March 2022

Cost figures as of: February 2023

Grand Bayou Ridge and Marsh Restoration - Increment 2 (BA-257)

Project Status

Approved Date: 2022 **Project Area:** 395 acres
Approved Funds: $3.41 M **Total Est. Cost**: $42.6 M
Net Benefit After 20 Years: 302 acres
Status: Engineering and Design
Project Type: Marsh Creation and Ridge Restoration
PPL #: 31

Location

Region 2, Barataria Basin, Plaquemines Parish, Western Bank of Grand Bayou

Problems

Within the Lake Hermitage basin, between Bayou Grande Cheniere and the Mississippi River, significant marsh loss has occurred with the construction of oil/gas canals, subsidence, and sediment deprivation. From examination of aerial photography, the majority of this loss occurred during the 1960s and 1970s when numerous oil/gas canals were dredged in the area. Based on the hyper-temporal land change analysis conducted by USGS for the Wetland Value Assessment, the land loss rate in the project area is -0.4% per year for the period 1984 to 2020.

Restoration Strategy

Sediments from the Mississippi River will be hydraulically dredged and pumped via pipeline to create/nourish approximately 386 acres of marsh. The proposed design is to place the dredged material to a fill height of +2.5ft NAVD88. Dewatering and compaction of dredged sediments should produce elevations conducive to the establishment of emergent marsh and within the intertidal range. Containment dikes will be gapped at the end of construction.

Approximately 7,100 linear feet (9 acres) of forested ridge will be created along the western bank of Grand Bayou using material from the Mississippi River. The ridge will be constructed to a crown elevation of +5.0 feet NAVD88, 20 feet wide, and will be planted on the crown and slopes.

Construction of the Lake Hermitage Marsh Creation (BA-42) project with Grand Bayou on the left and the site of Grand Bayou Ridge and Marsh Restoration - Increment 2 (BA-257).

Service goals include restoration/protection of habitat for at-risk species. Restoration of coastal forested ridges provides habitat for trans-Gulf migratory birds such as the golden-winged warbler, an at-risk species. The seaside sparrow, another species of concern, would benefit from marsh restoration in this area.

Progress to Date

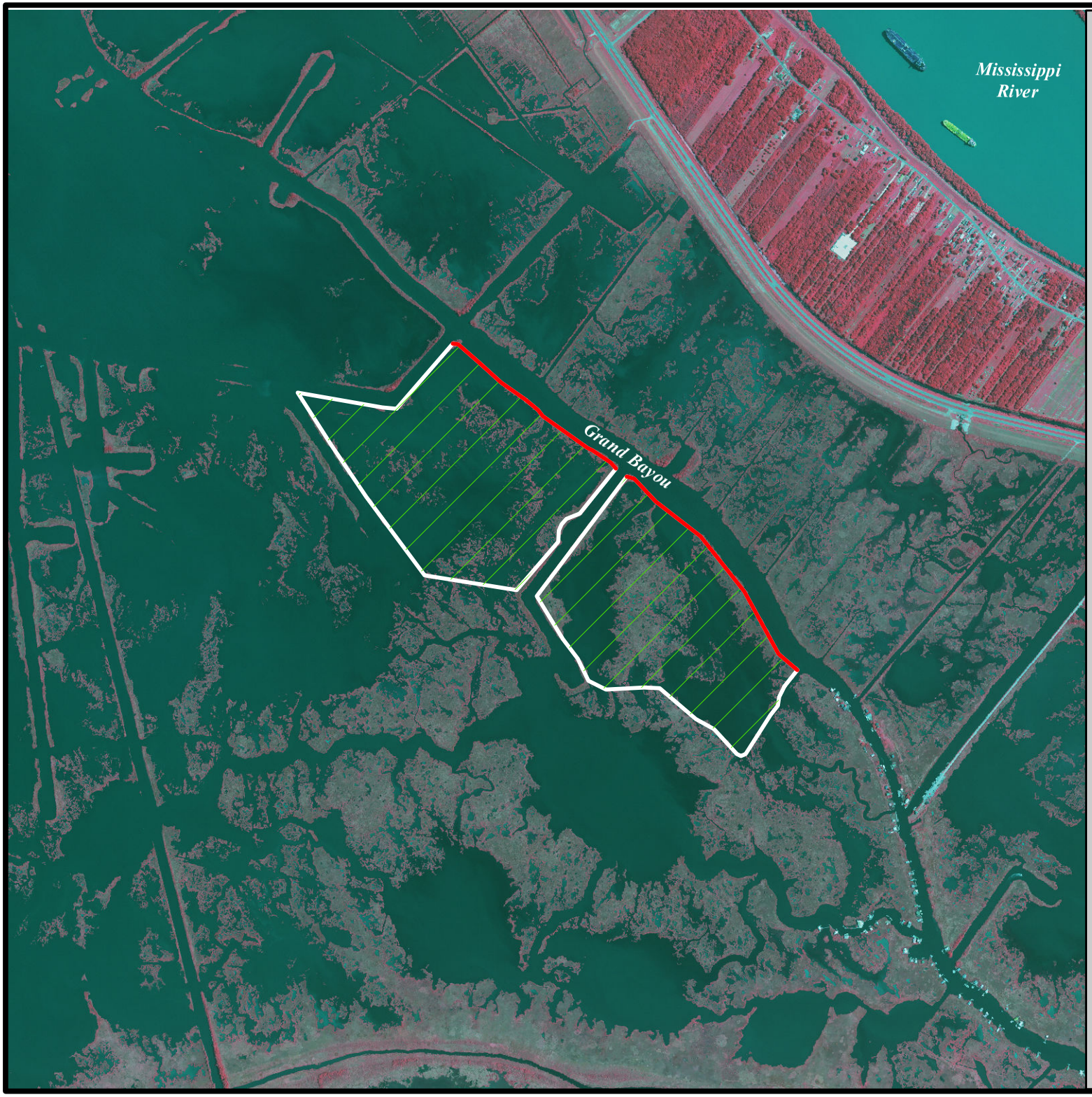
The project was approved for Phase I Engineering and Design in January 2022.

This project is on Priority Project List 31.

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) 342-4736



Grand Bayou Ridge and Marsh Restoration Increment 2 (BA-257)

Ridge Restoration *

Marsh Creation *

Project Boundary

*denotes proposed features

USGS
science for a changing world

N

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 and Assessment Branch
Baton Rouge, La.

Background Imagery:
2019 NAIP

Map Date: February 10, 2022
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