June 2021

Cost figures as of: February 2023

Mid Breton Land Bridge Marsh Creation and Terracing (BS-32)

Project Status

Approved Date: 2018 **Project Area: aaaArea**
Approved Funds: $35.8 M **Total Est. Cost**: $37.3 M
Net Benefit After 20 Years: 411 acres
Status: Construction
Project Type: Marsh Creation and Terracing
PPL #: 27

Location

This project is located in Region 2, Breton Sound Basin, Plaquemines Parish, west of Delacroix along Bayou Gentilly.

Problems

From 1932 to 1990, the Caernarvon Mapping Unit lost 14,240 acres of its marsh. Prior to Hurricane Katrina, the greatest lost documented occurred between 1956 and 1974 and coincided with Hurricane Betsy and extensive canal building. Hurricane Katrina in 2005 devastated the area resulting in substantial marsh loss. According to USGS Open File Report (2006-1274), approximately 39 square miles of marsh around the upper and central portions of Breton Sound were converted to open water by ripping of the marsh or by marsh submergence. Based on the hyper-temporal analysis conducted by USGS for the extended project boundary, the loss rate in the project area is estimated to be –1.91 %/year for the period 1984 to 2019.

View of the degraded marsh at the project site.

Restoration Strategy

The goal of this project is to 1) create/nourish approximately 514 acres of intertidal marsh with material dredged from Lake Lery, and 2) create approximately 22,000 LF of terraces (17 acres of marsh) in strategic areas to reduce erosion due to wind-induced waves and trap sediments from the Caernarvon Freshwater Diversion that pass through Lake Lery and into Lost Lake.

Sediments from a Lake Lery borrow site will be hydraulically dredged and pumped via pipeline to create/nourish 514 acres of intermediate marsh contained within 5 Marsh Creation Areas (MCA). Material would be pumped to a constructed fill elevation of +3.5 (MCA 2, 3, and 4) and +2.8 NAVD 88 (MCA 1 and 5). Dewatering and compaction of dredged sediments should produce elevations conducive to the establishment of emergent marsh and within the intertidal range by target year 3. Perimeter containment dikes will be constructed. Containment dikes will be gapped and/or degraded by the end of target year 3.

Approximately 22,000 LF of terraces (17 acres of marsh) will be created with long reach excavators in strategic areas north and west of the MCA 2, 3, and 4. This will reduce erosion due to wind induced waves and help trap sediments that flow through Lake Lery and Lost Lake.

Progress to Date

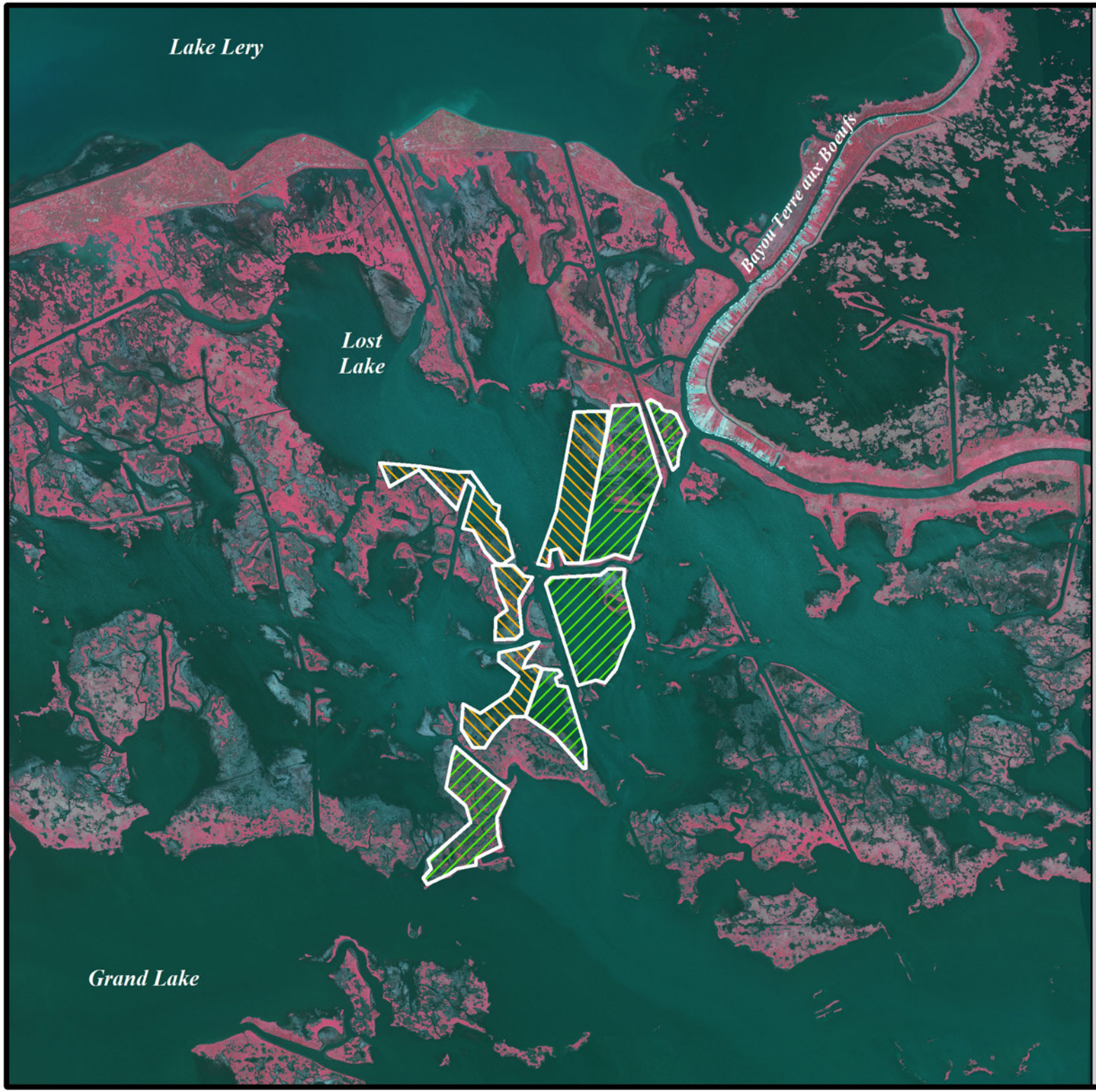
This project was approved for Phase I Engineering and Design on February 9th, 2018. The project was approved for Phase II Construction on January 22, 2021. Currently the project team is acquiring land right agreements and applying for a 404 Permit from the Corps.

This project is on Priority Project List (PPL) 27.

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



Mid-Breton Land Bridge Marsh Creation and Terracing (BS-32)

Marsh Creation *

Terrace Fields *

Project Boundary

*denotes proposed features

USGS
science for a changing world

N

0.5 0 0.5 1 Kilometers

0.5 0 0.5 1 Miles

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

Background Imagery:
2019 NAIP Photography

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