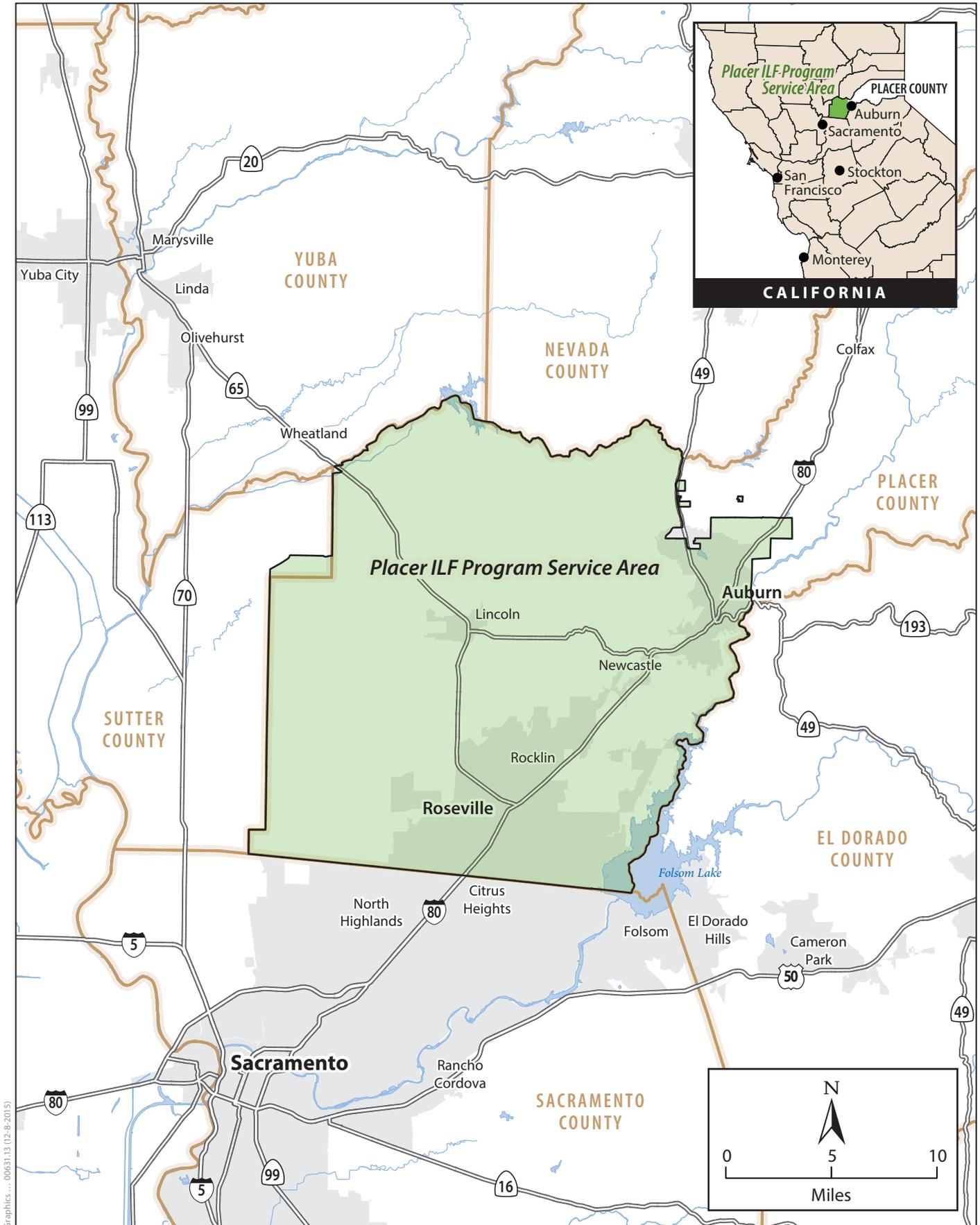
(e.g., performance standards, short- and long-term management plans and schedules), real estate protection mechanisms (e.g., conservation easements, restrictive covenants), and funding mechanisms for management in perpetuity (e.g., non-wasting endowments). The Corps has compliance and enforcement responsibilities until performance standards are achieved and the site is transferred to an approved manager and funded in perpetuity. 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, the County ILF Program expedites and streamlines permitting and compliance efforts by the agencies.

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. These include the Placer County Conservation Program, which includes a Draft Habitat Conservation Plan and Natural Community Conservation Plan (HCP/NCCP), and the Draft County Aquatic Resource Program (CARP). 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) and California Department of Fish and Wildlife (CDFW) (herein referred to as the “Wildlife Agencies”) 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. 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. This would include the ultimate goal of receiving a Programmatic General Permit from the Corps, Programmatic Water Quality Certification from the Central Valley Regional Water Quality Control Board (CVRWQCB). The HCP/NCCP outlines a comprehensive conservation strategy that conserves sensitive plants, wildlife, and aquatic and terrestrial natural communities in western Placer County. If approved, these programs will be compatible with the ILF Program. The County has also approved a three-part mitigation strategy for the Placer Vineyards Specific Plan (PVSP) area, which comprises a significant portion of the proposed ILF service area, that addresses the compensatory wetland mitigation requirements of the Corps, the wetland preservation requirements typically imposed by the USFWS, and a general vernal pool land cover mitigation requirement that will facilitate a broader level of functioning of enrolled mitigation properties.

2.0 Objectives

The objectives of the proposed County ILF Program are to:

- Provide an effective regional and watershed-based compensatory mitigation program for unavoidable impacts on jurisdictional aquatic resources permitted by the Corps in western Placer County.
- Provide a means to establish and track mitigation values that are required for mitigation associated with losses of Waters of the United States.
- Provide a mitigation program that is consistent with other federal and state mitigation standards.
- Provide an environmentally preferable alternative to permittee-responsible compensatory mitigation pursuant to the Mitigation Rule by constructing biologically superior mitigation



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Figure 1
Placer ILF Program Regional Location and Vicinity Map

projects of adequate quality and quantity to meet current and expected demand for credits in the ILF Service Area.

- Minimize the temporal loss of aquatic resources by identifying, designing, and gaining approval for compensatory mitigation projects in advance of compensatory mitigation needs.
- Maintain a level of accountability commensurate with mitigation banks, such that the compensatory mitigation obligations assumed by the County through sale of credits are met in a timely and effective manner pursuant to the Mitigation Rule.
- Consolidate funding for compensatory mitigation projects in the Service Area to reduce the costs of constructing isolated and/or small-scale mitigation projects by implementing larger and more comprehensive mitigation projects.
- Provide the Interagency Review Team (IRT) with compensatory mitigation projects that target needs specific to the Service Area.

3.0 Establishment

The Placer County ILF Program would provide compensation for unavoidable impacts on aquatic resources of Placer County resulting from projects implemented within western Placer County. See Figure 2 for the ILF Program Plan Area. The County would be the ILF Program sponsor and in coordination with the Corps and IRT would develop the framework to implement compensatory mitigation projects, including mitigation site selection, project prioritization, and project execution. The County will utilize extensive conservation data collected during the development of the PCCP and respective watershed plans to develop the ILF Program. The use of regional and watershed-based data already compiled will ensure the County develops a cohesive strategy for aquatic resource management and a mitigation program to maximize ecosystem benefits and success of mitigation sites through effective site selection and implementation of the watershed approach. In addition, the ILF Program will be coordinated to the extent possible with conservation efforts outside of Placer County, including the Yuba-Sutter County NCCP/HCP, Yolo County National Heritage Program, Butte County Conservation Plan (an HCP/NCCP), Natomas Basin HCP, and others, to enhance regional connectivity and maximize the watershed approach to better ensure success of individual sites. See Figure 3 for a map of the Regional Conservation Planning Efforts. The ILF Program will be structured to:

- Provide an incentive for proposed public and private projects to maximize avoidance and minimization of aquatic resources, and design for the Corps Least Environmentally Damaging Practicable Alternative (LEDPA) early in project development as envisioned by the Placer County General Plan Natural Resource goals and policies.
- Provide compensatory mitigation credits required through Corps General and Individual Permits pursuant to Section 404 of the Clean Water Act (CWA).
- Facilitate future mitigation for CVRWQCB Water Quality Certifications pursuant to Section 401 of the CWA, CVRWQCB Waste Discharge Requirements pursuant to the State Porter-Cologne Act.
- Support accounting of mitigation credits.
- Plan and execute compensatory mitigation projects at the regional and watershed level to maximize ecological benefits by taking into account aquatic habitat diversity, habitat connectivity, physical processes including hydrologic sources (including the availability of water

rights), soils and geologic conditions, trends in land use, and compatibility with adjacent land uses.

- Utilize the existing regional planning efforts and data developed in concert with resource and regulatory agencies to identify compensatory mitigation projects for efficient IRT approval by prioritizing sites already identified and by providing site-specific objectives, comprehensive site plans, and ecological performance standards that meet the strict requirements of the Mitigation Rule.

4.0 Background, Need, and Technical Feasibility

4.1 Background

The ILF Program will service approximately 269,000 acres of western Placer County. 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 in Lincoln and unincorporated areas surrounded by agricultural uses and natural grassland, riparian and stream floodplains, and vernal pool communities. The foothills region consists of lower-density suburban and rural residential development along the Interstate 80 corridor and lower density rural residential development, grazing land, natural woodland communities, and higher gradient streams with typically narrow floodplains in the north foothills. See Figure 4 for the waterways of Placer County and the boundary separating the valley and foothill regions within the County.

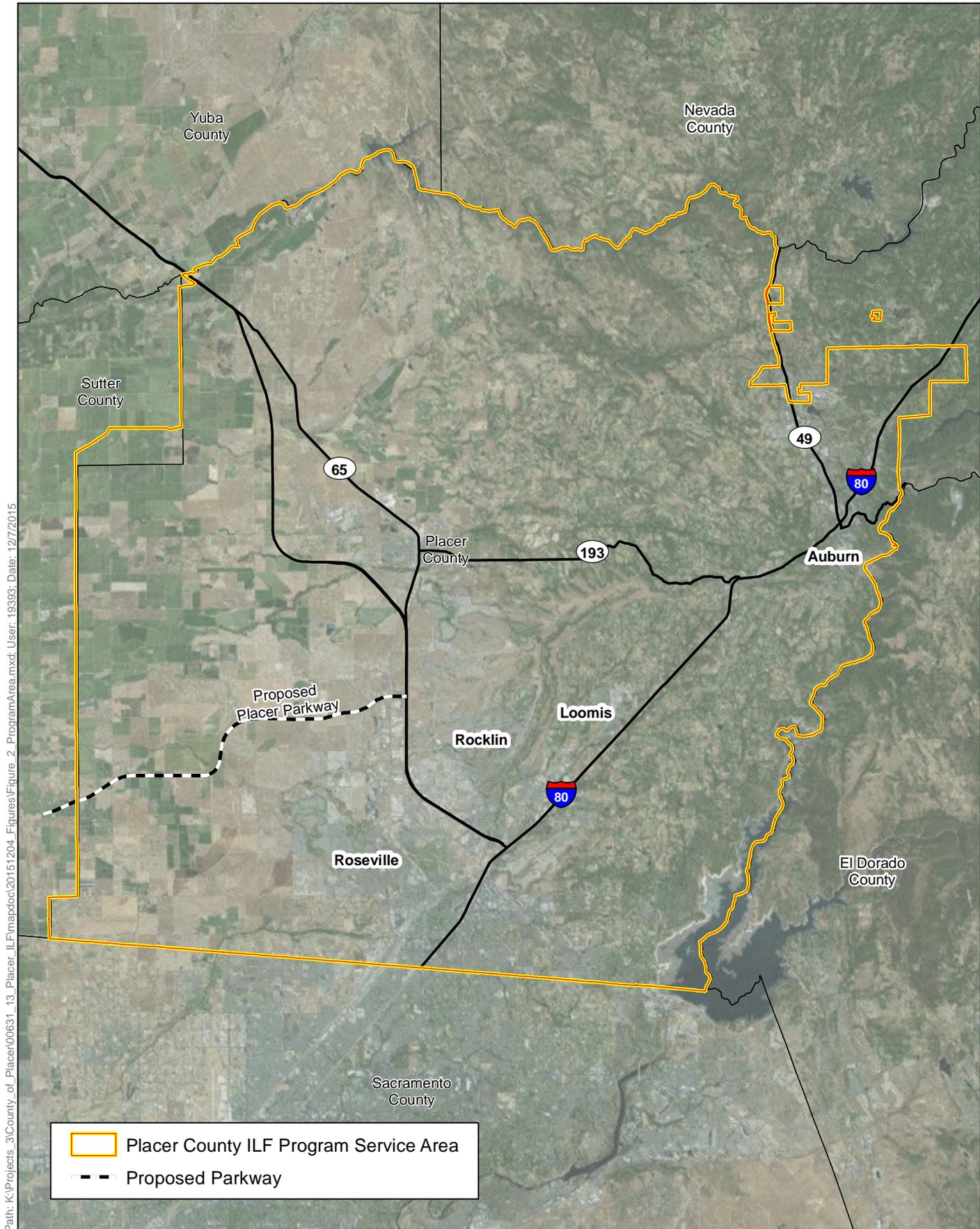
The ILF program would utilize an approach developed for the PCCP of purchasing large blocks of land within the northern and western regions of western Placer County, identified as the Reserve Acquisition Area (RAA). Assembly of the RAA would be based on scientifically accepted principles of conservation biology and informed by the best available biological data. Information on species (e.g., distribution, habitat relationships, and life history characteristics) and habitats (e.g., distribution, species composition, ecological function) would be used to inform acquisitions within the RAA. The RAA would be the primary focus of land acquisitions on which to preserve and restore aquatic resources due to the larger parcel size and more intact watersheds and adjacent uplands. See Figure 5 for the proposed RAA shown in dark green.

The County would implement mitigation projects within the RAA to maximize connectivity and likelihood of success, as well as within stream corridors outside of the designated RAA that maximize ecosystem functions and services, including benefits to species, depending on priorities within the watershed. Stream Restoration Opportunity Areas currently identified are shown on Figure 6.

4.2 Need

The ILF Program is a key element to providing a comprehensive conservation strategy for the protection and use of wetland resources within the Service Area. If approved, the ILF Program would complement the PCCP by providing the mechanism for applicants under the PCCP to satisfy Corps, and CVRWQCB aquatic resources mitigation requirements by paying the PCCP fees.

The ILF Program is needed to provide the residents of Placer County with a comprehensive regional approach to natural resource mitigation for projects affecting aquatic resources. The ILF Program will simplify the permitting process by providing advanced compensatory mitigation which meets



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Figure 2
Placer County ILF Program Service Area

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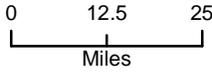
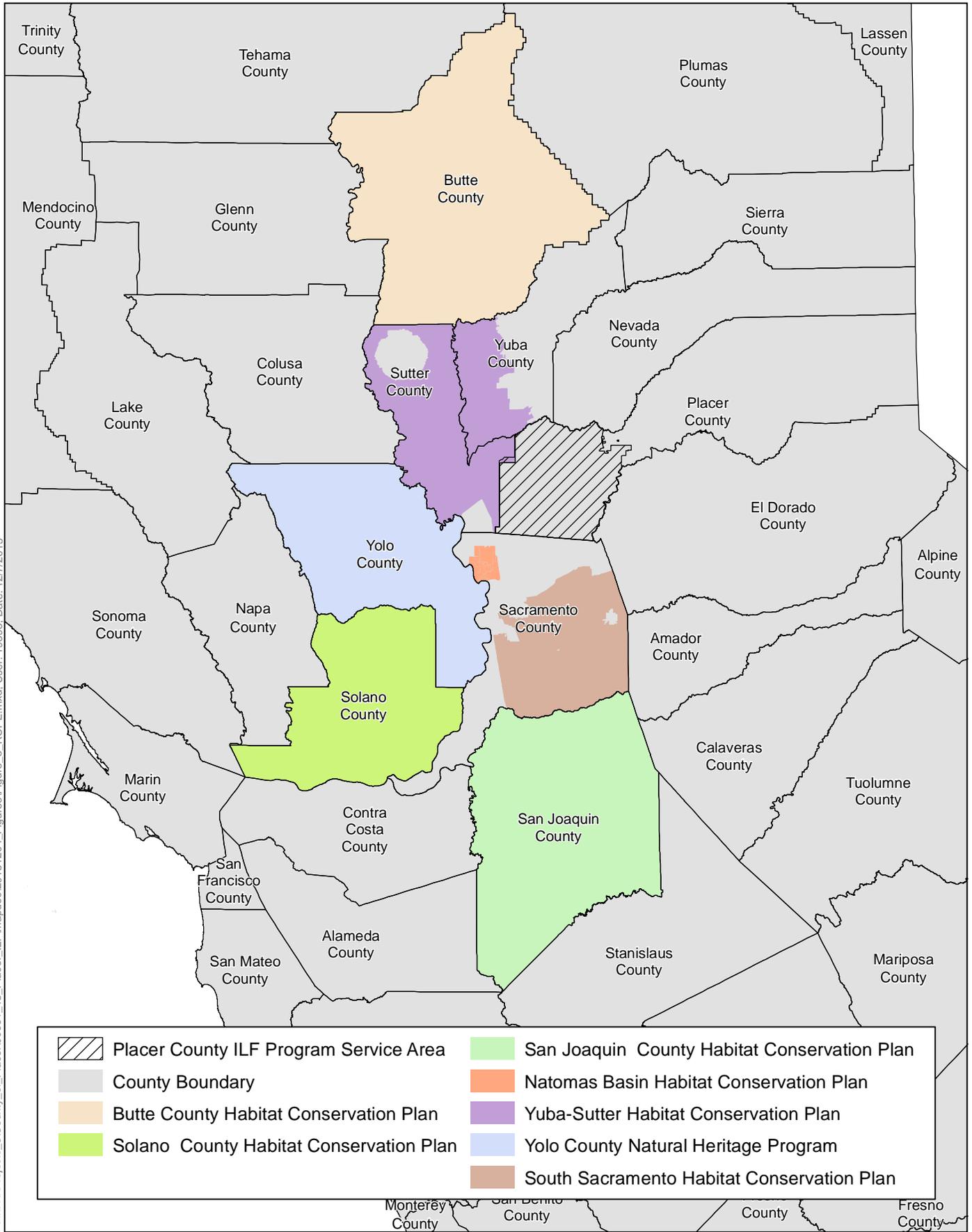


Figure 3
Regional Conservation Planning Efforts

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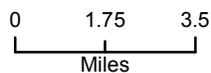
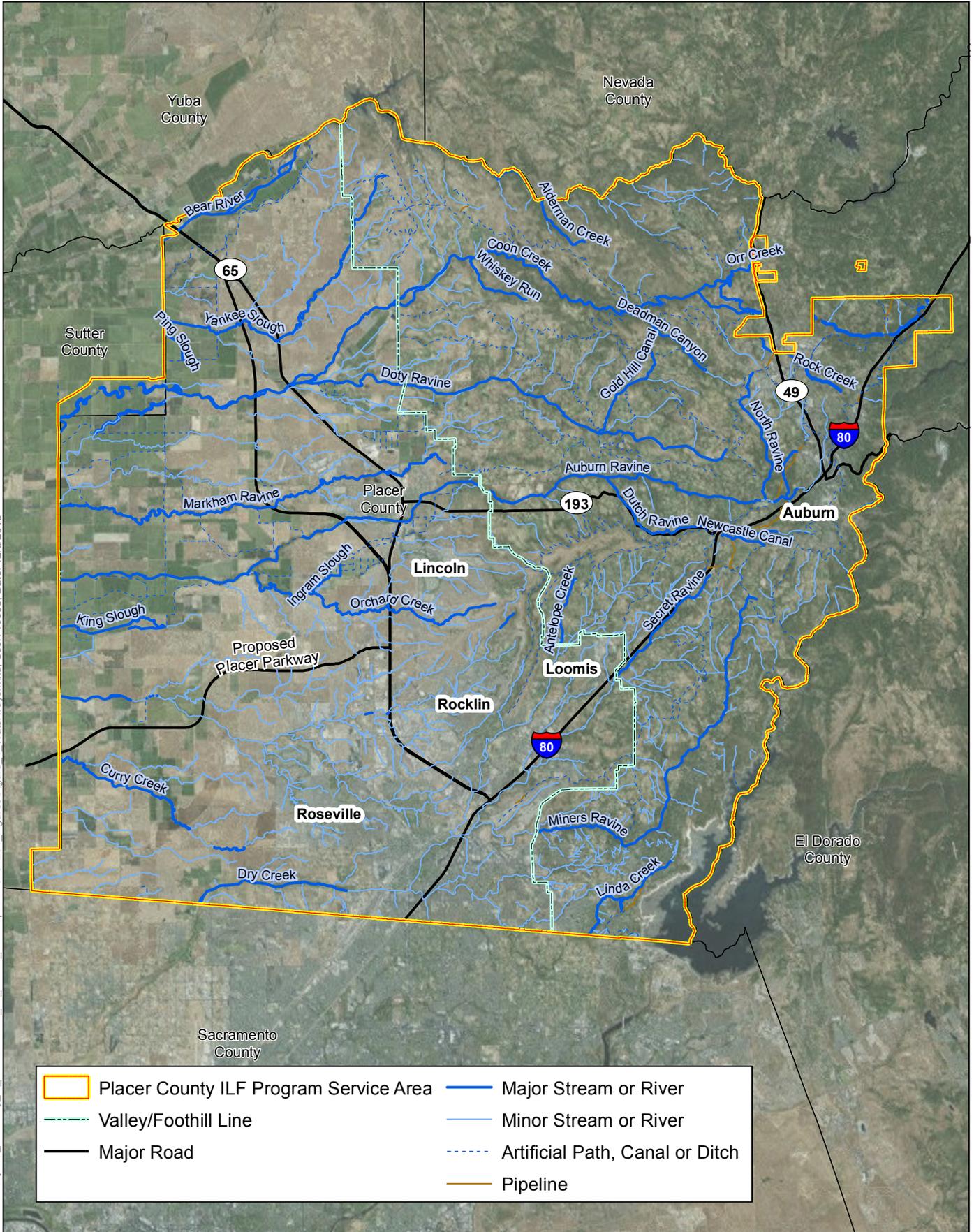
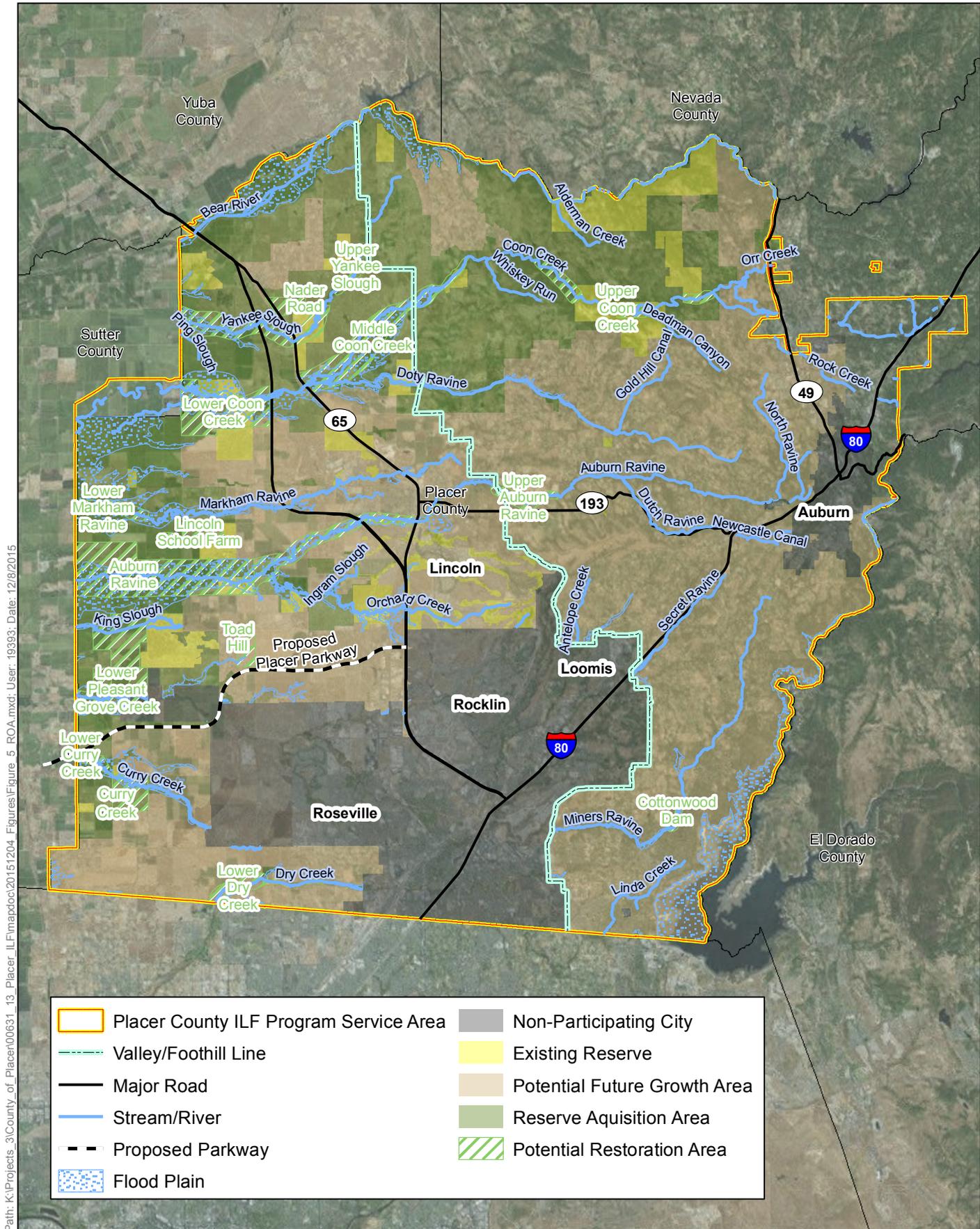


Figure 4
Waterways of Placer County



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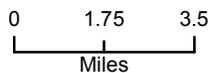


Figure 5
Restoration Opportunity Areas

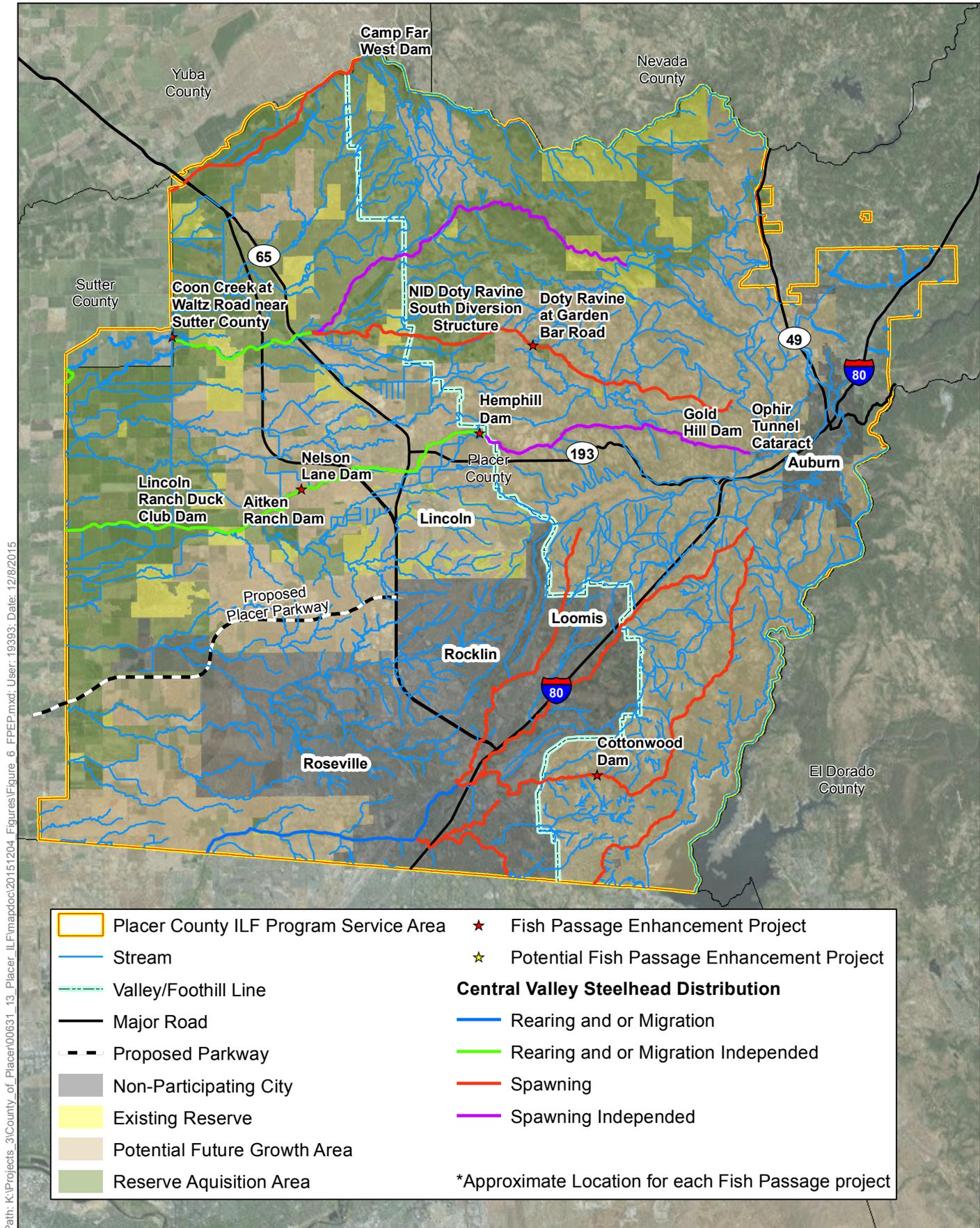
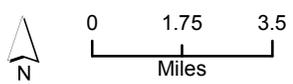


Figure 6
Fish Passage Enhancement Projects



the strict requirements of the Mitigation Rule, thereby eliminating the time needed by the project proponent and regulatory agencies to identify, develop, review, and approve a project-specific mitigation proposal.

Over the next 50 years, urban development, in-stream projects, capital projects, operation and maintenance projects, and rural development projects will result in significant unavoidable impacts on aquatic resources that must be mitigated. The majority of the impacts are anticipated to be within the potential future growth areas shown on Figure 5, where an increase in population from 116,000 to 349,000 is anticipated. To accommodate the projected population growth, approximately 19,744 acres of open space in the valley is anticipated to be converted to urban and associated land uses. In addition, approximately 14,673 acres of land conversion are projected in the foothills and I-80 Corridor due primarily to expansion of rural residential land uses and transportation projects. Figure 5 shows the Valley/Foothill line, which bisects the Service Area. The ILF Program is needed to provide the substantial quantity of high-quality compensatory mitigation needed to respond to projected growth. The ILF Program will ensure that compensatory mitigation credits are available prior to project approval and will be consistent with the Mitigation Rule (40 CFR Part 230), limiting the temporal loss of functions and services between impacts and successful compensatory mitigation. Further, the Mitigation Rule includes a preference hierarchy that gives priority to ILF programs over permittee-responsible mitigation options because ILF programs provide a greater watershed planning effort, making them environmentally preferable.

In the absence of the proposed ILF Program, applicants would need to utilize appropriate credits on an ad hoc basis from mitigation banks if available within the area of their project, from other ILF programs (such as the National Fish and Wildlife Fund [NFWF] ILF Program), or propose a permittee-responsible mitigation project, all of which may not support the ongoing regional conservation efforts set forth in the PCCP. Existing and future mitigation banks would only provide a portion of the credits anticipated to be needed to mitigate for potential future growth. Further some banks are not located within the County and do not serve to protect resources within the County's watersheds. The NFWF ILF Program has a large service area covering the Corps' Sacramento District; this Program will not ensure the fees collected from projects in Placer County are mitigated within the County and will satisfy the regional conservation goals in the PCCP or County General Plan. The Placer ILF Program aims to maintain the regional watershed functions and services within the County more broadly than other ILF programs are likely to be able to do.

Permittee-responsible mitigation projects have been documented nationally as being less environmentally preferable because they have historically had a low success rate. This was attributed to the fact that these sites are typically small onsite wetlands and the placement and design lack application of the watershed approach as well as a third party manager and long-term protection and management (National Research Council 2001). Locally, the effectiveness of small vernal pool preserves (less than 60 acres) have been evaluated in Placer County and found to be highly important for protecting rare flora and fauna, but inadequately protected and funded compared to larger preserves (Vollmar and AECOM 2009). Therefore, the small preserves evaluated by this study were more vulnerable to the effects of human and domestic pet trespass, infestation by weeds, and generally have more intensive management challenges with lower oversight by regulatory agencies. The Placer County ILF Program would overcome these challenges and increase the success rate of mitigation sites for aquatic resources because these mitigation sites will be larger and designed within a larger landscape of protected upland and aquatic natural communities. Because these sites will be large, they will be less vulnerable to the effects of human development and other management issues such as invasive species.

4.3 Technical Feasibility

4.3.1 Regional Approach

The ILF Program is feasible because it will be based on both the regional and watershed efforts ongoing within the Service Area. Resource and regulatory agencies, local jurisdictions, and other stakeholder groups are collaborating in these efforts. Informed by information and analysis prepared for the PCCP and the CARP, the ILF Program would be implemented through a detailed planning framework and monitoring program. Restoration, enhancement, and preservation projects within a reserve system of acquired properties would be funded by the fees generated by the mitigation requirements of permits issued by the Corps, CVRWQCB, and the County.

Aquatic resources preservation and restoration are well-established in Placer County. There is a wealth of local information and expertise with successful mitigation projects, such as approved mitigation banks and other restoration mitigation projects, which the County will draw upon in implementing the ILF Program. The ILF Program will utilize information and conceptual projects already identified in the draft PCCP and strive to generate credits based on mitigation projects with at least conceptual planning documents approved by the IRT to minimize the use of advance credits and reduce financial risks.

4.3.2 Watershed Approach

As described above, the ILF Program is based on a regional watershed approach designed to conserve uplands and aquatic resources, and species as envisioned in the Draft PCCP and Draft CARP. The ILF Program adopts this approach and integrates three watershed plans:

- the Dry Creek Coordinated Resource Management Plan,
- the Auburn Ravine/Coon Creek Ecosystem Restoration Plan, and
- the Pleasant Grove/Curry Creek Ecosystem Restoration Plan.

These Placer County/CALFED funded watershed management plans were designed to give direction to control pollution, manage stormwater, and restore and enhance stream system habitats and uplands that surround them. In addition, the Dry Creek Greenway Regional Vision is a regional open space greenway and park system that protects the natural waterways, riparian corridors, natural and cultural resources and sensitive habitat lands, and provides compatible recreational opportunities that do not impact sensitive resources or private property rights.

By definition, watershed planning focuses on a watershed, a geographic area that is defined by a drainage basin. A watershed based mitigation strategy should address a geographic area large enough to ensure that implementing the strategy will successfully mitigate causes of impairments and threats to the waterbody impacted. Although there is no rigorous definition or delineation of this concept, 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 affects biodiversity.

Plans that bundle watersheds within a given geographical location with similar sets of problems, or address a common stressor (e.g., sediment, nutrients, loss of biological function) across multiple related watersheds, can be particularly useful in terms of planning and implementation efficiency

and the strategic use of administrative resources. Within the Service Area, what are commonly referred to as the western Placer Creeks (e.g., Dry, Pleasant Grove, Auburn Ravine, and Coon) share a common landscape with a similar set of problems and stressors. These watersheds, between the Bear and American rivers, lie within the American Basin Hydrologic Unit.

Placer County believes this regional geographical designation is a feasible watershed approach that will ensure minimizing effects in individual watersheds. The regional watershed approach allows large-scale restoration efforts to occur outside individual HUC-8 watersheds in locations of contiguous habitat with buffer lands and where they are more likely to succeed. These large-scale efforts would likely occur within the Reserve Acquisition Areas in the northern and western areas of the Service Area. The flexibility of being able to mitigate project impacts within the larger American Basin Hydrologic Unit will prove over time to improve watershed functions and services and species recovery; therefore, the County believes it is the environmentally preferable alternative with the greatest likelihood for ecological success and sustainability.

Placer County's watershed approach ensures that compensatory mitigation will be located where it is most likely to successfully replace lost functions and services, taking into account such watershed-scale features as aquatic habitat diversity, habitat connectivity, relationships to hydrologic sources (including the availability of water rights), trends in land use, ecological benefits, and compatibility with adjacent land uses.

5.0 Operation

The ILF Program will be operated independently until such time as the PCCP is approved and operational, at which time the ILF Program would be operated in conjunction with the PCCP. ILF Program mitigation projects will be implemented, and ILF Program credits will be created, largely through implementation of the broader conservation strategy envisioned in the PCCP. The PCCP will include the development of a reserve system that protects vernal pools, wetlands, other waters and the adjacent uplands. Each ILF Program mitigation project proposal will also be consistent with the goals and objectives outlined in Section 8, *Compensation Planning Framework*.

5.1 Program Components

The proposed ILF Program will ensure no net loss of aquatic resources acreage, functions, and services within the Service Area. Wetland mitigation fees will be designed to ensure that impacts to aquatic resources are addressed through restoration, establishment, and enhancement. Preservation of aquatic resources will be an important component of the PCCP's overall conservation strategy, but compensatory mitigation for impacts to Waters of the U.S. will consist primarily of restoration, establishment, and enhancement actions.

1. **Reserve System.** The ILF Program will implement compensatory mitigation projects on lands acquired by the County and protected with conservation easements, which will augment the approximately 16,000 acres of existing conservation lands in Placer County. Once the PCCP is approved and operational, land acquired for mitigation projects through the ILF Program would become part of the PCCP reserve system, which is expected to encompass 45,000 to 50,000 acres over the next 50 years (anticipated permit term of the PCCP). Cumulatively, the PCCP will eventually place 36% of the present non-urban landscape in the Service Area under conservation management. The County would be responsible for protection and management of

the reserve system in perpetuity to ensure the protection of aquatic resource functions and services at the regional and watershed scales.

The Reserve System would provide the framework for protecting and managing the mitigation projects funded by the ILF Program. The Reserve System would mainly be located in the western and northern valley and in the northern foothills, regionally separated from future urban and suburban growth.

The County will assemble the Reserve System in the following ways:

- Enhancement of land owned by the County or City of Lincoln (i.e., the anticipated PCCP Permittees) and inclusion in a conservation easement.
- Purchase of conservation easements or land in fee title from willing sellers.
- Purchase of land or conservation easements in partnership with other organization(s) (these sites cannot be used as mitigation projects).
- Acceptance of land or easement dedication in lieu of fee payment if the easement contributes to the goals and objectives of the ILF Program and with County approval.
- Acceptance of land or easement dedication as a gift or charitable donation.

Acquisition of land in fee title and conservation easements will likely be the primary land acquisition mechanism.

When possible, land adjacent to existing protected areas will be acquired first to ensure that the Reserve System is composed of contiguous units rather than isolated parcels.

2. **Vernal Pool Mitigation Projects.** The ILF Program will implement vernal pool restoration, establishment, and enhancement projects.
3. **Wetland Mitigation Projects.** The ILF Program will implement a variety of restoration, establishment, and enhancement projects that address the suite of wetland communities including riparian, emergent marsh, seasonal wetlands, and springs/seeps to establish riparian and stream credits and improve habitat connectivity to the Reserve System.
4. **Other Waters Mitigation Projects.** The ILF Program will implement a variety of restoration, establishment, and enhancement projects that address riverine habitat that does not have riparian vegetation, but otherwise contains perennial, intermittent, ephemeral or open water habitat.
5. **Other Mitigation Projects.** The County will track other restoration, establishment and enhancement projects, as well as preservation lands, to ensure the reserve system is developed appropriately and the goals and objectives of the ILF Program and PCCP are achieved.

5.2 Credit Types

The Mitigation Rule (33 CFR 332.2) recognizes four mitigation approaches for which credits can be generated. The ILF Program would cover a large geographic area and would include mitigation activities that meet each of these definitions. The type of credits will be defined in each site-specific mitigation plan and will adhere to the definitions of restoration (re-establishment and rehabilitation), establishment (creation), enhancement, and preservation in the Mitigation Rule.

- *Restoration*: 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.
 - Re-establishment: Manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area and functions.
 - Rehabilitation: Manipulation of the physical, chemical or biological characteristics of a site with the goal of repairing the natural/historic functions to a degraded aquatic resource. Rehabilitation results in gain in aquatic resource function, but does not result in a gain in aquatic resource area.
- *Establishment*: Manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist at an upland site. Establishment results in a gain in aquatic resource area and functions.
- *Enhancement*: Manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area.
- *Preservation*: Removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions. For preservation to be used as compensatory mitigation, five (5) criteria must be met: (1) The resources to be preserved provide important physical, chemical, or biological functions for the watershed; (2) The resources to be preserved contribute significantly to the ecological sustainability of the watershed; (3) Preservation is determined by the District Engineer to be appropriate and practicable; (4) The resources are under threat of destruction or adverse modifications; and (5) The preserved site will be permanently protected through an appropriate real estate or other legal instrument.

It should also be noted that the Corps is currently working to simplify the crediting system and will continue to make mitigation decisions such that the functions and values of vernal pools, wetlands and other waters are protected. The PCCP has identified initial opportunities and priorities within the Service Area to address the anticipated growth and associated unavoidable impacts on waters. The ILF Program utilizes these same opportunities and priorities and establishes three general categories of credit types based on aquatic resource habitat type: (1) Vernal Pools; (2) Wetlands; (3) Other Waters. Within each category, credits are proposed to be defined as one acre equals one credit, but will be based on the functional lift provided to the site as agreed to by the IRT at the time of the specific site review. This includes credits for restoration, establishment, and enhancement of wetlands, and to a lesser degree preservation. Within the Wetlands category, there are four sub-categories: riparian wetlands, freshwater emergent marsh, seasonal wetland, and spring/seep. Within the Other Water category, there are two sub-categories: riverine without riparian (i.e., non-wetlands) and lacustrine (e.g., lake/pond). Riparian credits may also be defined by stream miles measured along the centerline or linear feet of shoreline, depending on the site and mitigation

approach. Credits within these categories will be defined in site specific mitigation plans and provide the Hydrogeomorphic (HGM) class, Cowardin wetland class, and vegetation classification.

5.2.1 Reserve System

The Compensation Planning Framework will utilize the Service Area as the scale for evaluation of wetland losses, pressures, and restoration objectives because this approach allows for a comprehensive watershed perspective that incorporates aspects of habitat functions, species utilization, water quantity and quality, and connectivity within a contiguous integrated unit. As such, the use of Service Area promotes an ecologically coherent assessment of stresses and restoration potentials across a spectrum of wetlands functions, services, and landscape position. Wetland Credits will be applied to restore, enhance, create, or in certain cases preserve any form of palustrine, lacustrine, and riverine wetlands, and other waters, other than vernal pools, within individual River System Service Areas.

A comparison of the various wetland classification systems and their associated vocabulary is provided in Table 1. The ILF proposes to use the Corps' vocabulary as much as possible, though there are some differences between the various classification systems.

5.2.2 Vernal Pool Credits

Vernal Pool Credits will be made available for impacts to vernal. Funds generated from the sale of these credits will be applied to address critical vernal pool needs within the Service Area consistent with the Compensation Planning Framework described below. Vernal pools are addressed as a distinct component because of the substantial historic loss of vernal pools in the Service Area, the ongoing high threat level, and the ecological correlation between vernal pools and a high number of state and federally listed threatened and endangered species. These credits address the uniquely critical need for this wetland type, and will be applied to restore vernal pools consistent with the goals and objectives of the USFWS Vernal Pool Recovery Plan.

5.2.3 Wetland Credits

Wetland Credits will be made available for impacts to all non-vernal pool wetlands in the Service Area including: riparian, emergent marsh, seasonal wetlands, and springs/seeps. The County will track wetland impacts by type, and Wetland Credits by type, consistent with the Corps wetland habitat designations. The County will also ensure these reports are integrated into the Corps' mitigation accounting system, as described in Section 5.7, *Credit Tracking*. Funds generated from the sale of Wetlands Credits will be applied to fulfill similar wetland preservation, restoration or enhancement needs within the Compensation Planning Framework for the ILF Program.

5.2.4 Other Waters Credits

Other Waters Credits will be made available for impacts to all non-wetland impacts in the Service Area including riverine without riparian vegetation and lacustrine habitat. Other waters impacts offset by the purchase of these credits and mitigation Project acreages within the Service Area, will also be tracked utilizing the Corps other waters designations including perennial, intermittent, ephemeral and open water. Funds generated from the sale of Other Waters Credits will be applied to address needs and functions identified within the Compensation Planning Framework for the ILF Program.

Table 1. Comparison of Placer County Wetland Classifications

Proposed Placer County In-Lieu Fee Program	Placer County Aquatic Resources Program (Waters of the County)	Placer County Conservation Plan	U.S. Fish and Wildlife Service/ National Wetland Inventory/Cowardin
Vernal Pool	Palustrine (vernal pool)	Vernal Pool Type Wetlands	Palustrine (Vernal Pool)
Reserve System	Upland	Vernal Pool Grassland Complex ¹	Upland
Wetlands – Riparian Wetlands	Stream zone and Riverine	Valley Foothill Riparian	Riverine
Wetland –Emergent Marsh	Palustrine (wetlands)	Fresh Emergent Wetland	Palustrine (Emergent Marsh)
Wetland – Seasonal Wetland	Palustrine (wetlands)	Seasonal Wetland	Palustrine (Seasonal Wetland)
Wetland – Spring/Seep	Palustrine (wetlands)	Spring and Seep	Palustrine (Spring/Seep)
Other Waters –Riverine without Riparian	Riverine (Rivers and streams)	Riverine	Riverine
Other Waters – Lacustrine (e.g. lake/pond)	Lacustrine (reservoirs, lakes and ponds)	Lacustrine	Lacustrine

¹ Upland component of vernal pool complexes.

5.3 Credit Amounts

The ILF Program initially proposes the following advance credits:

1. Vernal Pool Credits
 - Vernal pools – 1-2 acres (restoration).
 - Vernal pools – 1-2 acre (establishment).
 - Vernal pools – 5-10 acres (preservation).
2. Wetland Credits
 - Riparian habitat – 1-2 acres.
 - Freshwater emergent marsh – 1-2 acres.
 - Seasonal wetlands – 1-2 acres.
 - Spring/seep – 0.25-0.5 acre.
3. Other Waters Credits
 - Lacustrine – 1,000-2,000 linear feet.

The total number and type of credits developed under the ILF Program will depend on the number of restoration, enhancement and establishment projects developed and the number of projects that use the ILF Program.

A specific wetland mitigation proposal will be forthcoming during the development of the ILF instrument, if necessary, and it will be based on the Corps' standards and also the PCCP's RAA. It will address vernal pool and possibly other wetland types to ensure the County stays ahead of impacts.

5.4 Credit Pricing

Credit costs will be established based on a full cost accounting of expenses in accordance with the Mitigation Rule. The cost for one credit will be based on the cost of land acquisition, legal fees, program administration, mitigation project planning and design, implementation (e.g., grading or other construction activities, plant materials, erosion control materials, labor, etc.), short-term performance monitoring and maintenance (5 to 10 years), adaptive management and remedial measures, long-term maintenance and management (e.g., non-wasting endowments or equivalent), financial assurances (e.g., performance bonds, letters of credit, etc.), and contingency. Therefore, the cost per credit is based, in part, on the level of intensity of the mitigation approach, making preservation credits generally less expensive than establishment credits. Credit prices for each mitigation site and across the program will be re-evaluated periodically and, if necessary, adjusted to ensure prices are adequate to fully protect and manage the mitigation sites in perpetuity. A method for determining credit fees for future mitigation sites will be included in the draft instrument.

5.5 Advance Credits and Released Credits

The ILF Program will allocate credits in advance of the implementation of a project. These are referred to as *advance credits*. Advance credits are a subset of the total approved credits for each site-specific mitigation plan, and are approved for sale prior to being fulfilled in accordance with an approved mitigation project plan. Additionally, advanced credit sales would be used to generate funds to pay for mitigation development and implementation. Once the successful implementation of a mitigation project occurs, *released credits* will be generated and replace the mitigation requirements associated with the advance credits. Any release credits generated by a project in excess of the amount necessary to fulfill the advance credit obligations may be used for other projects. The ILF instrument will contain a schedule for fulfillment of advanced credit sales. The number of advance credits will be determined in coordination with the IRT through review of the Compensation Planning Framework (described in Section 8 below) and approval of site-specific mitigation plans.

The ILF Program will encourage collaborative funding from multiple sources for mitigation projects, as allowed for in federal regulations (33 CFR Part 332). When determining the amount of mitigation credit for the ILF Program provided by a collaboratively funded project, mitigation credit will be claimed proportional to the funding amount it provided to the project, including cash and in-kind contributions.

The timing and sequence of reserve assembly relative to impacts of permitted activities is critical to the success of the ILF Program. The availability of credits must stay ahead of total impacts permitted within the Service Area. To meet this provision, a mitigation project will need to be approved by the IRT prior to the release of credits.

5.6 Credit Releases

In order for the ILF Program to be available as an option for meeting compensatory mitigation requirements for permit authorizations within the Service Area, a mitigation project will have to be identified and described in a mitigation plan that has been approved by the IRT. Given the volume of projects, the County proposes such approval to occur on a programmatic basis (e.g., annually, property by property, or some other logical grouping of mitigation projects). The number of credits

available at any given time will be determined by the credit release schedule outlined in the mitigation plan, and may include advance credits (33 CFR Part 332). Credits will be allocated to a specific site when a permanent conservation easement is in place for that site.

The ILF program would be issued the full amount of advance credits upon execution of the ILF instrument. The number of available advance credits will decrease as they are sold and retired through the creation of released credits. As released credits are created they will be applied against the number of advance credits previously sold to retire the advance credits and a new number of advance credits would be available for sale.

Credits generated through ILF Program mitigation projects may be sold to any private or public sector individual, organization, or agency that is seeking mitigation credits to comply with a Section 404 permit, Section 401 Water Quality Certification, or other environmental permit issued within the Service Area that allows ILF Program credits for compensatory mitigation. Use, as well as the number and type, of credits for activities authorized by Corps permits will be at the discretion of the Corps District Engineer. Similarly, use of credits authorized by other agencies will be at the discretion of that agency. Upon sale of the credits, the County becomes responsible for the compensatory mitigation requirements of the permit. The cost of the credit will be determined by the County in coordination with the IRT.

5.7 Credit Tracking

The County will establish and maintain an annual report ledger that tracks the production of advance and released credits for the ILF Program and for individual mitigation sites within the ILF Program. Reporting requirements for the annual report will be provided in the ILF Instrument. The annual report ledger will be designed to integrate with the Regulatory In-lieu fee and Bank Information Tracking System (RIBITs).

The County will track fees and all other income received, the source of the income, and any interest earned by the program account. The ledgers will include a list of all the permits for which ILF Program funds were accepted, including the file number, the specific watershed in which the authorized impacts are located, the amount (acreage/linear feet) of authorized impacts, the aquatic resource type impacted, the amount of compensatory mitigation required, the amount paid to the ILF Program, and the date the funds were received. In addition, the County will create and maintain a report ledger for the ILF Program that will track all disbursements/expenditures and the nature of disbursement. The County will also track funds obligated or committed, but not yet disbursed.

The ledger will also include, for each mitigation project, the specific watersheds (e.g., HUC-10 and HUC-8) in which the project is located, the amount of compensation being provided by each type of mitigation approach (re-establishment, enhancement, establishment, and preservation), the aquatic or other resource type represented, the amount of compensatory mitigation being provided (acres/linear feet), and the number of credits certified by the IRT. The annual report ledger will also include a balance of advance credits and released credits at the end of the report period for the Service Area.

5.8 Processes for Mitigation Project Development

The Mitigation Rule generally requires mitigation projects to be approved and implemented to a specified level within three growing seasons of the first sale of advance credits within the Service Area.

The County will develop compensatory mitigation projects that are consistent with the ongoing regional conservation efforts in the Draft PCCP, watershed plans, and the General Plan over time as opportunities within the Service Area become available. Mitigation projects will be prioritized on the basis of anticipated impacts on aquatic resources. As such, the selection of potential mitigation projects will focus on large scale restoration/establishment and preservation projects that address IRT and County priorities within the Service Area. Each compensatory mitigation project will be evaluated for its potential to provide appropriate compensatory mitigation for aquatic resources based on the following criteria:

- *Likelihood of Success* – Demonstrated through a mitigation plan concept and proper site due diligence.
- *Achieves Multiple Objectives* – In addition to the establishment and preservation of aquatic resources, the potential mitigation projects should increase the physical (soils and hydrology), chemical (biogeochemical and water quality), and biological (habitat, species, and buffers) functions and services of the aquatic resources.
- *Land Use Compatibility* – Projects must be located where they limit land use conflicts and where they can benefit existing habitat corridors and nearby protected natural areas.
- *Funding leverage* – Mitigation project costs must be itemized (e.g., planning, implementation, and monitoring) and funding must be secured.
- *Capacity of the County* – The County must demonstrate that there is sufficient capacity and expertise to plan, implement, monitor, and manage the mitigation project.
- *Long Term Management* – Mitigation projects must have a funded plan for the long-term management of the site in perpetuity.

5.9 Initial Project Prospectus

After a mitigation project site has been selected, an Initial Project Prospectus will be prepared and submitted to the IRT. The Initial Project Prospectus will provide (at a minimum) the following information:

- Property location and ownership
- Mitigation proposal
- Consistency with Compensation Planning Framework and mitigation site evaluation criteria
- Project partners
- Number of proposed credits to be generated by the project
- Budget
- Title review

Upon IRT approval of the Initial Prospectus, a full Project Development Plan (PDP) will be developed in accordance with the requirements of the 2008 Mitigation Rule. The PDP will utilize the Sacramento District's mitigation banking templates, as applicable, to address all site specific planning, implementation, monitoring, and protection aspects of the Project. The ILF Instrument will establish timelines for document delivery and IRT review to facilitate timely review with the objective of enabling Projects to be implemented within the three year window specified in the 2008 Mitigation Rule.

6.0 Service Area

The proposed geographic Service Area for the ILF Program is located on the Sierra west slope of the Lower Sacramento River Basin in western Placer County (Figure 1). Sacramento River tributaries define a series of subbasins. Western Placer County falls in four subbasins at USGS level HUC-8. See Figure 7 showing the HUC-8 Watershed Boundaries:

- The Upper Bear River (18020126) defines the northern service area boundary.
- The Upper Coon Creek—Upper Auburn Ravine (18020161) watershed covers the majority of the service area.
- The Lower American River (18020111) covers the majority of the southern service area along the southern boundary.
- The North Fork American River (18020128) delineates the southeastern service area boundary.

Placer County stretches from the Sacramento Valley east to the high Sierra and the California-Nevada state line and covers a total area of 1,500 square miles (962,000 acres). The Service Area proposed for the ILF Program is approximately 269,000 acres of western Placer County.

The Service Area is the area within which the ILF Program will be implemented, and nearly all (approximately 95%) of the Service Area is in private ownership. Specific aquatic resource conservation and mitigation strategies outlined in the County's General Plan, Draft PCCP, Draft CARP, and individual watershed management plans will be integrated into the development of the ILF Program. This integration of existing data developed in coordination with regulatory agencies and local jurisdictions ensures that the ILF Program will start off addressing known stakeholder interests and land uses. In addition, the early identification of priority sites for aquatic resource restoration and protection helps to ensure implementation of a sound watershed approach across the Service Area.

7.0 Ownership Arrangements and Long-Term Management Strategy

The ILF Program provides for the long-term preservation and management of the mitigation sites through direct acquisition of land and/or conservation easements. The County will work with experienced partners who will own and manage the land in cooperation with the County and as approved by the IRT, under certain conditions. Conservation easements will be recorded on all preserve lands and the County will own the conservation easements in most cases. Each mitigation project covered by the ILF Program will meet the appropriate ownership and stewardship requirements to insure its long-term protection in accordance with the Mitigation Rule. Conservation easements will be recorded on mitigation project sites before the final release of mitigation project credits.

The details of land ownership and stewardship for long-term management will vary by project. The following are examples of implementation:

1. The County will partner with a landowner or entity with fee title interest in a property. The owner or entity will grant a conservation easement to be held by a conservation oriented non-profit organization or the County, or the State of California. Long-term management would

become the responsibility of the fee title holder or the conservation easement holder. Long-term monitoring would be the responsibility of the County unless delegated to a qualified conservation easement holder.

2. The County or partner mitigation organization obtains the right to develop a mitigation project and record a conservation easement on a property (same as above) while the owner retains fee title to the property. Long-term management would be the responsibility of the fee title holder while the County would be responsible for monitoring or delegating the monitoring to a qualified conservation easement holder.
3. The County, State or a federal entity obtains fee title to land and would be ultimately responsible for long-term management, conservation easement and monitoring.

8.0 Compensation Planning Framework

The Compensation Planning Framework addresses the following 10 elements required by the Mitigation Rule.

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 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 above satisfy the five (5) criteria in the Mitigation Rule (33 CFR Section 332.3h) for use of preservation.
8. A description of any public and private stakeholder involvement in plan development and implementation, including 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

8.1 Geographic Service Area

The rationale for the structure of the proposed ILF Program Service Area is described in Section 4.0 of this document. A key element of the ILF Program is that it is aligned with the habitat and species conservation goals of the regional conservation planning efforts in process for the Draft PCCP, rather than strictly focusing on mitigation needs based on geographic proximity. As a result, the Service

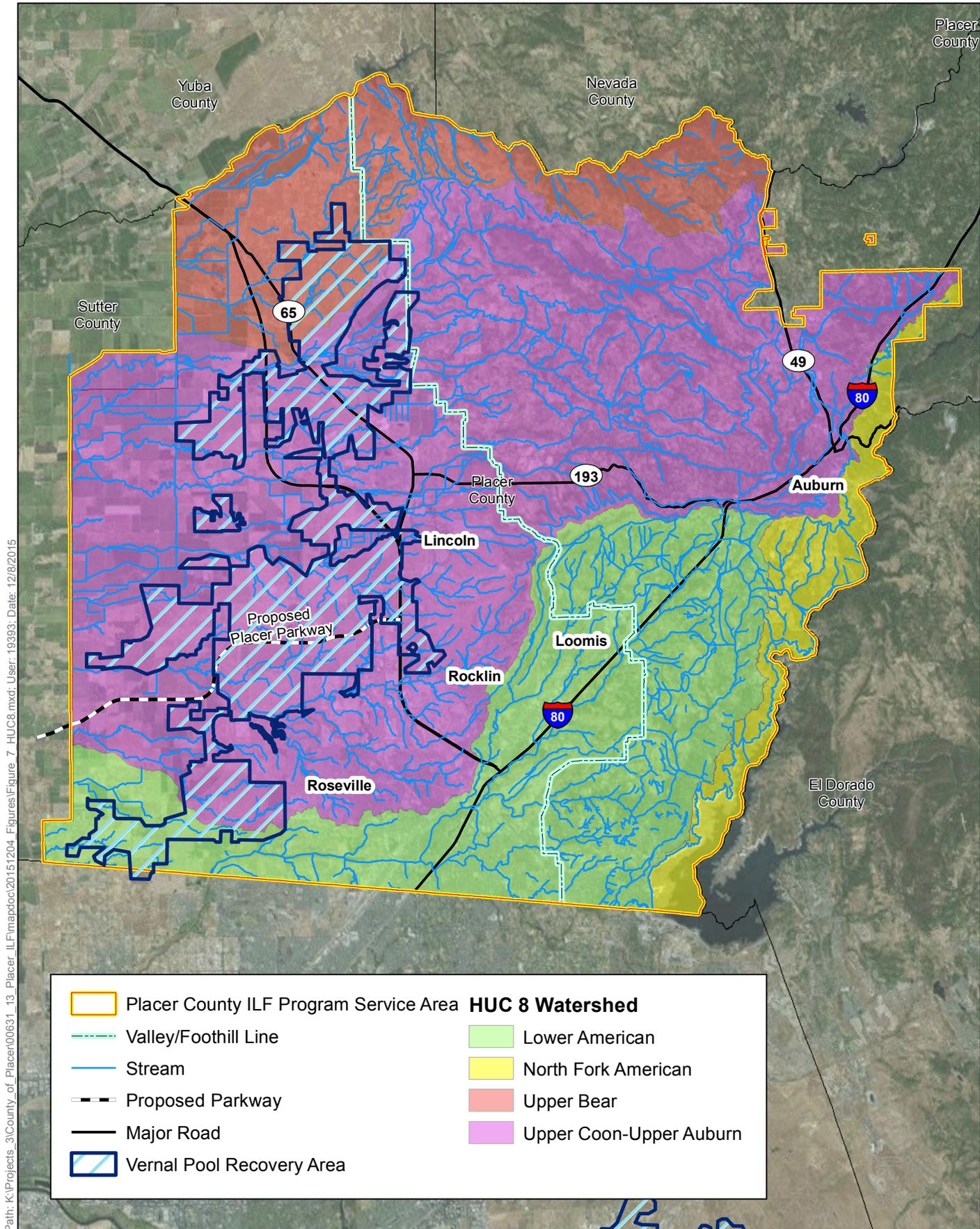


Figure 7
HUC 8 Watersheds and Riverine Systems

Area covered by the ILF Program incorporates a watershed-based rationale to identify mitigation planning, as well as the regional conservation approach that aims to designate large areas for conservation.

8.2 Current Aquatic Resource Condition

8.2.1 Vernal Pools

Vernal pool complexes comprise 44,077 acres within the Service Area (Figure 8). Vernal pools occur in undulating topography and may be isolated from one another, but more often they are interconnected by swales or ephemeral drainages in vernal pool complexes that may extend for hundreds of acres. These swales are part of the vernal pool complex, although often they do not remain saturated long enough to develop the unique plants and animals that characterize vernal pools. Pools may also be hydrologically connected by subsurface water flows. Direct rainfall is the primary water source but overland runoff and groundwater may also contribute to vernal pool hydrology (Jokerst 1990, as cited in Jones & Stokes 2004). Size and depth of vernal pools vary. Vernal pools are ecologically integrated with the surrounding uplands, typically annual grassland habitats that form the watershed of the complex.

Vernal pools are classified on the basis of physical, geographical, and biological factors (Sawyer and Keeler-Wolf 1995, as cited in Jones & Stokes 2004). Several types of restrictive soil layers have been described (Smith and Verrill 1998, as cited in Jones & Stokes 2004), two of which occur in western Placer County: hardpans and volcanic flows. Hardpans are formed when silica minerals are leached, redeposited, and then cemented lower down the soil profile. They occur on alluvial terraces on the east side of the Central Valley. Northern Hardpan Vernal Pools are most common in the Southeastern Sacramento Valley Vernal Pool Region, where they occur in complexes of many small pools and swales among mima mounds on soils of the Pentz-Pardee-Red Bluff, Redding-Corning, and San Joaquin series (USFWS 2005). Northern Volcanic Mudflow Vernal Pools (Holland 1986; Sawyer and Keeler-Wolf 1995, as cited in Jones & Stokes 2004) occur on the Exchequer soils that formed on the lahars (mudflows) of the Mehrten Formation. Remaining vernal pool complexes in the Mehrten formation occupy approximately 1,700 hectares (4,200 acres) or approximately 1.5% of the remaining land area. These are almost completely within private ownership and have been converted by urban and suburban development. Placer County contains most of the small number of Volcanic Mudflow Vernal Pools in the southeastern portion of the Sacramento Valley (USFWS 2005). Total vernal pool wetted area is a fraction of this and will be determined based on review of specific proposals.

8.2.2 Wetlands

Wetland areas (non-vernal pool wetlands) comprised of riparian, freshwater emergent marsh, seasonal wetlands and spring/seep categories make up approximately 11,205 acres of the Service Area. The wetlands contain vegetation and wildlife that is aquatic, but does not include water bodies lacking hydrophytic vegetation (streams, lakes, ponds) or vernal pools.

Freshwater emergent marsh wetlands are distinguished from deepwater aquatic habitat and wet meadow or grassland habitats by the presence of tall, perennial, grass-like plants rooted in soils that are typically permanently flooded or inundated, but can also be semi-permanent and seasonally flooded. The boundary between freshwater emergent wetland and deepwater (i.e., lacustrine and riverine) habitats is at a depth of 6.6 feet (Cowardin et al. 1979, as cited in Jones & Stokes 2004).

Freshwater emergent wetland 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, as cited in Jones & Stokes 2004). They are often associated with small human-made ponds and natural drainageways that are enhanced by intentional or unintentional releases of irrigation water. Freshwater emergent wetland 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. 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 western Placer County, freshwater emergent marsh wetlands occurs at elevations of about 50–1,765 feet. These ecosystems occupy about 1,280 acres, or less than 1% of the Service Area. Approximately 98% of this habitat is on private land. Most individual occurrences of freshwater emergent marsh wetlands in the County are less than 1 acre in extent; some larger, restored freshwater emergent marsh wetlands exist in the northwestern part of the Service Area near Sheridan.

Riparian wetland systems and habitats make up approximately 7,175 acres of the Service Area. Riverine systems with associated riparian wetland habitat occurring in western Placer County HUC-10 watersheds include perennial and intermittent streams (Figure 9). As the term implies, perennial streams sustain flows year round. The larger streams in the Plan area and vicinity such as the Bear River and American River are perennial and always have been. 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 become perennial because of inter-basin water transfers (e.g., the movement of water from one basin or watershed to another) and inputs of water destined for downstream uses (e.g., Auburn Ravine, Coon Creek, etc.).

In western Placer County, valley foothill riparian wetlands occurs on the American and Bear River corridors and along Coon Creek and lower Auburn Ravine. 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 and rarely occur on intermittent streams. On high-energy, bedrock-constrained river systems, the riparian corridors are patchy and quite narrow, limited laterally by steep side slopes, and usually not exceeding one tree canopy in width. Willow scrub is generally persistent, but is also an early successional stage that is eventually over-topped by valley oak, cottonwood, or alder in mature riparian woodland (Mayer and Laudenslayer 1988, as cited in Jones & Stokes 2004).

Seasonal wetlands (non-vernal pool wetlands) and spring/seep areas occur in small amounts and vary within the service area but are separated from other categories since they are distinct special aquatic resources. The current conditions of these resources are similar to that of the vernal pool discussion above and additional details of these resources will be provided in the compensation planning framework in the in-lieu fee instrument document.

8.2.3 Other Waters

Riverine systems (without wetlands) and lacustrine open water habitats make up approximately 4,790 acres of the Service Area. Riverine systems without riparian wetlands occurring in western Placer County HUC-10 watersheds include perennial, intermittent, and ephemeral streams (Figure

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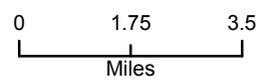
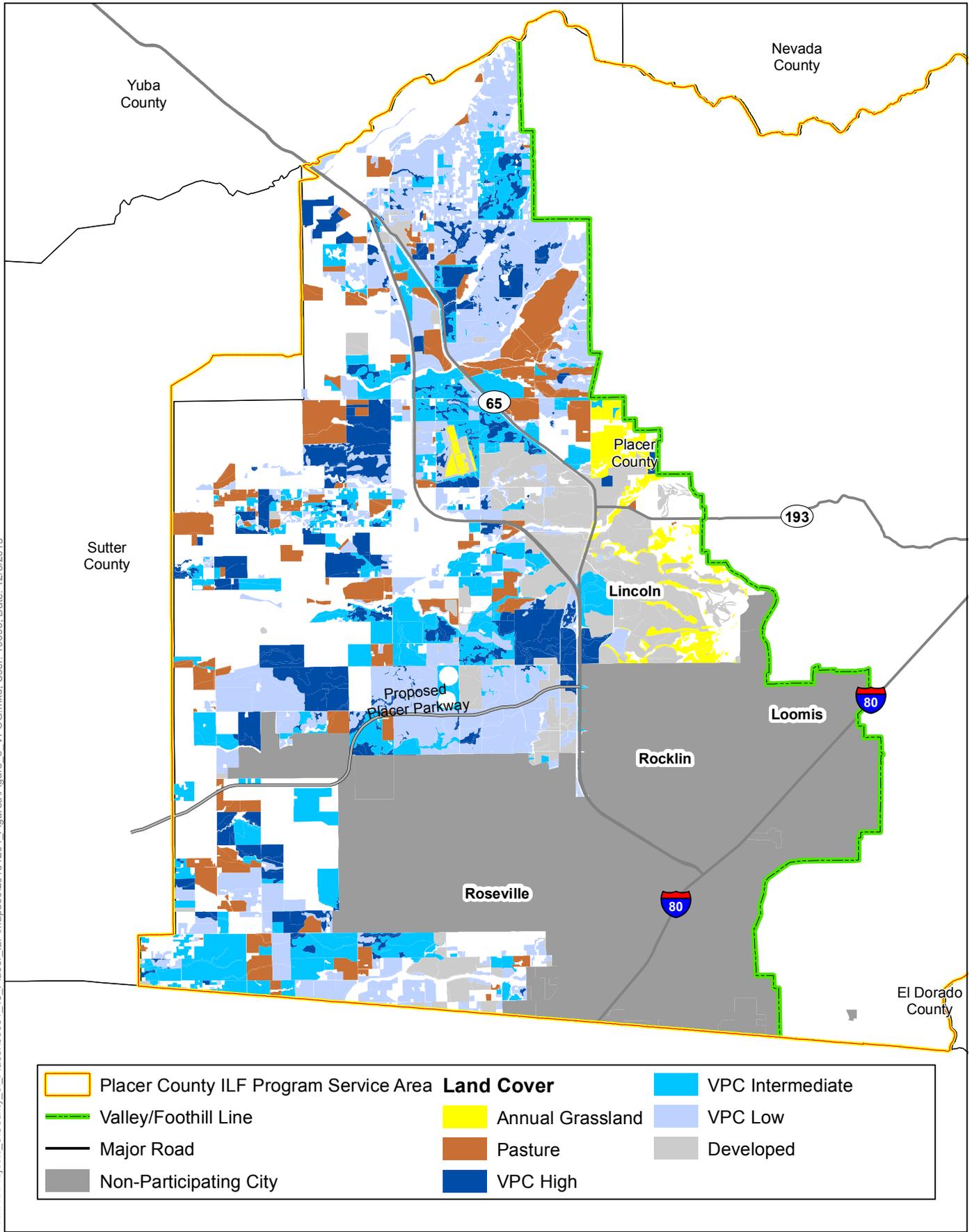
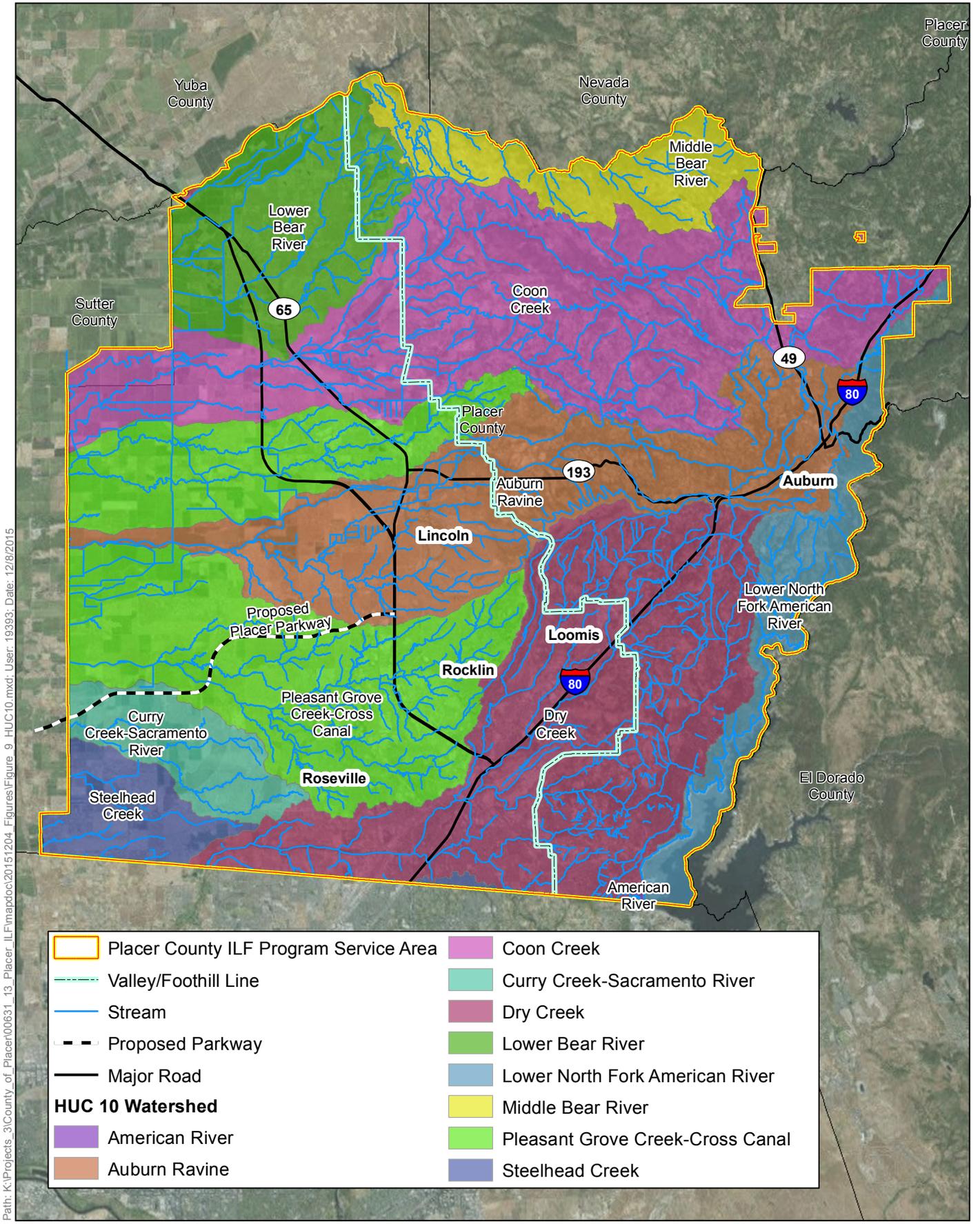


Figure 8
Vernal Pool Complexes and Grasslands



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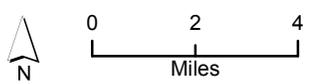
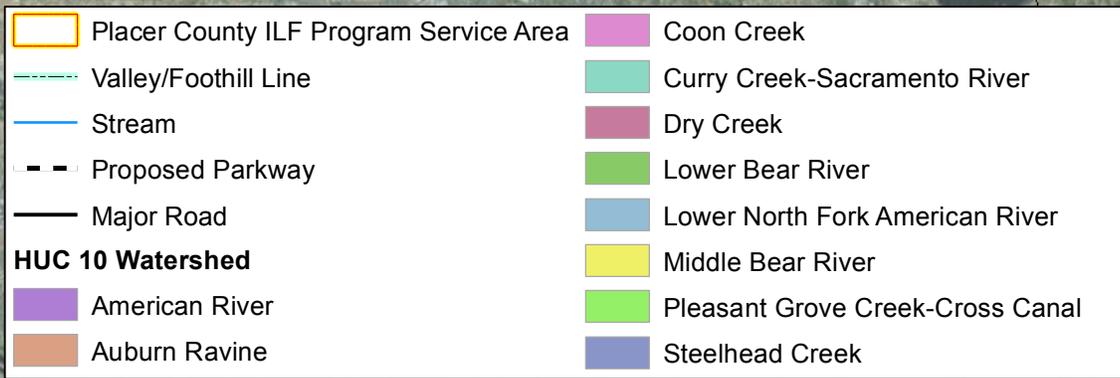


Figure 9
HUC 10 Watersheds and Riverine Systems

9). As the term implies, perennial streams sustain flows year round. The larger streams in the Plan area and vicinity such as the Bear River and American River are perennial and always have been. 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 become perennial because of inter-basin water transfers (e.g., the movement of water from one basin or watershed to another) and inputs of water destined for downstream uses (e.g., Auburn Ravine, Coon Creek, etc.). 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.

Lacustrine ecosystems are defined as inland, natural ponds and lakes, as well as artificial features such as reservoirs that are formed by dammed river channels. Aquatic features less than 0.1 acre, such as small stock ponds, are found throughout the Service Area; however, most of these shallow features were not mapped as lacustrine ecosystems due to limitations of scale in the aerial photography. Although many are named as lakes, it is important to recognize that reservoirs are different from natural lakes in their physical and biological characteristics. Most reservoirs fluctuate on an annual basis, being gradually drawn down in summer to supply water for irrigation, power generation, or agriculture. However, even a fluctuation of as little as 3 to 6 feet can prevent plants from establishing at the shoreline or aquatic plant beds from developing. Stratification also characterizes deep natural lakes.

Lacustrine ecosystems, including reservoirs, are found throughout California at virtually all elevations, but they are less abundant in arid regions. Approximately 4,790 acres of lacustrine ecosystems were mapped in western Placer County; these are widespread across the Service Area. Many artificial reservoirs and agricultural or residential ponds exist in the Service Area. The two largest reservoirs, Camp Far West on the Bear River and Folsom Lake on the American River, border Placer County on the north and south, respectively. They were created by public agencies for a combination of flood control, power generation, and water storage; both are also used for recreational purposes.

8.3 Threats to Aquatic Resources

8.3.1 Vernal Pools

Threats to vernal pools include development and fragmentation, modification to inundation and hydro-period due to changes in the hydrology of surface flows and perched groundwater flows, nonnative vegetation (including annual grasses and noxious weeds), impacts from recreational use, impacts on water quality, nonnative predators, and decreased pollination and dispersal of vernal pool species due to impacts on adjacent uplands.

8.3.2 Wetlands

Threats to wetland ecosystems include changes in the timing and volume of stream flows (e.g., effects of reservoir operations, surface water diversions, groundwater pumping, urban and agricultural runoff), dams that impede movement of fish and natural sediment transport, changes in water quality, reduction in riparian and stream channel structural complexity (e.g., loss of riparian trees, stream down-cutting and widening, and stream channelization), siltation, and invasions of nonnative species (Meehan 1991, as cited in Jones & Stokes 2004). Additional threats include

conversion to land uses such as agriculture or urban development, pollution, grazing, changes in hydrologic regime, and natural processes such as fire or flood.

Loss of riparian vegetation results in decreased shading, increased water temperatures, reduced cover, and decreased input of nutrients. Trash and other pollutants, such as oil, fertilizers, and herbicides that are washed into streams may degrade water quality to the point that aquatic life cannot persist. Aquatic invertebrates, often sensitive to water quality, may die off, thus disrupting the food chain. Water operations and land alterations that result in reduced stream baseflows and/or increased depth to the water table threaten growth in valley foothill riparian systems.

8.3.3 Other Waters

Threats to lacustrine and riverine ecosystems include changes in the timing and volume of stream flows (e.g., effects of reservoir operations, surface water diversions, groundwater pumping, urban and agricultural runoff), dams that impede movement of fish and natural sediment transport, changes in water quality, siltation, and invasions of nonnative species (Meehan 1991, as cited in Jones & Stokes 2004). Trash and other pollutants, such as oil, fertilizers, and herbicides that are washed into streams may degrade water quality to the point that aquatic life cannot persist. Aquatic invertebrates, often sensitive to water quality, may die off, thus disrupting the food chain.

8.4 Historic Aquatic Resource Loss

8.4.1 Vernal Pools

Vernal pool 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 restoration may be necessary to regain proper functioning of a vernal pool ecosystem (USFWS 2005).

8.4.2 Wetlands

Wetlands 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).

Rivers and creeks with associated riparian wetlands 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 (Kattelman 1996, as cited in Jones & Stokes 2004). All riverine systems within the Service Area have been further altered by creation 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. Valley foothill riparian woodland has 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 this land-cover type.

8.4.3 Other Waters

Lacustrine and riverine (without wetlands) features are also among the altered ecosystems as explained in the paragraphs above.

8.5 Reserve and Aquatic Resource Goals and Objectives

The reserve and aquatic resource goals and objectives for each aquatic resource addressed by the ILF Program are derived from the Draft PCCP and summarized below.

8.5.1 Reserve

Although the ILF will not include an “upland” category, these areas will be protected through vernal pool and wetland acquisitions, and ultimately through the PCCP. The ecological relationship between jurisdictional areas and uplands are important to document as they provide watershed protection for wetlands.

8.5.2 Vernal Pools

The main goal for conservation and management of vernal pool is to restore, enhance, and protect functional vernal pool complexes. This includes restoring, enhancing and creating the hydrological processes that sustain vernal pools.

The following objectives are designed to achieve this goal.

- Ensure a no net loss of vernal pools.
- Restore, enhance or create up to 298 acres of vernal pools.
- Preserve approximately 225 acres of vernal pools.
- Enhance and maintain vernal pools, vernal pool grassland complexes, and grasslands by 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.

The goals and objectives of vernal pools will be refined in the ILF Instrument and throughout the life of the ILF program to address and enhance the ecological benefit of vernal pools in the service area.

8.5.3 Wetlands

The main goal for conservation and management riparian wetland communities is to restore, enhance, create, protect and maintain riverine and riparian wetland communities that promote native biodiversity. The conservation strategy for riverine and riparian wetland 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. For western Placer County streams, this generally means providing the channel width and depth to convey 100-year flood flows while maintaining habitat complexity necessary to ensure water quality and suitable streambed conditions for all life stages of covered aquatic species. It also means restoring, enhancing and preserving wetland communities.

The following objectives are designed to achieve this goal.

- Restore up to 383 acres of palustrine wetlands (approximately 193 acres as freshwater marsh).
- Protect up to 600 acres of palustrine wetlands (400 acres in the Valley and 200 acres in the Foothills) with at least 256 acres of fresh emergent marsh.
- Restore up to 1,397 acres of riverine/riparian complex (75% as riparian woodland).
- Preserve up to 2,200 acres of riparian wetland habitat (an estimated 1,600 acres in the Valley and 600 acres in the Foothills).
- Preserve up to 88.6 linear miles of riverine habitat.

The goals and objectives of wetlands will be refined in the ILF Instrument and throughout the life of the ILF program to address and enhance the ecological relationships between wetlands and other water habitats.

8.6 Prioritization Strategy

Overall, the ILF's prioritization strategy will be based on the Corps' guidance to:

1. Purchase available credits from aquatic resource mitigation banks.
2. Re-establish or establish aquatic resources.
3. Rehabilitate aquatic resources.
4. Enhance aquatic resources.
5. Preserve aquatic resources in conjunction with other forms of aquatic resource compensation (when determined appropriate by the IRT and consistent with the 5 criteria in 33 CFR 332.3(h)).

The County in conjunction with the Corps and IRT will utilize the Corps' South Pacific Division's Uniform Performance Standards and will establish approved reference wetland areas for comparisons to improve success criteria in the restoration areas.

8.6.1 Mitigation Banks

There are several in-County and out-of-County mitigation banks with service areas that could be used to address wetland impacts. These are shown in Table 2. However, the use of mitigation banks will depend on a variety of factors including:

1. Cost and affordability of the credits in relation to County-generated credits;
2. The bank's ability to fulfill the regional conservation objectives associated with the County's goals (e.g., in-County mitigation only)
3. The bank's ability to be integrated into the PCCP's Conservation Strategy including its ability to meet the PCCP's long-term management and monitoring requirements.

Table 2. Mitigation Banks with Capacity Serving Placer County

Name	Owner	Status	Habitat Types	Acreage	Wetland Credits (Acres)
In-County					
Western Placer Schools Conservation Bank	Wildlands, Inc.	Available	Vernal pool, wetlands	121.78	18.662 vernal pool preservation
Locust Road Mitigation Bank	Wildlands, Inc.	Available	Annual grassland, seasonal wetland, vernal pool	74.56	0.001 seasonal wetland (plus 0.73 potential); 3.136 vernal pool creation (plus 5.134 potential)
Toad Hill Ranch Mitigation Bank	Wildlands, Inc.	Available	Annual grassland, vernal pool, spring/seep	1,630.72	8.25 seasonal wetland (plus 16.5 potential); 5.702 vernal pool creation (plus 24.9 potential)
Markham Ravine Conservation Bank	Westervelt Ecological Services	Pending	Fresh emergent, vernal pool	300.0	Pending
Silvergate Mitigation Bank	Sheridan Mitigation Corp.	Unknown	Fresh emergent, lacustrine, riverine	655	Not listed in RIBITS
Yankee Slough Conservation Bank	Conservation Resources, LLC.	Unknown	Fresh emergent, riverine	732	Not listed in RIBITS
Out-of-County					
Bryte Ranch Conservation Bank	Richard Thurn	Available	Vernal pool	573.0	13.778 vernal pool preservation
Clay Station Conservation Bank	ECORPS	Available	Vernal pool	405.0	56.01 vernal pool preservation (plus 5.1 potential)
Dolan Ranch Conservation Bank	Wildlands, Inc.	Available	Vernal pool	252.0	11.442 vernal pool preservation
Elise Gridley Multi-Species Conservation Bank	Wetland Resources LLC	Available	Marsh, riparian, vernal pool	1,815.0	8.835 freshwater marsh, 2.47 riparian potential, 19.58 vernal pool/seasonal wetland creation,
Gill Ranch Conservation Bank	Conservation Resources	Available	Vernal pool	1,810	8.956 vernal pool preservation (plus 33.766 potential preservation)

Note: Updated based on data in Regulatory In-lieu Fee and Bank Information Tracking System (RIBITS) November 10, 2015.

If a bank is able to fulfill these requirements, it may be used by the County or project applicants to mitigate wetland impacts. As described earlier, in the absence of the proposed ILF Program, applicants would need to utilize appropriate credits on an ad hoc basis from mitigation banks if available within the area of their project, from other ILF programs (such as the NFWF ILF Program), or propose a permittee-responsible mitigation project. However, these methods may not support the ongoing regional conservation efforts set forth in the PCCP, and existing and future mitigation banks would only provide a portion of the credits anticipated to be needed to mitigate for potential future growth. The Placer ILF Program aims to maintain the regional watershed functions and

services within the County more broadly than mitigation banks or ILF programs are likely to be able to do.

8.6.2 Reserve and Vernal Pools

The County will prioritize acquisition of vernal pool lands based on whether properties occur within USFWS Vernal Pool Critical Habitat for vernal pool fairy shrimp and USFWS Vernal Pool Recovery Core Area, particularly where critical habitat and core areas fall within the Reserve Acquisition Area. (The Western Placer County core area comprises 36,260 acres, all in the Service Area, including 2,580 acres of critical habitat designated for vernal pool fairy shrimp. Sixty percent of the critical habitat and 45 percent of the core habitat are in the planned future growth [PFG] area, with the balance of the total in the Reserve Acquisition Area). Focusing acquisition of critical habitat and core areas in the Reserve Acquisition Area (as opposed to PFG) will help to buffer future vernal pool reserves from urban/suburban development and associated secondary impacts (e.g., runoff, spread of invasive species, light and noise pollution).

Sites that support occurrences of large populations or high density of covered species, or rare occurrences (e.g., Conservancy fairy shrimp, which currently has one known occurrence in the Service Area) will also be prioritized for acquisition. The County will also work to protect and 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 protect and restore vernal pools and vernal pool grassland complexes in the Reserve System in general should follow these guidelines:

- In general, the minimum area for an acquisition of a vernal pool complex is 200 acres if the area is within the PFG 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 such as Conservancy fairy shrimp, Ahart's or Red Bluff dwarf rush, and nest colonies for bank swallows and tricolor blackbird.
- 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 restoration 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 be able to allow grazing or other suitable means to control invasive species and to ensure ecological integrity. Such methods may not be practicable on reserves imbedded within an urban/suburban matrix.
- The interface between urban/suburban land uses and Reserve lands should be minimized to decrease edge effects. These concepts are described in Chapter 6 of the Draft PCCP, but will be further integrated and enforced through the development of implementation strategies for the ILF Program.

Restored and created 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.). Restored and created vernal pools must be able to function based upon existing hydrology without augmentation. Their design should 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 will include the 12 components required by the Mitigation Rule, including clearly defined objectives, enforceable ecologically-based success criteria, monitoring plan, adaptive management plan, and long-term management plan. Objectives and success criteria will be modified and improved as new information becomes available through development and implementation of the monitoring and adaptive management programs.

The County's restoration projects will include criteria consistent with performance standards and success criteria as outlined in South Pacific Division's Uniform Performance Standards. These standards typically include:

- a. Requirements for survival of planted stock.
- b. Requirements for plant density or percent cover by hydrophytic plants.
- c. Requirements that are staged over time so that different performance standards must be met as the aquatic resource matures.
- d. Requirement of a target percent cover, density, or height of native species.
- e. Requirement of a target species richness amount.
- f. Use of indices to compress large amounts of information.
- g. Use of reference wetlands or other aquatic resources sites as a benchmark.
- h. Requirements specifically limiting occurrence of exotic and nuisance plant species.

Additionally, performance standards for aquatic resource types will measure physical, hydrologic, and water quality conditions at mitigation sites.

For each restoration plan, the County will coordinate with the IRT to develop a list of site-specific aspects of a vernal pool complex that needs to be restored. The County will also coordinate with the IRT to ensure that scientifically-based and site-specific restoration methods are implemented while restoring the hydrological and ecological processes in the vernal pool and upland habitats of each site.

Monitoring efforts of restored and created vernal pools in the Service Area indicate that future restoration in the Plan area has a high potential for success. These include over 100 vernal pools restored by A. Teichert & Son in Lincoln (EcoAnalysts 2009), USFWS-restored vernal pools at both the Colusa and Llano Seco Complexes of the Sacramento USFWS Wildlife Refuge (Silveira 2007), and others. Successful restoration projects in the County with similar physical and landscape conditions will be used to inform proposed vernal pool restoration projects in the ILF Program.

8.6.3 Wetlands

The Corps and IRT with the County will identify restoration sites based on the site selection guidelines described below, first for riparian wetlands, then for other wetland types. Figure 5 displays potential restoration opportunities along upper and lower Coon Creek, upper and lower Yankee Slough, lower Markham Ravine, Auburn Ravine, lower Pleasant Grove Creek, and Curry Creek. The ILF Program will utilize the Dry Creek Coordination Management Plan, the Auburn Ravine/Coon Creek Ecosystem Restoration Plan, and the Pleasant Grove/Curry Creek Ecosystem Restoration Plan to help identify potential stream and riparian acquisition, enhancement, and restoration actions in these watersheds. These plans provide guidance for riparian and stream restoration 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 PFG Dry Creek Watershed as shown on and Figure 6. Additional opportunities for riparian restoration would be identified through site assessments.

Restoration and enhancement sites will be selected according to criteria that include but are not limited to:

- Moderate to high potential for success of restoration 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 restoration 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 PCCP 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, Dry Creek Watershed American Basin Council of Watersheds, Dry Creek Conservancy, and the Pleasant Grove-Curry Creek Ecosystem Restoration Project Group, Trout Unlimited, and the

member organizations of the Central Valley Joint Venture) and, when necessary, the IRT to identify restoration sites.

For freshwater emergent marsh, seasonal and spring/seep wetlands, potential restoration and creation sites will be identified and selected based on their hydrologic, geomorphic, and soil conditions to ensure the success of restoration 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. For example, sites selected to provide nesting habitat for tricolored blackbird must be situated within a matrix of suitable foraging habitat. Sites selected to provide habitat for covered amphibians and northwestern pond turtle must have suitable upland habitat adjacent to the restored wetland or pond to provide habitat for aestivation, nesting (for northwestern pond turtle), and corridors for movement to other habitats. In accordance with the California red-legged frog recovery plan, ponds created to provide habitat for California red-legged frogs should incorporate the Appendix D Guidelines for Voluntary Pond Management for the Benefit of California Red-legged Frog (USFWS 2002). This includes locating ponds at least 0.6 mile from ponds inhabited by bullfrogs.

8.6.4 Other Waters

The Corps and IRT with the County will identify restoration sites based on the site selection guidelines described below. Figure 5 displays potential restoration opportunities along upper and lower Coon Creek, upper and lower Yankee Slough, lower Markham Ravine, Auburn Ravine, lower Pleasant Grove Creek, and Curry Creek. The ILF Program will utilize the Dry Creek Coordination Management Plan, the Auburn Ravine/Coon Creek Ecosystem Restoration Plan, and the Pleasant Grove/Curry Creek Ecosystem Restoration Plan to help identify potential stream acquisition, enhancement, and restoration actions in these watersheds. These plans provide guidance for stream restoration 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 PFG Dry Creek Watershed as shown on and Figure 6.

Restoration and enhancement sites will be selected according to criteria that include but are not limited to:

- Moderate to high potential for success of restoration 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 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 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 PCCP 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, Dry Creek Watershed American Basin Council of Watersheds, Dry Creek Conservancy, and the Pleasant Grove-Curry Creek Ecosystem Restoration Project Group, Trout Unlimited, and the member organizations of the Central Valley Joint Venture) and, when necessary, the IRT to identify restoration sites.

8.7 Use of Preservation

For impacts to aquatic resources within the Corps' jurisdiction, preservation may be utilized as a method of mitigation when the five factors in the Mitigation Rule are met as defined previously. Preservation can be credited by discretion if it is associated with a larger complex of mitigation areas (restoration and/or enhancement projects). Additionally, landscapes that contain sensitive ecological features (vernal pools, endangered species, and mature riparian forests) with established natural processes should be protected (preserved) in perpetuity for the cumulative benefit to the ecosystem.

8.8 Public and Private Stakeholder Involvement

The ILF Program is designed to involve partners such as government entities, private entities, and non-profit conservation organizations in its implementation. Such stakeholder involvement will be critical to the success of the ILF Program. The regulatory agencies including the Corps, EPA, USFWS, and CDFW as represented by the IRT are engaged in the development, review, and approval process of the ILF Program and also have jurisdiction over and significant knowledge of the geography, ecology, and aquatic resources the program addresses. If approved, the ILF Program will require the ongoing, active involvement of the IRT. In addition, The County invites other governmental entities that may not be represented in the IRT, including the National Marine Fisheries Service (NMFS), CVRWQCB, and State Water Resources Control Board (SWRCB), to review and offer input in the development of the ILF Program, and to consider participating in its implementation. Finally, it is expected that the owners of land proposed for development in Placer will play a critical role in the early stages of this Program by providing appropriate sites for mitigation projects implemented under the Program.

8.9 Long-Term Protection and Management Strategies

The ILF Program provides for the long-term preservation and management of the mitigation 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. However, the County anticipates that conservation easements will be recorded on all preserve lands and that the County will own the conservation easements in most cases. Each mitigation project covered by the ILF Program will meet the appropriate ownership and stewardship requirements to insure its long-term protection pursuant to the Mitigation Rule.

Conservation easements or equivalent protection measures will be recorded on mitigation project sites before the final release of mitigation project credits.

8.10 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. A formal ILF Program monitoring report will be generated and submitted to the IRT annually. The Compensation Planning Framework is intended to be a living document that is evaluated periodically, and updated and refined as necessary to incorporate new information and stakeholder participation. Potential updates to the Compensation Planning Framework will be presented to the IRT at the biannual meetings.

9.0 Program Account

The County will establish and maintain a system for tracking the production of credits, credit transactions, and financial transactions between the County and purchasers of credits. Credit protection, credit transactions, and financial transactions must be tracked on a programmatic basis (i.e., the number of available credits for the entire program by service area) and separately for each individual project.

The County's ILF Program account will track funds accepted from purchasers separately from those accepted from other entities and for other purposes (i.e., enforcement actions, supplemental environmental projects, grants). The account will be set up within the Treasury of the County of Placer, which in turn is held at a financial institution that is a member of the Federal Deposit Insurance Corporation. Any and all interest accruing from the account will be used to provide compensatory mitigation for impacts on aquatic resources.

The program account will be established after the Instrument is approved and before any ILF Program fees are accepted by the County. The price of each credit fee will be based on administrative and consultant costs of site selection, conducting baseline assessments, restoration design, obtaining entitlements and permits, as well as the cost of land acquisition, implementation of the restoration project, initial management of the restoration projects until success criteria are achieved, and long-term management costs (e.g., endowment or equivalent). The detailed costs for site-specific credits will be provided in mitigation plans for review and approval by the IRT to ensure sufficient monies are collected to implement and manage planned projects in perpetuity.

A portion of the fees paid into the ILF Program may be used for administrative costs. Such costs include fees associated with the establishment and operation of the program, staff time for carrying out program responsibilities, expenses for day-to-day management of the program, and administrative duties associated with hiring private contractors or consultants.

Funds from advance credits sales may be deposited into a single financial account constituting the "ILF Program Account," the funds generated by each Credit sale will be tracked separately by an accounting system and allocated to the appropriate Credit type (i.e., Vernal Pool, Wetlands, or Other Waters). All funds in the ILF Program Account will be tracked to their ultimate expenditure, whether for project related costs, administrative costs, or other costs as provided by the 2008 Rule. This will be accomplished through a system and tools similar to which is used by the NFWF ILF program (NFWF 2012) that includes *Deltex-Costpoint and EasyGrants* or similar.

The County will report annually to the IRT on the ILF program account. The County understands that if the Corps, or other members of the IRT, determines that the County is failing to provide compensatory mitigation by the third full growing season after the first advance of credit is secured, funds may be directed to alternative compensatory mitigation projects. In addition, the County understands that the Corps and other IRT signatories to the Instrument have authority to audit the program account at any time.

The reporting will include:

- all income received, disbursements, and interest earned;
- a list of all permits (including the Corps permit number, the amount of authorized impacts, the amount of required compensatory mitigation, the amount paid into the ILF Program Account, and the date the funds were received from the permittee);
- a description of the expenditures from the account, such as the costs of land acquisition, planning, construction, monitoring, maintenance, contingencies, adaptive management, and administration; and
- the balance of advance credits and released credits at the end of the report period.

Additionally, the ILF program will apply generally accepted accounting principles (“GAAP”) to all of its financial accounts including the ILF Program Account.

Funds in the program will be invested at an institution that is a member of the Federal Deposit Insurance Corporation in accordance with NFWF’s then-prevailing investment policy statement on cash management, or another investment policy approved by the IRT. The County believes the NFWF investment policy is a potentially appropriate investment strategy for ILF Program Account funds since the funds will generally be expected to be disbursed or obligated within three years of receipt. Accordingly, the County’s 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.

10.0 Sponsor Qualifications

The County will form an internal team led by the Community Development/Resource Agency in coordination with the other participating agencies (City of Lincoln and Placer County Water Agency) to operate the ILF Program. The County has extensive experience developing and implementing large programs, including conservation planning programs, and working with resource and regulatory agencies to comply with state and federal laws. The County also has extensive experience managing accounts, collecting fees, and managing consultant teams.

The County will implement ILF Program for compensatory mitigation projects, and it will be responsible for developing and maintaining annual budgets; obtaining grants; receiving, tracking and reporting fee revenues collected; researching land acquisition opportunities; acquiring land (with partners); implementing restoration projects; and management/monitoring of the reserves.

The County team will be responsible for collecting and tracking fees, ensuring the number of credits sold to a permittee match the final regulatory permit requirements, and reporting fee collections to

the IRT through an approved letter format on a monthly basis. The County team will manage and account for the fee revenues collected under the ILF Program through credit ledger and reporting protocol that the IRT will be able to review and approve.

Placer County through the Placer Legacy program has extensive experience with the planning, implementation, maintenance, and monitoring of wetland/stream system restoration and creation projects. Recent Placer County projects include the Lakeview Farms Riparian and Wetland Restoration project (restored 17.5 acres of riparian habitat and created 3.8 acres of seasonal wetland habitat), and the Miners Ravine Streambank/Riparian Restoration Project (restored 0.42 acres of riparian habitat, and 660 linear feet of the stream channel and bank). The NID Highway 65 Gauging Station Fish Passage Restoration Project resulted in the construction a new roughened channel with rock chutes and pools designed to facilitate Chinook salmon and steelhead passage. Placer County is in the design phase of the Cotton Dam Fish Passage and Riparian Habitat Restoration Project expected to result in over 20 acres of riparian restoration through the re-alignment of the existing stream channel and partial removal of Cotton Dam. In addition, the County is currently in the design phase of two major restoration projects in the Squaw Creek and Truckee River watersheds. All projects have or will result in a cumulative net increase of waters of the United States. Moreover, since 2000, Placer County, working with the Placer Land Trust, Truckee Donner Land Trust and others, has protected over 20,000 acres of land.

In addition to drawing on the County's experience, the County will contract with experienced mitigation providers/contractors/consultants to design, construct, monitor, and maintain the mitigation sites. The County team will be responsible for the identification and management of consultant teams to plan and implement site-specific priority projects, ensure compliance with monitoring protocols and adaptive management strategies within the site-specific plans, and maintenance and management of the sites. Annual reports for each mitigation site will follow a standard format approved by the IRT and, if annual reports are prepared by consultants, they will also be reviewed by the County team prior to submission to the IRT to ensure standardization and completeness.

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