Southern California Wetlands Recovery Project

Regional Strategy
Executive Summary

Introduction

Southern California's vitality depends in large part on the appeal of its natural environment, especially its rivers, streams, wetlands, and nearshore waters (collectively "wetlands"). The state's five southernmost coastal counties, which constitute only 8.6 percent of the state's land area, are home to half the state's inhabitants and account for 42% percent of its economy. The $500 billion annual regional output is larger than the gross national product of all but 11 of the world's nations and constitutes six percent of the nation's gross national product. People continue to flock here to enjoy the warm, dry summers and mild winters, the dramatic coastline and famous beaches. By 2020, the population is expected to rise from 16 million to 23 million.

While the natural environment continues to act as magnet for people and commerce, the resulting pressures have radically altered and degraded its waters, threatening to undermine public health, economic wellbeing, and the quality of life. The National Research Council has determined that California has lost a greater percentage of its wetlands than any other state, especially in the southern region, which comprises San Diego, Orange, Los Angeles, Ventura, and Santa Barbara Counties. In Los Angeles County, wetland losses exceed 95 percent.

Southern California has more flood control dams, debris basins, and miles of concrete-encased stream channels than any other region in the nation. Waterways and wetlands have been dammed, diverted, channelized, filled, and polluted. Flood waters are typically shunted to the sea rather than used to recharge aquifers. Meanwhile, the enormous infrastructure constructed to import water has drastically altered the natural hydrologic regime and deprived beaches of sand supplies.

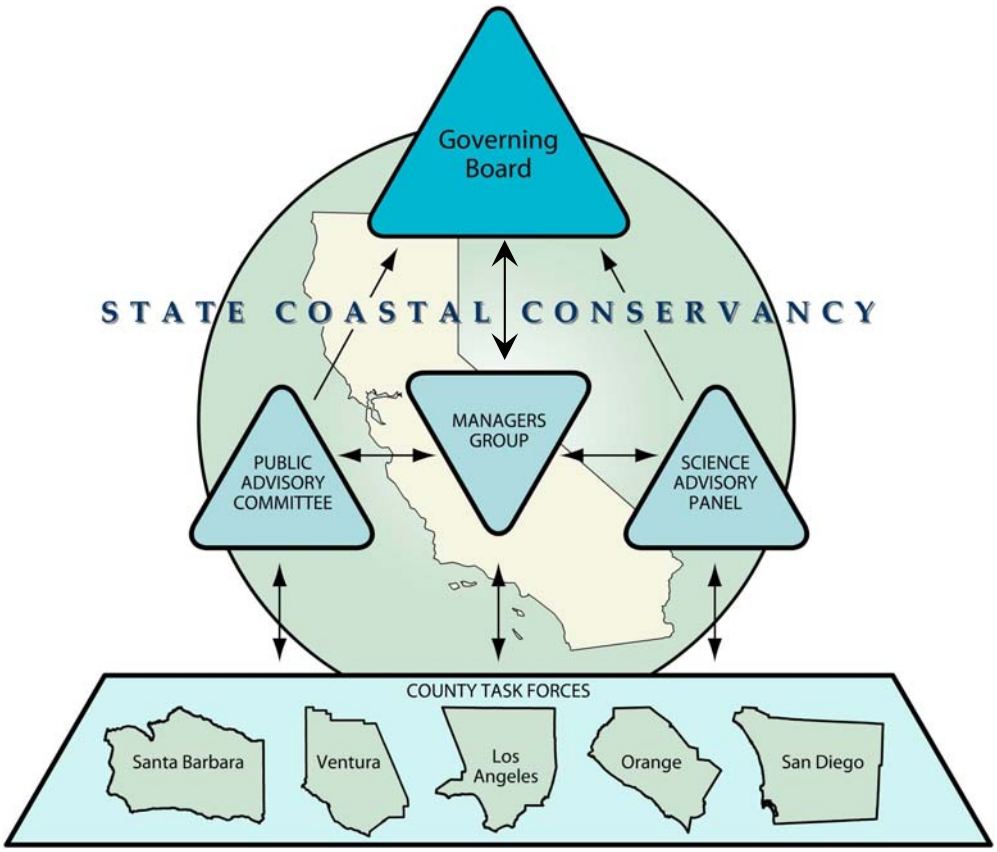
Water pollution is a growing concern. Southern California is one of the few major urban regions in the nation where contaminated runoff flows directly into streams and drains to nearshore waters rather than being diverted to wastewater treatment plants first. Over 150 beach closures occurred during summer 2000, undermining a $7 billion tourism and recreation industry.

The rich biodiversity of the region is rapidly being lost. Noted biologist E.O Wilson has designated southern California as one of the world's eighteen "hotspots" – the only one in North America – because of the scale of the threat to its biodiversity. At this time, 150 animal and 52 plant species that depend on rivers, streams, and wetlands are considered as threatened or endangered by either state or federal agencies. The region's coastal wetlands from Point Mugu to Tijuana Estuary have been nominated by the U.S. Fish and Wildlife Service as wetlands of international significance under the Ramsar Convention because of their importance to migratory birds, fisheries, endangered species, and biodiversity.

Despite staggering losses, however, precious natural areas survive or can be recovered. To be sure, restoration in this heavily urbanized region is a daunting task. The physical and

hydrological landscape has been irreversibly altered and it is often impossible to re-establish historic conditions. Opportunities for coastal wetland restoration are limited by extensive development, as well as by geologic and topographic constraints. Opportunities to preserve and restore stream corridors and riparian habitat are more numerous but are constrained by encroaching development and flood management concerns.

The Southern California Wetlands Recovery Project (WRP) was formed in 1998 to develop and implement a regional strategy to increase the pace and effectiveness of wetland recovery in the region. The WRP is a broad-based partnership of 17 state and federal agencies working in concert with scientists, local governments, environmental organizations, business leaders, and educators. The geographic scope of the WRP includes coastal wetlands and watersheds from Point Conception (in Santa Barbara County) south to the U.S.-Mexico border. The WRP employs three primary strategies to recover wetlands: (1) acquisition of property from willing sellers, (2) restoration and enhancement of wetlands where allowed by landowners and land managers, and (3) outreach and education about best practices to protect wetlands. The California State Coastal Conservancy manages the WRP and assists local partners in developing and implementing projects. The WRP ultimately seeks to reestablish a mosaic of functioning wetland and riparian systems that supports a diversity of species, while also providing refuges for humans within the urban landscape.



The WRP Regional Strategy articulates long-term goals and specific implementation strategies to guide the efforts of the WRP and its partners. The Regional Strategy was developed through a multi-year planning process involving all the WRP partners, including the Science Advisory Panel and County Task Forces, As such, the Strategy articulates a shared vision that each partner – at the federal, state, and local level – can turn to for guidance in how to manage staff effort, direct resources, and measure progress. Success depends not only on a few agencies actively engaged, but on each and every partner, at all levels, seeking to enhance the overall program with the particular resources that they wield.

This Executive Summary highlights key elements of the WRP Regional Strategy, approved by the WRP Governing Board in November 2001. The full version of the Regional Strategy is available on the WRP website at http://www.scwrp.org.

Southern California Wetlands

Regional Setting

The Southern California Bight is a distinct bioregion of California. It extends from Point Conception in Santa Barbara County to Punta Banda, south of Ensenada, in Baja California, Mexico and includes the marine-coastal interface and the coastal wetlands and watersheds. The Bight's embayments, marshes and estuaries are among the most productive and densely populated habitats on the Pacific coast. Coastal wetlands are nursery areas for both commercial and recreational fisheries, such as halibut. They also support many other animals, including the endangered light-footed clapper rail, which nest in marshes, and the California brown pelican, which roosts in lagoons and river mouths. South coast wetlands are also important to migratory birds traveling on the Pacific Flyway.

The physical features, climate, and hydrology of coastal Southern California have produced an unusual set of conditions and a diversity of plants and animals that sharply distinguish the region from any other in North America. Unlike the broad, gradually sloping coastal plains of the Atlantic and Gulf Coasts, Southern California has steep, coastal mountains that form a natural "amphitheater" to the coastline and descend sharply to the ocean, providing a unique setting for watersheds and wetlands. Rocky headlands and cliffs loom above the shore where the hills and mountain ranges approach the coastline, and sandy beaches and dune fields extend along the water's edge where valleys or basins, such as the Oxnard Plain and Los Angeles Basin, intersect the coastline.

Southern California is noted for its mild temperatures, short wet winters, and long dry summers, characteristic of a semiarid Mediterranean climate. Although in many regions latitude is a major factor in determining climate, here the major determinant is physical geography – such as proximity to the coast. Rainfall occurs primarily from November through March. As a result of El Niño and La Niña conditions, rainfall in the region varies significantly in both amount and intensity, from droughts to steady rains to torrential downpours. The San Gabriel and San Bernardino Mountains can experience more rain in a twelve-hour period than anywhere else in the continental United States.

The annual cycle of wet and dry seasons drives the hydrologic patterns seen in Southern California. Historically, many of the region's streams were intermittent, drying up in the summer. Perennial streams and rivers were fed either by groundwater or snowmelt. Floods and drought cycles occur regularly and are influenced by the cyclical El Niño and La Niña events. Almost all of the significant flood events in Southern California have occurred during El Niño winters.

Decline of Southern California Wetlands

Since 1950, significant declines were observed in the abundance of several species of fishes, shorebirds, seabirds, kelp habitats, and the supply of food (McGowan et al. 1998). It is estimated that 55 percent of the animals and 25 percent of the plants designated as threatened or endangered by the State depend on wetland habitats. Southern steelhead trout, for example, have been reduced in the past century from tens of thousands in number to approximately 200 to 300 (Pacific Marine Fisheries Council 2000). In the U.S., California ranks second in the number of aquatic species that are endangered (Allendorf 1982).

Large-scale destruction of coastal wetlands began during the second half of the 19th century. At that time, coastal wetland and estuarine habitats were generally seen as breeding grounds for disease-carrying mosquitoes. Many were used as dumps. Federal, State, and local policies encouraged the draining and filling of wetlands and their conversion to agricultural, urban, and military land uses. Oil extraction facilities were erected in several coastal wetlands. In others, ponds were created for salt extraction, sewage treatment, or duck hunting purposes. In those areas where wetland habitat remains, urban development has typically reduced, degraded, or eliminated the surrounding upland habitat that is a critical part of the wetland ecosystem.

In addition to providing habitat for plants and animals, coastal wetlands serve many other critical functions. They filter and transform pollutants from watershed runoff, help to control floods, moderate sediment delivery, promote groundwater recharge, protect shorelines from erosion, and provide food chain support for both aquatic and terrestrial ecosystems. Losses of coastal wetlands in Southern California, as well as the degraded state of those remaining, have greatly reduced these natural functions in the landscape.

Southern California's creeks and rivers have also been significantly altered as a result of agricultural and urban development. Dams were built in the upper watersheds for water storage, flood control, and hydroelectric purposes. Creek and river systems have been highly engineered with channels moved, confined to concrete, or placed underground. Extensive urban development has replaced native vegetation with concrete. The continuing population increase has spurred the import of water from a variety of sources – fundamentally changing the region's hydrologic landscape. Human activities have generated billions of pounds of contaminants, much of which has ended up in the waterways. These changes have severely degraded the habitat, ecosystem functions, and water quality of stream corridors.

The confinement and hardscaping of Southern California's creeks and rivers has led to substantial losses of the region's floodplain, riparian, and aquatic habitats. Faber et al. (1989) estimated that 90-95 percent of the riparian community has been lost. Some systems, such as the

Los Angeles River, have been almost completely disconnected from their floodplain and denuded of nearly all riparian habitat. Several species that rely on these habitats are listed as species of concern, including the least Bell's vireo, steelhead trout, red-legged frog, and arroyo toad. **M**igratory birds that historically used this habitat now face population declines because of overcrowding and disease. Riparian corridors often function as linkages between larger habitat areas. Loss of these movement corridors has contributed to fragmentation of the remaining wildlife habitat. The quality of the remnant riparian and aquatic habitat has been reduced by invasive species such as *Arundo donax*.

Urban and agricultural development in Southern California coastal watersheds has also significantly altered water quality, hydrology, and sediment transport functions of streams. Water quality impairments include increases of both non-toxic elements such as sediment, nutrients, and water temperature, and toxic contaminants such as pesticides and heavy metals. The loss of wetland habitat throughout the coastal watersheds has aggravated water quality problems, since wetlands can improve water quality by removing or sequestering many contaminants. The degraded water quality affects fish and wildlife habitat quality, and limits recreational use of Southern California beaches, bays, and lagoons.

The alteration of hydrologic patterns in Southern California watersheds has led to flood control and water supply problems. Because thousands of square miles of the region have been paved, the quantity and speed of storm water runoff have increased. The loss of floodplains in many watersheds has further intensified this effect. Irrigation of both agricultural and urban areas increases dry-season flows in creeks and rivers, so that many streams that were previously intermittent now flow year round. Base flows have also increased due to the significant amount of water imported into the region. At the same time, water diversions and groundwater pumping have depleted base flows in some systems. Because of diversions for groundwater recharge the Santa Ana River, which drains the largest watershed in Southern California, now rarely reaches the ocean.

Sediment flows in coastal streams have also changed in several ways. First, dams in the upper watersheds hold back sediment, reducing sediment transported downstream. Urbanization has increased storm water runoff, increasing channel and bank erosion. Disturbance of the natural vegetation cover – usually as a result of urban or agricultural development activities – has led to excessive erosion within many watersheds and along stream corridors. Urban and agricultural runoff during the dry season promotes dry-season root growth, making it more difficult to flush excess sediment from the area's streams. Finally, flood management practices have reduced the ability of storm waters to scour creek channels and estuaries, flush sediments into the ocean, and replenish beaches. As a result, the region suffers simultaneously from excess sedimentation in downstream estuaries, causing the infilling of stream channels, bays and coastal lagoons, and from a lack of natural beach sand replenishment.

Vernal pool habitat in Southern California has been reduced by approximately 90 percent. Vernal pools are a wetland type unique to Mediterranean climates, and in this region occur primarily in San Diego and Santa Barbara Counties. Vernal pools depend on runoff from surrounding uplands for their water. Thus, vernal pools have been lost due to both direct impacts to the pools, and indirect changes to the hydrology of surrounding uplands.

Population growth and related development in Southern California will continue to exacerbate impacts to coastal wetlands and watersheds. Vital upland habitat continues to be lost and corridors that link coastal wetlands to upstream habitats are quickly disappearing. Wetlands created to mitigate for wetland losses from development seldom perform the same ecological functions as those that were destroyed. Hydrologic and land use changes in the coastal watersheds also continue to impact stream corridors and downstream wetlands. Finally, global climate change also threatens to alter regional climate and hydrologic patterns and to submerge coastal wetlands.

All of these pressures have created a critical need for a coordinated and sustained effort to preserve and restore coastal wetlands and watersheds in Southern California.

Regional Goals

The long-term objective of the Southern California Wetlands Recovery Project is to reestablish a mosaic of fully functioning wetlands systems, with a diversity of habitat types and connections to upland communities, which preserves and recovers self-sustaining populations of species. A fully-functioning regional mosaic of wetlands will also provide important socio-economic values such as: sustainable habitat and food support for fish and wildlife including some commercially important species; improved water quality in coastal streams, beaches, and the nearshore waters; increased potential to buffer flood waters and recharge groundwater aquifers; increased opportunities for human interaction with nature – a valuable resource in a highly urbanized landscape; and increased opportunities for public education and research on the unique natural landscape features of southern California coastal watersheds.

The WRP has identified six regional goals to guide its efforts towards achieving this long-term vision:

1. Preserve and restore[1] coastal wetland ecosystems
2. Preserve and restore stream corridors and wetland ecosystems in coastal watersheds
3. Recover native habitat and species diversity
4. Integrate wetlands recovery with other public objectives
5. Promote education and compatible access related to coastal wetlands and watersheds
6. Advance the science of wetlands restoration and management in Southern California

These goals, along with key strategies for achieving each of them, are discussed below and summarized in Table 1.

[1] Preservation, as used in this document, is defined as any actions that facilitate protection of existing resources, including acquisition of property in fee by public agencies or through partnerships with private conservation organizations, acquisition of conservation easements, or implementation of best management practices on private property. The WRP relies on a non-regulatory approach and will only acquire property from willing sellers.

Restoration is also defined broadly to include any efforts that increase the quantity or quality of wetland resources in the region, including wetlands enhancement and improvement projects.

Table 1: Regional Goals and Key Strategies

REGIONAL GOAL	KEY STRATEGIES
Goal 1: Preserve and restore coastal wetland ecosystems.	A. Acquire privately-owned coastal wetlands and associated uplands. B. Acquire contiguous wetland and upland areas at sites that are already primarily in public (or conservation) ownership. C. Restore diversity and quality of wetland habitat types. D. Restore ecosystem functions. E. Address watershed impacts.
Goal 2: Preserve and restore stream corridors and wetland ecosystems in coastal watersheds.	A. Preserve riparian and aquatic habitat along stream corridors. B. Restore riparian and aquatic habitat along stream corridors. C. Reconnect creek and river corridors to their floodplains. D. Restore sediment transport functions and characteristic patterns. E. Reduce erosion, both along stream channels and from upland areas. F. Improve water quality. G. Preserve and restore wetlands, particularly vernal pools, in coastal watersheds.
Goal 3: Recover native habitat and species diversity.	A. Restore a diversity of habitat types. B. Employ a multi-species approach to wetlands recovery. C. Preserve and restore habitat linkages and fish and wildlife corridors. D. Preserve and restore rare wetlands, including vernal pools. E. Preserve and restore surrounding upland and dune habitat. F. Remove exotic species and re-establish native species. G. Recover native, extirpated species.
Goal 4: Integrate wetlands recovery with other public objectives.	A. Promote integration of wetlands conservation planning and priorities into related public policies and projects. B. Promote wetlands projects that achieve multiple public objectives.
Goal 5: Promote education and compatible access related to coastal wetlands and watersheds.	A. Develop compatible public access opportunities. B. Integrate interpretive programs into wetlands and watershed projects. C. Promote opportunities for experiential learning. D. Promote development and dissemination of educational materials and activities related to coastal wetlands and coastal watersheds. E. Research and disseminate information about the economic value of wetlands. F. Promote practices to reduce urban impacts on wetlands and watersheds.
Goal 6: Advance the science of wetlands restoration and management in Southern California.	A. Promote research on wetland ecology and restoration science, as well as on issues affecting the success and long-term sustainability of wetland restorations in Southern California. B. Promote development of more effective monitoring programs for both regional and project-specific assessments. C. Disseminate Information.

Goal 1: Preserve and restore coastal wetland ecosystems.

Given the extent of historical loss and the limited opportunities remaining, preservation and restoration of tidal wetlands in the region is a high priority. Wetland restoration in Southern California encompasses a broad range of activities, from small enhancement efforts to large-scale reconstruction of wetland systems. Significant changes in land use, watershed hydrology, and site topography limit the extent to which historic conditions can be feasibly restored. In many cases, restoration will involve creating a functioning wetland system, but not re-creating the historic conditions.

A. Acquire from willing sellers coastal wetlands and associated upland habitats that are primarily privately owned, and not subject to any conservation guarantees. High priority sites for acquisition include the Oxnard Plain, Ballona wetlands complex, Los Cerritos wetlands complex, and the Huntington Beach/Santa Ana River Mouth wetlands complex.

B. Acquire from willing sellers contiguous wetland and upland areas that function as part of the wetland ecosystem at sites that are already primarily in public (or conservation) ownership.

C. Restore diversity and quality of wetland habitat types (see Goal #3 for discussion).

D. Restore ecosystem functions. The goal of restoration is to restore the physical and biological processes that are characteristic of healthy wetland ecosystems. In addition to providing quality habitat, restoration of these processes can result in water quality improvements, groundwater replenishment, and better flood control. Restoration of ecological functions through proper conceptual design and long-term maintenance, monitoring, and adaptive management is a priority.

E. Address impacts of watershed inputs affecting coastal wetlands, including freshwater, sediment, nutrients, water contaminants, and invasive species. Watershed impacts should be addressed through both source control measures, such as implementation of best management practices (BMPs) on upstream property, and treatment measures such as sediment basins.

Goal 2: Preserve and restore stream corridors and wetland ecosystems in coastal watersheds.

The Wetlands Recovery Project has identified several considerations to help focus its work in coastal watersheds. High priority areas include: 1) areas where humans activities in the watershed are significantly impacting downstream coastal wetlands or other coastal resources; 2) stream corridors that provide connections to upland habitat areas; and 3) stream corridors that provide existing or potential anadromous fish habitat (e.g., for steelhead). The WRP will focus on preserving and restoring aquatic and riparian habitat, and re-establishing ecosystem functions such as hydrologic processes (including groundwater recharge and buffering of flood waters), erosion control and sediment transport, and water quality polishing. Many of the strategies aimed at improving habitat will also improve water quality.

A. Preserve riparian and aquatic habitat along stream corridors. Stream corridors will be preserved through several mechanisms, including acquisition of property, acquisition of conservation and agricultural easements, and coordination with landowners to implement practices that preserve and protect stream corridors.

B. Restore riparian and aquatic habitat along stream corridors. Key restoration activities include removing exotic species and revegetating with native species, removing fish passage barriers, stabilizing creek banks and channels through environmentally sensitive measures, replacing concrete and other hardscaping with biotechnical flood control and stabilization mechanisms, and "daylighting" creeks.

C. Reconnect creek and river corridors to their floodplains. Opportunities in Southern California to reconnect creeks and rivers to their floodplains are very limited due to the encroachment of development. For this reason, preserving systems with intact floodplains and areas where floodplains can be re-established are high priorities for the WRP.

D. Restore sediment transport functions and characteristic patterns. Restoration activities could include removing dams and other barriers to sediment transport, managing storm flows to increase scouring and flushing of downstream sediments, trapping sediment, and removing excess sediment in downstream estuaries. Specific priorities must be set individually for each watershed.

E. Reduce erosion, both along stream channels and from upland areas. Stream bank and channel erosion should be controlled through environmentally-sensitive stabilization measures that minimize channel hardscaping. Efforts to reduce erosion from upland areas will focus on working with landowners to implement erosion control management measures.

F. Improve water quality. Several of the strategies discussed above will have beneficial impacts on water quality by reducing sediment flows, contaminant loads, and water temperatures, and by detaining storm waters. Water quality concerns should be addressed through both source control and treatment measures.

G. Preserve and restore wetlands, particularly vernal pools, in coastal watersheds. As discussed above, both the vernal pool and its supporting upland area must be preserved to ensure survival of the pool.

Goal 3: Recover native habitat and species diversity.

The efforts of the WRP to preserve and restore coastal wetlands and stream corridors in coastal watersheds are largely aimed at preserving and recovering the region's biodiversity. Significant changes to the natural landscape and the related reduction in the carrying capacity of the regional ecosystem limit the extent to which historic habitat and species conditions can be restored. Therefore, the WRP will focus its efforts on: 1) preserving and restoring the regional diversity of wetland habitats; 2) restoring fully functioning wetlands ecosystems with a diversity of habitat types and connections to upland communities; and 3) preserving and recovering self-sustaining populations of species. Key strategies for accomplishing these goals include:

A. Restore a diversity of habitat types within individual wetland ecosystems (where appropriate and feasible). Larger wetlands will be best able to sustain a diversity of habitat types.

B. Employ a multi-species approach to wetlands recovery. The WRP advocates a multiple-species approach that also recognizes the more imminent threat to listed species. In general, this approach focuses on biological diversity at the ecosystem and habitat level, rather than on the species level. Listed species will continue to receive special attention; however, the objective is to maximize diversity and abundance of both listed and non-listed species.

C. Preserve and restore habitat linkages and fish and wildlife corridors. This includes linkages from the coastal wetlands up into the watersheds, as well as between wetlands along the coast.

D. Preserve and restore rare wetlands, including vernal pools.

E. Preserve and restore surrounding upland and dune habitat that are part of the wetland ecosystem.

F. Remove exotic species and re-establish native species, including plant, fish and predator species. For non-native species that are dispersed through the water, such as Arundo, removal and management efforts must be planned and implemented on a watershed scale.

G. Recover native, extirpated species.

Goal 4: Integrate wetlands recovery with other public objectives.

A. Promote integration of wetlands conservation planning and priorities into related public policies and projects. Many of the federal, state and local agencies that are responsible for pursuing or regulating other public objectives participate in the Wetlands Recovery Project. The WRP will use these agency connections to promote a more integrated approach to achieving multiple public benefits. A key strategy is including consideration of wetlands issues and wetlands objectives in planning and policy documents for other types of projects. Key public objectives that relate to WRP efforts include:

- Stormwater management
- Transportation and other infrastructure projects
- Water quality improvements
- Recreation
- Fire suppression measures
- Public safety
- Landscaping of public property

B. Promote wetland projects that achieve multiple public objectives. The WRP will place priority on wetlands and watershed projects that achieve public objectives in addition to habitat objectives. Wetland and watershed projects may facilitate other public objectives including:

- Stormwater management – Wetlands can decrease storm flows and peaks through detention of storm waters.
- Water quality – Restoring watershed ecological functions will improve water quality. In addition, restoring and creating wetlands will increase water polishing capacity within the watershed.
- Beach nourishment – Restoring natural sediment flows will increase natural sand replenishment processes.

- Recreation and access – Wetlands and stream corridors offer opportunities for passive recreation. Access to these areas can be designed to be compatible with both habitat and recreation goals.

Goal 5: Promote education and compatible access related to coastal wetlands and watersheds.

A. Develop compatible public access opportunities. Public access must be designed to be compatible with the overall habitat goals of wetlands recovery efforts.

B. Integrate interpretive programs into wetland and watershed projects. The WRP will encourage and fund the installation of interpretive signs and development of other interpretive materials as part of restoration projects. The WRP Small Grants Program will continue to prioritize restoration and enhancement projects with an education element.

C. Promote opportunities for experiential learning, including citizen monitoring programs, creek clean-ups, and volunteer work brigades to remove invasive plants or plant native species.

D. Promote development and dissemination of educational materials and activities related to coastal wetlands and coastal watersheds.

E. Research and disseminate information about the economic value of wetlands and habitat preservation based on factors such as tourist economy, water quality benefits, groundwater retention, and avoided stormwater conveyance costs.

F. Promote practices to reduce urban impacts on wetlands and watersheds.

Goal 6: Advance the science of wetlands restoration and management in Southern California.

A. Promote research on wetland ecology and restoration science, as well as on issues affecting the success and long-term sustainability of wetland restorations in Southern California. The WRP will promote wetlands restoration research in two main ways. First, the WRP will work with researchers to integrate wetland restoration research into WRP projects. Second, the WRP will develop an extramurally-funded research program on wetland ecology and restoration science through the Science Advisory Panel. The WRP Science Advisory Panel has identified three key areas for which additional data and research is needed:

- Prioritizing wetlands acquisition and restoration projects
- Addressing constraints to restoration projects
- Optimizing restoration implementation and evaluation

B. Promote development of more effective monitoring programs for both regional and project-specific assessments. The WRP will promote the development of better monitoring programs by requiring *and funding* monitoring programs for WRP projects. The WRP will also pursue development of standardized monitoring guidelines and more cost-efficient monitoring techniques.

C. Disseminate information. Through its network of federal, state, and local partners, the WRP will serve as a clearinghouse for information about wetlands research and restoration practices. Monitoring data from WRP projects will be made available on the WRP web site. In addition, the WRP will create forums for sharing research findings and recommendations. The WRP will also create or facilitate the creation of a data repository for wetlands restoration research.

County Objectives

The WRP Regional Goals and key strategies provide a general framework for guiding the WRP's efforts. In the County Objectives section (Chapter 4), the Regional Strategy identifies more specific needs and objectives for each coastal county. These objectives were developed by the County Task Forces working in collaboration with the Wetlands Managers Group. In each county a few high priority projects are identified, but for the most part the listed objectives have not been prioritized. In fact, one common theme expressed by the Task Forces was the need to develop a system for setting priorities. This is one of tasks now being pursued by the WRP Science Advisory Panel.

The County Objectives can be found in the full version of the Regional Strategy, posted on the WRP website at www.scwrp.org.

Five Year Implementation Plan

The Five Year Implementation Plan of the WRP Regional Strategy (Chapter 5) outlines both short and medium-term steps that will be taken by the WRP to realize the six regional goals. It also identifies which unit of the WRP will take the lead on each action. The Implementation Plan will be updated periodically as program goals are refined and new projects developed. The implementation actions are summarized in the table below. See the WRP website for the full version of the Five Year Implementation Plan.

Table 2: Summary of Five Year Implementation Plan

Implementation	Action	WRP Lead
1. Develop and implement preservation, restoration, and enhancement projects. (Regional Goals 1-3)	1.1 Develop a decision support tool to help assess both preservation and restoration potential based on ecological objectives.	SAP
	1.2 Identify needs for each watershed in the region.	CTF
	1.3 Identify restoration priorities for steelhead trout.	SCC
	1.4 Identify preservation and restoration priorities for the Santa Monica Mountains and south Santa Barbara coastal watersheds.	SCC
	1.5 Coordinate with regional agencies on mutual priorities.	WMG, SCC
	1.6 Continue project evaluation and selection process for annual Work Plan.	WMG
	1.7 Target project development efforts to priority area.	SCC, CTF
	1.8 Develop projects with multiple benefits.	SCC, CTF
	1.9 Build capacity and expertise of local agencies and organizations.	SCC, CTF, WMG
	1.10 Create a regional watershed network.	CTF
	1.11 Continue to implement projects.	SCC
	1.12 Secure project funding from state, federal, local, and private sources.	BOG, PAC
	1.13 Facilitate regulatory coordination for WRP projects.	WMG, BOG
2. Integrate wetlands recovery with other public objectives. (Regional Goal 4)	2.1 Coordinate with agencies working on related efforts to ensure wetlands objectives are considered.	WMG, SCC, CTF
3. Promote education and compatible access related to coastal wetlands and watersheds. (Regional Goal 5)	3.1 Develop guidelines for compatible access.	WMG, CTF
	3.2 Perform needs assessment regarding regional availability of accessible wetland areas and interpretive centers.	WMG, CTF
	3.3 Create a regional wetlands and watersheds calendar.	CTF
	3.4 Create a web-based guide describing the location, accessibility, sights, and activities at wetlands and watersheds throughout the region.	PAC, CTF
	3.5 Establish a means to track or estimate visitors to the region's wetlands and riparian areas.	PAC, CTF
	3.6 Continue to educate federal, state, and local decision-makers.	PAC
	3.7 Identify key educational themes for region's wetlands.	PAC
	3.8 Inventory wetlands materials in the five counties.	PAC
	3.9 Develop web site for sharing and disseminating education resources.	PAC, SCC

Implementation	Action	WRP Lead
	3.10 Continue to develop needed outreach materials and activities.	PAC
	3.11 Ensure that the WRP addresses the needs of the region's ethnically diverse population.	PAC
	3.12 Establish means for private sector to play more active role in the WRP.	PAC
4. Advance the science of wetlands restoration and management in Southern California. (Regional Goal 6)	4.1 Develop regional habitat objectives for the WRP.	SAP
	4.2 Develop regional monitoring program based on regional habitat objectives.	SAP
	4.3 Develop monitoring guidelines for WRP projects.	SAP
	4.4 Develop an extramurally-funded research program.	SAP
5. Promote information exchange and dissemination. (All Regional Goals)	5.1 Expand the WRP Information Station.	SCC, WMG, CTF
	5.2 Establish Watershed Contact Network.	SCF
	5.3 Expand WRP web site.	SCC
	5.4 Continue to hold WRP Symposium every one or two years.	WMG
	5.5 Coordinate with related efforts to disseminate information.	WMG, CTF
6. Partner Agencies (All Regional Goals)	6.1 Identify specific roles or actions for each of the 17 state and federal partner agencies to further the WRP's regional goals.	All agencies
7. Funding Objectives (All Regional Goals)	7.1 Secure project funding from the state each fiscal year.	BOG, PAC
	7.2 Increase proportion of federal, local, and private funding.	BOG, PAC
	7.3 Pursue long-term project funding.	BOG, WMG
	7.4 Pursue long-term funding for the County Task Forces.	PAC, CTF
	7.5 Secure funding for the Science Advisory Panel and SAP Research Program.	BOG, PAC, SAP

Key to WRP Lead:

- SCC – State Coastal Conservancy
- BOG – Board of Governors
- WMG – Wetlands Managers Group
- PAC – Public Advisory Committee
- SAP – Science Advisory Panel
- CTF – County Task Forces

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