

Priority Project List 25

Candidate Projects



Table of Contents

The 25th Priority List Planning Process	1
Candidate Project located in Region One	
Fritchie Marsh Creation and Terracing.....	6
North Shell Beach Marsh Creation.....	8
Candidate Projects located in Region Two	
Barataria Bay Rim Marsh Creation.....	11
East Bayou Lafourche Marsh Creation.....	13
East Leeville Marsh Creation and Nourishment.....	15
Caminada Headlands Back Barrier Marsh Creation Increment #2.....	17
Candidate Projects located in Region Three	
Bayou Terrebonne Ridge Restoration and Marsh Creation.....	20
West Vermilion Bay Shoreline Protection and Marsh Creation.....	22
Candidate Projects located in Region Four	
Southeast Pecan Island Marsh Creation & Freshwater Enhancement.....	25
Sweeney Tract Marsh Creation and Nourishment.....	27
Oyster Lake Marsh Creation and Nourishment.....	29
Candidate Demonstration Project	
Shoreline Protection, Preservation, and Restoration Panel (SPPR Panel).....	32
Candidate Evaluation Matrix	34
Demonstration Evaluation Matrix	35

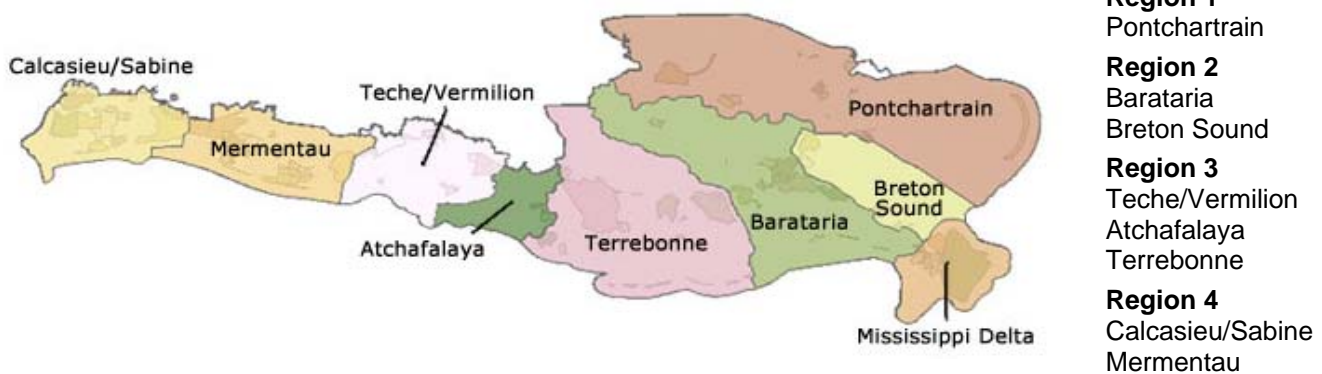


Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA) Priority Project List (PPL) Selection Process

Project Nominations

The 4 Regional Planning Teams (RPTs) will meet to propose projects to be included on the new PPL. Project nominations will be accepted in all the hydrologic basins below, except the Mississippi River Delta Basin as strategies for this basin are not included in the State Master Plan. *All proposals must be consistent with the 2012 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).

Louisiana's CWPPRA Basins



- 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 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.

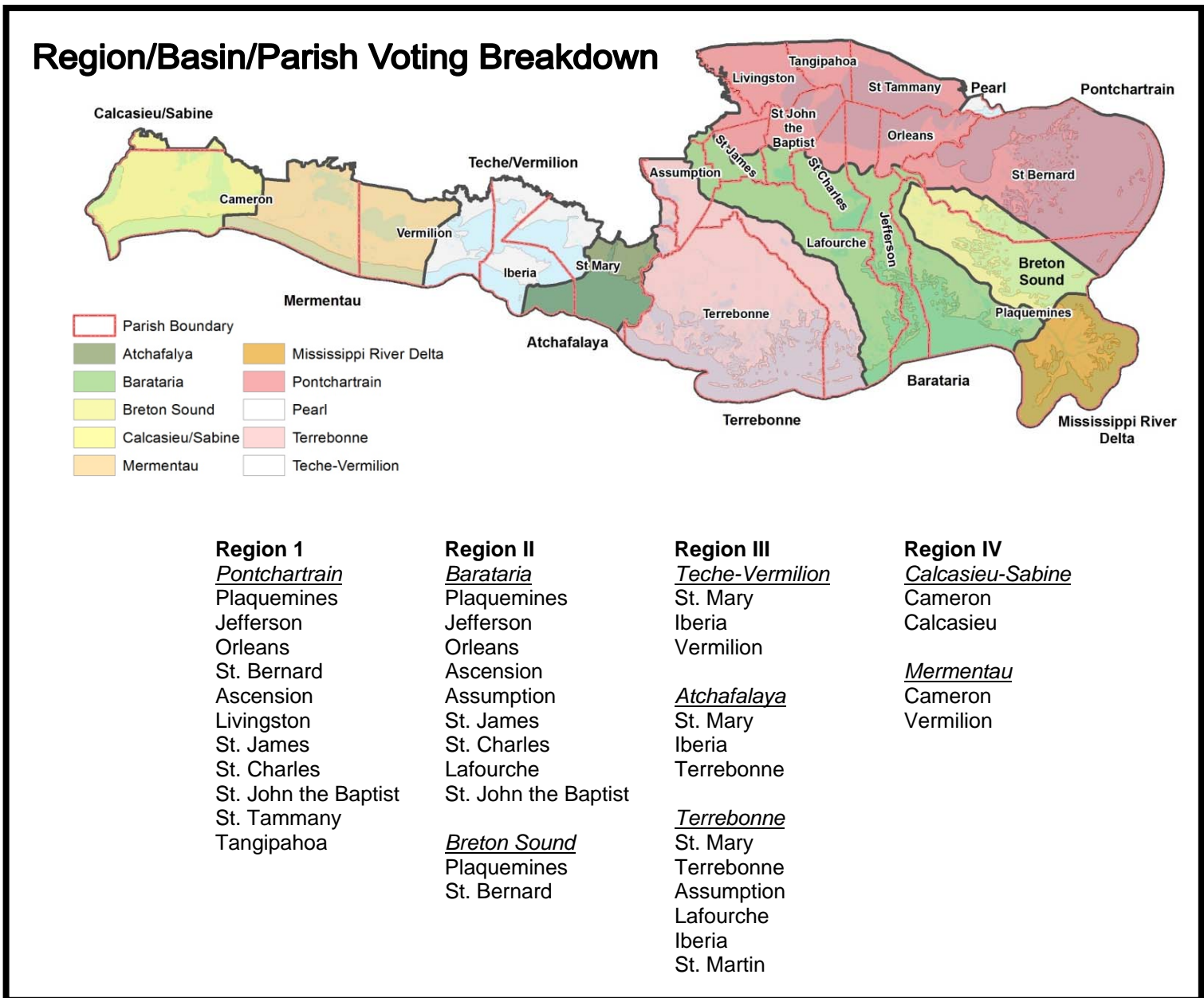
Prior to voting on project nominees, the Environmental Work Group (EnvWG) and Engineering Work Group (EngWG) will screen coastwide project and demonstration project nominations to ensure that each qualifies for its respective category as set forth in the CWPPRA Standard Operating Procedures (SOP).

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 or fax 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.

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 during the RPT meetings. 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 25 Schedule

January 27, 2015	Region IV Planning Team Meeting (Lafayette)
January 28, 2015	Region III Planning Team Meeting (Houma)
January 29, 2015	Regions I and II Planning Team Meetings (Lacombe)
February 24, 2015	Coastwide RPT Electronic Vote
February - March, 2015	Agencies prepare factsheets for RPT-nominated projects
March 2015	Engineering/Environmental Work Groups review project features, benefits, & prepare preliminary cost estimates for nominated projects (Baton Rouge)
March 2015	P&E Subcommittee prepares matrix of nominated projects showing initial cost estimates and benefits
April 16, 2015	Spring Technical Committee Meeting, select PPL 25 candidate projects (Baton Rouge)
May/June 2015	Candidate project site visits
May 14, 2015	Spring Task Force Meeting (Lafayette)
July/August/ September 2015	Eng/Eng/Econ Work Group project evaluations
September 10, 2015	Fall Technical Committee Meeting, O&M and Monitoring funding recommendations (Baton Rouge)
October 15, 2015	Fall Task Force Meeting, O&M and Monitoring approvals (New Orleans)
October 2015	Economic, Engineering, and Environmental analyses completed for PPL 25 candidates
December 10, 2015	Winter Technical Committee Meeting, recommend PPL 25 and Phase I and II approvals (Baton Rouge)
January 2016	Winter Task Force Meeting, select PPL 25 and approve Phase II requests (New Orleans)

Visit www.lacoast.gov/calendar for up-to-date information regarding meetings dates, times, & locations.

Candidate Projects Located in Region 1

PPL25 Fritchie Marsh Creation and Terracing

Project Location:

Region 1, Pontchartrain Basin, St. Tammany Parish, located approximately three miles southeast of Slidell, Louisiana. A substantial portion of the project is located on Big Branch National Wildlife Refuge.

Problem:

A significant portion of the Fritchie Marsh was lost due to Hurricane Katrina. Post storm shallow open water areas dominate the landscape which limits the effectiveness of the PO-06 CWPRRA project. Wetlands in the project vicinity are being lost at the rate -1.09%/year based on USGS data from 1985 to 2015. These marshes cannot recover without replacement of lost sediment, which is critical if the northshore marshes are to be sustained.

Goals:

Project goals include restoring and nourishing marsh. Specific goals of the project are: 1) create approximately 291 acres of marsh; 2) nourish approximately 49 acres of existing marsh; and 3) construct about 36,610 feet of earthen terraces or 26 emergent acres.

Proposed Solution:

An alternatives analysis was conducted leading to the selection of features and configuration to compliment and work synergistically with the existing PO-06 project and planned mitigation and restoration projects in the Fritchie Marsh. A robust engineering cost is included to evaluate increasing the project size if costs allow or adjust the layout, if needed during Phase 1. Approximately 2 million cubic yards of material would be placed confined to restore 291 acres and nourish approximately 49 acres of brackish marsh. Material would be dredged from a borrow site in Lake Pontchartrain. The borrow site would be designed to avoid and minimize impacts to aquatic habitat and existing shorelines. Approximately 26 acres of earthen terraces would be constructed within various locations totaling approximately 36,610 feet or 523 acres of terrace field. All containment dikes would be gapped or degraded no later than three years after construction to facilitate the development of tidal marsh functions supportive of estuarine species. The terraces would be planted as well as 50% of the created marsh acres to expedite colonization and enhance stabilization.

Project Benefits:

The project would result in approximately 290 net acres over the 20-year project life.

Project Costs:

The total fully-funded cost is \$27,944,102.

Preparer of Fact Sheet

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Fritchie Marsh Creation and Terracing (PPL25 Candidate)



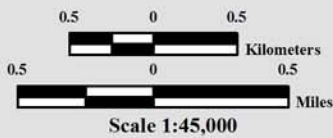
- Marsh Creation *
 - Terrace Field *
 - Project Boundary *
- * denotes proposed features



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 Coastal Restoration Assessment Branch
 Baton Rouge, La

Image Source:
 2013 NAIP Photography

Map ID: USGS-NWRC 2015-11-0034
 Map Date: June 30, 2015



PPL25 North Shell Beach Marsh Creation

Project Location:

Region 1, Pontchartrain Basin, St. Bernard Parish

Problem:

The landform separating Lake Borgne and the MRGO has undergone both interior and shoreline wetland losses due to subsidence, storm events, historic use of the MRGO prior to deauthorization (i.e., deep draft vessel traffic), and wave fetch. Although much of the project area is now protected from edge erosion by rock dike features, interior wetland loss attributed to subsidence continues to cause marsh fragmentation and open water conversion. Wetland loss rates in the applicable mapping unit are estimated to be -0.49%/year (1985 – 2009 LCA loss rate).

Goals:

The primary objective of this project is to create and nourish 394 acres of emergent brackish marsh to continue the ongoing efforts to stabilize the landmass separating Lake Borgne from the MRGO.

Proposed Solution:

The proposed project will create and nourish 394 acres of *Spartina* marsh by dredging sediment from designated borrow sources in Lake Borgne, and placing to a target fill elevation of +1.3 feet. Existing high shorelines along Lake Borgne and interior marsh edge could be used for containment where practical. Constructed containment features would be degraded or gapped as needed to promote tidal exchange after dewatering and consolidation of the fill material. The project would create 223 acres of marsh and nourish at least 171 acres of existing fragmented marsh. Additionally, 50% of the newly created area will include vegetative plantings.

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 \$24,313,536.

Preparers of Fact Sheet:

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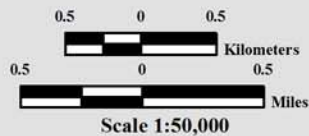
North Shell Beach Marsh Creation (PPL25 Candidate)



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 Coastal Restoration Assessment Branch
 Baton Rouge, La
 Image Source:
 2012 DOQQ Photography



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



Map ID: USGS-NWRC 2015-11-0035
 Map Date: July 14, 2015

Candidate Projects Located in Region 2

PPL25 Barataria Bay Rim Marsh Creation

Project Location:

Region 2, Barataria Basin, Jefferson and Plaquemines Parish

Problem:

Historic wetland loss in the area occurs in the form of interior marsh loss and shoreline erosion along Barataria Bay. The interior loss is caused by subsidence, sediment deprivation, and construction of access and pipeline canals. Based on the hyper-temporal analysis conducted by USGS for the extended project boundary, loss rates in the project area are estimated to be -0.58% per year for the period 1984 to 2015.

Goals:

The goal of the project is to create approximately 251 acres of marsh and nourish approximately 266 acres of marsh (517 acres total) with dredged material from Barataria Bay.

Proposed Solution:

Sediments from a Barataria Bay borrow site will be hydraulically dredged and pumped via pipeline into three separate fully contained cells to create approximately 236 acres of marsh and nourish 232 acres. The proposed design is to place the dredged material to an initial fill height of +2.9 ft NAVD88, with a target marsh height of +1.6ft NAVD88. Dewatering and compaction of dredged sediments should produce marsh elevations conducive to the establishment of emergent marsh and within the intertidal range. 50% of the contained marsh creation area will be planted if needed. Containment dikes will be constructed as necessary. Perimeter containment dikes exposed to high wave energy will be planted. Containment dikes will be degraded as necessary to reestablish hydrologic connectivity with adjacent wetlands.

Additional sediments from the same borrow site will be hydraulically dredged and pumped via pipeline to a semi-contained area to create approximately 15 acres of marsh and nourish 34 acres. Segments of containment dikes will be constructed as necessary across distinct channels. The proposed design is to place the dredged material to an initial fill height of +2.9ft NAVD88 in two primary ponds and in the pipeline canal that extends toward the east. Because these ponds and pipeline canal will not have full perimeter containment, dredged material fill height is expected to slope downward with distance from their perimeter. Containment segments will be degraded as necessary to reestablish hydrologic connectivity with adjacent wetlands.

Project Benefits:

The project would result in approximately 251 net acres over the 20-year project life.

Project Costs:

The total fully-funded cost is \$23,838,905.

Preparer of Fact Sheet:

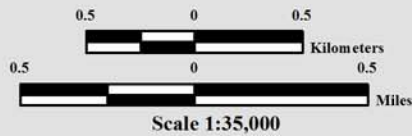
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Barataria Bay Rim Marsh Creation (PPL25 Candidate)



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



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Image Source:
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Map ID: USGS-NWRC 2015-11-0030
Map Date: June 26, 2015

PPL25 East Bayou Lafourche Marsh Creation

Project Location:

Region 2, Barataria Basin, Lafourche Parish

Problem:

The Leeville area has experienced extensive loss of emergent wetlands from subsidence, storms, oil/gas canal dredging, and altered hydrology. Wetland loss has increased the vulnerability of Leeville and Louisiana Highway 1 to damage from tropical storms. Based on the hyper-temporal analysis conducted by USGS for the extended project boundary, loss rates in the project area are estimated to be -1.41% per year for the period 1984 to 2015.

Goals:

The primary goal of this project is to restore marsh habitat in open water and in deteriorated marsh via hydraulic dredging and placement of dredged material.

The specific goal of the project is create approximately 417 acres (374 acres of marsh creation and 43 acres of marsh nourishment) of marsh with dredged material.

Proposed Solution:

Sediments from a Little Lake borrow site will be hydraulically dredged and pumped via pipeline to create/nourish approximately 417 acres of marsh (Figure 1). Dewatering and compaction of dredged sediments should produce elevations conducive to the establishment of emergent marsh and within the intertidal range. Perimeter containment dikes will be constructed. Containment dikes exposed to open water will be planted with appropriate vegetation. Containment dikes will be gapped at the end of construction or by target year 3.

Project Benefits:

The project would result in approximately 330 net acres over the 20-year project life.

Project Costs:

The total fully-funded cost is \$33,031,016.

Preparer of Fact Sheet:

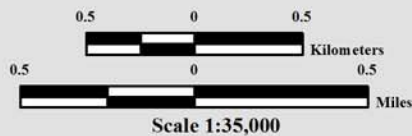
Kevin Roy, FWS, Kevin_Roy@fws.gov, 337-291-3120



East Bayou Lafourche Marsh Creation (PPL25 Candidate)



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



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Image Source:
 2012 DOQQ

Map ID: USGS-NWRC 2015-11-0029
 Map Date: August 25, 2015

PPL25 East Leeville Marsh Creation and Nourishment

Project Location:

Region 2, Barataria Basin, Lafourche Parish (primary)
Region 3, Terrebonne Basin, Lafourche Parish

Problem:

There is widespread historic and continued rapid land loss within the project site and surrounding areas resulting from subsidence, wind erosion, storms, and altered hydrology. The wetland loss rate for is -1.53%/year based on USGS data from 1984 to 2015. Furthermore, the limits of Southwestern Louisiana Canal are difficult to determine in some areas because land loss is causing the coalescence of the canal with adjacent water bodies. Natural tidal flow and drainage patterns which once existed are currently circumvented by the increasing area of open water. Data suggests that from 1932 to 1990, the basin lost over 245,000 ac of marsh, and from 1978 to 1990, Barataria Basin experienced the highest rate of wetland loss along the entire coast.

Goals:

The project goal is to create approximately 358 acres and nourish 124 acres of saline marsh east of Leeville.

Proposed Solution:

After consideration of three potential alternatives, features and an alignment were selected to establish an arc of wetlands along the north side of Southwestern Canal, Lake Jesse, and the west side of South Lake. This is to begin rebuilding the structural framework of wetlands east of Leeville and provide protection for Leeville from southeasterly winds and tides. A robust engineering and design cost was included for full flexibility during Phase 1 to expand the project if cost allows or to assess alternative configurations, if necessary. The proposed features consist of hydraulically mining sediment from a borrow source in Little Lake west of Leeville and pumping dredged material to create and nourish marsh east of Leeville. The disposal areas would be fully contained during construction and gapped no later than three years post construction to facilitate establishment of tidal connection and function. Additionally, a portion of the created marsh acres would be planted with smooth cordgrass following construction to help stabilize the created platform by increasing the rate of colonization.

Project Benefits:

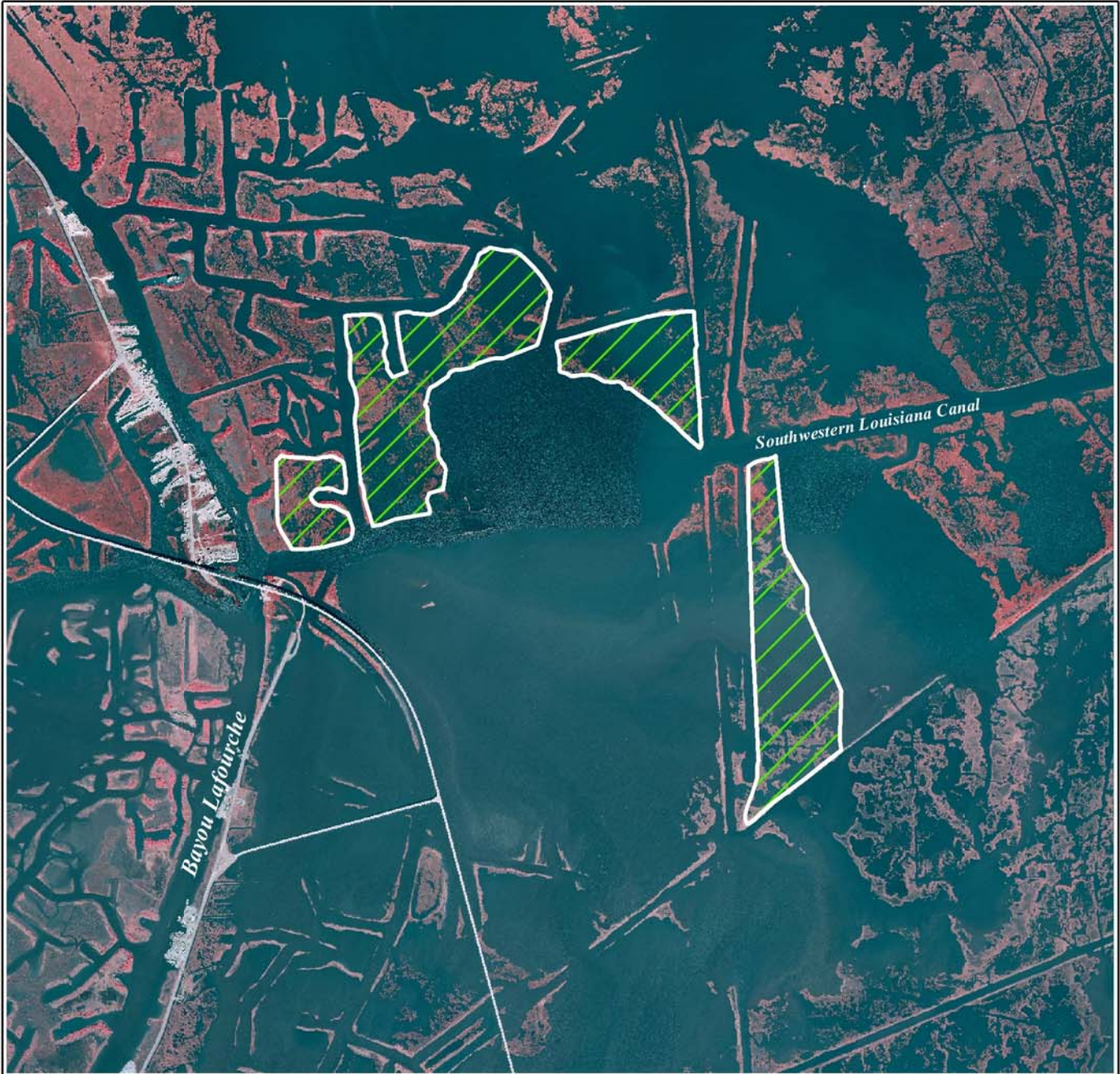
The project would result in approximately 322 net acres over the 20-year project life.

Project Costs:

The total fully-funded cost is \$35,066,972.

Preparer of Fact Sheet

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East Leeville Marsh Creation and Nourishment (PPL25 Candidate)

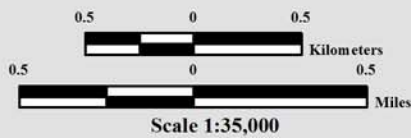


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 Baton Rouge, La

Image Source:
 2012 DOQQ



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



Map ID: USGS-NWRC 2015-11-0028
 Map Date: June 26, 2015

PPL25 Caminada Headlands Back Barrier Marsh Creation Increment #2

Project Location:

Region 2, Barataria Basin, Lafourche & Jefferson Parishes

Problem:

The Caminada Headland has experienced some of the highest shoreline retreat rates in Louisiana. Historically the shoreline has migrated landward at about 40 feet per year. Between 2006 and 2011, shoreline migration increased dramatically, exceeding 80 feet per year in near Bay Champagne and 110 feet per year in the Bayou Moreau area. The increased losses occurred in the wake of Hurricanes Katrina and Rita in 2005 as the breaches remained open for an extended length of time. The losses were exacerbated by Tropical Storm Fay and Hurricanes Gustav and Ike in 2008. Significant prolonged breaches greatly increase the net export of sediment from the headland.

In addition to the shoreline migration, the area is also experiencing high loss rates of interior marshes. As the beach and dune continue to migrate landward, overwashed sediment will be lost into newly formed open water and land loss rates will be exacerbated. The continued deterioration of Caminada headland threatens thousands of acres of wetland habitat as well as critical infrastructure, including Port Fourchon, LA Highway 1, and the lower Lafourche levee system.

Goals:

The goals of this project are to: 1) Create and/or nourish 444 acres of back barrier marsh, by pumping sediment from an offshore borrow site; 2) Create a platform upon which the beach and dune can migrate, reducing the likelihood of breaching, improving the longevity of the barrier shoreline, and protecting wetlands and infrastructure to the north and west. The proposed project is expected to slow the current trend of degradation in the headland.

Proposed Solution:

This project would create 246 acres of back barrier intertidal marsh and nourish 198 acres of emergent marsh using material dredged from the Gulf of Mexico. The marsh creation and nourishment cells are designed to minimize impacts on existing marsh and mangroves. Assuming some natural vegetative recruitment, vegetative plantings are planned at a 50% density, with half planned at project year one and half planned at project year 3. Containment dikes will be degraded or gapped by year three to allow access for estuarine organisms.

Project Benefits:

The project would result in approximately 207 net acres over the 20-year project life.

Project Costs:

The total fully-funded cost is \$24,977,605.

Preparers of Fact Sheet:

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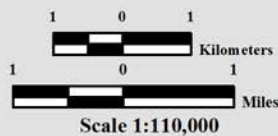


Caminada Headlands Back Barrier Marsh Creation, Increment #2 (PPL25 Candidate)



-  Marsh Creation *
-  Project Boundary
-  Back Barrier Marsh Creation
-  Beach & Dune Restoration

* denotes proposed features



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Image Source:
 2012 DOQQ

Map ID: USGS-NWRC 2015-11-0033
 Map Date: September 29, 2015

Candidate Projects Located in Region 3

PPL25 Bayou Terrebonne Ridge Restoration and Marsh Creation

Project Location:

Region 3, Terrebonne Basin, Terrebonne Parish

Problem:

The Terrebonne Basin was historically structured by a series of remnant north-south ridges of the many distributaries of Bayou Lafourche. Much of the habitat function of these ridges has been lost over the last half-century to erosion, subsidence, and development. Based on the hyper-temporal analysis conducted by USGS for the extended project boundary, loss rates in the project area are estimated to be -0.73% per year for the period 1984 to 2015. Land loss projections predict that the ridge and surrounding marshes will be converted to open water by 2050.

Goals:

The primary goals of this project are; 1) restore both the structural and habitat functions of several miles of Bayou Terrebonne ridge; 2) restore marsh habitat via marsh creation and nourishment and 3) protect the existing and newly created marsh and ridge with artificial oyster reefs. Specific goals of the project are: 1) restore approximately 5.4 miles of ridge habitat; 2) create/nourish 135 acres of marsh habitat with material dredged from Terrebonne Bay; and 3) install approximately 24,692 linear feet of artificial oyster reef/ridge armoring to provide habitat and protect the existing/newly created marsh and ridge.

Proposed Solution:

Approximately 28,501 linear feet (25 acres) of ridge will be constructed/restored on the east side of Bayou Terrebonne. The ridge will be constructed with borrow material from Bayou Terrebonne via bucket dredge. The ridge will be planted with seashore paspalum immediately post construction and with seedlings and saplings of appropriate species at TY3.

Sediments from a Terrebonne Bay borrow site will be hydraulically dredged and pumped via pipeline to create/nourish approximately 123 acres of marsh. The proposed design is to place the dredged material to an initial target elevation of +1.7 ft NAVD88. Dewatering and compaction of dredged sediments should produce marsh elevations conducive to the establishment of emergent marsh and within the intertidal range. Created marsh will be 100% planted with smooth cordgrass. Containment dikes will be constructed as necessary. Open water containment dike will be armored with gabion mats.

Gabion mats will be utilized to create approximately 24,692 linear feet of artificial oyster reef, ridge armoring, and shoreline protection.

Project Benefits:

The project would result in approximately 126 net acres of marsh (101 acres) and ridge (25 acres) habitats over the 20-year project life.

Project Costs:

The total fully-funded cost is \$36,867,892.

Preparer of Fact Sheet:

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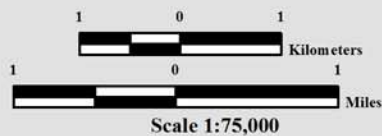


Bayou Terrebonne Ridge Restoration and Marsh Creation (PPL25 Candidate)



-  Ridge Protection *
-  Oyster Reef *
-  Ridge Restoration *
-  Marsh Creation *
-  Project Boundary

* denotes proposed features



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Image Source:
 2012 DOQQ

Map ID: USGS-NWRC 2015-11-0038
 Map Date: September 21, 2015

PPL25 West Vermilion Bay Shoreline Protection and Marsh Creation

Project Location:

Region 3, Teche-Vermilion Basin, Vermilion Parish

Problem:

Over the past decades, the project area has experienced wetland loss, primarily due to geomorphologic and hydrologic conditions being altered due to dredging of navigation and petroleum access canals and the construction of spoil banks and levees, and shoreline erosion along Vermilion Bay caused primarily by natural wave energy. Wave energy in the bay has gradually increased over the centuries because the bay is naturally getting deeper due to a slight yet constant subsidence and global sea-level rise. Recent loss rates (2003-2013) were calculated from aerial photography at 6.0 ft/yr.

Goals:

The goals of this project are to: 1) Create and/or nourish 769 acres of marsh, by pumping sediment from Vermilion Bay; 2) Protect/armor the western shoreline of Vermilion Bay between Bayou Prien and Hog Bayou and the Vermilion Bay shoreline adjacent to the proposed marsh creation cell near North Lake.

Proposed Solution:

The project proposes to create a total of 303 acres and nourish a total of 374 acres of emergent marsh by dredging sediment from Vermilion Bay. Approximately 23 acres would be confined marsh creation, and 280 acres would be unconfined marsh creation. Three acres would be confined marsh nourishment on North Lake and approximately 371 acres would be unconfined marsh nourishment in the southern project cell. The project also includes armoring approximately 18,352 linear feet of shoreline (2,474 LF of shoreline protection plus 15,878 LF of gabion mats) along Vermilion Bay between Bayou Prien and Hog Bayou and adjacent to the proposed marsh creation cell located near North Lake. Assuming some natural vegetative recruitment, vegetative plantings are planned at a 50% density at project year one. Containment dikes will be degraded or gapped by year three to allow access for estuarine organisms.

Project Benefits:

The project would result in approximately 317 net acres over the 20-year project life.

Project Costs:

The total fully-funded cost is \$24,975,860.

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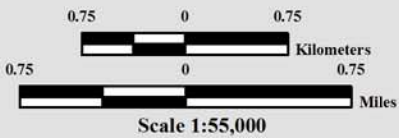
Cindy Steyer (NRCS), (225) 665-4253 x111



West Vermilion Bay Shoreline Protection and Marsh Creation (PPL25 Candidate)



-  Armored Protection *
 -  Shoreline Protection *
 -  Marsh Creation *
 -  Marsh Nourishment*
 -  Project Boundary
- * denotes proposed features



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 Coastal Restoration Assessment Branch
 Baton Rouge, La
 Image Source:
 2013 NAIP

Map ID: USGS-NWRC 2015-11-0039
 Map Date: August 19, 2015

Candidate Projects Located in Region 4

PPL25 Southeast Pecan Island Marsh Creation and Freshwater Enhancement

Project Location:

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

Problem:

The Southeast Pecan Island project area and surrounding marshes have experienced significant land loss from storm impacts, increased tidal exchange, saltwater intrusion, and reduced freshwater retention. Based on USGS data from 1984 to 2010, the wetland loss rate for the proposed project area is 0.99 %/year. Recent land loss, resulting from Hurricanes Rita and Ike, left Louisiana State Highway 3147 and Front Ridge Road exposed to open water wave action and vulnerable to additional storms.

Currently, Highway 82 forms a hydrologic barrier that isolates the Chenier Subbasin from freshwater associated with the Grand and White Lakes Subbasin. Highway 82 traverses cheniers wherever possible, however, low spots between cheniers historically allowed drainage from the Lakes Subbasin south into the Chenier Subbasin.

Goals:

The project goals are to restore/improve hydrologic conditions and increase emergent marsh vegetation throughout the project area. The project would help restore drainage of excess freshwater from the Lakes Subbasin into the Chenier Subbasin. Restoring the hydrology would reduce the exposure of fragile interior marsh to seasonal salinity spikes and increase productivity of marshes.

Proposed Solution:

The project would create/nourish approximately 253 acres of emergent marsh; create 55,000 linear feet (41 acres) of terraces; and promote growth of submerged aquatic vegetation.

The freshwater enhancement feature would improve hydrologic conditions by allowing water from the Lakes Subbasin to drain south into the Chenier Subbasin. The majority of the necessary infrastructure exists and would require channel clean out and the construction of two outlet structures, replacement of four sets of culverts along the conveyance channel, and the potential cleanout of culverts under Highway 82.

Project Benefits:

The project would result in approximately 301 net acres over the 20-year project life.

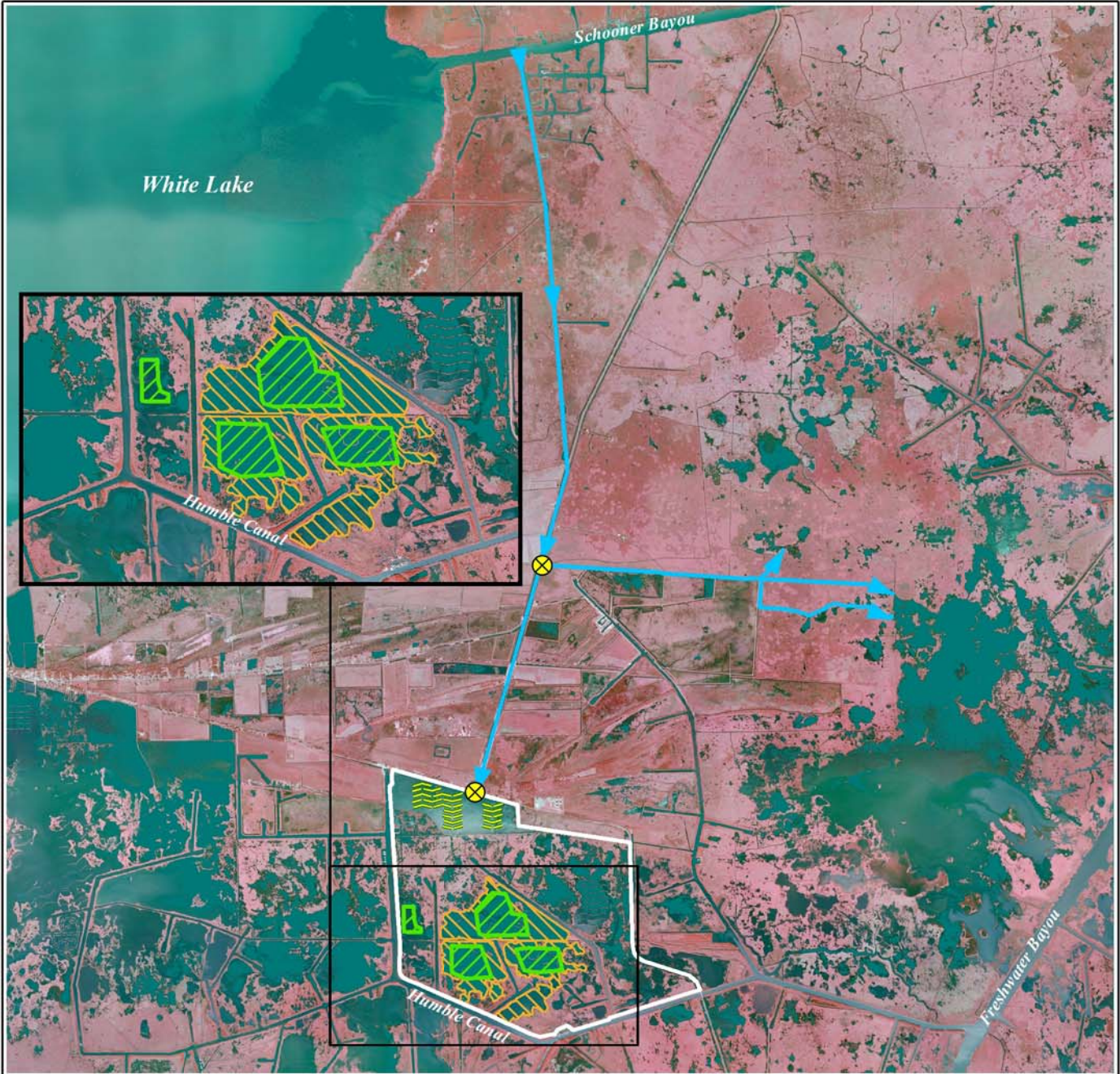
Project Costs:

The total fully-funded cost is \$33,497,546.

Preparers of Fact Sheet:

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Billy Broussard, Vermilion Corps, (337) 893-0268, bbillypb@kaplantel.net



Southeast Pecan Island Marsh Creation and Freshwater Enhancement (PPL25 Candidate)





Produced by:
 U.S. Department of the Interior
 U.S. Geological Survey
 National Wetlands Research Center
 Coastal Restoration Assessment Branch
 Baton Rouge, LA

Image Source:
 2012 DOQQ



-  Culvert with Flapgate *
-  Freshwater Introduction *
-  Terraces *
-  Marsh Creation *
-  Terrace Field *
-  Influence Area/Project Boundary *

* denotes proposed features


 Kilometers

 Miles
Scale 1:100,000

Map ID: USGS-NWRC 2015-11-0032
 Map Date: June 29, 2015

PPL25 Sweeney Tract Marsh Creation and Nourishment

Project Location:

Region 4, Mermentau Basin, Cameron Parish

Problem:

Marshes within the Hog Bayou Watershed mapping unit are stressed due to limited freshwater input and seasonal salinity spikes exacerbated by construction of the Mermentau Ship Channel. Other contributors to land loss in the area are subsidence, inundation, compaction, and erosion of organic soils. Currently, the project area is characterized as large, open water with degraded areas of wetland vegetation. The dredging of the Mermentau Ship Channel increased tidal amplitude and saltwater intrusion into the watershed. In addition to these direct losses, significant interior marsh loss has resulted from saltwater intrusion and hydrologic changes associated with storm damage and blocked drainages (inundation). The 1984 to 2014 interior marsh loss rate derived from USGS for the area is -1.50 % per year. The subsidence rate provided by the 2012 Louisiana State Master Plan Appendix C indicates a loss of 0.24 ft. of elevation within the 20-yr project life.

Goals:

The primary goals of this project are to restore marsh habitat in open water areas via marsh creation. Specific goals are: 1) Create and nourish approximately 730 acres of saline marsh, and 2) Create approximately 13,000 linear feet (6.9 acres) of tidal creeks to facilitate intertidal flow.

Proposed Solution:

Sediment mined from offshore would be placed to create 590 acres of saline marsh and nourish 133 acres of existing marsh. Material would be placed to achieve a settled target elevation of +1.27 feet NAVD88 (GEOID99) based on CRMS station 0614. Temporary containment dikes will be constructed to contain the fill material. To help facilitate estuarine fisheries access, containment dikes will be degraded within three years if the dikes do not naturally degrade, and approximately 13,000 linear feet (6.9 acres) of tidal creeks will be constructed. To improve hydrology of the area, two 48-inch flap-gated culverts would be installed to replace nonfunctional structures northwest of Second Lake and about 500 linear feet of closed conveyance channel would be cleaned out to facilitate water flow to and from the structures.

Project Benefits:

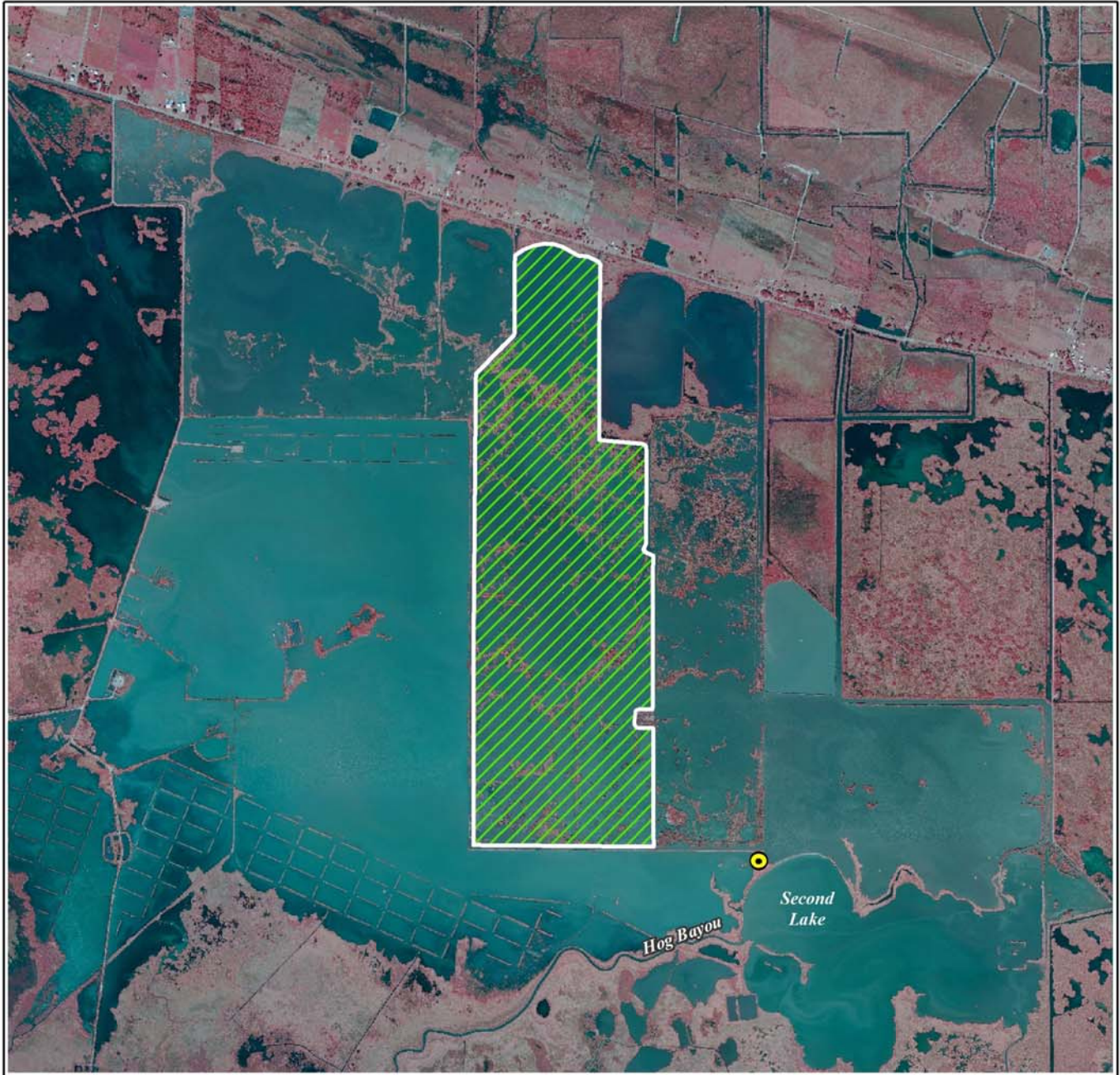
The project would result in approximately 524 net acres over the 20-year project life.

Project Costs:

The total fully funded cost is \$30,915,853.

Preparer(s) of Fact Sheet:

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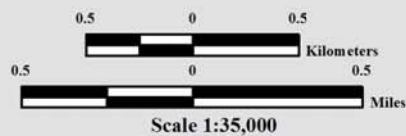
Sweeny Tract Marsh Creation and Nourishment (PPL25 Candidate)



- Hydrologic Improvement *
 - Marsh Creation *
 - Project Boundary
- * denotes proposed features



Produced by:
 U.S. Department of the Interior
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 National Wetlands Research Center
 Coastal Restoration Assessment Branch
 Baton Rouge, La



Map ID: USGS-NWRC 2015-11-0031
 Map Date: August 13, 2015

Image Source:
 2012 DOQQ

PPL25 Oyster Lake Marsh Creation and Nourishment

Project Location:

Region 4, Calcasieu-Sabine Basin, Cameron Parish

Problem:

Altered hydrology, drought stress, saltwater intrusion and hurricane induced wetland losses have caused the area to undergo interior marsh breakup. Impacts from Hurricane Rita in 2005 and Hurricane Ike in 2008 have resulted in the coalescence of Oyster Lake with interior water bodies increasing wave/wake related erosion. Based on USGS hyper temporal data analysis (1984 to 2014), land loss for the area is -1.28% per year. The subsidence rate is estimated at 3.8 mm per year according to the 2012 Louisiana State Master Plan Appendix C.

Goals:

The primary goals of the project are to create and nourish approximately 661 acres of saline marsh. Half of the created acres will be planted with smooth cordgrass vegetation.

Proposed Solution:

Sediment would be mined from the offshore disposal area used for CS-59 and placed in the project area to create approximately 476 acres and nourish approximately 185 acres of saline marsh. Disposal areas would be constructed between the CS-59 marsh creation areas and terrace field, and extend eastward. Material would be placed to achieve a settled target elevation of +1.4 feet NAVD 88, GEOID 99 based on CRMS station 0655. Temporary dikes, where necessary, would be constructed to contain the fill. If the dikes do not naturally degrade to marsh elevation within three years, they would be gapped. Half of the created elevations (237 acres) would be planted with smooth cordgrass plugs. Although marsh creation via dedicated dredging of sediment is the primary technique, opportunities may exist to include some terracing where warranted, but not included in the benefit/cost estimates at this time.

Project Benefits:

The project would result in approximately 438 net acres over the 20-year project life.

Project Costs:

The total fully-funded cost is \$38,073,046.

Preparer(s) of Fact Sheet:

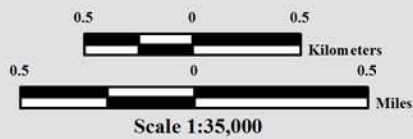
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Oyster Lake Marsh Creation and Nourishment (PPL25 Candidate)



- Marsh Creation/Nourishment *
 - Project Boundary *
 - CS-59 Project Boundary
- * denotes proposed features



Produced by:
 U.S. Department of the Interior
 U.S. Geological Survey
 National Wetlands Research Center
 Coastal Restoration Assessment Branch
 Baton Rouge, La
 Image Source:
 2013 NAIP Photography

Map ID: USGS-NWRC 2015-11-0027
 Map Date: June 26, 2015

Candidate Demonstration Project

PPL25 Demonstration Project Shoreline Protection, Preservation, and Restoration Panel (*SPPR Panel*)

Project Location:

Coastwide: Navigation Channels/Estuary Shorelines

Problem:

Historically Louisiana's coastal shoreline, bays, and lake rims have experienced high levels of retreat and land loss. The approach to repairing these areas have utilized heavy, hard engineering methods that eventually settle into the substrate, which has not achieved the goal and even presented additional hazards. Through the use of pre-fabrication of the proposed units, the landowner will see a 60%-80% reduction in installation costs when compared to typical rock rip-rap construction.

Goals:

The proposed demonstration project would stabilize existing shoreline features and attenuate shoreline retreat and potentially enhance interior marshes and an accretion platform behind the structure. The goal of the proposed demonstration project is to provide a cost effective construction alternative to rip rap for shoreline protection.

Proposed Solution:

The SPPR Panel is a pre-cast, saltwater tolerant concrete panel system (with *no carbon steel reinforcement*), the dimensions and density of which can be adjusted to site conditions. The SPPR Panel units resemble a chain when joined together allowing for on site adjustments to irregular shorelines, and has planned openings with the face of the unit that allows for some sediment to penetrate, along with providing ingress/egress of aquatic organisms.

The demonstration would include the selection of 2 diverse application sites for treatment with water depths ranging from 2 to 5 feet. Each treatment would include 3 replicate 260-foot sections for a total project installation of 1,600 linear feet. Project effectiveness would be monitored and evaluated after construction according to the CWPPRA workgroups' recommendation for this product in Phase 0. The conceptual treatment is shown in Figure 1.

Project Costs:

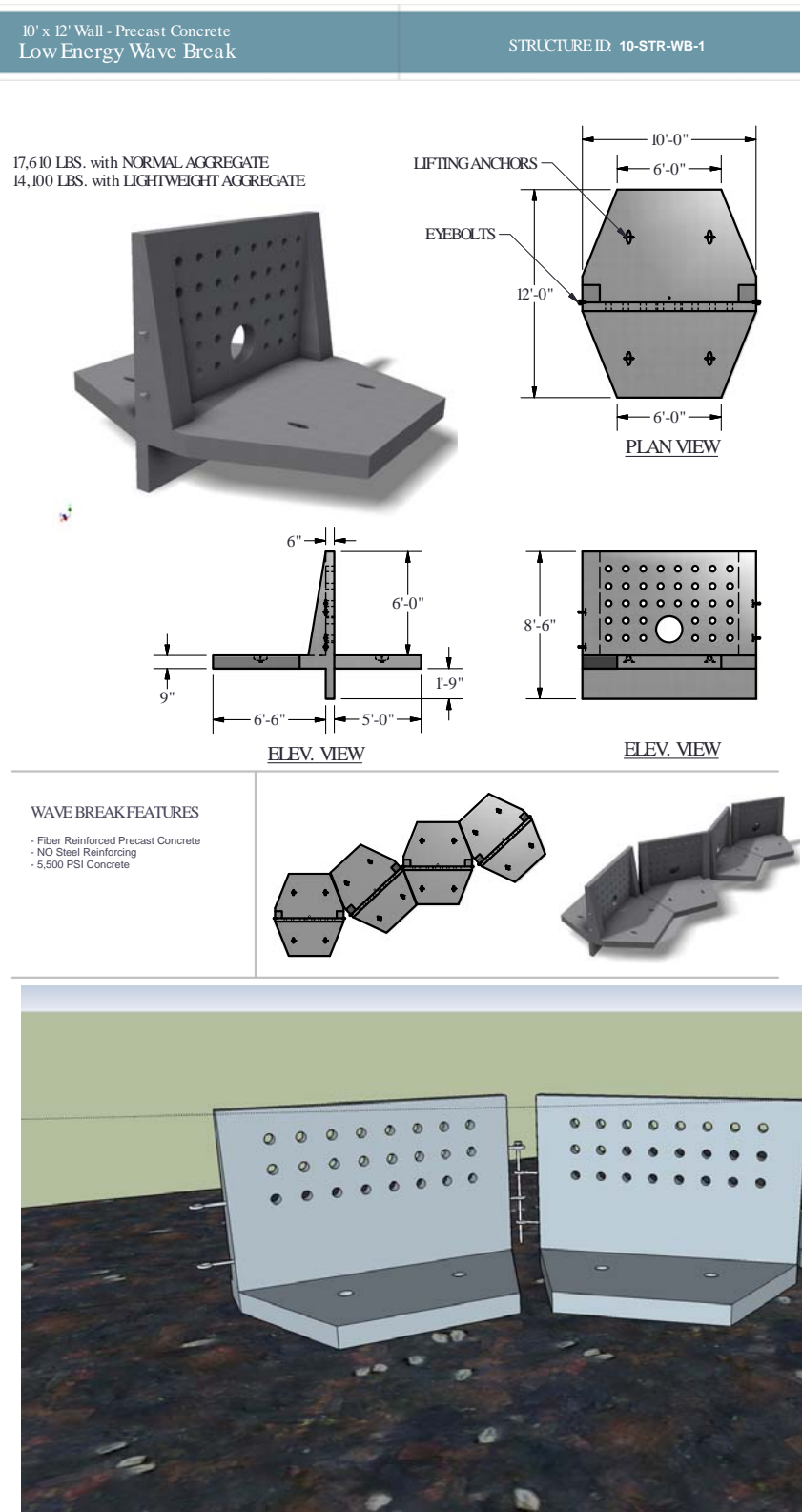
The total fully-funded cost is \$2,215,514.

Preparer(s) of Fact Sheet:

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Figure: 1. Example SPPR Panel dimensions, layout, and vent placement.



PPL25 Candidate Project Evaluation Matrix

10/29/2015

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	Average Annual Cost (AAC)	Cost Effectiveness (AAC/AAHU)	Cost Effectiveness (Cost/Net Acre)
Fritchie Marsh Creation and Terracing	1	St. Tammany	882	141	290	\$27,944,102	\$3,033,294	\$24,910,808	\$1,829,778	\$12,977	\$96,359
North Shell Beach Marsh Creation	1	St. Bernard	394	112	220	\$24,313,536	\$2,906,264	\$21,407,272	\$1,591,229	\$14,207	\$110,516
Barataria Bay Rim Marsh Creation	2	Jefferson & Plaquemines	520	158	251	\$23,838,905	\$2,693,708	\$21,145,197	\$1,562,085	\$9,887	\$94,976
East Bayou Lafourche Marsh Creation	2	Lafourche	417	177	330	\$33,031,016	\$3,242,713	\$29,788,303	\$2,173,216	\$12,278	\$100,094
East Leeville Marsh Creation and Nourishment	2	Lafourche	484	185	322	\$35,066,972	\$4,026,090	\$31,040,882	\$2,316,074	\$12,519	\$108,904
Caminada Headlands Back Barrier Marsh Creation Increment #2	2	Lafourche & Jefferson	444	142	207	\$24,977,605	\$3,034,310	\$21,943,295	\$1,644,442	\$11,581	\$120,665
Bayou Terrebonne Ridge Restoration and Marsh Creation	3	Terrebonne	173	76	126	\$36,867,892	\$3,456,191	\$33,411,701	\$2,384,633	\$31,377	\$292,602
West Vermilion Bay Shoreline Protection and Marsh Creation	3	Vermilion	769	153	294	\$24,975,860	\$2,875,082	\$22,100,778	\$1,612,396	\$10,539	\$84,952
Southeast Pecan Island Marsh Creation and Freshwater Enhancement	4	Vermilion	3,281	189	301	\$33,497,546	\$3,597,172	\$29,900,374	\$2,172,021	\$11,492	\$111,288
Sweeney Tract Marsh Creation and Nourishment	4	Cameron	730	274	524	\$30,915,853	\$3,150,226	\$27,765,627	\$2,008,392	\$7,330	\$59,000
Oyster Lake Marsh Creation and Nourishment	4	Cameron	661	258	438	\$38,073,046	\$3,608,939	\$34,464,107	\$2,505,694	\$9,712	\$86,925

PPL 25 Demonstration Project Evaluation Matrix

11/6/2015

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

Demonstration Project Name	Lead Agency	Total Fully Funded Cost	Parameter (P _n)						Total Score	Averaging of Agency Scores
			P ₁ Innovativeness	P ₂ Applicability or Transferability	P ₃ Potential Cost Effectiveness	P ₄ Potential Env Benefits	P ₅ Recognized Need for Info	P ₆ Potential for Technological Advancement		
Shoreline Protection, Preservation, & Restoration (SPPR) Panel	NMFS	\$2,215,514	2	3	2	2	2	2	13	12.9

"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

(P₁) *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.

(P₂) *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.

(P₃) *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.

(P₄) *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.

(P₅) *Recognized Need for the Information to be Acquired* - 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.

(P₆) *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

Date: December 10, 2015

Time: 9:30 a.m.

Location: LA Dept of Wildlife and Fisheries
Louisiana Room
2000 Quail Drive
Baton Rouge, Louisiana

Technical Committee Meeting

The evaluation results will be presented for all the PPL 25 candidate projects. The public is invited to attend and provide comments on the candidate projects. The Technical Committee will vote & recommend projects for PPL 25 selection. The Technical Committee will also consider requests for construction (Phase II) approvals.



Written comments may be provided no later than November 25, 2015 to the CWPPRA Task Force by mail or email to:

Colonel Richard Hansen
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