

The Martinez Regional Shoreline Resource Enhancement Project is located where Alhambra Creek meets the Carquinez Strait in Contra Costa County.

Begun in 1998 and completed in 2002, the project restored wetlands to a healthy brackish marsh while

improving the flood water conveyance of Alhambra Creek and enhancing public access.



Aerial view showing completed restoration

Partners in Enhancement

The Martinez Enhancement Project is a partnership of three agencies: Caltrans, City of Martinez, and East Bay Regional Park District (EBRPD). The project combined the agencies' distinct, yet compatible, goals:

- Caltrans aimed to provide Delta Smelt habitat that would compensate for the effects of the Carquinez Bridge Replacement Project. Caltrans provided the majority of the \$4.5 million needed for the project.
- The City of Martinez hoped to reduce the chronic flooding of downtown Martinez by Alhambra Creek in an environmentally sensitive manner. The City managed construction and provided funding.

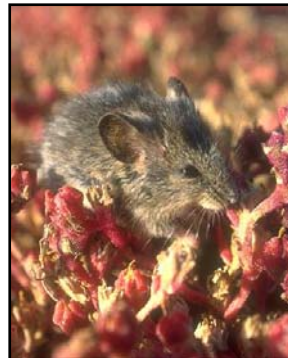
- EBRPD, which owns the shoreline land, wished to improve the overall habitat quality of the marsh especially for rare species, while also enhancing public access.

History

The marsh has a long history of human and natural influences. Originally a rocky beach, the Martinez Shoreline receives sediments from Alhambra Creek and Sierra Nevada mining tailings from the 1850's.



Delta Smelt. Photo Dept. of Fish & Game.



Salt Marsh Harvest Mouse. Photo Joe Didonato.

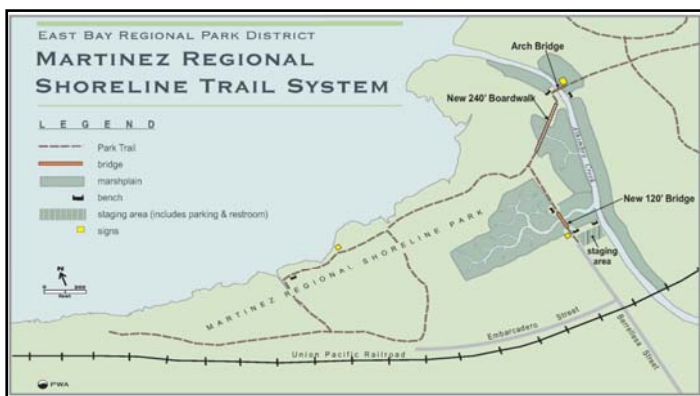
These sediments expanded the shoreline in the Carquinez Straits and turned the rocky shoreline into a tidal mud flat and then a brackish marsh. Sediments dredged to maintain shipping routes in the Carquinez Straits were also placed on the wetlands. Prior to the enhancement project, decades of sedimentation and dumping had left the Martinez Shoreline unable to serve its natural functions of flood control and wildlife habitat.

Dredging spoils had raised the land too far above the tide to support a healthy

ecosystem. Invasive plant species such as perennial pepperweed (*Lepidim latifolium*) dominated the site, creating habitat that would not support many native fish, birds, and mammals. The Alhambra Creek channel had also silted in, reducing flow capacity. Subsequent dredging resulted in sediments forming a berm that blocked creek water from overflowing onto the marsh. During high creek flow, water often backed up into Martinez, causing flood damage to stores and homes.

Project Activities & Construction

The Martinez Resource Enhancement Project focused on areas where past human activities had degraded wetland habitats and reduced flood capacity in



A trail map shows the project's improvements

Alhambra Creek. The key project goals were marsh restoration, creek channel widening, and improving public access.

Removing 30,000 cubic yards of silt and refuse lowered the marsh plain to a height where the tides regularly submerge the land, creating new mud flats and marsh. Non-native species were removed, and the area was graded for plant

colonization and planted with native species.

Delta smelt habitat was created by expanding the tidal slough channels that meander

through the wetlands. To reduce flooding in downtown Martinez, the Alhambra Creek channel was widened to its historical width of 50 feet, and the overall creek channel was also expanded to allow for 150 feet of gently-sloping flood terrace on either side. A low area was created for water to overflow onto the marsh and under a new boardwalk during high flows.

To enhance public access for bird watching and recreation, the existing wooden arch bridge at the Shoreline was retrofitted, and a new 120-foot concrete



A new bridge was built to allow a path for bird watching and recreation.

bridge was constructed. Pathways were improved by installing a 240-foot boardwalk, raised to prevent wash out, and

adding interpretive signs and new benches. Construction was finished in 2002. The project created 1.33 acres of slough channel area and 18.7 acres of enhanced marsh. This increased habitat for endangered fish, birds and mammals, including the

Delta smelt, which lives in the slough channels, the endangered salt marsh harvest mouse, and the



Images from before (top) and after (bottom) widening Alhambra Creek channel from 75 feet to 300 feet.

California clapper and black rails. The mud flats now host scores of shore birds, which birdwatchers can observe from the new boardwalk that extends through the marsh. Most importantly, by partnering three agencies with complementary goals and expertise, the Martinez Shoreline was enhanced more than any one agency could accomplish individually.

Quick Facts

Action: Habitat improvement, flood control

Acres: 80 restored/enhanced

Funding: \$4,500,000

Provided by: Caltrans and City of Martinez

Constructed: 2002

Target habitats: Tidal marsh, mudflat and riparian scrub

Target species: Delta smelt, Chinook salmon, Salt marsh harvest mouse.

Improvements: Marsh restoration, creek widening, improved public access.