January 2010
Cost figures as of: March 2013

Lost Lake Marsh Creation and Hydrologic Restoration (TE-72)

Project Status

Approved Date: 2010 **Project Area:** 7,312 acres
Approved Funds: $2.32 M **Total Est. Cost:** $34.6 M
Net Benefit After 20 Years: 452 acres
Status: Engineering and Design
Project Type: Marsh Creation
PPL #: 19

Location

The project is located in the Terrebonne Basin, Terrebonne Parish, near the vicinity of Lost Lake.

Problems

Significant marsh loss has occurred between Lake Pagie and Bayou DeCade to the point that little structural framework remains separating those two waterbodies. Northeast of Lost Lake, interior marsh breakup has resulted in large, interior ponds where wind/wave energy continues to result in marsh loss. West of Lost Lake, interior breakup has occurred as a result of ponding and the periodic entrapment of higher salinity waters during storm events.

This picture is an example of the deteriorating marsh found around Lost Lake. Dredged material would be pumped into this type of area to create new marsh.

Restoration Strategy

Approximately 465 acres of marsh will be created between Lake Pagie and Bayou DeCade, north of Bayou DeCade, and along the northwestern Lost Lake shoreline. Marsh creation will restore/protect some key features of structural framework (i.e., lake rim and bayou bank) within the area and connect to one of the marsh creation cells recently constructed under the North Lake Mechant Landbridge Restoration Project (TE-44). Borrow material will be taken from within Lost Lake and pumped via a hydraulic dredge into the marsh creation sites. Tidal creeks will be constructed within the marsh creation cells to ensure tidal connectivity and prevent ponding within the created marsh. In addition, 30,000 linear feet (26 acres) of terraces will be constructed to reduce fetch in an area of deteriorated marsh north of Bayou DeCade. Terraces will be planted with two rows along the crown and two rows on each side slope.

Two fixed-crest weirs along Carencro Bayou will be replaced with variable-crest structures. At certain times of the year, Carencro Bayou is an excellent source of fresh water and sediments from the Atchafalaya River/Four League Bay system. However, delivery of that water into the marshes west of Lost Lake is limited by fixed-crest weirs which limit water exchange. Installing structures with bays/gates will increase freshwater and sediment delivery. In addition, two fixed-crest weirs near Rice Bayou will be replaced with variable-crest structures to provide flow-through conditions in the system (i.e., water enters the system from Carencro Bayou and exits through the structures near Rice Bayou). Similar structures will be installed along Little Carencro Bayou to increase freshwater and sediment delivery into the marshes north of Lost Lake.

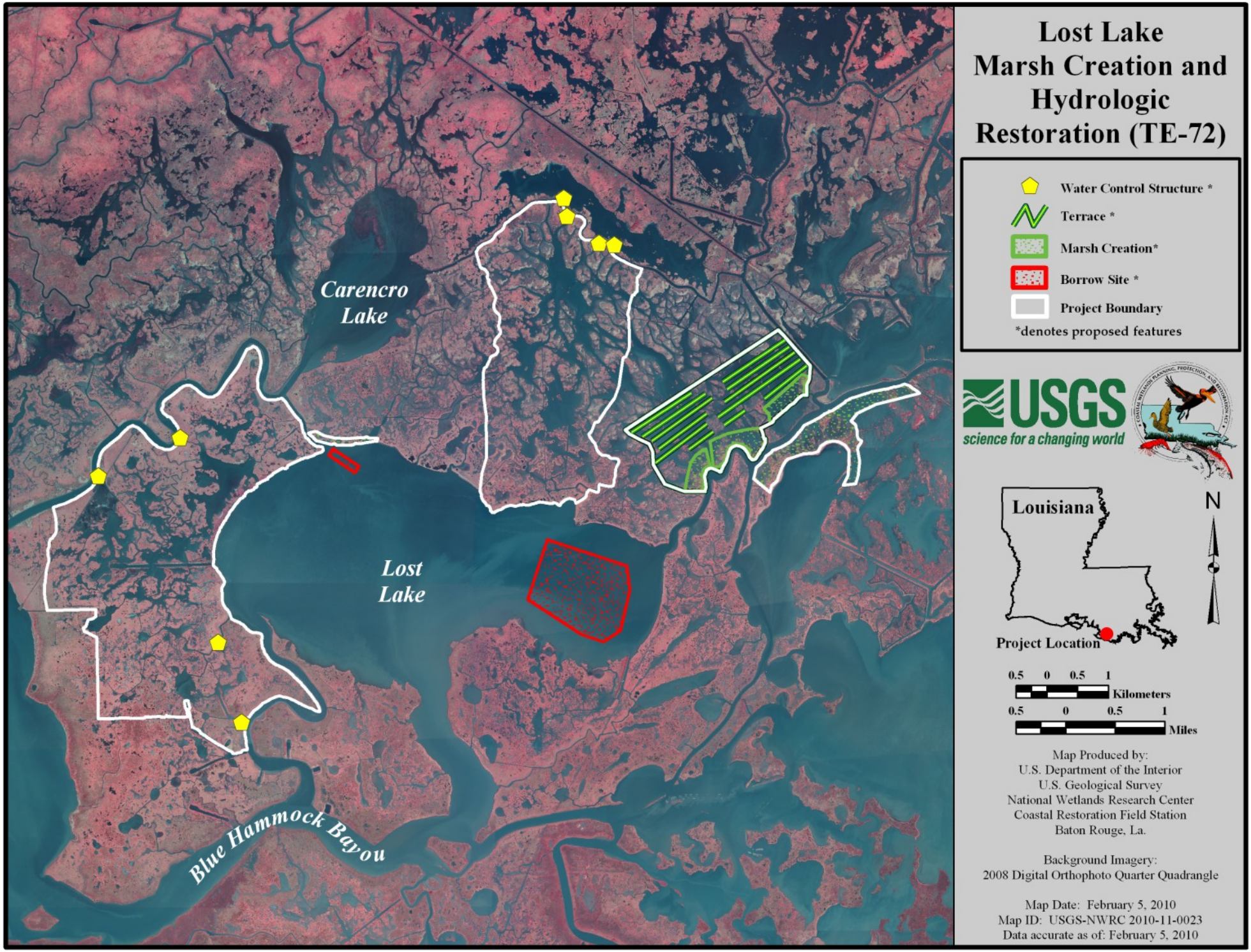
Progress to Date

This project is on Priority Project List 19.

For more project 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



Lost Lake Marsh Creation and Hydrologic Restoration (TE-72)

- Water Control Structure *
- Terrace *
- Marsh Creation*
- Borrow Site *
- Project Boundary

*denotes proposed features

USGS science for a changing world

Louisiana

Project Location

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
National Wetlands Research Center
Coastal Restoration Field Station
Baton Rouge, La.

Background Imagery:
2008 Digital Orthophoto Quarter Quadrangle

Map Date: February 5, 2010
Map ID: USGS-NWRC 2010-11-0023
Data accurate as of: February 5, 2010