STATE OF CALIFORNIA

FIVE YEAR COORDINATED WORK PLAN *for* WETLANDS CONSERVATION PROGRAM DEVELOPMENT

Revised March 2014

Introduction
This revised five year coordinated work plan has been developed by staff of the Department of Fish and Wildlife (DFW), Sacramento-San Joaquin Delta Conservancy, the Coastal Conservancy, and the State Water Resources Control Board (State Water Board) to carry out each agency's directives regarding wetland conservation program development. This revision includes the activity plans of two new agency partners: the Delta Conservancy and the Coastal Conservancy. The planning activities described in this work plan will develop each agency's wetland program in accordance with their respective agency's guidance and policies. (See Attachment A for a summary of past program accomplishments.)

1. Overall Goal Statement

Through this plan, our goal is to:

Increase the abundance and diversity of California's wetlands and riparian areas, and to sustain and enhance the delivery of ecosystem services.

2. General Background

2.a. Department of Fish and Wildlife

Several initiatives are underway in California to better coordinate, monitor and regulate activities involving California's wetlands, and as trustee for the State's fish and wildlife resources, DFW plays a role in these efforts. These efforts are consistent with recommendations in the California Natural Resources Agency's 2010 State of the State's Wetlands Report that calls for increased consistency and coordination among the State and its partners in conserving and assessing wetland quality and quantity.

In 2008, the California Wetlands Monitoring Workgroup (CWMW) was convened to better coordinate the wetland monitoring activities of local, State, and federal

agencies, tribes and non-governmental agencies involved in wetland monitoring and regulation. DFW participates and provides technical input on a variety of monitoring and policy topics. DFW also participates in the California Estuary Monitoring Workgroup which is initially focusing its efforts on the San Francisco Bay-Delta estuary. This workgroup group is developing a web page for the My Water Quality website which will have information on the ecosystem health and service provided by estuaries in California.

Additionally in 2008, the State Water Board began development of a Wetland and Riparian Area Protection Policy (Policy) that is intended to better regulate wetland resources of California. In its initial stages, the Policy is focused on defining wetlands (e.g., a consistent State definition of wetlands), developing a common wetland classification system, and integrating wetland monitoring. DFW has provided input into the development of this Policy through the State Water Board's Interagency Coordinating Committee (ICC) and the CWMW.

Through the actions described below, DFW will continue to assist in the coordination of wetland monitoring in the State, improve consistency among wetland-related regulatory efforts, support mapping efforts for the wetland resources of the State, and carry out wetlands conservation, management and restoration activities in cooperation with partner agencies and organizations statewide.

2.b. State Water Resources Control Board

As mentioned above, the State Water Board is considering a new policy on wetlands. The new policy is designed to protect and enhance California's wetlands, bring consistency to regulatory efforts by the State Water Board and nine Regional Water Quality Control Boards (Water Boards collectively), and to provide a common framework for monitoring and reporting water quality. The State Water Board directed staff, in Resolution Number 2008-0026, to develop a wetland protection policy using a phased approach. Phase 1 will bring forward a wetland definition; criteria for approving permits regulating the discharge of dredged or fill material into state waters; and wetland monitoring standards. Phase 2 will address wetland water quality standards and Phase 3 will address riparian protection measures.

Over the next five-year planning period, the State Water Board will focus on adopting and implementing Phase 1 and integrating the California Water Quality Monitoring Council's Wetland monitoring guidance into core Clean Water Act programs. In addition, research will be ongoing in support of the policy. In developing and implementing these actions, the State Water Board will seek to integrate its actions with regional planning approaches including natural community conservation plans, habitat conservation plans, watershed plans and integrated water resource management plans, and state climate change initiatives.

2.c. Sacramento-San Joaquin Delta Conservancy

The Sacramento-San Joaquin Delta Conservancy (Delta Conservancy) is California's newest conservancy, created by the Legislature as part of comprehensive Delta-focused legislation in November 2009. The Delta Conservancy leads efforts in protecting, enhancing and restoring the Delta ecosystem in coordination with other governmental and non-governmental entities in the Delta. The Delta Conservancy is contributing to better coordinated monitoring, ecosystem restoration, and natural resource management that may impact California's wetlands.

In 2008, the California Wetlands Monitoring Workgroup (CWMW) was convened to better coordinate the wetland monitoring activities of State and federal agencies involved in wetland monitoring and regulation. Staff from the Delta Conservancy is a co-chair for this group and will provide technical input on a variety of monitoring and policy topics including the development and use of the California Rapid Assessment Method (CRAM) and CRAM's use in monitoring and assessment programs in California.

The Delta Conservancy is pursuing partnership opportunities with the State Water Board for wetland monitoring and assessment in the Delta. Through this effort the Delta Conservancy will be playing a role in the State Water Board monitoring, assessment and reporting core element 28, "Regional Capacity Building" and the State Water Board monitoring, assessment and reporting core element 29, "WRAMP Partnership Support" through the Delta Conservancy's Habitat Tracking Project (see Table 3, pg. 17). This project is to expand the current capabilities of the EcoAtlas wetland project tracking system for the monitoring and assessment of California's aquatic resources to meet the project tracking, assessment, and reporting needs for current and planned habitat restoration.

The Delta Conservancy also houses the Delta habitat restoration project database, which was initially developed by the California Department of Water Resources' (DWR) FloodSAFE Environmental Stewardship and Statewide Resources Office (FESSRO) Delta Levees Program. This GIS database of current and planned restoration was developed to facilitate agency and stakeholder coordination and enhance understanding of existing projects and planning efforts. The Conservancy will continue to maintain and update the habitat restoration project database until it is incorporated into EcoAtlas.

2.d. State Coastal Conservancy

The California Coastal Conservancy (Coastal Conservancy), established in 1976, uses entrepreneurial techniques to purchase, protect, restore, and enhance coastal resources, and to provide access to the shore. We work in partnership with local governments, other public agencies, nonprofit organizations, and private landowners. Based on our analysis of the issues facing the California coast and Bay Area, the Coastal Conservancy has identified categories of restoration and protection activities that the Conservancy will work on during the

next five years, and beyond. In addition, we have identified objectives for improving coordination of wetland restoration and monitoring activities throughout the State, the San Francisco Bay, and Southern California, in particular.

In Southern California, the Coastal Conservancy works to coordinate and facilitate wetlands restoration activities through the Southern California Wetlands Recovery Project (WRP). The WRP, initiated in 1998, is a broad-based partnership of 18 state and federal agencies working in concert to improve coordination, pool resources, and advance the recovery of rivers, streams, and wetlands in coastal Southern California. The Coastal Conservancy provides staffing and serves as a fiscal agent for the WRP.

A primary goal of the WRP during the next five years is to update the *Regional Strategy* (2001), a document that guides project prioritization and shapes restoration and enhancement projects throughout the region. The *Regional Strategy* update will incorporate new data to create regional restoration goals, address resiliency to climate change, utilize the Integrated Wetlands Regional Assessment Program (IWRAP) to assess progress towards our goals, and provide an opportunity to align WRP priorities with other programs and efforts throughout the state. IWRAP, a regional monitoring program that was pioneered by the WRP, has produced data and information about the condition of Southern California wetlands and projects. This wetland assessment information will help form a critical piece of the *Regional Strategy* update. Furthermore, because IWRAP is wholly consistent with WRAMP tenets and tools, it provides critical data to the overall state program. Technical guidance for the Regional Strategy update will be provided by the Science Advisory Panel (SAP), which has grounded the WRP's management decisions in the best available science for the past 17 years. Participation in the California Wetland Monitoring Workgroup (CWMW) will allow the WRP's efforts to take advantage of knowledge and expertise from other portions of the state and will provide the state program with an excellent case study of regional cooperative monitoring, assessment, and planning.

In order to support the WRP's high-priority projects once they have been identified through the *Regional Strategy*, the Coastal Conservancy is acting as the Program Sponsor for the development of a WRP In-lieu Fee Program. The WRP's In-Lieu Fee Program will provide an opportunity for consolidated compensatory mitigation projects that have greater ecological functions and benefits than small, geographically separated projects. We will need to fully utilize the wealth of scientific and technical expertise available through the SAP in order to develop the In-Lieu Fee Program. Supporting the development of the In-lieu Fee Program will be a major focus for the Coastal Conservancy during the next five years.

Along the Central Coast, the Coastal Conservancy is involved in several wetland restoration programs. The Conservancy serves on the Executive Committee of the Morro Bay National Estuary Program and works with the MBNEP to implement priority projects identified in the Comprehensive Conservation and Management Plan (CCMP). Three key issues identified in the CCMP include

accelerated sedimentation, bacterial contamination, and excess nutrient loading. The Conservancy has helped to implement several projects to address these issues including implementing best management practices on agricultural lands and restoring floodplain function and habitat. The Conservancy also participates on the Strategic Planning Team for the Elkhorn Slough National Estuarine Research Reserve Tidal Wetland Program (TWP).

The Conservancy is also a key partner in the Integrated Watershed Restoration Program (IWRP) which stretches from Monterey County north to San Mateo. IWRP brings together federal, state and local resource and funding agencies to select and oversee the design and implementation of high priority projects to restore watersheds and wetlands and improve water quality. IRWP grew out of a series of watershed and wetland assessments prepared in the late 1990s and early 2000s. Staff from the Coastal Conservancy recognized the need for a coordinated, region-wide process for identifying, funding, and developing key projects to improve wetlands, riparian and aquatic habitat. The Coastal Conservancy has played a pivotal role in IWRP, providing critical funding for designs and permits for selected projects, technical assistance to develop projects with resource agency guidance, and leveraging funds for implementation.

In San Francisco Bay, the Coastal Conservancy is facilitating several large-scale wetlands restoration projects, is updating the San Francisco Baylands Ecosystem Habitat Goals Report, is implementing the San Francisco Bay Subtidal Habitat Goals Report, is coordinating restoration activities through the San Francisco Bay Joint Venture and San Francisco Estuary Partnership, and is supporting the work of the San Francisco Bay Restoration Authority.

In San Francisco Bay, the San Francisco Baylands Ecosystem Habitat Goals Report (Goals Report) was released in 1999 and calls for 100,000 acres of tidal marsh, with 40,000 acres existing today. The Coastal Conservancy is in the process of updating the Goals Report to take into account climate change impacts and especially sea level rise. This science update will be completed in late 2014 and provide recommendations for accomplishing the acreage goals in light of climate change and sea level rise. Continued reassessment of the impacts of climate change on our ability to reach the objectives in the Goals Report will be needed. The San Francisco Bay Subtidal Habitat Goals report lays out restoration, management, and science recommendations for the deeper water habitats in San Francisco Bay and we need to periodically assess progress.

The Coastal Conservancy is coordinating restoration activities efforts in the Bay through the San Francisco Bay Joint Venture and San Francisco Estuary Partnership (SFEP), and is supporting the work of the San Francisco Bay Restoration Authority. The San Francisco Bay Joint Venture, funded primarily by the US Fish and Wildlife Service, serves as the primary coordination forum for wetlands restoration and management in San Francisco Bay. The Joint Venture maintains a database and map of restoration and enhancement projects (through Wetland Tracker/EcoAtlas) and develops cost estimates for implementation of

wetlands efforts, and has an implementation strategy, *Restoring the Estuary*, which is periodically updated. The SFEP, a National Estuaries Program supported by US EPA, includes wetlands restoration among its priority areas. The Comprehensive Conservation Management Plan (CCMP), completed in 1993, includes objectives for wetlands among 145 actions to improve the health of San Francisco Bay, the Delta, and its watershed, while sustaining the beneficial uses of its waters for humans and wildlife. SFEP updated the CCMP in 2007, and today is undertaking a big picture review of accomplishments to date and challenges ahead. The goal is to create a new plan with focused actions, clear timelines and defined success markers. The newest collaborative effort to restore wetlands in the Bay is the San Francisco Bay Restoration Authority. The Authority is considering a regional measure to establish a parcel tax, with funds to go towards improving the health of San Francisco Bay. The Authority has much work to do prior to placing a measure on the ballot and if a measure passes, the Authority will undertake rigorous strategic planning, develop project selection processes, provide for external oversight, and report regularly on progress.

In the North Coast region, the Coastal Conservancy has helped establish the Humboldt Bay Initiative (HBI), a network of local partner agencies and non-profits that works to further ecosystem based management in Humboldt Bay, including wetland restoration. The Conservancy is currently working with HBI on sea level rise adaptation planning for the region, including tidal marshes and other natural resources. In addition, the Conservancy is working with its partners to plan and implement tidal marsh restoration projects for sea level rise adaptation. Three projects that are addressing sea level rise adaptation include a feasibility study with the Humboldt Bay Harbor District for the reuse of dredged materials for tidal marsh restoration and sea level rise adaptation, a feasibility study with the City of Arcata to create a wetland adjacent to the City's wastewater treatment plant to reduce threats associated with sea level rise, and working with the Humboldt Bay National Wildlife Refuge to implement the White Slough Restoration Project, providing sea level rise protection for shoreline infrastructure.

The Coastal Conservancy also sits on the Pacific Coast Joint Venture (PCJV) Management Board. The PCJV's territory includes California's three northernmost coastal counties – Mendocino, Humboldt and Del Norte -along with the coastal portions of Oregon, Washington, British Columbia, Alaska and Hawaii. The PCJV is working to update the existing Pacific Coast Joint Venture Strategic Plan, which includes recommendations for protection and enhancement of wetlands and bird habitat throughout its territory.

3. Wetland and Riparian Area Monitoring Plan

All activities of this work plan related to assessment and monitoring will be consistent with the Wetland and Riparian Area Monitoring Plan (WRAMP), developed by the CWMW and endorsed by the California Water Quality Monitoring Council (Monitoring Council) in June 2010.

CWMW continues work towards agreement on standardized aquatic resource mapping and definitions, monitoring and assessment approaches, and information collection and reporting. Increased emphasis is being placed on the transfer of these assessment tools and systems for routine program use by California's environmental agencies, their partners and constituents.

CWMW recognizes that the State Water Board Surface Water Ambient Monitoring Program (SWAMP) will provide support tools to all workgroups of the Monitoring Council. This includes a rigorous quality assurance/quality control program, the California Environmental Data Exchange Network (CEDEN) to share ambient water quality data between Water Board programs and with other agencies and organizations, and a system of Regional Data Centers to assist data generators with data comparability and management. SWAMP was envisioned to coordinate all water quality monitoring conducted by the State and Regional Boards to assess attainment of all core beneficial uses in all waterbody types.

4. Actions and Activities to Support the Overall Goal

4.a. Plan Organization

This work plan outlines specific activities over the next five years that are related to U.S Environmental Protection Agency's core elements of an effective state and tribal wetland program:

Regulation
Monitoring and Assessment
Water Quality Standards for Wetlands
Voluntary Restoration and Protection

Yearly activities will focus on selected core program elements; not all elements will be addressed in any given year.

4.b. Watershed Approach

This work plan will integrate the use of the watershed approach in all core areas. The approach is applied to leverage each of the core activities that protect and restore wetlands and riparian areas toward attainment of community-based environmental goals. Ecosystem restoration and management are considered components of protection.

More specifically, the watershed approach considers the abundance, locations, types and condition of aquatic resources in a watershed and how those factors contribute in the support of beneficial uses, fish and wildlife habitat and attainment of watershed goals. Consideration also is given to understanding historic and potential aquatic resource conditions, past and projected aquatic resource impacts in the watershed, and terrestrial connections between aquatic resources. Use of the watershed approach is intended to sustain or restore the natural abundance, the diversity and the ecological condition of aquatic resources in a broad landscape context. The watershed approach also is flexible in its recognition that ecosystem enhancement may be the environmentally preferred management practice in some highly disturbed, heavily engineered or rapidly changing environmental settings. Reporting on a watershed basis better informs land use decision making.

4.c. DFW Specific Actions

Table 1: DFW Planned Actions and Target Dates

ACTION ITEM	DESCRIPTION	PRODUCT	YEAR COMPLETED
Core Element: Regulation			
1. ICC	Continue participation in the ICC.	Policy input.	Ongoing input on policy and regulatory discussions.
2. Biological Objectives	Co-lead the technical development and participate as a member of the Steering Committee for the Biological Objectives Policy.	Develop the technical basis for objective quantification of stream health in California's perennial streams.	Ongoing work to support successful implementation will continue for the next few years as the details of the State Board policy are finalized.
Core Element: Monitoring, Assessment, and Reporting			
3. CWMW	Continue participation in the CWMW.	Policy/technical input.	Ongoing
4. Data Management and Exchange	Continue participation in the Monitoring Council's Data Management Workgroup.	Facilitate storage, exchange and access to wetland related data through the My Water Quality website.	Ongoing
5. Map Developmen t	Continue participation in the development of maps, including the development of the wetland classification system, through the CWMW.	Policy/technical input.	Ongoing
6. Map Management	Support dissemination of data pertaining to State's wetland and other aquatic resource maps. Data/metadata will be available for public viewing and downloading through DFW's BIOS website at bios.dfg.ca.gov and map services.	Wetland and aquatic resource maps, web services.	Ongoing
7. Monitoring and Assessment	Provide technical support for implementation of the Perennial Stream Assessment program and participate in efforts to expand into other waterbody types (e.g., wetlands and other aquatic resources) Participate in projects that support the use of bioassessment for condition assessment of aquatic resources.	Generate monitoring data and provide condition assessments.	Ongoing
8. Reporting	In collaboration with other agencies through the CWMW, report to decision makers and the public via the California Wetlands Portal (http://www.mywaterquality.ca.gov/eco_health/wetlands/) information that helps address three basic questions: (1) What is the extent of our wetlands? (2) How healthy are our wetlands? (3) How are our wetlands protected?	My Water Quality Portal Home Page.	Ongoing

*** Starred items are projects funded by USEPA

Table 1: DFW Planned Actions and Target Dates Continued

ACTION ITEM	DESCRIPTION	PRODUCT	YEAR COMPLETED
Core Element: Voluntary Restoration and Protection			
9. Wetland and Riparian Related Conservation Plans and Programs	Continue engagement in wetlands conservation, management and restoration activities throughout the State including the Central Valley and San Francisco Bay Joint Ventures and associated working groups and the Southern California Wetlands Recovery Project.	Meeting minutes and project reports, publications, and updates.	Ongoing through Waterfowl Program, Comprehensive Wetland Habitat Program, and wetland restoration and enhancements.
10. Wetland and Riparian Related Acquisition and Restoration, and Enhancement	Continue working to acquire and restore wetlands in cooperation with partner agencies and organizations statewide.	Agency updates, project reports and/or publications.	Ongoing through mitigation and acquisition efforts and grant fund administration.

*** Starred items are projects funded by USEPA

Table 2: Web links to DFW Table 1 Work Products

TABLE 1 ITEM NUMBER	NAME	WEB LINK
6.	Biogeographic Information and Observation System (BIOS) website	http://www.dfg.ca.gov/biogeodata/bios/whatis.asp
8.	Information Sharing	http://www.mywaterquality.ca.gov/eco_health/wetlands/
9. 10.	Comprehensive Wetland Habitat Program	http://www.dfg.ca.gov/lands/wetland/

4.d. State Water Board Specific Actions

Table 3: State Water Board Planned Actions and Target Dates

ACTION ITEM	DESCRIPTION	PRODUCT	YEAR COMPLETED
Core Element: Regulation			
1. Develop Wetland and Stream Definitions	Develop draft definitions for wetlands and stream channels.	Technical Advisory Team Memos; Peer Review.	Wetland definition completed 2010; stream definition targeted for mid-2014.
2. Phase 1 Policy***	Draft Phase 1 Wetland Area Protection and Dredge and Fill Permitting Policy to include a wetland definition, a delineation method, an assessment and monitoring framework, and procedures for dredge and fill discharges modeled after the 404(b)(1) Guidelines including the mitigation rule.	Draft Policy for public review and comment.	Spring 2014
3. Coordinate Policy Development with Regional Water Boards***	Coordinate Phase 1 efforts with all Regional Water Boards, and specifically with the San Francisco Bay Regional Water Quality Control Board's (Region 2's) proposed Stream and Wetland Systems Protection Policy Basin Plan amendments.	Meeting Minutes.	
4. Phase 1 Substitute Environmental Document (SED) Drafting Process***	The environmental document is a SED, which is authorized for Water Board policies and plans.	Draft SED.	Spring 2014
5. Phase 1 SED Public Review	Hold public workshops and a public hearing and respond to comments; make any necessary revisions to SED.	Meeting documents; sign-in sheets; response to comments.	Spring 2014
6. State Water Board Adoption of Phase 1	Obtain State Water Board approval of Phase 1 Policy.	Adopted Policy.	Summer 2014
7. Phase 1 Training	Develop and carry out staff training for Phase 1 permitting procedures.	Phase 1 Training Plan.	2014

ACTION ITEM	DESCRIPTION	PRODUCT	YEAR COMPLETED
Core Element: Regulation			
8. Watershed Approach***	Draft conceptual regulatory decision framework for applying the watershed approach to mitigation decisions. Using actual proposed projects, pilot the conceptual decision framework for applying the watershed approach in mitigation projects.	Regulatory Decision Framework for Watershed Approach (watershed profiles).	Ongoing. Pilot programs initiated with Regions 1, 2 and 6 and will use the decision framework. Additionally, evaluating how to. integrate the assessment framework with the U.S. Army Corps of Engineers' (Corps') SOP for mitigation.
9. Basin Planning***	Conduct demonstration projects to show how ambient monitoring data and targeted data gathered within selected watersheds are used to specify controls to: (a) mitigate indirect impacts attributed to dredge/fill activity, (b) specify buffers to protect wetland beneficial uses and (c) allow crediting of voluntary wetland restoration projects to offset unavoidable pollutant/pollution loads.	Basin Plan amendments.	2015
10. Integrated Reporting	For projects conducted per #9 (above), demonstrate how generated information may be interpreted for the Integrated Reporting of Water Quality by the Water Boards.	Integrated Reports.	2015
11. Advanced Mitigation Planning***	Collaborate with federal and state agencies in developing methods for evaluating and locating "advanced mitigation" sites.	Joint Agency Framework for Regional Advanced Mitigation Planning.	State Water Board signed Framework Agreement on 10/29/2012; ongoing coordination with RAMP committee. Work will focus on integrating WRAMP and the Watershed Profile tool.

ACTION ITEM	DESCRIPTION	PRODUCT	YEAR COMPLETED
Core Element: Regulation			
12. Mitigation Bank RT Participation	Develop means for State Water Board participation on mitigation bank review teams in collaboration with other participating federal and state agencies.	Agency MOU for Mitigation and Conservation Banking and In-Lieu Fee Programs in California.	State Water Board signed MOU on 11/15/2011; ongoing coordination with Corps' Mitigation Bank Program Development Team (PTD) The PTD's draft Bank Enabling Agreement Template includes the Water Boards as signatories.
Core Element: Water Quality Standards			
13. Wetland water quality standards Scoping Note***	Draft internal scoping note to build consensus on proposed wetland water quality standards. Develop pilot projects with the Regional Boards to "test" draft narrative water quality objectives and implementation plan.	Draft scoping note and pilot project meeting minutes.	2013 and ongoing; draft scoping note is now being circulated for Regional Board comment; pilot projects with Regions 1, 2 and 6 are in progress to test concepts.
14. Management review	Present results of pilot to management for consideration of the efficacy of the standards.	Meeting minutes.	2014
15. Riparian Width Buffer Rule***	Research and draft internal scoping note to build consensus on riparian buffer width rules necessary for water quality protection.	Draft scoping note.	2015
Core Element: Monitoring, Assessment, and Reporting			
16. Online Electronic Application with Mapping Tool***	Develop an online water quality certification application form for 401 permits that will allow applicants to map waters and riparian areas impacted by the project and proposed mitigation sites using online mapping tools. Develop project management program capabilities allowing Water Board staff to track regulatory clocks, communicate with project applicants and track application milestones.	Online Application available for pilot Water Boards.	2014. A Feasibility Study Report (FSR) is being developed to obtain additional Water Board funding to complete the 401 Online project. The pilot study has been completed, and "fixes" identified. Following the fixes, the Water Boards would adopt the program into their IT system if the FSR is approved.

ACTION ITEM	DESCRIPTION	PRODUCT	YEAR COMPLETED
Core Element: Monitoring, Assessment, and Reporting			
17. EcoAtlas Demonstration Projects for Dredge and Fill Permitting	Demonstration projects showing the efficacy of EcoAtlas to inform dredge/fill permitting decisions, and for reporting ambient wetland condition. Demonstration activities also are used to develop Water Board capacity to implement "Online 401/WDR Permitting." Projects include the refinement of classification systems and wetland mapping.	Project Reports.	2014
18. CRAM Calibration***	Continue scientific efforts through CWMW to calibrate and verify CRAM as the core method for cost-effective monitoring of wetland condition. Continue to develop a network of reference wetland sites, including mitigation and restoration projects.	Calibration of selected modules via statewide network of reference sites.	2009 and ongoing; reference sites have been identified for riverine, estuarine, and depressional wetlands. State Water Board staff chair the L-2 Committee of CWMW coordinating these efforts.
19. QA/QC for Level CRAM data***	Implement SWAMP recommended Quality Assurance and Data Management Programs to support the accurate collection and reporting of CRAM data.	A QAQC plan for CRAM to meet SWAMP requirements.	March 29, 2013 SWAMP endorsed CRAM as a monitoring method and approved the QA/QC plan. A revised plan is in preparation to respond to SWAMP comments regarding the need for emphasis on QA adherence for practitioners. The revision will also incorporate new research data, account for new modules, and to better align with 401 program needs identified by state audit.
20. CRAM Training***	Conduct training program for CRAM implementation, including sampling procedures and use of CRAM in mitigation decision-making (i.e., standard operating procedures). Training may include a unit on the use of EcoAtlas.	CRAM Training publications.	2009 and ongoing.

ACTION ITEM	DESCRIPTION	PRODUCT	YEAR COMPLETED
Core Element: Monitoring, Assessment, and Reporting			
21. CRAM modules***	Continue scientific efforts through CWMW to expand CRAM for additional wetland types with emphasis on the refinement of existing modules to meet program needs.	CRAM modules.	2009 and ongoing; 2012 CRAM modules have been developed for wet meadows and bar-built estuaries; work continues on episodic streams, and seasonal depressions.
22. Level 1 Mapping***	Research, develop and coordinate use of standard methods for wetland, stream, and riparian mapping, data collection, data management and data analysis through CWMW. Ensure that these methods comply with developing State policies, and are compatible with the California Environmental Data Exchange Network (CEDEN) system and its network of Regional Data Centers.	Mapping standards and procedures for the California Aquatic Resource Inventory (CARI) as stand-alone Level 1 inventory and as base map for EcoAtlas.	2009 and ongoing; CARI standards have been drafted with input from various agencies and NGOs. Work now focuses on implementing CARI standards across agencies. This would involve leadership from the CA Water Monitoring Council.
23. Data Management***	Ensure that all data are secured on existing State Water Board data systems or at one or more of the CEDEN Regional Data Centers.	Wetland Data Management Guidelines. Updated CEDEN database structure. Updated CRAM database and eCRAM user interface.	2015. Level 1 CARI data not finalized per CARI standard, but best available data integrated into one dataset. Detailed Level 2 CRAM data housed at the SFB RDC. Summary Level 2 CRAM data (Overall and attribute scores) available on EcoAtlas. Level 3 water quality data stored in CEDEN, but displayed in EcoAtlas.
24. Metadata Exchange***	Make these data and metadata available to other agencies through the establishment of web services and/or other data exchange mechanisms.	Wetland Metadata Exchange Protocols available through EcoAtlas.	2012 and ongoing. Data sources and metadata documented on EcoAtlas. Landscape profile tool on EcoAtlas

ACTION ITEM	DESCRIPTION	PRODUCT	YEAR COMPLETED
Core Element: Monitoring, Assessment, and Reporting			
			enables wetland data and information aggregation.
25. EcoAtlas mapping tools***	GIS tools to develop resource summaries such as watershed profiles and estimates of riparian buffer widths to assist staff in implementing various regulatory procedures.	Tools on EcoAtlas (i.e., watershed profile tool and riparian buffer width decision tool).	2016; TAT is developing a technical memo on EcoAtlas "Watershed Profile Tool". Through the TAT, SFEI-ASC continues to develop the riparian mapping tool that is now being modified to map alternative riparian buffer widths.
26. Information Sharing***	In collaboration with other agencies through the CWMW, report to decision makers and the public via the California Wetlands Portal (www.californiawetlands.net) answers to three basic questions: (1) "Where are the wetlands and riparian areas," (2) "What is their health status," and (3) "Are the policies, programs, and projects to restore and protect wetlands and riparian areas working? My Water Quality Portal Home Page.	CARI v. 0 compiles best available wetland maps for the state. CRAM data tools (eCRAM and EcoAtlas display tools provide access to CRAM results for 2,500 assessments statewide. Landscape profile tool designed for programmatic assessments.	2010 and ongoing. My Water Quality Wetland portal developed by CWMW and SFEI. Content has been transferred to the State Water Board October 2012 for programming and integration into MWQ Portal site.
27. Riparian Area Assessment-/-Data Collection***	Initiate field data collection to support riparian buffer objectives of Regional and State Water Boards as defined in Phase 2 and 3 of Policy.	Technical Memorandum No. 3: Landscape Framework for Wetlands and Other Aquatic Areas.	2010 and ongoing; there has been ongoing coordination with SWAMP on the use of CRAM in the Perennial Stream Assessment program to evaluate the biological condition of streams and adjacent riparian areas.

ACTION ITEM	DESCRIPTION	PRODUCT	YEAR COMPLETED
Core Element: Monitoring, Assessment, and Reporting			
28. Regional Capacity Building	Provide adequate support for regional CRAM/Audit teams and CEDEN Regional Data Centers to ensure regional capacity for state programs and continued integration with regional partners and the Regional Water Boards.	Regional Capacity Building Strategy Plan.	2015. In 2013 Budget Change Proposal (BCP) was submitted by the 401 program to develop a compliance monitoring program with the Regional Boards that would include joint Water Board audit teams.
29. WRAMP Partnership Support	Provide support necessary for partner agencies to adopt and integrate wetland assessment and inventory tools and data into regulatory and grant programs.	Regional "WRAMP Implementation Plan.	2010 and ongoing; in 2010, the CA Water Quality Monitoring Council endorsed WRAMP for integration into state agency planning. CWMW continues to coordinate implementation.
30. Compliance Monitoring Framework***	Develop an assessment framework to support compliance monitoring based on WRAMP for NCCP/HCP-401/404 permitting.	Compliance Monitoring Framework for ESA and CWA programs.	2013 and ongoing.
31. Wetland Status and Trends***	This is a statewide and regional cost-effective sampling plan to track net changes in wetland extent and diversity statewide using CARI. The S&T Plan is designed to answer the question: What are the relative effects of nature and people on the statewide distribution, abundance, and diversity of wetlands, streams, and riparian areas. . Continue activities that examine the efficacy of using "Status and Trends".	Status and Trends reporting	2013 and ongoing.

*** Starred items are projects funded by USEPA

Table 4: Web links to State Water Board Table 3 Work Products

TABLE 1 ITEM NUMBER	NAME	WEB LINK
1.	Wetland Definition	http://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/tatmemo2_062509.pdf
2.	Phase 1 Progress	http://www.waterboards.ca.gov/water_issues/programs/cwa401/wrapp.shtml
27.	CRAM Modules	http://www.cramwetlands.org/

30.	Metadata Exchange on EcoAtlas	http://www.ecoatlas.org/
33.	Landscape Assessment for Wetlands and Riparian Areas	http://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/wrapp/tatmemo3_061610.pdf

4.e. Delta Conservancy Specific Actions

Table 5: Delta Conservancy Planned Actions and Target Dates

ACTION ITEM	DESCRIPTION	PRODUCT	YEAR COMPLETED
Core Element: Monitoring, Assessment, and Reporting			
1. Database Management	Conservancy is currently managing the Delta habitat restoration project database. This GIS database of current and planned restoration was developed to facilitate agency and stakeholder coordination and enhance understanding of existing projects and planning efforts. The habitat database was initially developed by the California Department of Water Resources (DWR) and was transferred to the Conservancy in 2012.	GIS database of current information on habitat restoration, preservation, and enhancement projects in the Delta and Suisun Marsh.	Continuous
2. Data and Information Sharing for Assessment and Reporting***	The Delta Conservancy is currently working with SFEI to enhance regional capacity for wetland project tracking, assessment and reporting by expanding the current functionality of EcoAtlas.	Expanded EcoAtlas with capability to conduct additional assessments and generate a greater variety of reports.	April 2015
Core Element: Voluntary Restoration and Protection			
3. Develop a forum for coordination and information sharing	Conservancy leads the Delta Restoration Network, through a coordinated voluntary effort.	A comprehensive Delta restoration framework.	April 2014

*** Starred items are projects funded by USEPA

Table 6: Web links to Delta Conservancy Table 5 Work Products

TABLE 1 ITEM NUMBER	NAME	WEB LINK
1	EcoAtlas	www.ecoatlas.org.
2	DRN	http://deltaconservancy.ca.gov/public_involvement/delta-restoration-network.html

4.f. Coastal Conservancy Specific Actions

Table 7: Coastal Conservancy Planned Actions and Target Dates

ACTION ITEM	DESCRIPTION	PRODUCT	YEAR COMPLETED
Core Element: Monitoring, Assessment, and Reporting			
1. WRP *Regional Strategy*	Support the update of the WRP *Regional Strategy*. The updated *Regional Strategy* will incorporate a decade of new data and tools, and a growing momentum to address climate change and to protect and restore resilient and dynamic ecosystems.	The updated *Regional Strategy* will contain regional wetland restoration goals, strategies for achieving those goals, a suite of tools to guide project prioritization, and a monitoring framework for evaluating progress.	2016
2. Assess progress on WRP *Regional Strategy* with IWRAP	IWRAP will provide the framework for assessing progress towards the regional wetlands restoration goals developed through the update of *Regional Strategy*.	Regional Strategy update includes monitoring framework.	2016
3. Report progress on WRP *Regional Strategy* with EcoAtlas	Utilize EcoAtlas as the reporting mechanism for the *Regional Strategy*. Input existing WRP Work Plan projects and IWRAP data into EcoAtlas. Develop process for entering future projects into EcoAtlas.	Project information and monitoring data hosted on EcoAtlas.	2014
4. WRP Science Advisory Panel	Develop WRP Science Advisory Panel to advise the update of the WRP *Regional Strategy*, including IWRAP implementation, and development of an In-lieu Fee Program (see Action Item #15 below).	Updated *Regional Strategy* for the WRP, completed In-lieu Fee Program.	2016
5. CWMW	Participate in CWMW and Status and Trends working groups.	Coastal Conservancy and WRP input into Statewide monitoring efforts.	On-going
6. Estuary Workgroup	Provide information on California coastal wetlands for larger statewide program.	Coastal Conservancy and WRP input into	On-going

ACTION ITEM	DESCRIPTION	PRODUCT	YEAR COMPLETED
		Statewide estuary monitoring.	
7. SF Baylands Ecosystem Habitat Goals Report	Update the Goals Report to reflect climate change and conduct regular assessments of progress and reevaluate regularly.	Science Update Report and periodic assessment reports.	2014 and on-going
8. SF Bay Subtidal Habitat Goals Report	Assessments of progress towards Subtidal Goals.	Periodic assessment reports.	On-going
9. SF Bay Restoration Authority	Strategic planning, development of grant program, progress reporting, external oversight of grants.	Strategic plan, annual reports, RFPs, and committee reports.	On-going
10. Comprehensive Conservation Management Plan	Work by San Francisco Estuary Partnership to update CCMP.	Revised CCMP and regular reporting towards objectives.	On-going
11. Restoring the Estuary	Revisions to the SF Bay Joint Venture's Implementation Strategy, Restoring the Estuary, and reporting towards progress.	Revised report and regular progress reports.	On-going
12. SF Bay Wetland Tracker/EcoAtlas	Complete transfer of SF Bay JV database into Wetland Tracker and continuous updates to projects in Wetland Tracker.	Updated project database.	On-going
13. Pacific Coast Joint Venture Strategic Plan	Work with others to update the Pacific Coast Joint Venture Strategic Plan.	Revised report	On-going
14. Humboldt Bay Sea Level Rise Adaptation Plan	Work with others to produce a sea level rise vulnerability assessment and identify adaptation approaches for the region.	Plan	2015
15. Reuse of Humboldt Bay Dredged Material Study	Work with Humboldt Bay Harbor District to produce a feasibility study for the reuse of dredged materials for tidal marsh restoration and sea level rise adaptation.	Report	2015
Core Element: Voluntary Restoration and Protection			
16. Project prioritization and decision-making in the WRP *Regional Strategy*	Based on the regional goals and objectives identified in the Regional Strategy (see Action Item # 1, above), develop a suite of tools to guide project prioritization and help make site-specific decisions about wetland design and configuration.	Project prioritization and site-specific decision-making tools.	2016
17. In-lieu Fee Program	Develop an In-lieu Fee Program for wetlands mitigation. The In-lieu Fee Program will fund implementation of	Completed Instrument and initiation	2015

ACTION ITEM	DESCRIPTION	PRODUCT	YEAR COMPLETED
	projects on the WRP Work Plan and other wetlands restoration in Southern California.	of the In-Lieu Fee Program.	
18. WRP Work Plan Projects	Support implementation of 53 wetlands restoration and protection projects on the WRP Work Plan.	Completed wetlands restoration, enhancement, and protection projects.	On-going
19. IWRP (Monterey, Santa Cruz, and San Mateo Counties)	Continue to lead and expand the Integrated Watershed Restoration Program in Santa Cruz County as a model of agency cooperation and efficient government.	Wetland and watershed restoration projects completed in a coordinated, efficient, and scientifically rigorous framework.	On-going
20. Morro Bay NEP	Support implementation of the Comprehensive Conservation and Management Plan for the Morro Bay NEP.	Wetland restoration and enhancement projects as prioritized by the CCMP.	On-going
21. Elkhorn Slough NERR	Support implementation of the Elkhorn Slough NERR Tidal Wetland Program.	Wetland restoration and enhancement projects developed through a scientifically rigorous planning process.	On-going
22. Coastal Habitats	Develop plans and implement projects to restore and enhance coastal habitats including coastal wetlands, intertidal areas and stream corridors.	Completed coastal habitat restoration projects.	On-going
23. Coastal Watersheds and Floodplains	Develop plans and implement projects to preserve and enhance coastal watersheds and floodplains.	Completed watershed restoration projects.	On-going
24. Fish Habitat	Implement projects to improve fish habitat including projects to remove barriers to fish passage, ensure sufficient instream flow, and provide in stream habitat and favorable water temperatures.	Completed fish habitat restoration projects.	On-going
25. Water Quality	Complete plans and implement projects to improve water quality to benefit coastal and ocean resources.	Completed water quality improvement projects.	On-going
26. Carbon	Support wetlands restoration and	Completed	On-going

ACTION ITEM	DESCRIPTION	PRODUCT	YEAR COMPLETED
Sequestration	protection projects that sequester carbon, allowing California's natural resources to benefit from California's carbon market.	carbon sequestration projects that benefit from the carbon market.	
27. Wetland Migration Area for Sea Level Rise	Support projects that protect lands that could allow for wetland migration as sea levels rise.	Completed wetland migration protection projects.	On-going

*** Starred items are projects funded by USEPA

Table 8: Web links to Coastal Conservancy Table 7 Work Products

TABLE 1 ITEM NUMBER	NAME	WEB LINK

5. Annual Plan Review

The signatory agencies will annually review and discuss progress towards achieving the goals of this joint agency wetlands conservation program for California. The developments on the specific actions of this plan will be updated and reported. Adjustments to this program will be made as needed and in coordination with the California Wetlands Monitoring Workgroup.

6. Plan Authorization

We, the undersigned, have reviewed this Wetlands Conservation Program Workplan and direct our respective staff to work cooperatively towards its development and implementation as resources allow.

Victoria A. Whitney, Deputy Director
Division of Water Quality
State Water Resources Control Board

Sandra Morey, Deputy Director
Department of Fish and Wildlife
Natural Resources Agency

Shakoora Azimi-Gaylon,
Assistant Executive Officer
Delta Conservancy

Mary Small
Deputy Executive Officer
Coastal Conservancy

Summary of Past Work

A. Department of Fish and Wildlife

Table 4 DFW Summary of Past Work

PAST STATE ACTION	EPA CORE ELEMENT	SUPPORT OF CURRENT ACTION ITEM	PRODUCT	YEAR COMPLETED?
1. State of the State's Wetlands Report	Monitoring & Assessment	3.c., Table 1, Item 5	10 year Report	2010
2. Develop Wetland Definition	Regulatory	3.c., Table 1, Item 3	Draft State Water Board Wetland Definition	2010

Table 5: Web links to Table 4 Work Products

TABLE 4 ITEM NUMBER	NAME	WEB LINK
1.	California State of the State's Wetlands Report	http://resources.ca.gov/ocean/SOSW_report.pdf
2.	Wetland Definition	http://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/tatmemo2_062509.pdf

B. State Water Resources Control Board

Table 6 State Water Board Summary of Past Work

PAST STATE ACTION	EPA CORE ELEMENT	SUPPORT OF CURRENT ACTION ITEM	PRODUCT	YEAR COMPLETED?
1. Develop Wetland Definition	Regulatory	3.d. Table 3, Item 1.	Draft State Water Board Wetland Definition	2010
2. CRAM Development	Monitoring, Assessment, Reporting	3.d.Table 3, Item 13-15	CRAM Modules	2009 and ongoing

Table 7: Web links to Table 6 Work Products

TABLE 1 ITEM NUMBER	NAME	WEB LINK
1.	Wetland Definition	http://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/tatmemo2_062509.pdf
13.	CRAM	http://www.cramwetlands.org/

ACRONYMS

BIOS	Biogeographic Information and Observation System
CEDEN	California Environmental Data Exchange Network
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CIWQS	California Integrated Water Quality System
CRAM	California Rapid Assessment Method
CWMW	California Wetland Monitoring Workgroup
DFW	California Department of Fish and Wildlife
EIR	Environmental Impact Report
ICC	Interagency Coordinating Committee
IS	Initial Scoping
MONITORING COUNCIL	California Water Quality Monitoring Council
POLICY	Wetland and Riparian Protection Policy
REGIONAL WATER BOARD	Regional Water Quality Control Boards
STATE WATER BOARD	State Water Resources Control Board
SWAMP	Surface Water Ambient Monitoring Program
WRAMP	Wetland and Riparian Area Monitoring Program

Phil Greer, Principal
WRA Incorporated
2169-G East Francisco Boulevard
San Rafael, CA 94901

Subject: Contract No. 12-115, Amendment No. 2

Dear Mr. Greer:

Attached for your records is one fully executed copy of the above-referenced amendment.

Please continue to contact Mary Small regarding this project, but direct all budgets, invoices and requested modifications regarding this agreement to me.

Sincerely,

Erlinda Corpuz
Contracts Manager

EC: tf

Enclosure