



U.S. Fish and Wildlife Service

The Coastal Program at Humboldt Bay-Fiscal Year 2006



Freshwater Slough Estuary Rehabilitation

North Coast Regional Land Trust

Other Partners: California Department of Fish and Game, NOAA Fisheries, Redwood Community Action Agency, National Fish and Wildlife Foundation, and an adjacent landowner.

The 54 acre Freshwater Creek Conservation Area, owned and managed by the North Coast Regional Land Trust, is located along north Humboldt Bay. The

project will restore tidal influence to 35 acres of wetlands by removing a tidegate, removing a berm along the creek, improving existing stream channel morphology and enhancing off-channel sloughs. Native grasses, sedges, shrubs and hardwood tree species will be planted. Coastal Program funds will be used for project design and fencing to exclude cattle from the project area. Species to benefit include the federally listed Coho salmon, steelhead trout, and tidewater goby. Migratory birds will also benefit.

Photo Credit: Paula Golightly



Strawberry Creek Restoration Design

Pacific Coast Fish, Wildlife, and Wetlands Restoration Association

Other Partners: California Department of Fish and Game, The Resources Legacy Fund, and the landowner.

Strawberry Creek is a tributary to the Redwood Creek estuary at the town of Orick, California. Coastal Program funds will support collection of stream and floodplain data as well as the development of a

project design for restoring Strawberry Creek. Design and subsequent implementation will occur on private land immediately downstream of Redwood National and State Parks where the invasive plant species, reed canary grass, has choked the stream and significantly disrupted hydrology. Initial removal of reed canary grass will occur so the stream is visible and measurements can be easily taken to develop the project design. Subsequent project work will include a thorough removal of reed canary grass, restoration of stream banks, planting native tree and shrub species, and fencing cattle from the riparian area. Strawberry Creek is a relatively small tributary to Redwood Creek, but its location within the Orick valley lowlands and its direct connection to the Redwood Creek estuary provides many opportunities to restore habitat for the Federally listed Coho salmon, resident salmonids and migratory water birds.

Photo Credit: Paula Golightly



Salmon Creek Fish Access and Habitat Improvement Project

Pacific Coast Fish, Wildlife, and Wetlands Restoration Association

Other Partners: Humboldt Bay National Wildlife Refuge, California Department of Fish and Game, and the California Coastal Conservancy.

The estuary of the 18 square mile Salmon Creek watershed is located on Humboldt Bay National Wildlife Refuge in southern Humboldt Bay. Watershed assessments have identified poor function of the estuary as a key limiting factor impacting Federally listed salmon and steelhead. Poor water quality due to limited tidal exchange, and entrenched channelized stream reaches have also contributed to the problem. Coastal Program funds will be used to replace three existing tidegates and install a tidegate at a new location. The unique design of the new tidegates structures and their location will provide fish passage. These structures will also help to improve water quality by expanding the tidal prism and will allow for improved routing of sediment. Humboldt Bay National Wildlife Refuge will also enhance existing off channel sloughs to improve habitat. Species to benefit include the Federally listed Coho salmon, Chinook and steelhead, tidewater goby. Waterbirds will also benefit.

Photo Credit: Paula Golightly



Native Plant Restoration at the Manila Dunes Recreation Area

Manila Community Services District

Other Partners: California Department of Parks and Recreation, California Conservation Corps and Friends of the Dunes.

The 100 acre Manila Dunes Recreation Area (MRDA) is located on the north sand spit of Humboldt Bay and includes dunes, seasonal wetlands, willow swamps, and coniferous forest. The land is adjacent to federal lands managed by Bureau of Land Management and Humboldt Bay National Wildlife Refuge (Lanphere Dunes). Coastal Program and Endangered Species Program funds will be used to remove 6 acres of European beach grass. In addition, removal of yellow bush lupine shrubs will occur over the entire 100 acre area. The work will be completed using manual removal methods conducted by the California Conservation Corps crews.

The north sand spit of Humboldt Bay contains the most pristine coastal dune system remaining in western North America. It has a unique botanical diversity consisting of two rare plant communities, two Federally endangered plant species, and several other rare species. The MRDA and other areas of the local dunes system have been degraded by invasive weeds. These species impact native plant communities through direct competition and alteration of natural processes including sand movement and nutrient cycling.

Photo Credit: Paula Golightly



Wintering Shorebird Roosting Habitat

Humboldt State University Sponsored Programs Foundation

Other Partners: Humboldt State University Faculty

Humboldt Bay is an important estuary for shorebirds along the Pacific Flyway and was designated an International Site under the Western Hemisphere Shorebird Reserve Network in the late 1990's due to the diversity and abundance of shorebirds year-round. The importance of the bay is due to diverse habitats, in relatively pristine conditions compared to other estuaries in California. Nevertheless, these habitats are impacted by human activity such as development and recreational activities. Coastal Program funds will be used to assess the extent to which Dunlin, the most abundant wintering shorebird on Humboldt Bay, is limited in roost sites. The project will examine the degree to which individual shorebirds move among multiple roosts within and among successive high tides. In addition, the work will assess the extent to which Dunlin movements are influenced by human activity and natural disturbance such as predation. Results of project work will help provide information on how human activities affect roosting habitat requirements of shorebirds.

Photo Credit: USFWS File Photo



Crescent City Marsh Conservation Strategy

Smith River Alliance

Other Partners: California Department of Fish and Game and the California Native Plant Society

Crescent City Marsh is 335 acres in size and includes coastal freshwater wetlands, open water, brackish marsh, beach and dunes, prairie, coastal scrub and spruce forest. The marsh is home to more than 230 plant species, at least a dozen of which are absent or rare elsewhere along the coast of California. In addition, the marsh also contains the largest known population of the Federally endangered western lily. Coastal Program and Endangered Species Program funds will be used to develop a Conservation Strategy for the marsh along with a public outreach plan. The outreach plan will be developed for the public, landowners, and decision makers. It will be focused on developing options to protect and conserve existing habitat and hydrology. This unique landscape is located within a 1400 acre watershed that is currently threatened by increased development above and beyond the 510 acres currently in residential or industrial use.

Photo Credit: David Imper



Remote Monitoring of Seabirds at Castle Rock National Wildlife Refuge

Castle Rock National Wildlife Refuge

Other Partners: Humboldt State University

Castle Rock National Wildlife Refuge hosts the second largest seabird colony in California and is one of the most important multi-species seabird nesting sites in the California Current System. Coastal Program and Endangered Species Program funds were used to augment the Fiscal Year 2005 project.

The 2005 and 2006 funds were used to purchase and install a remote camera system on the island. This included a robotic video camera and a thermal imaging camera. The thermal imaging camera allows for gathering of critical information on nocturnal burrow nesting seabirds without visiting the island and damaging or disturbing burrows. Funds were also used to install a repeater station for improved transmission of camera images to the receiving units at Humboldt State University where the birds are being studied, and for supplies to provide internet streaming of video for education and outreach to the public at the Humboldt Bay National Wildlife Refuge Visitors Center and elsewhere. Species being studied on the island include common murre, cormorants, pigeon guillemots, Cassin's auklets, rhinoceros auklets, and storm petrels. To view seabirds on Castle Rock via remote camera log onto the following website:

http://www.humboldt.edu/~rtg1/research/castle_rock.html.

Photo Credit: Paula Golightly

The Coastal Program at Humboldt Bay-Project Cost Share Summary

Coastal Program Initiative Area FY 2006

Project Name	Funding Recipient	Funding Amount	Cost-Share/In-Kind Amount
Freshwater Slough Estuary Rehabilitation Project	North Coast Regional Land Trust	\$ 26,000	\$ 623,901
Strawberry Creek Restoration Design Project	Pacific Coast Fish, Wildlife, and Wetlands Restoration Association	\$ 15,000	\$ 50,736
Salmon Creek Fish Access and Habitat Improvement Project-Phase I	Pacific Coast Fish, Wildlife, and Wetlands Restoration Association	\$ 40,000	\$ 349,848
Native Plant Restoration at Manila Dunes Recreation Area	Manila Community Services District	\$ 15,000 Coastal \$ 5,000 ESA Funds	\$ 50,000
Wintering Shorebird Roosting Habitat	Humboldt State Sponsored Programs Foundation	\$ 23,891	\$ 10,000
Crescent City Marsh Conservation Strategy	Smith River Alliance	\$ 5,000 Coastal \$ 8,000 ESA Funds	\$ 5,994
Remote Monitoring of Seabirds at Castle Rock NWR	Humboldt State University Sponsored Programs Foundation	\$ 10,000 Coastal \$ 15,000 ESA Funds	\$ 109,154
Total		\$134,891 Coastal \$ 28,000 ESA Funds	\$1,199,633

Cost share ratio: Service funds Partner funds
 \$1 \$7.5

Note:

ESA Funds = Endangered Species Program Funds

