October 2002
Cost figures as of: December 2016

Isles Dernieres Restoration
Trinity Island (TE-24)

Project Status

Approved Date: 1992 **Project Area:** 776 acres
Approved Funds: $10.7 M **Total Est. Cost:** $10.7 M
Net Benefit After 20 Years: 109 acres
Status: Completed June 1999
Project Type: Barrier Island Restoration
PPL #: 2

Location

Trinity Island, which is one of five islands that make up the Isle Dernieres barrier island chain, is located approximately 13 miles south of Cocodrie, Louisiana, in Terrebonne Parish. It is bordered to the north by Lake Pelto and Terrebonne Bay, to the west by Whiskey Pass, to the south by the Gulf of Mexico, and to the east by New Cut and East Island.

Problems

The Isles Dernieres chain of barrier islands in Louisiana is experiencing land loss and fragmentation as a result of both natural processes and human activities. Trinity Island was expected to be lost by the year 2007 if no restoration was completed. The entire Isles Dernieres chain was projected to be lost by the year 2010 without restoration.

Louisiana's barrier islands buffer coastal areas from the storm surges that accompany hurricanes and tropical storms. They also protect interior fringe wetlands along the bay's shoreline from waves coming from the open Gulf of Mexico. Trinity Island serves as a nursery area for waterfowl and migratory species.

Restoration Strategy

The project required restoration of approximately 7.5 miles of both Trinity and East islands. It involved the construction of temporary perimeter containment dikes behind considerable stretches of the islands.

Sediment was suction-dredged from previously defined borrow areas of Lake Pelto and used to hydraulically fill the areas within the retaining dunes and dike structures.

An elevated marsh platform sloping from the dunes to the back bay dikes was created. The dunes and filled marsh were also planted with various species of vegetation.

Trinity Island sand fence and vegetative plantings.

Progress to Date

Construction of this Isles Dernieres project is complete. The dredging and shaping was completed in October 1998 and the vegetative planting was completed in June 1999.

Approximately 500 acres of island were created. The "net benefit after 20 years" figure listed above is the amount projected to remain of the created acreage at the end of the 20-year life of the project. Not included in the benefited acreage figure are benefits to the inland marsh because of reduced wave energy due to barrier island restoration.

Dune elevation, along with sand fencing and vegetation, is enhancing the barrier island's capabilities to buffer storm surges to fringe marshes and coastal towns. The temporary containment dikes have degraded because of natural processes. Intertidal areas have developed naturally.

This project is on Priority Project List 2.

For more project information, please contact:

Federal Sponsor:
U.S. Environmental Protection Agency
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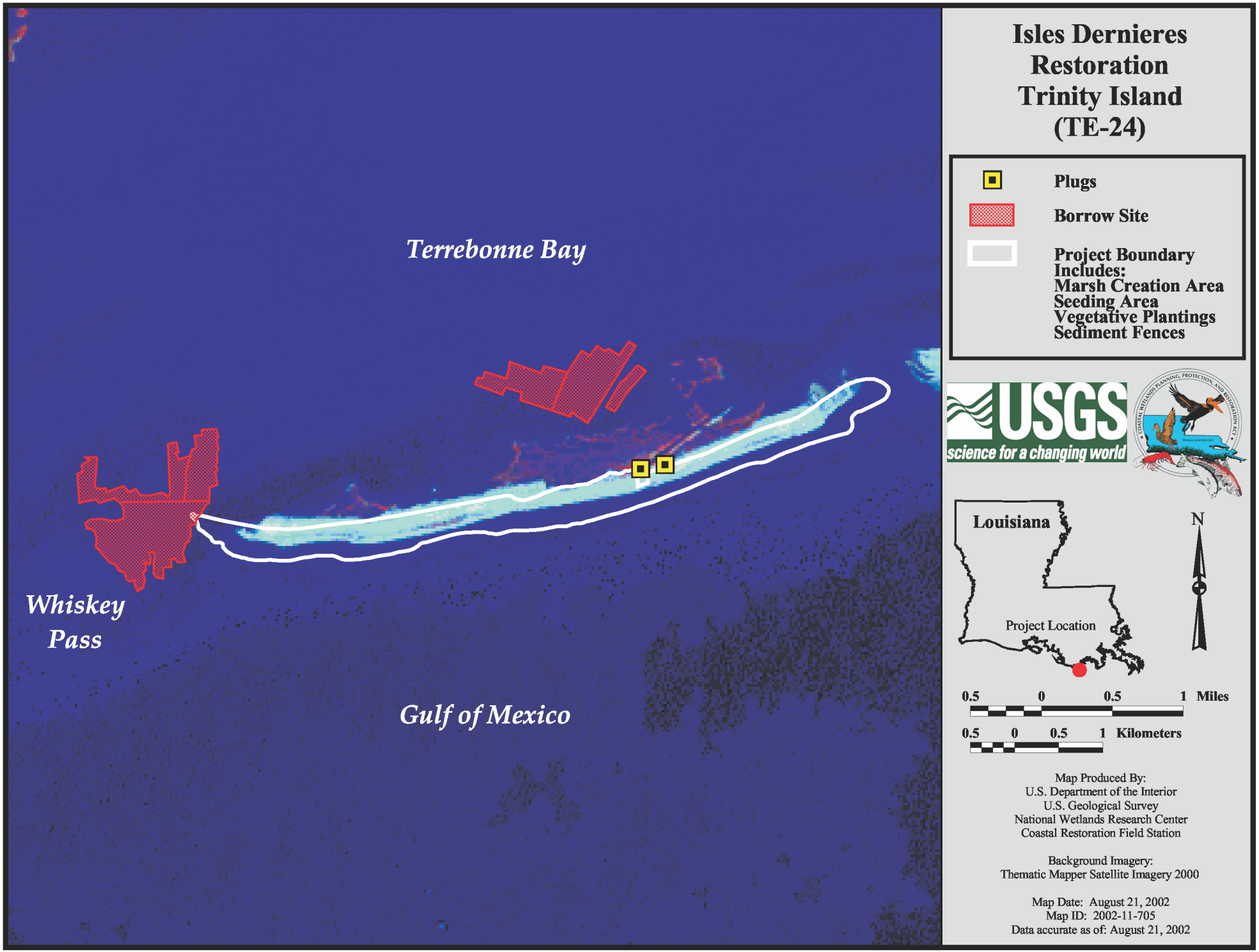
(214) 665-7255

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



Isles Dernieres Restoration Trinity Island (TE-24)

- Plugs
- Borrow Site
- Project Boundary Includes:
  - Marsh Creation Area
  - Seeding Area
  - Vegetative Plantings
  - Sediment Fences

USGS science for a changing world

0.5 0 0.5 1 Miles

0.5 0 0.5 1 Kilometers

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

Background Imagery:
Thematic Mapper Satellite Imagery 2000

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