



# The Coastal Program

## *Success in San Francisco Bay*



### *Caring for Our Coastal Habitats*

#### **Restoring Oro Loma Tidal Marsh**

In 1995, The U.S. Fish and Wildlife Service (Service) San Francisco Bay Coastal Program joined with the East Bay Regional Park District (EBRPD) and 10 other partners to restore 364 acres of diked, degraded marsh to a tidal salt marsh and wetland habitat typical of marshes found historically in south San Francisco Bay. Thanks to tremendous leveraging of funds and cooperative partnering, the Oro Loma marsh now supports shorebirds and waterfowl, provides habitat for the federally endangered salt marsh harvest mouse and California clapper rail, controls mosquitoes, and improves recreational opportunities for people using the San Francisco Bay Trail.

#### *Mosquito Heaven*

Before restoration, the site supported a small population of salt marsh harvest mouse but provided little or no value to waterfowl and shorebirds. Because the marsh site was isolated from all tidal action by the Bayshore and Sulphur Creek levees, standing water would accumulate and then evaporate, causing the underlying clay to swell and then shrink. The resulting cracks were perfect breeding ground for mosquitoes, but periodic diking of the area--a mosquito control measure in the past--was no longer possible due to the area's management for the endangered mouse.

#### *Everything Benefits*

To restore tidal action to the property, EBRPD proposed that the site be appropriately graded and then the levees be breached at two locations, opening the site to tidal flow from San Francisco Bay. The ponds formed from these actions would support emergent tidal marsh as well as tidal channels, mudflats, and loafing islands. These habitats would support large populations of waterfowl and shorebirds, while minimizing mosquito populations by eliminating areas of stagnant water.



*Before restoration: diked seasonal wetland and salt pan.  
East Bay Regional Park District photo*



*After restoration: tidal wetlands, brackish pond and upland habitat.  
East Bay Regional Park District photo*

*"This marsh restoration project ... represents an effort by multiple agencies and organizations to acquire and restore key endangered species habitats where they are needed in the Bay area."*

Margaret Kolar, San Francisco Bay Refuge Manager

*"Institutional road blocks have been removed and habitat improvements have resulted ... this is a great model of partnerships and the key role the Coastal Program can play in bringing ideas to action."*

Rick Morat, San Francisco Bay Coastal Program Manager

#### *Teeming With Life*

The levees were breached in November 1997 and within hours the marsh teemed with life. Hundreds of waterfowl and shorebirds flocked to the newly flooded wetland to feed on the insects and small vertebrates forced from their cover by water. Mark Taylor, operations and maintenance manager for the EBRPD, testifies: "It's bird heaven out here." Thousands of shorebirds feed on the mudflats and channels at low tide. At high tide, a multitude of waterfowl can be seen in the ponds and interconnecting tidal channels. Peregrine falcons and harriers cruise the marsh in search of food, and burrowing owls nest in artificial burrows created through a mitigation project.

Natural re-vegetation and re-colonization of the entire site by fish and wildlife is expected to continue. Long term plans for management of the marsh include maintenance of the levee system, flood control channels, utility access, predator and exotic species management, and research and interpretation.

## Restoring Tolay Creek Tidal Marsh

Tolay Creek is a rare surviving example of a San Francisco Bay tidal creek with an associated salt marsh. Tolay Creek enters San Pablo Bay between the Petaluma River and Sonoma Creek and was once important estuarine habitat for the salt marsh harvest mouse, California clapper rail, and Sacramento splittail. Over the years, the creek has filled with silt, losing its tidal action and its value as a salt marsh. In 1994, a partnership of agencies, environmental groups, and private landowners took action to restore the creek's tidal character.

### *From Regulation to Cooperation*

The project began when landowners, faced with regulations and mitigation requirements for repairing their levees, sought help from the Southern Sonoma County Resource Conservation District. Rather than fight the requirements, the group chose to find a mitigation site (land that provides the necessary habitat for the endangered species their levee repairs would disturb) that would meet the needs of all parties. It was a difficult search, but ultimately they found the ideal site: a poorly-producing hayfield owned by the City of Vallejo Sanitation District that the City was willing to sell.

### *Partners Move into Action*

This event opened up powerful possibilities. A multi-agency conservation group called the North Bay Forum was meeting to discuss projects in the San Pablo Baylands area. Members moved into action to see what they could do to further the project. Land acquisition was initiated by the California Department of Fish and Game. The Environmental Protection Agency sought additional federal funding support, and a successful outreach campaign to bring in additional local partners was launched by the USDA Natural Resources Conservation Service. The support of Representative Lynn Woolsey (D-6th CA) was key and her former staff member, Grant Davis, kept the process moving.

The list of partners is impressive: Norm Yenni and Fred Dickson, private landowners, Marin-Sonoma Mosquito Abatement District, U.S. Army Corps of Engineers, Wildlife Conservation Board, Save the Bay, Shell Oil Spill



*Dredge work was done both to enlarge channels, thereby restoring tidal action in Tolay Creek, and to improve levees to protect adjacent farmland.*

*Photo by Betsy Radtke/USFWS*

Litigation Settlement Trustee Committee, CALFED, Sonoma County Fish & Wildlife Advisory Board, the Sonoma Community Foundation, Pacific Gas and Electric, San Francisco Bay Regional Water Quality Control Board, San Francisco Bay Joint Venture, San Pablo Bay National Wildlife Refuge, Natural Resources Conservation Service, Ducks Unlimited, and the U.S. Fish and Wildlife Service Coastal Program.

### *Seed Money*

Early in the project, money for the estimated \$500,000 project was scarce and commitments were weak. The Service's Coastal Program was able to dedicate \$60,000, catalyzing other players to commit. As Rick Morat, Coastal Program manager put it, "Just showing up is important, but being able to make tangible contributions is key to becoming a serious partner and leveraging dollars from other entities." Later, when costs crept up, the Coastal Program was able to dedicate an additional \$75,000 to the project. In total, the partners raised nearly \$1.2 million in funds and in-kind services to complete the restoration.

### *"Cause for Celebration"*

Because of the mitigation site's placement in the watershed, natural tidal flow has been restored to 435 acres of tidal wetlands. This area represents

well over seven times the land that would have been restored without the monumental cooperation involved. "This just shows," remarked Betsy Radtke, Refuge Manager at San Pablo Bay National Wildlife Refuge, "that when a group of people have one goal in mind, they can lay aside their differences for the benefit of the Bay's wetland resources." Lisa Shanks, of the USDA Natural Resources Conservation Service, concurs: "The tireless and cooperative work of many individuals is cause for celebration. A portion of San Francisco Bay is prime estuary habitat once more."

*"It took a huge amount of energy to make what could have become a huge conflict a huge success. We could have gone for minimal mitigation, say 50 acres, but after sitting down and looking at the situation, we ended up with over 400 acres of restored wetlands. We decided to work hard for consensus on what we really wanted."*

Grant Davis,  
Executive Director,  
The Bay Institute