rev. September 2010
Cost figures as of: March 2013

Atchafalaya Sediment Delivery (AT-02)

Project Status

Approved Date: 1992 **Project Area:** 4,248 acres
Approved Funds: $2.53 M **Total Est. Cost:** $2.53 M
Net Benefit After 20 Years: 2,232 acres
Status: Completed March 1998
Project Type: Dredged Material/Marsh Creation and Hydrologic Restoration
PPL #: 2

Location

The project is located east of the lower Atchafalaya River navigation channel in the Atchafalaya River Delta, approximately 19 miles southwest of Morgan City, Louisiana, in St. Mary Parish.

Problems

Growth of the lower Atchafalaya Delta has been reduced as a result of maintenance of the Atchafalaya River navigation channel. Delta development in the shallow waters of Atchafalaya Bay is dependent on distributary flows and the diversion of sediments into over-bank areas through crevasse channels.

Because of the placement of material dredged from the navigation channel and sediment accumulation within the channels that decrease flow efficiency, the open crevasse channels are frequently short-lived. As riverflow through a crevasse channel is reduced, the amount of sediment that can be deposited in the delta is likewise reduced, resulting in decreased marsh development.

Restoration Strategy

The purpose of this project is to promote natural delta development by reopening two silted-in channels and using those dredged sediments to create new wetlands. Approximately 720,000 cubic yards of sediment were dredged from Natal Channel and Castille Pass in 1998. Over 12,000 feet of channel were reopened, and more than 280 acres of new habitat were created by the strategic placement of the dredged channels' sediments. By reestablishing water and sediment flow into the eastern part of the Atchafalaya Delta, an additional 1,200 acres of new habitat are expected to be naturally created over the life of the project.

A bucket dredge is shown removing sediment from a shoaled-in channel in order to help reestablish water and sediment flow within the Atchafalaya Delta.

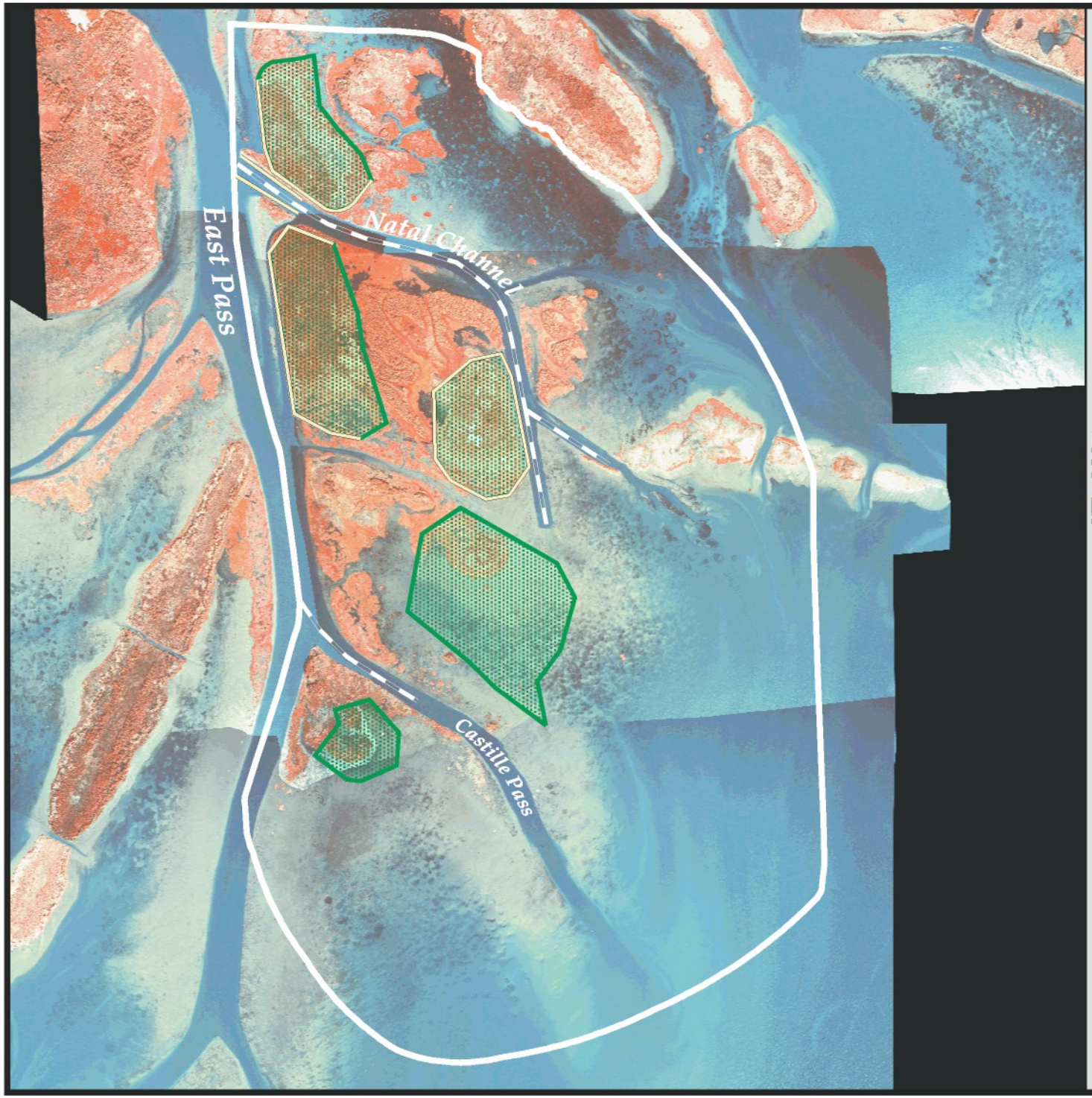
Progress to Date

Construction was completed in 1998. A pre- versus post-construction habitat analysis using aerial photography indicated that, while there was an increase in land of 78.4 acres, the majority of the habitat created was represented by forested wetland (50.1 acres), while fresh marsh and upland barren habitats accounted for 14 acres gain each. Although many of the dominant plant species are present in both created and reference areas, the created areas contained different plant communities when compared to any time period in the development of a natural crevasse splay that served as a reference area for this project. Although the long-term effects on submerged aquatic vegetation (SAV) are unclear, habitat mapping indicated an increase in SAV habitat of 221.5 acres from 1997 to 1998, but this is very close to the increases that were reported in the project area pre-construction. Satellite imagery indicates that there have been significant increases in emergent acreage from 1998 to 2008 This project is on Priority Project List 2.

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



Atchafalaya Sediment Delivery (AT-02)

- Dredge Channel
- Containment Dike
- Marsh Creation Area
- Project Boundary

USGS science for a changing world

0.25 0 0.25 Miles

0.25 0 0.25 0.5 Kilometers

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

Background Imagery:
Color Infrared Aerial Photography 2000
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