## Elkhorn Slough project 'one small step for mud'

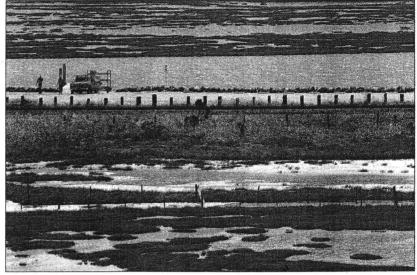
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ELKHORN SLOUGH — At Elkhorn Slough, it's

all about mud, preserving mud.

In front of a gathering of 50 wildlife officials, local residents and directors of the Elkhorn Slough Reserve on Wednesday, Bryan Largay, director of tidal wetlands for Elkhorn Slough National Estuarine Research Reserve, touted the successful completion of the "sill," a \$4.5 million project designed to slow erosion in the tidal estuary.

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SHMUEL THALER/SENTINEL

Elkhorn Slough spreads out over thousands of acres just south of the Santa Cruz County line. A \$4.5 million sill will slow erosion in the tidal estuary.

## **ELKHORN**

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"Elkhorn Slough is an amazing and beautiful place," Largay said. "Mud is what sustains the basic building block to support wildlife in the area. For the first time in 60 years, we have a project that will support a more sustainable marsh."

The sill, a newly constructed underwater retaining wall, is 200 feet wide, 15 feet high, and 5 feet under water. Surrounded by rock, the sill weighs 3 million pounds and was installed in interlocking parts. It is near Union Pacific railroad tracks at the confluence of Parson and Elkhorn sloughs, twin channels leading from the sea that feed more than 3,000 acres of marsh and tidelands, habitat for innumerable birds. fish, crustaceans, otters, seals and other animals.

Elkhorn Slough officials say they can already see the benefits of the project, which was mostly paid for with federal stimulus funds. Plant, bird and other animal life have adapted well to the project, including as many as five otter moms and pups resting in the area by the sill. Last month, biologists witnessed an otter birth near the construction site. And harbor seals with pups use the area extensively.

The project is expected to restore an additional seven acres of tidal marsh around the perimeter of the Parsons Slough Complex.

About the miles from Moss Landing Harbor, the area of the sill remains closed to boaters, but it is visible from the reserve center's overlook.

Largay said the sill is designed to ease in-and-out tidal erosion from the sea, which is eating away at the banks of the slough and the mud and sediment deposits vital for its health.

In 1947, a direct channel was cut through sand dunes to allow a permanent entrance to the Moss Landing Harbor, exposing marshy areas to greater tidal surge.

The project also made

improvements to public access at the slough's Kirby Park, including a new boat dock and repair of a parking lot at the site.

Mark Pastick, owner of Kayak Connection in Santa Cruz and Moss Landing, said he's pleased about the sill and its erosion-fighting benefits.

"That been a concern for decades," he said. "I'm also impressed with the Kirby Park upgrades."

The successful completion of the project included securing 14 permits from state and federal agencies and the collaborative efforts of the National Oceanic and Atmospheric Administration, Cali-fornia Department of Fish and Game, Elkhorn Slough National Estuarine Research Reserve, U.S. Fish and Wildlife, David & Lucile Packard Foundation, California Coastal Commission, California State Coastal Conservancy, U.S. Environmental Protection Agency, Union Pacific Railroad, California Regional Water Quality Control Board and the Monterey County Planning Department.

Duck's Unlimited, an international nonprofit involved in conservation of wetlands, oversaw the engineering contracts for the project. URS Corp. based in Oakland designed the project.

Mark Silberstein, executive director of the Elkhorn Slough Foundation, called the project "one small step for mud." He said the project involved numerous planning meetings with members of the public, scientists, engineers and groups concerned about the health of the slough.

"It was a long time coming," Silberstein said. "The sill will restore the area to a more natural condition of flow that will better sustain the slough habitat."

Construction began in November 2010 and ended in February. Officials said the project created 107 jobs at a time when Monterey County had a 17 percent unemployment rate, with an approximate \$1.5 million spent on related equipment and supplies.