TEXAS

Greens Lake Protection and Marsh Restoration: Engineering & Design

Funds will be 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 will engineer and design the optimal project elements to address these issues, likely to include (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 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 will contribute 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, the project is anticipated to protect and restore 5,100 acres of fragile coastal habitat in West Galveston Bay.