October 2002
Cost figures as of: March 2013

Sabine National Wildlife Refuge Erosion Protection (CS-18)

Project Status

Approved Date: 1991 **Project Area:** 13,000 acres
Approved Funds: $1.60 M **Total Est. Cost:** $1.60 M
Net Benefit After 20 Years: 5,542 acres
Status: Completed March 1995
Project Type: Shoreline Protection
PPL #: 1

Location

This project is located in the center of the Sabine National Wildlife Refuge, approximately 10 miles southwest of Hackberry in Cameron Parish, Louisiana. It is bordered to the north by Starks North Canal, to the east by Beach Canal, to the south by Starks Central Canal, and to the west by the Burton-Sutton Canal.

Problems

Pool 3 is a 27,000-acre freshwater marsh pool on the refuge that is hydrologically isolated and surrounded by tidally influenced brackish canals.

Because of the continual erosion created by boat traffic and weathering, the levee protecting Pool 3 from higher salinity water was in danger of breaching along the Burton-Sutton Canal.

Sabine National Wildlife Refuge Erosion Protection looking eastward across the Burton-Sutton Canal into Pool 3. The continuous rock breakwater is seen along the shoreline in the lower third of the photo.

Restoration Strategy

A 5.5 mile-long, continuous, free-standing rock dike was built along the east bank of the Burton-Sutton Canal and forms the western boundary of Pool 3.

Progress to Date

The project's effectiveness is being evaluated by shoreline movement surveys and by using a series of pre-construction and post-construction aerial photographs to evaluate changes in land-to-water ratios.

Shoreline survey results following the project's completion have shown that distances from survey markers to the edge of bank vegetation differed by less than 7.7 feet at any one station for both the project and reference areas. Between 1995 and 2000, shoreline advance was detected at almost all project stations and at four of the five reference stations. Mean shoreline advance rates were effectively equal: 1.3 feet per year for the project area and 0.9 feet per year for the reference sites.

Observations at the project site and data collected during the shoreline surveys demonstrate that the integrity of the west bank of Pool 3 has been maintained. The project has also been effective in preventing saltwater intrusion into Pool 3.

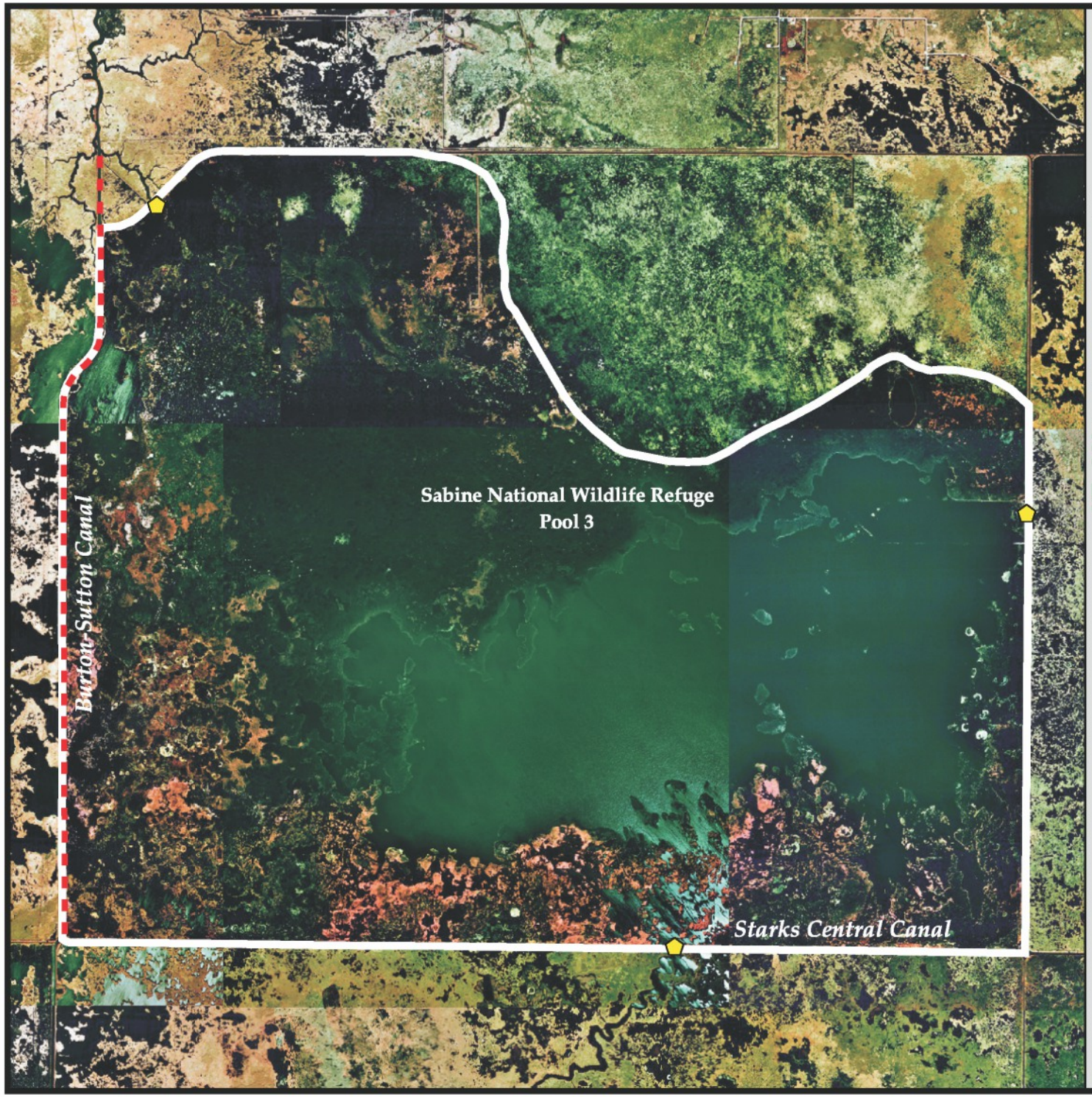
The levee appears to be stable, and the rock dike seems to be in good condition at this time. Future inspections of the project area will be conducted at regular intervals to document the condition of the rock breakwater and any required maintenance.

This project is on Priority Project List 1.

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



Sabine National Wildlife Refuge Erosion Protection (CS-18)

Weir

Shoreline Protection

Project Boundary

USGS science for a changing world

Louisiana

Project Location

N

1 0 1 Miles

1 0 1 Kilometers

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

Background Imagery:
1998 Digital Orthophoto Quarter Quadrangle

Map Date: May 9, 2002
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