BA-30 - East Grand Terre Island Restoration

Project Overview

Project Location:

Region 2, Barataria Basin

Problem:

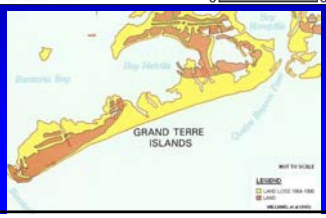
On-going shoreline erosion has resulted in breaching of the barrier shoreline

Goals:

1) Restore beach and dune to prevent breaching and maintain shoreline integrity

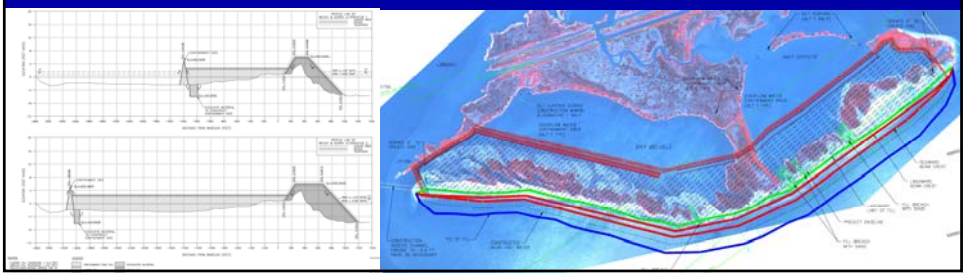
2) Create and restore barrier island habitats

Project Map



Project Features Overview

- Restore 2.8 miles barrier shoreline through construction of +6 foot dune with advanced nourishment.
- Construction 450-acre marsh platform north of and contiguous to the beach and dune fill to provide foundation for continued shoreline rollover and retreat.
- Install sand fencing and vegetative plantings.



Project Benefits & Costs

Project benefits

- Create and restore about 620 acres of barrier island immediately post-construction
- Maintain 2.8 miles of eroding shoreline
- Provide 335 net acres at TY20

Project costs

- The Fully Funded Cost for the project is: $36,705,731
- Phase 2 increment 1 request is $ 33,881,341

Prioritization Score

- 60

Project Comparison/Contrast

The Present **vs.** PPL # 9

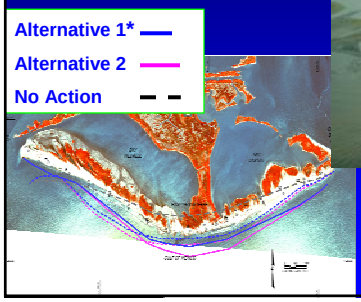
	Phase One	Current	% change
Fully funded cost (M)	$ 18.2	$ 36.7	201 %
TY 20 Net Acres	403	335	83 %
AAHU	177	268.9	151 %

Cost increase due to:

1) Project changes to increase dune and beach restoration to meet goal of maintaining shoreline integrity
2) Construction cost adjustments to reflect post-Katrina business climate and increase in construction contingency

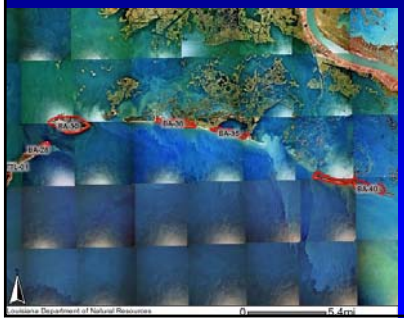
Project Need

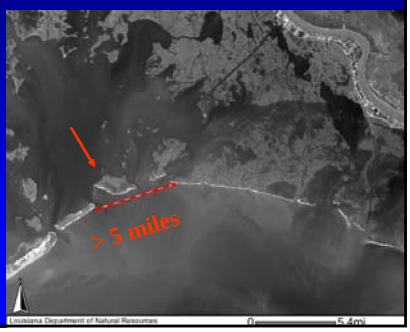
- Project conditions continue to deteriorate with permanent breaches in shoreline (shoreline erosion rates range from 20 to 80 feet/year (1996 to 2002)).
- Project costs expected to increase 15 – 20 %/year for the next two to three years



Project Need

- Project is one component of overall basin-wide effort to restore barrier shoreline (six projects in various stages)
- Limited window of construction feasibility
- Continued deterioration will result in 5-mile opening directly between lower Barataria Bay and the Gulf of Mexico.





Questions?

INFORMATION REQUIRED FOR PHASE II AUTHORIZATION REQUESTS

1. Description of Phase I Project

As authorized for Phase I in January 2000 (PPL 9) the project included restoration of 40 acres of beach and dune on the western portion of West Grand Terre, restoration of about 75 acres of beach and dune, and creation of about 212 acres of saline marsh on East Grand Terre Island (Figure 1). At the time of Phase I authorization, project goals were identified as 1) prevent breaching of the barrier shorelines through the 20-year project life, 2) protect existing structures on West Grand Terre island, and 3) achieve various acreage targets for dune, marsh, and other barrier island habitats.

A summary of Phase I project costs and benefits is provided below.

Fully Funded Total Project Cost	$18.2 M
Net Acres at TY20	403
Average Annual Habitat Units	177

2. Overview of Phase I Tasks, Process and Issues

Phase I tasks included pre-design investigations (i.e., topographic and bathymetric surveys, geotechnical investigations), various engineering assessments of project alternatives, and completion of 95% level plans and specifications for the preferred alternative. Design analyses revealed that the majority of project goals for West Grand Terre would be met without action. Design analyses for East Grand Terre suggested that the original conceptual design would not provide enough beach and dune strength on East Grand Terre to meet the primary project objectives, and that more robust project design would be required. A change in project scope was approved by the Task Force to proceed to final design on the preferred alternative for East Grand Terre only.

Other Phase I activities included development of the landrights workplan, preliminary ownership report, and execution of appropriate servitudes and agreements, development and submission of permit application materials, and development of draft NEPA documents. The project sponsors determined that HTRW investigations were not required based on review of land use history and previous basin-wide assessments conducted by the Corps of Engineers.

3. Description of the Phase II Candidate Project

A. Project Features

The recommended plan includes beach and dune fill to address the severity of erosion along the gulf-front shoreline and to repair shoreline breaches (Figure 2). The beach and dune fill template is approximately 15,000 ft long with a 90-foot wide dune design section to +6 feet with 1:30 back- and 1:45 fore-slopes. Advanced fill is distributed non-uniformly to account for varying longshore transport rates along the island. The maximum constructed berm width