February 2012
Cost figures as of: March 2013

Cole's Bayou Marsh Restoration (TV-63)

Project Status

Approved Date: 2012 **Project Area:** 3,840 acres
Approved Funds: $3.13 M **Total Est. Cost:** $26.6 M
Net Benefit After 20 Years: 398 acres
Status: Engineering and Design
Project Type: Marsh Creation and Hydrologic Restoration
PPL #: 21

Location

This project is located in Region 3, Teche/Vermilion Basin, Vermilion Parish, east of Freshwater Bayou Canal.

Problems

Project area wetlands are undergoing loss at -0.42 %/year based on 1983 to 2011 USGS data from the extended boundary. Wetland loss processes in this area include subsidence/sediment deficit, interior ponding and pond enlargement, and storm impacts resulting in rapid episodic losses. In addition, significant interior marsh loss has resulted from salt water intrusion and hydrologic changes associated with increasing tidal influence. As hydrology in this area has been modified, habitats have shifted to more of a floatant marsh type, resulting in increased susceptibility to tidal energy and storm damages. Habitat shifts and hydrologic stress reduce marsh productivity, a critical component of vertical accretion in wetlands.

Restoration Strategy

The specific goals of the project are: 1) create 365 acres of brackish marsh in recently formed shallow open water; 2) nourish 53 acres of existing brackish marsh; and, 3) increase freshwater and sediment inflow into interior wetlands by improving project area hydrology.

This project aims to create 365 acres and nourish 53 acres of brackish marsh via dedicated dredging with borrow from nearby Vermilion Bay. Although Vermilion Bay is not considered an "external" source of material, significant sediment inflows into this area may result in some borrow area infilling. Half of the marsh creation acres would be planted. The project will encourage additional freshwater nutrient and sediment inflow from Freshwater Bayou Canal by dredging a portion of Cole's Bayou along with the installation of a series of culverts throughout the project area.

Typical equipment used for hydraulically dredged marsh creation site near the dredge pipe discharge location.

The culverts located along the northern project boundary are envisioned to allow the ingress of sediment, water, and fisheries organisms into the semi-impounded project area, but avoid backflow of water and potential loss of interior marsh sediment (i.e., north to south flow only). The culverts located along the southern project boundary are envisioned to allow water to drain out of the marsh.

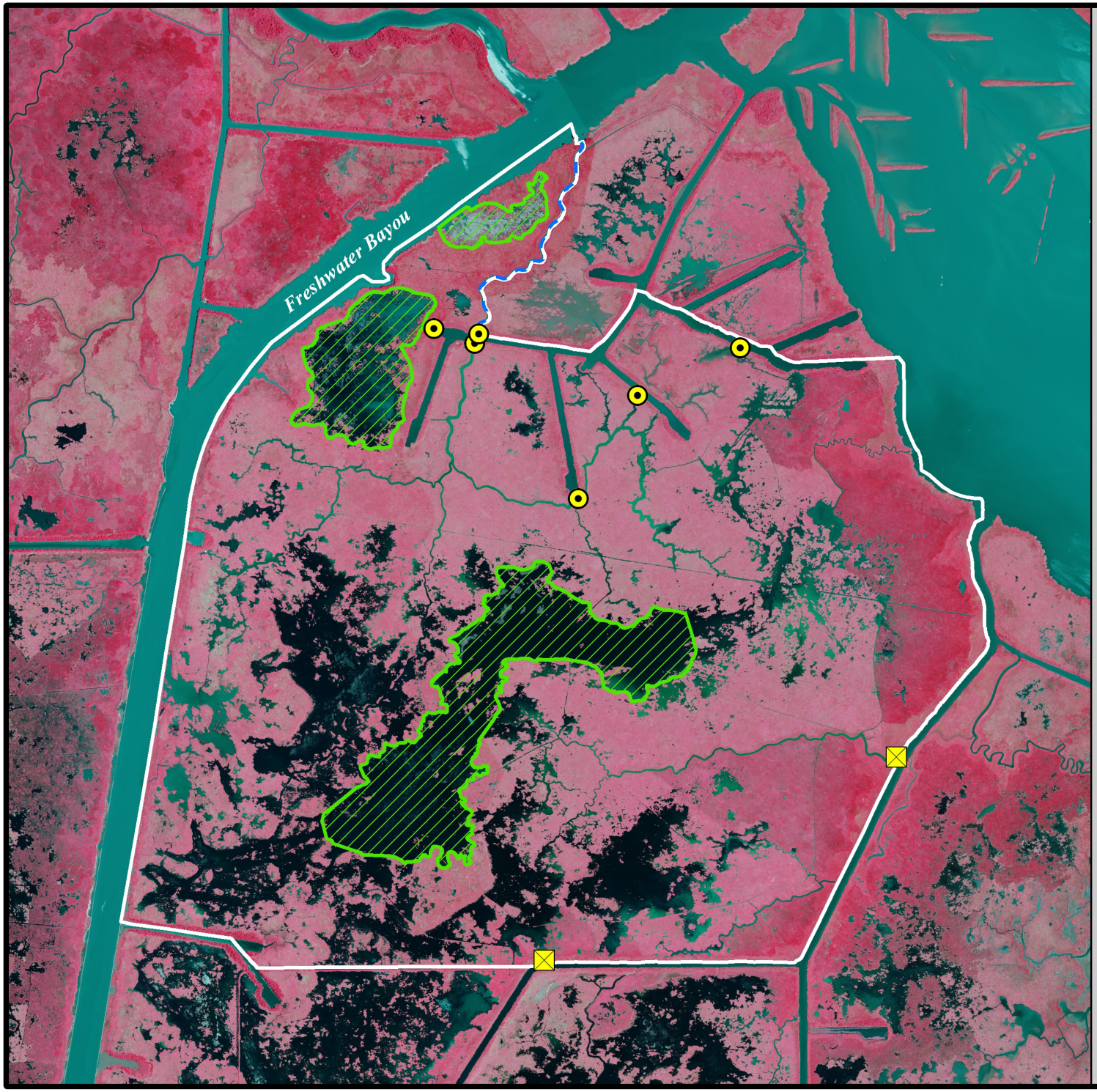
Progress to Date

This project is on Priority Project List 21.

For more project information, please contact:

Federal Sponsor:
National Marine Fisheries Service
Baton Rouge, LA
(225) 389-0508

Local Sponsor:
Coastal Protection and Restoration Authority
Baton Rouge, LA
(225) 342-4736



Cole's Bayou Restoration (TV-063)

- 1, 48" culvert with sluice and flap gates *
- 2, 48" culverts with flap gates *
- Channel Improvements *
- Marsh Creation *
- Project Boundary

*denotes proposed features

USGS
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0.2 0 0.2 0.4 Kilometers

0.2 0 0.2 0.4 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:
2010 NAIP Photography

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