rev. March 2009
Cost figures as of: February 2023

Lake Borgne Shoreline Protection (PO-30)

Project Status

Approved Date: 2002 **Project Area:** 192 acres
Approved Funds: $27.3 M **Total Est. Cost:** $27.4 M
Net Benefit After 20 Years: 165 acres
Status: Construction Completed
Project Type: Shoreline Protection
PPL #: 10

Location

The project is located on the southwest shoreline of Lake Borgne at Old Shell Beach and Bayou Dupre in St. Bernard Parish, Louisiana.

Problems

The narrow strip of marsh separating the Mississippi River Gulf Outlet (MRGO) and Lake Borgne in the vicinity of Old Shell Beach and Bayou Dupre is disappearing. This project addresses the loss by mitigating shoreline retreat and protecting the Lake Borgne shoreline. The shoreline erosion rate in the Shell Beach area has been estimated to be five to seven feet per year and seven to nine feet per year at Bayou Dupre. The interior marsh loss is likely to accelerate the erosion process. Revised shoreline erosion rates were based upon 1990 and 2004 imagery, therefore, the effects of hurricanes Katrina and Rita are not reflected.

Restoration Strategy

The project's objectives include: preventing and reducing Lake Borgne shoreline retreat in the areas adjacent to Old Shell Beach and Bayou Dupre to mitigate further joining of the lake and MRGO; reestablishing a sustainable lake rim; and preventing or reducing conversion of emergent marsh to open water.

Continuous rock breakwaters were constructed onshore approximately17,000 feet from Doulluts Canal to Fort Bayou (Shell Beach) to provide shoreline protection. The protection ties into the existing rock breakwater structure which surrounds the perimeter of Old Fort Beauregard (Fort Proctor). Additional onshore rock breakwaters were constructed approximately 6,643 feet west and 4,418 feet southeast of Bayou Dupre. Back-to-back steel sheet pile structures at Bayou Dupre tie the rock structures into the existing offshore U.S. Army Corps of Engineers rock breakwater along MRGO.

Double wall steel sheet pile structure at Bayou Dupre.

Progress to Date

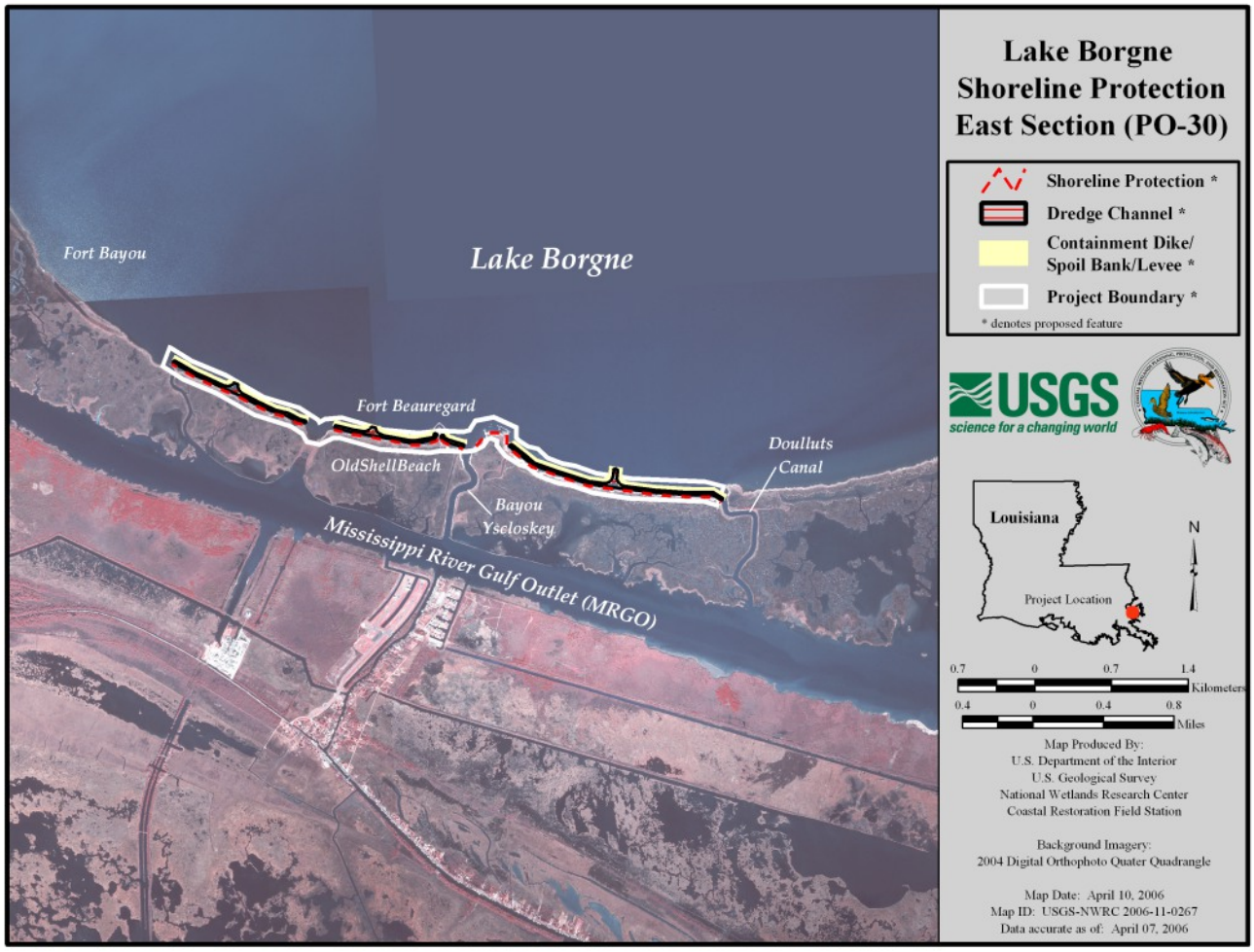
The initial project from Priority Project List 10, Lake Borgne Shoreline Protection (PO-30), originally provided lakeside protection only to the Old Shell Beach area. The Louisiana Coastal Wetlands Conservation and Restoration Task Force approved funding for engineering and design of the original PO-30 project at the January 2001 meeting. In April 2002, the project was combined with Lake Borgne Shoreline Protection at Bayou Dupre (PO-31) from Priority Project List 11. Construction funds were approved by the Task Force in February 2006. Construction has been completed. Double wall steel sheet pile structures are unique design features not previously used in other CWPPRA projects. Moreover, end-on construction rock placement, used in the vicinity of the Old Shell Beach naval facility due to debris, is another method not frequently used in other coastal restoration projects. Information and lessons learned from this project will be used in planning future coastal restoration work.

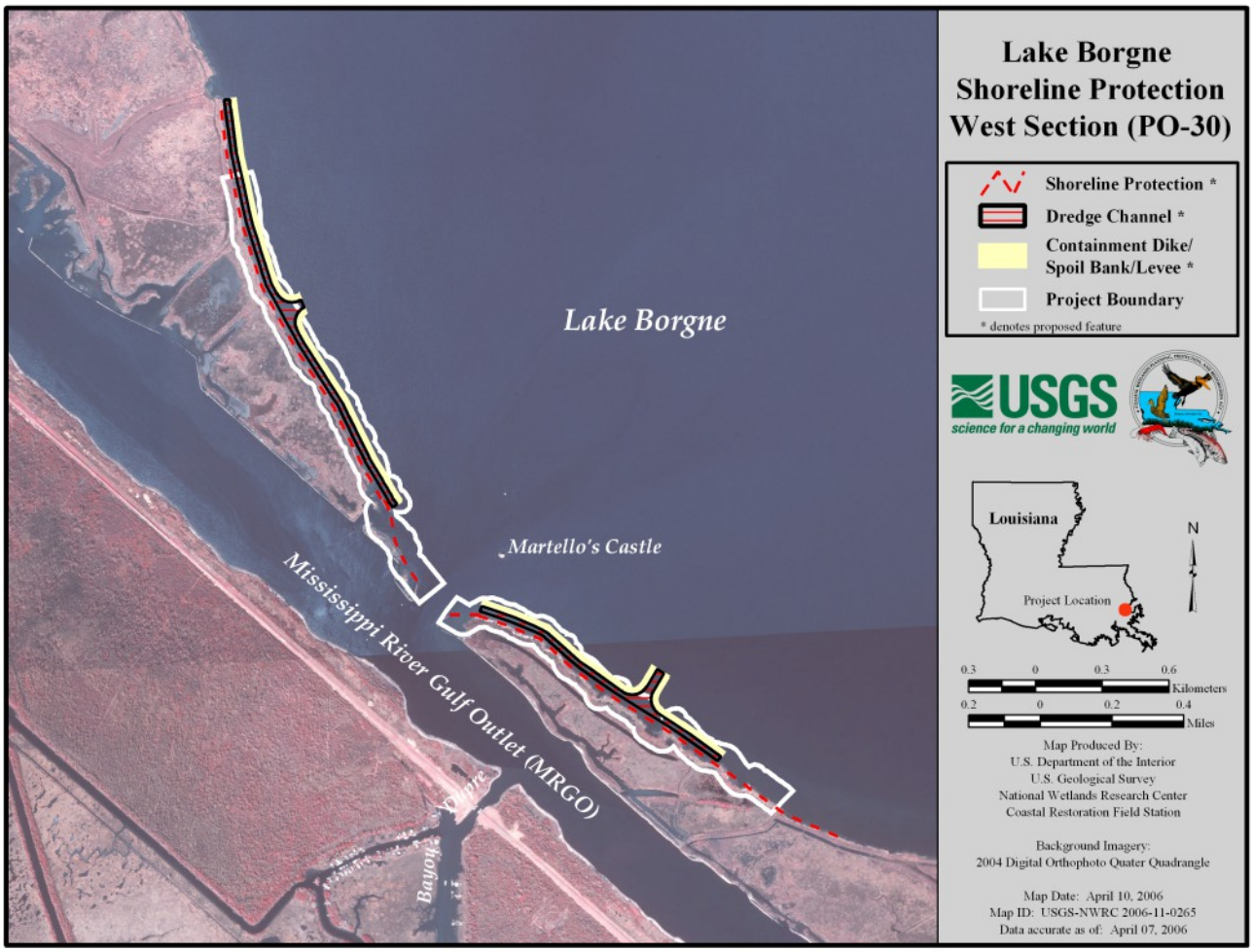
This project is listed on Priority Project List 10.

For more project information, please contact:

Federal Sponsor:
U.S. Environmental Protection Agency
Dallas, TX
(214) 665-7459

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


Lake Borgne Shoreline Protection East Section (PO-30)
Shoreline Protection *
Dredge Channel *
Containment Dike/ Spoil Bank/Levee *
Project Boundary *
* denotes proposed feature
USGS
science for a changing world
Louisiana
Project Location
N
0.7 0 0.7 1.4 Kilometers
0.4 0 0.4 0.8 Miles
Map Produced By:
U.S. Department of the Interior
U.S. Geological Survey
National Wetlands Research Center
Coastal Restoration Field Station
Background Imagery:
2004 Digital Orthophoto Quater Quadrangle
Map Date: April 10, 2006
Map ID: USGS-NWRC 2006-11-0267
Data accurate as of: April 07, 2006
Fort Bayou
Lake Borgne
Fort Beauregard
OldShellBeach
Bayou Yseloskey
Doulluts Canal
Mississippi River Gulf Outlet (MRGO)


Lake Borgne Shoreline Protection West Section (PO-30)
Shoreline Protection *
Dredge Channel *
Containment Dike/ Spoil Bank/Levee *
Project Boundary
* denotes proposed feature
USGS
science for a changing world
Louisiana
Project Location
N
0.3 0 0.3 0.6 Kilometers
0.2 0 0.2 0.4 Miles
Map Produced By:
U.S. Department of the Interior
U.S. Geological Survey
National Wetlands Research Center
Coastal Restoration Field Station
Background Imagery:
2004 Digital Orthophoto Quater Quadrangle
Map Date: April 10, 2006
Map ID: USGS-NWRC 2006-11-0265
Data accurate as of: April 07, 2006
Lake Borgne
Martello's Castle
Mississippi River Gulf Outlet (MRGO)
Bayou Dupre