



## Making Marsh: Phase 2 Now Underway

Coastal Bend Bays & Estuaries Program is now in the second phase of a major marsh restoration effort at a 160-acre site near the Nueces Bay Causeway that stretches between Corpus Christi and Portland. Intertidal marsh is a critical part of the bay ecosystem as essential habitat for juvenile fish, shrimp and crabs and feeding grounds for bigger fish and birds.

Crews arrived in February 2012 to begin the second phase, which will add another 84 acres of marsh complex between the inner terraces and the outermost berm.

Deeper water necessitated a different approach for the second phase. For the first phase, which began in July 2010 and created 76 acres of marsh complex, crews used heavy equipment to scoop out small sections of bay bottom, placing and forming the removed dirt into higher areas suitable for marsh growth.

For this second phase, equipment will dredge up sand and silt from further out in the bay and pump it into a series of mounds with suitable height for marsh grass.

Channels will be cut through the mounds as needed to allow sufficient water circulation.

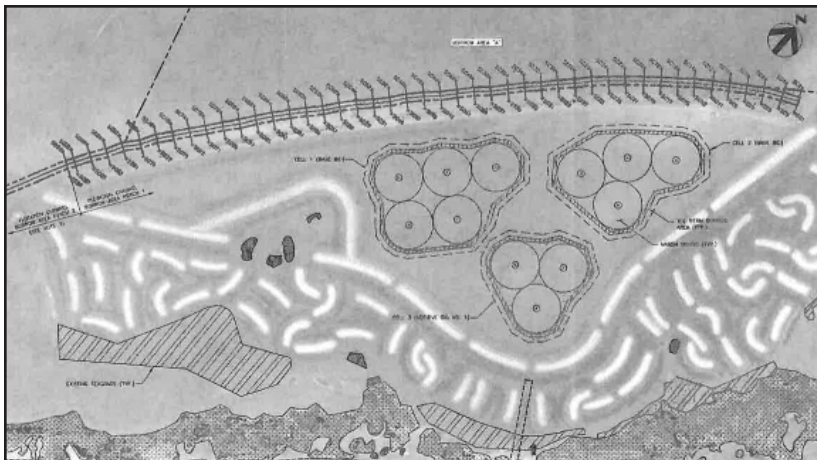


*The first phase, seen here in March 2011, created terraces and an outer berm. A second phase will create additional marsh complex in the middle.*

The result of both processes is a complex of channels and emergent cells that will be planted with marsh vegetation.

The first phase was completed in January 2011, and volunteers planted marsh grass throughout the spring.

The second phase is scheduled for completion in June 2012. Another round of volunteer plantings is expected.



*Phase 2 will add marsh mounds in between terraces and berm built in phase 1.*

The project's third phase will armor the outermost berm, likely with a rock revetment, to protect the project site and infrastructure.

After all construction work is complete, CBBEP will implement on-shore access improvements that make the site more user-friendly while protecting sensitive habitats.

While construction crews are working, the area will be restricted. But when finished, the site will include improved public access spots for fishermen and kayak launches.

CBBEP identified the area for marsh restoration after studies revealed the area lost as much as 340 acres over the last 60 years due to highway construction and subsequent erosion.

Photos: HDR, CBBEP, Lannon Aerial Photography

“Significantly more marsh habitat existed before the current causeway was constructed,” said Dustin Cravey, a project manager with the program.

In the late 1940s, causeway construction and related dredging in the area that is now Sunset Lake resulted in the loss of about 180 acres of marsh. Since then, studies show an additional 160 marsh acres have been lost due to erosion and subsidence.

“The only remaining marsh exists as a few isolated pockets along the shoreline,” he said.

The Coastal Bend Bays & Estuaries Program began its marsh restoration planning in 2005, Cravey said.

Project engineers with HDR, a Corpus Christi engineering firm, reviewed aerial photos from 1930 to 2000 to document intertidal marsh loss over that period.

Project planning also included extensive field work by HDR scientists. They assessed the types of existing marsh and checked bay bottom sediment quality to determine which areas were best for restoration. Through that process, they identified a site where about 160 acres will be converted from open water to a complex designed to mimic the natural marshes in the surrounding areas.

In 2008, CBBEP purchased 33 acres adjacent to the project site to provide better access to the area during marsh construction. Securing the necessary government permits for the project was a lengthy and costly part of the planning process. With those permits in place, the final design work and construction planning was completed.

Funding for this first phase was around \$1.2 million. Design and construction for the second phase is about \$1 million. The budget for the project’s third phase, public access improvements, and replanting as needed is approximately \$2.3 million.

CBBEP is partially funded by the Texas Commission on Environmental Quality and the U.S. Environmental Protection Agency. Funding for this project includes grants from the Texas General Land Office and the U.S. Fish and Wildlife Service.



*Marsh buggies dig up sediment for terraces in phase 1.*



*Volunteers, including junior and high school students, (left and right) helped plant marsh grasses on terraces built during phase 1. Smooth cordgrass (*Spartina alterniflora*) (center) grows on the new terraces.*



Check out additional information on this marsh restoration effort at [www.cbbep.org](http://www.cbbep.org).

The Coastal Bend Bays & Estuaries Program is a non-profit organization dedicated to protecting and restoring bays and estuaries in the 12-county region of the Texas Coastal Bend. CBBEP is partially funded by the Texas Commission on Environmental Quality and the U.S. Environmental Protection Agency.

For more information about the Coastal Bend Bays & Estuaries Program, contact Beth Becerra at (361) 885-6246 or [bbecerra@cbbep.org](mailto:bbecerra@cbbep.org).

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