

## 350 more acres of former salt ponds restored to tidal marsh

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With 10 scoops of an earth excavator, water from San Francisco Bay rushed through a levee on the Hayward shoreline on Thursday in the latest effort to restore thousands of acres of tidal marshes that were cut off from the bay for more than a century.

"It's for the fish!" said Carl Wilcox, a California Fish and Game Department biologist who helped mastermind the project, as more than 200 million gallons flowed over 350 acres near the San Mateo Bridge.

The levee-busting was part of a concerted effort that in the past half-dozen years has transformed more than 13,000 acres of bay tidal lands to new sources of food and shelter for fish and birds and expanded the Bay Trail. The new Hayward marsh will be open next year to visitors hiking the trail.

A crowd of volunteers and agency workers cheered Thursday afternoon as they watched the bay water reclaim its natural territory, covering up what humans over the past 160 years had diked into farm fields and then salt ponds.

The state bought 835 acres of salt ponds from agribusiness giant and landowner Cargill Inc. in 1996 with this goal in mind. Over the past two years, the East Bay Regional Park District has been preparing for the restoration of 600 of the acres within the new Eden Landing Ecological Reserve, named after the former port, Mount Eden Landing.

In a few months, western sandpipers, mallards, pintails and dozens of other bird species are expected to show up there in greater numbers as they swoop in to winter on the Pacific Flyway, a major migratory route.

**Halibut, striped bass, starry flounder and other bay fish will have more to eat in miles of shallow tidal waters and newly created sloughs, now wending inland from the bay.**

By next year, there will be three more miles of the Bay Trail, making it possible to walk 15 miles between San Leandro and Union City while admiring the original edges of the bay.

Two years of work has been done in preparation for breaching the levee, which includes flooding the final 250 acres of the tract next year.

Engineers have built two channels to mimic 7 miles of sloughs, while volunteers with the nonprofit Save the Bay have spent weekends pulling out weeds that don't belong in a

marsh, replacing them with hundreds of native species and cleaning up about 10,000 pounds of debris.

For thousands of years, the tidal marsh ringing the bay had served as the watery support for the web of aquatic organisms from zooplankton and little bay shrimp to English sole, starry flounder, surfperch and topsmelt.

Until the mid-1800s, waves washed over the broad alluvial plain at the bay's edge, where mud flats merged with marshy expanses of reddish-green pickleweed and cordgrass. The deep-water sloughs wound through the marsh, and rain collected in pools and ponds. The wetlands fed wildlife so abundant that European explorers recorded the sightings with awe.

Since post-Gold Rush development, the tidal marsh habitat has declined from about 190,000 acres to about 40,000 acres. Twenty of the 500 species of fish and wildlife that depend on tidal marshes were on the edge of extinction, including the salt marsh harvest mouse and the California clapper rail.

The diked ponds provided some habitat for wildlife but the ponds did little for the fish or bird species that needed fresher water, mud flats and upland shelter.

In 2000, bay agencies proclaimed an all-out effort to return the bay's wetlands, buying land with public and private money and restoring them. According to the California Coastal Conservancy, a state agency that acquires open space, some 13,000 acres of tidal marsh and other wetlands have been restored since then.

Another 35,000 acres have been either purchased or are in negotiation. In 2003, the federal and state governments purchased the biggest chunk -- 16,500 acres that were part of the Cargill holdings -- for \$100 million. Cargill retained 3,000 acres of property as well as salt-producing rights on 8,000 acres in the San Francisco Bay National Wildlife Refuge.

Federal restoration efforts near Alviso two years ago are already bringing in birds such as dunlins, sandpipers and wigeons. Waterfowl are also coming in greater numbers.

That's what is expected to happen in the inundated Hayward tract, said Fish and Game's Wilcox.

The sloughs and the marsh are also expected to aid the growth of zooplankton and phytoplankton, the tiny animals and plants. The growth of plankton will increase the productivity of the bay, Wilcox said.

Some of the happiest onlookers Thursday were Janice and Frank Delfino, who are 80 years old. They started fighting for the Hayward shoreline in the 1960s and faced their biggest battle in the 1980s, when developer John Thorpe wanted to build a horse race track, hotel and other development on the 835 acres, then known as the Baumberg Tract after the former town of Baumberg. The U.S. Fish and Wildlife Service said the development would harm the endangered mouse and clapper rail.

The Delfinos and others convinced the city of Hayward and the U.S. Army Corps of Engineers that the development was not a good idea, and Thorpe withdrew his application.



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An excavator breaks through a levee, letting water return to another 350 acres of tidal bayfront. Chronicle photo by Christina Koci Hernandez

## Restoring tidal marshes

The breaking of a levee near the Hayward shoreline brings back 350 acres of San Francisco Bay tidal marshes that had been filled since the Gold Rush days. Since 2000, more than 13,000 acres have been restored for fish, birds and native plants. The Bay Trail is also being expanded.

