October 2002
Cost figures as of: February 2023

East Timbalier Island Sediment Restoration, Phase 1 (TE-25)

Project Status

Approved Date: 1993 **Project Area:** 45,102 acres
Approved Funds: $3.69 M **Total Est. Cost:** $3.69 M
Net Benefit After 20 Years: 1,913 acres
Status: Completed Jan. 2000
Project Type: Barrier Island Restoration
PPL #: 3

Location

The project is located in Lafourche Parish, Louisiana, on East Timbalier Island. The island is part of a barrier island chain that separates Terrebonne and Timbalier bays from the Gulf of Mexico. Approximately 400 acres of the island are vegetated while the remainder is composed of tidal flats and shallow, submerged water bottoms.

Problems

When this project was first proposed in 1994, the remnants of East Timbalier Island were estimated to disintegrate within 11 years. In the last century, the island experienced one of the highest shoreline erosion rates in Louisiana, with an average loss of 70 feet per year. As a barrier island, East Timbalier not only protects Louisiana's coast from hurricanes and storm surges, but it also lessens the erosive forces of high waves from the Gulf of Mexico.

If the island were to be lost, the marshes in between Bayou Lafourche and Timbalier Bay would be susceptible to these forces, and the infrastructure surrounding Port Fourchon would be undermined. In addition, East Timbalier Island supports an abundantly diverse and rich fishery and serves as a prime nesting habitat for many migratory waterfowl.

Dredged sediments were pumped onto East Timbalier Island to create a frontal dune system. The Gulf of Mexico is on the right.

Restoration Strategy

The Louisiana Coastal Wetlands Conservation and Restoration Task Force funded the overall project on two funding cycles (Priority Project List 3 and 4). Construction funds from these two projects were combined into one effort in 1999-2000. The project plan called for dredging 2.8 million cubic yards of sediment to establish a 200-foot wide dune and a 600-foot wide marsh along the length of the island.

While Phase 1 of the project along the eastern half of the island did not reconnect the western and eastern portions of the island, it did create 99% of the targeted acreage. These land creations help to protect thousands of acres of existing fringing marsh to the north.

To protect this investment, construction funds for this phase of the project were used for the installation of 13,000 feet of sand fences in 2000. In 2001, the fencing was followed by the planting of 13,000 plugs of bitter panicum (*Panicum amarum*) and 6,500 plugs of marshhay cordgrass (*Spartina patens*) along both constructed phases of the island's dunes to minimize wind-induced erosion.

Progress to Date

Since construction, the created habitats are now supporting a range of new, emergent vegetation. Studies and surveys are underway to determine if additional sediments can be placed on the island to create even more habitat. This project is on Priority Project List 3.

For more project information, please contact:

Federal Sponsor:
National Marine Fisheries Service
Baton Rouge, LA
(225) 389-0508

Local Sponsor:
Coastal Protection and Restoration Authority
Baton Rouge, LA
(225) 342-4736

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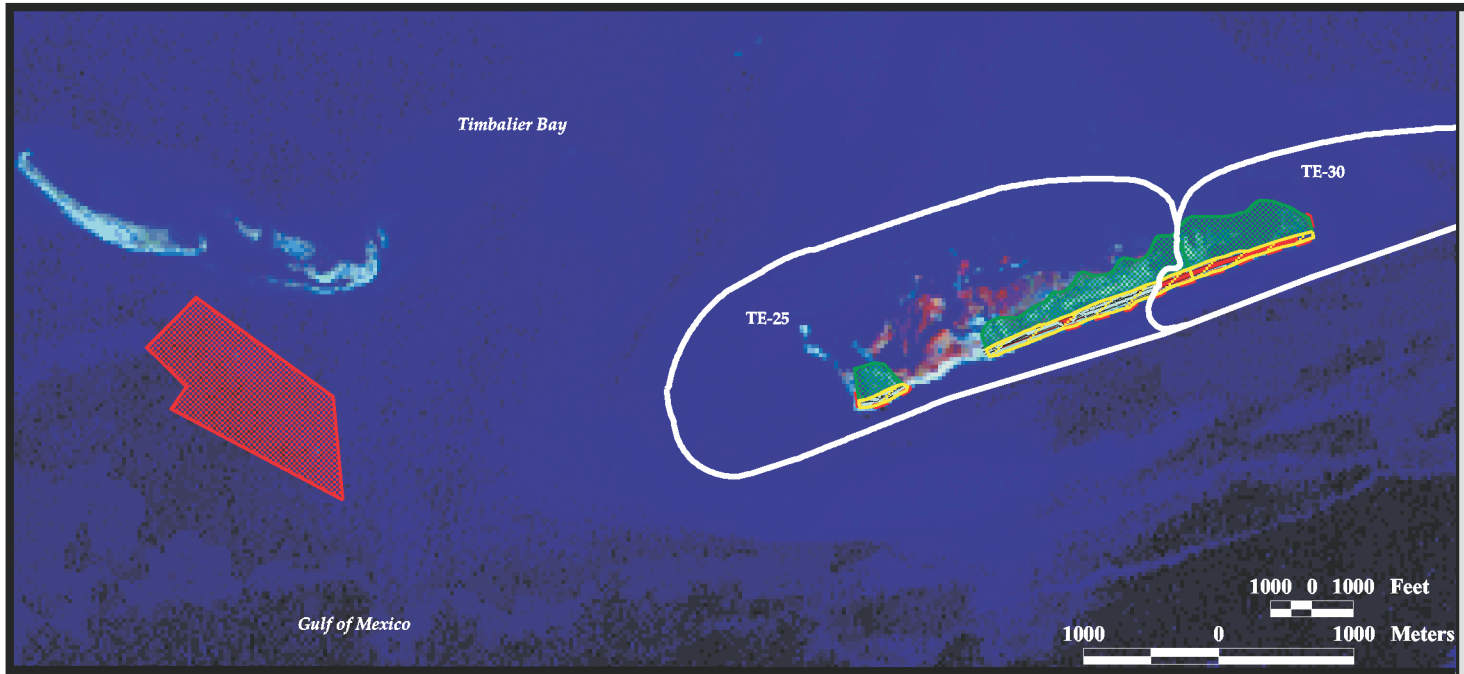

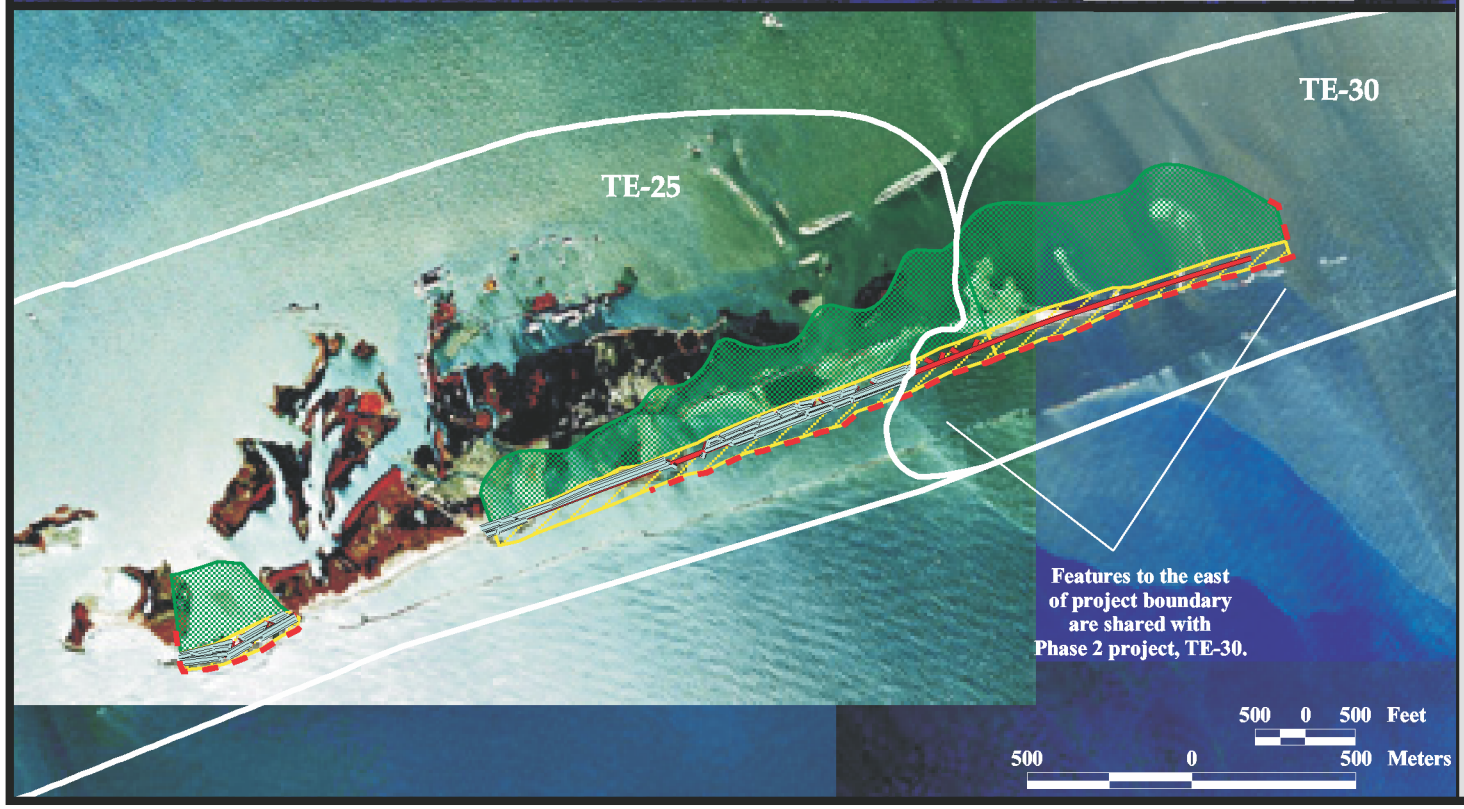

- Vegetative Plantings
- Shoreline Protection
- Sediment Fence
- Seeding Area
- Marsh Creation Area
- Borrow Site
- Project Boundary

Map Produced By:
U.S. Department of the Interior
U.S. Geological Survey
National Wetlands Research Center
Coastal Restoration Field Station

Background Imagery:
Top Image: Thematic Mapper Satellite Imagery 2000
Bottom Image: 1998 Digital Orthophoto Quarter Quadrangle

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