

CALIFORNIA STRATEGIC PLAN FOR WETLANDS AND RIPARIAN PROTECTION AND RESTORATION

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DRAFT

The goal of this strategic plan is to bring consistency, clarity and efficiency to the way wetlands and riparian areas within the watersheds of California are:

Afforded regulatory protection
Conserved for the fish and wildlife resource benefits
Managed for the sustained delivery water quality and quantity

Implementation of this plan will help reverse historic trends in wetland loss, mitigate future risks to aquatic resources, and produce measurable improvement in the abundance, diversity and health of the state's wetland and riparian resource. As a result of this commitment, the health of all of California's watersheds will improve from their headwaters to estuaries and beyond. Communities across the state will benefit from an increased delivery of needed ecosystem services. Through collaborative implementation of this plan, the State's vision is to:

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

OVERVIEW OF THE STRATEGIC PLAN

The strategy for achieving the State's vision of wetland and riparian protection has two parts. One part is the adoption of the California Wetland and Riparian Protection Policy (WRAPP). WRAPP and its associated implementation plan are under development. When completed the policy and implementation plan they will be amended to this Strategic Plan.

The second part of the strategy is the systematic technical information transfer through existing State programs and projects. Information transfer is accomplished through implementation of the State's Wetland and Riparian Area Monitoring Program (WRAMP). The major tenet of WRAMP is that common use of monitoring and assessment information across State programs is a major driver in coordinating and increasing the environmental effectiveness of work on wetlands and riparian protection and restoration. This theme is reflected in the organization of this Strategic Plan.

The Plan broadly describes four types of State programs that involve protection and restoration activities:

Regulatory,
Water Quality Management
Habitat Management and Restoration.
Public Reporting on the Health of California's Environment

Repeated within each program description are a common set of tasks or "elements." The elements align with those listed in the U.S. Environmental Protection Agency's document entitled, "Elements of a State Water Monitoring and Assessment Program" (2003). The elements described in the EPA document were originally developed as guidance to aid states in determining whether their aquatic monitoring programs meets the prerequisites of Clean Water Act Section 106 (e)(1). In this strategic plan, we apply the same elements as a way of integrating and optimizing the current good work of agencies and stakeholders on wetland and riparian protection and restoration.

Technical information transferred through these plan elements, and shared between programs, will increase the State's capacity to sustain and enhance its wetlands and riparian areas.

An Example

A common management objective among programs is the protection and restoration of high quality or highly significant wetlands and riparian areas. Monitoring and assessment activity is being designed and conducted to produce maps of these areas and to track their ecological condition over time. The systematic transfer of a common set of information to agency decision-makers in different programs will result in the integrated delivery of attention to those critical areas:

- (a) Protection from dredge and fill activity,
- (b) Provisioning of suitable water quality to sustain ecosystem health, and
- (c) Habitat management and restoration for recovery, preservation and buffering of fish and wildlife resources

STRATEGIC PLAN AND WRAMP

The technical information transfer part of this Strategy is implemented through a Wetland and Riparian Area Monitoring Program (WRAMP). WRAMP is organized to serve all State agencies and to support the implementation of WRAPP.

WRAM Tenets

The WRAMP will be based on the following tenets:

- Report to the public and State agencies answer 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?

- Minimize new program costs by leveraging existing programs and projects through their use of standardized core methodologies for mapping, assessment, quality assurance, data management, and reporting.
- Use the peer-review process of the State Water Board to help assure the scientific credibility of core methodologies used in ambient assessment and regulatory project assessment.
- Implement WRAMP through regional programs served by the Regional Data Centers of the State Water Board and delimited by the boundaries of its Regional Water Boards.
- Allow regions to supplement the core methodologies to meet special local and regional information needs.
- Remain coordinated statewide through the California Wetland Monitoring Workgroup (“CWMW”), a subcommittee of the California Water Quality Monitoring Council, on an ongoing basis.

WRAMP Structure

The CWMW will administer WRAMP. CWMW will facilitate communication among the State partner agencies. Assistance and coordination activity will be aligned with three specific program areas described in the next section of this plan, “WRAMP Implementation.”

Regional Programs serve as the primary focus for implementing the WRAMP and providing a forum for local coordination. Regional programs should involve cooperating federal, state, and local agencies that have primary responsibility for protecting and managing wetlands, streams, and riparian areas within a region. Technical project leads, scientists, and members of local non-governmental organizations may also participate in the regional programs. These programs should provide local quality control, training, and assessment audits. They may also identify areas for future technical or program development and may produce products that can be reviewed and vetted through the CWMW for potential statewide adoption.

Level 1, 2, and 3 workgroups coordinate consistent statewide mapping and assessment. They should be led by senior technical agency staff directly involved in statewide or inter-regional implementation of wetland, stream, and riparian policies and programs. The workgroups may also include environmental scientists from academia, not-for-profit science organizations, and the private sector with appropriate expertise across regions. The workgroups will receive input and suggestions from the regional programs and will ultimately recommend changes to Level 1, 2, and 3 methodologies, training, quality control, and data management. The workgroups will support agency programs by identifying opportunities and constraints for implementing WRAMP and will serve as a forum for identifying common priorities for future technical or policy development activities within their focal areas.

In addition, the WRAMP will organize ad hoc committees to develop assessment framework that describe how monitoring and assessment information can be used to inform specific types of management decisions. The use and development of assessment framework is outlined in WRAPP.

WRAMP and Watershed Approach

This Strategic 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 water 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.

WRAMP and Public Reporting

The WRAMP will make wetland and riparian data available to the public through public information management systems. The WRAMP will be used to assess the individual and cumulative effects of local management actions, such as wetland and riparian mitigation, enhancement, restoration, and creation, on ambient conditions for a variety of spatial scales, such as watersheds, regions, and statewide.

Adoption of WRAMP

State Water Board will seek to adopt WRAMP by 2011 as part of the Phase 1 Wetland and Riparian Area Policy. Also, the State Water Board will develop an implementation plan to facilitate the adoption of WRAMP by Regional Boards. In concert with this action, CWMW will pursue adoption of WRAMP by member agencies within their organizations.

WRAMP IMPLEMENTATION

WRAMP activity will be aligned and implemented to service three broad program areas. They are regulatory program assistance, water quality program assistance and habitat management program assistance. Outlined below are a set of support activities for each program area.

Regulatory Program Coordination

The State's authority to regulate wetland and riparian areas is based on the following

legislation and administrative rules:

Porter-Cologne Water Quality Control Act
Federal Clean Water Act, Section 401 (Certification Process)
Lake and Streambed Alteration Program
California Forest Practice Rules
California Coastal Conservancy Act

The legislation and rules are applied through a number of state agencies and programs. This Strategy outlines a common set of monitoring and assessment elements used to coordinate and support wetland and riparian regulatory activity.

Strategy Plan Objective

Regulatory programs will achieve no net loss in the overall abundance, diversity and condition of wetlands in California's watersheds. Riparian protection is considered a crucial factor in the attainment of this objective.

Planned Program Activity

(A) The State Water Board will develop and adopt a Wetland and Riparian Area Protection Policy (WRAPP). The policy will include a wetland definition and related delineation method, an assessment framework, and water quality standards protective of wetlands and riparian areas. The assessment framework will be coordinated through CWMW and WRAMP

The State Water Board shall seek adoption of Phase 1 of Wetland and Riparian Area Protection Policy by 2011.

(B) The State Water Board will develop regulations for the discharge of dredge and fill material that complement the USEPA/Corps' 404 (b)(1) Guidelines and the federal Compensatory Mitigation Rule, including the application of the watershed approach to mitigation decisions. Also, State agencies will consider adopting consistent wetland mitigation and monitoring guidelines that complement federal rules. These guidelines will include mitigation banking guidelines that recognize regional concerns and locate banks in the context of local or regional plans.

Monitoring and Assessment Elements

Design Support:

CWMW (WRAMP) will develop standardized definitions, a classification system that helps identify beneficial uses, and mapping protocols; DFG will be responsible for maintaining and updating wetland and riparian maps as guided by CWMW.

Also, CWMW will develop a technical plan for assessing the effect of wetland mitigation projects. The plan should enable the State to compare projects to

each other and over time, and to assess their cumulative effects on ambient condition.

Indicator Support:

CWMW will seek agency approval for the use of CRAM as a wetland rapid assessment tool to evaluate the extent and condition of wetlands in regulatory programs.

Also, a set of more intensive multi-metric indices of condition will be developed for CRAM calibration, and for use as performance standards for compensatory mitigation projects. A network of reference wetland, riparian and mitigation sites will be developed over time to support multi-metric development and CRAM refinement.

Quality Assurance Support:

State Water Board shall develop an implementation plan for the Wetland and Riparian Area Protection Plan (WRAPP) that will provide for appropriate staff training in applying the regulations and policy to permitting projects.

CWMW will develop and guide a plan for training agency staff and practitioners in proper use of the core WRAMP methodologies for mapping, data collection, data management, data analysis, data interpretation, and reporting.

Information Management Support:

CWMW will develop the reporting capabilities of the California Wetlands Portal. Specifically, CWMW will coordinate the development of standardized definitions and protocols to identify and map wetlands

Through EPA grant funding, State Water Boards, in partnership with SFEI, will develop a 401 online application that will include GIS project tracking.

CWMW will pursue developing data exchange between the Corps of Engineers "ORM" permit tracking system and the California Wetlands Portal.

Public Reporting Support

The CWMW will develop a technical paper on the status of current mitigation banks in California and evaluate their performance

Water Quality Program Coordination

The State's authority to protect and restore the ecological quality of wetlands, as waters of the State, is based on the Porter-Cologne Water Quality Control Act and regionally adopted Water Quality Control Plans and policies. Riparian protection is considered a crucial factor in the attainment of this objective.

Strategic Plan Objective

The State's Surface Water Assessment and Monitoring Program (SWAMP) will report to the public the ecological condition of the State's wetlands and the role that riparian areas play in sustaining wetlands as well as other aquatic resources of the state. Reporting will be done in a way that prioritized future management actions and evaluated the effectiveness of past management actions.

Planned Program Activity

(A) The State Water Board will complete a workplan for Phase 2 of Wetland and Riparian Area Protection Policy one year after adoption of Phase 1 of the Policy. Phase 2 of the Policy calls for:

- (1) Expansion of the Policy to protect wetlands from all non-dredge and fill activities affecting water quality
- (2) Wetland beneficial use definitions
- (3) New water quality objectives, if needed, to protect beneficial uses
- (4) Implementation program focused on the protection of all waters (including wetlands) and their water quality functions from all waste discharges (e.g., wastewater and stormwater)

(B) The State Water Board SWAMP will assess the ambient condition of wetlands and riparian areas, with interagency coordination provided by CWMW. Systematic reporting will commence with the 2012 Integrated Reporting cycle.

Monitoring and Assessment Elements

Design Support:

CWMW (WRAMP) will develop a technical plan of ambient assessment that can be incorporated into SWAMP.

CWMW will coordinate agency, regional and local programs use of standard methods for mapping, data collection, data management and data analysis.

Indicator Support:

CWMW will continue to calibrate and verify "CRAM" as the core method for cost-effective monitoring of wetland and riparian condition. A set of more intensive multi-metric indices of condition will be developed for CRAM calibration, and to provide quality assurance control for wetland and riparian surveys of ambient condition. A network of reference wetland and riparian sites will be developed over time to support multi-metric development and CRAM refinement.

Quality Assurance Support:

CWMW will work with the SWAMP program to develop standard QA/QC methods that will include training and data collection and data audits.

Information Management Support:

CWMW will seek to expand the capacity of California's Wetland Portal to display watershed and regional information about wetland condition and cause of degradation.

Public Reporting Support:

The State Water Board will utilize WRAMP to support reporting to USEPA pursuant to §305(b) and §303(d).

Habitat Management Program Coordination

The State's authority to protect and restore wetland and riparian habitats is based on:

California Endangered Species Act
California Environmental Quality Control Act
Lake and Streambed Alteration Program
Timberland Conservation Program

Plan Objective

Support the protection, recovery and restoration of highly significant wetland and riparian habitats by mapping their location (as appropriate) and reporting their ecological condition over time. The reporting of condition includes evaluation of the effectiveness of practices for purposes of adaptive management.

Planned Program Activity

Explore ways to bridge technical information transfer between SWAMP, California Fish and Game's Resource Assessment Program and conservation programs supported by local government and non-governmental organizations (e.g., The Nature Conservancy, Ducks Unlimited). Technical information transfer will aid the prioritization of wetland and riparian areas in need of management attention and the reporting of the effectiveness of management practices.

Monitoring and Assessment Elements

Design Support:

CWMW will explore ways to adapt the overall WRAMP assessment framework for adoption by public/private joint ventures aimed at wetland and riparian conservation organizations.

Indicator Support:

CWMW will assess wildlife function at wetland and riparian reference sites to calibrate CRAM and other multi-metric indices for use in habitat assessment.

Quality Assurance Support:

CWMW will compare and contrast the quality and use of wetland and riparian condition data generated by WRAMP methods relative to data generated by habitat conservation programs.

Information Management Support:

CWMW will assist CDFG and private conservation organizations in developing and transferring data about wetland and riparian restoration and preservation projects into the California Wetland Portal.

Public Reporting Support:

CWMW will coordinate with its habitat conservation partners to establish internet links from their websites to the California Wetland Portal. The Portal will serve as the primary tool for public information on wetland and riparian area status and trends.

Water Resources Program Coordination
(To be developed)

Coordination of Reporting the Health of the Environment

Plan Objective

A State of the State's Wetlands Report will be published every five years.

Planned Program Activity

The State Water Board in collaboration with the CWMW will prepare a feasibility report on the production of a State of the State's Wetlands Report on a five year cycle.

Monitoring and Assessment Elements

Design Support:

Indicator Support:

Quality Assurance Support:

Information Management Support:

CWMW will form a Data Management Committee (as a subcommittee of CWMW) to include representatives from the Natural Resources Agency and Cal/EPA, the Southern California Coastal Water Research Project, the San Francisco Estuary Institute, and the Moss Landing Marine Lab. The Data Management Committee will coordinate the development and implementation of a plan that assures WRAMP data meet minimum requirements of data quality and completeness and is compatible with SWAMP standards.

Public Reporting Support:

CWMW will assist Natural Resources Department in utilizing WRAMP to assess wetland extent and condition for the purposes of reporting the State of the State's Wetlands.

STRATEGIC PLAN COORDINATION AND REVIEW

This Plan will be developed and implemented by CWMW as a component of the Wetland and Riparian Area Monitoring Program. The participating agencies and organizations in CWMW are:

Participating State Agencies

- California Coastal Commission
- California Department of Parks and Recreation
- California Department of Fish and Game
- California Natural Resources Agency
- California Department of Water Resources
- California State Lands Commission
- Central Coast Regional Water Quality Control Board
- Central Valley Regional Water Quality Control Board
- Los Angeles Regional Water Quality Control Board
- San Diego Regional Water Quality Control Board
- San Francisco Bay Regional Water Quality Control Board
- Santa Ana Regional Water Quality Control Board
- State Water Resources Control Board

Participating Federal Agencies

- Natural Resources Conservation Service
- National Oceanic and Atmospheric Administration, National Marine Fisheries Service
- U.S. Army Corps of Engineers
- U.S. Environmental Protection Agency
- U.S. Fish and Wildlife Service

Other Participating Organizations

- Humboldt Bay Harbor District
- Moss Landing Marine Laboratories
- Southern California Coastal Water Research Project
- San Francisco Estuary Institute
- University of California at Merced

* as of January 2010

WORKLOAD AND FINANCIAL RESOURCE EVALUATION

Funding will be required to support the initial efforts of the CWMW and collaborating technical team to implement the plan elements. Additional ongoing funding will be required by the CWMW and the Monitoring Council to oversee and enhance monitoring, assessment and reporting coordination efforts and by the Regional Data Centers for data management, quality control, training, reporting, and periodic updates/upgrades

It is recommended that the equivalent of one full-time position be funded at one of the State member agencies of the CWMW for ongoing coordination and management of the State’s wetland data systems. In addition, the estimated initial and recurring statewide costs to implement each recommendation are summarized in Table 1.

Table 1. Provisional Estimate of Statewide Costs to Fully Implement the Strategic Plan

Program Element	One Time Initial Cost	Annual Cost	Total Cost Per Cycle	Yrs/Cycle
Wetland Status & Trends Mapping	\$5,060,000	\$315,000	\$2,205,000	7
Revise Statewide Wetland Map	none	\$420,000	\$8,400,000	20
Wetland Condition Assessment	grant funded	\$840,000	\$5,880,000	7
Data Management (incl. QAQC)	\$75,000	\$1,212,500	\$1,212,500	1
Reporting	grant funded	\$20,000	\$100,000	5
Total	\$5,135,000	\$2,807,500	\$17,797,500	

The wetland mapping and condition assessments can also be implemented incrementally based on ecoregions and/or wetland classes. We estimate the unit cost for wetland mapping and condition assessment to be \$45,000/ecoregion/wetland class and \$120,000/ecoregion/wetland class, respectively. There are seven ecoregions and currently seven major wetland classes recognized in California. The unit cost approach allows decision makers to implement mapping and assessment in a phased manner based on priorities. In addition, we recommend that the wetland and riparian mapping

for the entire state be updated on a 20 year cycle, at cost of approximately \$3,000 for each of the 2,800 USGS quadrangles in California.

Funding Strategy

Successful implementation of a the strategic plan will require sustainable funding and dedicated staff to coordinate among the key information providers, program staff and managers. Below is a discussion of three potential options for funding such a program; undoubtedly others exist.

1. Establish an endowment account that receives funds collected from fines and mitigation fees.

Under this option state regulatory agencies would direct fees from wetland mitigation projects and fines into an interest bearing account until the endowment target is reached. Once the endowment target is reached, fines and fees would no longer need to be directed to this account.

Requirements:

- Legislative buy-in and action for reallocation of state funds and to create an endowment account. (State budget bill would establish a new account.)
- Need Department of Finance (DOF) buy-in at the policy level.
- Need buy-in from affected agencies and departments.
- Governor's office buy-in would be dependent on determinations of DOF and other affected departments.

Impediments/challenges/considerations:

- State does not have a good track record in handling endowment accounts.
- An endowment held by a third-party, may generate a higher returns. However, DOF has not been supportive of endowment accounts being held by third-parties.
- Would need agreement among data holding departments on how funds would be allocated.
- State Water Board is currently drafting the *California Wetland and Riparian Policy*. Policy should discuss this option as one of the potential financing mechanism in the "monitoring and assessment" section.

2. Increase permit fees collected by regulatory agencies and direct a portion of these fees to a special account in the state budget.

Under this option, permit fees resulting from a specified increase and collected by agencies such as the Coastal Commission, DFG, and State Water Board would be directed to a special state account.

Requirements:

- Legislature buy-in and action for allocation of state funds and to create new account. (State budget bill would establish new account.) It may be possible to use already existing accounts; e.g., State Water Board, DFG, Coastal Commission.

- Need Department of Finance (DOF) buy-in at the policy level.
- Need buy-in from affected agencies and departments at the policy level.
- Governor's office buy-in would be dependent upon determinations of DOF and other affected departments.
- Increases in permit fees are subject to commission (e.g., Coastal Commission) and board (State Water Board) approval.
- Increases in permit fees are subject to Office of Administrative Law review and approval.

Impediments/challenges/considerations:

- Some departments (e.g., State Water Board) can not legally use enforcement-generated fees to fund work that is not part of their responsibilities. Policy changes might be needed to ensure alignment between responsibilities and use of enforcement-generated fees.
- Overcoming objection of the regulated community and related special interests.
- Would need agreement among data generating/managing departments on how funds would be allocated.
- State Water Board currently drafting *California Wetland and Riparian Policy*. Policy should discuss this option as one of the potential financing mechanism in the "monitoring and assessment" section.

3. Environmental License Plate Fund (ELPF)

Under this option a portion of ELPF monies (generated by DMW sales of environmental license plates) would be allocated to a designated wetland data management program or programs.

Requirements:

- Need California Transport Commission (CTC) and Natural Resources Agency Secretary buy-in at a policy level. Note: CTC and Resources Secretary approve the allocation of ELPF.
- DOF review and approval would be needed for department accepting funding. This review would be initiated by the submittal of a budget change proposal by the affected department or departments.
- Would require action from DOF and legislature if funds were diverted from ELPF to another account in the state budget.
- Would need agreement among data generating/managing departments on how funds would be allocated.

Impediments/challenges/considerations:

- Annual competition for ELPF monies is stiff and the fund is often oversubscribed.
- Need the support of the wetlands conservation community because of competing uses for funds.

STRATEGIC PLAN AND WRAMP IMPLEMENTATION PRIORITIES

To be developed
(See Attachment H for WRAMP Tenets Document as a starting point)