April 2019
Cost figures as of: February 2023

New Orleans Landbridge Shoreline Stabilization & Marsh Creation (PO-169)

Project Status

Approved Date: 2015 **Project Area:** 271 acres
Approved Funds: $23.0 M **Total Est. Cost**: $25.4 M
Net Benefit After 20 Years: 167 acres
Status: Construction
Project Type: Marsh Creation
PPL#: 24

Location

The project is located in Region 1, Pontchartrain Basin, Orleans Parish, flanking U.S. Highway 90 along the east shore of Lake Pontchartrain and areas surrounding Lake St. Catherine.

Problems

Since 1956, approximately 110 acres of marsh has been lost along the east shore of Lake Pontchartrain between Hospital Road and the Greens Ditch. One of the greatest influences of marsh loss in the area can be attributed to tropical storm impacts. Wetland losses were accelerated by winds and storm surge caused by Hurricane Katrina, which converted approximately 70 acres of interior marsh to open water. USGS land change analysis determined an interior loss rate of -0.001% per year for the 1984 -2018 period of analysis.
A separate analysis indicates rates of 2-5 ft/yr of shoreline erosion depending on the reach. Subsidence in this unit is relatively low and is estimated at 0-1foot/century (Coast 2050).

Lake Pontchartrain supports a large number of wintering waterfowl. Various gulls, terns, herons, egrets, and rails can be found using habitats associated with Lake Pontchartrain, which has been designated as an Important Bird Area by the American Bird Conservancy. Restoring these marshes will protect the Orleans Landbridge and will help to protect fish and wildlife trust resources dependent on these marsh habitats, particularly at-risk species and species of conservation concern such as the black rail, reddish egret, brown pelican, mottled duck, seaside sparrow, king rail, and the Louisiana eyed silkmoth.

The goal of the New Orleans Landbridge Shoreline Stabilization and Marsh Creation Project (PO-0169) is to restore and protect 290 acres of brackish marsh (174 acres marsh creation, 110 acres nourishment, and 6 acres outside of the footprint) and to protect 15,663 linear feet of shoreline by armoring lakeshore containment dikes. Specific objectives are to create and nourish 284 acres of brackish marsh habitat; stabilize the shoreline to reduce shoreline erosion and interior marsh loss; maintain the integrity of the East Orleans Landbridge and Lakes Pontchartrain and Borgne; protect fish and wildlife trust resources dependent on these marsh habitats, particularly at-risk species and species of conservation concern; and provide protection to a major hurricane evacuation route.

As a result of marsh scoured by Hurricane Katrina, a remnant shoreline east of U.S. Highway 90 offers little protection from wave energy coming from Lake St. Catherine and Rigolets Pass.

Restoration Strategy

Approximately 284 acres of brackish marsh will be restored using approximately 1.3 million cubic yards of material dredged from three borrow areas in Lakes St. Catherine and Pontchartrain and from flotation access dredging. Material will be placed in four (4) marsh restoration areas: a 111-acre area west of U.S. Highway 90 (MC1), an 83-acre area east of U.S. Highway 90 (MC2), a 14-acre area identified by the Land Trust for Louisiana as Nine Mile Island (MC3), and a 61-acre area at Bay Jaune Point (MC4). Approximately 15,663 linear feet of articulated concrete mats the will be added as a shoreline stabilization feature placed on the earthen containment dikes along the shorelines of three of the four marsh creation areas (MCAs 1, 2 and 4) to ensure the shoreline is stabilized during construction and throughout the project life. To achieve project goals, the dredge slurry in all four marsh creation fill areas will need to initially be placed to a constructed fill elevation above the functional brackish marsh range and settle into the range over the 20-year design life. To satisfy these conditions, marsh creation areas will be pumped to an elevation of +2.0 feet NAVD88.

Progress to Date

This project was approved for Phase I Engineering and Design in January 2015. The CWPPRA Technical Committee approved this project for Phase II Construction in February 2019.

This project is on Priority Project List (PPL) 24.

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
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New Orleans Landbridge Stabilization & Marsh Creation (PO-169)

Shoreline Stabilization *

Marsh Creation *

Project Boundary

*denotes proposed features

USGS
science for a changing world

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0.25 0 0.25 0.5 Kilometers

0.25 0 0.25 0.5 Miles

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

Background Imagery:
2017 NIAP Photography

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