

PPL24 PROJECT NOMINEE FACT SHEET
January 29, 2014

Project Name

Grand Bayou Freshwater Enhancement

Project Location

Region 3, Terrebonne Basin, Lafourche Parish

Problem

The project area is located within the North Bully Camp Marsh (43,882) and St. Louis Canal (25,563 acres) mapping units. Between the years 1932 and 1990, these two mapping units lost an estimated 12,840 and 3,450 acres of marsh, respectively. A significant amount of the land loss in these areas since 1949 may be attributed to direct removal and altered hydrology from canal dredging. Altered hydrology remains a current cause of land loss along with high rates of subsidence which are estimated to be between 2.1 and 3.5 ft/century (LCWCRTF 1999).

Because of the high number of canals that have been dredged in the area, high salinity Gulf waters move rapidly northward into the marshes within the project area. The amount of high salinity waters moving north is increasing as the marshes continue to breakup and disappear. The only freshwater input to this area originates from the Gulf Intracoastal Waterway (GIWW) along the northern project boundary. The freshwater inflow from the GIWW is restricted by the small cross-section of the channel north of the Hwy. 24 bridge and continuing for several thousand feet south of that bridge. There is also a restriction (earthen plug) in Margaret's Bayou which prevents fresh water from moving east from Grand Bayou into the broken marshes.

Goals

The primary goal of this project is to increase the flow of fresh water from the GIWW down Grand Bayou Canal. That increase in water would lower salinities and add nutrients to the wetlands south of the GIWW along the east and west banks of Grand Bayou Canal. **Specific goals:** 1) Increase the flow of fresh water from the GIWW into Grand Bayou Canal from approximately 600 cfs to 1,600 cfs; 2) redirect much of the freshwater from Grand Bayou Canal into the marshes east and west of Grand Bayou Canal, and 3) Create 112 acres of fresh marsh and nourish an additional 14 acres of intermediate marsh west of Grand Bayou near Hwy 24.

Proposed Solution

This project would increase the Grand Bayou cross-section from an average of 628 cfs to 1,604 cfs with the use of a hydraulic dredge. Material dredged from the channel would be beneficially used to create approximately 126 acres of intermediate marsh. Along the west bank of the channel a rock plug would be replaced with a 5-48" flap-gated culvert water control structure, an increase of 122 cfs. Along the east bank an earthen plug would be removed to allow freshwater to flow directly into the marshes to the east down Margaret's Bayou, an increase in 385 cfs.

Preliminary Project Benefits

- 1) *What is the total acreage benefited both directly and indirectly?*
This total project area is 26,533 ac.

- 2) *How many acres of wetlands will be protected/created over the project life?*
Approximately 676 acres of intertidal marsh habitat will be protected/created over the project life.
- 3) *What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (e.g., 50% reduction in the background loss rate)?*
The anticipated land loss rate reduction throughout the area of direct benefits will be 50-74% over the projects life.
- 4) *Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc?*
No.
- 5) *What is the net impact of the project on critical and non-critical infrastructure?*
The project would have moderate net positive impact to critical infrastructures which consists of Larose to Golden Meadow Levee, oil and gas infrastructure, and businesses near Hwy. 24.
- 6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?*
The project will have a synergistic effect with several Ducks Unlimited projects, Bayou Point aux Chenes WMA management units, and several mitigation projects located within the project area.

Identification of Potential Issues

The proposed project has the following potential issues: O&M, utility/pipeline, and DOTD bridge replacement.

Preliminary Construction Costs

The estimated construction cost including 25% contingency is \$15 M.

Preparer(s) of Fact Sheet:

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