

Hydrographic, Topographic, and Cultural Resources Survey in West Galveston Bay, Galveston County, Texas

Scope of Work

This project was in support of the shoreline protection and restoration of West Bay Bird Island. An initial 20 acre survey was completed in 2002. Subsequent surveys included the flood shoal area with channels in West Galveston Bay, survey of the pass and ebb shoal, beach profiles on the Gulf side, and a cultural resources Survey of the proposed dredge area.

Size – 6,000 acres **Cost** – \$55,000

Principal Elements and Special Features

Beach survey, surf zone survey, hydrographic survey to depth-of-closure, natural channel survey, island survey, cultural resources survey

This survey required access to marsh areas, shallow sand bars and channels with swift currents. Magnetometer and side-scan sonar surveys were necessary in support of the cultural resources survey. Horizontal and vertical control was researched and referenced to tide gauge benchmarks as well as using GPS static methods. Datum issues due to updates during the course of the work were addressed.

Relevance

This project demonstrates Frontier's ability to collect and provide accurate geo-referenced data across natural channels, on an island, through the surf zone, and to depth-of-closure offshore. It demonstrates Frontier's ability to complete magnetometer and side-scan surveys in support of Marine Archaeology.

