

California State Wetland Program Summary



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Section A. Quick View

Description of State's Wetlands

California's great geographic and climatic diversity lends itself to an equal diversity of wetlands. From the 600 mile-long coast, to vast interior valleys and deserts, to the tops of the Cascade and Sierra Nevada Mountains, diversity of wetland type and size is evident. Coastal estuaries, seasonal vernal pools, mountain wet meadows and extensive riverine wetlands, and other regional variants, are all protected under one set of state regulations. Wetland regulatory strategies must be customized to the diversity found in wetland types. The State Water Resources Control Board and nine Regional Water Quality Control Boards (collectively, the Water Boards) are the primary regulatory authorities for protection of wetlands in California, although other agencies have additional authorities over certain geographic areas or wetland functions, especially in regard to habitat values.

State Definition of Wetlands

The Water Boards' authority is derived from California's Porter-Cologne Water Quality Control Act, which defines "waters of the state" as "any surface water or groundwater, including saline waters, within the boundaries of the state."

In practice, the familiar United States Army Corps of Engineers' (Corps) definition is in use for Clean Water Act section 404 and 401 enforcement. The Water Boards do not have a single accepted definition of wetland areas that captures the diversity of wetland area types throughout the state. This has led to some inconsistency in wetland area regulation and management.

Because certain waters of the state have lost protection under the federal Clean Water Act due to the U.S. Supreme Court decisions, the State Water Board adopted Resolution 2008-0026 on April 15, 2008, which directs staff to develop a "statewide policy in three phases to protect wetlands and riparian areas that is watershed based Phase 1 is currently being drafted and includes a wetland area definition, wetland delineation requirements, and procedures for review and approval of dredge and fill/excavation projects. Phase 2 and 3 would address water quality standards for wetlands and protection for riparian areas.

Coastal wetlands are also protected under California’s Coastal Act (CCA) of 1976, which defines wetlands as “lands within the coastal zone which may be covered periodically or permanently with shallow water and include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, and fens.”

The California Coastal Commission (“Coastal Commission”), which is charged with enforcement of the Coastal Act, further provides a more specific definition for coastal wetlands in its regulations: “land where the water table is at, near, or above the land surface long enough to promote the formation of hydric soils or to support the growth of hydrophytes, and shall also include types of wetlands where vegetation is lacking and soil is poorly developed or absent as a result of frequent drastic fluctuations of surface water levels, wave action, water flow, turbidity or high concentration of salts or other substances in the substrate. Such wetlands can be recognized by the presence of surface water or saturated substrate at some during each year and their location within, or adjacent to vegetated wetland or deepwater habitats.”

The Keene-Nejedly California Wetlands Preservation Act (WPA) defines wetlands similarly to the CCA. Wetlands are defined as “lands which may be covered periodically or permanently with shallow water and which include saltwater marshes, freshwater marshes, open or closed brackish water marshes, swamps, mudflats, fens, and vernal pools.”

Historic Wetland Loss/Gain

Although data exists that tell us that California has lost vast areas of wetlands, especially in the coastal zone, since the mid-1800s, precise number of acres lost are impossible to determine. Ongoing loss of wetlands through permitted and unpermitted human activity continues today, but the size and scale of the state has prevented a comprehensive assessment of the actual amount of lost – or gained -- wetlands.

To address this need, in 2012 the Southern California Coastal Water Research Project (SCWWRP) released the [“Technical Design for a Status and Trends Monitoring Program to Evaluate Extent and Distribution of Aquatic Resources in California”](#) with the intent of providing design recommendations that can be used by state agencies to guide the development and implementation of a *California Status & Trends Program* for monitoring aquatic resource extent in California.

Additionally, a pilot study was completed in April 2015, [“Demonstrating the California Wetland Status and Trends Program: A Probabilistic Approach for Estimating Statewide Aquatic Resource Extent, Distribution and Change over Time”](#).

Resource agencies in California are seeking funding to implement the Status & Trends Program.

Original Wetland Acreage	Remaining Wetland Acreage	Acreage Lost	% Lost
Not Available	Not Available	NA	NA

Primary State Wetlands Webpage

http://www.mywaterquality.ca.gov/eco_health/wetlands/

State Wetland Program Plan

State of California Five-year Coordinated Work Plan for Wetlands Conservation Program Development (Revised March 2014). The plan can be downloaded from:

<http://water.epa.gov/type/wetlands/upload/california-wpp.pdf>

No Net Loss/Net Gain Goal

In 1993, by executive order, the state adopted a goal of no net loss under the *California Wetlands Conservation Policy*, along with a goal to “achieve a long-term net gain in the quantity, quality, and permanence of wetlands acreage and values in California in a manner that fosters creativity, stewardship, and respect for private property.” The Department of Fish and Wildlife (formerly, Fish and Game) includes this goal in [Section 1775-1779.5](#) of the Fish and Game Code: This goal can also be found in the state’s [Five Year Coordinated Work Plan for Wetland Conservation Program Development](#).

State Resources for Wetland Work (Estimated for December 2014)

State Name	Core element #1: Regulation*	Core Element #2: Monitoring and Assessment	Core Element #3: Wetland Water Quality Standards	Core Element #4: Voluntary Wetland Restoration
Agency	State Water Board (Statewide and 8 Regional Offices)	Information unavailable	Information unavailable	Information unavailable
Source(s)	State budget + grants			
Amount	Information unavailable			
Staffing	Information unavailable			
Agency	Department of Fish and Wildlife			
Source(s)	State budget + grants			
Amount	Information unavailable			
Staffing	Information unavailable			

*Additional support is provided by the California Delta Conservancy and the California Coastal Conservancy (no additional resource information available).

State Permitting Fees

State Permitting Fee	State Name
Yes/No	YES
Agency	State Water Resources Control Board
Amount (range)	\$600-\$90,000 (Fill/Excavation fees); Also annual fees of \$200-\$600 for fill/excavation, restoration and low impact projects. Annual fees for dredging projects are based on annual dredge volumes.

Detail: On October 30, 2014 the State Water Board adopted a new fee structure which requires an application fee deposit, for the required fee categories, at the time of application. The balance of the application fee is required prior to certification. In addition, dischargers will be invoiced annually for an Annual Active Discharge Fee until the Active Discharge Period is completed. If applicable, dischargers will be invoiced for an Annual Post Discharge Monitoring Fee after the project has completed the Active Discharge Period.

Innovative Features

- The Water Boards are developing an online water quality certification application form for water quality certifications that will allow applicants to map waters and riparian areas impacted by the project and proposed mitigation sites using online mapping tools. This tool will include project management program capabilities that will allow Water Boards staff to track regulatory clocks, communicate with project applicants and track application milestones.
- A Wetland and Riparian Area Monitoring Plan is available for statewide use, and is being applied to a growing number of permitting, restoration and ambient assessment projects. See: http://www.mywaterquality.ca.gov/monitoring_council/wetland_workgroup/wramp/
- The State Water Board is piloting demonstration projects for the [EcoAtlas](#) online tool to inform dredge & fill/excavation permitting decisions, track wetland impact and restoration projects, and for reporting ambient wetland condition data. These demonstration projects also aid in development of Water Board capacity to implement "Online 401/WDR Permitting." Projects include the refinement of classification systems and wetland mapping.

EcoAtlas will facilitate the implementation of a watershed approach to wetland permitting by calculating the "watershed profile," which is defined as the abundance, condition and diversity of aquatic resources within a watershed.). This process will allow the state to analyze how a project will take away from a watershed's aquatic condition, or profile, and informs developers and regulatory staff about the nature of proposed impacts and mitigation needs.

- California has a multi-year strategy underway for developing Water Quality Standards for Wetlands and riparian protections, as part of later phases of wetland policy development.
- The state has adopted a fee structure (described above) that allows better tracking of projects progress from application to end of post-construction monitoring. Once construction is done, a nominal annual monitoring fee ensures that post-project reporting isn't inadvertently forgotten. When the post-project site recovery is achieved and it is confirmed that all requirements are

fulfilled, the annual fees end for that project. Both project work and completion are tracked in one database.

Models and Templates

California EcoAtlas

<http://www.ecoatlas.org/>

Section B. Regulation

How are Wetlands Regulated in California?

California relies primarily on CWA §401 and the Porter-Cologne Water Quality Control Act to regulate wetlands statewide, but also has adopted laws and regulations directed at regional and/or coastal wetlands protection: the California Coastal Act, the McAteer-Petris Act, Wetlands Protection Act, and the Suisan Marsh Protection Act. Agencies responsible for implementing wetland-related state laws and regulations include:

- The **State Water Resources Control Board, Division of Water Quality (SWRCB)** and nine **Regional Water Quality Control Boards (RWQCBs)** together constitute the California Water Boards (Water Boards) and are responsible for implementing state and federal laws and regulations related to the protection of water quality.. The Water Boards exercise their authority under CWA §401 to issue water quality certifications (§401 certifications) and the Porter-Cologne Water Quality Control Act to issue waste discharge requirements (WDRs) for impacts to state waters, including wetlands.. The State Water Board issues permits for dredge or fill/excavation projects that fall within the jurisdiction of more than one RWQCB. Each RWQCB develops a regional water quality control plan, referred to as a basin plan. Basin plans develop standards for all water bodies within the basin. Additionally, basin plans designate beneficial uses for water bodies and are defined as the uses of water necessary for the survival or well-being of man, plants, and wildlife. Please visit the California State Water Board 401 Certification and Wetland Program's [website](#) for more information. For more information on the RWQCBs, please use [the map](#) to navigate to a specific RWQCB website.
- The **California Resource Agency's** primary wetland-related responsibilities are implementing the California Wetlands Conservation Policy and updating the state wetland inventory, as outlined in the policy and in the Wetlands Protection Act (WPA).
- The **California Coastal Commission** is the primary regulatory agency responsible for protecting and managing coastal resources along California's Pacific Coast.

Wetland-related state laws include:

Porter-Cologne Water Quality Control Act. The 1969 WQCA, commonly referred to as "Porter-Cologne," is the primary legislation guiding water quality protection in California and incorporates parts of the CWA such as National Pollutant Discharge Elimination System permit requirements and §401 water quality certification. The Act also includes water quality standards and sets the state's anti-degradation policy. Although it does not define wetlands, the Act applies to all waters of the state, which includes wetlands and isolated waters.

California Coastal Act. The CCA contains requirements related to coastal zone management and wetlands protection, including coastal development permits. All development in the coastal zone and activities that impact resources in the coastal zone require a permit. The CCA prohibits dredge and fill activities in coastal wetlands, with the exception of low impact allowable uses such as restoration or research. Additionally, no “coastal-dependent development” is permitted in wetlands. The CCA also authorizes local governments to administer coastal development permits within their jurisdictions if they have established a Local Coastal Program (LCP) approved and certified by the Coastal Commission. Specific requirements and guidance for developing LCPs are provided in the CCA.

McAteer-Petris Act. The MPA, approved in 1965, established the San Francisco Bay Conservation and Development Commission (BCDC) as the management and regulatory agency for the San Francisco Bay and Delta. The BCDC plans for and protects the San Francisco Bay’s resources, including wetlands. The Act gives the Commission jurisdiction over all tidal areas of the Bay including sloughs, marshlands, and submerged lands, the shoreline of the Bay up to 100 feet inland, salt ponds, managed wetlands,20 and additional areas subject to tidal action. BCDC is required to regulate tidal wetlands and waters of the San Francisco Bay through a permitting system. Activities requiring a permit include fill, materials extraction, and substantial changes to use of waters, lands, or structures. This Act also requires that the BCDC include conditions for minimizing impacts to wetlands and offsetting unavoidable impacts. The BCDC issues four types of permits: major, administrative, emergency, and region-wide permits. The Act also requires the BCDC to develop, adopt, and implement the San Francisco Bay Plan, which includes policies and objectives for managing and protecting the Bay’s resources, including but not limited to marshes.

Z’Berg-Nejedly Forest Practices Act. The Z’Berg-Nejedly Forest Practices Act is used to support regulation of forest resources by the Department of Forestry and Fire Protection (CalFire) The Act regulates forest harvesting, and includes protection for streams and wetlands.

Wetland Delineation

Delineation Guidance	Yes	No	Detail
Use State’s Own Method	X		Additional state procedures are defined in California’s Regional Water Quality Control Plans, and may become a part of the proposed new wetland policy. For non-federal delineations, some regions use the 1987 Manual only for wetlands within the Corps jurisdiction and adopt stricter criteria outside these areas (Regions 1, 2 and 6).
Use Corps’ 87 Manual and Regional Supplement	X		For all federal jurisdictional waters, the state uses the Corps ’87 Manual and regional supplement. However, when the state <i>does</i> delineations, some regions use the Corps’ 1987 <i>Wetlands Delineation Manual</i> for all wetlands within their regions.

Other (Please describe)	X	The Coastal Commission uses its own wetlands definition when delineating coastal wetlands (defined based on two rather than three parameters). This delineation process includes the use of information on hydrophytes from the U.S. Fish and Wildlife Service (FWS) and information on soils from the Natural Resources Conservation Service (NRCS). However, the Coastal Commission also refers to the 87 Manual for delineation methods.
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Note: Stream Environment Zones (SEZs) also include wetlands. Stream Environment Zone (SEZ) is a term unique to the Tahoe Basin and encompasses more than just wetlands. SEZ was developed by the Tahoe Regional Planning Authority (TRPA) to denote perennial, intermittent and ephemeral streams and drainages, marshes and meadows. The SEZ's generally show common wetland characteristics: riparian or hydric (wet site) vegetation; alluvial, hydric soils; and the presence of surface water or near-surface groundwater at least part of the year.

Evaluation Methodology

The state is currently using more quantitative methods, such as the California Rapid Assessment Methodology (CRAM), developed by the California Wetland Monitoring Workgroup. The CRAM features separate modules for different wetland types in the state. The Corps requires assessments that may include CRAM for projects impacting more than ½ acre of wetlands.

Exempted Activities

Regulation is broader than the federal requirements, as the Porter-Cologne Act does not exempt anything.

Special Provisions for Agriculture and Forestry

California does regulate specific forestry, agriculture and ranching activities that are exempt in the federal regulations.

Penalties and Enforcement

- The Water Boards have legal authority to enforce violations of CWA §401 certifications under the WQCA. The Water Boards may issue administrative civil liability complaints, and the State Water Board handles the claims. State and Regional Water Boards may also issue cease and desist orders, clean up and abatement orders, and civil penalties that may not exceed \$10,000 for each day in which the violation occurs. Any person may petition to the SWRCB to review an act or failure to act on the part of the RWQCBs.
- The Coastal Commission has the authority to issue cease and desist and restoration orders. Civil liabilities may be imposed by superior court for any violation of the CCA or coastal development permit, which may not exceed \$30,000 but may not be less than \$500.

Permit Tracking

The SWRCB tracks information related to §401 certifications and WDRs, such as fees, impacts, and required compensatory mitigation, through the California Integrated Water Quality System (CIWQS). The Water Boards have a formal process for recording information in CIWQS, including a Quality Assurance/Quality Control program ran by the State Water Board.

Although the Coastal Commission has no wetland mitigation tracking system, it keeps track of mitigation through individual permit condition compliance review. The BCDC’s tracking system is tied to a Bay Resource Assessment Tool, and it is working to develop a mitigation tracking system in coordination with the San Francisco Regional Water Board and San Francisco Estuary Institute. California Department of Fish and Wildlife has their own tracking system.

State General Permit (statewide vs. regional coverage)

Permit Coverage	Yes	No	Detail (Type of Permit)
Regional General Permit	X		The Water Boards issue General Orders certifying Corps’ Regional General Permits for such activities as emergency repairs and flood control.
Statewide General Permit	X		The State Water Board as issued a general orders for a select number of Nationwide Permits that have minimal impacts and are exempt from review under the California Environmental Quality Act.t.

Assumption of 404 Powers

Assumption Status	Yes	No	Detail
Assumed		X	
Working Toward Assumption		X	
Explored Assumption	X		

Joint permitting

None.

Special Area Management Plans and Advanced Identification Plans

None.

Buffer Protections

The state is researching how riparian zones protect water quality. The state is developing a California Riparian Width Buffer Algorithm. Buffer protections are politically complex in the state.

Mitigation Policy

Currently, California follows the Corps' mitigation rules. The state is working on a wetland policy (described above), which includes mitigation requirements. A draft version of the policy is to be out for public comment in spring 2016 for adoption in summer of 2016 (tentatively).

Compensatory mitigation for both wetlands and streams is required by the Water Boards.. Projects proposing permanent impacts to waters must include mitigation plans to compensate for losses in area and functions. The proposed wetland policy will include regulations and guidelines regarding mitigation procedures.

The CCA requires that all coastal wetland functions be maintained by minimizing impacts. As such, coastal development permits issued for dredge and fill activities in coastal wetlands must include mitigation, including, "at a minimum," acquisition of wetlands that are of equal or great biological value at a 1:1 ratio or opening up an equivalent amount of areas to tidal action. If no adequate restoration sites are available, an in-lieu fee may be dedicated to a public agency that is sufficient to purchase a site of equal or greater biological value. However, in-lieu fees must go towards a project that has already been designed and approved. To provide a framework for reviewing mitigation plans and evaluating mitigation projects, the Coastal Commission also published *Procedural Guidance for the Review of Wetland Projects in California's Coastal Zone* in 1995. This guidance applies CEQA's mitigation definition, which calls for a sequence of avoidance, minimization, restoration, and compensation.

The California Fish and Wildlife Code require that CDFW Lake and Streambed Alteration Agreements include requirements to avoid and minimize impacts to fish and wildlife resources. In cases where mitigation is necessary, the CDFG includes relevant requirements.

Mitigation Database

The Water Boards track mitigation through CIWQS.

Section C. Monitoring and Assessment

Agency Responsible for Wetland Monitoring and Assessment (Please refine and clarify this section)

To address the fact that there was no mechanism for design and coordination of consistent wetland monitoring across the State of California, the California Wetland Monitoring Workgroup (CWMW) was established in 2009 as a subcommittee of the California Water Quality Monitoring Council. A primary goal of the CWMW is to function as the forum for statewide coordination of wetland and riparian monitoring and assessment and to provide a mechanism for cooperation among state and federal agencies, non-governmental organizations, and research institutions. The Workgroup is working to develop standardized definitions for wetlands and riparian areas, a statewide classification system, mapping and delineation protocols, condition assessment protocols, data transfer protocols and data quality control procedures and analytical and reporting methods.

In June 2010, a statewide [Wetland and Riparian Area Monitoring Plan \(WRAMP\)](#) was developed by the CWMW and endorsed by the California Water Quality Monitoring Council. WRAMP is a plan for comprehensive monitoring and assessment of aquatic resources using a watershed or landscape context. WRAMP, like U.S. EPA's three-tier monitoring assessment framework, includes three levels of

assessment and analysis, and provides the framework for making these three levels of assessment work together in the analysis on the overall condition and viability of aquatic resources within a watershed. Although WRAMP has been applied to support a watershed approach to wetland and stream protection in California, the framework can be adjusted to generally support ecosystem and habitat planning, assessment, monitoring, and reporting.

Level 1 assessments consist of map-based inventories of aquatic resources, including rivers, streams, and riparian areas, plus related projects that have a direct effect on the distribution and abundance of aquatic resources. Level 1 maps may serve as the basis for landscape and watershed profiles and be used as a framework for Level 2 and 3 assessments.

Level 2 assessments are rapid, field based assessments that provide data on overall aquatic resource condition. In California, the [California Rapid Assessment Method](#) has been developed for wetland and stream condition assessments (see description below). Other level 2 assessments exist and may also be used when needed.

Level 3 assessments are usually site-specific measures of specific resources. Plant species composition, nesting bird surveys, spawning success, and groundwater recharge rates are examples of level 3 data types.

The State Water Board's [Surface Water Ambient Monitoring Program \(SWAMP\)](#) now provides 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 coordinates all water quality monitoring conducted by the State and Regional Boards to assess attainment of all core beneficial uses in all waterbody types.

The State Water Resources Control Board (SWRCB) administers the state's *Surface Water Ambient Monitoring Program (SWAMP)*, a program that provides a statewide framework to "coordinate comparable, consistent, and scientifically defensible methods and strategies to improve surface water monitoring, assessment and reporting." SWAMP was designed to integrate the different monitoring programs among and within Regions and to ensure collection of comparable ambient data. The program is designed around beneficial use assessment and regulatory requirements. Two statewide monitoring programs were developed – one to assess the fishable beneficial use in lakes and reservoirs and the other to assess aquatic life use in perennial streams. SWAMP also has a regional monitoring component. Part of this process may involve some wetlands monitoring to better assess the state of in-stream waters, but wetlands do not receive a separate "score." In many cases, little funding exists for implementation of SWAMP at regional levels; thus, some regions focus on high quality waters and priority watersheds, and monitoring is primarily conducted through contracts.

Mapping/Inventory

Eighty percent of the state's wetlands have been mapped by the National Wetland Inventory (NWI). The Resources Agency plans to map the remaining wetlands in the state and re-map wetlands that were mapped in the 1980s to ensure their accuracy. Primary partners include the Coastal Conservancy, CDFW, FWS, and EPA Region IX. The CWMW is trying to add more detail to maps as funding becomes available. CWMW is creating a status and trends project (contact: Chris Potter),

which has already been piloted. This project would give the state an ongoing inventory of wetlands (like Minnesota has), which is completed by region and would be completed statewide in 10 years. California recently published a *State of State Wetlands Report*.

State Wetland Mapping Public Portal

[California EcoAtlas](#) provides access to information for effective wetland management. The maps and tools can be used to create a complete picture of aquatic resources in the landscape by integrating stream and wetland maps, restoration information, and monitoring results with land use, transportation, and other information important to the state's wetlands.

Through the [California Environmental Resources Evaluation System \(CERES\)](#) the California Wetlands Information System (CWIS) provides information on wetlands including maps, environmental documents, agency roles in wetlands management, and restoration and mitigation. All information is accessible online and is intended for the general public and government agencies.

Wetland Classification and Assessment

A variety of assessment methodologies are used in wetlands management and protection in California; however, these methods cannot be applied to all California wetland types equally. To fill gaps and standardize practices, state and federal agency representatives and scientists from the South, Central, and North Coasts and Bay Area developed the *California Rapid Assessment Method (CRAM)* to evaluate physical wetland conditions across a range of wetland types and geographic areas. Mainly intended as a cost-effective, science-based monitoring and assessment tool, it can be used as a part of a probabilistic sampling program (like that used by EPA's Environmental Monitoring and Assessment Program [EMAP]) to develop a landscape level profile of the condition of different wetlands within a watershed. This information can, in turn, be used to help plan, monitor, and assess restoration activities.

Statewide Wetland Monitoring Plan

California is in the process of developing a statewide wetland monitoring plan. The [California Wetland Monitoring Workgroup](#) (CWMW) is currently convening to improve the monitoring and assessment of wetland and riparian resources by developing a comprehensive wetland monitoring plan for California and increasing coordination and cooperation among local, state, and federal agencies, tribes, and non-governmental organizations. The workgroup will review technical and policy aspects of wetland monitoring tool development, implementation and use of data to improve wetland management in California.

The Workgroup has developed an initial working document to guide this effort entitled, "[California Wetland Monitoring Workgroup Tenets of a State Wetland and Riparian Monitoring Program \(WRAMP\)](#)".

The *California Rapid Assessment Method (CRAM)* tool provides a preliminary determination of the need for additional analysis or monitoring and supplementary regulatory information and can be used in §401 certification, §404 permitting, and coastal development permit decision-making by providing information for permit evaluation, site selection, and evaluation of mitigation success.

All natural resource agencies in the state use California's Wetland and Riparian Area Monitoring program (WRAMP) under WQMC. WRAMP promotes the use of rapid assessment (EPA Level 2)

monitoring tools to assess the condition of wetlands and riparian areas throughout the State. Rapid Assessment Methods (RAMs) use cost-effective, field-based diagnostic tools to answer questions about general wetland condition. In 2010, the California Water Quality Monitoring Council (CWQMC) directed the (CWMW) to create a Level 2 (Rapid Assessment) Committee to coordinate the review, development and implementation of rapid assessment tools for all state agencies.

The CWMW is also actively seeking full funding for the Wetland Status and Trends Program discussed above. This program, if funded, would provide the first comprehensive information about the amount of wetlands in California and change over time.

Overall Wetland Gain and Loss Tracking System

Although the state does not yet have an ongoing tracking system, CWMW is creating a status and trends project which has already been piloted. This project would give the state an ongoing inventory of wetlands (like Minnesota has), which is completed by region and would be completed statewide in 10 years.

Wetland Monitoring and Assessment Characteristics

Level	None	Level 1	Level 2	Level 3
<i>California</i>		X CARI mapping standard	X CRAM and others	X SWAMP

Type	None	IBI	Condition	Functional
<i>California</i>		Not in wetlands	X CRAM assesses condition	No functional assessment

Frequency	None	Project Specific	Ongoing
<i>California</i>		X	Not currently, but the proposed status and trends project would create an ongoing program

Participation in National Wetland Condition Assessment

NWCA Study Type	Yes	No
National Study	X	
State Intensification Study	X	

Description: California added additional plots for the 2011 NWCVA. For more information, contact Eric Stein (lead researcher) or Paul Jones (EPA Region 9).

Section D. Water Quality Standards

Wetland and Water Quality Standards

Type	None	Use Existing WQ Standards	In Process	Adopted	Future Direction
Wetland-specific Designated Uses		X		Regions 2,4,6	
Narrative criteria in the standards to protect designated wetland uses		X		Los Angeles Basin Plan	
Numeric criteria in the standards based on wetland type and location to protect the designated uses		X			
Anti-degradation policy includes wetlands				X	

Description: The State Water Resources Control Board (SWRCB) sets the anti-degradation policy for all “waters of the state,” which include wetlands. The board also sets statewide water quality standards that must be applied in each region. Each RWQCB adopts and implements Water Quality Control Plans (Basin Plans) that are legally binding. Basin Plans include beneficial uses and numeric and narrative water quality objectives (standards) to protect these uses. Regions 1, 3, 5, 7, and 9 have no water quality objectives or beneficial uses specific to wetlands; however, wetlands are addressed via other beneficial uses (i.e., Saline, Estuarine, and Marine Habitats, and Warm and Cold Freshwater Habitats), and water quality objectives are set for protection of inland surface waters, enclosed bays and estuaries, and coastal lagoons. California’s wetland program plan indicates that the state is working on developing and piloting narrative wetland water quality standards (<http://water.epa.gov/type/wetlands/upload/california-wpp.pdf>).

Section E. Voluntary Wetland Restoration

While California does not have one single statewide voluntary wetland restoration program, but it has several formal, active state programs responsible for wetland restoration is taking place in the state. The California Wetlands Conservation Policy makes restoration a priority for the state and calls for the identification of “regional and statewide goals for conserving, restoring, and enhancing wetlands.” The policy goes on to state that “achievement of these goals will emphasize maintaining economic uses (e.g., agriculture) of restored and enhanced lands and be achieved through the voluntary participation of landowners.” The policy also calls for no net loss of wetlands.

To achieve this goal, several state agencies administer various restoration programs including landowner incentive programs, easements, technical and cost-share assistance, and grant programs:

- The *California Coastal Conservancy (CCC)* provides grants for wetland acquisition and restoration, and conducts restoration and provides technical and planning guidance as well. Through its Resource Enhancement Program, the Coastal Conservancy has restored over 40,000 acres in the San Francisco Bay Area and 5,000 to 6,000 acres in Southern California.¹⁹⁷ The Conservancy works cooperatively with many agencies, organizations, and private partners to achieve its restoration
- The *Wildlife Conservation Board (WCB)* operates as an arm of the CDFW but retains independent authority. The WCB created the Inland Wetland Conservation Program in 1990 to increase waterfowl populations by protecting and restoring wetland habitat in the Central Valley and to advance the goals of the Central Valley Joint Venture. Through this program, the WCB administers a cost-sharing program. It awards grants to non-profit organizations, state and local governments, Resource Conservation Districts, and Special Districts for projects that will restore and enhance lands or that will place wetlands into easements. The WCB also may purchase degraded wetlands, restore them, and sell them to a public agency or private entity.
- The *State Water Resources Control Board (SWRCB)* has a grants program and water resource restoration projects that include wetland restoration. The San Francisco Bay Water Board and partners have established habitat goals for wetlands and related habitats.
- The *California Department of Parks and Recreation (CDPR)* provide grants for wetland-related restoration projects. CDPR's Office of Grants and Local Services administers the Federal Land and Water Conservation Fund and Habitat Conservation Fund Grant Programs.
 - The Habitat Conservation Fund Program does include wetlands as one of six funding categories. Habitat Conservation Fund Program grant applicants can apply for funds for projects to either acquire wetlands property or to enhance or restore properties. The program provides \$2 million per year, including both wetland- and non-wetland-related projects. Applicants must meet a one to one non-state match requirement.
 - CDPR conducts restoration activities on state parks lands.
 - The Land and Water Conservation Fund Program do not include wetlands as a funding category; however, occasionally an applicant has requested funding for an acquisition that has a wetlands component.
- The *California Department of Fish and Wildlife (CDFW)* administers a Landowner Incentive Program in the Central Valley, which provides landowners with incentive payments for implementing a habitat conservation plan for threatened and endangered species on restored wetlands, riparian lands, and native grasslands. The Delta provides the majority of water to Southern California. The program is funded by FWS and the California State Wetland Fund. The CDFW also administers the California Waterfowl Habitat Program, under which the agency enters into agreements with landowners to protect waterfowl habitat. Through the agreement, landowners receive \$20 for each acre of waterfowl habitat protected per year. The landowners must abide by specific agreement terms for wetlands. The CDFW ensures that compliance takes place and that payments are issued.
- The *California Department of Water Resources (CDWR)* has authority from Proposition 84 to allocate \$1 billion in grants to local agencies to meet long-term water resource needs including protection of

water quality and the environment. Although projects are not required to be specific to wetlands, they must have multiple benefits. One of the eleven possible benefits includes “removal of invasive non-native species, the creation and enhancement of wetlands, and the acquisition, protection, and restoration of open space and watershed lands.”

Wetland Restoration-related State Laws include:

- **Keene-Nejedly California Wetlands Protection Act.** The state legislature passed the 1976 WPA in recognition of the state’s valuable wetlands and the need to protect them in perpetuity for the public benefit. Under this Act, the state developed a plan in 1979 to guide wetlands protection, acquisition, enhancement, and restoration to be implemented through 2000. The Act was updated in 2000 recognizing the need “for state agencies that are responsible for wetlands conservation to develop and disseminate a wetlands conservation strategy” for use by the legislature, local governments, and regional wetlands programs.
- **Suisan Marsh Preservation Act.** The Nejedly-Bagley-Z'berg Suisan Marsh Preservation Act was passed in 1974 by the state legislature to protect the Suisan Marsh, the largest wetland system in California that comprises 10 percent of the state’s wetlands.
- **California Wetlands Conservation Policy.** In August 1993, Governor Wilson announced his “California Wetlands Conservation Policy,” created by Executive Order W-59-93. The goals of the policy are to: (1) ensure no overall net loss and achieve a long-term net gain in the quantity, quality, and permanence of wetlands acreage and values in California in a manner that fosters creativity, stewardship, and respect for private property; (2) reduce procedural complexity in the administration of [s]tate and federal wetlands conservation programs; and (3) encourage partnerships to make landowner incentive programs and cooperative planning efforts the primary focus of wetlands conservation and restoration. This policy calls for the Resources Agency to establish an Interagency Task Force in cooperation with the CA Environmental Protection Agency to direct and coordinate administration and implementation of the policy.
- **California Environmental Protection Act.** Projects or activities carried out by state or local agencies or activities that require a state permit or approval must go through an environmental review process pursuant to the California Environmental Protection Act (CEQA). The environmental review involves an evaluation of alternatives and impacts and identification of mitigation if avoidance is not possible. Coastal development permits, Lake or Streambed Alteration Agreements, and §401 water quality certifications may only be issued after a review of final CEQA documents is complete. Although not specific to wetlands, CEQA can play a role in wetlands protection and management.

Types of Wetland Restoration Work Funded by the State:

Type of Work	YES	NO	Description
Fund Wetland Restoration (may include easement agreements)	X		CCC, WCB
Private Land Restoration	X		CDWR, CDFW, WCB, CCC
Public Land Restoration	X		CDWR, CDFW, WCB, CCC
Technical Assistance	X		CCC
Tax Incentives	X		CDFW
Other	X		Cost-sharing program by WCB

Voluntary Wetland Restoration Program Components

The California Coastal Commission runs the Wetland Recovery Program.

Wetland Restoration Efforts	Nothing in the Works	Planning	In Progress	Mature/Complete
Program has a set of restoration goals				X
Coordinate with relevant agencies that outline restoration/protection goals and strategies and timeframes				X
Developed multi-agency body to coordinate restoration/protection efforts				X
Set restoration goals based on agency objectives and available information				X

Goals for Restoration Projects*

Goal	Yes	No	Description
No Net Loss	X		
Reverse Loss/Net Gain	X		
Nonpoint Source Pollution (NPS)/WQ	X		
Total Maximum Daily Load (TMDLs)	X		
Habitat	X		Recognize declining nature of vernal pools; developing a way to be more protective of vernal pools (Contact: Paul Jones)
Coastal Protection	X		Wetland recovery projects
Floodwater Protection	X		
Groundwater	X		
Other (please describe)			

Restoration Tracking

No. The only restoration tracking at the state level is for mitigation projects. The state would like to use EcoAtlas to track conditions of wetland restoration projects in the future (currently piloting).

Landowner Guides and Handbooks to Assist with Voluntary Wetland Restoration Efforts

None. The state views this as an area needing support.

Section F. Innovative and/or Highly Effective Education and Outreach

- My Water Quality provides a [portal](#) for the public to understand the condition of their watersheds. The web-based portal, supported by a wide variety of public and private organizations, presents

California water quality monitoring data and assessment information that may be viewed across space and time. Initial web portal development concentrates on four theme areas, with web portals to be released one at a time.

- The Resource Agency administers and maintains a major education and outreach effort through its California Environmental Resources Evaluation System (CERES). The system is designed to provide a variety of environmental information and data to the public, government agencies, and scientists. The information can be used for environmental planning and analysis. Part of the CERES, the California Wetlands Information System (CWIS) is another important educational tool. This system provides information on wetlands including maps, environmental documents, agency roles in wetlands management, and restoration and mitigation. All information is accessible online and is intended for the general public and government agencies.

Section G. Climate Change and Wetlands

Although there is no specific organized effort to connect wetlands and climate change at the state level, climate change work is a big initiative in the state. The program informally considers such things as consideration of issues such as drought, storage, habitat, fish and wildlife protection, and sea level rise. CALTRANS (roads) has funded studies of wetlands as buffers for climate changes and wetland restoration is part of the wetland program’s informal efforts to address climate change. The state hosts think tanks on the topic of climate change.

Section H. Integration

Entity/Program Area	Yes/No	Description of the Connection
NPDES/Stormwater	YES	§401 and stormwater managers are the same people, but there are no statewide efforts to develop a joint permit or permitting strategy.
303(d)	NO	
305(b) reporting on wetlands	NO	
Total Maximum Daily Load (TMDLs)	NO	However, there is interest in using wetlands to address TMDL goals
Climate Change/ Resiliency	YES	As part of overall statewide strategy; consideration of issues such as drought, storage, habitat, fish and wildlife protection, and sea level rise
Land Use /Watershed planning	YES	The State’s wetland work plan integrates the use of the watershed approach in all core areas.
Flood/Hazard Mitigation	NO	
Coastal Work	YES	
Wildlife Action Plan	Likely	Fish and Wildlife Department may have wetlands as part of plans
Statewide Comprehensive Outdoor Recreation Plan (SCORP)	Unknown	Contact California State Parks
Other – High Speed Rail	YES	Both Stormwater and §401 staff work together with the high speed rail program to ensure that all requirements are met

State Wetland Program Continuum

Continuum Stage	Core Element 1: Regulation	Core Element 2: Monitoring & Assessment	Core Element 3: Wetland Water Quality Standards	Core Element 4: Voluntary Restoration
Mature Stage High				X (State have been doing a lot for a long time)
Initial Implementation Stage	X (Once get wetland policy approved)			
Development Stage		X (Developing CRAM)		
Early Stage Low			X	

Section I. Contact Information

Bill Orme

California State Water Quality Control Board

Chris Potter (Coastal Wetlands)

Sam Gauthier

Coastal Commission

Shakura Azin

Delta Conservancy

Section J. Useful Websites

State Government Programs

1. [California Natural Resources Agency](#)
 - a) <http://baydeltaconservationplan.com/Home.aspx>
 - b) <http://www.dfg.ca.gov/marine/mpa/index.asp>
 - c) [State of the State's Wetlands Report](#)

- d) http://resources.ca.gov/conserving_treasured_lands.html
 - e) <http://ceres.ca.gov/wetlands/>
2. State Water Resources Control Board
- a) [General Program Information](#)
 - b) http://www.waterboards.ca.gov/water_issues/programs/cwa401/wrapp.shtml
 - i. Wetland And Riparian Area Protection Policy

As directed by the State Water Board in [Resolution No. 2008-0026](#), the Wetland and Riparian Area Protection Policy is being implemented in three phases which will allow for necessary infrastructure and program development. The current Phase 1 effort is now called the “Wetland Area Protection and Dredge and Fill Permitting Policy.” The purpose of Phase 1 is to protect all waters of the State, including wetlands, from dredge and fill discharges. It includes a wetland definition and associated delineation methods, an assessment framework for collecting and reporting aquatic resource information, and requirements applicable to discharges of dredged or fill material.

Phases 2 and 3 are not under consideration at this time. Current efforts on Phase 1 are focused on developing a Draft Program Environmental Impact Report and accompanying draft policy and draft regulation text.
 - ii. [Wetland Conservation Work Plan 2012 Update](#)
 - c) Dredge/Fill (401) and Wetlands Program
 - d) http://www.waterboards.ca.gov/water_issues/programs/cwa401/
 - e) Nonpoint Source Pollution Control Program
http://www.waterboards.ca.gov/water_issues/programs/nps/
 - f) Watershed Management
http://www.waterboards.ca.gov/water_issues/programs/watershed/
3. [California Environmental Protection Agency](#)
- a) State Water Resources Control Board
 - i. Water Issues
http://www.waterboards.ca.gov/water_issues/programs/cwa401/wrapp.shtml
 - 1. Surface Water Ambient Monitoring Program
http://www.waterboards.ca.gov/water_issues/programs/swamp/index.shtml
SWAMP is tasked with assessing water quality in all of California’s surface waters.
 - ii. Wetland And Riparian Area Protection Policy

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includes a wetland definition and associated delineation methods, an assessment framework for collecting and reporting aquatic resource information, and requirements applicable to discharges of dredged or fill material.

Phases 2 and 3 are not under consideration at this time. Current efforts on Phase 1 are focused on developing a Draft Program Environmental Impact Report and accompanying draft policy and draft regulation text.

iii. Preliminary Draft Wetland Area Protection Policy

http://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/wrapp/policy_draft.pdf

iv. Wetland Conservation Work Plan 2012 Update

http://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/wrapp/2011wetplanw2012sbupd.pdf

4. California Water Quality Monitoring Council

http://www.mywaterquality.ca.gov/contact_us/index.shtml

In November 2007, a [Memorandum of Understanding \(MOU\)](#) was signed by the Secretaries of the California Environmental Protection Agency (Cal/EPA) and the California Natural Resources Agency to establish the California Water Quality Monitoring Council (Monitoring Council). The MOU was mandated by [CA Senate Bill 1070](#) (Kehoe, 2006) and requires the boards, departments and offices within the California Environmental Protection Agency (Cal/EPA) and the California Natural Resources Agency to integrate and coordinate their water quality and related ecosystem monitoring, assessment, and reporting.

CA Senate Bill 1070 (Water Code Sections 13167 and 13181) and the MOU require that the Monitoring Council develop specific recommendations to improve the coordination and cost-effectiveness of water quality and ecosystem monitoring and assessment, enhance the integration of monitoring data across departments and agencies, and increase public accessibility to monitoring data and assessment information. While the Monitoring Council may recommend new monitoring or management initiatives, it will build on existing effort to the greatest extent possible. The Monitoring Council published its [initial recommendations](#) in December 2008, and its recommendations for [A Comprehensive Monitoring Program Strategy for California](#) in December 2010.

a) California Wetlands Portal

<http://www.californiawetlands.net/tracker/>

The purpose of the Wetlands Portal is to provide the public information on the quantity and quality of California wetlands.

b) California Wetland Monitoring Workgroup

http://www.mywaterquality.ca.gov/monitoring_council/wetland_workgroup/index.shtml

c) California Rapid Assessment Method

<http://www.cramwetlands.org/>

The development, training and implementation of the California Rapid Assessment Method is overseen by a committee composed of federal, state and local agency personnel and scientists, NGO scientists and consultants. CRAM is a cost-effective and

scientifically defensible rapid assessment method for monitoring the conditions of wetlands throughout California. It is designed for assessing ambient conditions within watersheds, regions, and throughout the State. It can also be used to assess the performance of compensatory mitigation projects and restoration projects.

5. Wildlife Conservation Board
 - a) Inland Wetlands Conservation Program
<http://www.wcb.ca.gov/Wetlands/>
6. California Biodiversity Council
<http://biodiversity.ca.gov/>

Federal Government Programs

1. USDA Natural Resources Conservation Service
Wetlands Reserve Program
<http://www.ca.nrcs.usda.gov/programs/wrp/>

Other Wetland Organization Links

1. San Francisco Estuary Institute
 - a) Wetland Science Program
<http://www.sfei.org/wl>
 - b) Regional Watersheds Program
<http://www.sfei.org/ws>
2. Wetlands and Water Resources, Inc.
 - a) Applied Conservation Science and Adaptive Management Services
<http://www.swampting.org/services/applied-conservation-science>
 - b) Site-Specific Restoration and Enhancement Services
<http://www.swampting.org/services/site-specific-restoration>
3. Point Blue Conservation Science
<http://www.prbo.org/cms/index.php>