Why Restore the Elkhorn Slough?

A Threatened Natural Area

Tucked away between Santa Cruz and Monterey is the Elkhorn Slough estuary, which contains California's second largest salt marsh. Elkhorn Slough is a nationally important natural resource that is facing unprecedented rates of tidal marsh loss and impairments to tidal creeks, mudflats, and channel habitats. The marsh habitats that took thousands of years to develop in the Slough are being lost in decades. In fact, approximately 50 percent of the tidal marsh in Elkhorn Slough has been lost in the past 70 years. The Elkhorn Slough system is currently out of balance. These rapid changes not only affect the Slough's animals and plants, but also impact neighboring private lands, public access sites, and transportation infrastructure.

Reasons to Protect Elkhorn Slough's Tidal Habitats

Elkhorn Slough provides…

- critical habitat for over 200 bird, marine mammal, and fish species, including some that are threatened or endangered. These species are, in turn, nurtured by hundreds of species of marine invertebrates and plants,
- a nursery for commercial and recreational fish,
- an important migratory stop-over for birds,
- hundreds of acres of wetlands that act as buffers to minimize shoreline erosion and improve water quality by filtering polluted waters,
- recreation, education, and research opportunities to thousands of visitors that come each year to kayak, bird watch, teach students about the estuary, conduct scientific studies, and walk on trails.

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Changes to Elkhorn Slough Tidal Habitats

A variety of human activities over the last 150 years have had unintended consequences on Elkhorn Slough.

- *Marsh Loss & Tidal Erosion*: One of the most significant changes to Elkhorn Slough was the construction of the Moss Landing Harbor in 1947 that made the estuary's mouth size much deeper and moved the location south. The opening now allows more tidal waters to enter the Slough and at much higher speeds than had been naturally occurring. The result is significant marsh loss due to bank erosion that causes the marsh to collapse into the channel, as well as increased tidal flooding which "drowns" the plants. Another consequence of tidal erosion is that soft sediments that provide important habitat for many invertebrates are being eroded from the channel bottom, tidal creeks, and mudflats.

- *Freshwater Changes*: The diversion of the Salinas River and overdraft of groundwater has decreased freshwater inputs to Elkhorn Slough, causing hundreds of acres of tidal brackish marsh to be lost. The diversion has also decreased river sediments from entering Elkhorn Slough, and marshes need these types of sediments to survive.

- *Diking & Draining*: Hundreds of acres of Elkhorn Slough's wetlands were diked, drained, and converted to farmland by the mid-1950s. The wetland soils dried out and compacted, subsiding by several feet. Although tidal waters have been restored to some of these areas, the elevation remains too low for marsh plants to grow.

- *Pollution & Invasive Species*: High levels of pollution in the form of nutrients and pesticides, and the introduction of over 70 non-native species also impair Elkhorn Slough's tidal wetlands.

Moving Forward

Currently, the Elkhorn Slough Tidal Wetland Project is working on restoring and enhancing the habitat at the Elkhorn Slough. Their most current project is focused on constructing a low sill at the mouth to parsons Slough to reduce habitat loss. You can get involved by providing your input at community forums or via our website. Elkhorn Slough belongs to the community, so make sure to get informed and have your voice heard!

To learn more about the Elkhorn Slough Tidal Wetland Project (TWP), contact the TWP Communications Assistant at (831) 728-2822 x 325 or email twpinfo@elkhornslough.org. You can also browse the Tidal Wetland Project web page at www.elkhornslough.org/tidalwetlandproject/index.html

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