Restoration project in Alviso key to restoring San Francisco Bay wetlands

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More than 80 years after San Jose's Guadalupe River was rerouted and separated from its natural connection with San Francisco Bay, a project that aims to reconnect the bay and the river near Alviso will break ground this morning.

Scientists say the project is a key step in the effort to restore 15,100 acres of former salt-evaporation ponds back to tidal marshes for fish, birds and other wildlife. The federal and state governments purchased the property from Cargill Salt in 2003.

"Everyone should be excited. We are finally starting to move earth, and projects are moving forward to restore the bay," said John Bourgeois, manager of the South Bay Salt Pond Restoration Project.

Under the $2.5 million plan, crews will build a 40-foot long concrete notch in the earthen levee along pond A8, a former industrial salt-evaporation pond, and then build eight large metal gates in it. Raising the gates will allow tidal waters to flow into the Guadalupe River near Alviso's Gold Street Bridge.

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The shoreline of a salt pond in Alviso, Calif. is cluttered with construction... (Gary Reyes)

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The notch has three goals. First, by introducing tidal action into the river, engineers expect to widen its channel by 90 feet and deepen it by 2 feet, restoring it to more natural historic conditions.

Second, because bay waters are more salty than the fresh water in the river, they are expected to slow the growth, or kill, masses of bulrushes and tule reeds that have choked the river over the past 30 years, a source of controversy in Alviso. That should eventually make the lower Guadalupe easier to use for boaters.

Third, Mercury from the New Almaden Quicksilver Mines in South San Jose has washed down the Guadalupe and into the bay for 160 years. Although the mines closed decades ago, rainwater continues to wash some mercury into the river, where it builds up in birds and fish, not only harming wildlife but also making some fish unsafe to eat.

Mercury in the mud

The notch project, said Bourgeois, will allow scientists to obtain more precise information about how much mercury is already buried in the mud of the river and salt pond bottoms, how it behaves chemically when stirred up and what effects it has on fish, birds and

even insects. How other former Cargill salt ponds that ring the bay — from Hayward to Redwood City — are restored will depend in part on what happens in the experiment.

"These marshes are habitat for endangered species like the salt marsh harvest mouse and the clapper rail, along with waterfowl," said Bourgeois. "If we increase the amount of mercury they are exposed to, their populations could decline. We not only want to do no harm, but to restore these species."

Construction on the notch is scheduled to be completed in December. The tidal gates will be opened early next year, slowly at first, with scientists from the nonprofit San Francisco Estuary Institute and government agencies studying wildlife, sediment movement, mercury concentrations and other issues.

The project is a joint effort of the U.S. Fish and Wildlife Service and the Santa Clara Valley Water District, funded in part with a $1 million grant from President Barack Obama's stimulus plan.

Widespread support

Leaders in Alviso strongly support the project.

"When you bring saltwater back, we all win," said Alviso resident Dick Santos, a member of the water district board. "It will take care of high maintenance of the invasive vegetation and bring back all kinds of species."

Santos also said he thought the project, by enlarging the channel, will improve flood control in Alviso. In a related action, the water district board in November approved a $6 million project to dredge parts of the lower Guadalupe and remove vegetation.

The river's woes date back to the Gold Rush. Founded in 1852, Alviso began as a port for ships carrying redwood, quicksilver and orchard fruits. But the port silted in.

The construction of salt-evaporation ponds there starting in 1929 rerouted the Guadalupe River, cutting off tidal action. By the 1960s, the U.S. Army Corps of Engineers and the water district straightened the river to improve flood safety. But in removing its lazy meanders, they inadvertently created a freeway for sediment, which now collects at Alviso.

As a result of the changes, the river became muddier, with less saltwater from the bay. By 1980, an enormous growth of bulrushes and cattails began to take over. In 1977, one spot in the river was 218 feet wide. By 2004, it was 54 feet wide.

Environmentalists, some of whom have opposed major vegetation removal, support the notch project.

"The sediment redistributed around the South Bay from this project will help make salt ponds shallower so plants can grow," said David Lewis, executive director of Save the Bay, in Oakland. "It is a very important step in keeping the salt pond restoration moving ahead."

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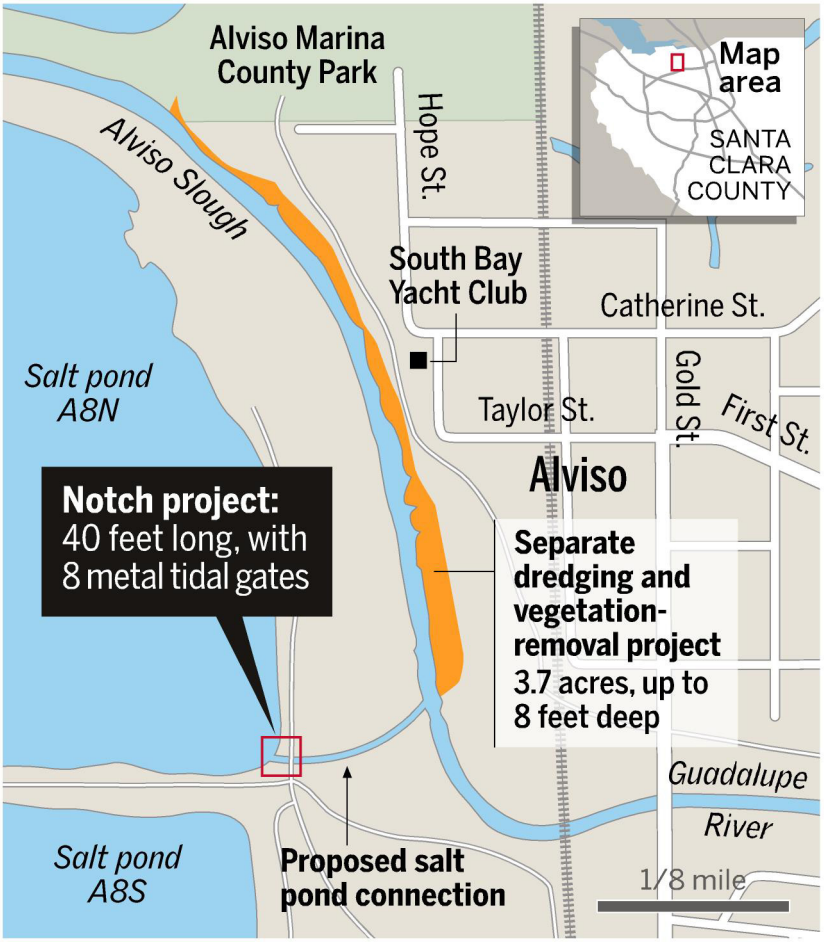
Linking the bay and Guadalupe River

Work will begin today on a $2.5 million project to cut a 40-foot notch in the levee between the Guadalupe River near Alviso and salt pond A8. A key goal is to allow bay waters to mix with the river, reducing sediment and overgrown vegetation.



Source: Santa Clara Valley Water District

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The shoreline of a salt pond in Alviso, Calif. is cluttered with construction waste on Jan. 12, 2010. The U.S. Fish and Wildlife Service and other agencies will break ground on a $3 million project to cut a 40-foot notch in the levees to allow salt water from the bay to flow back into the Guadalupe River to scour out years of accumulated silt, tule reeds and other unwanted vegetation. This pond is adjacent to the levee that will be breached. If successful, the project will regenerate the natural marshland and offer new flood protection for the city of Alviso which is below sea level. (Gary Reyes/Mercury News) (Gary Reyes)

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A water level indicator measures a salt pond in Alviso, Calif. on Jan. 12, 2010. The U.S. Fish and Wildlife Service and other agencies will break ground on a $3 million project to cut a 40-foot notch in the levees to allow salt water from the bay to flow back into the Guadalupe River to scour out years of accumulated silt, tule reeds and other unwanted vegetation. If successful, the project will regenerate the natural marshland and offer new flood protection for the city of Alviso which is below sea level. (Gary Reyes/Mercury News) (Gary Reyes)

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The shore of a salt pond in Alviso is filled with debris Jan. 12, 2010. The U.S. Fish and Wildlife Service and other agencies will break ground on a $3 million project to cut a 40-foot notch in the levees to allow salt water from the bay to flow back into the Guadalupe River to scour out years of accumulated silt, tule reeds and other unwanted vegetation. If successful, the project will regenerate the natural marshland and offer new flood protection for the city of Alviso which is below sea level. (Gary Reyes/Mercury News) (Gary Reyes)

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Construction waste clutter a salt pond and levee in Alviso, Calif. on Jan. 12, 2010. The U.S. Fish and Wildlife Service and other agencies will break ground on a $3 million project to cut a 40-foot notch in the levee in the background to allow salt water from the bay to flow back into the Guadalupe River to scour out years of accumulated silt, tule reeds and other unwanted vegetation. The excavator at upper right will soon be carving out the levee. If successful, the project will regenerate the natural marshland and offer new flood protection for the city of Alviso which is below sea level. (Gary Reyes/Mercury News) (Gary Reyes)

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Eric Mruz (cq) of the U.S. Fish and Wildlife Service stands atop a levee that will be breached above the salt ponds in Alviso, Calif. on Jan. 12, 2010. The U.S. Fish and Wildlife Service and other agencies will break ground on a $3 million project to cut a 40-foot notch in the levees to allow salt water from the bay to flow back into the Guadalupe River to scour out years of accumulated silt, tule reeds and other unwanted vegetation. Mruz stands in the area of the levee that will be cut through. Mruz is the Refuge Manager for the Don Edwards San Francisco Bay National Wildlife Refuge. If successful, the project will regenerate the natural marshland and offer new flood protection for the city of Alviso which is below sea level. (Gary Reyes/Mercury News) (Gary Reyes)

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