June 2021
Cost figures as of: April 2024

Cameron-Creole Plugs (CS-17)

Project Status

Approved Date: 1991
Project Area: 20,392 acres
Approved Funds: $1.14 M
Total Est. Cost: $1.14 M
Net Benefit After 20 Years: 865 acres
Status: Completed January 1997
Project Type: Hydrologic Restoration
PPL #: 1

Location

This project is located approximately 6 miles northeast of Cameron in Cameron Parish, Louisiana. It encompasses 14,471 acres of intermediate-to-brackish marsh dominated by marshhay cordgrass (*Spartina patens*).

Problems

High rates of marsh loss have resulted from saltwater intrusion from the Gulf of Mexico via the Calcasieu Ship Channel and Calcasieu Lake.

Excessive salt water pooling from hydrologic alterations in the southern end of the project area has caused vegetation death.

Shoreline erosion from wind-driven wave action threatens fragile, broken marsh in the eastern project area.

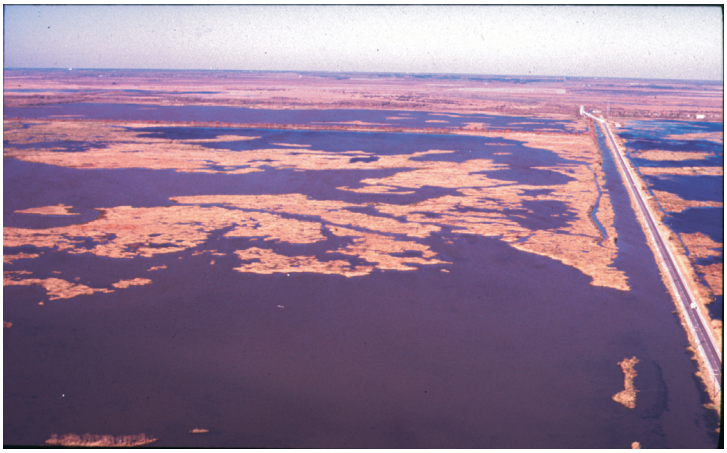
Restoration Strategy

In 1989, a levee and five water control structures were constructed along the east shore of Calcasieu Lake as part of the Cameron-Creole Watershed Management Project. In the current project (CS-17), two plugs were installed in the Lakeshore Borrow Canal to moderate water circulation and flow, as well as reduce the duration of inundation in the southern project area.

Project effectiveness will be determined by monitoring salinity, water flow, water level, and vegetation in the project area and reference area.

Progress to Date

Based on emergent vegetation surveys, the total percent of vegetative cover was highest in the reference area at 96% in 1996, increasing to 98% in 1997 and to 99% in 2000. Cover in the northern project area increased from 95% in 1996 to 96% in 1997 before decreasing slightly to 92% in 2000. The southern project area experienced a slight decrease in cover from 83% in 1996 to 78% in 1997, followed by a slight increase to 81% in 2000.



The northeastern portion of the Cameron Creole watershed is bordered by Louisiana Highway 27.

The frequency of occurrence of submerged aquatic vegetation decreased dramatically in both the project and reference areas. In the project area, it declined from 69% in 1996 to 18% in 2000; in the reference area, the frequency decline was from 86% to 23% across the same period. There was a change in species composition over all three sampling years (1996, 1997, and 2000) caused by drought-induced changes in water level and salinity. Widgeongrass (Ruppia maritima) dominated in 1996 and 2000 when lowered water level increased salinities; however, watercelery (Vallisneria americana) dominated in 1997 when water levels were higher and salinities remained low.

The project and reference areas are within the boundaries of the Cameron-Creole Watershed Management Project, which was funded by the Natural Resources Conservation Service's Small Watershed Program.

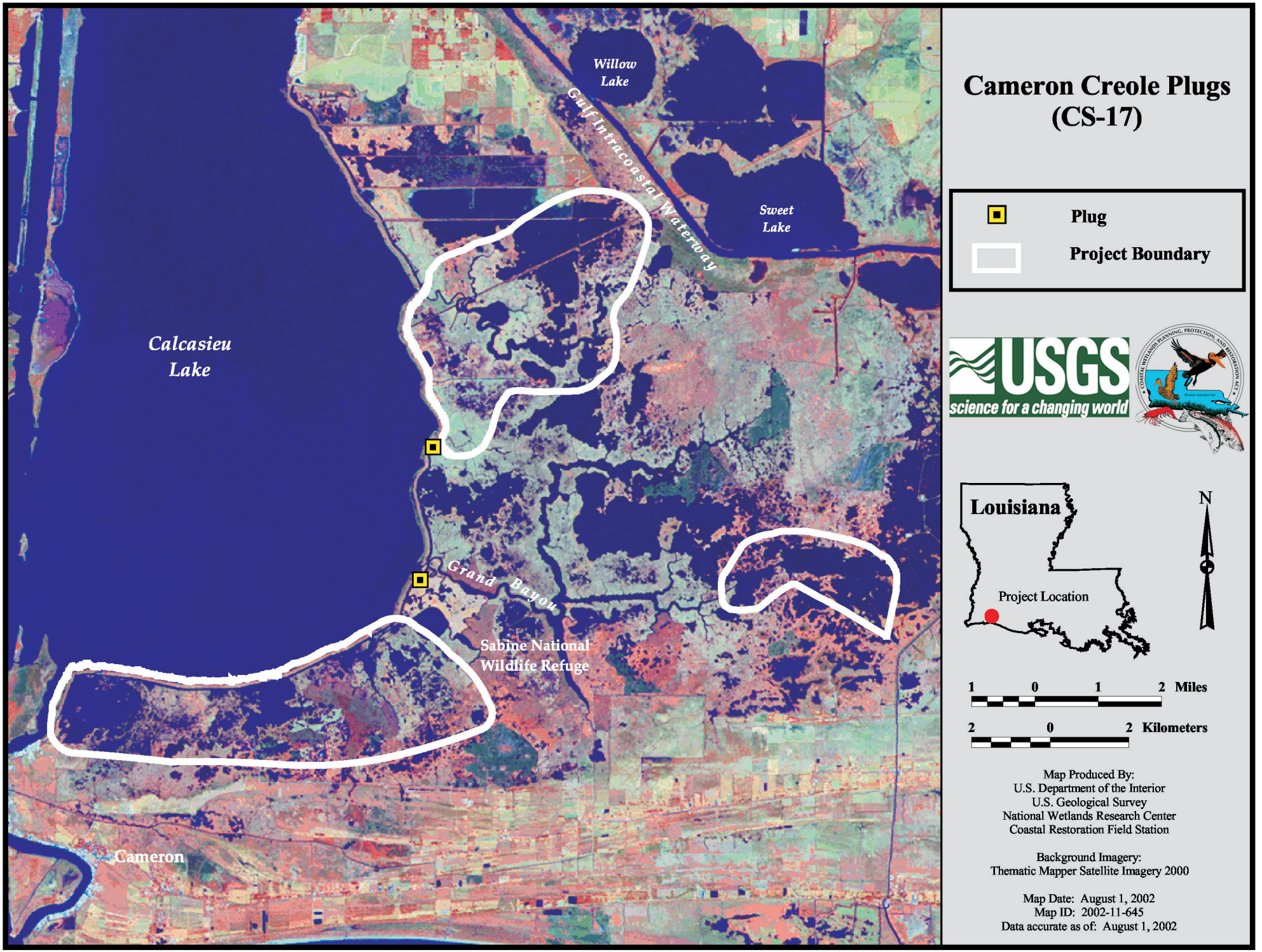
This project expired in 2017 and has been closed out. The project's features were made part of the CS-04a Cameron-Creole Watershed Maintenance Project which was approved for a 20-yr project life extension.

This project is on Priority Project List 1.

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



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Plug

Project Boundary

USGS science for a changing world

Louisiana

Project Location

N

1 0 1 2 Miles

2 0 2 Kilometers

Map Produced By:
U.S. Department of the Interior
U.S. Geological Survey
National Wetlands Research Center
Coastal Restoration Field Station

Background Imagery:
Thematic Mapper Satellite Imagery 2000

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