

# Priority Project List 29

## Candidate Projects



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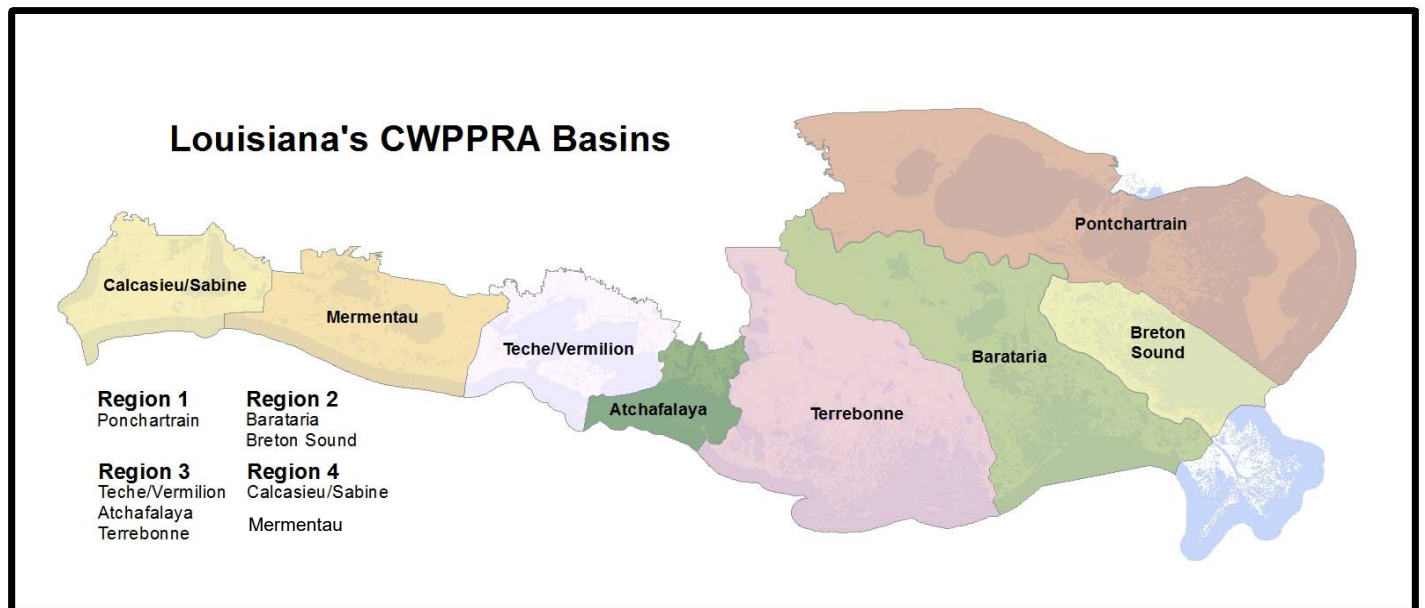
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# Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA) Priority Project List (PPL) Selection Process

## 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.
- Coastwide Projects
  - Proposed technique applicable across the coast; refer to Appendix F of the CWPPRA Standard Operation Procedures for coastwide project guidelines
  - Project nominations that are legitimate coastwide applications will be accepted separate from the 8 basins at any of the 4 RPT meetings.
- Demonstration Projects
  - Demonstrates a technology which can be transferred to other areas in coastal Louisiana
  - Refer to Appendix E of the CWPPRA Standard Operating Procedures for demonstration project guidelines

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 a federal sponsor will be determined. 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. If a mutually agreeable position on sponsorship cannot be determined by overlapping sponsors, voting by the RPT representatives (including agencies and only the parishes within the project’s basin) will occur to determine sponsorship at the RPT meeting.

For non-overlapping projects, a federal sponsor does not have to be identified prior to the coastwide vote.

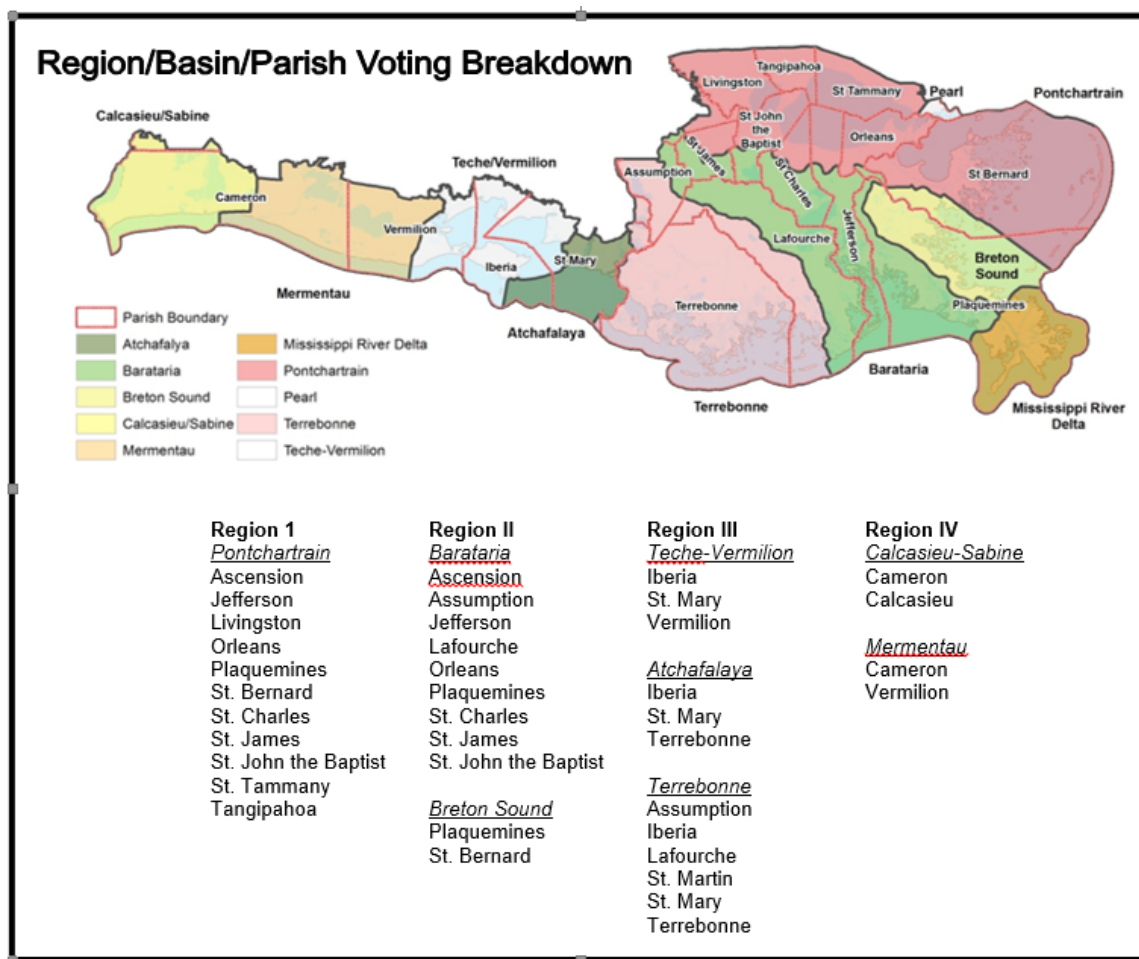
Prior to voting on project nominees, the Environmental Work Group (EnvWG) and Engineering Work Group (EngWG) will screen coastwide project and demonstration project nominations to ensure that each qualifies for its respective category as set forth in the CWPPRA Standard Operating Procedures (SOP).

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.





## **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 29 Schedule

January 2019	Region IV Planning Team Meeting (Grand Chenier)
January 2019	Region III Planning Team Meeting (Morgan City)
February 2019	Regions I and II Planning Team Meetings (Lacombe)
February 2019	Coastwide RPT Electronic Vote
March/April 2019	Agencies prepare factsheets for RPT-nominated projects
March/April 2019	Engineering/Environmental Work Groups review project features, benefits, & prepare preliminary cost estimates for nominated projects (Baton Rouge)
April 2019	P&E Subcommittee prepares matrix of nominated projects showing initial cost estimates and benefits
April 2019	Spring Technical Committee Meeting, select PPL 28 candidate projects (New Orleans)
May/June 2019	Candidate project site visits
May 2019	Spring Task Force Meeting (Lafayette)
July/August/ September 2019	Eng/Eng/Econ Work Group project evaluations
September 2019	Fall Technical Committee Meeting, O&M and Monitoring funding recommendations (Baton Rouge)
October 2019	Fall Task Force Meeting, O&M and Monitoring approvals (New Orleans)
October 2019	Economic, Engineering, and Environmental analyses completed for PPL 28 candidates
December 2019	Winter Technical Committee Meeting, recommend PPL 28 and Phase I and II approvals (Baton Rouge)
January 2020	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 1**

## **PPL29 St. Catherine's Pass Marsh Creation**

### **Project Location:**

The project is located on the easternmost side of the New Orleans landbridge near Rabbit Island and adjacent to Lake St. Catherine in Region 1, Pontchartrain Basin, Orleans Parish.

### **Problem:**

The landfall of Hurricane Katrina in southeast Louisiana destroyed thousands of acres of marsh and other coastal habitats in the Lake Pontchartrain basin. The hurricane weakened large areas of interior marsh habitat which were either lost or damaged near the Rigolets. In addition to enduring impacts from storm surge and hurricanes, the area is suffering from ongoing subsidence. Without continued sediment input, marshes cannot maintain viable elevations. Restoring the marsh in this area would protect and maintain resources vital to nearby communities.

### **Goals:**

The primary goal of this project is to restore degraded marsh habitat and provide increased protection from storm surge and flooding. The specific goals of the project are 1) to create approximately 195 acres of marsh, 2) nourish an additional 88 acres of marsh, 3) create 5.6 acres of tidal creeks and ponds and 4) plant 141 acres with appropriate marsh plant species. Material will be dredged from Lake Borgne.

### **Proposed Solution:**

Sediment will be hydraulically dredged from Lake Borne and pumped via pipeline to create 195 acres of marsh and nourish 88 acres of marsh. The open water containment portions of the dikes will be gapped no later than three years post construction. The target fill elevation is 0.95 feet. Tidal creeks and ponds (5.6 acres) and vegetative plantings (141 acres) will be included in the project. The proposed project will maintain the marshes on the New Orleans landbridge, separating Lake Pontchartrain and Lake Borgne. The landbridge, along with the Biloxi Marsh area and the Chandeleur Islands, provides protection and improves local community resiliency for the New Orleans area. Infrastructure, such as a rail line and US Hwy 90, will indirectly benefit from this project. The proposed project is designed to work synergistically with the New Orleans Landbridge Shoreline Stabilization and Marsh Creation (PO-169).

### **Project Benefits:**

The project would result in approximately 188 net acres over the 20-year project life.

### **Project Costs:**

The total fully-funded cost is \$26,726,853.

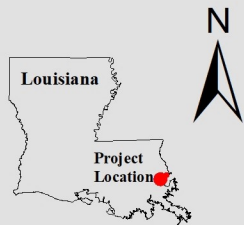
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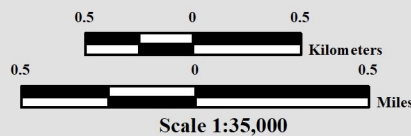




## St. Catherine Pass Marsh Creation (PPL29 Candidate)



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



Produced by:  
 U.S. Department of the Interior  
 U.S. Geological Survey  
 Wetland and Aquatic Research Center  
 Coastal and Ocean Restoration Branch  
 Baton Rouge, La

Image Source:  
 2017 NAIP

Map ID: USGS-NWRC 2019-11-0021  
 Map Date: July 22, 2019



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

## **PPL29 North 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 2019 USGS loss rate is -1.41%/year (yr) for the extended project boundary area.

### **Goals:**

The project goal is to create and nourish approximately 389 acres (ac) of marsh (322 ac creation 67 ac nourishment) and construct approximately 8,548 linear feet (ft) of terraces (approximately 12 ac) 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 322 ac of marsh and nourishing 67 ac of existing marsh. Two creation cells allow a channel for drainage. Approximately 8,548 ft of earthen terraces would be constructed. The terraces would be strategically placed east of the northern marsh creation cell and south of the southern cell. Dewatering of the marsh creation cells into areas adjacent to the terraces would take advantage of sediment laden water trapping the particulates to create additional marsh. 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. 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 and design would include an additional 349 ac to allow robustness for these additive or alternate features during Phase 1.

### **Project Benefits:**

The project would result in approximately 294 net acres over the 20-year project life.

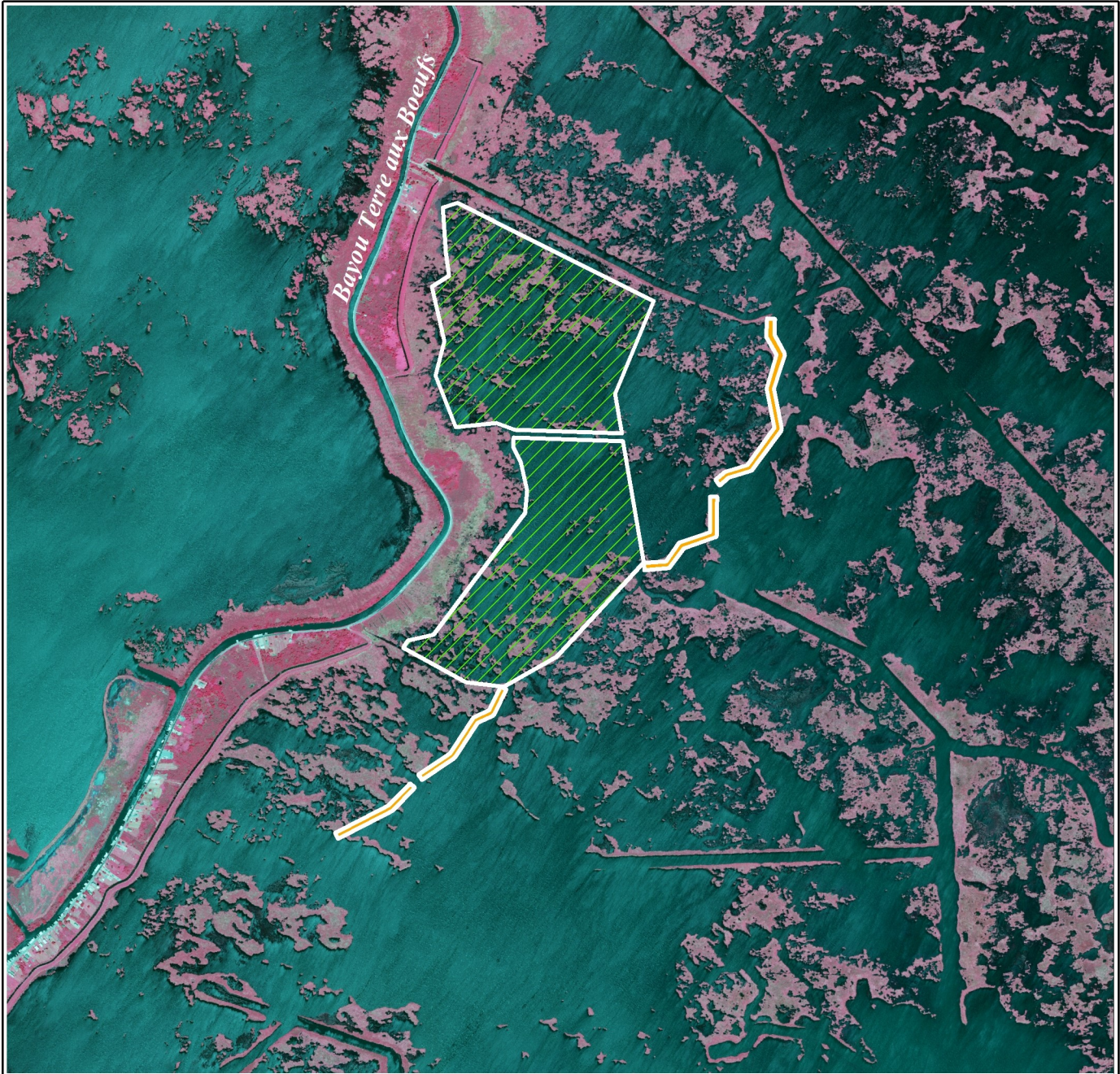
### **Project Costs:**

The total fully-funded cost is \$35,521,865.

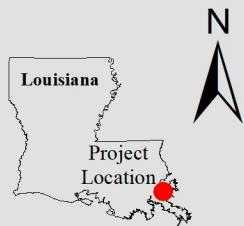
### **Preparer of Fact Sheet:**

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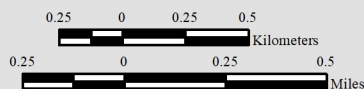




## North Delacroix Marsh Creation and Terracing (PPL29 Candidate)



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



**Scale: 1:30,000**

Map Produced By:  
U.S. Department of the Interior  
U.S. Geological Survey  
Wetland and Aquatic Research Center  
Coastal and Ocean Restoration Branch  
Baton Rouge, LA

Image Source:  
2017 NAIP

Map ID: 2019-11-0027  
Map Date: September 10, 2019

## **PPL29 Phoenix Marsh Creation – East Increment**

### **Project Location:**

Region 2, Breton Sound Basin, Plaquemines Parish

### **Problem:**

The two major causes of wetland loss for this area are sediment deprivation and saltwater intrusion. Altered hydrology and oil/gas development have exacerbated this loss. Much of the fresh and intermediate marsh that once existed earlier in this century has either converted to more saline habitats or has become open water as a result of oil/gas canals, subsidence, and a lack of sediment deposition. The 1984 to 2019 USGS land change rate is -0.78% per year.

### **Goals:**

The project goal is to restore 392 acres of marsh in the open water areas between Bayou la Croix and River aux Chênes through the placement of dredged material via hydraulic dredging. This project will work synergistically with projects to the east by creating continuity with the Breton Landbridge Marsh Creation (West) Project (BS-38) and the Mid Breton Landbridge Marsh Creation and Terracing Project (BS-32). This proposed first increment would extend the reach of the Breton Landbridge and is part of an overall, long-range, restoration goal to create/nourish 1,000 to 2,000 acres of intermediate marsh across 5 miles of the Breton Sound Basin from River aux Chênes to the Mississippi River.

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 proposed for listing as a threatened species. The project could also benefit other species of concern including the saltmarsh topminnow and seaside sparrow.

### **Proposed Solution:**

Sediment will be hydraulically dredged from the Mississippi River to create 314 of marsh and nourish an additional 78 acres. The dredged riverine sediments will be pumped via pipeline into two semi-confined disposal areas. Where feasible, existing marsh will be used as containment instead of containment dikes. Vegetative plantings are not proposed in the marsh creation areas, and containment dikes will be gapped no later than three years post construction.

### **Project Benefits:**

The project would result in 297 net acres over the 20-year project life.

### **Project Costs:**

The total fully-funded cost is \$41,683,037.

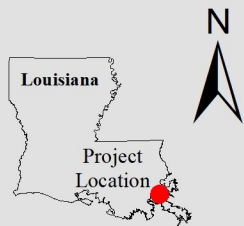
### **Preparer of Fact Sheet:**



Kevin Roy, USFWS, kevin\_roy@fws.gov, 337-291-3120

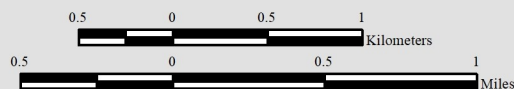




## Phoenix Marsh Creation - East Increment (PPL29 Candidate)



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



Scale: 1:40,000

Map Produced By:  
U.S. Department of the Interior  
U.S. Geological Survey  
National Wetlands Research Center  
Coastal and Ocean Restoration Branch  
Baton Rouge, LA

Image Source:  
2017 NAIP

Map ID: 2019-11-0025  
Map Date: August 13, 2019



## **PPL29 Northeast Turtle Bay Marsh Creation Extension**

### **Project Location:**

Region 2, Barataria Basin, Jefferson Parish

### **Problem:**

Historic wetland loss in the Perot/Rigolettes mapping unit of the Barataria Basin has been caused by subsidence, sediment deprivation, and construction of access and pipeline canals. The Barataria Waterway has also allowed salt water and higher tidal energies to enter the area causing marsh loss. Interior ponds have expanded and coalesced as a result of subsidence and increased tidal energies. As ponds expand increased wave fetch exacerbates interior shoreline erosion. Based on analysis conducted by USGS, loss rates in the project extended boundary are estimated to be -0.76% per year for the period 1984 to 2019.

### **Goals:**

The goal of the project is to create approximately 541 acres and nourish approximately 68 acres of low salinity brackish marsh (609 acres total) with dredged material from Turtle Bay. This project is part of an overall, long-range, restoration goal which would create/nourish 7,400 acres of low salinity brackish and intermediate marsh on the east shore of Little Lake and Turtle Bay (2017 Coastal Master Plan No. 002.MC.04a, Lower Barataria Marsh Creation – Component A).

### **Proposed Solution:**

The proposed project will create approximately 541 acres and nourish approximately 68 acres of marsh using sediment dredged from Turtle Bay. At this time, it is expected that the area will be fully contained with containment dike borrow from both inside and outside of the marsh creation cell. Containment dikes will be degraded as necessary to reestablish hydrologic connectivity with adjacent wetlands. In case the area does not re-vegetate on its own, the maintenance cost estimate includes funds to plant 25% of the created marsh at Year 3.

### **Project Benefits:**

The project will result in approximately 506 net acres over the 20-year project life.

### **Project Costs:**

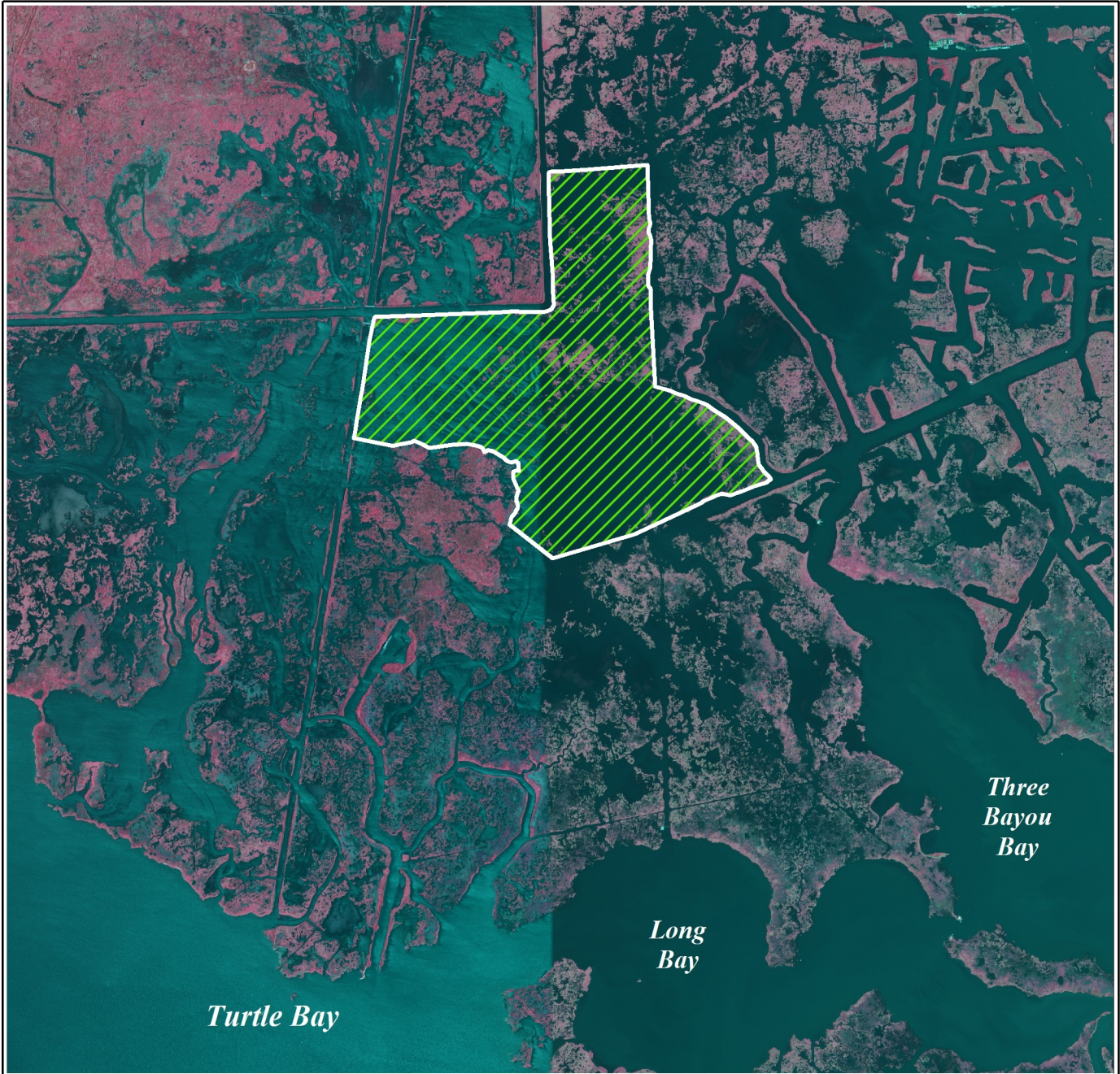
The total fully-funded cost is \$47,909,554.

### **Preparers of Fact Sheet:**

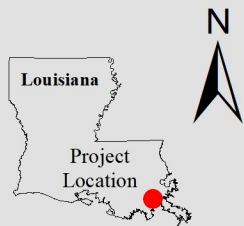
Quin Kinler, USDA-NRCS, 225-271-2403, [Quin.Kinler@usda.gov](mailto:Quin.Kinler@usda.gov)

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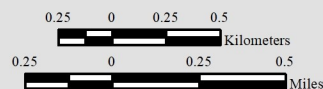
Eric Whitney, USDA-NRCS, 337-291-3069, [Eric.Whitney@usda.gov](mailto:Eric.Whitney@usda.gov)



## NE Turtle Bay Marsh Creation Extension (PPL29 Candidate)



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



**Scale: 1:35,000**

Map Produced By:  
U.S. Department of the Interior  
U.S. Geological Survey  
Wetland and Aquatic Research Center  
Coastal and Ocean Estimation Branch  
Baton Rouge, LA

Image Source:  
2017 NAIP

Map ID: 2019-11-0024  
Map Date: July 24, 2019



## **PPL29 Fifi Island Marsh Creation**

### **Project Location:**

Region 2, Barataria Basin, Jefferson Parish

### **Problem:**

Fifi Island has undergone significant land loss from storms, subsidence, and wave erosion due to its northern exposure to Bay Des Ilettes. Since the early 2000s, several restoration efforts have taken place on the island. The island has experienced periods of land gain due to the deposition of dredged material from the maintenance dredging of Bayou Rigaud. The latest dredging event was in 2010. The Grand Isle Independent Levee District has also been instrumental in several island restoration projects. A rock dike now provides protection to wave energy along the northern island shoreline. Additional rock dikes have also been constructed along the southern shoreline adjacent to Bayou Rigaud. Based on the hyper-temporal analysis conducted by USGS for the extended project boundary, the land loss rate in the project area is -1.21% per year for the period 1984 to 2019.

### **Goals:**

The primary goal of this project is to restore marsh habitat in the open water areas on Fifi Island. The specific goals of this project are; 1) create 160 acres of marsh and 2) nourish 14 acres of marsh.

Service goals include restoration 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 proposed for listing as a threatened species. The project could also benefit other species of concern including the saltmarsh topminnow and seaside sparrow.

### **Proposed Solution:**

Sediments from Caminada Bay will be hydraulically dredged and pumped via pipeline to create/nourish 174 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. Containment dikes will be gapped at the end of construction or by TY3.

### **Project Benefits:**

The project would result in approximately 143 net acres over the 20-year project life.

### **Project Costs:**

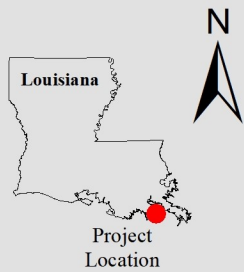
The total fully-funded cost is \$19,995,400.

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

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## Fifi Island Marsh Creation (PPL29 Candidate)



-  Marsh Creation \*
-  Project Boundary

\* denotes proposed features



Scale: 1:30,000

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U.S. Department of the Interior  
U.S. Geological Survey  
National Wetlands Research Center  
Coastal and Ocean Restoration Branch  
Baton Rouge, LA

Image Source:  
2017 NAIP

Map ID: 2019-11-0026  
Map Date: July 25, 2019

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



## **PPL29 Bay Raccourci Marsh Creation and Ridge Restoration**

### **Project Location:**

Region 3, Terrebonne Basin, Terrebonne Parish

### **Problem:**

High saline waters from Lake Mechant have directly contributed to the loss and/or conversion of much of the historically intermediate marshes to low salinity brackish marshes north of Lake Mechant. Subsidence, canal dredging and storm damage have also contributed significantly to the loss of marsh in the area. The zone of intermediate marsh (transition zone between fresh and brackish marshes) is located just north of Lake Mechant. High salinity water entering Bay Raccourci via Bayou Raccourci/Lake Mechant effectively short circuits the TE-44 project and flows unimpeded into lower salinity marshes surrounding Bay Raccourci. The 1984 to 2016 USGS loss rate is -0.32%/yr for the extended boundary area.

### **Goals:**

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

Specific goals of the project are: 1) Create approximately 444 acres (341 acres of creation; 103 acres of nourishment) of marsh with dredged material from Lake Mechant; 2) create 16,350 linear feet (17 acres) of forested ridge habitat.

### **Proposed Solution:**

The project would have 341 acres of marsh creation and 103 acres of marsh nourishment via confined disposal in three disposal areas of sediments dredged from Lake Mechant. The proposed design is to place the dredged material to a fill height of +1.17 ft NAVD88. 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 gapped at the end of construction.

The northern containment dike would be built to a height of +4.0 feet NAVD88 with a 10 feet wide crown and would also serve as a ridge. Material for the ridge would be bucket dredged from both Bayou de Cade and from within the marsh creation cell. The entire 16,350 linear feet (17 acres) of ridge would be planted with saplings and bare root seedlings on the crown and smooth cordgrass along the bayou side slopes.

### **Project Benefits:**

The project would result in approximately 343 net acres over the 20-year project life.

### **Project Costs:**

The total fully-funded cost is \$39,837,121.




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

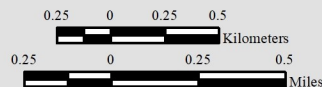
Robert Dubois, FWS, Robert\_Dubois@fws.gov, 337-291-3127



## Bay Raccourci Marsh Creation and Ridge Restoration (PPL29 Candidate)



-  Ridge Restoration \*
  -  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 Ocean Restoration Branch  
Baton Rouge, LA

Image Source:  
2017 NAIP

Map ID: 2019-11-0022  
Map Date: July 22, 2019

## **PPL29 West Louisiana Highway 1 Marsh Creation**

### **Project Location:**

Region 3, Terrebonne Basin, Lafourche Parish

### **Problem:**

The Terrebonne Basin is an abandoned delta complex, characterized by a thick section of unconsolidated sediments that are undergoing dewatering and compaction, contributing to high subsidence, and a network of old distributary ridges extending southward from Houma. Historically, subsidence and numerous oil and gas canals and pipelines in the area have contributed significantly to wetland losses. Since 1932, the Terrebonne Basin has lost approximately 20% of its wetlands. Current loss rates range from approximately 4,500 to 6,500 acres/year. This loss amounts to up to 130,000 acres during the next 20 years. One-third of the Terrebonne Basin's remaining wetlands would be lost to open water by the year 2040. The wetland loss rate for the project area is -0.86% per year based on USGS hyper temporal data from 1984 to 2019.

### **Goals:**

The project goal is to create and/or nourish 313 acres of emergent saline marsh.

### **Proposed Solution:**

The proposed project's primary feature is to create and/or nourish approximately 313 acres of emergent marsh (260 acres of marsh creation and 53 acres of marsh nourishment). In order to achieve this, sediment will be hydraulically pumped from a borrow source in Catfish Lake. Containment dikes will be constructed around the marsh creation area to retain sediment during pumping. The containment dikes will be degraded and/or gapped no later than three years post construction. The project will include planting smooth cordgrass plugs installed in strategic locations based on 10% of the acreage.

### **Project Benefits:**

The project would result in approximately 242 net acres over the 20-year project life.

### **Project Costs:**

The total fully-funded cost is \$32,721,200.

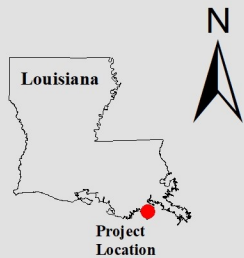
### **Preparer of Fact Sheet:**

Dawn Davis, NOAA-Fisheries, [Dawn.Davis@noaa.gov](mailto:Dawn.Davis@noaa.gov), (225) 380-0041

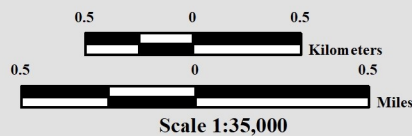




## West Louisiana Highway 1 Marsh Creation (PPL29 Candidate)



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



Produced by:  
 U.S. Department of the Interior  
 U.S. Geological Survey  
 Wetland and Aquatic Research Center  
 Coastal and Ocean Restoration Branch  
 Baton Rouge, La

Image Source:  
 2017 NAIP Photography

Map ID: USGS-NWRC 2019-11-0019  
 Map Date: July 30, 2019



## **PPL29 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 -0.86% per year for the period 1984 to 2019. 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.

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 proposed for listing as a threatened species. The project could also benefit other species of concern including the saltmarsh topminnow and seaside sparrow.

### **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 248 net acres over the 20-year project life.

### **Project Costs:**

The total fully-funded cost is \$42,277,142.

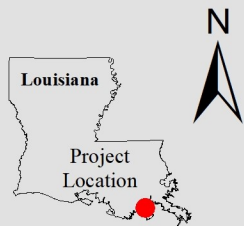
### **Preparer of Fact Sheet:**




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

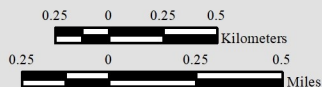




### East Catfish Lake Marsh Creation and Shoreline Protection (PPL29 Candidate)



-  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

Map ID: 2019-11-0018  
 Map Date: July 08, 2019

Image Source:  
 2017 NAIPQ

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

## **PPL29 Mermentau Basin Wetland Inundation Relief**

### **Project Location:**

Region 4, Mermentau Basin, Cameron Parish, Rockefeller Wildlife Refuge

### **Problem:**

Construction of Louisiana Highway 82 restricts drainage of local communities and marshes north of the highway to outlets located on Rockefeller Wildlife Refuge. That restriction can result in prolonged periods of inundation during high rainfalls and flooding events. A modified system including the East End Lock system along with additional structures will aid with the increase volume flow to the 8 outlets at the Gulf of Mexico. This will reduce prolonged periods of ponding over thousands of acres of wetlands.

### **Goals:**

The goals of this project are to reduce prolonged periods of inundation to relieve flooding stress and restore the function, value, and sustainability to thousands of acres of marsh. The proposed project will also allow Rockefeller Wildlife Refuge to accommodate additional water flow during flooding events to relieve flooding of local communities. The project will create marsh and divert water into marsh areas that will benefit from the freshwater, nutrients and sediment.

### **Proposed Solution:**

The proposed project would construct additional drainage structures that would allow for an increase in flow from the upper basin. The current lock system is over 40 years old, in desperate need of repair, and cannot adequately relieve flooding in much of the Mermentau Basin. In addition to the lock and outflow structures, modifications at LA Hwy 82, including cleaning of drainage laterals and connection of flow through outlets to main canals, will improve flow and increase drainage. Reduced inundation of marsh is predicted to increase marsh production over the 35,000-acre project area, providing an estimated 64 net acres (SIProd Model preliminary run at 1.53% reduction in inundation). Another 126 net acres are expected from the diversion of some of the water through Unit 4 (NSED2 Model). In addition, 105 acres of marsh will be created/nourished from beneficial use of hydraulically dredged material from nearby canals.

### **Project Benefits:**

The project would result in approximately 279 net acres over the 20-year project life.

### **Project Costs:**

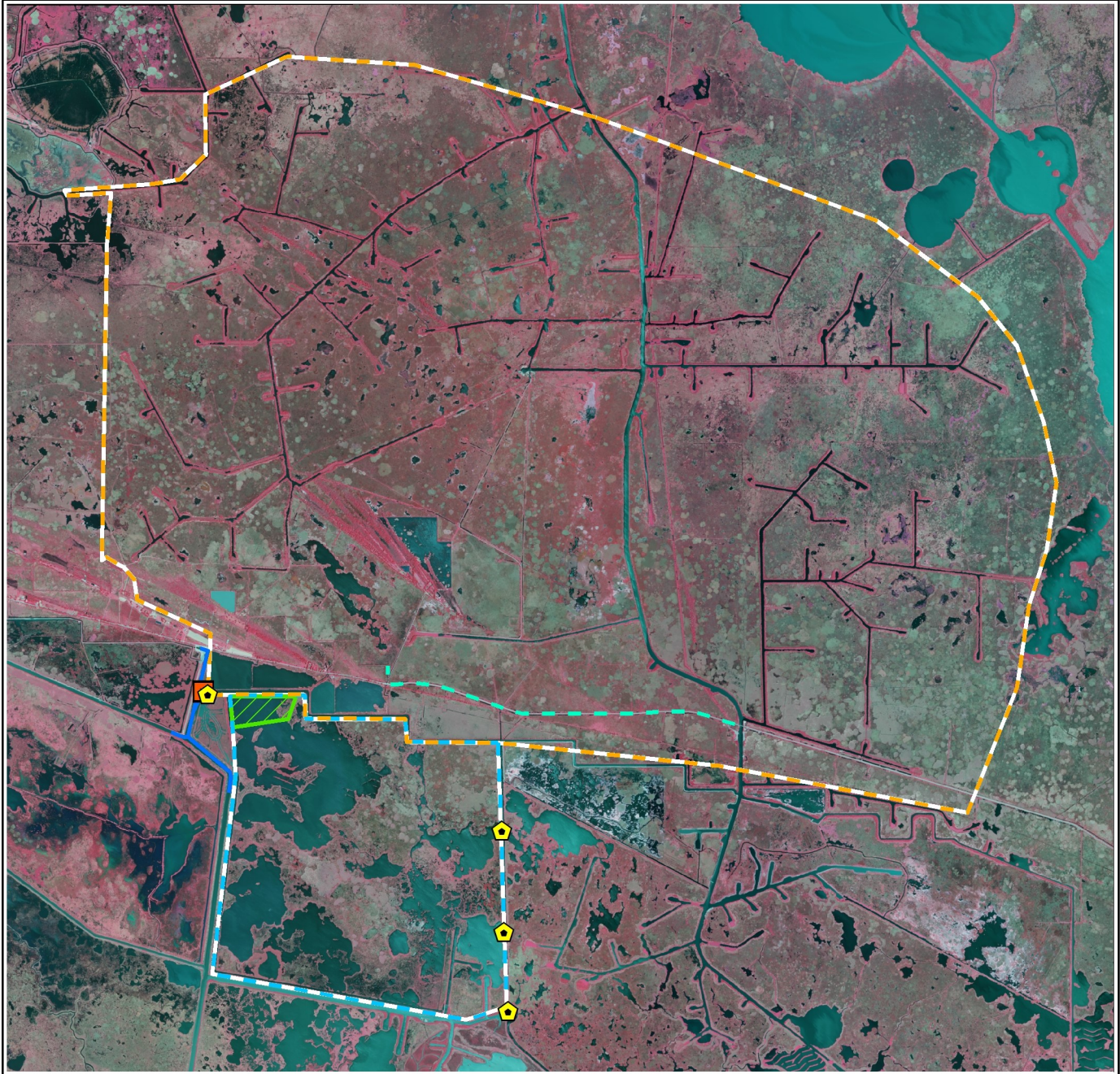
The total fully-funded cost is \$25,232,677.

### **Preparers of Fact Sheet:**

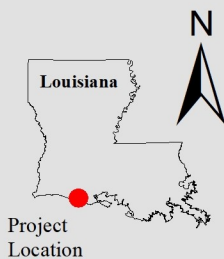
Ron Boustany, Biologist, USDA-NRCS, [ron.boustany@usda.gov](mailto:ron.boustany@usda.gov), 337-291-3067









Eric Whitney, Engineer, USDA-NRCS, [eric.whitney@usda.gov](mailto:eric.whitney@usda.gov), 337-291-3069



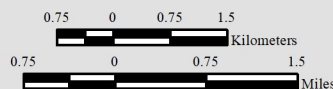


## Mermentau Basin Wetland Inundation Relief (PPL29 Candidate)



- |   |                                  |   |                                  |
|---|----------------------------------|---|----------------------------------|
|  | <b>Water Control Structure *</b> |  | <b>Marsh Creation *</b>          |
|  | <b>Lock Gate Repair</b>          |  | <b>Freshwater Introduction *</b> |
|  | <b>Dredge Borrow *</b>           |  | <b>Inundation Relief *</b>       |
|  | <b>Channel Cleanout *</b>        |  | <b>Project Boundary</b>          |

\* denotes proposed features



**Scale: 1:100,000**

Map Produced By:  
U.S. Department of the Interior  
U.S. Geological Survey  
National Wetlands Research Center  
Coastal and Ocean Restoration Branch  
Baton Rouge, LA

Image Source:  
2017 NAIP

Map ID: 2019-11-0028  
Map Date: August 19, 2019



## **PPL29 Southeast Pecan Island Restoration**

### **Project Location:**

Region 4, Mermentau Basin, Vermilion Parish, south of Highway 82 and southeast of Pecan Island

### **Problem:**

Louisiana (LA) Highway 82 separates the Lakes Subbasin to the north from the marshes to the south. Low spots between cheniers historically allowed drainage from the Lakes Subbasin south into the Chenier Subbasin. Virtually all of the project area marshes have become isolated from the movement of freshwater from the upper basin and therefore experience increased tidal exchange, saltwater intrusion, and reduced freshwater retention. Consequently, these marshes are highly deteriorated and considered a priority for restoration in the State's Coastal Master Plan. Based on the hyper-temporal analysis (1984-2018) conducted by USGS, loss rates are estimated to be -0.76% per year.

### **Goals:**

The project goals are to restore/improve hydrologic conditions and promote the expansion of emergent marsh vegetation throughout the project area, create marsh via hydraulic dredging of material borrowed from the Gulf of Mexico (Gulf) and create terraces in large expanses of shallow open water. The proposed freshwater introduction feature would restore/improve hydrologic conditions by allowing water from the Lakes Subbasin to drain south across LA Highway 82 into the Chenier Subbasin. The marsh creation and terrace features would create new wetland habitat, restore degraded marsh, and reduce wave erosion.

### **Proposed Solution:**

The project would construct approximately 372 acres of marsh and 23,100 linear feet of terraces in the most degraded location of the project area. Material will be borrowed from the Gulf for marsh creation. A freshwater introduction structure will be constructed at Front Ridge to connect the Lakes Subbasin to the project area marshes to allow for import of freshwater, nutrients, and sediment. Most of the necessary infrastructure already exists and would require only minimal improvement/cleanout for conveyance of freshwater.

### **Project Benefits:**

The project would result in approximately 403 net acres over the 20-year project life.

### **Project Costs:**

The total fully-funded cost is \$34,173,140.

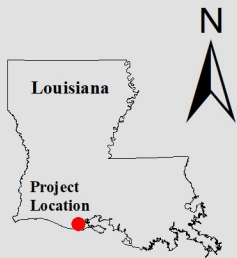
### **Preparers of Fact Sheet:**

Ron Boustany, Biologist, USDA-NRCS, [ron.boustany@usda.gov](mailto:ron.boustany@usda.gov), 337-291-3067  
Eric Whitney, Engineer, USDA-NRCS, [eric.whitney@usda.gov](mailto:eric.whitney@usda.gov), 337-291-3069





## Southeast Pecan Island Restoration (PPL29 Candidate)

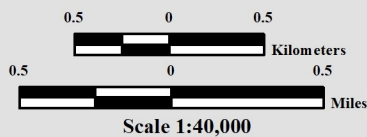


- Freshwater Introduction Structure \*
  - Marsh Creation \*
  - Terrace Field \*
  - Influence Area/Project Boundary \*
- \* denotes proposed features



Produced by:  
 U.S. Department of the Interior  
 U.S. Geological Survey  
 Wetland and Aquatic Research Center  
 Coastal and Ocean Restoration Branch  
 Baton Rouge, La

Image Source:  
 2017 NAIP



Map ID: USGS-NWRC 2019-11-0020  
 Map Date: July 30, 2019



## **PPL29 Mud Lake South Marsh Creation**

### **Project Location:**

Region 4, Calcasieu/Sabine Basin, Cameron Parish

### **Problem:**

The project area has experienced substantial wetland loss due to anthropogenic and natural causes in the past century. Approximately 28% of wetlands in the Calcasieu-Sabine Basin were lost to open water from 1932 to 2010 due to subsidence, saltwater intrusion, and hurricane damage. Particularly high losses occurred from Hurricanes Rita (2005) and Ike (2008). Anthropogenic activity, such as the construction of the Calcasieu Ship Channel and LA Highway 27, has also disrupted the natural hydrologic regime of the area, limiting natural wetland building and maintenance processes, and in turn, exacerbating marsh breakup. Oil and gas extraction may be responsible for increased subsidence in the region. Land change analysis at Coastwide Reference Monitoring System (CRMS) sites between 2005 and 2015 indicate land loss at 37% of CRMS sites in the Calcasieu/Sabine Basin, which is the highest percentage coast wide.

### **Goals:**

The primary goals of this project are to restore degraded wetland habitat and provide increased protection from storm surge and flooding. Specific objectives are to 1) create 267 acres of emergent marsh, 2) nourish 54 acres of emergent marsh, 3) create 6.5 acres of tidal creeks and ponds, and 4) plant 160 acres with appropriate brackish marsh species.

### **Proposed Solution:**

This project would create 267 acres of marsh and nourish 54 acres of existing fragmented marsh near Mud Lake in areas that were historically marshland but are now largely open water. The initial target fill elevation is +1.70 feet (NAVD88). Constructed containment dikes would be gapped as needed by year 3 to provide tidal exchange after fill materials settle and consolidate. Vegetative plantings tidal creeks/ponds will be included in project construction. The proposed project features will help maintain the marshes adjacent to and separating Mud Lake and Mud Pass and will provide support as a barrier marsh to the Gulf of Mexico shoreline. Infrastructure such as LA Hwy 27 and Gulf Beach Hwy will benefit from this project. The proposed project would be synergistic with the following projects: adjacent Oyster Bayou Marsh Creation and Terracing (CS-59), Oyster Lake Marsh Creation and Nourishment (CS-79), East Mud Lake Marsh Management (CS-20), and Holly Beach Sand Management (CS-31).

### **Project Benefits:**

The project would result in approximately 246 net acres over the 20-year project life.

### **Project Costs:**

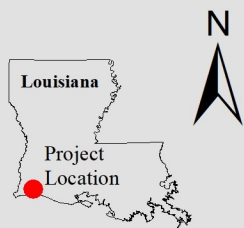
The total fully-funded cost is \$24,480,653.



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

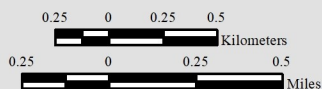
Sharon L. Osowski, Ph.D.; EPA; (214) 665-7506; [osowski.sharon@epa.gov](mailto:osowski.sharon@epa.gov)  
Brad Crawford, P.E., EPA; (214) 665-7255; [Crawford.brad@epa.gov](mailto:Crawford.brad@epa.gov)



## Mud Lake South Marsh Creation (PPL29 Candidate)



-  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 Ocean Restoration Branch  
Baton Rouge, LA

Image Source:  
2017 NAIP

Map ID: 2019-11-0023  
Map Date: July 23, 2019

## PPL29 Candidate Project Evaluation Matrix

11/6/2019

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)
St. Catherine's Pass Marsh Creation	1	Orleans	283	98	188	\$26,726,853	\$2,836,520	\$23,890,333	\$1,601,708	\$16,344	\$142,164
North Delacroix Marsh Creation and Terracing	2	St Bernard	411	134	294	\$35,521,865	\$3,714,166	\$31,807,699	\$2,139,129	\$15,964	\$120,823
Phoenix Marsh Creation	2	Plaquemines	392	107	297	\$41,683,037	\$3,393,064	\$38,289,973	\$2,506,528	\$23,425	\$140,347
Northeast Turtle Bay Marsh Creation Extension	2	Jefferson	609	267	506	\$47,909,554	\$4,500,433	\$43,409,121	\$2,914,561	\$10,916	\$94,683
Fifi Island Marsh Creation	2	Jefferson	174	75	143	\$19,995,400	\$2,015,213	\$17,980,187	\$1,188,676	\$15,849	\$139,828
Bay Raccourci Marsh Creation and Ridge Restoration	3	Terrebonne	461	135	343	\$39,837,121	\$3,447,902	\$36,389,219	\$2,415,778	\$17,895	\$116,143
West La Hwy 1 Marsh Creation	3	Lafourche	313	134	242	\$32,721,200	\$3,183,330	\$29,537,870	\$1,963,599	\$14,654	\$135,212
East Catfish Lake Marsh Creation & SP	3	Lafourche	306	132	248	\$42,277,142	\$3,376,249	\$38,900,893	\$2,453,314	\$18,586	\$170,472
Mermentau Basin Wetland Inundation Relief	4	Cameron	36,855	148	279	\$25,232,677	\$2,745,274	\$22,487,403	\$1,386,483	\$9,368	\$90,440
Southeast Pecan Island Restoration	4	Vermilion	3,281	176	403	\$34,173,140	\$3,816,094	\$30,357,046	\$2,003,134	\$11,381	\$84,797
Mud Lake South Marsh Creation	4	Cameron	321	119	246	\$24,480,653	\$2,755,313	\$21,725,340	\$1,466,588	\$12,324	\$99,515



# *Coastal Wetlands Planning, Protection and Restoration Act Technical Committee Meeting Announcement*

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**Date:** December 5, 2019

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

**Location:** Tulane River and Coastal Center  
1370 Port of New Orleans Place  
New Orleans, LA

Special Note: Limited parking available on site. Additional parking is available in Convention Center Lot J. Early bird rate is \$5/car before 10am. Food and drink are prohibited at the Tulane River and Coastal Center.

## **Technical Committee Meeting**

The evaluation results will be presented for all the PPL 29 candidate projects. The public is invited to attend and provide comments on the candidate projects. The Technical Committee will vote & recommend projects for PPL 29 selection. The Technical Committee will also consider requests for construction (Phase II) approvals.



**Written comments may be provided no later than November 21, 2019 to the CWPPRA Task Force by mail or email to:**

**Colonel Stephen Murphy  
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**