

# SARGENT BEACH NOURISHMENT & DUNE PROTECTION PROJECT

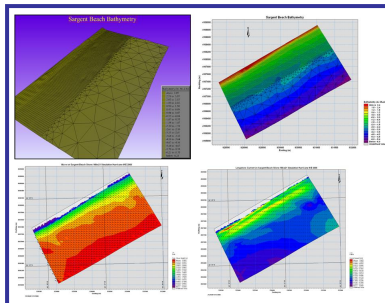
Client: Matagorda County, TX



The Sargent Beach Nourishment and Dune Protection Project is a proposed erosion response project to nourish the beach and provide dune protection on the Gulf of Mexico in Matagorda County. It entails the proposed placement of approximately 200,000

cubic yards of sand along a 0.5 to 1 mile length of beach. This scope of services includes collection and compilation of existing historical data and engineering studies, performance of a boundary and hydrographic survey, an alternatives analysis, numerical modeling, an environmental assessment, and selection of a desired alternative in collaboration with Matagorda County and the GLO, formulation of a preliminary design, and preparation and coordination of required permit applications.

Coastal Tech has assimilated existing reports and data relevant to the Project Area as were available from the General Land Office (GLO), the U.S. Army Corps of Engineers Galveston District (USACE) and the University of Texas Bureau Of Economic Geology (BEG). We have met at the Project site with Project stakeholders including representatives of the GLO, Matagorda County, USACE, and citizens of Sargent Beach – to discuss and identify: (a) specific areas of concern and interest, (b) long-term Project objectives, (c) the expected Project schedule, and (d) Project design criteria and standards. Based upon the existing reports and data, and local stakeholder input, Coastal Tech summarized the results of the above including historical and existing conditions surrounding the Project area. The modeled Sargent Beach area represents a consolidated shore of stiff clay in a low-lying barrier island of Matagorda County, Texas. A Mike21 two-dimensional integrated model dynamically coupling spectral wave, hydrodynamic, sediment transport and morphology modules has been applied to simulate shoreline processes, and predict recreational beach nourishment performance on clay substrate. Together with model bathymetry and computational grids, the Figures show simulation snapshots of waves, and wave-induced currents along the Sargent Beach shoreline during the 2008 Hurricane Ike.



## Key Elements

- ① Data Collection
- ① Boundary & Hydrographic Surveys
- ① Public Workshops
- ① Preliminary Design
- ① Numerical Models
- ① CEPRA Grants
- ① USACE Section 10/404 Permitting

**Date:** 2008 - Present

**Fees:** \$200,000

## Contact:

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