July 2001

Replace Sabine Refuge Water Control Structures at Headquarters Canal, West Cove Canal and Hog Island Gully (CS-23)

Project Status

Approved Date: 1994
Project Area: 42,247 acres
Net Benefit After 20 Years: 953 acres
Project Type: Marsh Management
Cost: $4.6 million
Status: Completed Dec. 2001

Location

The project is located in the eastern portion of the Sabine National Wildlife Refuge. Just west of LA Hwy 27, it is approximately four miles southwest of Hackberry on the west bank of Calcasieu Lake in Cameron Parish, Louisiana.

Problems

The construction of the Calcasieu Ship Channel has led to saltwater intrusion, increased water fluctuations, and tidal scouring from the West Cove area of Calcasieu Lake, resulting in marsh loss in this area. The former fixed crest weirs with eight-foot "Tainter" gates in the center (at West Cove and Hog Island Gully) and flapgated culverts (at Headquarters Canal) were built in the 1970s and were inadequate to drain the project area of excess water. These flow restrictions have led to increased water levels in the marshes west of Hwy 27. The structures' openings were also inadequate for tidal flow into these marshes.

Restoration Strategy

This project was authorized to replace the water control structures on three major waterways that allow water to flow between Calcasieu Lake and the interior marshes west of Hwy 27. The new structures on Hog Island Gully, West Cove Canal, and Headquarters Canal will be operated to effectively discharge excess water, to increase the cross sectional area by 370 percent (thereby enhancing the movement of estuarine fish and shellfish), and to help curtail saltwater intrusion into the interior marshes.

This project should help maintain intermediate and brackish vegetation communities and increase submerged aquatic vegetation. Salinity, water level, and vegetation will be monitored.

Progress to Date

The Headquarters Canal structure was completed February 2000, the Hog Island Gully structure was completed in August 2000, and the West Cove structure will be completed by December 2001. Baseline monitoring of salinity, water level, and vegetation was initiated in 1998.

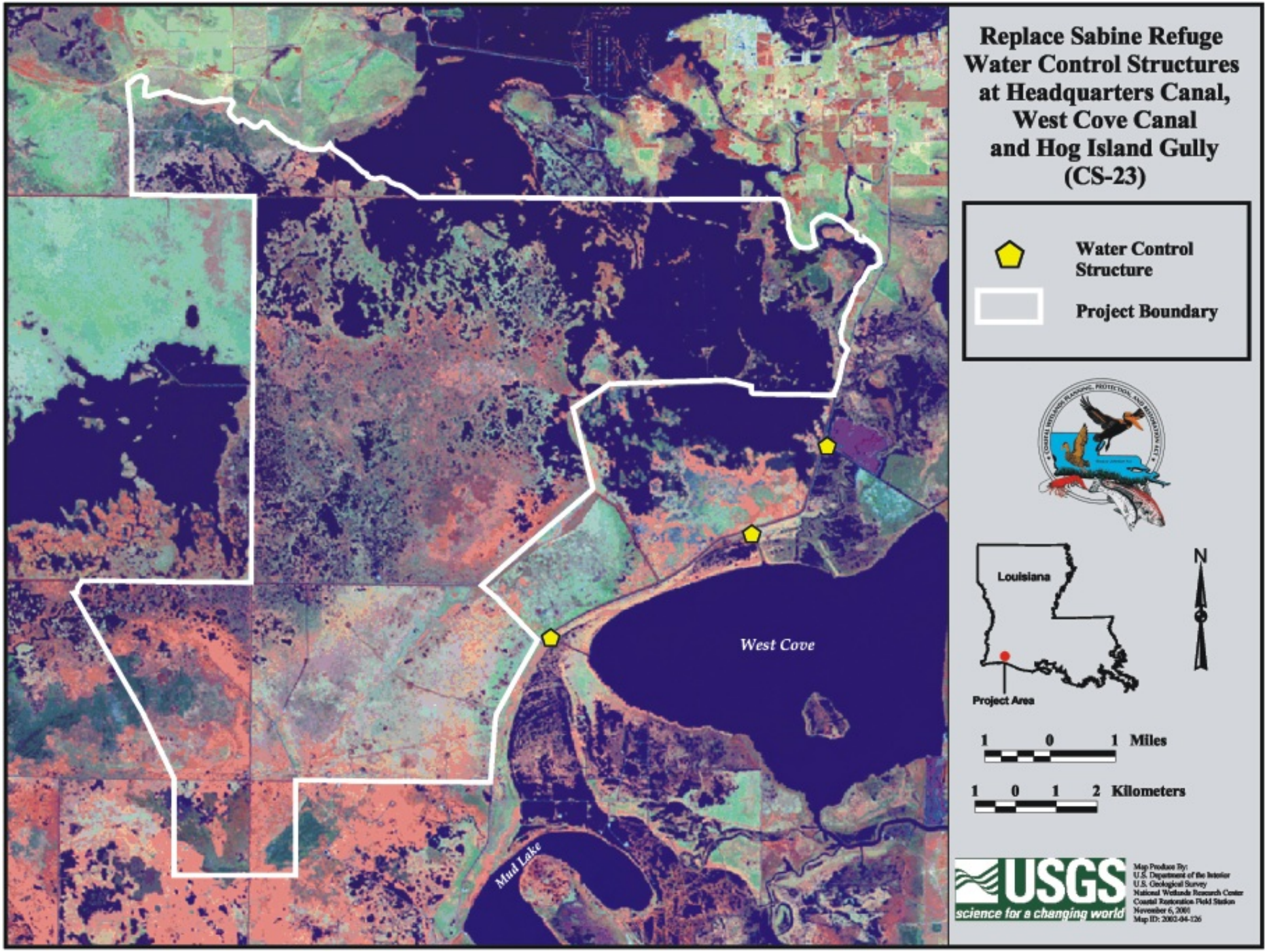
The Sabine National Wildlife Refuge's new Headquarters Canal water control structure (looking southwest) is comprised of three 5-ft diameter culverts with sluice and flap gates. The refuge headquarters buildings are in the background, and LA Hwy 27 is to the right.

Looking west at the Hog Island Gully water control structure on the Sabine National Wildlife Refuge. The structure has four large 7.5-ft wide by 8-ft deep bays and two smaller 3.5-ft wide by 8-ft deep bays with slide gates. LA Hwy 27 is in the background. The West Cove structure is similar, but with three bays instead of four.

For more project information, please contact:

Federal Sponsor:
U.S. Fish and Wildlife Service
Baton Rouge, LA
(337) 291-3100

Local Sponsor:
Louisiana Department of Natural Resources
Baton Rouge, LA
(225) 342-7308


Replace Sabine Refuge
Water Control Structures
at Headquarters Canal,
West Cove Canal
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(CS-23)
Water Control Structure
Project Boundary
Louisiana
Project Area
N
1 0 1 Miles
1 0 1 2 Kilometers
West Cove
Mud Lake
USGS
science for a changing world
Map Produce By:
U.S. Department of the Interior
U.S. Geological Survey
National Wetlands Research Center
Coastal Restoration Field Station
November 6, 2001
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