

# Southern California Wetlands Recovery Project WRP Work Plan Project Descriptions

## 1. Matilija Dam Removal Engineering and Design

Tier: 1

**Local Lead:** Ventura County Watershed Protection

**SCC Project** Neal Fishman and Bob Thiel

Preliminary engineering and design for the removal of Matilija Dam on the Ventura River. The project includes removing the dam, moving and storing sediment, building a high flow bypass system at the Robles Diversion, building downstream levees, and building a sediment basin along the Robles Diversion canal. The purpose of the project is to remove barriers to steelhead passage (including Matilija Dam), restore natural hydrologic regimes on the river, and restore riparian and wetland habitat.

The Matilija Dam Ecosystem Restoration Project is one of the largest dam removal projects in the country. It would involve removal of the 200-foot high, 600-foot wide Matilija Dam on a major tributary of the Ventura River to reestablish steelhead passage, restore the river's sediment balance and allow sand to flow to coastal beaches. In order to remove the dam, six million cubic yards of sediments trapped behind the dam will be moved or recontoured. A high flow sediment bypass system will be constructed at a water diversion downstream. A silt removal system will be installed along the diversion canal. Levees will be built in several places along the river channel to protect property from flooding due to the expected increases in stream channel elevations in the first years after removal of the dam. The project also involves removal of invasive plants and installation of replacement water wells.

**Status:** The project is now in its design/engineering phase, which is scheduled to be completed by the end of 2007. Although certain construction elements may be initiated within the next several years, the removal of the dam and the sediment behind it is not expected to begin until late 2009 or 2010.

The Corps has included \$1.3 million in its 2007-2008 budget for the design project. The Coastal Conservancy has contributed over \$2 million to the project since 2001 and through the Ocean Protection Council has been authorized to spend an additional \$2 million on the design and engineering effort to assist the County of Ventura meet its local sponsor requirements. The County's Watershed Protection District has recently received a \$5 million grant of Proposition 50, Chapter 8 funding for two project construction elements, including an extensive arundo removal program along the portions of the river.

A federal appropriation to fund construction and implementation was included in the Water Resources Development Act (WRDA) that was recently passed by Congress.

**Status:** Engineering is underway.

**Estimated cost:** \$8,000,000

<b>Funding:</b>	Wildlife Conservation Board	\$1,000,000
	Coastal Conservancy	\$1,000,000
	Army Corps of Engineers	\$6,000,000

**Cost Notes:** The final design phase will cost several million dollars. Removal of the dam itself is estimated to cost between \$110 and \$150 million.

## 2. Baron Ranch Acquisition

**Local Lead:** Land Trust for Santa Barbara County

Tier: 1

**SCC Project** Not assigned yet.

The Land Trust for Santa Barbara County (LTSBC) proposes to acquire the 1,092-acre Baron Ranch on the Gaviota Coast in Santa Barbara County. This acquisition will protect roughly 4 miles of riparian corridor with year-round flows from the Los Padres National Forest (LPNF) to the Pacific Ocean, almost all of the Arroyo Quemado Creek watershed, and create opportunities for watershed and riparian restoration and up to six miles of public trail access, connecting to trails in the LPNF and the Arroyo Hondo Preserve. This project is proposed as an adjunct

to the Arroyo Hondo Ranch Enhancement Plan prepared by the LTSBC for the 782-acre Arroyo Hondo Preserve purchased with Wetland Recovery Project support in 2000.

<b>Estimated cost:</b>		\$6,000,000
<b>Funding:</b>	Wildlife Conservation Board (requested)	\$5,000,000
	Goleta Valley Land Trust (applied)	\$500,000
	Wetlands Recovery Project (requested)	\$500,000

**3. Arroyo Hondo Creek Steelhead Habitat Enhancement Project Tier: 1**

**SCC Project**

The Land Trust for Santa Barbara County (LTSBC) is implementing a fish passage improvement project in the lower portion of Arroyo Hondo Creek. Instream enhancements in and adjacent to the Highway 101 culvert will be installed, with the primary focus of supporting upstream migration of adult Steelhead trout into the 2,800-acre Arroyo Hondo watershed. The project consists of two components: Creation of a new rock-lined scour pool, supported by a rock weir, upstream of the existing arch culvert and concrete box culvert; and installation of concrete baffles, a maintenance path and walkway within the bed of the existing arch culvert.

Arroyo Hondo is a fairly pristine 2,800-acre coastal watershed with a perennial blue-line stream--length of 6 miles. It is located in the Santa Ynez Mountains, approximately 25 miles west of Santa Barbara, California along the Gaviota Coast. Authors of Steelhead Assessment and Recovery Opportunities in Southern Santa Barbara County identified it as one of the most ecologically important watersheds on the Gaviota Coast

**Status:** Due to issues with Caltrans and Union Pacific Railroad, the LTSBC has had to reduce the scope of the originally-intended project. The project no longer includes removing the concrete box culvert located seaward of the arch culvert, and creating additional lagoon habitat. The LTSBC hopes to conduct project work late in 2007.

<b>Estimated cost:</b>		\$1,481,140
<b>Funding:</b>	Dept. of Fish and Game (WCB)	\$804,140
	Coastal Conservancy	\$650,000
	Land Trust of Santa Barbara County	\$12,000
	Smart Family Foundation	\$15,000

**4. Gaviota State Park Watershed Restoration/Enhancement**

**Local Lead:** California Department of Parks and Recreation **Tier:** 1

Design an environmentally sensitive, all-weather stream crossing. An initial study and proposal were put forth by Santa Barbara County and rejected by the EPA in 2006. Portions of this study and lessons learned from the process can be applied to future planning and design efforts.

Plan for berm removal and sediment control. Develop a plan for the maintenance of the road until a bridge is built. Spoils from this removal will be fit for backcountry road fill, so the two tasks should coincide.

Plan site restoration if campground was relocated out of the floodplain.

<b>Status:</b>		
<b>Estimated cost:</b>		\$665,000
<b>Funding:</b>	Department of Fish and Game (applied)	\$261,000

Department of Fish and Game	\$84,000
FEMA \$65,000	
Wetlands Recovery Project (requested)	\$255,000

**Cost Notes:** Total implementation estimated to cost \$13million

## 5. Lower Refugio Creek Restoration

**Date Funded:** 1/07

**Local Lead:** Land Trust for Santa Barbara County

**Tier:** 2

Implement portions of the lower Refugio Creek Riparian Restoration Plan developed with a small grant from the WRP. The project will be undertaken in cooperation with the Cachuma RCD and the three private landowners in the watershed. Lower Refugio Creek supports a diverse riparian woodland with sycamore, cottonwood, willow, oak, poplar, bay laurel and California pepper trees and an understory of mixed natives and invasive weeds. The creek also supports one of the largest *Arundo donax* infestations on the Gaviota Coast. The primary land use adjacent to the creek is avocado and citrus orchards, with 1200 feet of fenced pasture on the Freeman Ranch running along the west bank. Listed species expected to be found in the riparian woodland of Refugio Creek include California red-legged frog, southern steelhead, least Bell's vireo and the southwestern willow flycatcher.

The project will improve the wildlife habitat along one and one-half miles of the creek by: (a) removing more than 100 separate patches of *Arundo* and smaller areas of invasive castor bean, ivy, false tobacco and Kudzu vine; (b) stabilizing 1,300 linear feet of eroding creek bank primarily with willow fascines and planted berms; and (c) revegetating 17,000 square feet of the riparian corridor with approximately 900 native trees, shrubs and understory plants. The project will also include up to four years of post-installation monitoring, re-treatment and replacement planting to ensure a successful outcome

**Status:** Ongoing Project; should be completed by spring 2010

<b>Estimated cost:</b>	\$452,450
<b>Funding:</b> Coastal Conservancy	\$385,000
USFWS \$32,450	
USFWS Grant	\$15,000
Landowner in-kind contribution	\$20,000

**Cost Notes:** SCC funds were authorized in two separate Board actions; although the second authorization is referred to as Phase II, it enables completion of the originally-intended work, and is technically not a new project phase.

## 6. Santa Clara River White Rock Lake Acquisition

**Local Lead:** City of Santa Clarita

**Tier:** 1

Acquisition and restoration of three parcels, totaling 91.12 acres and located on or along the Upper Santa Clara River in the Soledad Canyon area northeast of Santa Clarita. The property, which are all owned by a single willing seller, include an 11-acre RV park; two undeveloped 40 acre parcels with upland areas and riparian forest; 1800 linear feet of stream corridor; and a created wetland area of 5-10 acres.

The parcels have been identified as key acquisition priorities in both a Conceptual Area Protection Plan (CAPP) approved by DFG and the WCB and a watershed conservation plan prepared by The Nature Conservancy. One of the primary objectives of the project is to help secure a wildlife connection between the two main units of the Angeles National Forest, as well as core habitats and key linkages in a region that is facing severe development pressures from increasing urbanization along the Highway 14 corridor from Santa Clarita through the Antelope Valley.

The site and adjacent areas along the river provide existing and potential habitat for unarmored three-spine stickleback, Santa Ana sucker, arroyo chub; red legged frog, and southwestern willow flycatcher. Vegetation communities in the three parcels include Fremont cottonwood riparian forest, desert buckwheat, and semi desert chaparral, with the potential to restore chaparral, coast live oak woodlands, and high quality riparian scrub and woodlands at lower elevations. Once the site is acquired, the City intends to remove the RV infrastructure (buildings, septic tanks, wells, electrical systems), as well as an earthen flood control berm. The City would then engage in an extensive habitat restoration effort on site and develop both public art and interpretive display and a trail connection to the Pacific Crest Trail.

**Status:** The owner is a willing seller and has expressed informal support for the City's long term plans for the property. Since the City submitted its application for inclusion of the project on the Work Plan, property owners in the City voted to create and fund a new Open Space Preservation District that could provide additional funds for this project beyond that budgeted below

<b>Estimated cost:</b>		\$2,125,000
<b>Funding:</b>	City of Santa Clarita	\$500,000
	Wetlands Recovery Project (requested)	\$1,625,000

**7. Maria Ygnacio Fish Passage Project** **Tier: 2**

A streambed grade stabilization structure at the Union Pacific Railroad crossing on Maria Ygnacio Creek currently restricts steelhead trout from migrating upstream to spawning habitat. A conceptual design for the barrier was developed by a fish passage engineer with NOAA Fisheries. The conceptual design is to cut or remove some of the existing sandstone blocks in the structure, thereby forming a 108-foot long, low flow conduit through which fish can swim upstream to the natural-bottom channel under the freeway next to the railroad. One or two boulder weirs may also be installed below the structure to raise the elevation of the pool and to deflect flow into the middle of the channel. Erosion on the streambank opposite of the hard bank of the adjacent bike path will also be repaired through biotechnical methods, improving habitat for creekside species as well as steelhead. The project would fund professional design services, hydraulic and sedimentation analyses, project management consulting, and permitting.

Maria Ygnacio Creek lies in Southern Santa Barbara County in the middle of an urbanized area adjacent to a bike path and directly above the project is the Union Pacific Railroad and US 101 Freeway crossings. The primary vegetation communities along the project sites are riparian woodland and riparian scrub. Native trees include western sycamore, coast live oak, arroyo willow and black cottonwoods. Species of concern or endangered species known to inhabit this area include the arroyo toad, coast range newt, Belding's savannah sparrow, uttall's scrub oak, two-striped garter snake, least Bell's vireo and the Southern Steelhead trout - *Oncorhynchus mykiss*.

**Status:** A conceptual plan has been prepared, this project would fund final design and permitting. As of Summer 2007, project is on hold until liability issues can be worked out with the Union Pacific Railroad.

<b>Estimated cost:</b>		\$80,000
<b>Funding:</b>	Wetlands Recovery Project requested	\$80,000

**8. Arroyo Burro Creek Arundo Removal Project** **Tier: 2**

This project proposes to remove approximately 2.5 acres of *Arundo donax*, from the bed, banks and overbanks along a 2000 foot stretch of Arroyo Burro Creek on private property belonging to the Stonecreek Homeowners Association and remove approximately 1 acre of arundo along a 3000 foot stretch of the creek on private properties located just downstream of Hidden Valley Park.

The Agricultural Commissioner's Office will maintain project sites, and survey for regrowth and missed arundo patches for five years subsequent from the beginning of this project or until the declaration of local eradication, whichever comes first. Eradication of arundo from the project areas will be declared upon not finding individual or regrown arundo plants within the project areas for three consecutive years. This project is essentially a

continuation downstream of an arundo removal project started in 2002. The 2002 project removed approximately 1 acre of arundo from a 7,000 foot stretch of Arroyo Burro Creek upstream of the Stonecreek site.

**Status:** WCB funding will be requested in 2008 and would enable the WMA to implement an eradication program in the targeted area of the creek.

<b>Estimated cost:</b>		\$99,930
<b>Funding:</b>	Wildlife Conservation Board	\$51,000
	City of Santa Barbara	\$48,930

**9. Goleta Slough Tidal Restoration Demonstration      Date Funded: 5/04**

**Local Lead:** City of Santa Barbara      **Tier:** 2

**SCC Project** Trish Chapman, 510-286-0749, tchapman@scc.ca.gov

The Goleta Slough Tidal Restoration Experiment evaluates alternatives for restoring tidal action to isolated basins in Goleta Slough, adjacent to the Santa Barbara Municipal Airport. Most of the wetlands in the western slough have been isolated from tidal circulation by berms, severely degrading the habitat quality. Restoration of tidal circulation to basins that have become hydrologically isolated in the slough was identified as a top priority in the 1997 Goleta Slough Ecosystem Management Plan. However, proposed tidal restoration has raised concerns from the FAA that wetlands restoration activities could increase the bird strike hazard at the airport.

The objective of the Tidal Restoration Experiment is to obtain empirical data that can adequately address the FAA’s concerns and resolve the bird-strike issue. The experiment introduces tidal action to basin F in the slough with the full tidal range of Tecollito Creek. The experimental basin along with one control basin will be monitored for 2-3 years. Depending on the results, an additional experiment may be conducted by further excavating basin F to create a system that remains ponded much of the time. That system would also be monitored for 2-3 years. The Tidal Restoration Experiment is the only way to move beyond the current impasse towards eventual restoration of more than 100 acres of Goleta Slough.

**Status:** Project construction was completed in December 2005. The first year of monitoring (2006) found that restoration did not increase the bird-strike hazard.

<b>Estimated cost:</b>		\$750,000
<b>Funding:</b>	City of Santa Barbara	\$500,000
	Coastal Conservancy	\$250,000

**10. Montecito Creek Fish Passage**

**Local Lead:** Community Environmental Council      **Tier:** Incubator

**SCC Project** Moira McEnespy, 510-286-4165, mmcenespy@scc.ca.gov

This project will develop a comprehensive program for the removal and modification of a series of migration barriers on the middle and lower reaches of Montecito Creek in Santa Barbara County. The project will also include a focused assessment of riparian conditions to identify additional opportunities for riparian restoration.

**Status:** This project was submitted by the Community Environmental Council as a follow-up to a Coastal Conservancy grant to Santa Barbara County to begin planning fish passage projects along Montecito Creek. The project is now pending additional planning funds and assurance to the County that modification of the lower-most structure (a channelized creek mouth) will not increase flood stages.

<b>Estimated cost:</b>		\$475,000
<b>Funding:</b>	Coastal Conservancy	\$275,000
	Wetlands Recovery Project (requested)	\$200,000

### 11. Western Goleta Slough Wetland Restoration Project Tier: 2

This project will enhance and expand wetland habitat value throughout the 34.41-acres owned by CDFG in the Goleta Slough Ecological Reserve by removing non-native plant species; improving hydrologic conditions to sustain wetlands; removing man-made features; enhancing upland habitats adjacent to wetlands and providing for future tide circulation opportunities. The project also includes 5 years maintenance and monitoring of ensure success. This project will take advantage of Army Corps of Engineers mitigation funds which require restoration of freshwater wetlands. It will be designed to accommodate restored tidal action as part of a subsequent phase.

**Status:** The WCB approved \$903,312 in funding for this project, May 23, 2006. CEQA and design has been completed, full implementation is still pending on approval of a Coastal Permit. Removal of invasive species could begin in the fall of 2007, with major construction planned for 2008

<b>Estimated cost:</b>		\$1,813,312
<b>Funding:</b>	Wildlife Conservation Board (proposed)	\$903,312
	Army Corps of Engineers (mitigation)	\$870,000
	FAA	\$40,000

### 12. Devereux Slough Restoration Date Funded: 1/07

Tier: 1

The project will implement the restoration plan that is included in the Coal Oil Point Reserve Management Plan. The project will remove exotic plant species, revegetate habitat areas and develop a monitoring protocol for seasonally tidal wetlands. The project includes restoration of uplands adjacent to the Devereux Slough.

The Coal Oil Point Reserve is a University-owned coastal preserve dedicated to preservation, research and education. The Reserve is located 1.5 miles from the University of California-Santa Barbara and it is an important outdoor laboratory for students and researchers. Within its 170 acres are a variety of linked coastal habitats including a salt-marsh, a vernal pool, a fresh-water pond, dune swales, an estuary, dunes, and coastal scrub. Coal Oil Point is the southern gateway to the undeveloped Gaviota Coast and it is adjacent to the Ellwood Mesa open space.

**Status:** The restoration of the west margin of the Devereux slough has began in 2007 with a contribution of \$261,000 from the Wildlife Conservation Board and \$86,270 from UCSB (as matching funds),

<b>Estimated cost:</b>		\$412,000
<b>Funding:</b>	Wildlife Conservation Board	\$261,000
	University of California Santa Barbara	\$86,270
	Volunteers	\$66,000

**Cost Notes:** The UC Natural Reserve system provides very little funding to manage and maintain its properties. This project does not have adequate matching funds. Cost estimates for restoration and especially removal of non--native plants are high.

### 13. Mission Creek Steelhead Passage Project Tier: 1

**SCC Project** Moira McEnespy, 510-286-4165, mmcenespy@scc.ca.gov

The project consists of removing the three primary barriers to upstream fish migration in the lower watershed of Mission Creek, those at the Caltrans channel, Tallant Road, and the 192 Bridge. Because the barriers are linked, removal would provide a total of almost five miles of new habitat for steelhead trout. The project seeks to fulfill the following objectives:

- Facilitate the migration of the endangered steelhead trout.
- Improve aquatic habitat for fish and amphibians.
- Expand wetland habitat and improve water quality.
- Increase foraging and nesting habitat for bird species, and increase tree canopy along the Mission Creek

riparian corridor.

- Improve the hydrology of Mission Creek by allowing for infiltration of surface water to groundwater. The increased channel roughness and infiltration resulting from the project would improve surface water quality.
- Use interpretive signage to provide opportunities for education concerning wetland habitat and water quality issues.

**Status:** A physical model is being developed of the proposed project to evaluate its feasibility. Project proponents will present findings to the Wetland Managers Group when the feasibility work is complete.

<b>Estimated cost:</b>		\$1,394,000
<b>Funding:</b>	Department of Fish and Game (requested)	\$149,000
	Department of Fish and Game	\$155,000
	City of Santa Barbara	\$1,090,000

**Cost Notes:** Implementation expected to cost \$15,000,000

**14. Arroyo Burro Restoration at Las Positas**

**Local Lead:** City of Santa Barbara **Tier:** Incubator

Develop a riparian restoration plan for approximately 2000 feet of Arroyo Burro Creek in the City of Santa Barbara. The project site is located approximately 0.25 miles above Arroyo Burro Estuary. The proposed project will solicit public input, establish a community restoration working group, develop conceptual design plans, perform a constraints and feasibility analysis, and complete preliminary design plans for a creek restoration project on Arroyo Burro. Potential project components include:

- Eradication of nonnative plants and revegetation with native riparian and upland plant species.
- Removal of all riprap, concrete, and large trash within the creek channel including 200 feet of pipe and wire revetment.
- Removal/redesign of a riprap grade control structure.
- Biotechnical stabilization of approximately 2,000 linear feet of creek bank.
- Construction of a trail with interpretive signage.
- Construction of a wetland/storm water retention basin and biofilter and/or expansion and relocation of the creek channel.

The project site includes two acres of wetland habitat and four acres of upland habitat, and is bordered by Arroyo Burro on the west and Las Positas Road on the east. Urban and agricultural development within the watershed have significantly impacted the creek corridor. The creek habitat in this area is highly degraded due to past land disturbance and urban development within the watershed. The creek is deeply incised (up to 25 feet), the banks are experiencing significant erosion, and the creek corridor is dominated by non-native species such as Arundo donax. The creek also has poor water quality due to upstream urban runoff.

**Status:** This City is working to refine the scope of work for this project. That scope may be affected by the eventual outcome of permitting for a proposed residential project nearby, for which the City may require partial restoration of Arroyo Burro as mitigation.

<b>Estimated cost:</b>		\$270,000
<b>Funding:</b>	City of Santa Barbara	\$180,000
	Wetlands Recovery Project requested	\$90,000

**Cost Notes:** Also providing a \$10,000 WRP small grant to remove invasive species from a nearby property.

**15. Carpinteria Creek Restoration Project** **Date Funded:** 9/02

**Local Lead:** Community Environmental Council **Tier:** 1

Carpinteria Creek is located in coastal Santa Barbara County, about 10 miles southeast of the City of Santa Barbara and 16 miles northwest of the City of Ventura. It begins in the Santa Ynez Mountains at an elevation of about 4,700 feet and drains a watershed of about 15 square miles, characterized by steep hillsides and canyons.

Biologists for the California Department of Fish & Game believe that Carpinteria Creek offers the best opportunity among all South Coast urban streams for restoring significant steelhead runs in the next few years.

This project will remove steelhead passage barriers and enhance riparian habitat along Carpinteria Creek and its main tributary Gobernador Creek. A total of six barriers will be removed, providing access to three miles of steelhead habitat. These projects were identified in the Carpinteria Creek Watershed Management Plan. The projects involve replacing two Arizona crossings, three culverts and one debris basin, which block steelhead passage. Each project will also involve enhancing and stabilizing creek bank and riparian habitat. There are willing landowners for each of the projects identified.

**Status:** The projects are in various stages of the permitting/planning and design/implementation phases. Below is an update to each of the projects:

Bliss -Project planning and design is complete. Permitting phase is currently being finalized. Beginning of implementation is being planned for completion by Winter 2008.

Cate- Project planning and design is complete. Permitting phase is currently being finalized. Beginning of implementation is being planned for completion by Winter 2008.

Raya - Project planning and design is complete. Permitting phase is currently being finalized. Beginning of implementation is being planned for completion by Winter 2008.

Widdoes- Project is currently in the planning/design and permitting phase.

<b>Estimated cost:</b>		\$412,000
<b>Funding:</b>	Cachuma RCD	\$4,000
	County of Santa Barbara	\$7,800
	Watershed Coalition	\$7,500
	Coastal Conservancy	\$70,000

**Cost Notes:** Total project cost with implementation is estimated at \$412,000. Total WRP contribution is estimated at \$322,000. The funding above is for planning and has already been granted. Implementation funding has been applied for from the Department of Fish and Game.

**16. Carpinteria Salt Marsh, Basin 1 Implementation**      **Date Funded:** 8/03

**Local Lead:** Land Trust of Santa Barbara County      **Tier:** 1

**SCC Project** Janet Diehl, 510-286-4164, jdiehl@scc.ca.gov

Restore and enhance approximately 17 acres of wetlands and 19 acres of transitional and upland habitat at Carpinteria Salt Marsh. SCC funds were granted to the Land Trust for Santa Barbara County in 2003, and the Land Trust will complete the project in 2007.

The goals for this phase of the marsh restoration project were to: : 1) deepen existing tidal connections and establish new ones, including cutting through or installing culverts in existing berms; 2) remove non-invasive exotic vegetation and replant with native vegetation; and 3) restore and improve tidal flushing by modifying the tidal inlet to the ocean, which has been altered by past flood control measures. The project will result in an increase of tidal channels, salt marsh, brackish marsh, transition, and willow scrub habitat types. The project is designed to be compatible with Santa Barbara Co. Flood Control District's planning for flood control channel and berms as well as District's maintenance plans.

The Carpinteria Salt Marsh is located in southeastern Santa Barbara County adjacent to the City of Carpinteria. The project site is 36 acres within a 230-acre salt marsh in the coastal plain of Carpinteria, and is surrounded by urban development, agricultural fields, US Highway 101, a railroad, and single-family homes. Basin I is approximately 24 acres of wetlands, uplands, and creek channels, and South Marsh is approximately 12 acres of degraded marsh. Natural upland habitats surrounding the marsh are limited due to the extent of urban development in the area. Much of the upland habitats are disturbed and dominated by non-native species. Pickleweed is the predominant wetland plant. Small patches of coastal scrub and willows can be found at scattered locations around the upper edges of the marsh. A small section of brackish marsh featuring alkali

balrush exists in Basin I.

**Status:** Tidal channels, berm removal, tidal inlet and soil removal were completed in September 2005. Approximately 17,000 native plants were installed with two years of planned maintenance. A new pedestrian trail is 90% completed and landscaped, and a 90-foot steel truss pedestrian bridge footbridge to connect this project to an earlier and adjacent marsh restoration/access project will be completed in Fall 2007.

<b>Estimated cost:</b>	\$1,994,500
<b>Funding:</b> University of California Natural Reserve System	\$3,500
NOAA - Community Based Restoration Program	\$55,000
U.S. Fish and Wildlife Service	\$505,000
County in kind	\$26,000
County of Santa Barbara CREF	\$50,000
Land Trust of Santa Barbara County	\$80,000
Coastal Conservancy	\$1,275,000
TBD	

**Cost Notes:** A total of \$200,000 in community donations has been raised for on-going management and maintenance of the property.

## 17. Ventura River Parkway

**Tier:** Incubator

**SCC Project** Bob Thiel

This program involves a multi-phased effort to acquire and restore a series of key riparian parcels with the goal of creating a contiguous corridor of habitat and recreational open space along the lower 15 miles of the Ventura River from Ojai to the estuary. It also involves restoration of several key sites previously acquired by the Ojai Valley Land Conservancy as part of the initial effort to create a river parkway for the Ventura River.

The objectives of the program---to be implemented in partnership among a number of nonprofit organizations and local agencies---are to protect and restore habitat, create wildlife linkages, reconnect the river to its floodplain, and provide for public access and education. Its principal components would include the acquisition of fee title and conservation or agricultural easements to key riparian parcels to insure their long-term protection; restoration of existing Ojai Valley Land Conservancy (OVLC) preserves along the river (including portions of the Ventura River Preserve) and development and implementation of restoration projects on various sites along the river.

**Status:** The OVLC has completed a restoration plan for portions of the Ventura River Preserve and has applied for environmental review and permitting in advance of seeking funding from the Coastal Conservancy and Wildlife Conservation Board to implement components of that plan. The OVLC now has property interests (fee title or easements) that about three miles of the 15 mile river corridor. The next stage of its acquisition program is to focus on acquiring a contiguous corridor of habitat and recreational open space below the VRP, as well as acquiring property interests in the vicinity of the confluence of the River and San Antonio Creek. Following acquisition, riparian and floodplain restoration projects will be pursued.

In May 2007, the Coastal Conservancy awarded the Trust for Public Land a \$100,000 grant to carry out preliminary planning, stakeholder coordination and property analyses to assist in the development of the Ventura River Parkway program. TPL's work is to include creating a conceptual plan that would promote a vision for the Ventura River Parkway; helping to identify willing sellers of riparian parcels in the lowest six miles of the River (i.e., from the Foster Park area to the estuary) and priority acquisition and restoration projects along that reach; and conducting preliminary site assessments for a potential demonstration project along the lower river.

<b>Estimated cost:</b>	\$8,000,000
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**Cost Notes:** Cost estimates very preliminary at this point

**18. Ventura River Arundo Removal Project**

**Date Funded:** 10/03

**Local Lead:** Ventura County RCD

**Tier:** 2

**SCC Project** Kara Kemmler, 805-564-6747, kkemmler@scc.ca.gov

Remove Arundo donax from a 5-acre parcel adjacent to the Ventura River and revegetate with native riparian species. The project proposed to serve as a demonstration project to evaluate Arundo removal methods and six different riparian revegetation treatments. Three replicates of the revegetation treatments were planned to ensure statistically reliable results. The Ventura County Watershed Protection District served as lead agency for the project on behalf of the Ventura County Arundo Task Force.

The Demonstration Project site is located along the east bank of the Ventura River in Casitas Springs. The Ventura County Watershed Protection District and the City of Ventura own the project site. This portion of the Ventura River supports patches of mule fat scrub and willow-dominated riparian scrub within the broad river bottom.

**Status:** Implementation began in Fall 2004. Winter storms in 2005/2006 rainy season severely impacted the project area and proposed work. One of four treatment areas was completely scoured out by flooding, the other three areas were inaccessible for an extended period. Retreatment on the three remaining areas began in October 2006. Treatments on these areas will continue through December 2007. The revegetation protocol proposed became infeasible due to the altered flow path, so the Watershed Protection District coordinated with NRCS to perform revegetation methods in a different location where similar Arundo removal had occurred.

<b>Estimated cost:</b>	\$326,000
<b>Funding:</b> Dept. of Fish and Game	\$63,500
Natural Resource Conservation Service	\$67,000
Ventura County Watershed Protection District	\$63,500
Coastal Conservancy	\$132,000

**19. Hedrick Ranch Nature Area Restoration Project**

**Local Lead:** Friends of the Santa Clara River

**Tier:** 2

**SCC Project** Peter Brand, 510-286-4162, brand@scc.ca.gov

Implement restoration and enhancement activities on the Hedrick Ranch, a 223-acre riparian preserve along the Santa Clara River. Approximately 94 acres of the site lies in the upper floodplain terrace and the balance of 129 acres lies in the river channel active over the past 10 years. The project will implement the recommendations of the Hedrick Ranch Management and Restoration Plan under the stewardship of the Friends of The Santa Clara River. Key elements of the project include: stabilization of approximately 1000 linear feet of stream bank; removal of invasive plant species and re-establishment of native riparian vegetation on approximately 16 acres; reparation of additional technical studies, including a hydrogeology study and surveys of reptile and amphibian on the property.

**Status:** Since 2005, the Friends of the Santa Clara River has been awarded grants from the State Water Resources Control Board totaling more than \$850,000 for habitat restoration and installation of bioswales and other agricultural water quality best management practices---funds which are currently funding restoration projects on site. Additional funding may eventually be required to remove Arundo donax along the stream channel, but that project awaits completion of various restoration and other studies being conduct for the Santa Clara River Parkway project.

<b>Estimated cost:</b>	\$850,000
<b>Funding:</b> State Water Resources Control Board	\$850,000

**20. Arundo Removal North San Fernando Valley**

**Tier:** 2

**SCC Project** Chris Kroll, 510 286-4169, ckroll@scc.ca.gov

This project will remove Arundo donax (Giant Reed) from private land in five tributary canyons located along north side of San Fernando Valley -- Box Canyon, Devil Canyon, Pacoima Canyon, Little Tujunga Canyon, Big Tujunga

Canyon -- that drain to the Los Angeles River. Project will complement Arundo removal efforts underway on adjacent public land owned by Angeles National Forest, U.S. Army Corps of Engineers, Los Angeles County Dept. Public Works, City of Los Angeles Dept. Water & Power, and Santa Monica Mountains Conservancy.

The project goal is to control infestations of non-native invasive Arundo donax (Arundo), at several locations near the wildland/urban interface on the north side of San Fernando Valley. The total area affected is approximately 300 ac, with approximately 5 miles of stream corridor. Primary vegetation communities are riparian woodlands dominated by native white alder, sycamore, cottonwood, and willow species.

**Status:**

**Estimated cost:** \$110,000

**Funding:** Wetlands Recovery Project (requested) \$86,000

**Cost Notes:** \$24,000 has been applied from a variety of grants, no funding is secured.

**.21. Santa Clara River Parkway Acquisitions**

**Date Funded:** 6/01

**Local Lead:** The Nature Conservancy

**Tier:** 1

**SCC Project** Peter Brand, 510-286-4162, brand@scc.ca.gov

Acquire fee title or conservation easements to approximately 4,000 acres along the lower 25 miles of the Santa Clara River for inclusion in the Santa Clara River Parkway. Approximately 6,000 acres within the meander belt of the river and with upland connections into South Mountain have been mapped out for inclusion in the river parkway. Approximately 2,400 of these acres are now in public ownership. Following acquisition, riparian and floodplain restoration projects will be proposed for the entire corridor.

**Status:** Approximately 2400 acres have been acquired along 10 miles of the river. Negotiations for additional acquisitions are ongoing. In addition, the Coastal Conservancy has provided \$1,000,000 for a restoration feasibility study that will be completed in Fall 2007. It consists of a comprehensive analysis of the hydrology, hydraulics, water quality, habitat, species occurrence, geomorphology, and vegetation maps of the entire river corridor from the mouth to the Ventura County line. Consultant recommendations will help guide the Coastal Conservancy and the Nature Conservancy in further acquisition and future restoration to restore the natural dynamics of the river system and revive the threatened populations of several species, notably the southern steelhead.

**Estimated cost:** \$14,669,411

<b>Funding:</b>	California Resources Agency (River Parkway)	\$201,000
	CECLP	\$500,000
	USFWS	\$750,000
	Trustee Council	\$4,000,000
	Coastal Conservancy--Prop 13	\$8,206,411
	SCC-Wetlands Recovery Project	\$1,003,000

**Cost Notes:** Acquisition costs for the entire program are estimated at \$25 million.

**22. Santa Clara River Estuary McGrath State Beach**

**Tier:** 2

**SCC Project** Bob Thiel, 805-957-9299, bthiel@scc.ca.gov

This project seeks to expand current restoration activities in exotic plant removal and native replanting within the Santa Clara River Natural Preserve at McGrath State Beach. The project will also decommission and restore areas currently occupied by trails within the Preserve.

The Santa Clara River Estuary lies at the mouth of the Santa Clara River, which drains some 2000 square miles of watershed. Historically, the estuary encompassed about 870 acres. But development for agricultural and urban

uses has reduced the estuary to some 230 acres, of which 180 acres are located within DPR's McGrath State Beach, Santa Clara River Natural Preserve. The Preserve is bordered on the south by campgrounds, to the east by agricultural land use, and to the north, the city of Ventura's wastewater treatment facility.

<b>Estimated cost:</b>		\$504,900
<b>Funding:</b>	Department of Parks and Recreation (in kind)	\$10,500
	Wetlands Recovery Project (requested)	\$493,500

### 23. Lower Conejo Creek Acquisition

**Tier:** 2

**SCC Project** Peter Brand, 510-286-4162, brand@scc.ca.gov

Acquire approximately 80 acres along Conejo Creek for restoration of flood plain and riparian habitat. The property is on Conejo Creek at its confluence with Calleguas Creek. The project will also involve acquiring an agricultural and conservation easement for adjacent farm property. Future restoration activities would include widening the flood plain and allowing the creek to meander more freely in this area. Substantial removal of exotics would also be needed.

The Habitat Subcommittee of the Calleguas Creek Watershed Steering Committee has approved the acquisition as a priority, and a conceptual restoration plan is being prepared

<b>Estimated cost:</b>		\$1,500,000
<b>Funding:</b>	Coastal Conservancy-In lieu mitigation fees	\$600,000
	Wetlands Recovery Project requested	\$750,000

**Cost Notes:** Cost estimate is preliminary. The Conservancy has approximately \$1.5 million of in-lieu mitigation fees available for acquisition and restoration of this property and other riparian restoration projects in the Calleguas watershed.

### 24. Sepulveda Basin Plan

**Tier:** 2

**SCC Project** Chris Kroll, 510 286-4169, ckroll@scc.ca.gov

The River Project (TRP) intends to undertake a cooperative planning effort for the rehabilitation of the Los Angeles River in the Sepulveda Basin, with the ultimate goal of utilizing bioengineered bank stabilization methods for streambank revegetation along nearly a mile of soft-bottom stream.

The project will include a detailed reach and site scale engineering and ecological analysis, a feasibility and design process that involves multiple agency involvement, and permitting. This will

<b>Estimated cost:</b>		\$485,000
<b>Funding:</b>	Wetlands Recovery Project (requested)	\$485,000

### 25. Ormond Beach Wetlands Acquisition, Part 2

**Date Funded:** 10/03

**Local Lead:** Coastal Conservancy

**Tier:** 1

**SCC Project** Peter Brand, 510-286-4162, brand@scc.ca.gov

Acquire in fee or through a conservation easements, the privately owned portions of the Ormond Beach wetlands. In June 2002, the Coastal Conservancy acquired 265 acres formerly owned by Southern California Edison. In June 2006, the Nature Conservancy completed purchase of 275 acres from Metropolitan Water District (MWD). Future acquisition of 210 to 340 acres of adjacent agriculture property is expected pending negotiations on the City's Specific Plan process.

**Status:** First two acquisitions are complete, negotiations for additional purchase are ongoing.

<b>Estimated cost:</b>		\$23,000,000
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**Funding:** Wildlife Conservation Board \$11,500,000  
 Coastal Conservancy \$11,500,000

**Cost Notes:** Cost estimates are very preliminary.

**26. Ormond Beach Wetlands Restoration Plan** **Date Funded:** 8/03

**Local Lead:** Coastal Conservancy **Tier:** 1

**SCC Project** Peter Brand, 510-286-4162, brand@scc.ca.gov

Prepare restoration plan for the 900-acre Ormond Beach wetlands area. The restoration plan will evaluate options for: restoring tidal action to portions of the property; restoring historic drainage patterns disrupted by filling and tile drainage systems installed for agricultural use; and recreating a mix of tidal and seasonal wetlands with associated grasslands.

**Status:** The restoration feasibility study is expected to be complete in Spring 2008..

**Estimated cost:** \$600,000

**Funding:** U.S. Environmental Protection Agency \$75,000  
 Coastal Conservancy (HCF) \$525,000

**Cost Notes:** Cost estimate is for the first phase only, total restoration planning costs estimated at \$3 million.

**27. La Sierra Riparian Acquisition**

**Local Lead:** Mountains Restoration Trust **Tier:** 2

Acquire approximately 90 acres of wetland, riparian and upland habitat that support La Sierra Lake in the Malibu Creek watershed. The acquisition includes a portion of the lake, four blue-line streams, and the seeps and ephemeral watercourses in the uplands that protect the water source for this three-acre, year-round lake. The primary vegetation communities found on the project site include riparian woodlands, dominated by coast live oak, California bay-laurel, and western sycamore. La Sierra Lake supports 35 obligate and associated wetland plant species, two aquatic mosses, and a rare vernal pool species which has only been reported one other time since 1891 in the Santa Monica Mountains. The project site is immediately downstream from a primarily undisturbed watershed that supports a series of oak, sycamore, willow, and mixed oak and bay riparian plant communities, and is adjacent to the county-designated La Sierra Canyon Significant Ecological Area.

An appraisal was completed for the property in 1998, a new appraisal was completed in 2004. With project funding, the appraisal and preliminary title report will be updated, title insurance acquired, and escrow opened. The County of Los Angeles will own the properties, the Mountains Restoration Trust will manage the property as a nature preserve.

**Status:** MRT is currently seeking funding for the project.

**Estimated cost:** \$3,000,000

**Funding:** Mitigation Funds \$818,500  
 Habitat Conservation Fund \$600,000  
 Recovery Land Acquisition \$450,000

**Cost Notes:** The project is located outside of the coastal zone, but within the Santa Monica Mountains Conservancy zone. No private funds are included, there is a funding shortfall for the two acquisitions.

**28. Los Angeles River Revitalization - Taylor Yard Acquisition** **Tier:** 2

**SCC Project** Chris Kroll, 510 286-4169, ckroll@scc.ca.gov

The Taylor Yard property is 42.6 acres, with direct frontage along the river for approximately one mile. It current

does not include wetland habitat, but there is tremendous potential for wetland restoration. Once acquired, the plans for this site include removal of concrete walls to restore a natural river meander and the creation of large-scale wetlands natural water quality improvements.

The Taylor Yard property lies on the eastern side of the Los Angeles River along a stretch of the river known as Glendale Narrows. It is situated between the newly opened Río de Los Angeles State Park and the river. It is across the river from the Elysian Valley community, and is directly linked to the Cypress Park and Glassell Park neighborhoods. Within the Los Angeles River

Revitalization Master Plan, this property is specifically highlighted within one of the plan’s twenty identified Opportunity Areas (Taylor Yard Opportunity Area) because of potential for this site for revitalization, ecological restoration, new recreation opportunities, and water quality improvements.

**Estimated cost:** \$50,000,000  
**Funding:** City of Los Angeles (Measure O) \$25,000,000

**Cost Notes:** Cost estimate may not be accurate, negotiations ongoing property may require significant remediation prior to restoration

**29. Cold Creek Riparian Acquisitions, Part 2**

**Local Lead:** Mountains Restoration Trust **Tier:** 2

**SCC Project:** Bob Thiel

Acquire 155.83 acres of riparian and upland habitat along Cold Creek, a perennial tributary to Malibu Creek, for inclusion in the 1319-acre Cold Creek Preserve. The subject acquisitions will continue the 15-year acquisition strategy of the State Coastal Conservancy-funded Cold Creek Restoration Plan to acquire properties integral to the preservation of Cold Creek, a wild, pure and scenic stream in the Santa Monica Mountains National Recreation Area. Major project tasks for each acquisition will include: preparing an appraisal, completing negotiations, securing funding sources, ordering a preliminary title report, opening escrow, reviewing title issues, and closing escrow on the purchase.

The Cold Creek riparian corridor is located within a coastal watershed of the Santa Monica Mountains and has been designated a Significant Ecological Area and Environmentally Sensitive Habitat Area. It contains a free, perennial spring-fed stream shaded by a dense riparian canopy and a diverse mixture of native vegetation types and sensitive natural resources. The project site includes approximately 25 acres of existing wetland habitat along Cold Creek and 3200 feet of stream corridor. Primary vegetation communities include chaparral, coastal sage scrub (mainly covering south-facing aspects), grassland, oak woodland, and sycamore/oak/willow riparian woodland with obligate wetland plant species.

Cold Creek---a critical wildlife corridor between Topanga State Park and Malibu Creek State Park---provides connectivity and habitat linkages for wildlife movement, dispersal, and re-colonization following disturbance. It is one of the few natural streams in the Santa Monica Mountains that has not been invaded by non-native aquatic species. Cold Creek historically supported steelhead before being cut off from Santa Monica Bay by the Rindge Dam and county road culverts.

**Status:** Since it originally submitted its proposal to the Recovery Project, the MRT has acquired approximately 66 acres of property in the Cold Creek area, using County Proposition A funds and community contributions. The MRT is currently in discussions with a willing seller regarding a potential bargain sale of 14 parcels totaling about 94 acres, which were most recently appraised at about \$6.7 million. Coastal Conservancy staff is working with the MRT to help secure funding for such an acquisition if the MRT is able to reach an agreement with the seller.

**Estimated cost:** \$2.3 to 3.0 million  
**Funding:** County Natural Land for Trails Grant Program \$500,000  
 Funding Gap: \$1.8 to \$2.3 million

**30. Upper Malibu Creek Feasibility Study (Rindge Dam) Date Funded: 4/03**

**Local Lead:** California Department of Parks and Recreation **Tier:** 1

**SCC Project** Bob Thiel, 805-957-9299, bthiel@scc.ca.gov

Conduct USACOE feasibility study for management of the Upper Malibu Creek watershed. The feasibility study is evaluating options for extensive restoration and enhancement of riparian and aquatic systems above Malibu Lagoon, including the possible removal of Rindge Dam , located about 3 miles upstream from the lagoon. The dam, which is almost completely silted in, acts as a complete barrier to steelhead migration. The study is also focusing on enhancements for endangered steelhead trout and riparian bird habitat. The California Department of Parks and Recreation (DPR) is the local sponsor.

**Status:** In May 2007, the Corps notified DPR, the Santa Monica Bay Restoration Commission and the Coastal Conservancy that the public draft of the feasibility Study, originally is scheduled for completion in September 2007, would be delayed until at least the end of the calendar year. The Corps is currently finishing its alternatives analysis as well as revising the habitat conditions component of its baseline conditions report. Corps staff have also advised that there may be a need for an additional \$600,000 in local funding to complete the study, depending on the amount that the Corps itself is able to contribute to the additional budget for the project and the amount accepted as DPR's in-kind contribution.

<b>Estimated cost:</b>		\$3,600,000
<b>Funding:</b>	Dept. of Parks and Recreation (in-kind)	\$350,000
	Dept. of Parks and Recreation	\$428,500
	U.S. Army Corps of Engineers	\$1,550,000
	SCC-Santa Monica Bay Restoration Project	\$402,700
	Coastal Conservancy	\$368,800

**Cost Notes:** There is a potential funding gap of \$600,000.. A 50% non-federal match is needed to complete the feasibility study. If the Corps were to manage and help fund implementation of the removal of Rindge Dam (now estimated at roughly at \$40 million), the usual split would be a 65% federal and 35% local cost share and would require Congressional authorization and appropriation for the project .

**31. Santa Monica Bay Watershed Acquisitions**

**Local Lead:** Mountains Recreation Conservation Authority **Tier:** 1

**SCC Project** Bob Thiel, 805-957-9299, bthiel@scc.ca.gov

Acquisition of two blocks of property to preserve 849 acres of wildlife and riparian habitat within the Santa Monica Mountains National Recreation Area and reaches of Corral Canyon Creek, a perennial stream that flows directly into Santa Monica Bay.

Both properties---Rancho Corral (650 acres), Corral Canyon North (199 acres)---are owned by limited liability companies or limited partnerships affiliated with a single owner, who has signed an option to sell them to the Trust for Public Land or its designee.

The objectives of this project are to prevent further fragmentation of wildlife habitat in an area under severe development pressure, as well as to help protect the water quality of the Corral Canyon watershed. Both properties have entitlements that would allow for development. But they both currently remain as undeveloped open space and are part of a major core of coastal habitat and wildlife corridors in the Santa Monica Mountains. Primary vegetation communities include a mosaic of coastal sage scrub and chaparral, oak riparian woodland and upland coastal live oak woodland.

Acquisition of these areas would provide an opportunity to link the Backbone Trail to the Pacific as well as connect Malibu Creek State Park with parkland owned by the Santa Monica Mountains Conservancy within the SMMNRA. Both properties have the highest priority in the SMMNRA Land Protection Plan. Following acquisition, the properties would be maintained and managed by the Mountains Recreation and Conservation Authority (MRCA), using County operations and maintenance funds authorized under Proposition A.

**Status:** The Rancho Corral acquisition will be completed by the end of 2007 if adequate funding can be made available. It is expected that the Corral Canyon North Property will be acquired in 2008

<b>Estimated cost:</b>		\$17,200,000
<b>Funding:</b>	Department of Parks and Recreation (requested)	\$4,100,000
	Wildlife Conservation Board (requested)	\$2,000,000
	State Water Resources Control Board (SMBRC)	\$500,000
	Santa Monica Mountains Conservancy	\$7,100,000
	Coastal Conservancy	\$2,500,000
	Los Angeles County Measure A	\$1,000,000

**32. Topanga Creek Restoration Program**

**Date Funded:** 1/05

**Local Lead:** RCD of the Santa Monica Mountains

**Tier:** 1

**SCC Project** Kara Kemmler, 805-564-6747, kkemmler@scc.ca.gov

Implement the recommendations of the 2002 Topanga Creek Watershed and Lagoon Restoration Feasibility Study. This is a multi-phased program that will be implemented over several years and in partnership with multiple agencies, particularly State Parks. The primary goals of the program are to:

1. Restore habitat at identified priority locations in order to increase benefits to the endangered steelhead trout and tidewater goby, as well as other aquatic species of special concern in the watershed.
2. Improve passage opportunities for steelhead trout and extend the reach of creek providing suitable habitat for spawning and rearing.
3. Identify ways to improve sediment transport and delivery in order to enhance conditions in the creek and restore beach nourishment opportunities.
4. Improve water quality in all areas of the watershed where impairments have been identified.
5. Continue monitoring of water quality, sediment loads, streambank condition and target species populations (steelhead trout, tidewater gobies, western pond turtles, CA newts, etc.) in order to identify population trends related to restoration actions.

Two studies are nearing completion were recently completed: a feasibility study for removing the Rodeo Grounds road berm that is located approximately 400 meters upstream from Topanga Lagoon; and a hydrogeologic study of lower Topanga Creek to identify groundwater resources and better understand their relationship to fish distribution and habitat in the creek. Final design and permitting are expected to be complete by Spring 2008 for implementation of the Rodeo Grounds berm removal, which will enhance fish passage opportunities.

**Status:** The next phase of the project will be to implement the berm removal, it is expected that this phase will occur in 2008.

<b>Estimated cost:</b>		\$3,061,330
<b>Funding:</b>	Dept. of Parks and Recreation (requested)	\$454,300
	Dept. of Parks and Recreation (in-kind)	\$52,855
	California Department of Fish and Game	\$250,000
	Wildlife Conservation Board	\$1,847,675
	SCC-Santa Monica Bay Restoration Project	\$500,000
	Coastal Conservancy	\$300,000
	RCD of the Santa Monica Mountains (in-kind)	\$20,800
	Mitigation Funds (MRCA)	\$90,000

**Cost Notes:** Estimated cost above reflects a conservative estimate of hazardous material disposal fees which may be less depending on content of material excavated.

**33. Las Flores Creek Restoration**

**Local Lead:** City of Malibu

**Tier:** 2

The goal of this project is to restore ecological function to Las Flores Canyon Creek, resulting in improved channel stability, protection of the emergent wetland downstream and increased potential habitat for steelhead trout and other native species. The Las Flores Canyon watershed is a 2,646-acre coastal watershed of Santa Monica Bay located on the southeastern flank of the Santa Monica Mountains (Figure 1).

The Las Flores Creek Restoration Project is bounded by Pacific Coast Highway (PCH) on the south, Rambla Pacifico on the west, and Las Flores Canyon Road. The total project area is approximately 3.4 acres and 2,400 linear feet of the creek. The project will include grading flood plain/terrace and installing rock vanes/deflectors for improved in-stream habitat and channel stability. In-stream habitat features will expand the number of current pools available to steelhead trout and create larger pools. Improved passage, resting pools and escape cover will also provide for movement of steelhead to larger upstream spawning pools. The project will install biotechnical bank stabilization (vegetated soil lifts, vegetated rock revetment, etc.) to protect against sediment loading and landslides, which are deleterious to native aquatic species as well as the downstream emergent wetland. It will also remove and manage invasive exotic plant species including a small cluster of arundo. The project will preserve and expand native tree canopy to improve in-stream and riparian habitat. Finally, the site will be revegetated with native species (coastal scrub, riparian, sycamore woodland) to restore cover, vegetative structure and increase native diversity. Revegetation will result in increased physical steelhead habitat as well as improved water temperature regulation.

**Status:** An Initial Study and Mitigated Negative Declaration has been completed, permits obtained, and construction contractor hired with a project start date in mid-September 2007. In-stream work to be completed by the end of October 2007 with bank and flood plain vegetation planting through early Spring 2008.

<b>Estimated cost:</b>		\$3,860,000
<b>Funding:</b>	River Parkways (Resources Agency)	\$925,000
	Wildlife Conservation Board	\$600,000
	DWR - Urban Streams Grant	\$835,000
	City of Malibu	\$1,500,000

**Cost Notes:** About half of the City's and Resources Agency's funds are allocated to public access elements: public restrooms, parking, walking trails, picnic tables and benches.

**34. Solstice Creek Steelhead Access Implementation Date Completed:** 11/06

**Local Lead:** National Park Service

**Tier:** 2

**SCC Project** Kara Kemmler, 805-564-6747, kkemmler@scc.ca.gov

Solstice Creek has been identified as a primary candidate for recovery of the southern steelhead trout, a federal endangered species. The seven barriers in the National Recreation Area were removed in fall of 2006. The City of Malibu is currently working to remove the existing box culvert at the Corral Canyon Road crossing and replace it with a clear span bridge over Solstice Creek.

The final fish passage barrier is at Pacific Coast Highway. This project will be a CalTrans Environmental Enhancement and Mitigation program (EEM) project that would modify the culvert at PCH downstream of the proposed project area. It is expected to be implemented in 2008.

<b>Estimated cost:</b>		\$3,425,100
<b>Funding:</b>	Wildlife Conservation Board	\$345,000
	Department of Fish and Game	\$637,815
	Coastal Conservancy	\$145,000
	Coastal Conservancy (NOAA)	\$200,000
	National Park Service	\$1,300,000
	City of Malibu	\$145,000
	City of Malibu, NPS, Heal the Bay (in-kind)	\$56,285
	American Rivers (Conservation Corps)	\$34,000

**35. Malibu Lagoon Restoration and Enhancement**      **Date Funded:** 10/02

**Local Lead:** California Department of Parks and Recreation      **Tier:** 1

**SCC Project** Kara Kemmler, 805-564-6747, kkemmler@scc.ca.gov

Restore and enhance the ecological structure and function of Malibu Lagoon by increasing circulation and enhancing wetland habitat. Lagoon enhancements were recommended in the 1999 Malibu Lagoon enhancement plan prepared by UCLA for the SCC.

Heal the Bay worked on the Malibu Lagoon Restoration and Enhancement Plan (completed June 2005) with State Parks, the Coastal Conservancy and a diverse group of stakeholders. Phase 1 of the Restoration and Enhancement Plan includes relocation and redesign of the existing public parking and staging areas to maximize habitat restoration area in Phase 2 and to improve water quality in the Lagoon through implementation of BMPs. Phase 2 involves restoration of the lagoon, including recontouring western lagoon channels, enhancing circulation in the lagoon, creating bird nesting habitat and providing improved educational and recreational opportunities for the public.

The RCD of the Santa Monica Mountains will work with State Parks to implement both phases of the project. The wetland habitat could potentially be enlarged in the future by restoring the adjacent property once it is acquired.

**Status:** The EIR was certified by the State Parks in April 2006. Implementation of the first phase, relocation of the existing parking lot, will occur December 2007-February 2008. Implementation of the second phase, lagoon restoration, is expected to occur Summer-Winter 2008 with long term monitoring and adaptive management to follow.

<b>Estimated cost:</b>		\$7,000,000
<b>Funding:</b>	Wildlife Conservation Board	\$417,200
	State Water Resources Control Board (Prop 50)	\$3,000,000
	State Water Resources Control Board (Prop 13)	\$825,000
	Dept. of Parks and Recreation (in-kind)	\$200,000
	Coastal Conservancy	\$827,000

**Cost Notes:** Coastal Conservancy also paid for restoration planning, \$350,000.

**36. Zuma Canyon Restoration and Steelhead Enhancement Feasibility Study**

**SCC Project** Bob Thiel, 805-957-9299, bthiel@scc.ca.gov      **Tier:** 2

Restore a 7 acre agricultural area near the entrance of Zuma Canyon that has been planted in avocados. Based on its location and soils, this area would naturally support a mixture of riparian and coastal sage scrub vegetation. Within the restoration area, the vegetation will be converted from 100% non-native species to a minimum of 60% native vegetative cover within 2 years, with a final goal of less than 5% cover of non-native species at the end of five years.

A minimum of 1600 students will visit the site per year and these students will be engaged in ecological restoration activities within the canyon. In addition, the Park Service will expand on the initial baseline habitat assessment by Caltrout, and determine habitat quality and feasibility of steelhead restoration in Zuma Creek, including a habitat assessment, fish passage evaluation, and development of a conceptual restoration plan.

**Estimated cost:** \$402,000

**Funding:**

**Cost Notes:** No funding has been identified for this project

**37. Solstice Canyon Acquisitions**

**Local Lead:** National Park Service

**Tier:** 1

**SCC Project** Bob Thiel, 805-957-9299, bthiel@scc.ca.gov

Acquisition of 428 acres in the upper Solstice Canyon watershed of the Santa Monica Mountains to complete continuous parkland ownership between the upper and lower reaches of Solstice Creek. Once acquired, the land would be owned and managed by the National Park Service as a component of the Santa Monica Mountains National Recreation Area (SMMNRA).

Although this section of the upper watershed is relatively pristine, it faces a severe threat of luxury development, and efforts are needed to preserve it and bridge the sections of public ownership at each end of the canyon. The properties targeted for acquisition are currently owned by six different individuals or entities, three of whom have already indicated that they are willing sellers.

Solstice Canyon is a 2840-acre coastal watershed in the center of the SMMNRA. The 4.9 mile long creek is one of only four perennial streams in the mountains and has been the focus of extensive efforts by a partnership of state, federal and local agencies to improve steelhead habitat and modify or remove fish migration barriers. Those agencies are investing over \$3 million to redesign highway barriers, restore migration routes, and enable the reintroduction of steelhead trout to Solstice Creek---efforts that are the subject of a project already listed on the WRP Work Plan.

Public parkland constitutes 46 percent of the watershed and includes 3.9 miles (or 76 percent) of the mainstem of Solstice Creek. The proposed land acquisition project here would bring 96 percent of Solstice Creek (and 61 percent of the watershed) within public ownership and protection, as well as protect more than 4200 linear feet of stream corridor.

**Status:** Negotiations are underway to acquire five of the parcels (totaling 231.3 acres) from two landowners. These properties are undergoing title review, and an appraisal has been initiated for one of the properties. The Park Service intends to proceed with tracking willing-seller status and other acquisition efforts for the other properties as funding becomes available.

<b>Estimated cost:</b>		\$8,638,780
<b>Funding:</b>	Federal SAFET LU Transportation Appropriation	\$1,100,000
	Los Angeles County Natural Land for Trails Grant	\$500,000
	Los Angeles County	\$600,000
	Wetlands Recovery Project (requested)	\$6,438,780

**Cost Notes:** \$6,438,780 funding gap

**38. Prisoners Wetland and Lower Canada del Puerto Restoration**

**Local Lead:** Channel Islands National Park

**Tier:** 1

The proposed project will take place at Prisoners Harbor and Cañada del Puerto, the primary access point for Santa Cruz Island, Channel Islands National Park. This 50-acre project will 1) restore a 4.5 acre coastal wetland and its ecological functions; 2) restore 1 mile of stream corridor and its ecological functions; 3) reconnect the stream channel with its floodplain; 4) re-establish a diversity of native wetland and riparian plant communities; and 5) promote education while providing compatible access to the wetland and stream corridor. Required actions include: 1) remove 10,000 to 12,000 yards of fill from 4.5 acres of historic wetland; 2) move the existing parking area from the wetland site to a more upland location; 3) remove the 400-foot levee constructed to contain the freshwater creek; 4) remove invasive plant species including eucalyptus and fennel from 25 acres along 1 mile of stream corridor; 5) re-vegetate the project area with native wetland and riparian plants; 6) protect a native American archeological site; and 7) install educational signage and design compatible public access.

<b>Estimated cost:</b>		\$1,000,000
<b>Funding:</b>	Coastal Impact Assistance Program (applied)	\$250,000
	National Park Service	\$220,000
	Wetlands Recovery Project (requested)	\$530,000

**39. Ballona Wetlands Restoration Planning**

**Date Funded:** 12/04

**Local Lead:** Department of Fish and Game

**Tier:** 1

**SCC Project** Mary Small, 510-286-4181, msmall@scc.ca.gov

Develop restoration alternatives for all of the lands owned by the State of California, a total of 600 acres. Consistent with the WRP Regional Strategy, planning will be include connected wetlands within the landscape context.

The restoration plan will develop and analyze a range of alternatives to restore and enhance a mix of wetland habitats that will benefit endangered and threatened species as well as other migratory and resident species. Alternatives will need to be ecologically beneficial, technically feasible and sustainable. The restoration project will provide for wildlife-oriented public access and recreation opportunities. This project will collect baseline data, develop project alternatives, conduct feasibility analysis and complete environmental impact analysis for restoration of the state owned property.

**Status:** The Conservancy and its partners have begun a public planning process and are in the process of hiring technical consultants to assist in developing restoration alternatives. Feasibility analysis of the conceptual restoration alternatives will be completed early in 2008.

<b>Estimated cost:</b>	\$750,000
<b>Funding:</b> Coastal Conservancy -- Prop 12	\$750,000

**40. DeForest-Dominguez Wetlands Restoration Planning and Design**

**Local Lead:** City of Long Beach

**Tier:** 2

**SCC Project** Chris Kroll, 510 286-4169, ckroll@scc.ca.gov

Prepare a preliminary plan, environmental review document, and permits for creation of wetland riparian and upland habitat along approximately 3 miles of the east bank of the Los Angeles River. The plan will be jointly undertaken by the City of Long Beach and the Los Angeles County Department of Public Works (LADPW). The De Forest Park site is approximately 38 acres located on the east side of the Los Angeles River extending about 6,600 feet between the developed DeForest Park to the north and Del Amo Boulevard to the south. The Dominguez Gap east basin extends from Del Amo Blvd. to the 405 freeway. The project has multiple objectives including increasing and enhancing wetland and riparian habitat, improving water quality, and enhancing recreational opportunities.

Restoration of DeForest Basin, in concert with the Dominguez Gap Spreading Ground Basin operated by Los Angeles County Public Works, will establish a two mile contiguous corridor of habitat and recreational open space along the Los Angeles River in Long Beach.

**Status:** All design work for Dominguez Gap completed 2006 and construction of the project by the County is presently underway. The City of Long Beach will manage final design of the DeForest project, to be completed in 2008.

<b>Estimated cost:</b>	\$1,050,000
<b>Funding:</b> Rivers and Mountains Conservancy	\$100,000
City of Long Beach	\$100,000
Los Angeles County Department of Public Works	\$250,000
Coastal Conservancy	\$600,000

**Cost Notes:** Conceptual planning for DeForest basin was funded by the Coastal Conservancy with money designated for the Los Angeles River in Prop. 204. LADPW funded conceptual planning for the Dominguez Gap basin. Implementation funding will come from a variety of sources.

**41. Santiago Creek Arundo Control and Habitat**

**Local Lead:** Santa Ana River Watershed Association **Tier:** 1

**SCC Project** Not assigned yet.

The purpose of this project is to complete Arundo control and habitat restoration in three areas of Orange County's Santa Ana River Watershed that otherwise will continue to be sources of infestation of Orange County's restoration efforts on Santiago Creek, Carbon Creek, and the lower Santa Ana Canyon. Approximately 140 acres of Arundo and associated invasives will be removed and managed in three separate locations proposed for restoration including Santiago Creek, Carbon Creek, and the Santa Ana Canyon between Prado Dam and the Orange County line.

These are the last major pieces of infested habitat that have not been treated, or are not scheduled for treatment in, or directly affecting Orange County. Biological monitoring done in consort with the control efforts will focus on endangered species leading to an understanding of their status and distribution and fostering recovery. Information will be disseminated on invasive issues and the importance and plight of the riparian communities and their endangered inhabitants.

**Status:** To date, the Santa Ana Watershed Association has spent \$526,585 on Santiago Creek restoration and \$28,000 annually for the past few years in maintenance. Approximately 140 acres of Arundo and associated invasives were removed and are under ongoing management. There has only been preliminary mapping performed in the other two project areas.

<b>Estimated cost:</b>	\$2,390,766
<b>Funding:</b> Proposition 13 and Santa Ana Trust Fund	\$761,476
Wetlands Recovery Project requested	\$1,629,290

**42. Lower Los Angeles River Acquisitions**

**Local Lead:** City of Long Beach **Tier:** 2

**SCC Project** Chris Kroll, 510 286-4169, ckroll@scc.ca.gov

Acquire properties adjacent to the lower Los Angeles River suitable for wetland and riparian restoration projects. Several properties along the lower Los Angeles River have been identified as possible sites for wetland restoration. Negotiations for these sites are in varied stages. Potential sites include:

Edison property: 72 acres. The property is located on the west bank of the river between Del Ammo Blvd. and Artesia Blvds. It is zoned for public access and flood control. Edison is currently marketing the property for commercial development.

Wrigley Heights, North: 15.8 acres. Located east of the river and north of the 405 freeway. The site is adjacent to the Dominguez Gap spreading grounds. Owner appears willing to sell. The City of Long Beach would like to acquire the property. Approximately 9.6 acres would be used for possible recreation, and 6.2 acres for riparian restoration. Estimated cost is \$14,000,000.

Wrigley Heights, South: 24.7 acres. Property is located on the east side of the river between Wardlow Road and the 405 freeway. Site was used for an oil/water separation facility. There is now a horse stable on the property. The City of Long Beach would like to acquire the property for a mixed-use park, including a wetland restoration at the site of the former separation facility. The current owners would be responsible for site clean up. Estimated cost is \$20,000,000.

**Status:** The City of Long Beach is actively pursuing acquisition of the Wrigley Heights, North and South properties. The Edison property has been included in the I-710 widening project planning.

<b>Estimated cost:</b>	\$20,000,000
<b>Funding:</b> TBD	

**Cost Notes:** Cost estimate is very preliminary and includes upland and recreational areas

in addition to potential wetland restoration areas. No funding has been identified for these acquisitions.

**43. Machado Lake Habitat Restoration Project**

**Date Funded:** 5/04

**Local Lead:** City of Los Angeles

**Tier:** 2

**SCC Project** Chris Kroll, 510 286-4169, ckroll@scc.ca.gov

Develop final projects to improve habitat and water quality of Machado Lake, which is located in the Ken Malloy Harbor Regional Park (KMHRP) in the communities of Harbor City and Wilmington in the City of Los Angeles. Machado Lake, which is approximately 103 acres in size, represents the only remaining natural wetlands in the Los Angeles Harbor area and serves a particularly important role in sustaining migratory and local bird populations in the Los Angeles area.

Environmental review and permitting will also take place in this planning phase.

**Status:** Project stalled, the City awarded a major Prop O grant for Machado Lake.

<b>Estimated cost:</b>	\$500,000
<b>Funding:</b> City of Los Angeles (Prop K)	\$200,000
Coastal Conservancy	\$300,000

**44. Colorado Lagoon Restoration**

**Date Funded:** 1/05

**Local Lead:** City of Long Beach

**Tier:** 2

**SCC Project** Chris Kroll, 510 286-4169, ckroll@scc.ca.gov

Implement the restoration plan for the Colorado Lagoon, a 44-acre saltwater lagoon connected to Alamitos Bay. The principal goals of the plan are to improve the fish and wildlife habitat in and around the lagoon and to improve the quality of the water flowing into and out of the lagoon:

- Redirect, reduce or filter storm and dry weather runoff to minimize contamination of water and sediment in the lagoon;
- Identify sources of pollutants and recommend controls within the watershed;
- Evaluate need to remove contaminated sediments;
- Restore and maintain estuarine habitat; and
- Improve lagoon circulation and the tidal connection with Marine Stadium and Alamitos Bay

The project would be undertaken by the City of Long Beach Parks and Recreation Department with input from the Friends of Colorado Lagoon. The lagoon suffers from poor water quality, frequent algal blooms, and low biological diversity. The lagoon is part of the historic Los Cerritos Wetlands complex. It is a saltwater body that was created by dredging a mudflat and is connected by tide gate to Alamitos Bay through the Marine Stadium. Five storm drains currently discharge into the lagoon. The tide gate is left open during the winter and is closed at times during the summer to retain enough water in the Lagoon for swimming which is allowed in the west arm of the Lagoon. The Lagoon was once a popular clamming site. Marine fish can be found in the lagoon.

**Status:** EIR will be completed spring 2008.

<b>Estimated cost:</b>	\$5,614,868
<b>Funding:</b> Rivers and Mountains Conservancy	\$150,000
Coastal Conservancy	\$500,000
State Water Resources Control Board	\$3,823,868
Army Corps of Engineers (in kind)	\$906,000
Ports of Long Beach	\$235,000

**Cost Notes:** The County is pursuing funds for complimentary improvements to stormwater system.

**45. Los Cerritos Wetlands Conceptual Restoration Plan****Local Lead:** Coastal Conservancy**Tier:** 1**SCC Project** Bob Thiel, 805-957-9299, bthiel@scc.ca.gov

Prepare conceptual restoration plan for the Los Cerritos Wetlands. Project would include an assessment of existing resources, hydrologic analysis, identification of opportunities and constraints, an evaluation of alternatives for expanding tidal circulation and restoring fresh and brackish water wetlands. A recommended conceptual restoration plan will then be prepared. Preparation of the conceptual plan is contingent upon adequate access to property and cooperation of private and public property owners.

**Status:** A preliminary scope of work has been drafted. No funding has been reserved or identified for the planning, planning on hold until the Los Cerritos acquisitions are completed.

**Estimated cost:** \$500,000

**Funding:** Wetlands Recovery Project (requested) \$500,000

**46. Los Cerritos Wetlands Acquisition – Phase II Acquisition Tier: 1****SCC Project** Bob Thiel, 805-957-9299, bthiel@scc.ca.gov

The Los Cerritos Wetlands Authority is taking the lead in negotiating acquisition of 100 acres of the Hellman property, south of the San Gabriel River in the City of Seal Beach. Under a settlement agreement between the owners, the Coastal Commission, and a group of environmental organizations, the owners must offer this area for sale to a public entity. This property is adjacent to the City's Gum Grove Park and property owned by the State Lands Commission.

The Wildlife Conservation Board has indicated that it will fund the acquisition, the Authority will take title to the property.

**Status:** The sellers and the Los Cerritos Wetlands Authority are negotiating the terms of the purchase. It is anticipated that this property could be acquired in 2008.

**Funding:** Wildlife Conservation Board (proposed) TBD

**Cost Notes:** The Wildlife Conservation Board plans to fund this acquisition once the terms of the negotiation are negotiated.

**47. San Joaquin Marsh Enhancement - Phase II Implementation Tier: 2****SCC Project** Karen Bane, 510-286-0922, kbane@scc.ca.gov

Enhancement of the approximately 120 acres of perennial marsh. Historically, the perennial marsh contained open water areas and channels. The extent and depth of the open water areas has significantly decreased due to gradual accumulation of sediment and organic matter and subsequent encroachment of cattails. Except for a few remaining open water areas, the marsh has become predominantly a monoculture of cattails. Consequently, the loss of open water habitat has reduced the diversity of wildlife species that the San Joaquin Marsh Reserve support.

**Status:** Planning and permitting is complete. A funding package for construction is being prepared from private entities needing mitigation credit and public sources. The Coastal Conservancy is funding consultant services to facilitate the revision of design and permits to accommodate the funding partners. The University is preparing conservation MOUs with the regulatory agencies and legal agreements with the funding parties. Construction may commence in August 2008.

**Estimated cost:** \$3,700,000

**Funding:** Mitigation Funds \$3,700,000

**Cost Notes:** The funding package has not been finalized and may also include some public funds.

**48. Upper Newport Bay Ecological Restoration Implementation****Date Funded:** 12/03**Local Lead:** County of Orange**Tier:** 1**SCC Project** Greg Gauthier, 805-259-9539, ggauthier@scc.ca.gov

Project will dredge 2.1 million cubic yards of sediment from Upper Newport Bay and enhance several existing habitat areas. The Ecosystem Restoration Project involves deepening both the Unit I/III and Unit II sediment basins in the upper bay up to -20 feet below mean sea level. This will remove approximately 2.1 million cubic yards of sediment from the bay. The sediment will be disposed of offshore at an approved EPA disposal site. The project also includes an ongoing maintenance dredging program that will be undertaken approximately every 21 years. These ecosystem enhancements include dredging channels to promote tidal circulation and limit predator access to sensitive areas, expanding mudflat habitat in several locations to compensate for mudflats lost to dredging and creating wetlands and California Least Tern nesting islands.

**Status:** A construction contract was awarded in fall 2005. The ecosystem enhancements funded by the State are projected to be complete in November 2008.

<b>Estimated cost:</b>		\$38,000,000
<b>Funding:</b>	Army Corps of Engineers (expected)	\$12,560,000
	Army Corps of Engineers	\$12,440,000
	Coastal Conservancy -- Prop 12	\$13,000,000

**Cost Notes:** Total project costs is approximately \$38 million, with 65% of that coming from the Federal government. The State has advanced the entire local sponsor share of \$13,000,000. The US ACE '06 budget included \$5,000,000. O&M may be needed in 21 years.

**49. Huntington Beach Wetlands -- U.C. Acquisition (Brookhurst Marsh)****Date Funded:** 11/07**Local Lead:** Huntington Beach Wetlands Conservancy**Tier:** 1**SCC Project** Greg Gauthier, 805-259-9539, ggauthier@scc.ca.gov

Acquire approximately 16 acres of the Huntington Beach Wetlands complex. The Huntington Beach Wetlands encompass 160 acres, approximately 144 of which are in public ownership. Of these, only 25 acres have been restored. The remaining areas of the Huntington Beach wetlands support degraded, non-tidal salt marsh. The key parcel remaining in non-conservation ownership is the 16-acre parcel owned by the University of California.

**Status:** Huntington Beach Wetlands Conservancy and UC are in the process of finalizing the acquisition.

<b>Estimated cost:</b>		\$860,000
<b>Funding:</b>	Coastal Conservancy	\$860,000

**50. Orange Coast River Park****Local Lead:** Friends of Harbors, Beaches and Parks**Tier:** Incubator**SCC Project** Greg Gauthier, 805-259-9539, ggauthier@scc.ca.gov

Develop and implement an action strategy for the Orange Coast River Park, a 1000 acre mosaic of wetland, riparian, and upland habitats along the lower three miles of the Santa Ana River. It is envisioned that the Orange Coast River Park would extend up the east side of the Santa Ana River to the eastern boundary of Fairview Park. Included within the proposed boundaries are Fairview Park, and North and South Talbert Preserves, the Huntington Beach Wetlands, the US Army Corps of Engineers restoration marsh at the mouth of the river, Sunset Ridge, and Superior Park in Newport Beach. The privately-owned Banning Ranch would also be included in the park if it is acquired for conservation purposes.

Planning and restoration of each of these pieces is in different stages of development; some have already been completed. The Fairview Park Master Plan is complete and funds are being sought to implement the plan. North Talbert Park has been restored and invasive vegetation removal is

underway in South Talbert Park. A restoration plan for the Huntington Beach Wetlands also is nearing completion.

Additionally, a water quality study to identify potential projects has been completed and a master plan for trails and interpretation is in progress through the National Park Service's Rivers, Trails and Conservation Assistance program. The various landowners have formed an OCRP Partners group and are working to develop a management and operation strategy for the OCRP. Once this step is accomplished the group will be ready to prioritize project and implementation needs and develop a full project action strategy and budget for combining these disparate pieces into one coordinated river park.

<b>Estimated cost:</b>		Not available.
<b>Funding:</b>	State Water Resources Control Board	\$634,000
	Wetlands Recovery Project requested	TBD
<b>Cost Notes:</b>	Scope and budget need further definition, total cost estimated to be	

### 51. Big Canyon Creek Restoration - Final Engineering

**Local Lead:** City of Newport Beach **Tier:** 2

**SCC Project** Karen Bane, 510-286-0922, kbane@scc.ca.gov

The project consists of completing final engineering and design work for the restoration of Big Canyon Creek in Upper Newport Bay. The project addresses wetland habitat, water quality, drainage and hydrologic issues, storm drain problems, tidal exchange needs, sedimentation, long-term system sustainability, and public access. The restoration plan also addresses drainage problems and water quality contamination from Big Canyon Country Club golf course, bluffside homes and impervious urban watershed area.

**Status:** Final engineering and design work is underway, construction expected in 2008.

<b>Estimated cost:</b>		\$700,000
<b>Funding:</b>	RWQCB (Santa Ana)	\$200,000
	Coastal Conservancy	\$500,000

### 52. Laguna Canyon Creek Restoration Project

**Local Lead:** City of Laguna Beach **Tier:** 2

**SCC Project** Not assigned yet.

The Laguna Creek serves as a major riparian habitat resource and wildlife corridor. Significant open space habitats in close proximity include the Laguna Coast Wilderness Park & Preserve which is located directly to the east across Laguna Canyon Road.

The creek consists of a narrow riparian habitat that transition into coastal sage scrub/chaparral. Riparian woodland canopy species include sycamore, oak, elderberry, and willows. Varied riparian herb vegetation within the creek is well established. Mulefat scrub communities can be found in several locations along the creek. In addition, there is a natural meadow area in the upper portion of the project area near the El Toro and Laguna Canyon road intersection.

Endangered, rare or distributionally restricted species include the Orange County Turkish rugging, yellow warbler, yellow-breasted chat, many-stemmed dudleya, red-tailed hawk, and water pigmy-stone crop. Examples of Bird and animal species that have been identified in the area include the blue heron, American egret, black phoebes, cliff swallows, brewer's blackbirds, marsh wrens, kestrels, woodpecker, barn owl, mule deer, raccoon, crayfish, goldfish, pacific tree frog, snakes, ducks, frogs, turtles, bobcat, and gray fox.

Endangered, rare or distributionally restricted species include the Orange County Turasih rugging, yellow warbler, yellow-breasted chat, many-stemmed dudleya, red-tailed hawk, and water pigmy-stone crop. Examples of Bird

and animal species that have been identified in the area include the

<b>Estimated cost:</b>		\$450,000
<b>Funding:</b>	City of Laguna Beach	\$150,000
	Wetlands Recovery Project requested	\$300,000

**53. Wood Canyon Stream Stabilization and Restoration**

**Local Lead:** County of Orange **Tier:** Incubator

**SCC Project** Deborah Ruddock, 510-286-4168, druddock@scc.ca.gov

Restore degraded riparian habitat along approximately 3.5 miles of Wood Canyon Creek and its tributaries. Wood Canyon Creek is a tributary to Aliso Creek. The project consists of three main elements: 1) modification of an existing detention basin at the upstream boundary of the Wilderness Park which is contributing to erosion in Wood Canyon; 2) re-routing and revegetating a approximately 500 feet of a tributary stream to reduce erosion and create a more natural, meandering stream channel; and 3) removal of non-native species. In addition to habitat benefits, the project will provide water quality benefits by increasing the capability of Wood Canyon Creek to filter non-point source pollution.

Wood Canyon is characterized by its rugged hillsides, oak woodlands, freshwater marshes, riparian corridors and abundant wildlife. The proposed restoration encompasses Wood Canyon Creek and its lower order tributaries from its origin in the northern section of the Aliso and Wood Canyons Wilderness Park to its confluence with Aliso Creek.

The impacts of the surrounding communities have increased inputs of urban runoff and stormwater into Wood Canyon over the past thirty years. This project will address restoration of those areas of the canyon that show detrimental effects from erosion and resulting sediment loading of the downstream areas in Aliso Creek.

**Status:** Design plans need to be finalized. County is working with WRP Local Assistance Program to get project implemented. Project may need to be redefined to move ahead without ACOE funding.

**Estimated cost:** Confidential

**Funding:** Current funding information is not available.

**54. Aliso Creek Mainstem Riparian Restoration**

**Local Lead:** County of Orange **Tier:** Incubator

**SCC Project** Deborah Ruddock, 510-286-4168, druddock@scc.ca.gov

Stabilize approximately three miles of Aliso Creek and restore over 4000 acres of riparian habitat along the creek. Project components include the following: 1) construction a series of drop structures ("pool and riffle structures") to stabilize the creek gradient without having to lengthen the creek; 2) remove failed grade control structures and riprap and revegetate; 3) remove non-native invasive plant species; 4) re-establish native riparian habitat on the flood terraces; and 5) create off-channel aquatic and riparian habitat in an abandoned oxbow of the creek. The project was developed through the Aliso Creek Watershed Management Feasibility Study prepared by the County and ACOE.

Aliso Creek is located in southern Orange County. The lower reaches of the creek and its tributary Wood Canyon Creek are located within a County-owned Wilderness Park and support high quality riparian habitat. The Aliso Creek watershed suffers from a number of problems related to urbanization of the watershed, including creek instability, degraded water quality, loss of fish and wildlife habitat, and flooding damages. Continued degradation of the creek threatens to degrade or destroy the riparian habitat in Aliso and Wood Canyon Creeks.

**Status:** County is rescoping project to smaller, phased efforts. Project will be re-evaluated once it has been re-defined.

**Cost Notes:** Current funding information is not available.

**55. Santa Ana River, Featherly Regional Park Restoration Tier: 2**

**SCC Project** Greg Gauthier, 805-259-9539, ggauthier@scc.ca.gov

The Santa Ana Watershed Association (SAWA), in partnership with the Orange County Conservation Corps, Riparian Repairs, and Featherly Regional Park propose to complete the removal of Arundo from the park. It will take approximately 6 months to remove the remaining 20 acres of Arundo, which is scattered over a broad area. The Arundo is not in a contiguous stand, but rather is scattered in clumps. Some Arundo is in rough terrain, and some is on islands in the river. Most patches have native trees and shrubs inside the Arundo clumps. For this reason, only about 4 to 5 acres of Arundo are accessible to a trackloader.

Arundo will be removed by a combination of chainsaw crews and a trackloader with attached cutting blade. Arundo that can't be cut with the trackloader (due to terrain or inclusion of native plants) will be cut with chainsaws, hauled to a chipper, and chipped into a truck for disposal. The area is expected to restore naturally from the existing seed bank. Native cuttings will be used to revegetate as necessary.

**Estimated cost:** \$492,600

**56. San Juan and Trabuco Creek Steelhead Recovery Watershed Management Plan Implementation Tier: 1**

**SCC Project** Greg Gauthier, 805-259-9539, ggauthier@scc.ca.gov

The San Juan and Trabuco Creeks Watershed Steelhead Recovery Plan identifies projects that can be implemented to restore this coastal watershed for the recovery of a native fish species. This proposal describes implementation of the top three priority projects identified in the Plan, including alteration of the Metrolink crossing of Trabuco Creek, assessment and restoration of the San Juan Creek Lagoon (hydrologic, sedimentation, and habitat assessment and floating island habitat pilot project), and restoration of a 3,000-foot long reach of Trabuco Creek (alteration of the stream structure and removal of exotic species

**Estimated cost:** \$25,000,000

**Cost Notes:** The total project cost, for all components is estimated at \$25,000,000.

**57. Trabuco Creek Fish Passage Project Tier: 2**

**Local Lead:** Trout Unlimited

**SCC Project** Not assigned yet.

The project will plan and design a fishway for 800 feet of cement-lined channel on Trabuco Creek under highway I5 and a county road. Removal of the existing fish barrier would open up access to 15 miles of steelhead spawning and rearing habitat. The project will also include riparian habitat enhancement adjacent to the fish barrier to benefit other species.

**Status:** The plan was finished and 30% of the initial design should be completed by the end of November 2007.

**Estimated cost:** \$360,000

**Funding:** Wildlife Conservation Board \$315,000

California Conservation Corps	\$10,000
California Department of Fish and Game	\$16,000
County of Orange	\$10,000
Trout Unlimited	\$9,000

**Cost Notes:** Estimated construction costs are \$1,021,000. Planning work has not been completed.

**58. Serrano Creek Stabilization and Restoration Phase II, Reach 2 & 3**

**Local Lead:** County of Orange

**Tier:** 1

**SCC Project** Greg Gauthier, 805-259-9539, ggauthier@scc.ca.gov

Serrano Creek, a coastal stream corridor, is a tributary of San Diego Creek draining an area of about 2,590 acres at Trabuco Road within the City of Lake Forest. The proposed project will stabilize the creek beds and banks, restore riparian habitat, and reduce sediment loadings to Newport Bay. Serrano Creek has undergone substantial erosion in recent years due to changes in the watershed. In general, sediment supply to the unimproved stream has been reduced and local runoff has increased, both in peak and duration. This request is to prepare engineering plans and environmental documents for Serrano Creek between Trabuco Drive and Rancho Parkway for Phase II, Reaches 2 and 3. The Southern California Wetlands Recovery Project (WRP) was a funding partner on Phase I, Reach 1

<b>Estimated cost:</b>		\$1,500,000
<b>Funding:</b>	County of Orange	\$500,000
	Wetlands Recovery Project (requested)	\$1,000,000

**59. San Juan Hydrologic Unit - Non Native Species Eradication Plan**

**Local Lead:** County of Orange

**Tier:** Incubator

This project will develop a comprehensive program to remove non-native, invasive species from the San Juan Hydrologic Unit in Orange County. The project area includes about 173,000 acres in Orange County. The project will include mapping riparian plant communities, developing a GIS database and developing a non-native species eradication plan.

<b>Estimated cost:</b>		\$100,000
<b>Funding:</b>	Department of Fish and Game	\$50,000
	County in kind	\$50,000

**60. Restoration of Riparian Habitat in the Carlsbad Hydrologic Unit Tier: 1**

**SCC Project** Megan Johnson, 619-645-3167, mjohnson@scc.ca.gov

This project involves implementation of a comprehensive program to remove non-native plant species, and restore riparian and select upland habitat areas in the Carlsbad Hydrologic Unit (CHU). Invasive non-native plants are a concern for several reasons, including the displacement of native vegetation, impacts to threatened and endangered wildlife species, degradation of private property, and increased risk of both fire and flood. The goals of the project are:

- 1) Make significant progress in re-establishing the hydrologic and ecological functions of the riparian and coastal wetland habitats within the CHU through the removal of invasive non-native pest plants over large areas through a comprehensive and efficient program.
- 2) Replace these invasive species through the most effective means available with appropriate native plant species for the habitat.
- 3) Restore beneficial uses to riparian and wetland habitats in the CHU.
- 4) Establish reliable mechanisms to ensure the long-term continuation of efforts to control invasive exotic species in wetland and riparian areas.
- 5) Elucidate steps in the establishment of a Weed Management Area (WMA) for the CHU.

**Status:** Substantial progress has been made in the implementation of the invasives removal program The State Board awarded a Prop 13 grant for this program in 2004 and that grant has been completed. The WCB awarded \$1,500,000 for this project in 2006. The WCB grant is underway and will continue until 2010. To date, 426.4 acres of invasive plants have been treated and 210.7 acres remain to be treated.

<b>Estimated cost:</b>		\$5,460,000
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<b>Funding:</b>	Wildlife Conservation Board	\$1,500,000
	State Water Resources Control Board	\$3,960,000

**61. Buena Vista Creek Watershed Plan****Tier: 1****SCC Project** Deborah Ruddock, 510-286-4168, druddock@scc.ca.gov

Preparation of a comprehensive watershed/sub-watershed management plan for Buena Vista Creek, located in the Carlsbad Hydrologic Unit (CHU). Recommended action of Carlsbad Watershed Network Management Plan.

**Estimated cost:** \$374,500

<b>Funding:</b>	Audubon Society (in-kind)	\$139,200
	Wetlands Recovery Project (requested)	\$235,300

**62. Buena Vista Lagoon Restoration Plan - Preliminary Date Funded: 8/04 Engineering and EIR/S****Local Lead:** Department of Fish and Game**Tier: 1****SCC Project** Deborah Ruddock, 510-286-4168, druddock@scc.ca.gov

The Buena Vista Lagoon Restoration Feasibility Study outlined three basic options for lagoon restoration: 1) maintain the lagoon primarily as a freshwater system; 2) restore tidal circulation to the maximum extent possible; or 3) restore tidal circulation to the lagoon's western basin. The Feasibility Study was completed in spring of 2006 and the next phase is to develop preliminary engineering and conducting the environmental impact analysis on the proposed restoration

**Status:** DFG selected the tidal alternative as the proposed action for the purposes of CEQA based on review of the feasibility study, and a regional habitat analysis and updated sedimentation analysis conducted under this project.

**Estimated cost:** \$1,000,000

<b>Funding:</b>	Coastal Conservancy	\$500,000
	Wetlands Recovery Project (requested)	\$500,000

**63. Batiquitos Lagoon Exotics Removal and Revegetation****Local Lead:** Batiquitos Lagoon Foundation**Tier: 2****SCC Project** Deborah Ruddock, 510-286-4168, druddock@scc.ca.gov

Develop detailed plans for exotics removal and re-vegetation with native plants for approximately 16 acres of wetland and upland habitat adjacent to Batiquitos Lagoon, runoff and erosion control measures to protect the restored and enhanced habitat, and trail improvements as needed. A 1997 Conceptual Planning Study for the lagoon examined conservation and education opportunities and constraints that existed on the shore of the lagoon. The concept study divided the lagoon into 12 planning areas and concluded that invasive non-native plant species were the single greatest threat to habitat quality in and around the lagoon.

This project will prepare the detailed plans, permits, and environmental review to remove exotics and revegetate the 5 highest priority areas around the lagoon and to implement runoff and erosion control measures and make trail improvements where needed.

**Status:** The Foundation, the Coastal Conservancy and WRP Local Assistance Program have agreed to delay implementation of this project pending completion of key land acquisitions in the proposed project area now pending

**Estimated cost:** \$350,000

<b>Funding:</b>	Coastal Conservancy (requested)	\$300,000
	City of Carlsbad (uncommitted)	\$40,000
	Batiquitos Lagoon Foundation	\$10,000

**Cost Notes:** Cost estimates are preliminary and based on five year old assumptions.

**64. Batiquitos Lagoon - Mitsuuchi Acquisition** **Date Funded:** 11/07

**SCC Project** Deborah Ruddock, 510-286-4168, [druddock@scc.ca.gov](mailto:druddock@scc.ca.gov) **Tier:** 1

The 18-acre Mitsuuchi parcel comprises much of the little remaining habitat surrounding the Batiquitos lagoon, including habitat used by endangered species. The Carlsbad Habitat Management Plan (HMP), a local plan permitted under the federal Natural Communities Conservation Planning program (NCCP) and the Northwest San Diego County Multiple Habitat Conservation Plan (MHCP), affords some protection for the property but still allows limited development. Because of previous large scale habitat losses to development, state and federal regulators believe fee acquisition of the entire Mitsuuchi parcel followed by restoration is necessary to protect and enhance lagoon functioning and to help preserve amounts and kinds of habitat and linkages necessary to sustain viable regional populations of critical species.

Specifically, acquisition of the Mitsuuchi Property would provide significant resource conservation benefits including: 1) protection of a wetland to upland habitat transition zone supporting important refugia for wetland species during flooding; 2) protection and future enhancement of breeding, sheltering and foraging habitat for the unique upland and wetland species that occupy the transition zone, including the Federally listed California gnatcatcher, least Bell's vireo and light-footed clapper rail; 3) control of non-native species and erosion that threaten existing ecological resources; and 4) maintenance of a habitat buffer between the lagoon and surrounding development.

<b>Estimated cost:</b>		\$2,400,000
<b>Funding:</b>	Coastal Conservancy	\$1,700,000
	USFWS	\$700,000

**65. San Elijo Lagoon Restoration Planning** **Tier:** 1

**SCC Project** Megan Johnson, 619-645-3167, [mjohnson@scc.ca.gov](mailto:mjohnson@scc.ca.gov)

Substantial efforts are in progress to actively manage the San Elijo Lagoon ecosystem. A long-term financial endowment funds maintenance of tidal flushing. Recent efforts over the past eight years to keep the lagoon open to tidal circulation have shown that significant ecological benefits result from increased tidal flushing, as evidenced by increased diversity and abundance of fish, improved water quality, reduced production of mosquitoes and midges, enlarged nesting areas for California least terns, Belding's savannah sparrows, and Western snowy plovers, and increased foraging by birds. These ecological improvements have also fostered significant public enjoyment of the lagoon.

This project will promote diversity and quality of habitats through restoration of tidal circulation and functions, while maintaining the distribution of critical tidal wetland habitats, including mudflat acreage that has decreased by 33% in 3 years. This project includes a self-sustaining maintenance plan and a monitoring plan that incorporates benchmark criteria and measurable adaptive management practices.

<b>Estimated cost:</b>		\$4,100,000
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**66. San Dieguito Watershed Invasive Species Control and Re-vegetation**

**SCC Project** Megan Johnson, 619-645-3167, [mjohnson@scc.ca.gov](mailto:mjohnson@scc.ca.gov) **Tier:** 1

This project will restore 874 acres of riparian and marsh habitat in the San Dieguito Watershed in northern San Diego County through the treatment and control of *Arundo donax*, perennial pepperweed, pampas grass and

Tamarix spp. (Tamarisk), with subsequent revegetation using native species. Invasive non-native plant species are displacing native habitat, depleting available water, causing numerous water quality impacts, and creating a flood and fire threat. The river is designated as critical habitat by the Fish and Wildlife Service for three endangered species: least Bell's vireo, southwestern willow flycatcher, and arroyo southwestern toad, and San Dieguito Lagoon has the state's third largest population of light-footed clapper rail. The San Dieguito River Valley is also recognized as an official 'cornerstone' of both the County MHCP and City MSCP Plans. The invasives program is also part of an integrated regional effort that uses common approaches, mapping, permitting and monitoring. This increases long-term benefits and efficiency of projects under the program.

<b>Estimated cost:</b>		\$4,766,000
<b>Funding:</b>	IRWMP Prop 50	\$1,700,000
	Department of Parks and Recreation	\$372,000
	Natural Resource Conservation Service	\$147,000
	Water District	\$200,000
	Wetlands Recovery Project Small Grant and WHIP	\$36,750
	Wetlands Recovery Project (requested)	\$2,310,250

**67. Los Penasquitos - Sediment Management**

**Local Lead:** Los Penasquitos Lagoon Foundation **Tier:** 2

**SCC Project** Karen Bane, 510-286-0922, kbane@scc.ca.gov

Based upon hydrology and sediment studies completed for the watershed and lagoon, Los Penasquitos Creek was identified as the largest potential contributor of sediment to the lagoon. The project will consist of basin construction on a three-acre parcel owned by the City of San Diego property along Los Penasquitos Creek and some education and outreach concerning the effects of sedimentation on the lagoon. The sediment basin will cover an area of approximately 2.5 acres and is designed to withstand a 100-year storm event (16,800 cubic feet/second) without substantial damage. The basin has a sediment volume of 4,400 yd<sup>3</sup> (9,900 tons), which is between the sediment transport capacities of a 2-year and a 5-year flood flows.

Los Penasquitos Lagoon is rapidly filling with sediment because urban development in the watershed has upset the geomorphic equilibrium of the three main tributaries (Carroll, Los Peñasquitos and Carmel Creeks) that empty into the Lagoon. Impacts associated with such rapid sedimentation include: reduced tidal mixing within lagoon channels, degradation and (in some cases) net loss of riparian and salt marsh vegetation; increased vulnerability to flooding for surrounding urban and industrial developments; turbidity associated with siltation in lagoon channels. Los Penasquitos Lagoon (LPL) is recognized as an important coastal resource at local, state, national and international levels. It supports several endangered species (e.g. Least Bell's Vireo, Belding's Savannah Sparrow, Light Footed Clapper Rail, Salt Marsh Daisy), serves as a safe stopover for migratory birds traveling along the Pacific Flyway, and provides refuge for coastal marine species to feed and hide from predators. LPL has special status as the closest lagoon to the only two Areas of Special Biological Significance located within San Diego -- the San Diego Marine Life Refuge and the San Diego-La Jolla Ecological Reserve, as a Critical Coastal Area. It is also being considered for addition to the National Oceanic and Atmospheric Administration (NOAA) National Estuarine Research Reserve system and to the list of Wetland of International Significance under the United Nation's Ramsar Program.

**Status:** Construction may commence in fall 2007 once an agreement between Los Penasquitos Lagoon Foundation, the City, and the Conservancy to protect the public interest in the constructed improvement pursuant to Public Resources Code Section 31116(c) has been recorded.

<b>Estimated cost:</b>		\$2,250,000
<b>Funding:</b>	State Water Resources Control Board	\$1,107,000
	Los Penasquitos Lagoon Foundation	\$42,000
	Coastal Conservancy	\$328,000

**68. Hanson Pond Acquisition, El Monte Valley** **Tier:** 1

**SCC Project** Megan Johnson, 619-645-3167, mjohnson@scc.ca.gov

This project will acquire and restore 143.5 acres of wetland and upland habitat adjacent to the San Diego River in the El Monte Valley, San Diego County. Additionally, the project will be linked hydrologically, physically, and biologically to a major restoration project on Helix Water District owned land to the east and west. This in turn is part of a larger effort to restore over 1,500 acres along the San Diego River corridor in the El Monte Valley.

The Hanson pond project is an integral and critical component of the larger vision for a restored valley and creation of The El Monte Valley Nature Park. Concurrent with this project, the Endangered Habitats Conservancy (EHC) is negotiating the purchase and restoration of over 700 adjacent acres including retiring the rights for the construction of two golf courses. The Hanson pond site will be linked hydrologically, physically, and biologically to the San Diego River and adjacent restoration areas. The site will be the primary location for public access to the El Monte Valley Nature Park. Approximately 30 acres of the pond will be filled and restored to emergent wetland habitat to enhance biodiversity on the site. The emergent wetland will be expanded by roughly 25 acres onto the adjacent Helix property.

<b>Estimated cost:</b>		\$6,500,000
<b>Funding:</b>	San Diego River Conservancy	\$1,500,000
	State Water Resources Control Board	\$1,000,000
	River Parkways (Resources Agency)	\$1,500,000

**Cost Notes:** other sources:\$1,000,000, funding gap \$1,500,000

**69. San Diego River Land Conservation Program, Hanlon WalkerTier: 1**

**SCC Project** Megan Johnson, 619-645-3167, mjohnson@scc.ca.gov

The San Diego River Land Conservation Program proposes acquiring approximately 1,500 acres in the San Diego River Watershed, creating a contiguous riparian corridor along 52 miles of the San Diego River that would reach from its headwaters near Julian to its mouth at the Pacific Ocean. This program would ensure and enhance the protection of riparian corridors, the restoration and preservation of wetlands and habitat systems, the improvement of water quality and the provision of access for recreation and education. The Land Conservation Program would implement the San Diego River Conservancy's Five Year Strategic and Infrastructure Plan.

The first priority in the River Conservancy's Land Conservation Program and the most active prospect is the potential acquisition of approximately 140 acres, including over 2 miles of river, in the City of Santee. Fee title to the property, popularly known as the RCP ponds, is held by the Hanlon/Walker family. The Hanlon/Walker properties constitute a critical linkage that is central to the River Conservancy's Strategic Plan. Protection of Hanlon/Walker properties would secure a contiguous riparian corridor from the City of Santee to the El Monte Valley. The properties contain two major sand mining ponds, a portion of a Tank Hill and twelve acres that is the current location of the RCP brick manufacturing company. Sand mining operations on the properties are nearing completion and the owners are eager to sell. The City of Santee has proposed that 90% of the property be placed in the Santee MSCP sub area plan.

**Estimated cost:** Confidential

**70. Rose Creek Watershed Assessment**

**Date Funded:** 8/03

**Local Lead:** San Diego EarthWorks

**Tier:** 2

**SCC Project** Chris Kroll, 510 286-4169, ckroll@scc.ca.gov

Prepare an assessment of existing conditions, and opportunities and constraints for habitat protection, habitat restoration, and public access improvements in lower Rose Creek watershed.

The major elements of the watershed assessment will be: 1) compilation of existing information about the watershed (below MCAS Miramar) and identification of gaps in information; 2) identification of current management practices in the watershed; 3) analysis of the general hydrology of the watershed; 4) mapping of exotic plant species; 5) identification of habitat restoration opportunities; and 6) identification of public access/trail opportunities. The watershed assessment will be the first phase of a larger planning process for protection and

restoration of the watershed. Planning efforts will be coordinated with MCAS Miramar's planning for the upper watershed as well with the Mission Bay and Marian Bear Memorial Park management plans. San Diego EarthWorks, a nonprofit organization, will undertake the project in partnership with the City.

**Status:** The hydrologic and hydraulic assessment was completed in Fall 2005 the next stage of planning is underway. Additional funding is needed to complete the modeling.

<b>Estimated cost:</b>		\$282,300
<b>Funding:</b>	Coastal Conservancy	\$150,000

### 71. Rose Creek Watershed Assessment Implementation Tier: 1

**SCC Project** Chris Kroll, 510 286-4169, ckroll@scc.ca.gov

Implement recommendations of the Rose Creek Watershed Opportunities Assessment including completing a watershed-wide hydrologic study; planning for creation of wetlands at the mouth of Rose Creek; and designing trail linkages.

<b>Estimated cost:</b>		\$1,165,000
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### 72. San Diego Watershed Riparian Restoration Program Tier: 1

**SCC Project** Megan Johnson, 619-645-3167, mjohnson@scc.ca.gov

The San Diego River Conservancy has initiated a watershed based invasive, non-native plant control program in the San Diego River Watershed. This program will help to implement one of the Conservancy's strategic initiatives contained in its Five Year Strategic and Infrastructure Plan, Program 3, Project 1, Remove Invasive Non-Native Plants and Restore the Land. Initial baseline mapping has been completed, watershed-based permitting is being initiated, and funding for implementation of control and restoration is being developed. Over 329 acres of high priority invasive plant species have been mapped in riparian areas that need to be controlled and replanted. Arundo, tamarisk, palms, and pampas grass are the bulk of the acreage, but non-native trees are also in abundance. All of these species degrade habitat quality and pose significant fire and flood risk. Initial funding for the program has been committed from the Proposition 40 River Parkways program. Treatment areas not covered by the Prop 40 funds include: Arundo donax (86 ac), tamarisk (3 ac), pampas grass (15 ac), palms (16 ac), mixed exotic trees (11 ac) and other species (17ac).

<b>Estimated cost:</b>		\$5,100,000
<b>Funding:</b>	River Parkways (Resources Agency)	\$1,500,000
	Department of Defense	\$175,000
	Helix Water District (requested)	\$975,000
	Wetlands Recovery Project (requested)	\$2,650,000

### 73. Famosa Slough Acquisition Tier: 1

**SCC Project** Megan Johnson, 619-645-3167, mjohnson@scc.ca.gov

The Friends of Famosa Slough propose to acquire 10 real estate parcels totaling approximately 0.9 acres of privately held property adjacent to Famosa Slough. Once this land is acquired, the Friends will stabilize the banks and implement water quality improvements, improve the rough trail through the site, remove invasives, re-vegetate with native plants, and maintain the site until it is self sustaining.

<b>Estimated cost:</b>		\$950,000
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**Cost Notes:** \$70,000 has been identified for this project, but applicant did not provide source for those funds.

**74. Famosa Slough Culvert Replacement**

**Date Funded:** 2/06

**Local Lead:** Friends of Famosa Slough

**Tier:** 2

**SCC Project** Karen Bane, 510-286-0922, kbane@scc.ca.gov

This project will replace an inoperable culvert between Famosa Channel and Famosa Slough to increase the tidal prism in the slough. Restoration of this culvert was identified as a priority in the 1993 Famosa Slough Enhancement Plan. The feasibility study to reactivate the culvert was completed in February 2001.

Reactivation of the culvert will improve tidal circulation in the slough. Assuming an average of two additional horizontal feet in tidal inundation around the perimeter of the slough (excluding the northern channel), there will be an increase in wetlands of about 1/6 acre. Other projects identified in the enhancement plan are contingent on implementation of this project.

**Status:** WCB awarded construction funds in February 2006, culvert repair should be complete in 2006. The project is awaiting permit issuance from the City of San Diego. Culvert repair should be complete by December 2007.

**Estimated cost:** \$181,000

**Funding:** Wildlife Conservation Board \$181,000

**75. Chollas Creek Watershed Opportunities Assessment**

**Tier:** Incubator

**SCC Project** Megan Johnson, 619-645-3167, mjohnson@scc.ca.gov

This project will assess opportunities in the Chollas Creek watershed to improve habitat and water quality conditions while also providing for community benefits such as recreation and education. The project includes detailed reach-based assessments of the creek and watershed system that identifies more specific locations for certain types of activities and refines the specific types of activities proposed for a certain location.

The planning topics and themes to be addressed in the opportunities assessment include the following: ecology, wetlands habitat, water quality, stormwater management, land use and other topics. Physical and biological opportunities (such as for improving wetlands habitat or stormwater) will be characterized at the reach scale.

**Estimated cost:** \$450,000

**Funding:** Wetlands Recovery Project (requested) \$450,000

**76. Sweetwater Marsh Restoration**

**Tier:** 1

**SCC Project** Megan Johnson, 619-645-3167, mjohnson@scc.ca.gov

The Sweetwater Marsh Restoration and Enhancement Plan proposes to improve the overall habitat value within the Sweetwater Marsh Unit of the San Diego Bay National Wildlife Refuge. The project site's salt marsh habitat and associated tidal channels provide nesting and/or foraging habitat for four federally listed bird species, including the endangered California least tern, California brown pelican, light-footed clapper rail, and the threatened western snowy plover; as well as the State endangered Belding's savannah sparrow. A federally listed endangered plant, salt marsh bird's beak, also occurs within the marsh and the threatened California gnatcatcher has been observed in the adjacent upland habitats on Gunpowder Point. Twenty-six species covered by the Multiple Species Conservation Plan (MSCP) have either been observed or have the potential to occur here. Invasive plant species, such as Australian saltbrush, hottentot fig, chrysanthemum, tree tobacco, and fennel, are generally restricted to the transitional zone around the salt marsh, while giant reed and tamarisk occur in a brackish marsh located near Interstate 5. Implementation of the proposed restoration and enhancement projects would assist in the implementation of the recently approved Comprehensive Conservation Plan (CCP) for the San Diego Bay NWR (USFWS 2006).

**Estimated cost:** \$4,135,000

**Funding:** NAWCA \$300,000

Port of San Diego	\$68,000
Audubon Society	\$8,953
Wetlands Recovery Project (requested)	\$4,126,047

**77. South San Diego Bay Coastal Wetland Restoration Project Tier: 1**

**SCC Project** Karen Bane, 510-286-0922, kbane@scc.ca.gov

Prior to the 1900s, San Diego Bay was a fertile, shallow bay surrounded by extensive mudflats and salt marshes. Over the past hundred years, significant portions of the bay have been dredged or filled to accommodate port development and other urban uses. At the southernmost end of the bay, much of the original salt marsh and intertidal mudflat habitat was diked to create solar salt evaporation ponds and salt marsh and freshwater wetland habitats of the Otay River floodplain were converted to agricultural fields. Today, only about 20 percent of San Diego Bay’s historic salt marsh habitat and 10 percent of its original intertidal habitat remain intact.

The U.S. Fish and Wildlife Service (Service) has prepared a Comprehensive Conservation Plan (CCP) for the San Diego Bay National Wildlife Refuge (Refuge) that guides refuge operations, habitat management, and visitor services on the Refuge for the next 15 years. The inclusion of habitat restoration proposals within the draft CCP reflects the need to restore sensitive coastal habitats within San Diego Bay, while still maintaining those aspects of the existing habitats on the Refuge that support nesting seabirds and other migratory birds. The primary goal of the recommended restoration is to improve habitat and foraging conditions for a number of listed species, particularly the California least tern, western snowy plover, and light-footed clapper rail.

**Status:** The final EIS and Record of Decision are anticipated in March 2006 and June 2006 respectively. Pending engineering could begin in summer 2006 and construction could begin by summer 2008.

<b>Estimated cost:</b>	\$1,860,000
<b>Funding:</b>	
USFWS	\$323,749
Port of San Diego	\$5,000
Wetlands Recovery Project requested	\$1,530,000

**Cost Notes:** The WMG recommended that state and local funds should only be used to match federal contributions to this project. Preliminary cost estimates for construction range from \$10 to \$20 million.

**78. Tijuana Estuary Tidal Restoration Program - Phase II Date Funded: 4/01 Feasibility**

**Local Lead:** Southwest Wetlands Interpretive Association **Tier: 1**

**SCC Project** Karen Bane, 510-286-0922, kbane@scc.ca.gov

This project entails feasibility and design studies for a second phase of saltmarsh restoration at Border Field State Park in the south area of the Tijuana Estuary involving approximately 480 acres. The restoration is prescribed by a Conceptual Plan for the Tijuana Estuary Tidal Restoration Program (TETRP) adopted by the Conservancy and the U.S. Fish and Wildlife Service in 1992. First phase TETRP projects, the Oneonta Tidal Linkage and the Model Marsh were completed in 1997 and 2000.

It is anticipated that the investigation will produce a comprehensive restoration plan identifying a series of restoration projects to be implemented in phases. The assessment includes the following components: 1) analyzing the hydrologic issues identified in TETRP as needing further examination; 2) assessing the feasibility of integrating a beach nourishment element into the project design; and 3) preparing preliminary restoration plans for the projects that would be implemented. Project planning is being overseen by the Tijuana Estuary Management Authority, a Technical Advisory Committee created for the project, Coastal Conservancy, and U.S. EPA staff.

**Status:** The Final Feasibility and Design Study will be issued in April 2008. Review and feedback will be solicited from the Science Advisory Committee for the Tijuana River National Estuarine Research Reserve, the regulatory

and resource agencies.

<b>Estimated cost:</b>		\$1,232,316
<b>Funding:</b>	U.S. Environmental Protection Agency	\$188,000
	Coastal Conservancy (Prop. 13)	\$1,039,000
	SCC-Wetlands Recovery Project	\$5,316

**Cost Notes:** Preliminary estimates for construction range from \$87 million to \$132 million depending on sediment disposal methods permitted. Construction could begin earlier than 2010.

**79. Goat Canyon Enhancement Project, Construction**      **Date Funded:** 1/02

**Local Lead:** California Department of Parks and Recreation      **Tier:** 1

**SCC Project** Karen Bane, 510-286-0922, kbane@scc.ca.gov

Construct sediment retention basins adjacent to the Goat Canyon drainage to restore riparian habitat in the project vicinity. The project will reduce sediment flows to the southern arm of Tijuana Estuary. Project construction is restricted to September 15 to March 1 to protect the least Bell's vireo, and is administered by California State Parks.

Goat Canyon Creek is the westernmost tributary to the Tijuana River and it flows through the south arm of the estuary. 90% of the Goat Canyon watershed is located in Mexico. The watershed is characterized by steep, highly erodible slopes; rapid development; and concrete-lined stream channels. These conditions contribute to high sediment loads in Goat Canyon Creek which are degrading the downstream estuary. In August 2003, the Conservancy authorized \$208,000 for feasibility studies, an erosion control and stormwater management program for Los Laureles Canyon, the Mexican portion of the watershed.

**Status:** The project began in Fall 2003. Sediment management structures were completed in Spring 2005. Habitat restoration is in progress with full performance expected by 2008.

<b>Estimated cost:</b>		\$8,405,700
<b>Funding:</b>	Wildlife Conservation Board	\$1,800,000
	California Department of Parks and Recreation	\$1,200,000
	National Oceanographic and Atmospheric Admin.	\$300,000
	City of San Diego	\$105,700
	Coastal Conservancy	\$1,195,795
	SCC-Wetlands Recovery Project	\$3,804,205

**80. Los Laureles Canyon**

**Local Lead:** Tijuana River National Estuarine Research Reserve      **Tier:** Incubator

**SCC Project** Karen Bane, 510-286-0922, kbane@scc.ca.gov

Laureles Canyon in the City of Tijuana, Baja, California, Mexico drains into Goat Canyon and the Tijuana River National Estuarine Research Reserve in the United States. The watershed is characterized by steep highly erodible slopes; rapid development; and concrete-lined stream channels. These conditions contribute to high sediment loads in Goat Canyon Creek which are degrading the downstream estuary. In August 2003, to compliment the Goat Canyon Sediment Basin project, the Conservancy authorized \$208,000 for a feasibility study of erosion control and storm water management options in Los Laureles Canyon. Recommendations included a combination of community projects, water and sediment control structures, and preservation of undeveloped portions of the watershed.

The California State Coastal Conservancy and US Environmental Protection Agency are funding community projects to revegetate neighborhoods, install impervious street pavers, establish composting and recycling and citizen water quality monitoring. Additional planning is needed to ascertain the type and location of sediment and water control infrastructure and to develop an acquisition program.

**Status:** Community projects are attracting additional funds and technical assistance. The Coastal Conservancy and Earth Island Institute may consider funding an erosion control project once a comprehensive project proposal is developed.

**Estimated cost:** Not available.

**81. WRP Technical Assistance and Program**

**Tier: 2**

Provide technical assistance to WRP Governing Board, Managers Group, and Science Advisory Panel to further the goals of the Recovery Project. Potential uses of technical assistance funds include:

- \*Subregional planning documents
  - identify project opportunities in a subregion
  - assist in setting subregional acquisition and restoration priorities
  - develop comprehensive exotics species control programs (e.g., Arundo, Caulerpa, etc.).
- \*Pre-project evaluations, including resource surveys, appraisals, Phase I hazmat analyses, etc.
- \*Feasibility studies for issues that extend beyond a single project.
- \*Science Panel staff support and investigations of specific technical issues.
- \*Symposium planning and organization.
- \*Public outreach activities.
- \*Other technical assistance needs that arise.

Funds will be used on an as-needed basis with the approval of the Wetlands Managers Group.

**Status:** Project is ongoing.

**Estimated cost:** \$650,000

**Funding:** Coastal Conservancy \$650,000

**82. WRP Small Grants Program**

**Date Funded:** 6/01

**Local Lead:** Environment Now

**Tier: 2**

Provide grants up to \$30,000 for restoration and enhancement projects consistent with the goals of the Wetlands Recovery Project. The small grants program gives priority to projects with a significant education or community involvement element. The grant selection committee includes a representative from each of the county task forces. Examples of projects include removal of invasive species and revegetation with native species and several locations, development of a restoration plans, and development of wetland community volunteer and education programs.

Program activities are summarized below:

- 2001 -- 10 projects funded, \$250,000 total
- 2002 -- 10 projects funded, \$280,000 total
- 2003 -- 15 projects funded, \$267,908 total
- 2004 -- 11 projects funded, \$273,550 total
- 2005 - 9 projects funded, \$188, 865 total

**Status:** A total of 46 projects have been funded. 16 of these are complete. Earth Island Institute has committed to continue funding the Small Grants program for five more years.

**Estimated cost:** \$1,071,458

**Funding:** Earth Island Institute \$791,458  
 SCC-Wetlands Recovery Project \$280,000

**Cost Notes:** The annual SGP budget includes approximately \$200,000 for grants and \$75,000 for program management.