rev. September 2018
Cost figures as of: February 2023

Hydrologic Restoration and Vegetative Planting in the des Allemands Swamp (BA-34-2)

Project Status

Approved Date: 2001 **Project Area:** 2,394 acres
Approved Funds: $5.56 M **Total Est. Cost:** $7.88 M
Net Benefit After 20 Years: N/A
Status: Completed
Project Type: Hydrologic Restoration/ Vegetative Planting
PPL #: 10

Location

The project is located west of Lac des Allemands in St. James Parish, Louisiana, south of the town of South Vacherie, bordered on the south by Bayou Chevreuil, and on the east by LA Highway 20.

Problems

The Lac des Allemands River Basin Initiative identified the following specific problems within the Lac des Allemands Watershed: drainage impairments; water quality impairments; loss of marsh; and decline of cypress forest. Many years of study by Louisiana State University researchers in these swamps have demonstrated that, because of impoundment, subsidence, and inadequate accretion of sediments and organic matter, some areas are already highly stressed and converting to open water, floating aquatic plants, and fresh marsh. Also, the Coast 2050 report suggests that other areas of the swamps throughout the basin will likely convert to open water or floating marsh by the year 2050. These problems are caused by the loss of river water along with the associated sediment and nutrients necessary for swamp health. The loss of river water can be attributed to the leveeing of the Mississippi River. Impoundment caused by roads, drainage canals, and spoil banks is also a major cause of degradation of these swamps.

Restoration Strategy

The original proposed restoration strategy included installing two small siphons (averaging 400 cubic feet per second) to divert water from the Mississippi River; gapping spoil banks on Bayou Chevreuil; gapping spoil banks along the borrow canal beside Louisiana Highway 20; installing culverts under Louisiana Highway 20; improving drainage in impounded swamps; and planting cypress and tupelo seedlings in highly degraded swamp areas. The proposed diversion from the Mississippi River was to bring fresh water, fine-grained sediments, and nutrients into the upper des Allemands swamps, which would have helped maintain swamp elevation, improve swamp water quality, and increase productivity and regrowth of young trees as older trees die. However, after hydrologic modeling and more detailed engineering/design and cost estimation, it was determined that the siphon would cost far more than originally anticipated. For that reason, the CWPPRA Task Force approved the project sponsors' request to re-scope the project to eliminate the siphon feature, and to focus on the remaining project features.

Recent photo at the edge of the swamp. The impoundment has led to a negative effect on cypress and tupelo trees and encouraged the growth of herbaceous marsh plants.

The remaining project features include six spoil bank gaps into the impounded swamp to reverse the impoundment effects that are serious impediments to healthy swamp structure and function. Planting cypress and tupelo seedlings will help reestablish the swamp forest in highly stressed areas. Over time, project benefits should include reduced swamp submergence and increased swamp productivity. This strategy will, in turn, provide wildlife, fishery, and storm buffering benefits.

Progress to Date

The Louisiana Coastal Wetlands Conservation and Restoration Task Force approved Phase 1 funding in January 2001. In June 2013, the Task Force approved a request to change the scope of the project to eliminate a siphon feature and focus on the remaining original hydrologic restoration and vegetative planting project features. The Louisiana Coastal Protection and Restoration Authority performed the engineering and design services.

Design was completed in October 2015 and Phase 2 funds for construction was approved by the Task Force in January 2016. Construction activities for excavation and placement began in October 2017 and ended on December 20, 2017, vegetative plantings occurred in late January, and officially completed on February 2, 2018. The three (3) principal project features included:

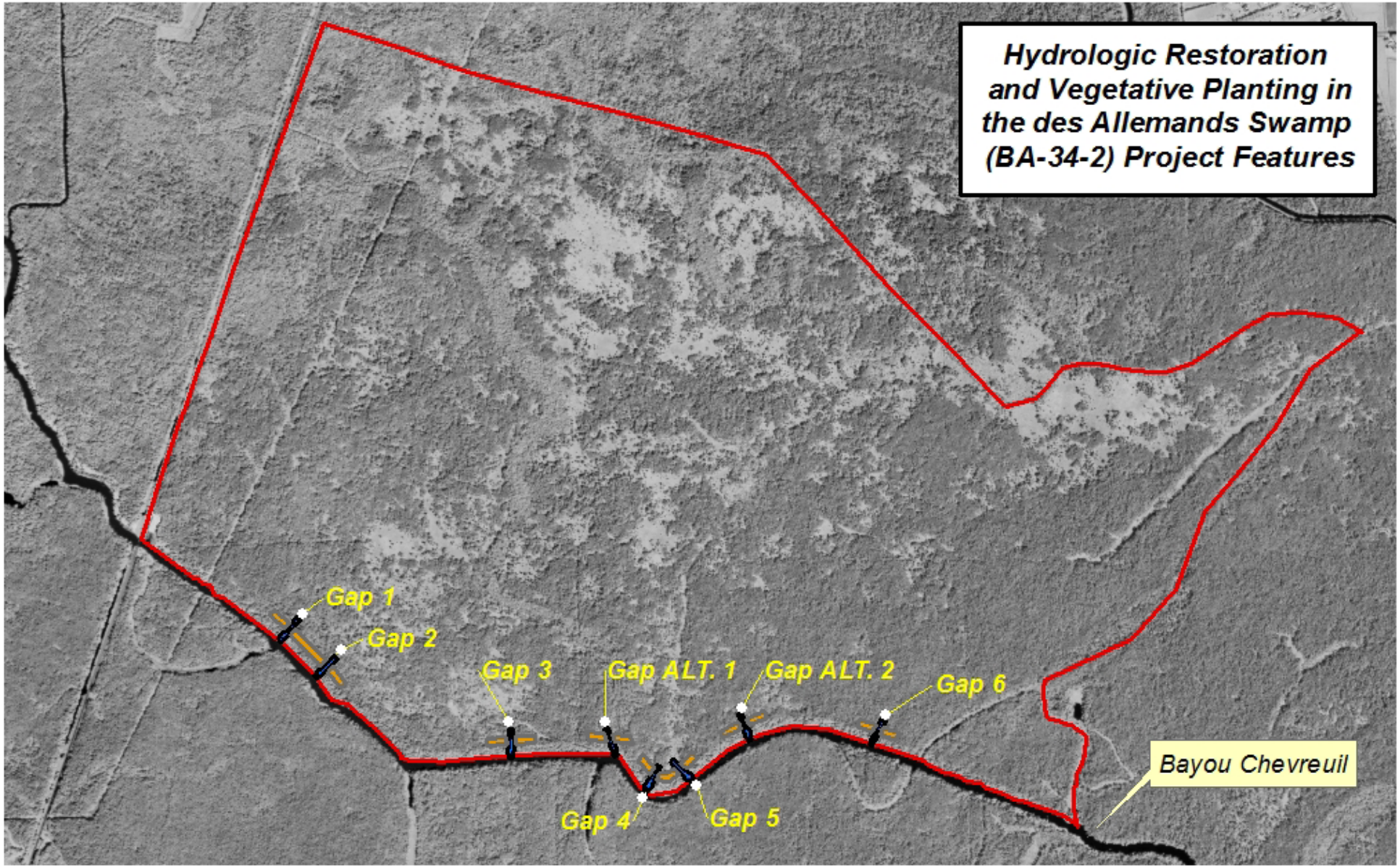
1. Eight (8), 400-foot-long, strategically designed gaps were cut in the northern Bayou Chevreuil spoil bank to reverse the effects of impoundment;
2. Sixteen (16) spoil placement areas were created on each side of the channel banks (1 placement area on both sides of each gap) to beneficially use the dredged material on site;
3. Seven hundred (700) Bald Cypress and one hundred (100) Water Tupelo saplings were planted in the constructed spoil placement areas to start swamp regeneration and swamp productivity.

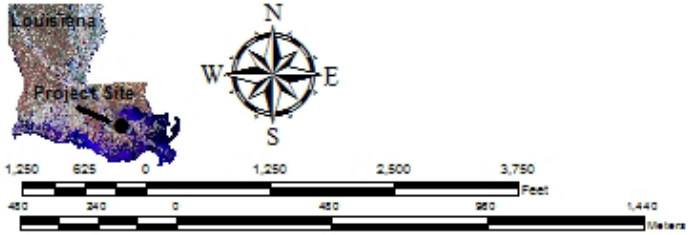
This project enhanced 2,395 acres of swamp habitat that would have continued to degrade without the project.

For more information, please contact:

Federal Sponsor:
U.S. Environmental Protection Agency
Dallas, TX
(214) 665-2712

Local Sponsor:
Coastal Protection and Restoration Authority
Baton Rouge, LA
(225) 342-4736





Data Source:
Coastal Protection and Restoration Authority of LA Operations

2013 NAIP

Date: Juner 23, 2015
Map ID: 2015-TRO-026

- Spoil Disposal
- Gap Cuts
- BA-34-2 Project Area