June 2021
Cost figures as of: February 2023

Bayou Bonfouca Marsh Creation (PO-104)

Project Status

Approved Date: 2011 **Project Area:** 621 acres
Approved Funds: $27.8 M **Total Est. Cost**: $28.2 M
Net Benefit After 20 Years: 478 acres
Status: Completed
Project Type: Marsh Creation
PPL#: 20

Location

This project is located in Region 1, Pontchartrain Basin, St. Tammany Parish. Parts of the project are located within Big Branch Marsh National Wildlife Refuge adjacent to Bayou Bonfouca.

Problems

The marsh in this area was fairly stable prior to Hurricane Katrina in August 2005. There was extensive damage to the marsh along the north shore of Lake Pontchartrain and especially localized in the marshes near Bayou Bonfouca when the storm surge removed many acres of marsh. Marsh loss rates should increase in the marsh surrounding these newly created open water areas due to an increase in wind driven fetch. Within the project area, the Lake Pontchartrain shoreline erosion rates seem to be very low. Currently, there is one large breach and several smaller ones in the Lake Pontchartrain shoreline, with many more breaches seemingly imminent. These breaches provide direct connection between the fresher interior marshes and higher saline waters of Lake Pontchartrain. The breaches in the bankline should be filled before they grow to become a major exchange point causing an increase in interior loss rates.

Picture depicts the broken marsh resulting from Hurricane Katrina.

Restoration Strategy

The primary goal of the project is to create 604 acres and nourish 310 acres of low salinity brackish marsh in open water areas adjacent to Bayou Bonfouca with sediment pumped from Lake Pontchartrain.

This project would consist of placing sediment, hydraulically dredged from Lake Pontchartrain, in open water sites to a height of +1.2 NAVD 88 to create 604 acres and nourish approximately 310 acres of marsh. Several historic marsh ponds have been identified and would be restored. Tidal creeks are also proposed to connect these ponds to facilitate water exchange and fisheries access. Containment dikes would be sufficiently gapped or degraded to allow for fisheries access no later than three years post construction.

The project would result in approximately 424 net acres of intermediate marsh over the 20-year project life.

Progress to Date

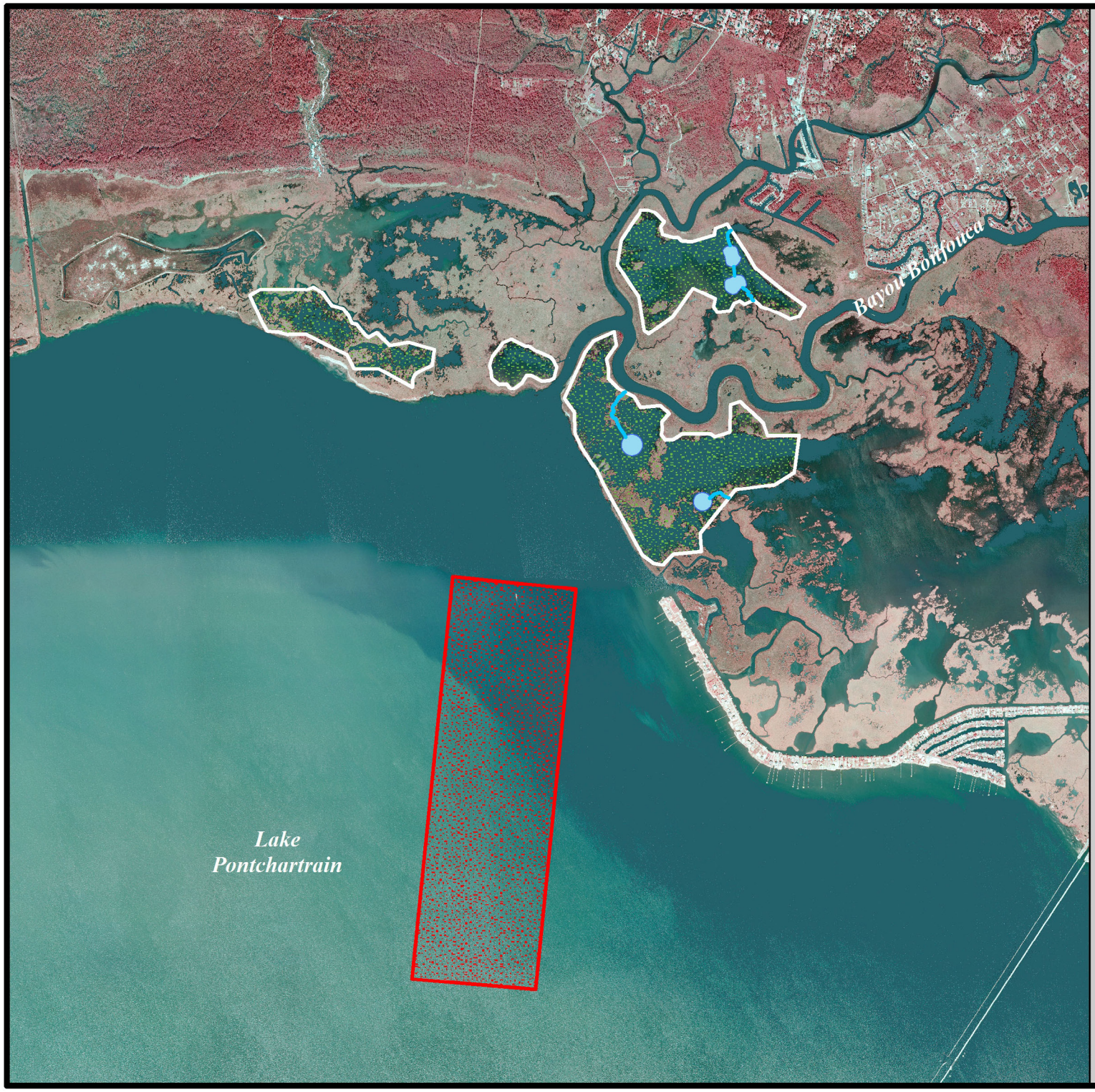
This project was approved for Phase II in January 2013. All construction has been completed for this project. A large O&M event was completed in February 2021 which included creating tidal creeks in each of the marsh creation units as well as dredging the created ponds located in marsh creation unit 2.

This project is on Priority Project List 20.

For more information, please contact:

Federal Sponsor:
U.S. Fish and Wildlife Service
Lafayette, LA
(337) 291-3100

Local Sponsor:
Coastal Protection and Restoration Authority
Baton Rouge, LA
(225) 342-4733



Bayou Bonfouca Marsh Creation (PO-104)

- Tidal Creek *
- Tidal Pond *
- Borrow Site *
- Marsh Creation *
- Project Boundary

*denotes proposed features

USGS
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0.25 0 0.25 0.5 Kilometers

0.25 0 0.25 0.5 Miles

Map Produced by:
U.S. Department of the Interior
U.S. Geological Survey
National Wetlands Research Center
Coastal Restoration Assessment Branch
Baton Rouge, La.

Background Imagery:
2012 Digital Orthophoto Quarter Quadrangle

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