rev. September 2013
Cost figures as of: January 2017

# Penchant Basin Natural Resources Plan, Increment 1 (TE-34)

## Project Status

**Approved Date:** 1997 **Project Area:** 80,719 acres
**Approved Funds:** $17.6 M **Total Est. Cost:** $17.6 M
**Net Benefit After 20 Years:** 675 acres
**Status:** Completed
**Project Type:** Hydrologic Restoration
**PPL #:** 6

## Location

The project is bounded on the north by the Gulf Intracoastal Waterway (GIWW), the east by a north/south line from Lake De Cade to the GIWW, the south by Lake Mechant and Lost Lake, and to the west by a north/south line from Lost Lake to Avoca Island in Terrebonne Parish, Louisiana.

## Problems

Area problems include major hydrologic alterations, interior marsh erosion, subsidence, saltwater intrusion, herbivory, and hurricane damage.

The project will create marsh, increase flow of fresh water from the upper Penchant Basin and protect interior wetlands from erosive, tidally induced water exchange, which is causing conversion of marshes to open water and loss of productive fish and wildlife habitat.

## Restoration Strategy

This project will combine the long-term realignment of Penchant Basin hydrology with restoration and protection measures aimed at maintaining the physical integrity of the area during the transition toward greater riverine influence.

The project includes about 6,520 feet of foreshore rock dike (shoreline protection) along the southern bank of Bayou Chene at its intersection with Bayou Penchant and approximately 35 acres of marsh creation. Two freshwater introduction structures, consisting of a) 10-48" flap gates in Superior Canal and b) steel sheetpile weir with 10' boat bay and six 5' x 5' flap gated openings at Brady Canal, will be constructed to improve freshwater conveyance from Bayou Penchant into the central Terrebonne marshes. On the north bank of Bayou Decade extending from Lake Decade to Turtle Bayou (12,000 ft) an earthen embankment will be maintained and from Voss Canal to Lost Lake (14,000 ft) an earthen embankment will be constructed to 4.0 feet NAVD88 with 6:1 side slopes and rock armoring on the south-face. Within the embankment, a sheetpile weir, with a 10 ft wide boat bay, will be constructed at each of two existing channels that intersect Bayou Decade.

The objectives of the project are to eliminate erosion and create approximately 35 acres of emergent marsh along the southern bank of Bayou Chene at its intersection with Bayou Penchant, convey Atchafalaya River water, sediment, and nutrients to lower Penchant Basin tidal marshes to offset subsidence and saltwater intrusion and maintain the integrity of a deteriorated reach of the north bank of Bayou Decade to minimize encroachment of open water marine influence.

## Progress to Date

The Louisiana Coastal Wetlands Conservation and Restoration Task Force approved this project on April 24, 1997. Priority Project List (PPL) 6 authorized funding of $7,051,550, while PPL 8 authorized an additional $7,051,550.

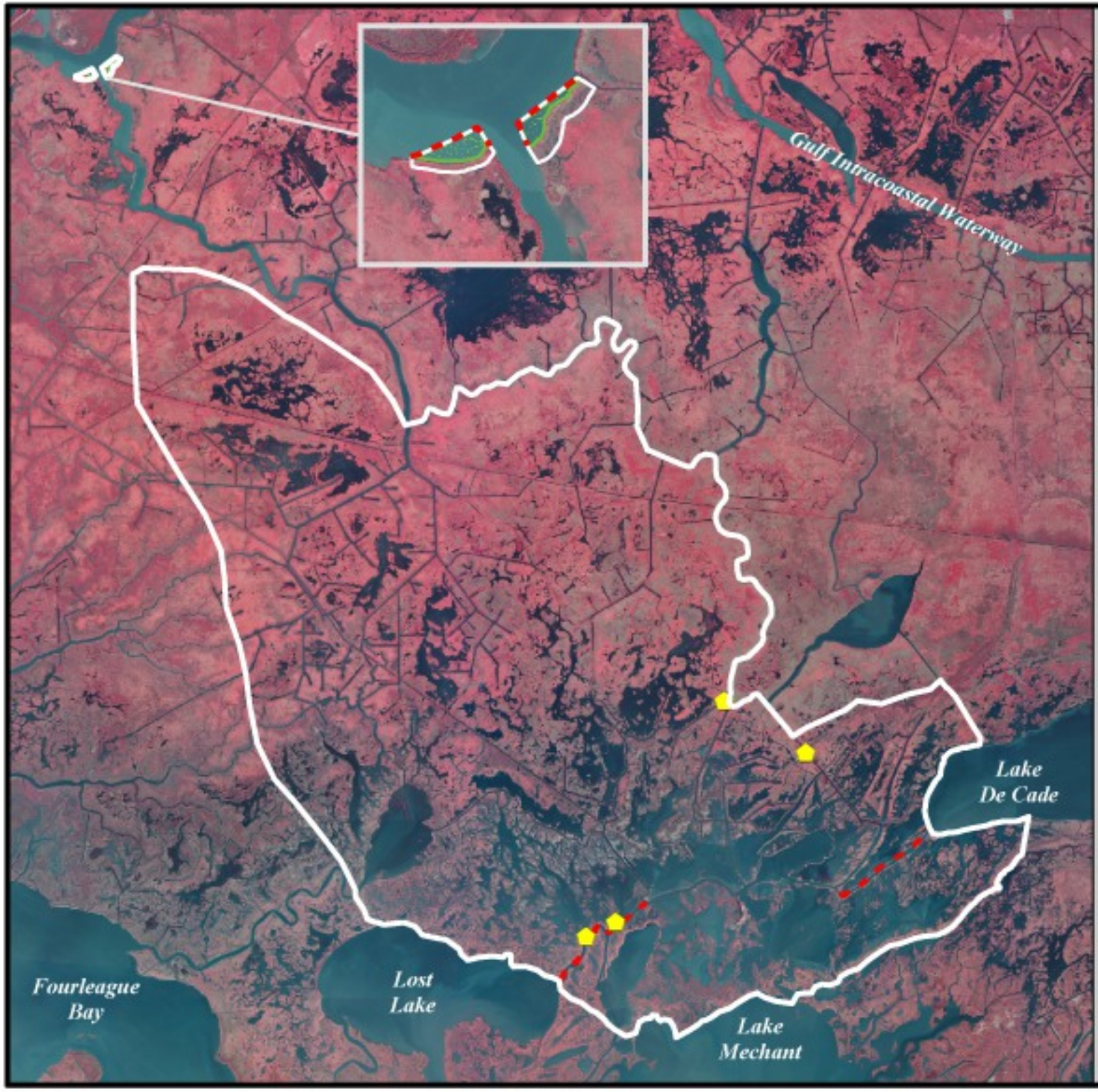
Planning, engineering and design of this project included extensive data collection, hydrodynamic modeling, and related investigations. This effort resulted in a change in scope to the project which was approved by the Task Force in April 2008. Construction was completed in August 2011.

This project is on Priority Project List 6.

*For more project information, please contact:*

**Federal Sponsor:**
Natural Resources Conservation Service
Alexandria, LA
(318) 473-7756

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




# Penchant Natural Resources Basin Plan Increment 1 (TE-34)

Water Control Stucture *

Shoreline Protection*

Marsh Creation*

Project Boundary

*denotes proposed features

USGS
science for a changing world

N

1 0 1 2 Kilometers

1 0 1 2 Miles

Map Produced by:
U.S. Department of the Interior
U.S. Geological Survey
National Wetlands Research Center
Coastal Restoration Field Station
Baton Rouge, La.

Background Imagery:
2008 Digital Orthophoto Quarter Quadrangle

Map Date: March 25, 2010
Map ID: USGS-NWRC 2010-11-0032
Data accurate as of: March 12, 2010