

H-E-B CONSERVATION UPDATE

November 2017



Tricolored heron © Dero Sanford

The Texas portion of the Gulf Coast supports a mosaic of habitats unequalled in beauty and biological diversity, including hundreds of miles of beaches, productive fisheries, riparian forests and coastal grasslands and coastal bays and estuaries that are crucial stopover sites for millions of migrating birds. These valuable natural resources coexist with several of Texas' largest urban and industrial centers.

The Nature Conservancy's goals for the Gulf of Mexico are to restore healthy shorelines, protect freshwater resources, increase coastal resiliency through habitat restoration and ensure participation of Gulf communities in the economic benefits of restoration.

OUR WORK

With H-E-B's support, our Texas-based Coastal Restoration Program was able to purchase a new, 24-foot aluminum boat in 2017 built specifically to meet our ongoing field work needs in coastal restoration and marine research. We are pleased to report that the new boat did not sustain damage during Hurricane Harvey and was moved to a new location for safekeeping.

H-E-B's support has greatly enhanced Conservancy staff's ability to effectively carry out crucial restoration work and research. The new vessel's notable features include shallow draft capabilities, a durable metal hull, greater horsepower for hauling heavy field equipment, increased ease and safety for offloading and on-loading SCUBA divers and the ability to handle rough bay conditions.

Currently, this work is concentrated on three oyster reef restoration projects, located in Copano Bay, Matagorda Bay and Galveston Bay respectively. Collectively, these three projects represent a combined 100-reef construction suitable for commercial harvest. Oyster reef restoration improves the health of our marine environment on many fronts: improving water quality, building more resilient coastlines and improving the health of our fisheries by creating fully functional underwater marine habitats that increase fish and crab yields for commercial and recreational fisheries. According to a



Conservancy staff member Mark Dumesnil proudly stands by our new boat.

recent study in the *Journal of Applied Ecology*, just one acre of restored oyster reef provides 1 ½ tons of extra fish and seafood per year.

Oyster reefs also serve as natural buffers against rising sea tides and hurricanes by forming breakwaters that protect shorelines and wetlands from erosion. Additionally, they are one of nature's most efficient filtration systems, stripping pollutants and minerals from the millions of gallons of freshwater that flow into the sea.

These projects will allow us to test scientific theories on the ecological and commercial benefits of positioning harvestable and non-harvestable reefs in close proximity to each other where they may interact, thrive and grow together.

Other work within the program includes the ongoing restoration of Shamrock Island—one of the most important bird-nesting islands on the Texas coast. Located in Corpus Christi Bay, Shamrock Island is owned and managed by the Conservancy. In Phase I of the restoration we installed 27 breakwaters and planted seagrass beds to buffer damaging wave action. During Phase II, we installed three breakwaters at the south end of the island, set just offshore to reduce wave erosion while leaving the shoreline in its natural state. After installing the breakwaters, two breaches were filled in to stabilize the island; both breaches threatened interior freshwater lagoons with sea water and erosion. Through a multi-partner effort, the Conservancy is leading a similar project to create a bird rookery island in San Antonio Bay for which we are currently seeking federal permitting to construct.

THANK YOU

Taken together, these projects promise to create fully functional marine habitats that will help restore the health and heritage of the entire Gulf region. We will continue our work, applying these innovative techniques to rebuild oyster reefs and protect wetlands along the coast thanks to the help that H-E-B has provided by funding our new boat.



Top to bottom: Brown pelicans at Shamrock Island © Jerod Foster; Oyster reefs in Corpus Christi Bay © Erika Nortemann; Laughing gull chick at Shamrock Island © Rich Kostecke