

McFADDIN NATIONAL WILDLIFE REFUGE – DUNE RESTORATION

Client: Texas General Land Office



July 2000, Pre-Construction



October 2002, Post-Construction

In coordination with the Texas GLO and U.S. Fish & Wildlife Service, Coastal Tech prepared the conceptual, preliminary and final design and specifications for this highly successful dune restoration project in Jefferson County, Texas. Services included permitting and construction oversight, beach access planning, and acquisition of all dune plants for the project. The innovative, cost-saving design was selected through preparation of an Environmental Assessment (EA) in accordance with requirements of the National Environmental Policy Act (NEPA).

As part of the EA, Coastal Tech performed a habitat assessments for federally-listed threatened and endangered species, delineated wetlands affected by the proposed project, coordinated with the Texas Historical Commission regarding potential impacts to cultural resources, and analyzed the cost-benefit ratio for four dune restoration alternatives. Coastal Tech collected more than 45,000 native dune plants within the McFaddin and Aransas National Wildlife Refuges and coordinated the propagation of these plants for installation within the project area. Coastal Tech also developed innovative methods to preserve and relocate 15,000 dune plants on site that would have otherwise been buried by reconstruction of the dune system. Coastal Tech provided construction phase services in May 2001 and again for a renourishment in April 2003.

In May 2005, four years after the initial project, the McFaddin Dune Project remained one of the most successful natural shoreline stabilization projects constructed on the Texas coast. The dune itself had restored important habitat in the refuge and reintroduced sea oats to this section of the Texas coast. In spite of being impacted by three tropical storms and one hurricane, the project remained robust and continued to protect the upland coastal wetlands and marshes in the refuge. Unfortunately with the passage of Hurricane Ike in 2008, much of the Refuge, as well as the rest of the upper east Texas coast, underwent a dramatic loss of shoreline and of habitat.

Key Elements

- Plan Design
- Federal Permitting
- Fill placement
- Environmental Assessment
- Plant Acquisition, Propagation & Installation
- Construction Supervision

Completion Dates:

2001 & 2003

Fees: \$131,687

Cost: \$450,000

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