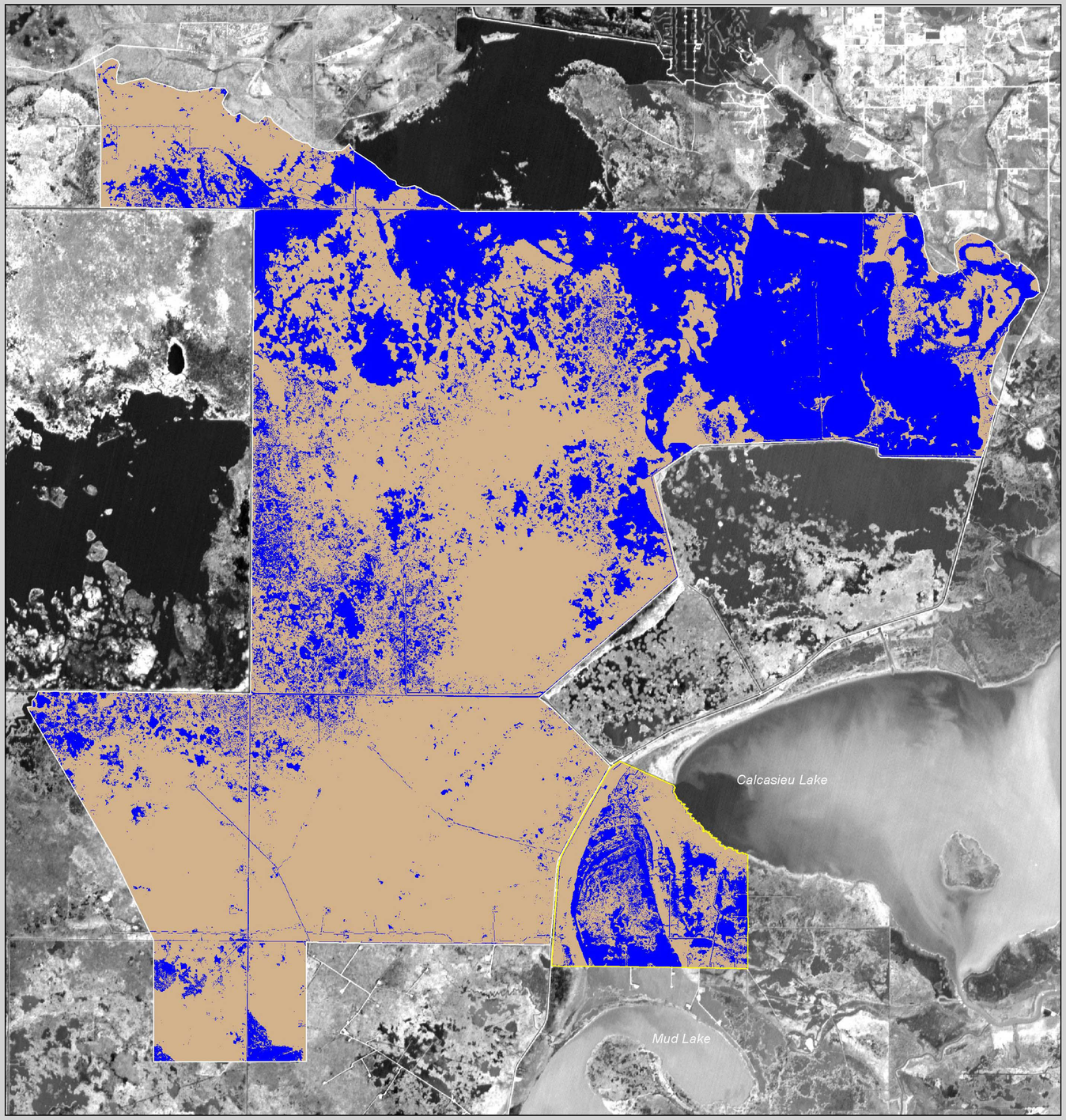
Replace Sabine Refuge Water Control Structures at Headquarters Canal, West Cove Canal, and Hog Island Gully (CS-23)

Coastal Wetlands Planning, Protection and Restoration Act

2000 Land-Water Analysis



Project Description:

The Replace Sabine Refuge Water Control Structures at Headquarters Canal, West Cove Canal, and Hog Island Gully (CS-23) project area is located within the Sabine National Wildlife Refuge in Cameron Parish, Louisiana. The project area comprises 42,247 acres (17,097 ha) of fresh to intermediate marsh and supports diverse vegetative and wildlife communities.

Between 1952 and 1974 the Black Lake area, located north of the project area, experienced an 81% reduction in the acreage of emergent wetlands. A number of factors such as salinity stress, erosion, subsidence, prescribed burning and hydrologic modification have influenced this habitat change. The largest influence has probably been manmade changes to the hydrology of the area. The dredging of the Calcasieu Ship Channel and the construction of Highway 27 have increased water and soil salinities, changed the distribution and circulation of saltwater, and disrupted the natural hydrology and ecology of a large portion of the Sabine National Wildlife Refuge marshes.

The detrimental impacts of excessive salinity on brackish and intermediate marshes makes it necessary to occasionally reduce or halt the inflow of saline water. In 1981 the first water-control structures were completed at the three primary avenues for water passage (Headquarters Canal, West Cove Canal, and Hog Island Gully). Exposure to saltwater has corroded these structures to the extent that they are now inoperable or almost inoperable

The CS-23 project plans to completely remove and replace the water control structures at Headquarters Canal, West Cove Canal, and Hog Island Gully. Additional structures and culverts will be built to provide larger cross sections for water removal and to minimize saltwater intrusion. The replacement structures will be operated to discharge excess water and curtail saltwater intrusion into the interior marshes more effectively, and increase the cross sectional area for ingress/egress of estuarine dependent species. Upon completion of the new structures, high saline waters will be precisely controlled, water discharge capacities will be increased, and vegetative stress through water logging will be minimized, thus enhancing emergent and submergent vegetative growth. The proposed action is estimated to restore 367 acres (149 ha), protect 586 acres (237 ha), and enhance 42,247 acres (17,097ha) of intermediate and brackish marshes over the 20-yr life of the project.

Class	Project Acres	Reference Acres
Land	28146.8	1695.5
Water	13572.1	1233.5
Total	41718.9	2929.0

Project Location

Project boundary

Reference boundary

N

Prepared by:
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and
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Coastal Restoration Division
Abbeville Field Office

Scale 1:42,000

2 0 2 4 6 Miles

3 0 3 6 9 Kilometers

Source:
The land-water data were acquired from 1:24,000 color infrared photography shown here at 1:42,000 scale. The photography was obtained on November 27, 2000. The data were overlayed on a 1998 panchromatic SPOT image.

Federal Sponsor:

Map ID: USGS-NWRC 2003-02-0313