

# The South Bay Salt Pond Restoration Project

The largest wetlands restoration project on the West Coast of the U.S., the Project encompasses 15,100 acres of former salt ponds located around the south edge of San Francisco Bay bordering Silicon Valley. Its mission is to restore and enhance wetlands in South San Francisco Bay as habitat for federally endangered species and migratory birds while providing for flood management and wildlife-oriented public access and recreation.

## Project Partners



# Annual Report 2011

*A yearly snapshot of Project milestones and assessment of progress toward meeting restoration, public access and flood management goals.*



February 2012

The South Bay Salt Pond Restoration Project's progress is due to the efforts of a broad array of supporters, from those who have volunteered their labor at Earth Day cleanups, docent tours and habitat restoration projects, to public and private organizations that have given funds.

In 2011, construction work and scientific efforts were supported by:

- Federal American Recovery and Reinvestment Act stimulus funds provided through the National Oceanic and Atmospheric Administration
- U.S. Fish and Wildlife Service
- U.S. Geological Survey
- U.S. EPA, on its own or through the San Francisco Estuary Project
- State of California Wildlife Conservation Board
- State Coastal Conservancy
- State Department Of Water Resources Integrated Regional Water Management Program
- Alameda County Flood Control District
- Santa Clara Valley Water District
- Resources Legacy Fund
- National Fish and Wildlife Foundation Leopard Shark Account

In addition, the Project has benefited since its inception from major support from other organizations, including:

- The William and Flora Hewlett Foundation
- The Goldman Fund
- The David and Lucile Packard Foundation
- The Resources Legacy Fund
- The Gordon and Betty Moore Foundation
- The Adobe Foundation Fund



## Message from the Executive Project Manager

Dear Friend of the South Bay Salt Ponds,

2011 saw continued progress at the South Bay Salt Pond Restoration Project, which has established a marked record of achievement among the nation's wetlands restoration efforts.

We completed work on our first restoration on California Department of Fish and Game land, breaching 630 acres of former industrial salt ponds near Hayward to the tides, the first step in returning these areas back to marshlands and sloughs.

Additionally, we are beginning to see the fruits of our labors, as scientists monitor nesting birds on newly created islands, native fish in new tidal areas, and, through satellite imagery, track the arrival and growth of marsh plants on restored wetlands.

While appreciating the benefits of our restoration work, we are also carefully studying any potential impacts our activities might cause. That way, we can adapt what we do to ameliorate those impacts, and respond better to the complexities of water and sediment flows, chemical processes, and the behavior of a wide range of species. This Adaptive Management approach is an integral part of the way we are doing restoration, so that restoration responds and grows as we incorporate lessons learned.

As we near completion of our first projects, we have launched planning and design of our next wave of construction.

I want to give a huge thanks to all our partners and the stakeholders, scientists and concerned citizens who continue to collaborate with us.

We hope you will enjoy learning about the exciting progress in restoring the wild heart of the South Bay.

Sincerely,

**John Bourgeois**

State Coastal Conservancy

South Bay Salt Pond Restoration Project Executive Project Manager



# 2011 Year in Review



## Milestones

A first suite of construction projects, launched in 2009, is now nearing completion, and the Project has launched planning, modeling, analysis and design work for its second phase of restoration, pond enhancement and public access. Full Project build-out will take decades. 2011 milestones include:

## Tidal Marsh Restoration

- 1 Three ponds, E9, E8A and E8X, totaling 630 acres, were breached to tidal action, the first Project construction in Eden Landing.
- 2 The first of eight tide gates at Pond A8 was opened to allow tides into this 400-acre area. Scientists continued to monitor concentrations of toxic mercury that remain in Bay sediments near San Jose from upstream mercury mining. The scientists are testing for mercury in sediment, water and animals; they are comparing the results to the surrounding area, and to loads coming downstream to the project site. Results from the comprehensive study will be available in 2013.
- 3 The Island Ponds, restored to the tides in 2006, are developing habitat faster than expected, allowing for healthy growth of pickleweed and other native salt marsh plants that will eventually provide habitat for endangered species such as the California clapper rail and salt marsh harvest mouse.

## Enhanced Ponds

- 4 Shorebirds came to nest at newly constructed Ravenswood nesting islands. The habitat attracted 192 avocet nests and 5 nests of the threatened western snowy plover. Thousands of shorebirds and waterfowl roosted and foraged in this pond during the winter and migratory seasons.

## Public Access

In 2011, more than 1000 people participated in bike tours, photography safaris, history lectures, field trips, restoration work and other events provided by Salt Pond volunteer docents and U.S. Fish and Wildlife Service interpretive staff. This included the 75 people who helped pull more than 1 ton of invasive plants at a Ravenswood restoration event offered with partner Save The Bay.

## Flood Protection

Parts of the Project cannot be completed until levees are in place to protect low-lying parts of the South Bay. The Project has closely coordinated with a related but separate effort, the Congressionally-authorized South San Francisco Bay Shoreline Study. This U.S. Army Corps of Engineers feasibility study, conducted with the State Coastal Conservancy and the Santa Clara Valley Water District as non-federal partners, will identify and recommend for federal funding flood risk management and ecosystem restoration projects.

This year, the Shoreline Study team identified a set of levee options to protect the Alviso area and took feedback from the public. Shoreline Study agencies will choose a preferred set



of Alviso-area levee alignments in 2012 (the Shoreline Study is also working with the Project to develop restoration plans for Ponds A9-A15).

In addition, our partners at the Alameda County Flood Control District are conducting detailed modeling of tidal flood risks near Eden Landing and proposing innovative ways to ameliorate these risks in conjunction with restoration.

## Science

The Science Program in 2011 hosted its third Science Symposium, drawing more than 200 people to learn about the Project's latest scientific findings, which include:

- Preliminary data indicating sufficient sediment to support marsh development for the life of the Project;
- Wildlife is returning to restored habitats -- 30 species of fish, almost all native, are using newly restored ponds;
- Increasing populations of shorebirds and dabbling ducks and maintained diving duck populations;
- A decrease in hatching success of western snowy plovers. Managers are working to limit the impact of nest-raiding predators.

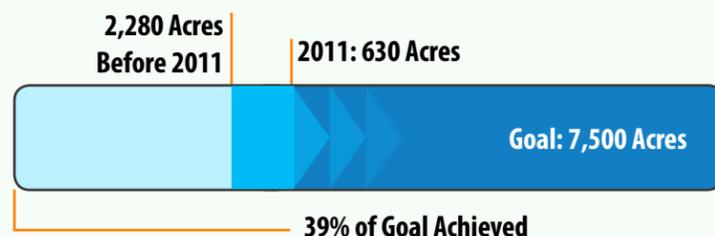


## Progress Toward Our 3 Goals

### Goal 1: Restore & Enhance Habitat

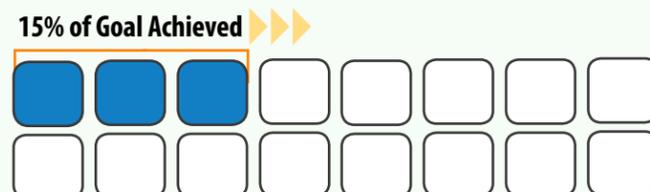
2,910 Acres of Habitat Restored

In 2011, Project managing partner the California Department of Fish and Game opened three ponds, a total of 630 acres, to tidal action. Under the 50/50 scenario of 50% wetlands and 50% managed ponds, 7,500 acres of former salt ponds will be restored to tidal marsh. The Project has accomplished about 40% of that goal.



Designs Completed on 240 Acres of Enhanced Ponds

At the other end of our adaptive management strategy, the Project's 90/10 scenario of 90% wetlands and 10% managed ponds calls for 1,600 acres of former salt ponds to be improved to provide optimal habitat for a variety of avian species. The more birds that our enhanced ponds can provide for, the more other ponds we will be able to restore to tidal marsh. The project has enhanced 240 pond acres and in 2011 prepared to launch construction to build 16 nesting islands on an additional 240 acres.



### Goal 2: Provide Public Access

Planning and Design Proceeds

The Project has identified trails and other public improvements to build. The vision: establish an interrelated trail system; provide viewing and interpretation opportunities; create small watercraft launch points; and allow for waterfowl hunting. The project to date has created 2.9 trail miles. In 2011, work progressed on planning Bay Trail extensions and design was completed for a new overlook and interpretive panels in the Alviso area.



### Goal 3: Provide Flood Management

Flood Protection Progress Maintained

A goal of the Project is to provide for flood risk management, with the objective of maintaining or improving existing South Bay area levels of flood protection. Project managers are committed to ensuring that flood hazards to adjacent communities and infrastructure do not increase as a result of the restoration. Tidal marsh restoration completed to date will increase scour in existing channels, thereby increasing flood flow capacity. However, tidal marsh restoration in flood-critical parts of the Project area will not occur until inboard flood protection is established.

