October 2002
Cost figures as of: February 2017

Barataria Bay Waterway Wetland Restoration (BA-19)

Project Status

Approved Date: 1991 **Project Area:** 510 acres
Approved Funds: $1.16 M **Total Est. Cost:** $1.16 M
Net Benefit After 20 Years: 445 acres
Status: Completed December 1998
Project Type: Marsh Creation
PPL #: 1

Location

The project is located on Queen Bess Island north of Grand Isle and east of the Barataria Bay Waterway in Jefferson Parish, Louisiana.

Problems

Between 1956 and 1989, subsidence and erosion caused Queen Bess Island to shrink dramatically. Its average loss across this period was nearly 1 acre per year. The island's reduction in size from 45 to 17 acres only increased the frequency of storm-induced overwash, further degrading its role as a crucial nesting habitat for Louisiana's state bird, the endangered brown pelican (*Pelecanus occidentalis*).

Restoration Strategy

The initial project design was to use maintenance-dredged sediments to create marsh in shallow water areas adjacent to the Barataria Bay Waterway. However, oyster leases in or adjacent to the proposed marsh creation sites prohibited the use of all sites. As an alternative, in cooperation with the operations and maintenance of the channel, dredged material was used to enlarge Queen Bess Island.

An additional 9 acres of vegetated wetland were created adjacent to the state-funded Queen Bess project (BA-05b) by constructing a rock dike and filling the containment area with dredged material from the Barataria Bay Waterway. A breach was built on the north side of the rock dike to allow effluent to be routed from the containment area through the BA-05b project area and the original Queen Bess Island.

The bounded area of open water on the left side of the island in the foreground is the BA-19 project area. Immediately adjacent to the project area is the thin strip of the BA-05b project area, with the original Queen Bess Island just to its right.

Progress to Date

The size of Queen Bess Island increased from 17 acres in 1989 to 34.6 acres in 1996 from the combined efforts of this project and the state-funded (BA-05b) project.

Vegetation has not colonized in this project's area because of its low elevation and persistent inundation with water.

There is a sediment deposition rate of 0.14 feet per year in the state-funded (BA-05b) project area and deposition rate of 0.31 feet per year on the original island. These rates indicate that the containment dike breach created by this project allowed a substantial amount of effluent to settle, as intended, in adjacent wetlands outside of the dredge-fill area.

This project was completed for $945,678, more than $250,000 under its original budget. Remaining funds may be used to clear marsh creation sites of oyster leases. The oyster lease sites would be used as marsh creation areas under the U.S. Army Corps of Engineers Barataria Bay Waterway Navigation Project.

This project is on Priority Project List 1.

For more project information, please contact:

Federal Sponsor:
U.S. Army Corps of Engineers
New Orleans, LA
(504) 862-1597

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

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Project Boundary

USGS science for a changing world

200 0 200 400 Feet

50 0 50 100 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

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