November 2021
Cost figures as of: April 2024

Terracing and Marsh Creation South of Big Mar (BS-24)

Project Status

Approved Date: 2013
Project Area: aaaArea
Approved Funds: $2.30 M
Total Est. Cost: $23.6 M
Net Benefit After 20 Years: 322 acres
Status: Engineering and Design
Project Type: Marsh Creation and Terracing
PPL #: 22

Location

About 5 miles south of Violet, LA in Region 2, Breton Sound Basin in Plaquemines Parish, south of Big Mar and west of Lake Lery.

Problems

From 1932 to 1990, the Caernarvon Mapping Unit lost 14,240 acres of its marsh. Prior to Hurricane Katrina, the greatest loss documented occurred between 1956 and 1974 and coincided with Hurricane Betsy and extensive canal building. Hurricane Katrina 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 storm related scouring or submergence of the marsh. Because the framework of the marsh has been degraded, suspended sediments provided by the diversion move through the system and fall out where velocities are reduced such as in Big Mar and Lake Lery.

Restoration Strategy

The goal is to create terraces in the shallow open water area south of Big Mar within the Caernarvon Diversion outfall area. Terraces will reduce wave fetch in the large open water areas and promote conditions conducive to growth of marsh vegetation and submerged aquatic vegetation. Additional benefits may be achieved through capturing suspended sediments. Marsh creation is also proposed to reestablish the western shoreline of Lake Lery in association with the Lake Lery Shoreline Restoration Project (BS-16).

Approximately 21,500 linear feet of terraces (19 acres) will be constructed with in-situ material to reduce fetch and turbidity and capture suspended sediment. Sediments will be hydraulically dredged from Lake Lery and pumped via pipeline to create and restore approximately 392 acres of marsh in the project area

What was once a healthy marsh platform defining the western Lake Lery shoreline has converted to open water. Continued marsh loss in this area will jeopardize the structural integrity of the Lake affecting the overall ecosystem functions within the Caernarvon outfall area.

Progress to Date

Engineering and Design is complete, and phase II construction funds will be requested in December 2021.

This project is on Priority Project List 22.

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
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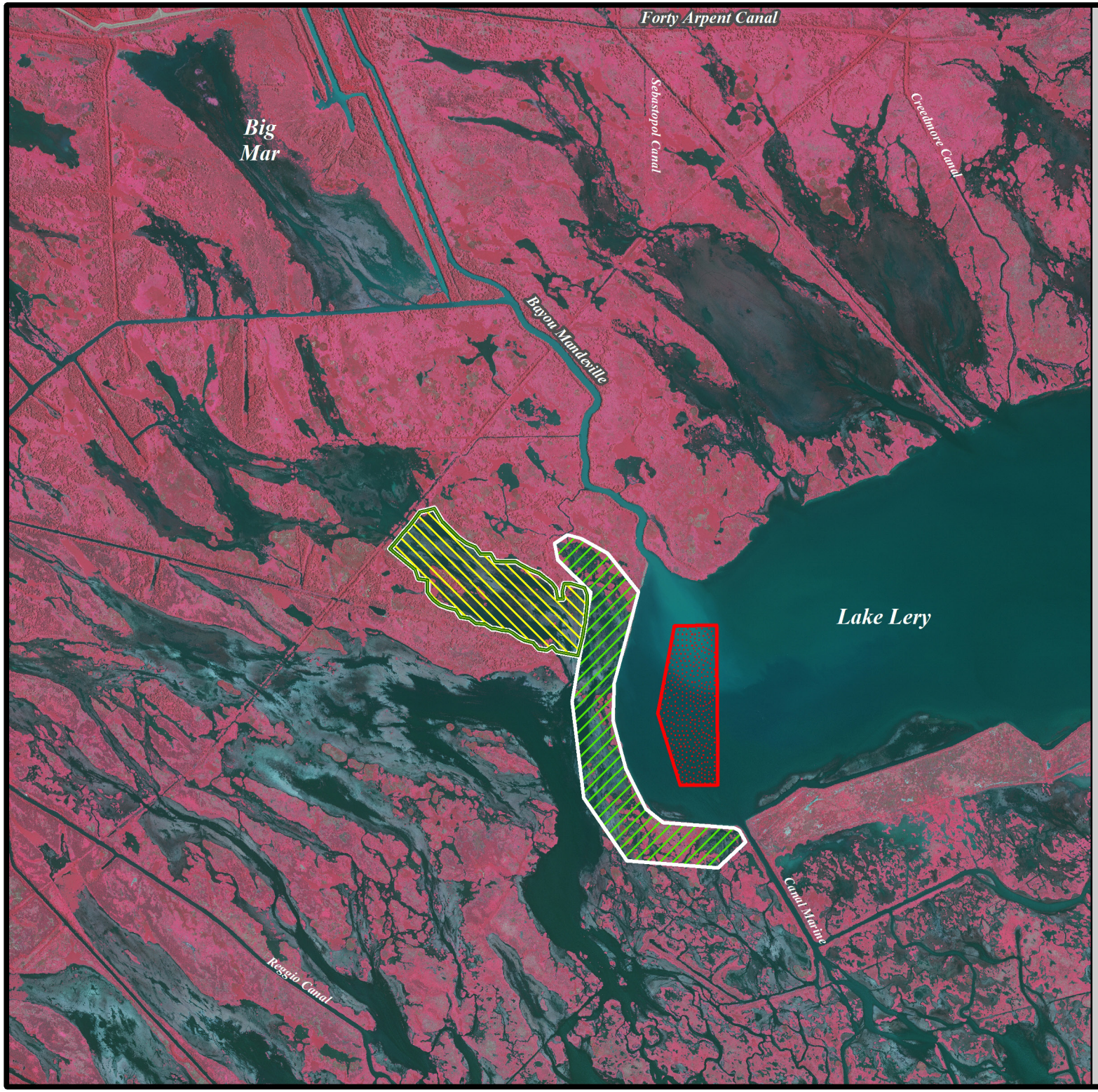
(225) 342-4733



Terracing and Marsh Creation South of Big Mar (BS-24)

- Marsh Creation *
- Terrace Field *
- Borrow Site *
- Project Boundary

*denotes proposed features

USGS science for a changing world

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
Wetland and Aquatic Research Center
Coastal Restoration Assessment Branch
Baton Rouge, La.

Background Imagery:
2019 NAIP CIR

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