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Egery Flats Restoration Project Complete!

by Kathryn Tunnell

The Coastal Bend Bays & Estuaries Program (CBBEP) has just wrapped up the Egery Flats Restoration Project! Funded by the National Fish & Wildlife Foundation's (NFWF) Gulf Environmental Benefit Fund, U.S. Fish & Wildlife Service, Texas Parks & Wildlife Department, and CCA Texas Habitat Today for Fish Tomorrow and CCA's Building Conservation Trust, this project restored hydrology to the Egery Flats system, which will reduce salinity to enhance over 600 acres of emergent marsh, submerged aquatic vegetation, and tidal flats.



Finishing touches put on the restoration project with planting of *Spartina alterniflora*. Click play to watch project video!

A favorite among roadside fishermen, crabbers, and birders, Egery Flats sits along the western edge of Copano Bay, near the mouth of the Aransas River. Though seemingly productive to the recreational user, the ecosystem has suffered greatly since the placement of Farm to Market Road 136 in 1945 with only two water exchange points. While it connected communities and provided public access to the flats, it also limited water flow. Over time the culverts at the water exchange points became clogged and the water flow was restricted enough to impact water quality and habitats, which resulted in the conversion of over 100 acres of estuarine marsh and vital habitat to open water since the 1950s.





View of FM 136 and Egery Flats (right) showing reduced emergent vegetation.

The project involved replacing the culverts at the water exchange points along the roadway. Two 30-inch pipe culverts were replaced and upgraded with three 3-foot x 6-foot box culverts at each location. The upgraded culverts will increase water exchange and reduce salinity, which will facilitate the re-vegetation and recovery of the Egery Flats ecosystem. To jumpstart that re-vegetation, the last phase of the project included planting 8 acres of emergent marsh vegetation (*Spartina alterniflora*).



Before (left) and after culvert construction (right).

“It’s great to see the improved flow through the culverts connecting Egery Flats to the Copano Bay system,” said Adrien Hilmy, Project Manager for the CBBEP. “Not only will this increased water exchange improve the salinity levels, but it will also help increase the nutrient and sediment input into the marsh, creating a more productive and diverse ecosystem.”



To measure the success of the project, CBBEP worked with the Mission-Aransas National Estuarine Research Reserve (MANERR) at the University of Texas Marine Science Institute and Texas Parks and Wildlife Department to collect valuable preconstruction data, including porewater salinity and vegetation monitoring. The monitoring will continue for several years post construction and will help determine the effectiveness of the culvert replacement and success of the restoration project.



Katie Swanson (MANERR) retrieving data from porewater salinity monitoring station.

The marshes in Egery Flats and the Coastal Bend are essential habitat for living marine resources and provide feeding grounds for waterfowl, wading birds, and shorebirds. Many of the birds that use Egery Flats also rely on the nearby Aransas National Wildlife Refuge. The proximity of Egery Flats as a healthy feeding ground and marine nursery will enhance the overall ecological productivity and value of the Aransas Bay complex. Great things are on the horizon for Egery Flats!

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. For more information about the Coastal Bend Bays & Estuaries Program, contact Kathryn Tunnell at (361)336-0311 or ktunnell@cbbep.org. This report published in November 2020.

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