January 2008 (rev)
Cost figures as of: March 2013

Raccoon Island Breakwaters Demonstration (TE-29)

Project Status

Approved Date: 1996 **Project Area:** N/A
Approved Funds: $1.79 M **Total Est. Cost:** $1.79 M
Net Benefit After 20 Years: N/A
Status: Completed July 1997
Project Type: Demonstration: Barrier Island Restoration
PPL #: 5

Location

The project is located approximately 21 miles southwest of Cocodrie, Louisiana, in Terrebonne Parish.

Problems

Raccoon Island, like all of Louisiana's barrier islands, is narrowing and losing land because of the combined effects of sea-level rise, subsidence, storm activity, inadequate sediment supply, and significant human-related disturbances.

Segmented rock breakwaters function as effective barriers against perpetual wave erosion and act as sand traps. Newly formed "tombolos," or sandbars, can be seen behind the breakwaters.

Restoration Strategy

Eight segmented breakwaters were constructed along the eastern end of the island to reduce the rate of shoreline retreat, promote sediment deposition along the beach, and protect seabird habitat.

Project effectiveness will be determined by monitoring changes in the shoreline, wave energy, and elevations along the beach, and by surveys of the gulf floor between the shoreline and the breakwaters.

Progress to Date

Based on wave data collected through September 1998, the segmented breakwaters have significantly reduced wave energy landward of the structures and are providing protection to the adjacent shoreline.

The breakwaters have reversed the long-term shoreline retreat rate of 36.4 feet per year along most of the project area, but shoreline retreat continues to persist along the eastern end of the project due to the orientation of the breakwaters.

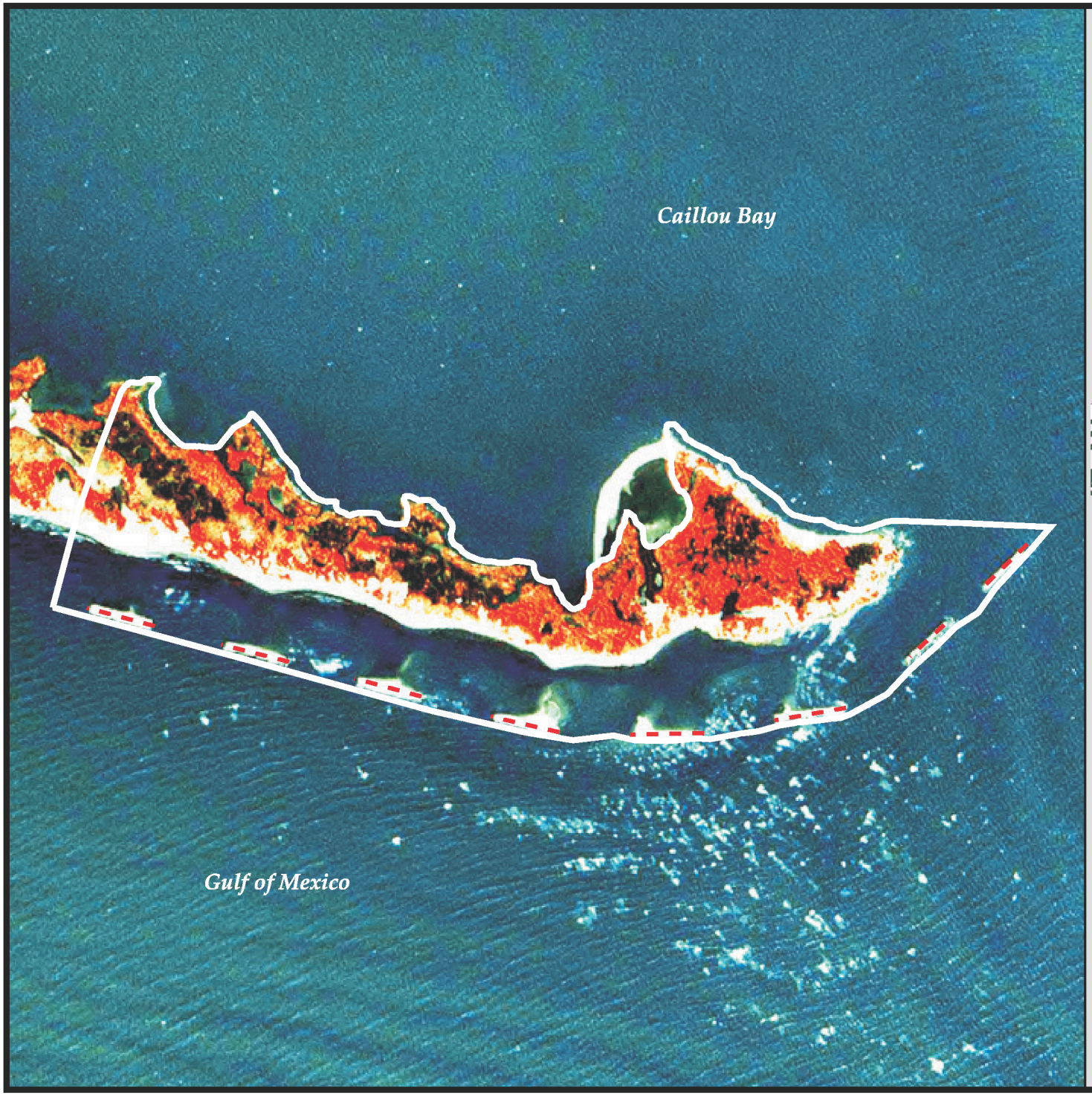
From an engineering perspective, an unanticipated positive response has occurred along the western flank of the breakwater system, resulting in the deposition of more than 41,000 cubic yards of sediment. Deposition has occurred on both the gulf and shore sides of the breakwaters. An ebb-shoal complex, upon which the breakwaters were constructed, appears to be supplying sand to the breakwater system. This process could continue for as long as the source remains viable or until the breakwater compartments are filled. This project is on Priority Project List 5.

Another project that will continue the work begun with this one (Raccoon Island Shoreline Protection/Marsh Creation [TE-48]) was approved by the Louisiana Coastal Wetlands Conservation and Restoration Task Force in January 2002.

For more project information, please contact:

Federal Sponsor:
Natural Resources Conservation Service
Alexandria, LA
(318) 473-7756

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



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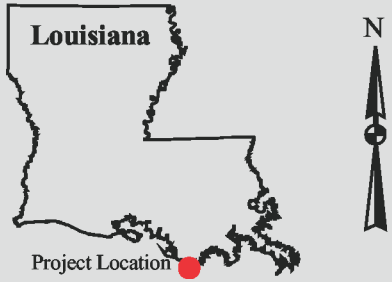
Shoreline Protection

Project Boundary



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400 0 400 Feet

100 0 100 Meters

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

Background Imagery:
1998 Digital Orthophoto Quarter Quadrangle

Map Date: August 13, 2002
Map ID: 2002-11-672
Data accurate as of: August 13, 2002