

# Priority Project List 28

## Candidate Projects



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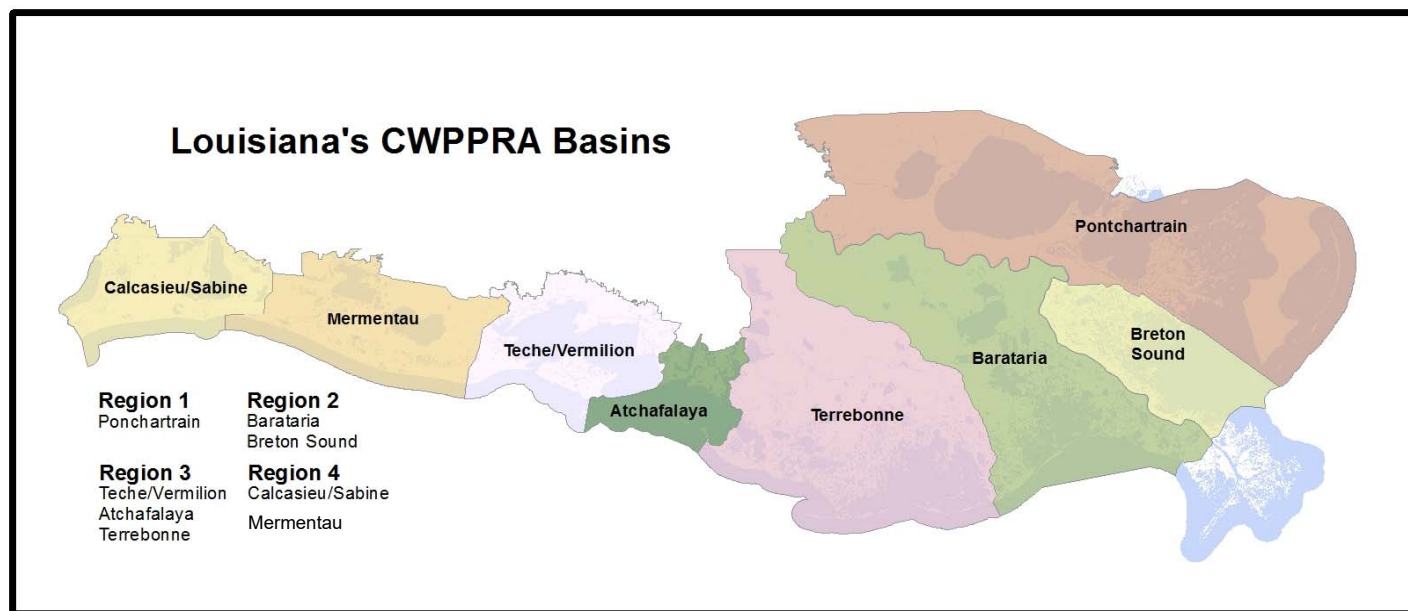




## Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA) Priority Project List (PPL) Selection Process

### Project Nominations

The 4 Regional Planning Teams (RPTs), consisting of representatives from the CWPPRA agencies and the coastal parishes located in those regions, will meet to propose projects to be included on the new PPL. Project nominations will be accepted in all the hydrologic basins below. *All proposals must be consistent with the 2017 State Master Plan to be considered as possible nominees; therefore, those wishing to propose projects are encouraged to work with representatives of the Louisiana Coastal Protection and Restoration Authority prior to the RPT meetings to develop projects that are consistent.* A lead agency will be assigned to each nominated project to prepare preliminary project support information (factsheet, maps, and potential designs, and benefits).



- Project nominations that provide benefits or construct features in more than one basin shall be presented in the basin receiving the majority of the project's benefits.
- Multi-basin projects can be broken into multiple projects to be considered individually in the basins which they occur.
- Project nominations that are legitimate coastwide applications will be accepted separate from the 8 basins at any of the 4 RPT meetings.

If similar projects are proposed within the same area, the RPT representatives, including the CWPPRA agencies and *only* the parishes located within the project's basin, will determine if those projects are sufficiently different to allow each of them to move forward. If not sufficiently different, such projects will be combined into one project nominee, and the federal sponsor of the project will be determined prior to the coastwide electronic vote. This decision to either combine similar projects or allow each to move forward will be made at the RPT meeting where the similar projects are proposed.

Prior to voting on project nominees, the Environmental Work Group (EnvWG) and Engineering Work Group (EngWG) will screen coastwide project and demonstration project nominations to ensure that each qualifies for its respective category as set forth in the CWPPRA Standard Operating Procedures (SOP).

Nominees	Basin
4	Barataria
4	Terrebonne
3	Breton Sound
3	Pontchartrain
2	Mermentau
2	Calcasieu/Sabine
2	Teche/Vermilion
1	Atchafalaya
1	Coastwide
22	TOTAL

## Coastwide Electronic Vote

The RPTs will vote after the individual RPT meetings via email to select nominee projects. The RPTs will select projects per basin based on land loss rates (see table on left) and up to 6 demonstration projects.

During the RPT meetings, all CWPPRA agencies and parishes will be required to provide the name and contact information for the official representative who will vote to select nominee projects. Each officially designated parish representative in the basin will have one vote and each federal agency and the State will have one vote.

### Region/Basin/Parish Voting Breakdown



#### Region I Pontchartrain

Ascension  
Jefferson  
Livingston  
Orleans  
Plaquemines  
St. Bernard  
St. Charles  
St. James  
St. John the Baptist  
St. Tammany  
Tangipahoa

#### Region II Barataria

Ascension  
Assumption  
Jefferson  
Lafourche  
Orleans  
Plaquemines  
St. Charles  
St. James  
St. John the Baptist  
  
Breton Sound  
Plaquemines  
St. Bernard

#### Region III Teche-Vermilion

Iberia  
St. Mary  
Vermilion  
  
Atchafalaya  
Iberia  
St. Mary  
Terrebonne  
  
Terrebonne  
Assumption  
Iberia  
Lafourche  
St. Martin  
St. Mary  
Terrebonne

#### Region IV Calcasieu-Sabine

Cameron  
Calcasieu  
  
Mermentau  
Cameron  
Vermilion

## **Preliminary Assessment of Nominated Projects**

Agencies, parishes, landowners, and other individuals will informally confer to further develop projects. The lead agency designated for each nominated project will prepare a brief project description that discusses possible features. Factsheets will also be prepared for demonstration project nominees.

During this preliminary assessment, the EngWG and EnvWG meet to review project features, discuss potential benefits, and estimate preliminary fully funded cost ranges for each project. The Work Groups also review the nominated demonstration projects. If it is determined that a demonstration project is unlikely to be utilized in restoration or has been evaluated previously, the Work Groups may recommend to the Technical Committee that these projects not move forward.

The P&E Subcommittee prepares a matrix of cost estimates and other pertinent information for nominees and demonstration project nominees.

## **Selection of Phase 0 Candidate Projects**

The selection of the Phase 0 candidate projects occurs at the spring Technical Committee meeting. The Technical Committee meets to consider the project costs and potential wetland benefits of the nominees. They will select 10 candidate projects regardless of basin and may select up to 3 demonstration project candidates for detailed assessment by the EngWG, EnvWG, and Economic Work Group (EcoWG).

## **Phase 0 Analysis of Candidate Projects**

During Phase 0 analysis, the EngWG, EnvWG and Academic Advisory Group meet to refine project features and develop boundaries for the project and extended boundaries for estimating land loss.

The sponsoring agencies coordinate site visits for each project to observe the conditions in the project area. There will be no site visits conducted for demonstration projects. The sponsoring agencies develop draft WVAs and prepare Phase 1 engineering and design cost estimates and Phase 2 construction cost estimates, using formats approved by the applicable work group. Demonstration project candidates will be evaluated as outlined in Appendix E of the SOP.

The EngWG reviews and approves Phase 1 and 2 cost estimates, the EcoWG reviews cost estimates and develops annualized (fully funded) costs, and the EnvWG reviews and approves all draft WVAs.

The Corps of Engineers staff prepares an information package for Technical Committee review and public distribution consisting of:

- 1) Updated project factsheets;
- 2) A matrix that lists projects, fully funded cost, average annual cost, WVA results in net acres and Average Annual Habitat Units (AAHUs), and cost effectiveness (average annual cost/AAHU);
- 3) A qualitative discussion of supporting partnerships and public support.

## **Selection of the PPL**

The selection of the PPL will occur at the winter Technical Committee and Task Force meetings. The Technical Committee meets and considers matrix, project factsheets, and public comments, then recommends up to 4 projects and up to one demonstration project for selection to the PPL. The Task Force will review the Technical Committee recommendations and determine which projects will receive Phase 1 (design) funding for the PPL.

Once a project completes Phase I, Phase II (construction) funding must be requested from the Task Force and much of the evaluation is updated using additional information gained since original analysis.



## Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA)

### PPL 28 Schedule

January 30, 2018	Region IV Planning Team Meeting (Grand Chenier)
January 31, 2018	Region III Planning Team Meeting (Morgan City)
February 1, 2018	Regions I and II Planning Team Meetings (Lacombe)
February 27, 2018	Coastwide RPT Electronic Vote
March/April 2018	Agencies prepare factsheets for RPT-nominated projects
March/April 2018	Engineering/Environmental Work Groups review project features, benefits, & prepare preliminary cost estimates for nominated projects (Baton Rouge)
April 2018	P&E Subcommittee prepares matrix of nominated projects showing initial cost estimates and benefits
April 12, 2018	Spring Technical Committee Meeting, select PPL 28 candidate projects (New Orleans)
May/June 2018	Candidate project site visits
May 24, 2018	Spring Task Force Meeting (Lafayette)
July/August/ September 2018	Eng/Eng/Econ Work Group project evaluations
September 13, 2018	Fall Technical Committee Meeting, O&M and Monitoring funding recommendations (Baton Rouge)
October 11, 2018	Fall Task Force Meeting, O&M and Monitoring approvals (New Orleans)
October 2018	Economic, Engineering, and Environmental analyses completed for PPL 28 candidates
December 6, 2018	Winter Technical Committee Meeting, recommend PPL 28 and Phase I and II approvals (Baton Rouge)
January 2019	Winter Task Force Meeting, select PPL 28 and approve Phase II requests (New Orleans)

***\*DATES SUBJECT TO CHANGE\****

Visit [www.lacoast.gov/calendar](http://www.lacoast.gov/calendar) for up-to-date information regarding meetings dates, times, & locations.

## **Candidate Projects Located in Region 2**

## **PPL28 East Delacroix Marsh Creation and Terracing**

### **Project Location:**

Region 2, Breton Basin, St Bernard Parish

### **Problem:**

Hurricanes Katrina and Rita caused the majority of wetland loss in the project area. Wind erosion and saltwater intrusion have resulted in loss of marsh vegetation and wetland soils. Marsh loss has increased exposure of Delacroix to flooding from the east/southeast. The 1984 to 2018 USGS loss rate is -1.58%/yr for the extended project boundary area.

### **Goals:**

The project goal is to create and nourish approximately 406 acres of marsh (353 acres creation, 53 acres nourishment) and construct approximately 12,950 linear feet of terraces (approximately 8 acres) utilizing a layout to help protect the community of Delacroix.

### **Proposed Solution:**

Sediment would be hydraulically dredged from Lake Lery and placed in two confined disposal areas creating 353 acres of marsh and nourishing 53 acres of existing marsh. Two creation cells allow a channel for the existing pump station. Approximately 12,950 ft of earthen terraces would be constructed. Terraces would be planted with appropriate bare root plants 2.5 ft apart in one row per side and crown. Created marsh will not be planted. Containment dikes will be gapped no later than three years after construction. The cost includes maintenance dredging of the pump station channel at year 10. Material would be stacked on remnant dikes along the channel so as not to fill marsh. Two additional areas of deteriorating marsh south and east of the proposed project will be investigated should the project be considered for further evaluation. Therefore, data acquisition for Engineering & Design will include an additional 114 ac to allow flexibility for analysis of these alternate features.

### **Project Benefits:**

The project would result in approximately 314 net acres over the 20-year project life.

### **Project Costs:**

The total fully-funded cost is \$39,838,424.

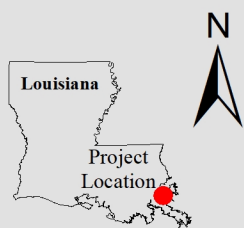
### **Preparer of Fact Sheet:**




Brandon Howard, NOAA-Fisheries, [Brandon.Howard@noaa.gov](mailto:Brandon.Howard@noaa.gov), 225-389-0508

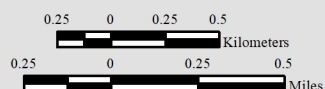




## East Delacroix Marsh Creation and Terracing (PPL28 Candidate)



-  Marsh Creation \*
  -  Terrace Field \*
  -  Project Boundary
- \* denotes proposed features



Scale: 1:35,000

Map ID: 2018-11-0019  
Map Date: May 31, 2018

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

Image Source:  
2017 NAIP



## **PPL28 Breton Landbridge Marsh Creation (West), River aux Chenes to Grand Lake**

### **Project Location:**

Region 2, Breton Basin, Plaquemines Parish

### **Problem:**

Historically, this area was nourished by the freshwater delivered by the Mississippi River until the creation of the levees along the lower river. In 1991, the Caernarvon Freshwater Diversion began delivering freshwater to the marshes in the area. The major cause of wetland loss has been to storm activity (i.e. Hurricanes Betsy and Katrina), causing both storm-induced scouring and salt water intrusion. Altered hydrology and oil/gas development have exacerbated this loss. High subsidence rates range from 2.1-3.5 ft/century. Natural lakes and bays increase in size due to coalescence with marsh lost to water and increased wave fetch. The 1984 to 2016 USGS loss rate is -1.76%/yr for the extended boundary area.

### **Goals:**

The project goals are to restore 423 acres of marshes and bank lines along the south side of Grand Lake. The proposed first phase would address the critical reach of the landbridge by restoring the Grand Lake shoreline. This project is part of an overall, long-range, restoration goal which would create/nourish 1,000 to 2,000 acres of intermediate marsh across 7 miles of the Breton Basin from River aux Chenes to Bayou Terre aux Bouefs.

### **Proposed Solution:**

There will be 326 of marsh creation and 97 acres and marsh nourishment, respectively, via confined disposal in four disposal areas of sediment dredged from Grand Lake. Three disposal areas will be fronted by constructing a lakeside berm. The berm would be constructed with a combination of bucket dredge and marsh buggies. The lakeside slope of the berm would be planted with appropriate vegetation. The marsh creation acres would not be planted. The non-lakeside portions of the dikes will be gapped no later than three years post construction (i.e., the lakeshore berm would not be gapped). Data will be acquired from 224 additional acres to allow flexibility for an analysis of alternate features.

The overall landbridge concept incorporates marsh and shoreline restoration in a west-to-east configuration across the basin to be completed in two to three phases. Once restored, the land-bridge would reduce the potential for coalescence of Lake Lery with Grand Lake and Lake Petit.

### **Project Benefits:**

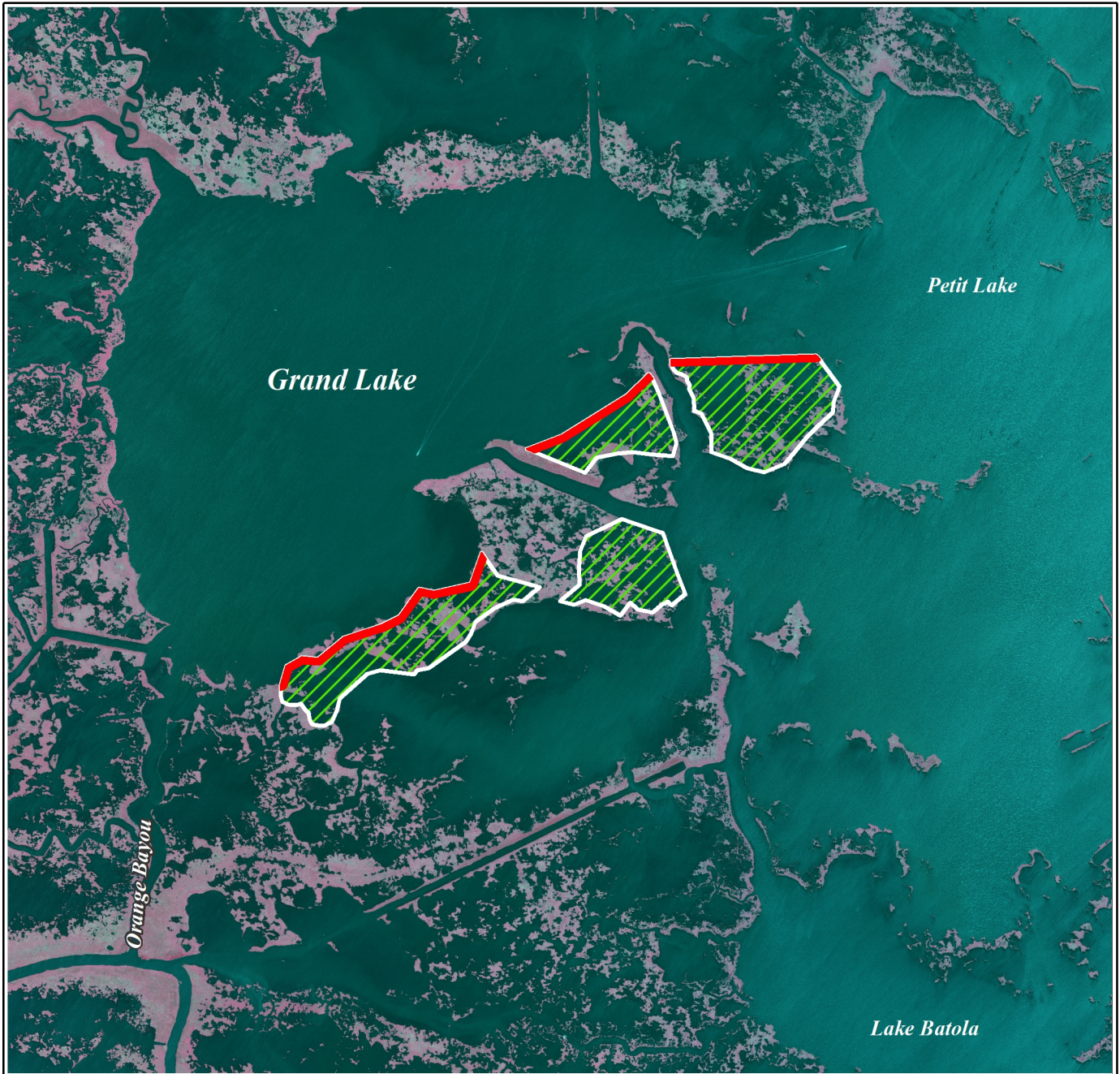
The project would result in approximately 272 net acres over the 20-year project life.

### **Project Costs:**

The total fully-funded cost is \$37,538,544.

### **Preparer of Fact Sheet:**

Brandon Howard, NOAA-Fisheries, [Brandon.Howard@noaa.gov](mailto:Brandon.Howard@noaa.gov), 225-389-0508



# **Breton Landbridge Marsh Creation (West), River aux Chenes to Grand Lake (PPL28 Candidate)**

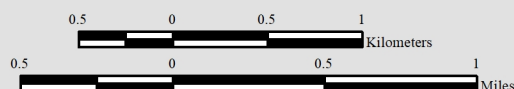


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U.S. Geological Survey  
National Wetlands Research Center  
Coastal and Oceanic Restoration Branch  
Baton Rouge, LA

Image Source:  
2017 NAIP



-  Earthen Berm \*
  -  Marsh Creation \*
  -  Project Boundary
- \* denotes proposed features



Scale: 1:40,000

Map ID: 2018-11-0018  
Map Date: May 31, 2018



## **PPL28 Bayou Terre aux Boeufs Ridge Restoration and Marsh Creation**

### **Project Location**

Region 2, Breton Sound Basin, Plaquemines Parish, west of bayou Terre Aux Boeufs

### **Problem**

Historic ridge habitat loss occurs in the form of subsidence and shoreline erosion along Bayou Terre aux Boeufs (BTAB). The shoreline erosion is caused by boat traffic from recreational and commercial vessels. The ridge is subsiding due to anthropogenic and natural processes. The habitat associated with ridges in Louisiana is Live Oak Hackberry forest. This ecosystem is utilized by trans-gulf migratory bird species as a first and last stop when crossing the Gulf of Mexico. This critical habitat is rated as S1 and S2 priority by the state of Louisiana. Interior marsh loss in the project site is caused by subsidence, increased tidal prism and salinities due to construction of access and or transmission canals. The BTAB ridge is the barrier that separates brackish from intermediate marsh in the Breton Basin. Loss of this hydrological barrier could pose greater threats to already diminishing intermediate marshes. Based on the hyper-temporal analysis (1985-2018) conducted by USGS loss rates are estimated to be -0.65% per year.

### **Goals**

The primary goals of this project are: 1) create forested, coastal ridge habitat along the western bank of Bayou Terre aux Boeufs, and 2) restore marsh habitat in the open water areas via marsh creation and marsh nourishment. Specific goals of the project are: 1) Create approximately 28,218 linear feet (22 acres) of forested ridge; and 2) create approximately 286 acres and nourish approximately 249 acres of marsh with dredged material from Cochon Bay.

Related goals include restoration/protection of habitat for threatened and endangered species and other at-risk species. This project would restore habitat potentially utilized by the black rail, saltmarsh topminnow, and Louisiana eyed silkmoth, which are petitioned for listing as threatened/endangered species. The project could also benefit other species of concern including the seaside sparrow and neotropical migrants.

### **Proposed Solution**

Lake sediments will be hydraulically dredged and pumped via pipeline to create 286 acres of marsh and nourish 249 acres of marsh. The bayou will be mechanically dredge to create 28,214 linear feet (22 acres) of ridge habitat. Containment dikes will be gapped and the ridge will be planted.

### **Project Benefits**

The project would result in approximately 283 net acres of marsh and ridge habitat over the 20-year project life.

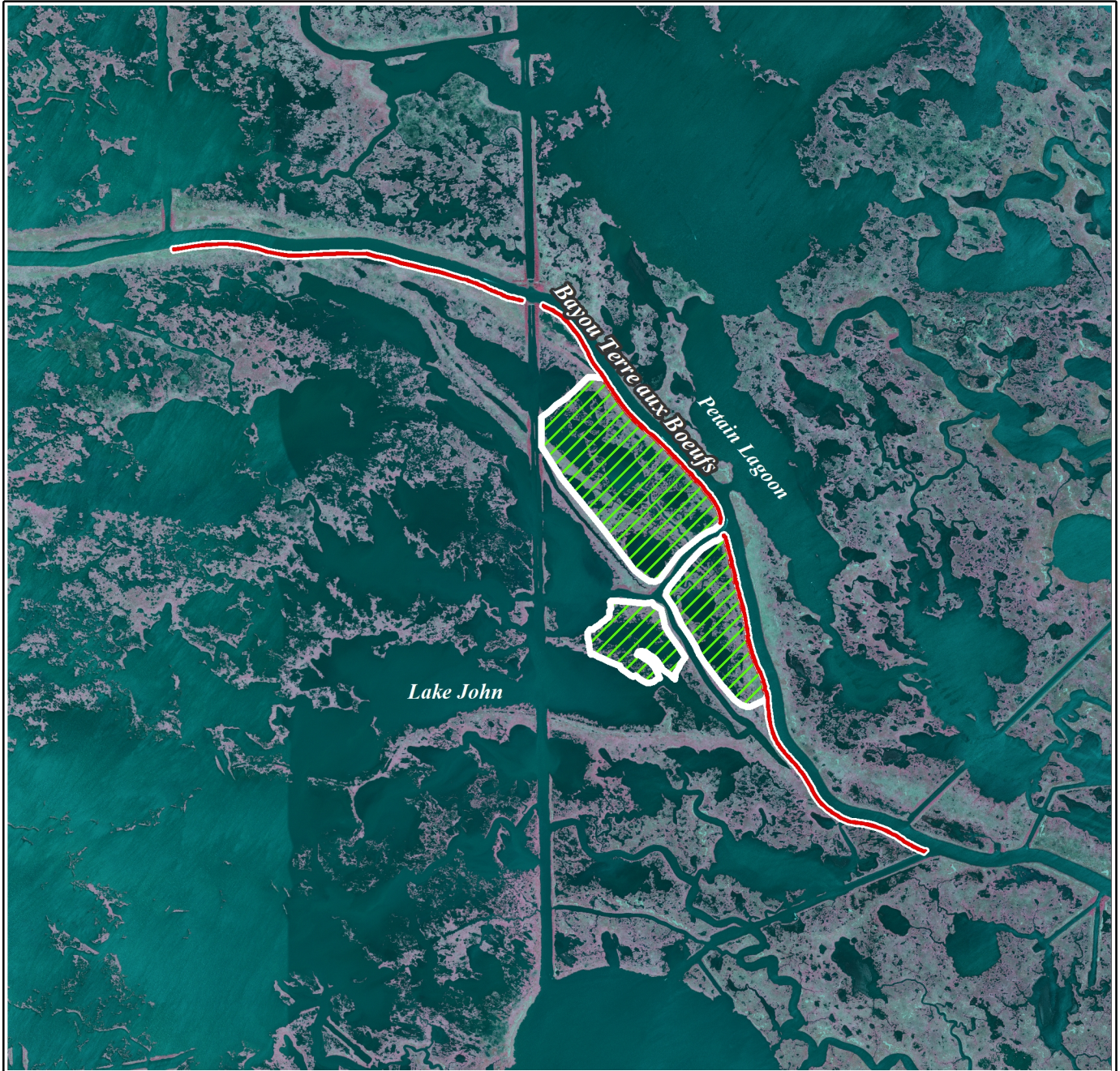
### **Preliminary Cost**

The total fully-funded cost is \$38,432,042

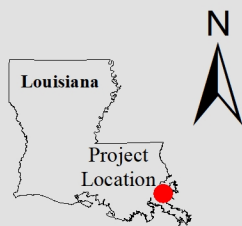
### **Preparer of Fact Sheet**

Ron Boustany, USDA/NRCS, [ron.boustany@la.usda.gov](mailto:ron.boustany@la.usda.gov)





## Bayou Terre aux Boeufs Ridge Restoration and Marsh Creation (PPL28 Candidate)



Marsh Creation \*

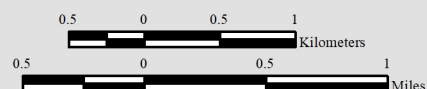


Ridge Restoration \*



Project Boundary

\* denotes proposed features



Scale: 1:50,000



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U.S. Geological Survey  
National Wetlands Research Center  
Coastal and Oceanic Restoration Branch  
Baton Rouge, LA

Image Source:  
2017 NAIP

Map ID: 2018-11-0021  
Map Date: May 31, 2018



## **PPL28 Grand Bayou Ridge and Marsh Restoration**

### **Project Location:**

Region 2, Barataria Basin, Plaquemines Parish

### **Problem:**

Within the Lake Hermitage basin, between Bayou Grande Cheniere and the Mississippi River, significant marsh loss has occurred with the construction of oil/gas canals, subsidence, and sediment deprivation. From examination of aerial photography, the majority of this loss occurred during the 1960s and 1970s when numerous oil/gas canals were dredged in the area. Based on the hyper-temporal analysis conducted by USGS for the extended project boundary, the land loss rate in the project area is -1.12% per year for the period 1984 to 2018.

### **Goals:**

The primary goals of this project are; 1) restore marsh habitat in the open water areas via marsh creation and terracing and 2) restore forested ridge habitat along Grand Bayou.

Specific goals of the project are: 1) Create approximately 356 acres (344 acres of creation; 12 acres of nourishment) of marsh with dredged material from the Mississippi River; 2) create 25,000 linear feet (19 acres) of terraces; 3) Create 10,657 linear feet (13 acres) of forested ridge habitat.

### **Proposed Solution:**

Sediments from the Mississippi River will be hydraulically dredged and pumped via pipeline to create/nourish approximately 356 acres of marsh. The proposed design is to place the dredged material to a fill height of +1.1 ft NAVD88 (per the BA-42 Lake Hermitage Marsh Creation Project). Containment dikes will be gapped at the end of construction.

Approximately 25,000 linear feet of terraces (19 acres) will be constructed in open water areas west of Grand Bayou (Figure 1). Terraces will have a 15-ft crown width, a height of +2.5 ft NAVD88, and side slopes of 1(V):4(H). The terraces will be planted with seashore paspalum on the crown and smooth cordgrass on the side slopes.

Approximately 10,657 linear feet (13 acres) of forested ridge will be created along the western bank of Grand Bayou using material from the bayou. The ridge will be constructed to a crown elevation of +4.0 feet NAVD88, 25 feet wide, and will be planted on the crown and slopes.

### **Project Benefits:**

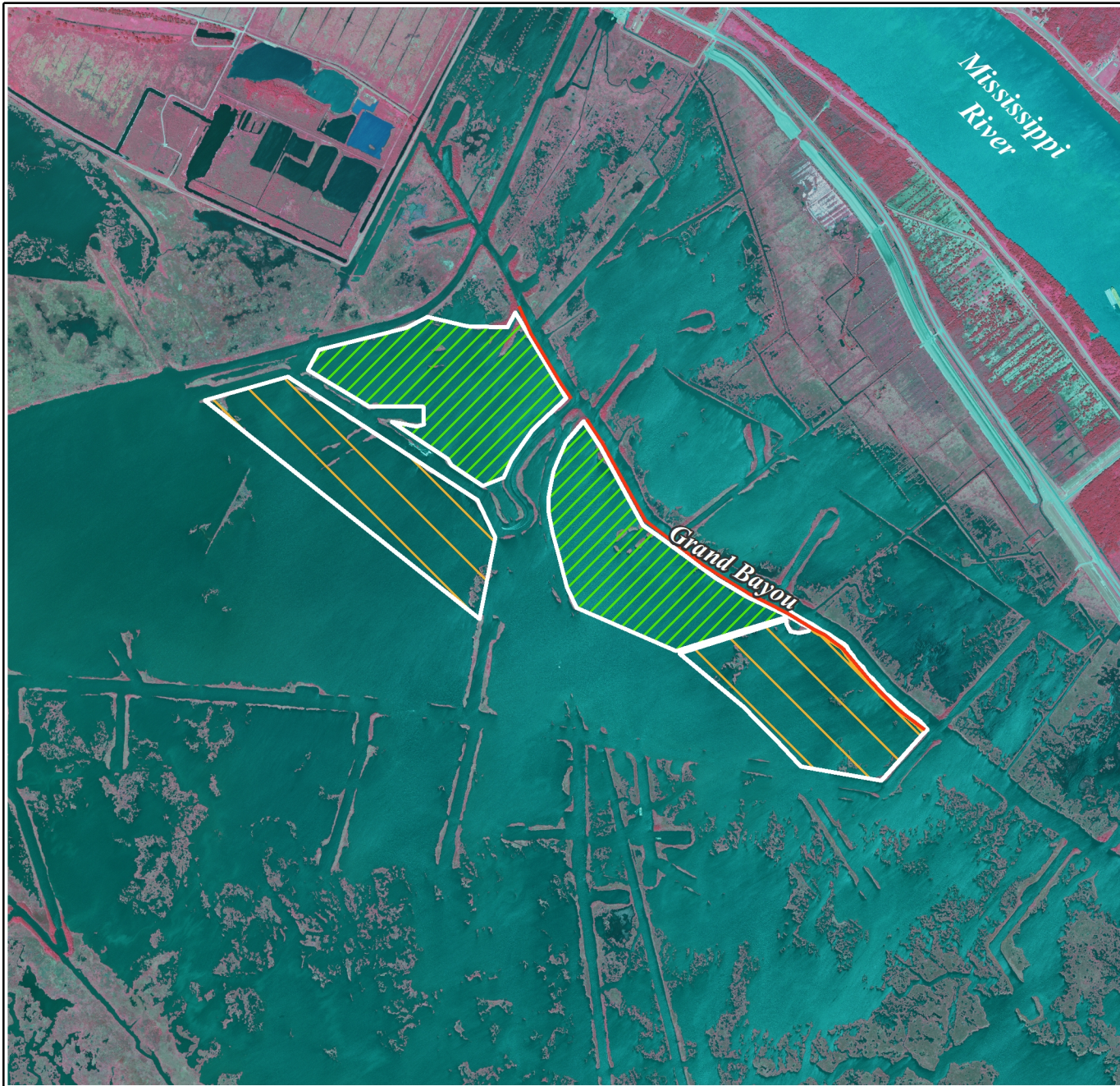
The project would result in approximately 336 net acres over the 20-year project life.

### **Project Costs:**

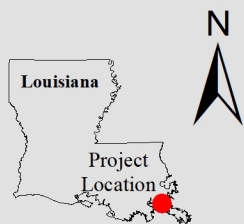
The total fully-funded cost is \$41,795,419.

### **Preparer of Fact Sheet:**

Kevin Roy, FWS, [Kevin\\_Roy@fws.gov](mailto:Kevin_Roy@fws.gov), 337-291-3120

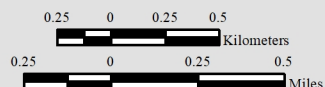


## Grand Bayou Ridge and Marsh Restoration (PPL28 Candidate)



-  Ridge Restoration \*
-  Marsh Creation \*
-  Terrace Field \*
-  Project Boundary

\* denotes proposed features



Scale: 1:35,000

Map ID: 2018-11-0020  
Map Date: May 31, 2018

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

Image Source:  
2017 NAIP

## **Candidate Projects Located in Region 3**



## **PPL28 East Catfish Lake Marsh Creation and Shoreline Protection**

### **Project Location:**

Region 3, Terrebonne Basin, Lafourche Parish

### **Problem:**

Significant marsh loss has occurred east and south of Catfish Lake. Causes of marsh loss include the construction of numerous oil/gas canals, subsidence, and sediment deprivation. Between Catfish Lake and the Golden Meadow Hurricane Protection Levee, very little marsh remains after the construction of an extensive network of oil/gas canals. Much of the remaining land in this area consists of spoil banks and isolated patches of marsh. From examination of aerial photography, the majority of this loss occurred during the 1960s and 1970s. Based on the hyper-temporal analysis conducted by USGS for the extended project boundary, the land loss rate in the project area is -1.08% per year for the period 1984 to 2018. Shoreline erosion rates (1998-2017) range from 10 ft/yr along the eastern lake shoreline to 22 ft/yr along the southern lake shoreline.

### **Goals:**

The primary goals of this project are; 1) restore marsh habitat in the open water areas east and south of Catfish Lake, and 2) restore and protect the eastern and southern Catfish Lake shoreline.

The specific goals of this project are; 1) create 235 acres of marsh, 2) nourish 71 acres of marsh, 3) protect the marsh creation cells from shoreline erosion.

### **Proposed Solution:**

Sediments from Catfish Lake will be hydraulically dredged and pumped via pipeline to create/nourish 306 acres of marsh. Dewatering and compaction of dredged sediments should produce elevations conducive to the establishment of emergent marsh and within the intertidal range. Containment dikes will be constructed around each marsh creation cell. Where practicable, material will be borrowed from perimeter oil/gas canals. Containment dikes will be gapped at the end of construction or by TY3. Approximately 2,566 linear feet of sheet pile wall will also be installed as a containment feature.

Approximately 12,479 linear feet of shoreline protection (gabion mattresses) will be installed along the lakeside boundary of the marsh creation cells on the constructed containment dikes.

### **Project Benefits:**

The project would result in approximately 244 net acres over the 20-year project life.

### **Project Costs:**

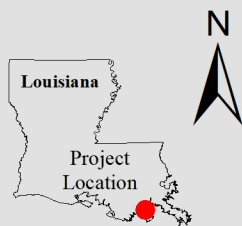
The total fully-funded cost is \$40,448,993.




### **Preparer of Fact Sheet:**

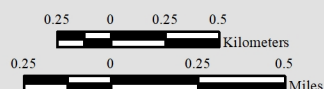
Kevin Roy, FWS, [Kevin\\_Roy@fws.gov](mailto:Kevin_Roy@fws.gov), 337-291-3120



## East Catfish Lake Marsh Creation and Shoreline Protection (PPL28 Candidate)



-  Shoreline Protection \*
  -  Marsh Creation \*
  -  Project Boundary
- \* denotes proposed features



Scale: 1:35,000



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

Image Source:  
2017 NAIPQ

Map ID: 2018-11-0017  
Map Date: May 31, 2018

## **PPL28 Small Bayou LaPointe Marsh Creation**

### **Project Location:**

Region 3, Terrebonne Basin, Terrebonne Parish

### **Problem:**

Examination of historical aerial photography clearly indicates significant marsh loss in the vicinity of the project area, particularly in the area between Small Bayou LaPointe and Bayou DeCade. Subsidence, canal dredging, saltwater intrusion, storms, and altered hydrology are all important factors contributing to marsh loss in the area. USGS calculated a 1984-2018 land change rate of -0.41% per year for the extended boundary north of Small Bayou LaPointe and -0.39% per year south of the bayou.

### **Goals:**

The primary goals of this project are; 1) restore marsh habitat in areas of open water and deteriorated marsh along Small Bayou LaPointe and 2) continue with the concept of the North Lake Mechant Landbridge with an eastward extension of the TE-44 project.

The specific goals of this project are; 1) create 257 acres of marsh and 2) nourish 54 acres of marsh. Service goals include restoration/protection of habitat for threatened and endangered species and other at-risk species. This project would restore habitat potentially utilized by the black rail which is petitioned for listing as a threatened/endangered species. The project could also benefit other at-risk species including the seaside sparrow and mottled duck, both priority species for the Gulf Coast Joint Venture.

### **Proposed Solution:**

Two marsh creation areas (MCA) are proposed totaling 311 acres (Figure 1). MCA1 is located north of Small Bayou LaPointe and MCA2 is located east of the bayou. Both MCAs are adjacent to the marsh platform which now exists along the historical Small Bayou LaPointe ridge. Sediments from Lake DeCade will be hydraulically dredged and pumped via pipeline to create marsh in open water and nourish existing marsh. Dewatering and compaction of dredged sediments should produce elevations conducive to the establishment of emergent marsh and within the intertidal range. Containment dikes will be constructed around each marsh creation cell. Where practicable, material for containment dikes will be borrowed from outside the marsh creation cells. Containment dikes will be gapped at the end of construction or by TY3.

### **Project Benefits:**

The project would result in approximately 249 net acres over the 20-year project life.

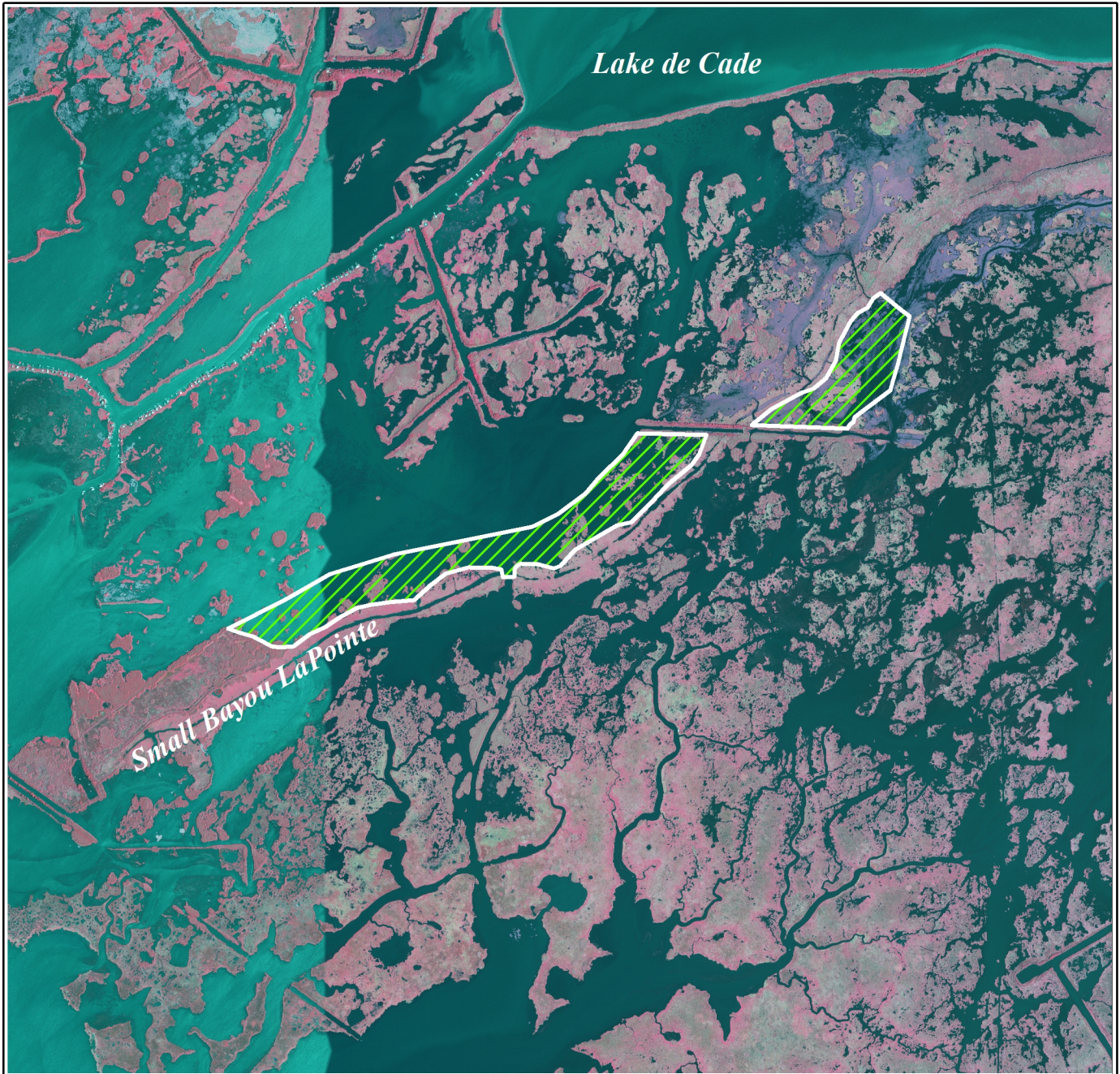
### **Project Costs:**

The total fully-funded cost is \$34,575,172.

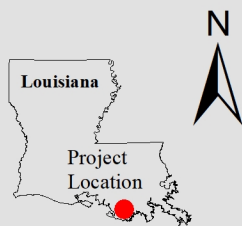
### **Preparer of Fact Sheet:**



Kevin Roy, FWS, [Kevin\\_Roy@fws.gov](mailto:Kevin_Roy@fws.gov), 337-291-3120

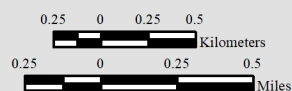




## Small Bayou LaPointe Marsh Creation (PPL28 Candidate)



-  **Marsh Creation \***
-  **Project Boundary**
- \* denotes proposed features**



Scale: 1:40,000

Map ID: 2018-11-0030  
Map Date: August 13, 2018

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

Image Source:  
2017 NAIP



## **PPL28 North Marsh Restoration (North Increment)**

### **Project Location:**

Region 3, Teche-Vermilion, Vermilion Parish

### **Problem:**

Project area wetlands are undergoing losses at -0.86%/year based on 1985 to 2018 USGS hypotemporal data. Marshes in this area are subject to losses from subsidence/sediment deficit, seasonal saltwater intrusion, shoreline erosion, and altered hydrology from levees and increased connectivity with Freshwater Bayou Canal. Interior marshes are fragmenting with erosion and submergence. The result is plant stress reducing marsh productivity. Disturbances to the landscape from hurricanes and herbivory have resulted in the breakup and export of interior marsh. Erosion is leading to higher water turbidity within the interior ponds, increased pond width and depth, and decreasing coverage of submerged aquatic vegetation. It is unlikely these areas will recover unaided. If left to deteriorate, the project vicinity could eventually open into Freshwater Bayou risking conversion of larger interior marsh areas to open water.

### **Goals:**

The project goal is to create and nourish approximately 239 acres of marsh, protect 5,952 feet of shoreline, and construct approximately 16,100 linear feet of terraces (~16 emergent acres).

### **Proposed Solution:**

There will be 189 and 50 acres of marsh creation and nourishment, respectively, using dedicated dredging of sediment mined from the Gulf of Mexico and confined disposal. The borrow area would be designed to avoid adverse impacts to the Gulf shoreline and sited to not mine the same area as ME-31. In addition to marsh creation, approximately 5,952 linear feet of foreshore rock dike would be constructed in three segments along Freshwater Bayou Canal to protect the channel bank lines from erosion. The dike segments tie into existing spoil banks to maintain access to existing oil and gas canals and slips. Additionally, three gaps in the rock are included to maintain tidal exchange and fish access. The gaps are protected by an offset section of rock. The rock dike would be constructed similarly to the recent CIAP project on the west side of the channel. Also, 16,100 linear feet of terraces would be constructed. The terrace slopes and crown would be planted with appropriate marsh vegetation. Containment dikes would be gapped.

The project is the first increment of three within a conceptual comprehensive plan to address critical wetland loss on the east side of Freshwater Bayou Canal. The plan uses three restoration techniques that are scaled to be cost competitive given practicalities of options for borrow areas.

### **Project Benefits:**

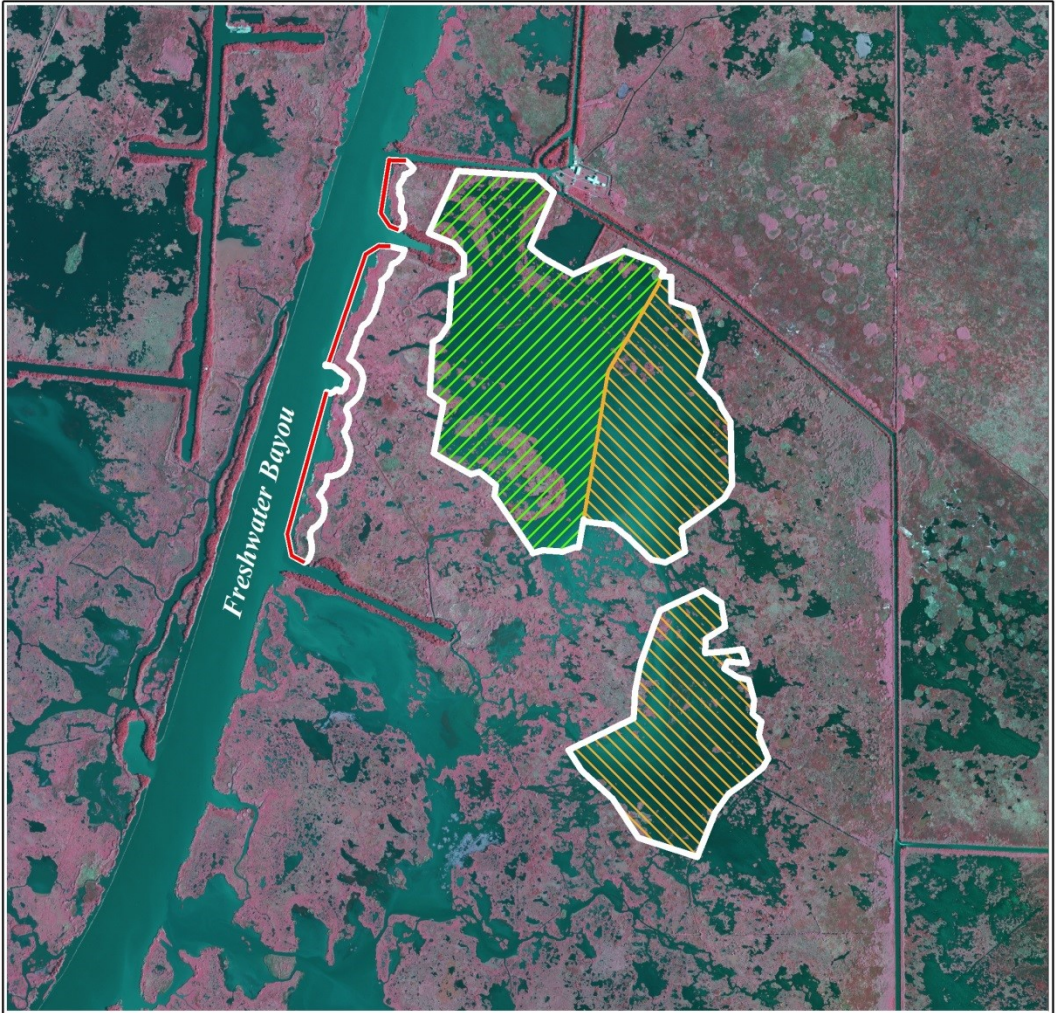
The project would result in approximately 217 net acres over the 20-year project life.

### **Project Costs:**

The total fully-funded cost is \$ 41,142,554.





### **Preparer of Fact Sheet:**

Dawn Davis, NOAA-Fisheries, [Dawn.Davis@noaa.gov](mailto:Dawn.Davis@noaa.gov), 225-389-0508



## North Marsh Restoration (North Increment) (PPL28 Candidate)



-  Shoreline Protection \*
-  Marsh Creation/Nourishment \*
-  Terrace Field \*
-  Project Boundary

\* denotes proposed features



Scale: 1:25,000

Map ID: 2018-11-0029  
Map Date: July 11, 2018

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

Image Source:  
2017 NAIP

## **Candidate Projects Located in Region 4**



## **PPL28 Southeast White Lake Marsh Creation**

### **Project Location:**

Region 4, Mermentau Basin, Vermilion Parish

### **Problem:**

Examination of aerial photography clearly indicates significant marsh loss has recently occurred in the project area. Historically, the project area has been very stable with very little wetland loss. However, it is believed that several high-water events during 2015 to 2017 led to marsh detachment and extensive wetland loss throughout the area. USGS calculated a 1984-2018 loss rate of -0.77% per year for the extended project boundary.

### **Goals:**

The primary goal of this project is to restore marsh habitat in areas of open water and deteriorated marsh. Specific goals are to; 1) create 450 acres of marsh and 2) nourish 368 acres of marsh.

Service goals include restoration/protection of habitat for threatened and endangered species and other at-risk species. This project would restore habitat potentially utilized by the black rail which is petitioned for listing as a threatened/endangered species.

### **Proposed Solution:**

Two marsh creation areas (MCA) are proposed totaling 818 acres (Figure 1). MCA1 (608 acres) is located between White Lake and an access canal which runs southwest-northeast across the project area. MCA2 (210 acres) is located to the east of the access canal. Sediments from White Lake will be hydraulically dredged and pumped via pipeline to create marsh in open water and nourish existing marsh. Dewatering and compaction of dredged sediments should produce elevations conducive to the establishment of emergent marsh and within the intertidal range. Containment dikes will be constructed around each marsh creation cell. Where practicable, material will be borrowed from outside the marsh creation cells. Containment dikes will be gapped at the end of construction or by TY3.

### **Project Benefits:**

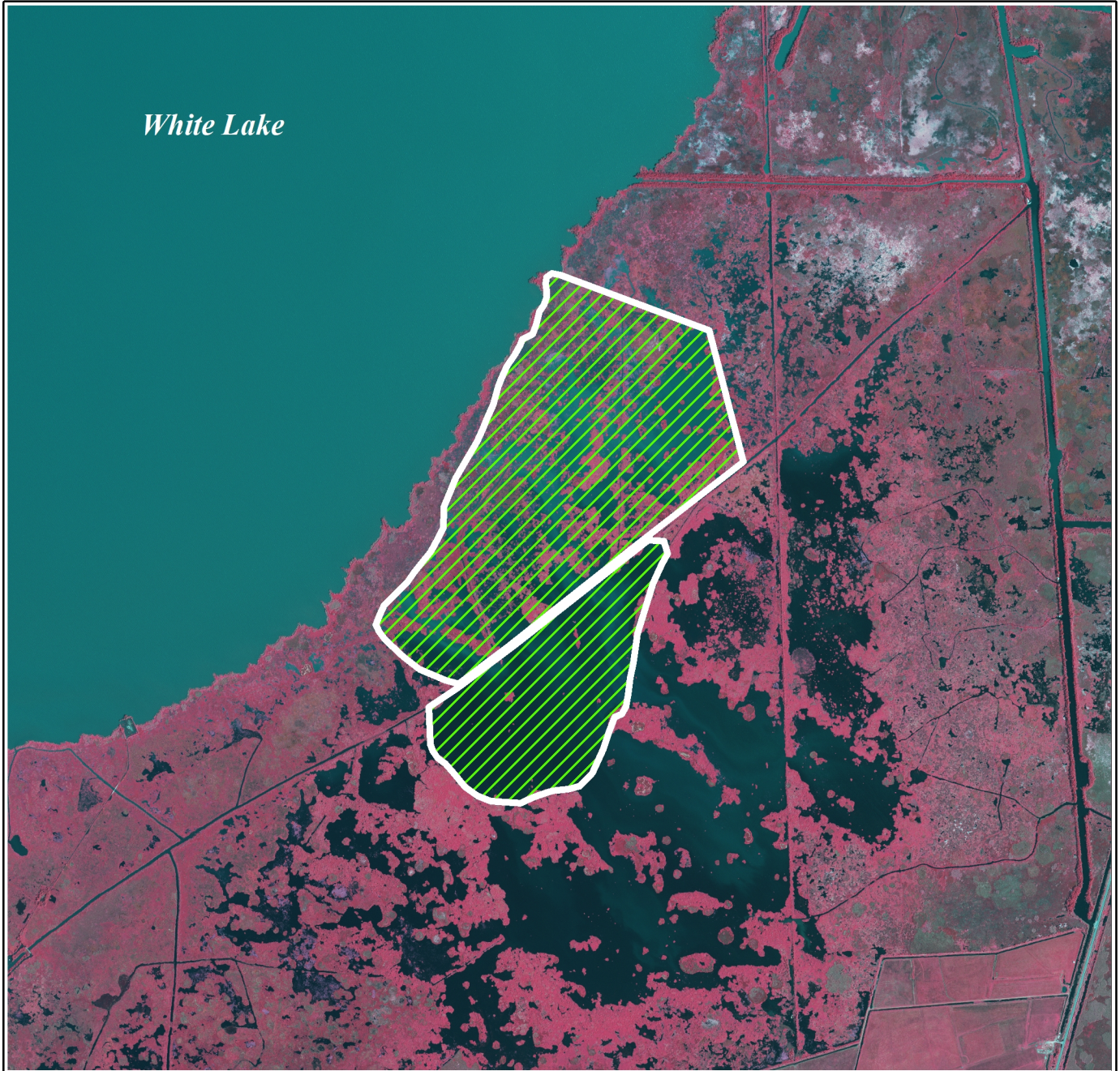
The project would result in approximately 444 net acres over the 20-year project life.

### **Project Costs:**

The total fully-funded cost is \$25,887,192.



### **Preparer of Fact Sheet:**

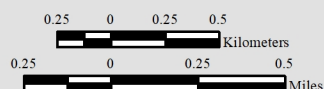
Kevin Roy, FWS, [Kevin\\_Roy@fws.gov](mailto:Kevin_Roy@fws.gov), 337-291-3120



## Southeast White Lake Marsh Creation (PPL28 Candidate)



-  Marsh Creation \*
-  Project Boundary
- \* denotes proposed features



Scale: 1:35,000

Map ID: 2018-11-0023  
Map Date: August 13, 2018

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

Image Source:  
2017 NAIP

## **PPL28 Long Point Bayou Marsh Creation**

### **Project Location:**

Region 4, Calcasieu/Sabine Basin, Cameron Parish, approximately 4 miles south of Hackberry between LA Highway 27 and Calcasieu Ship Channel.

### **Problem:**

The project area is in an area that has been influenced by saltwater intrusion, increased water fluctuations and erosion. Human alterations have disrupted the hydrologic processes which contributed to wetland building and maintenance, while subsidence and sea level rise continues. Almost all fresh marsh was converted to intermediate and brackish by the late 1970s as a result of saltwater intrusion and increased tidal influence. Land loss rates within the project area now show a positive trend; the experimental land change analysis conducted by USGS for the extended project boundary shows a land gain of +0.21% per year (1985 to 2017) in the project area. Historical topographic maps show that the area was nearly all land in 1955.

### **Goals:**

The project goal is to create and/or nourish approximately 392 acres (create 340 acres and nourish 52 acres) of emergent brackish marsh through beneficial use dredged material from the Calcasieu Ship Channel. Eight acres of tidal creeks will also be included. The Environmental Protection Agency's strategic plan goals include "Work with partners to protect and restore wetlands and coastal and ocean water resources."

In addition, this project would restore habitat potentially used by the saltmarsh topminnow and black rail, which are petitioned/proposed for Federal listing as threatened/endangered species. The project may also benefit neotropical migratory birds.

### **Proposed Solution:**

This project will create/nourish 392 acres of marsh near Long Point Bayou and just north of the Sabine National Wildlife Refuge. This project will beneficially use dredged material from the Calcasieu Ship Channel or other locations and placed into shallow open water sites within the project area. Constructed containment dikes would be breached/gapped as needed to provide tidal exchange after fill materials settle and consolidate. The project would create 340 acres of marsh and nourish at least 52 acres of existing fragmented marsh. A target fill elevation of +1.14 feet (NAVD88) is envisioned to enhance longevity of this land form. Additionally, 196 acres of vegetative plantings and 8 acres of tidal creeks will be included.

### **Project Benefits:**

The project would result in approximately 332 net acres over the 20-year project life.

### **Project Costs:**

The total fully-funded cost is \$13,000,363

### **Preparer of Fact Sheet:**



Sharon L. Osowski-Morgan, Ph.D., EPA; (214) 665-7506; osowski.sharon@epa.gov  
Brad Crawford, EPA; (214) 665-7255; crawford.brad@epa.gov

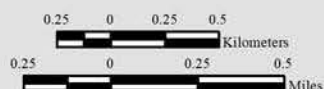




## Long Point Bayou Marsh Creation (PPL28 Candidate)



-  Marsh Creation \*
-  Project Boundary
- \* denotes proposed features



Scale: 1:35,000

Map ID: 2018-11-0022  
Map Date: May 31, 2018

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

Image Source:  
2017 NAIP

## **Candidate Coastwide Projects**

## **PPL28 Coastwide Hydrologic Improvements Project**

### **Project Location:**

Coastwide

### **Problem:**

For decades, the natural hydrology and tidal flows of the Louisiana coast have been altered by development, oil and gas exploration, wetland management techniques, as well as storms, erosion, and other manmade and natural processes. These alterations can take various forms such as installation of dikes, roadways, levees, and other barriers, inadequate or failing culverts and water-control structures, etc. These modifications reduce or restrict tidal or freshwater exchanges and change the structure and function of coastal habitats, which can eliminate nursery grounds for important marine and coastal species. Coastal marshes have been altered, degraded, and lost. By focusing restoration efforts in relatively small footprints, such as removing barriers to tidal flow or freshwater exchange, hundreds or even thousands of acres of coastal marshes can be positively impacted. The wetland loss rate for the project area is  $-0.77\%$  per year based on averages of existing hydrologic projects.

### **Goals:**

Restore and/or improve hydrology to coastal marshes through increasing freshwater, nutrient and sediment inputs, and tidal exchange. The project will also strive to increase fisheries access to unused or underutilized nursery habitat, increase the functionality of coastal marsh habitats, and improve water quality.

### **Proposed Solution:**

Installation, improvement, replacement, repair, removal of water control structures (for example culverts, weirs, plugs, dikes, spoil banks, etc.). Freshwater conveyance by dredging (using material beneficially). This project will provide a funding mechanism to implement hydrologic restoration projects within the scale of the CWPPRA program. Implementation of this project is cyclical (five implementation cycles; one every three years). The project is not intended to provide for construction or maintenance of other funded projects with existing O&M funding mechanisms. The project will not provide funds for design or construction of water control features which would place new areas under management and further restrict flows and/or fisheries access. The project is not intended to rebuild deteriorated marsh management units and further restrict flows and/or fisheries access.

### **Project Benefits:**

The project would result in approximately 220 net acres over the 20-year project life.

### **Project Costs:**

The total fully funded cost is \$ 25,505,424.

### **Preparer of Fact Sheet:**

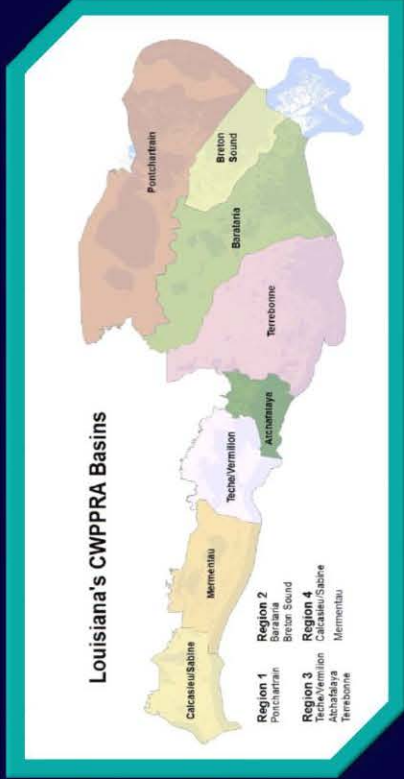
Donna Rogers, Ph.D.; NOAA Fisheries, 225-636-2095, [Donna.Rogers@noaa.gov](mailto:Donna.Rogers@noaa.gov)  
Jason Kroll; NOAA Fisheries, 225-757-5411, [Jason.Kroll@noaa.gov](mailto:Jason.Kroll@noaa.gov)



# PPL28 Coastwide Hydrologic Improvements Candidate Project



30





## **Candidate Demonstration Projects**

## **PPL28 Demonstration Project ShoreFlex II**

### **Project Location:**

Coastwide: Shorelines of banks, terraces, and earthen berms

### **Problem:**

Many Louisiana coastal restoration projects contain shorelines susceptible to erosion due to wave fetch, boat wakes, and currents. Installing heavy protective materials such as articulated concrete mats or rock can require access dredging and weak soils may not support these heavy materials. Newly constructed restoration projects may lose valuable acreage to erosion.

### **Goals:**

The proposed demonstration project would stabilize existing shoreline features and effectively stop erosion, but preserve vegetated edge habitat. The goal of the proposed demonstration project is to provide a low-cost method to create vegetated shorelines that are resistant to erosion.

### **Proposed Solution:**

ShoreFlex II is a cable tied concrete block erosion control mat; mat dimensions and block density can be adjusted to site conditions and to increase the amount of openings. The matrix consists of concrete blocks strung in a staggered brick pattern to control erosion. ShoreFlex II mats weigh 11 lbs/SF, compared to 45 lbs/SF for standard open cell Articulated Concrete Block (ACB) open cell mats. ShoreFlex II is designed with approximately 30 percent open area to facilitate vegetation growth; ACB open cell mats have 15 to 20 percent open area and a geotextile backing (necessary due to the weight). Vegetation can be planted in the gaps between the ShoreFlex II blocks, or natural vegetation can grow through the openings.

The demonstration would include the selection of three replicate eroding shoreline sites for each of the three shoreline treatments: ShoreFlex II, standard open cell ACB mats, and unprotected eroding shoreline. Each shoreline treatment would include three replicate 504-foot sections for a total installation of 1,512 linear feet. Project effectiveness would be monitored and evaluated after construction according to the CWPPRA workgroup recommendation for this product in Phase 0. The conceptual treatments are shown in Figure 1.

### **Project Costs:**

The total fully funded cost is \$3,854,572.

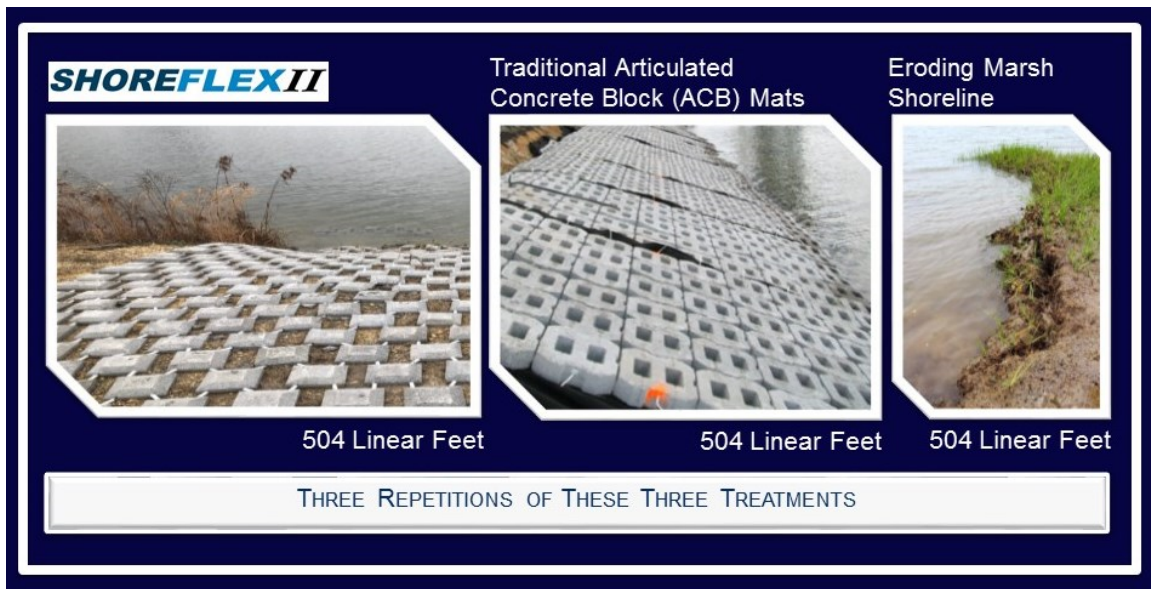
### **Preparer(s) of Fact Sheet:**

Donna Rogers, Ph.D.; NOAA Fisheries, 225-636-2095, [Donna.Rogers@noaa.gov](mailto:Donna.Rogers@noaa.gov)

Jason Kroll; NOAA Fisheries, 225-757-5411, [Jason.Kroll@noaa.gov](mailto:Jason.Kroll@noaa.gov)

Cody Colvin; Industrial Fabrics, Inc., 225-328-0545, [ccolvin@ind-fab.com](mailto:ccolvin@ind-fab.com)

**Figure: 1. Shoreline Treatments: ShoreFlex II, Traditional ACB Mats, and Eroding Marsh Shoreline**





## PPL28 Candidate Project Evaluation Matrix

11/14/2018

Project Name	Region	Parish	Project Area (acres)	Average Annual Habitat Units (AAHU)	Net Acres	Total Fully Funded Cost	Fully-Funded Phase I Cost	Fully-Funded Phase II Cost incl O&M	Average Annual Cost (AAC)	Cost Effectiveness (AAC/AAHU)	Cost Effectiveness (Cost/Net Acre)
East Delacroix Marsh Creation and Terracing	2	St. Bernard	597	140	314	\$39,838,424	\$3,642,501	\$36,195,923	\$2,462,343	\$17,588	\$126,874
Breton Landbridge Marsh Creation (West)	2	Plaquemines	423	107	272	\$37,538,544	\$3,837,364	\$33,701,180	\$2,340,859	\$21,877	\$138,009
Bayou Terre aux Boeufs Ridge Restoration and Marsh Creation	2	Plaquemines	557	154	283	\$38,432,042	\$3,693,215	\$34,738,827	\$2,406,549	\$15,627	\$135,802
Grand Bayou Ridge and Marsh Restoration	2	Plaquemines	719	171	336	\$41,795,419	\$3,463,474	\$38,331,945	\$2,562,817	\$14,987	\$124,391
East Catfish Lake Marsh Creation and Shoreline Protection	3	Lafourche	306	130	244	\$40,448,993	\$3,159,421	\$37,289,572	\$2,396,570	\$18,435	\$165,775
Small Bayou LaPointe Marsh Creation	3	Terrebonne	311	88	249	\$34,575,172	\$2,798,869	\$31,776,303	\$2,145,311	\$24,379	\$138,856
North Marsh Restoration (North Increment)	3	Vermilion	532	104	217	\$41,142,554	\$3,501,879	\$37,640,675	\$2,400,893	\$23,086	\$189,597
Southeast White Lake Marsh Creation	4	Vermilion	818	173	444	\$25,887,192	\$2,620,974	\$23,266,218	\$1,584,615	\$9,160	\$58,304
Long Point Bayou Marsh Creation	4	Cameron	392	166	332	\$13,000,363	\$2,295,824	\$10,704,539	\$785,202	\$4,730	\$39,158
Coastwide Hydrologic Improvements		Coastwide	12,500	162	220	\$25,505,424	\$1,143,580	\$24,361,844	\$1,007,720	\$6,220	\$115,934

# PPL 28 Demonstration Project Evaluation Matrix

11/15/2018

(Parameter grading as to effect: 1 = low; 2 = medium; 3 = high)

Demonstration Project Name	Lead Agency	Total Fully Funded Cost	Parameter (P <sub>n</sub> )						Total Score	Averaging of Agency Scores
			P <sub>1</sub> Innovativeness	P <sub>2</sub> Applicability or Transferability	P <sub>3</sub> Potential Cost Effectiveness	P <sub>4</sub> Potential Env Benefits	P <sub>5</sub> Recognized Need for Info	P <sub>6</sub> Potential for Technological Advancement		
ShoreFLEX II - Demo	NMFS	\$3,854,572	1	2	2	2	2	2	11	11.6

"Total Score" calculation:

Individual parameter scores were determined from the score having the majority of the vote.

Example - if 4 agencies cast a vote of "3" and 3 agencies cast a vote of "2", then a score of "3" was given.

"Averaging of Agency Scores"

calculation:

Calculated by averaging the Total Scores from each Agency.

## Demonstration Project Parameters

(P<sub>1</sub>) *Innovativeness* - The demonstration project should contain technology that has not been fully developed for routine application in coastal Louisiana or in certain regions of the coastal zone. The technology demonstrated should be unique and not duplicative in nature to traditional methods or other previously tested techniques for which the results are known. Techniques which are similar to traditional methods or other previously tested techniques should receive lower scores than those which are truly unique and innovative.

(P<sub>2</sub>) *Applicability or Transferability* - Demonstration projects should contain technology which can be transferred to other areas of the coastal zone. However, this does not imply that the technology must be applicable to all areas of the coastal zone. Techniques, which can only be applied in certain wetland types or in certain coastal regions, are acceptable but may receive lower scores than techniques with broad applicability.

(P<sub>3</sub>) *Potential Cost Effectiveness* - The potential cost-effectiveness of the demonstration project's method of achieving project objectives should be compared to the cost-effectiveness of traditional methods. In other words, techniques which provide substantial cost savings over traditional methods should receive higher scores than those with less substantial cost savings. Those techniques which would be more costly than traditional methods, to provide the same level of benefits, should receive the lowest scores. Information supporting any claims of potential cost savings should be provided.

(P<sub>4</sub>) *Potential Environmental Benefits* - Does the demonstration project have the potential to provide environmental benefits equal to traditional methods? somewhat less than traditional methods? above and beyond traditional methods? Techniques with the potential to provide benefits above and beyond those provided by traditional techniques should receive the highest scores.

(P<sub>5</sub>) *Recognized Need for the Information* - Within the restoration community, is there a recognized need for information on the technique being investigated? Demonstration projects which provide information on techniques for which there is a great need should receive the highest scores.

(P<sub>6</sub>) *Potential for Technological Advancement* - Would the demonstration project significantly advance the traditional technology currently being used to achieve project objectives? Those techniques which have a high potential for completely replacing an existing technique at a lower cost and without reducing wetland benefits should receive the highest scores.

# *Coastal Wetlands Planning, Protection and Restoration Act*

## *Technical Committee Meeting Announcement*

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**Date:** December 6, 2018

**Time:** 9:30 a.m.

**Location:** LA Dept of Natural Resources  
LaSalle Bldg (LaBelle Room)  
617 N Third Street  
Baton Rouge, Louisiana

### **Technical Committee Meeting**

The evaluation results will be presented for all the PPL 28 candidate projects. The public is invited to attend and provide comments on the candidate projects. The Technical Committee will vote & recommend projects for PPL 28 selection. The Technical Committee will also consider requests for construction (Phase II) approvals.



**Written comments may be provided no later than November 29, 2018 to the CWPRA Task Force by mail or email to:**

**Colonel Michael Clancy**  
**District Engineer, New Orleans**  
**c/o: Brad Inman**  
**U.S. Army Corps of Engineers**  
**7400 Leake Avenue**  
**New Orleans, Louisiana 70118**

**Email:**  
**Brad.L.Inman@usace.army.mil**