

Appendix B: Wetlands Conservation Planning

Several existing federal, state, and local regional planning documents address issues related to wetlands recovery efforts in Southern California. In general, these documents focus on a specific species or group of species, geographic area, or issue. The Wetlands Recovery Project is integrating all of these related plans and policies into a coordinated strategy for Southern California. Key plans and policies for developing the WRP's regional strategy include:

- U.S. Shorebird Conservation Plan
- North American Waterfowl Management Plan
- Riparian Bird Conservation Plan
- Threatened and Endangered Species Recovery Plans (light-footed clapper rail, California least tern, Brown pelican, Steelhead trout)
- California Nonpoint Source Pollution Control Plan
- Ocean Resources Management Program
- California Continuing Resource Investment Strategy Project
- State Coastal Sediment Management Program
- Santa Monica Bay Restoration Plan
- Regional Water Quality Control Board Plans and Policies
- Multiple Species Conservation Planning in San Diego and Orange Counties

This chapter provides a brief review of these plans and highlights goals and priorities related to WRP activities.

United States Shorebird Conservation Plan

The United States Shorebird Conservation Plan (USSCP) was developed by a partnership of federal and state agencies, non-governmental conservation organizations and individual researchers to create national and international partnerships committed to the conservation of shorebirds that depend on wetland habitats. The USSCP calls for the creation of regional planning efforts to identify conservation actions, and to develop integrated management practices to protect shorebirds. The plan identifies international, national, and regional goals, along with recommended management activities. The overarching international goals of the USSCP are to:

- Develop monitoring programs related to shorebird declines;
- Conduct research on the factors limiting populations of declining shorebirds, and
- Focus international conservation efforts on reducing limiting factors and developing coordinated shorebird conservation efforts.

Management activities recommended for the Southern Pacific region, including the Southern California coast, include:

- Increase the area and quality of tidal wetlands along the coast.
- Protect coastal wetlands from development.

The Plan also recommends focusing on experimentation with management of human-built habitats such as salt ponds and rice fields.

North American Waterfowl Management Plan

The North American Waterfowl Management Plan (NAWMP) develops a strategy to restore waterfowl populations through habitat protection, restoration, and enhancement. The Plan was originally developed by the U.S. and Canadian governments, and Mexico subsequently became a participant. Specific goals identified in the plan include:

- Develop measurable, scale-specific management objectives;
- Expand monitoring and assessment capabilities;
- Design and carry out evaluations related to conservation strategies;
- Define and implement waterfowl conservation in a landscape context;
- Implement community-based projects within a landscape context;
- Broaden partnerships with other migratory bird conservation initiatives; and
- Support and encourage conservation partnerships with communities.

The success of the Plan depends on partnerships and “joint ventures” that involve federal, state, tribal and local governments, businesses, conservation groups, and individual citizens. Joint ventures are designed to develop implementation plans focusing on areas of concern identified in the Plan. The WRP functions as the equivalent of a joint venture in Southern California, but it does not have official “joint venture” status under the NAWMP. There are no specific areas of concern mentioned in the NAWMP associated with coastal Southern California.

Riparian Bird Conservation Plan

The Riparian Bird Conservation Plan guides conservation, policy, and actions on behalf of California’s riparian habitats and associated land birds. The Plan was developed by the California Riparian Habitat Joint Venture (RHJV) a partnership among several federal, state, and local agencies, and non-governmental organizations. The Plan provides the foundation for adaptive conservation planning in California’s riparian habitats. It outlines objectives for habitat protection, restoration, cultivated restoration, management, monitoring and research, and public policies. Key objectives related to WRP efforts include:

- Prioritize riparian sites for restoration and protection based on: 1) current indicators of avian population health; 2) proximity to existing high quality sites; 3) areas with

- intact adjacent upland habitats; 4) intact natural hydrology or the potential to restore natural hydrologic processes; and 5) surrounding land uses.
- Promote self-sustaining functioning riparian ecosystems.
 - Restore and manage riparian forest to promote structural diversity and volume of the understory.
 - Restore the width of the riparian corridor.
 - Protect, enhance and recreate natural riparian processes, particularly hydrology and associated high-water events.
 - Control and eradicate non-native plant species. This is best planned and implemented on a watershed scale.

The Plan identifies “Portfolio Sites” throughout the state which have been recognized by the RHJV for their active programs of restoration and protection that consider birds. The Santa Clara River is the only portfolio site identified to date from the south coast.

Threatened and Endangered Species Recovery Plans

In 1973, Congress passed the federal Endangered Species Act (ESA) with the ultimate goal to “recover” threatened and endangered species so they no longer need protection under the Act. The Act stipulates that recovery plans be developed for listed species that describe the steps needed to restore a species to health. The U.S. Fish and Wildlife Service is responsible for preparing most recovery plans, with the exception of those for marine and anadromous fishes which are prepared by the National Marine Fisheries Service. Recovery plans applicable to Southern California’s coastal wetlands and watersheds include:

- a. Light-footed Clapper Rail
- b. California Least Tern
- c. California Brown Pelican
- d. Western Snowy Plover
- e. Vernal Pools of Southern California
- f. Southwestern Willow Flycatcher (draft)
- g. California Red-legged Frog (draft)
- h. Least Bell’s Vireo (draft)
- i. Arroyo Southwestern Toad

The State of California has also developed a recovery plan for the southern steelhead trout. A federal Recovery Plan for this species has not yet been drafted.

(a) Light-footed clapper rail recovery plan

The light-footed clapper rail (*Rallus longirostris levipes*) is one of three clapper rail subspecies in California. The light-footed clapper rail is found in coastal salt marshes from Santa Barbara County, California to San Quintin Bay in Baja California, Mexico. Clapper rails frequent coastal marshes where tidally influenced habitats are bordered by upper estuarine vegetation (e.g.,

cattails, tules) that result from fresh-water inputs. Upper estuarine habitats are important for nesting and foraging, and for birds dispersing or wandering after breeding. Small populations of the bird remain primarily in Ventura County (Mugu Lagoon) and Orange County (Anaheim Bay and Newport Bay).

The dredging and filling of marshes in southern California is the primary cause of the decline in the abundance and distribution of the clapper rail. In the 1800s, the bird was also hunted. Excessive runoff, poor water quality, habitat destruction, and severe storms adversely affect the marsh community and hinder reproduction success rates. The bird was added to the federal list in October 1970.

The primary objective of the light-footed clapper rail recovery plan (USFWS 1985) is to increase the rail breeding population to at least 800 pairs within 10,000 acres of adequately protected, suitably managed, secure wetland habitat, consisting of at least 50% appropriate marsh vegetation in at least 20 complexes. The USFW Service states that this objective could be achieved by preserving, restoring, and/or creating approximately 10,000 acres of habitat. The Recovery Plan recommends:

- Protecting existing habitat;
- Increasing the carrying capacity and stability of existing habitat;
- Increasing the size of particular population units;
- Creating and stocking new habitat; and
- Protecting and managing the population of the birds south of the US-Mexico border.

The Recovery Plan identifies the several Southern Californian wetlands as critical habitat for the clapper rail, including Goleta Slough, Kendall-Frost Ecological Reserve, upper Newport Bay, Anaheim Bay, Santa Margarita River Estuary, and the Tijuana Marsh. In addition, the plan identifies degraded marshes, such as Carpinteria Marsh, San Joaquin Marsh, and Sweetwater Marsh as potential restoration areas for the endangered bird. With respect to these coastal wetlands, the following restoration activities are recommended in the plan:

- Improve/restore tidal action;
- Create/expand fringing freshwater marsh;
- Create low and high marsh;
- Create nesting hummocks;
- Enhance the vigor of cordgrass;
- Improve network of tidal channels;
- Remove exotic vegetation;
- Control sedimentation, human disturbance, pollutants, debris, and predators; and
- Identify water quality concerns.

(b) California least tern recovery plan

The California least tern (*Sterna albifrons browni*) is one of 12 recognized subspecies of the least tern. Least terns nest and roost on sandy beaches and feed over the nearshore ocean. They also use estuaries, sloughs, lagoons, and river mouths for feeding and roosting. From mid-April to mid-May, the migratory California least tern colonies arrive to feed and roost in southern California's coastal wetlands. Their historic breeding range stretched along the Pacific coast from the San Francisco Bay to San Jose del Cabo, Baja California, Mexico. The decline in the abundance and diversity of the least tern has followed development of south coast wetlands, heavy recreational use of beaches, and the introduction of non-native predators (e.g., rats, cats, dogs, and red foxes).

The recovery plan for the species (USFWS 1985) recommends the following with respect to SCWRP wetlands:

- Protect existing habitat (such as the Santa Margarita Estuary);
- Preserve feeding areas (such as Devereux and Goleta Sloughs);
- Create or restore habitat (e.g., at San Dieguito Lagoon and the mouth of Santa Ana River);
- Identify special site protection problems of certain insecure colonies and implement corrective action as needed (at Playa del Rey, San Gabriel River and Santa Clara River Mouths);
- Provide adequate nesting habitat in former or potential breeding areas (such as Anaheim Bay, Bolsa Bay Ecological Reserve, Upper Newport Bay Ecological Reserve);
- Protect nesting areas for existing colonies (located at San Elijo Lagoon, Mugu Lagoon, Santa Margarita River Mouth, Huntington State Beach Least Tern Natural Area, Upper Newport Bay Ecological Reserve, and Los Peñasquitos Lagoon); and
- Restore tidal flow in wetlands to enhance feeding grounds (for sites located on Mugu lagoon, Bolsa Bay, Anaheim Bay and Los Peñasquitos Lagoon).

(c) Brown pelican recovery plan

The California brown pelican (*Pelecanus occidentalis californicus*) is one of six recognized subspecies of the brown pelican. The brown pelican is strictly a coastal-dependent bird, frequenting open nearshore waters, bays, harbors, river mouths and lagoons. The breeding range of the brown pelican begins at the Channel Islands (in the Southern California Bight), and continues southward to Isla Ixtapa off Acapulco, Mexico. The primary reason for the endangerment of the pelican is pollution, such as DDT and PCB concentrations found in the marine environment. In 1970, the California brown pelican was classified by the USFWS as an endangered species.

The Recovery Plan (USFWS 1983) focuses on the Southern California Bight population, with a particular emphasis on the need to protect nesting sites on Anacapa Island, which is the last major nesting area for the bird. The goals of the Recovery Plan address the basic habitat needs of the California brown pelican, and include:

- Disturbance- and predator-free nesting areas;
- Offshore habitat with an adequate food supply, and
- Appropriate roosting sites (located in Southern Californian wetlands) for both resident and migrant pelicans.

The Recovery Plan calls for the preservation of marsh habitats of the south coast (including river mouths), which are important roost areas for the brown pelican. Mugu Lagoon, is the major roost area for the pelican due to its proximity to Anacapa Island, which is 14 miles offshore. The Recovery Plan notes that the destruction of major roost areas may have adverse population effects.

(d) Western Snowy Plover Draft Recovery Plan

The Pacific coast population of the western snowy plover (*Charadrius alexandrinus nivosus*) breed primarily on coastal beaches from southern Washington to southern Baja California, Mexico. Western snowy plovers breed primarily above the high tide line on coastal beaches, sand spits, dune-baked beaches, sparsely-vegetated dunes, beaches at creek and river mouths, and slat pans at lagoons and estuaries. Habitat degradation caused by human disturbance, urban development, introduced beachgrass, and expanding predator populations have resulted in a decline in active nesting areas and in the size of the breeding and wintering populations. The Pacific Coast population of the western snowy plover was listed as threatened in 1993.

The Draft Recovery Plan (USFWS 2001) focuses on achieving well-distributed increases in numbers and productivity of breeding adult birds and providing for long-term protection of breeding and wintering plovers and their habitat. Recommended actions include:

- Maintain natural coastal processes that perpetuate high quality breeding habitat, including inlet formation, migration and closure.
- Remediate and compensate the disruption of natural processes by creating and enhancing existing and potential breeding habitat.
- Create, manage, and enhance coastal ponds and playas for breeding habitat. Significant opportunities for management of nesting plovers currently exist at Bolsa Chica wetlands and south San Diego Bay salt ponds.
- Prevent disturbance of breeding snowy plovers by people and domestic animals.

(e) Vernal Pools of Southern California Recovery Plan

Vernal pools are seasonal depressional wetlands with a rich endemic flora and micro fauna. Numerous plant species are dependent upon southern California vernal pools. Pools are utilized by birds and various mammals for food, water, and nesting. Fairy shrimp and other invertebrates provide food for waterfowl, especially ducks. The Southern California Vernal Pool Recovery Plan (USFWS 1998) addresses six species that are listed as endangered and one that is proposed for threatened status: San Diego button-celery (*Eryngium aristulatum parishii*), California Orcutt grass (*Orcuttia californica*), San Diego mesa mint (*Pogogyne abramsii*), Otay mesa mint (*Pogogyne nudiuscula*), Riverside fairy shrimp (*Streptocephalus woottoni*), San Diego fairy

shrimp (*Branchinecta sandiegonensis*), and spreading navarretia (*Navarretia fossalis*). It is estimated that as much as 97 percent of vernal pool habitat in Southern California has been lost, primarily due to urban development.

The Recovery Plan outlines several actions for conserving and enhancing Southern California vernal pool habitat, with specific emphasis on stabilizing and protecting existing populations for the six endangered species. Key recommendations include:

- Secure remaining vernal pools and their watersheds through fee acquisition or conservation agreements.
- Rehabilitate and enhance vernal pool habitats and their constituent species.
- Reestablish vernal pool habitat to historic structure and composition to increase genetic diversity and population stability.

Key locations identified in the Recovery Plan, include three mesa-top complexes in Goleta, the Otay and Kearny mesas in San Diego, and scattered sites in northern San Diego and southern Orange counties.

(f) Southwestern Willow Flycatcher Draft Recovery Plan

The southwestern willow flycatcher (*Empidonax traillii extimus*) breeds in dense riparian habitats in southwestern North America, and winters in southern Mexico, Central America, and northern South America. The southwestern willow flycatcher breeds in relatively dense riparian tree and shrub communities associated with rivers, swamps, and other wetlands. Habitat requirements include brushy savanna edges, second growth, shrubby clearings and pastures, and woodlands near water. Destruction and modification of riparian habitats has greatly reduced available breeding habitat for the southwestern willow flycatcher. Concurrent with habitat loss have been increases in brood parasitism by the brown-headed cowbird.

The southwestern willow flycatcher was listed as endangered in 1995. Designated critical habitat in Southern California includes portions of the Santa Ana, Santa Margarita, San Luis Rey, San Dieguito, San Diego, and Tijuana Rivers. The Draft Recovery Plan (USFWS 2001) recommends increasing and improving breeding habitat, by restoring, mimicking and/or recreating natural physical and biotic processes that influence riparian ecosystems, and reducing other stresses on the flycatcher. Specific actions include:

- Restoring the diversity of fluvial processes that allow a diverse assemblage of native plants to develop.
- Restore adequate hydrogeomorphic elements.
- Manage exotic plant species.
- Conserve and protect all existing breeding sites.
- Secure, maintain, and enhance largest populations, in particular the Upper San Luis Rey River and the Santa Margarita River on Camp Pendleton.
- Develop new habitat near extant populations.
- Manage brown-headed cowbird parasitism.

(h) Least Bell's Vireo Draft Recovery Plan

The least Bell's vireo (*Vireo bellii pusillus*) is an obligate riparian species during the breeding season and typically inhabits structurally diverse woodlands along watercourses, including cottonwood-willow forests, oak woodlands, and mulefat scrub. The breeding distribution of the least Bell's vireo is currently restricted to eight counties in southern California and portions of Baja California, Mexico. Least Bell's vireo winter in southern Baja California. Extensive breeding habitat loss and degradation and brood parasitism by the brown-headed cowbird have resulted in a rangewide decline of the least Bell's vireo.

The least Bell's vireo was listed as endangered in 1986. One objective of the Draft Recovery Plan (USFWS 1998) is to establish stable or increasing populations, each consisting of several hundred or more breeding pairs, at several sites including: Tijuana River, Dulzura Creek/Jamul Creek/Otay River, Sweetwater River, San Diego River, San Luis Rey River, Camp Pendleton/Santa Margarita River, Santa Ana River, Orange County/Los Angeles County, and Santa Clara River. The plan identifies key threats and recommended actions for each of these sites.

Additional actions recommended in the plan include:

- Continue cowbird removal to increase breeding success.
- Develop alternative means of controlling cowbird parasitism.
- Control nonnative plant species.
- Establish perpetual endowments for cowbird control and/or exotic plant control in least Bell's vireo habitat.

(g) California Red-legged Frog Draft Recovery Plan

The California red-legged frog (*Rana aurora draytonii*) is endemic to California and Baja California, and is typically found from sea level to elevations of about 1,500 meters. The California red-legged frog requires a variety of habitat elements with aquatic breeding areas embedded within a matrix of riparian and upland dispersal habitats. Breeding sites of the California red-legged frog are in aquatic habitats including pools and backwaters within streams and creeks, ponds, marshes, sag ponds, dune ponds and lagoons.

The California red-legged frog has been extirpated from 70 percent of its former range and now is found in coastal drainages from Marin County south to northern Baja California. The frog is no longer found in San Diego or Orange counties. In 1996, the frog was federally listed as threatened. Potential threats to the species include elimination or degradation of habitat from land development and land use activities and habitat invasion by non-native aquatic species.

The first priority identified by the California Red-Legged Frog Draft Recovery Plan (USFWS 2000) is to develop and implement watershed management and protection plans for every watershed within the current and historic range of the California red-legged frog. The Recovery Plan identifies these watersheds, and ranks development of a management plan for each

watershed as priority one, two or three. The plan also provides extensive guidance on preparation of the watershed management and protection plans, including:

- Protect suitable habitats and buffers in perpetuity, in part through acquisition of parcels and conservation easements.
- Develop and implement guidelines for maintaining adequate water flow regimes.
- Control/eliminate non-native species/predators.
- Decrease the exposure of California red-legged frogs and their habitats to contaminants.

(i) Arroyo Southwestern Toad Recovery Plan

The arroyo southwestern toad (*Bufo microscaphus californicus*) is endemic to primarily the coastal plain and mountains of central and southern California and Baja California. These toads breed in stream channels and use stream terraces and surrounding uplands for foraging and wintering. Direct habitat loss due to urbanization, agriculture and dam construction is the main cause for the decline of the arroyo toads. The arroyo toad was listed as endangered in 1994.

The Recovery Plan for the Southwestern Arroyo Toad (USFWS 1999) identifies eight watersheds in Southern California that are critical to the arroyo toad's recovery. These are: 1) San Juan Creek; 2) Santa Margarita River; 3) San Luis Rey River; 4) San Dieguito River/Santa Ysabel Creek; 5) San Diego River; 6) Sweetwater River; 7) Otay River/Dulzura Creek; and 8) Tijuana River-Cottonwood Creek basins.

The recovery strategy consists of five parts:

- Stabilize and maintain populations throughout the range of the arroyo toad in California by protecting sufficient breeding and nonbreeding habitat.
- Monitor the status of existing populations to ensure recovery actions are successful.
- Identify and secure, by appropriate management and monitoring, additional suitable arroyo toad habitat and populations.
- Conduct research to determine the population dynamics and ecology of the species to guide management efforts and determine the best methods for reducing threats.
- Develop and implement an outreach program to reduce negative human-related effects on arroyo toad habitats and populations.

(j) Steelhead Recovery Plan

The southern steelhead (*Oncorhynchus mykiss*) is an indicator species for the general health and integrity of coastal watersheds. The southern steelhead was listed as an endangered species in August 1997. With respect to the south coast, the evolutionarily significant unit (ESU) includes all naturally spawned populations of steelhead (and their progeny) in streams from the Santa Maria River to Malibu Creek. This has been the observed range of the species in most recent years. However, in years of substantial rainfall, spawning steelhead can be found as far south as the Santa Margarita River in northern San Diego County. NMFS is considering extending the ESU down to San Mateo Creek.

In 1996, the California Department of Fish and Game developed a *Steelhead Restoration and Management Plan for California*. Goals for steelhead restoration and management within the state were identified as: 1) increase natural production so that steelhead populations are self-sustaining and maintained in good condition, and 2) enhance angling opportunities and non-consumptive uses. Strategies to accomplish these goals include:

- Restore degraded habitat.
- Restore access to historic habitat that is presently blocked.
- Develop and facilitate research to address deficiencies in information on fresh water and ocean life history, behavior, habitat requirements, and other aspects of steelhead biology.

The DFG Steelhead Plan identifies key issues for steelhead recovery and recommends next steps for several watersheds in Southern California. These are summarized below.

- Santa Barbara County Coastal Streams
 - Removal of passage barriers on Gaviota Creek and Rincon Creek
- Ventura River
 - Increase instream flows
 - Remove or modify Matilija Dam
 - Undertake comprehensive watershed planning for the river
 - Assess habitat in San Antonio and Coyote creeks
- Santa Clara River
 - Increase instream flows
 - Assess habitat on Santa Paula Creek
- Malibu Creek
 - Remove or modify Rindge Dam
 - Remove or modify passage barriers upstream of Rindge Dam
 - Maintain instream flows
- Coastal Streams South of Malibu
 - Assess habitat and potential for restoration of steelhead runs in coastal streams south of Malibu, including San Mateo Creek, the Santa Margarita River, and the San Luis Rey River

California Nonpoint Source Pollution Control Plan

The California Nonpoint Source Pollution Control Plan is the first significant upgrade of California's Nonpoint Source Pollution Control Program (NPS Program) since its inception in 1988. The State Water Resources Control Board and the Coastal Commission developed the plan in partnership with all of the State agencies within the California Resources Agency and the California Environmental Protection Agency. The Plan provides a single, unified, and coordinated approach to deal with NPS pollution structured around 61 management measures (MMs). MMs serve as general goals for the control and prevention of polluted runoff. Site-specific management practices (MPs) are then used to achieve the goals of each management measure.

Several of the management measures directly relate to the WRP's efforts, including:

- Instream and riparian habitat restoration
- Erosion and sediment control
- Protection of surface water quality and instream and riparian habitat
- Protection of wetlands and riparian areas
- Restoration of wetlands and riparian areas
- Vegetated treatment systems -- Promote the installation of vegetated treatment systems (e.g., artificial or constructed wetlands)
- Promote the establishment of programs to develop and disseminate scientific information on wetlands and riparian areas and to develop greater public and agency staff understanding

The Plan specifically recommends that agencies coordinate with the WRP for management measures related to hydromodification or wetlands.

Ocean Resources Management Program

The goal of the California Ocean Resources Management Program (CORMP) is to ensure comprehensive and coordinated management, conservation, and enhancement of California's ocean resources for their intrinsic value and for the benefit of current and future generations. The CORMP focuses on four areas: stewardship; economic sustainability; research, education, and technology; and jurisdiction and ownership. *California's Ocean Resources: An Agenda for the Future* was prepared by the California Resources Agency and outlines an implementation strategy for the CORMP. One chapter of the Ocean Agenda addresses Habitats and Living Resources and provides several recommendations relevant to the WRP's efforts:

- Complete resource inventories within bays, estuaries, and coastal lagoons along the California coast, as well as within the waters offshore the California coastline, and make this data accessible through the California Environmental Resources Evaluation System (CERES).
- Establish additional comprehensive long-term approaches for sustainably managing California's ocean and coastal fishery stocks, with an emphasis on re-building stocks in decline.
- Support state, national, and international efforts to reduce the importation and establishment of non-native species and study the current effects of these species on California and other West Coast states.

California Legacy Project

The California Legacy Project (CLP; formerly CCRISP) is an initiative by the California Resources Agency to help state agencies and the state's conservation partners make better decisions about how to conserve the state's natural resources. CLP is a new program and is just

beginning its planning and data collection efforts. CLP will build on and support regional planning efforts that are already underway. But it will approach conservation from a broad, statewide perspective that focuses on whole ecosystems and promotes conservation of five key sets of natural resources:

- (a) High priority aquatic and terrestrial biodiversity resources.
- (b) Working landscapes such as agricultural lands, ranch lands, and forest lands.
- (c) Watershed values.
- (d) Natural lands for recreation and education.
- (e) Existing and restorable natural open space in and around urban areas.

The WRP will coordinate closely with the Resources Agency in developing resource data and evaluating priorities for Southern California.

In a related effort, the Resources Agency commissioned a study, based on a simple methodology, assigning conservation priorities for biodiversity preservation and urban open space. The results of the Resource Assessment Project (RAP) and its recommendations provided many lessons that helped to make CLP's draft conservation priorities methodology better. A major contribution was the development of a set of improved and updated data layers, including a map showing all lands currently in state and federal ownership. All natural areas within fifty miles of the major metropolitan areas were also mapped.

State Coastal Sediment Management Program

The California Resources Agency is spearheading a program to develop a comprehensive coastal sediment management program for the state. As one element of this, the Resources Agency has released a Draft Policy on Coastal Erosion, that advocates the need for restoring sediment transport functions in the coastal watersheds:

- The Resources Agency and its constituent departments should be proactive in protecting and enhancing natural coastal landforms and processes, such as increasing sediment transported through coastal watersheds to the coastline.

Efforts to restore sediment transport to reduce coastal erosion will also benefit the WRP's watershed enhancement and restoration efforts. In addition, sediment removed from coastal wetlands as part of restoration activities may be a source of additional sand for Southern California's beaches.

Santa Monica Bay Restoration Plan

In 1988, Santa Monica Bay was accepted into the National Estuary Program, and the Santa Monica Bay Restoration Project was tasked with assessing problems in the Bay and producing a restoration plan. The SMB Restoration Project includes over 50 federal, state, and local partners. The Santa Monica Bay Restoration Plan contains over 200 recommendations that address the need for pollution prevention, public health protection, habitat restoration, and comprehensive

resource management of the Bay. The plan has a specific section addressing the Bay's wetlands, which outlines the following goal and strategies:

- Goal: To improve wetland quality, increase wetland quantity, and to ensure long-term, comprehensive management and protection.
- Strategies:
 - Restore and enhance ecological diversity and productivity of degraded wetlands (function and value).
 - Protect existing wetlands through improved regulation, local land use plans, special ordinances, and/or other measures (at all levels of government).
 - Acquire privately-owned wetlands.
 - Coordinate funding for restoration and creation projects.
 - Ensure long-term management and monitoring for wetlands.
 - Develop and implement a long-term education program focusing on wetlands.
 - Create new wetlands, where feasible.

The plan specifically identifies Ballona Wetlands, Ballona Lagoon, and Malibu Lagoon for restoration. Other potential restoration sites identified include Trancas Lagoon, Upper Medea Creek, Lower Topanga Canyon, Zuma Canyon, Arroyo Sequit Canyon, and La Sierra Canyon.

The Santa Monica Bay Plan also outlines a program for watershed planning and management with the goal “to protect the beneficial uses of the Bay by applying a coordinated and comprehensive watershed planning and management approach.

Regional Water Quality Control Board Policies and Plans

The Southern California Wetlands Recovery Project area falls within the jurisdiction of four of the State's Regional Water Quality Control Boards (San Diego, Santa Ana, Los Angeles, and Central Coast). Each of these Regional Boards are represented on the WRP Governing Board and Managers Group. The Boards' participation ensures that the WRP's policies and programs will be consistent with Regional Board objectives, and facilitates cooperation among the Regional Boards and the federal, state, and local partners of the WRP.

Each Regional Board has prepared a Basin Plan and a Watershed Management Initiative (WMI) Chapter for their region; together, these two documents provide a framework for each Board's activities. The Basin Plans are designed to preserve and enhance water quality and protect the beneficial uses of all waters. Specifically, the Basin Plans (1) designate beneficial uses for surface and ground waters, (2) set narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's anti-degradation policy, and (3) describe implementation programs to protect waters in the region. Designated beneficial uses include supporting aquatic and wetland habitats in general, as well as specifically habitat for rare and endangered species, migratory species, and fish spawning habitat. The State Water Board determines which waterbodies in the state are “impaired” as defined by Section 303(d) of the federal Clean Water Act based on the beneficial uses and water quality objectives

defined in the Basin Plans. The State Water Board ranks each of the impaired waterbodies as high, medium, and low priority.

The Watershed Management Initiative is a relatively new effort of the State and Regional Water Boards to provide water resource protection, enhancement, and restoration while balancing economic and environmental impacts through an integrated planning approach. Through the WMI, water quality monitoring, assessment, planning, standards, permit writing, nonpoint source management, ground water protection, and other programs at the State and Regional Boards are integrated to promote a more coordinated and efficient use of personnel and fiscal resources while ensuring maximum water quality protection benefits. Each Regional Board has drafted a WMI Chapter that provides an overview of the watershed management areas (WMAs) in its region, discusses current and potential Regional Board activities in relation to these WMAs, identifies impaired waterbodies, and outlines an expected schedule for development of TMDL¹ regulations for impaired waterbodies within each WMA.

The WMI Chapter of the San Diego RWQCB outlines several principles and guidelines related to wetlands including:

- Protect and preserve existing wetlands.
- Restore historical salt and brackish marsh habitats wherever possible.
- Protect existing salt and brackish marsh habitats from conversion to freshwater marsh habitats.
- Restore and enhance freshwater wetland habitats, except in areas where such habitats would encroach into salt and brackish water marsh habitats.
- Protect vernal pool complexes as unique wetland habitats which are extremely difficult to recreate.
- Preserve high quality ephemeral stream habitats in those areas (such as on military bases and in large rural parks) which can be protected from the hydrological changes which accompany urban development.
- Preserve wildlife corridors and connectivity functions along riverine systems.
- Protect wetlands from the invasion of non-native species.
- Provide sufficient vegetated buffer around wetlands to protect wetland habitat functions.
- Promote public awareness of the important habitat and water quality functions of wetlands.
- Expand the acreage of wetlands in developing areas to treat urban runoff, recognizing that wetlands provide water quality protection functions.
- Encourage the use of constructed wetlands to improve water quality and enhance beneficial uses throughout the region.
- Promote management measures that preserve the natural hydrology of the floodway and do not require clearing or other maintenance of native riparian and wetland vegetation in order to maintain flow capacities needed to reduce damage from flooding along riverine systems.

¹ Total Maximum Daily Load

The Los Angeles RWQCB has incorporated priorities identified by the Southern California Wetlands Recovery Project into the “Wetlands Protection and Management” section of its WMI Chapter. The WMI identifies additional priorities that relate to the WRP’s work, including:

- Watershed monitoring and assessment – coordination of existing resources and participation in regional and statewide efforts to fund this program at an appropriate level.
- Habitat loss/restoration – even with strides in improving instream water quality, unless habitat is restored, in many cases beneficial uses can not be restored. Efforts which address this need are 401 certification, the Southern California Wetlands Recovery Project, and various watershed efforts. Removal of exotic species is also included in these efforts.
- Priority nonpoint source efforts – several areas have been targeted for accelerated efforts including development of regional strategies to address agriculture, septic tanks, urban runoff, and marinas as contributors of nonpoint source pollution.

Multiple Species Conservation Planning

Both the federal and state governments have legislation related to multiple species conservation planning. The 1982 amendments to the federal Endangered Species Act included the addition of Section 10. Section 10 authorized Habitat Conservation Plans (HCPs) to give states, local governments, and private landowners a means by which they could "incidentally take" listed species or their habitats only after the landowners have identified what will be done to "minimize and mitigate" the impact of the permitted take on the listed species. In 1991, the State passed the Natural Community Conservation Planning Act with the primary objective of conserving natural communities at the ecosystem scale while accommodating compatible land use. The focus of the initial NCCP effort has been the coastal sage scrub habitat of Southern California, home to the California gnatcatcher and approximately 100 other potentially threatened or endangered species. HCPs and NCCPs only address endangered species regulations. Areas with approved HCPs or NCCPs plans are still subject to wetlands regulation under the Section 404 of the Federal Clean Water Act and Section 1600 et seq. of the State Fish and Game code.

There are several multiple species conservation planning efforts underway in San Diego and Orange Counties. These programs and their policies and priorities related to wetlands are discussed below.

1. San Diego Multiple Species Conservation Program

The San Diego Multiple Species Conservation Program (MSCP) is a comprehensive habitat conservation planning program for southwestern San Diego County. The program has been approved by both the U.S. Fish and Wildlife Service and the California Department of Fish and Game. The goal of the MSCP is to create a preserve network that consists of multiple habitat patches and wildlife “corridors” to protect selected sensitive plant and animal species within the boundaries. The MSCP study area covers approximately 900 square miles and includes the City of San Diego, unincorporated County land, and portions of 10 other city jurisdictions.

Within the MSCP study area, a Multi-Habitat Planning Area (MHPA) has been identified in which a permanent preserve will be assembled and managed for its biological resources. The MSCP plan assumes that all wetland and riparian habitat within the MHPA will be completely conserved. A significant amount of wetland and riparian habitat within the MSCP study area is not included in the MHPA, making it susceptible to future development. This includes:

- Southern Coastal Saltmarsh – 151 acres
- Freshwater Marsh – 318 acres
- Riparian Forest – 250 acres
- Oak Riparian Forest – 2,307 acres
- Riparian Woodland – 143 acres
- Riparian Scrub – 1,088 acres
- Disturbed Wetlands – 190 acres

The MSCP will be implemented through subarea plans adopted by each local jurisdiction. Subarea plans contain criteria, such as conservation targets, mitigation standards and/or development encroachment limits, to ensure that habitat preservation proceeds in step with development, and mechanisms to avoid or minimize project impacts to the preserve. A preserve management plan, or a schedule for its preparation, is also contained in the subarea plan. Subarea plans for the cities of San Diego, Chula Vista, Santee, Del Mar, and Coronado, the County of San Diego and Otay Water District are included in the MSCP Plan (Volume II). Subarea area plans have also been completed and approved for the cities of La Mesa and Poway.

2. SANDAG Multiple Habitat Conservation Plan

The San Diego Association of Government (SANDAG) led the preparation of a multiple species conservation plan for northern San Diego County called the Multiple Habitat Conservation Plan (MHCP). The MHCP planning area covers 183 square miles and includes the cities of Carlsbad, Encinitas, Escondido, Oceanside, San Marcos, Solana Beach and Vista. A draft of the MHCP was released by the SANDAG Board on June 22, 2001, and has not yet been approved by federal, state, or local agencies. Subarea plans have been completed and released for review for the cities of Carlsbad, Encinitas, Escondido, Oceanside, and San Marcos. Each City's subarea plan identifies focused planning areas (FPAs) within which some lands will be dedicated for open space and habitat conservation.

The MHCP includes a “no net loss” policy for wetlands, including riparian habitat. Key objectives of the MHCP related to the WRP's efforts include:

- Conserve and manage the majority of remaining biological core and linkage areas;
- Help conserve a large core area contiguous with but outside the study area boundary in a regionally significant location;
- Conserve most east-west movement corridors between upland areas and coastal lagoon systems;

- Conserve a regionally significant north-south stepping stone corridor for bird species, especially the California gnatcatcher;
- Preserve significant landscape linkages between the study area and adjoining jurisdictions
- Restore and enhance linkage function in some critical locations.

3. Orange County Natural Community Conservation Planning

The NCCP program within Orange County encompasses approximately 340,000 acres divided into two main subareas: Central/Coastal and Southern. In 1996, the Orange County Central/Coastal NCCP/HCP was approved by the USFW and the CDFG. The result of the NCCP/HCP is a preserve of 39,000 acres of coastal sage scrub, chaparral, grasslands, and other habitat. The Orange County NCCP focuses primarily on coastal sage scrub habitat, and only addresses a few riparian species. In the Southern subarea, the County, cities, and major landowners are preparing a NCCP/HCP subarea plan, and the ACOE and CDFG are preparing a Special Area Management Plan (SAMP) for wetlands planning. Together, these plans will integrate wetlands and endangered species planning. These programs will need to be approved by the USFWS, USACOE, and CDFG.