NFWF | Gulf Environmental Benefit Fund

TEXAS Greens Lake Protection and Marsh Restoration: Engineering & Design

Funds were utilized for the development of engineering and design documents necessary to protect and restore 5,100 acres of fragile coastal marsh habitat, sea grass, tidal channels and oyster beds in West Galveston Bay. Greens Lake contains important coastal marsh habitat that is suffering from shoreline erosion, saltwater intrusion, potential subsidence, and overall degradation. This investment engineered and designed the optimal project elements to address these issues, including (a) shoreline protection breakwaters, (b) a weir or reduced inlet structure at the mouth of Greens Lake to reduce tidal exchange and wave energy, and (c) the beneficial use of dredge material from the Gulf Intracoastal Waterway (GIWW) and/or other potential sources to restore marsh elevations sufficient to promote and sustain marsh vegetation.

Overall, the protection of this critical coastal habitat has contributed to the larger landscape-scale conservation efforts in West Galveston Bay. The Galveston Bay system lost over 35,000 acres of intertidal wetlands since the 1950s, which was important habitat and feeding grounds for dozens of species of birds, and estuarine-dependent species including shrimp, red drum, and blue crab.





When constructed, this project is anticipated to protect and restore 5,100 acres of fragile coastal habitat in West Galveston Bay.

AT A GLANCE

RECIPIENT: Ducks Unlimited (DU)

AWARD AMOUNT: \$117,996

PARTNERS:

USFWS, NOAA, Texas General Land Office, Texas Commission on Environmental Quality, Texas Parks and Wildlife Department

LOCATION:

West Galveston Bay

AWARD DATE: November 2014

STATUS: Closed

PROGRESS UPDATE: Project closed November 2017.

