



Western Ecological Research Center <http://www.werc.usgs.gov>

South Bay Salt Pond Restoration Project

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Contact:
Steven E. Schwarzbach
Laura Valoppi

Email:
steven_schwarzbach@usgs.gov
laura_valoppi@usgs.gov

Phone:
916-278-9490
916-278-3124

U.S. Geological Survey | Western Ecological Research Center | 3020 State University Dr. East, Suite 3006, Sacramento, CA 95819

Under the management of California State Coastal Conservancy, U.S. Fish and Wildlife Service and the California Department of Fish and Game, **over 15,000 acres of former salt ponds in South San Francisco Bay** are being restored to natural tidal wetlands and managed ponds.

This is the **South Bay Salt Pond Restoration Project** — the largest tidal wetland restoration project on the West Coast and a major investment in the natural infrastructure of Silicon Valley and the South Bay.

As part of this restoration, the U.S. Geological Survey is investigating sediment transport, habitat changes, sea level rise resiliency, wildlife behavior, mercury contamination and many other topics — **findings which will guide adaptive management actions for the South Bay restoration.**

USGS Western Ecological Research Center biologist **Laura Valoppi** serves as the Lead Scientist and research coordinator for the overall restoration project. Valoppi and other USGS scientists actively collaborate with resource managers and consultants from local universities, nonprofits, and other institutions to coordinate scientific research to inform this adaptive management plan — a plan that hopes to restore the wild heart of south San Francisco Bay.




Adaptive Management in Action

- The restoration process will return ecosystem services and benefits to Silicon Valley communities, enhancing flood protection, sediment trapping, as well as recreational access and opportunities.
- The restoration will increase marsh habitat in San Francisco Bay and provide resources for the endangered California clapper rail and salt marsh harvest mouse.
- Restored and managed ponds and mud flats will provide habitat and nesting grounds for migrating waterfowl, seabirds and the threatened western snowy plover.
- The adaptive management plan has a time horizon of 50 years and requires rigorous scientific support.
- USGS scientists are monitoring and modeling sediment transport in South Bay to gauge whether restored tidal systems will have enough sediment influx for natural marsh accretion and to sustain mudflat habitats.
- USGS scientists are studying whether the restoration process is altering the nearby mudflat habitats and food webs, and taking bathymetric surveys to observe changes in the benthic habitat.
- USGS scientists are studying how historic mercury deposits may be released by natural and planned scouring of South Bay channels, to understand the fate and transport of the mercury and its impacts on bird reproduction in this important breeding habitat.

Project Contacts

South Bay Salt Pond Restoration Project

<http://www.southbayrestoration.org>

John Bourgeois, Project Executive Director, jbougeois@scc.ca.gov

San Francisco Bay National Wildlife Refuge Complex

<http://www.fws.gov/desfbay/>

Eric Mruz, Refuge Manager, eric_mruz@fws.gov

USGS Western Ecological Research Center

<http://www.werc.usgs.gov/southbayrestoration>

Laura Valoppi, Project Lead Scientist, laura_valoppi@usgs.gov

Project Partners and Supporters

- California State Coastal Conservancy
- U.S. Fish and Wildlife Service
- California Department of Fish and Game
- USGS Western Ecological Research Center
- USGS California Water Science Center
- USGS Pacific Coastal and Marine Science Center
- USGS National Research Program
- San Francisco Bay Joint Venture
- US EPA
- NOAA
- Army Corps of Engineers
- State of California Wildlife Conservation Board
- UC Davis
- California State University Sacramento Center for Collaborative Policy
- San Jose State University
- Santa Clara Valley Water District
- Santa Clara Basin Watershed Management Initiative
- Alameda County Flood Control and Water Conservation District
- City of Menlo Park
- Audubon
- The Bay Institute
- California Waterfowl Association
- Ducks Unlimited
- H.T. Harvey and Associates
- Invasive Spartina Project
- Mid Peninsula Regional Open Space District
- PRBO
- SFBBO
- San Francisco Bay Trail
- David & Lucile Packard Foundation
- Richard and Rhoda Goldman Fund
- William and Flora Hewlett Foundation
- Gordon and Betty Moore Foundation

USGS Scientists Researching Salt Ponds

USGS Western Ecological Research Center

<http://www.werc.usgs.gov>

Josh Ackerman, jackerman@usgs.gov

Mercury effects on avian health; gull predation on nests

Michael Casazza, mike_casazza@usgs.gov

Endangered clapper rail demographics and survival

John Takekawa, john_takekawa@usgs.gov

Mud flat invertebrate fauna; habitat use by wading birds and waterfowl; mapping sea level rise impacts on marsh habitat; endangered salt marsh harvest mouse studies

USGS California Water Science Center

<http://ca.water.usgs.gov/>

David Schoellhamer, dschoell@usgs.gov

Sediment transport monitoring, modeling and forecasts

Gregory Shellenbarger, gshellen@usgs.gov

Sediment flux and transport

USGS Pacific Coastal and Marine Science Center

<http://walrus.wr.usgs.gov/>

Bruce Jaffe, bjaffe@usgs.gov

Bathymetry surveys and mudflat erosion/accretion studies

USGS National Research Program - Western Region

<http://water.usgs.gov/nrp/>

Mark Marvin-DiPasquale, mmarvin@usgs.gov

Legacy mercury methylation, fate and transport

Jan Thompson, jthomps@usgs.gov

Benthic invertebrate communities

