Priority Project List 26
Candidate Projects

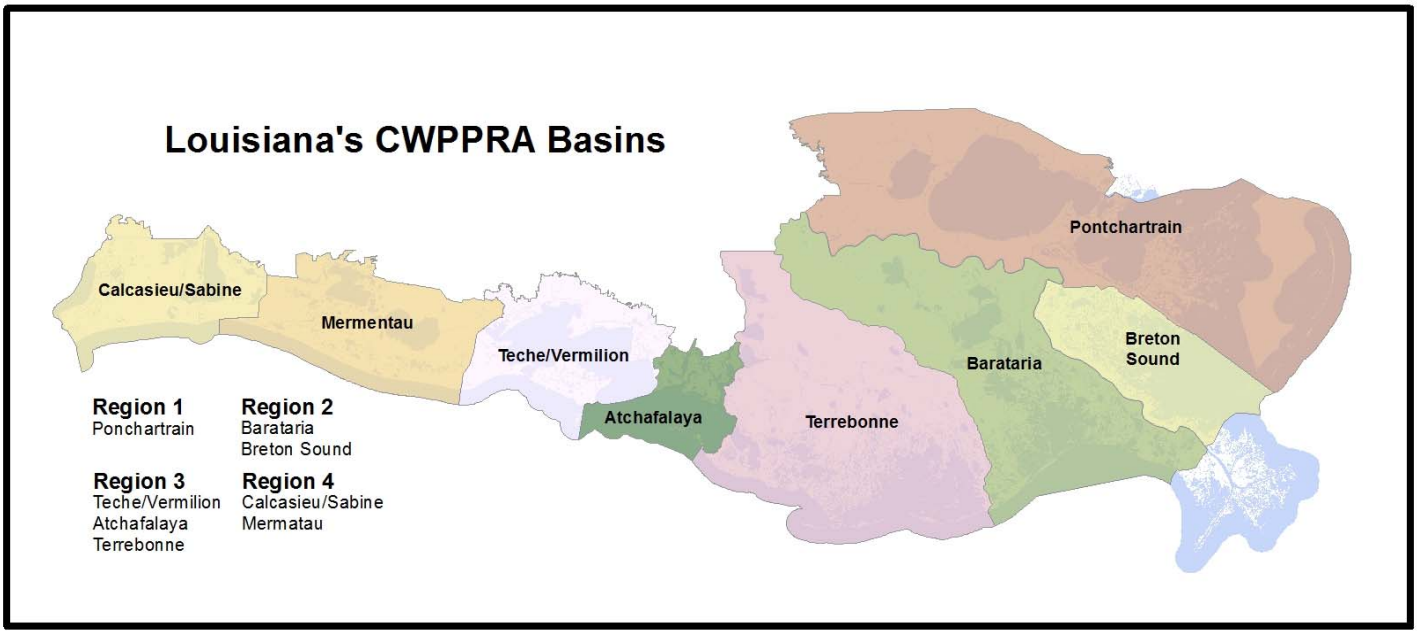
Table of Contents

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. *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).



- 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.

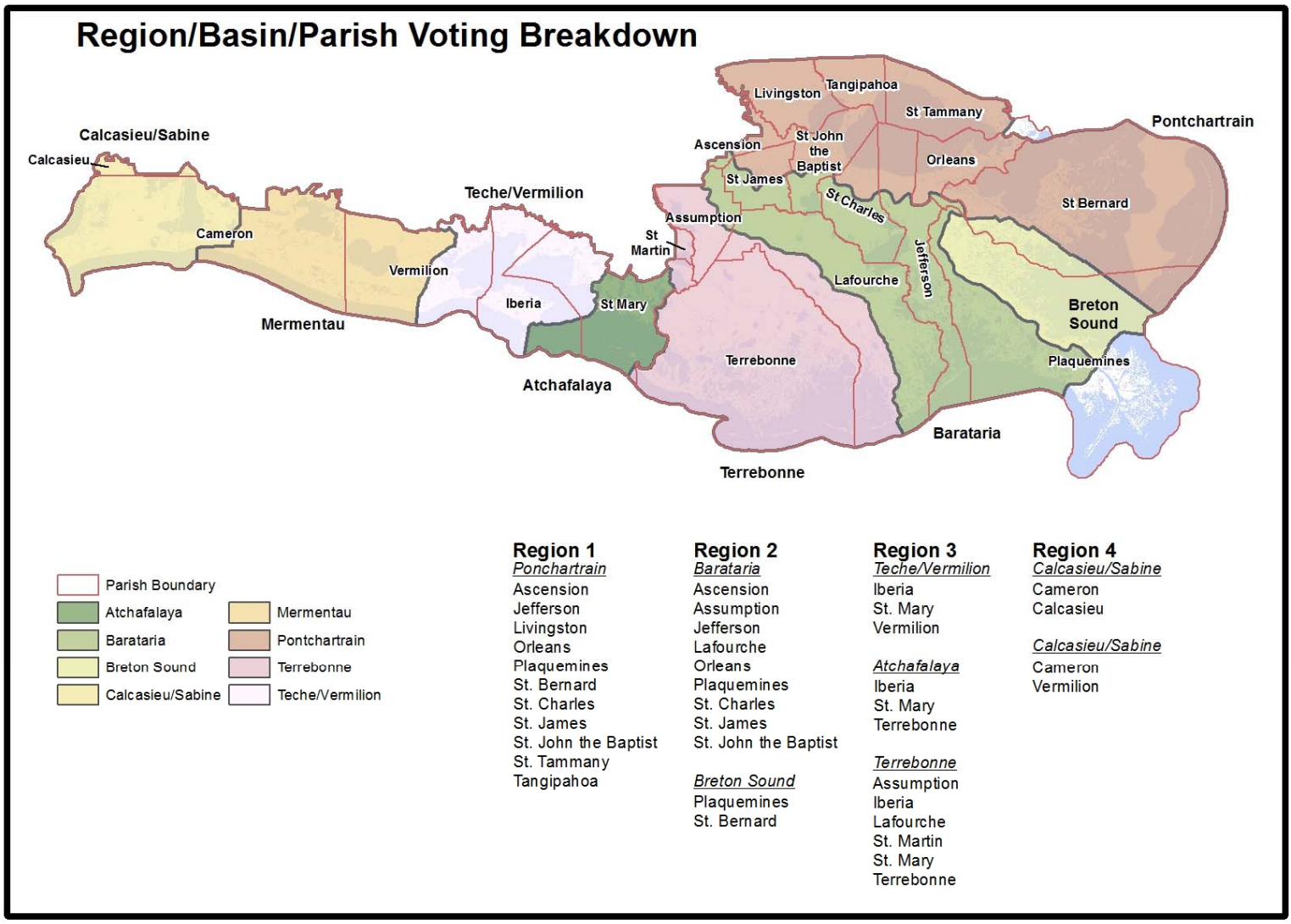
Prior to voting on project nominees, the Environmental Work Group (EnvWG) and Engineering Work Group (EngWG) will screen coastwide project and demonstration project nominations to ensure that each qualifies for its respective category as set forth in the CWPPRA Standard Operating Procedures (SOP).

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.

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 26 Schedule

January 26, 2016	Region IV Planning Team Meeting (Lafayette)
January 27, 2016	Region III Planning Team Meeting (Gray)
January 28, 2016	Regions I and II Planning Team Meetings (Lacombe)
February 23, 2016	Coastwide RPT Electronic Vote
February - March, 2016	Agencies prepare factsheets for RPT-nominated projects
March 2016	Engineering/Environmental Work Groups review project features, benefits, & prepare preliminary cost estimates for nominated projects (Baton Rouge)
March 2016	P&E Subcommittee prepares matrix of nominated projects showing initial cost estimates and benefits
April 5, 2016	Spring Technical Committee Meeting, select PPL 26 candidate projects (New Orleans)
May/June 2016	Candidate project site visits
May 12, 2016	Spring Task Force Meeting (Lafayette)
July/August/ September 2016	Eng/Eng/Econ Work Group project evaluations
September 14, 2016	Fall Technical Committee Meeting, O&M and Monitoring funding recommendations (Baton Rouge)
October 19, 2016	Fall Task Force Meeting, O&M and Monitoring approvals (New Orleans)
October 2016	Economic, Engineering, and Environmental analyses completed for PPL 26 candidates
December 7, 2016	Winter Technical Committee Meeting, recommend PPL 26 and Phase I and II approvals (Baton Rouge)
January 2017	Winter Task Force Meeting, select PPL 26 and approve Phase II requests (New Orleans)

DATES SUBJECT TO CHANGE

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

Candidate Projects Located in Region 1

PPL26 Bayou La Loutre Ridge Restoration and Marsh Creation

Project Location:
Region 1, Lake Pontchartrain Basin and Breton Basin, St. Bernard Parish

Problem:
Historic and current ridge habitat loss occurs in the form of subsidence and shoreline erosion along Bayou La Loutre. The shoreline erosion is caused by increased boat traffic diverted due to the closure of the MRGO channel. Ridge habitat consists of Live Oak Hackberry Maritime forest which is utilized by trans-gulf migratory bird species as a first and last stop when crossing the Gulf of Mexico. This critical habitat is rated as S1-Most Critically Imperiled (State Natural Heritage Program) and S2 priority by the state of Louisiana. Interior marsh loss along Lena Lagoon is caused by subsidence, sediment deprivation, increased wave fetch and construction of access and navigational canals. The integrity of the Lena Lagoon shoreline has been breached, and loss of this wetland buffer will expose the La Loutre ridge to highly erosional winter storm events.

Goals:
The goal of the project is to create and approximately 31.7 acre ridge feature with material from bucket dredging Bayou La Loutre. Additionally dredged material from Lake Borgne will create 163 acres of marsh and nourish approximately 258 acres of marsh along Lena Lagoon (421 acres total).

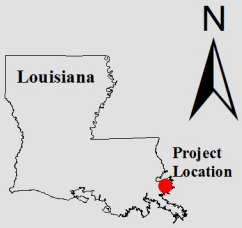
Proposed Solution:
The proposed project will create approximately 5.46 miles (28,855 ft) of ridge along Bayou La Loutre and 24.4 acres of Live Oak/Hackberry Maritime forest habitat (Figure 1). The ridge habitat will be built centerline along the bank of the bayou. The structure will have a +4 elevation with a 5:1 slope on the bayou side and 3:1 slope on the marsh side. Additionally the newly created ridge will include herbaceous and woody plantings with smooth cord plantings along the toe. The Lena Lagoon site will create and nourish approximately 421 acres of marsh using sediment dredged from Lake Borgne. Lena Lagoon will have a semi-confined south and east flank and a fully confined north flank. Containment will be degraded as necessary to re-establish hydrologic connectivity with adjacent wetlands.

Project Benefits:
The project would result in approximately 167 net acres of marsh and approximately 20 acres of forested ridge over the 20-year project life.

Project Costs: The total fully-funded cost is $29,762,138.

Preparer of Fact Sheet
Ron Boustany, NRCS, (337) 291-3067, ron.boustany@la.usda.gov
Cody Colvin, NRCS-Engineer, (225) 665-4253, cody.colvin@la.usda.gov
Blaise Pezold, LDAF-CRVP, 985-447-3871 ext. 3, Blaise.Pezold@la.nacdnet.net

Bayou La Loutre Ridge Restoration and Marsh Creation (PPL26 Candidate)



Ridge Restoration *

Marsh Creation *

Project Boundary

* denotes proposed features

1 0 1 Kilometers

1 0 1 Miles

Scale 1:60,000

USGS science for a changing world

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

Image Source:
2012 DOQQ

Map ID: USGS-NWRC 2016-11-0030
Map Date: June 30, 2016

PPL26 St. Catherine Island Marsh Creation and Shoreline Protection

Project Location:
Region 1, Pontchartrain Basin, St. Tammany Parish

Problem:
The eastern shoreline of Lake Pontchartrain experienced extensive loss of interior emergent wetlands and severe damage to the lake shorelines from Hurricane Katrina passing directly over the area in 2005. The continued loss of the weakened project area shorelines has increased the vulnerability of the New Orleans Landbridge and U.S. Highway 90. Based on the hyper-temporal analysis conducted by USGS for the extended project boundary, interior loss rates in the project area are estimated to be -0.26% per year for the period 1984 to 2016.

Goals:
The primary goals of this project are to protect a portion of the Lake Pontchartrain shoreline and restore/protect interior marsh habitat with the placement of dredged material (hydraulic dredge).

The specific goals of the project are; 1) halt shoreline erosion by protecting approximately 13,000 ft. of Lake Pontchartrain shoreline with shoreline revetment and construct approximately 7,000 ft. of foreshore dike and 2) create approximately 93 acres of marsh and nourish an additional 126 acres of marsh with material dredged from Lake Pontchartrain.

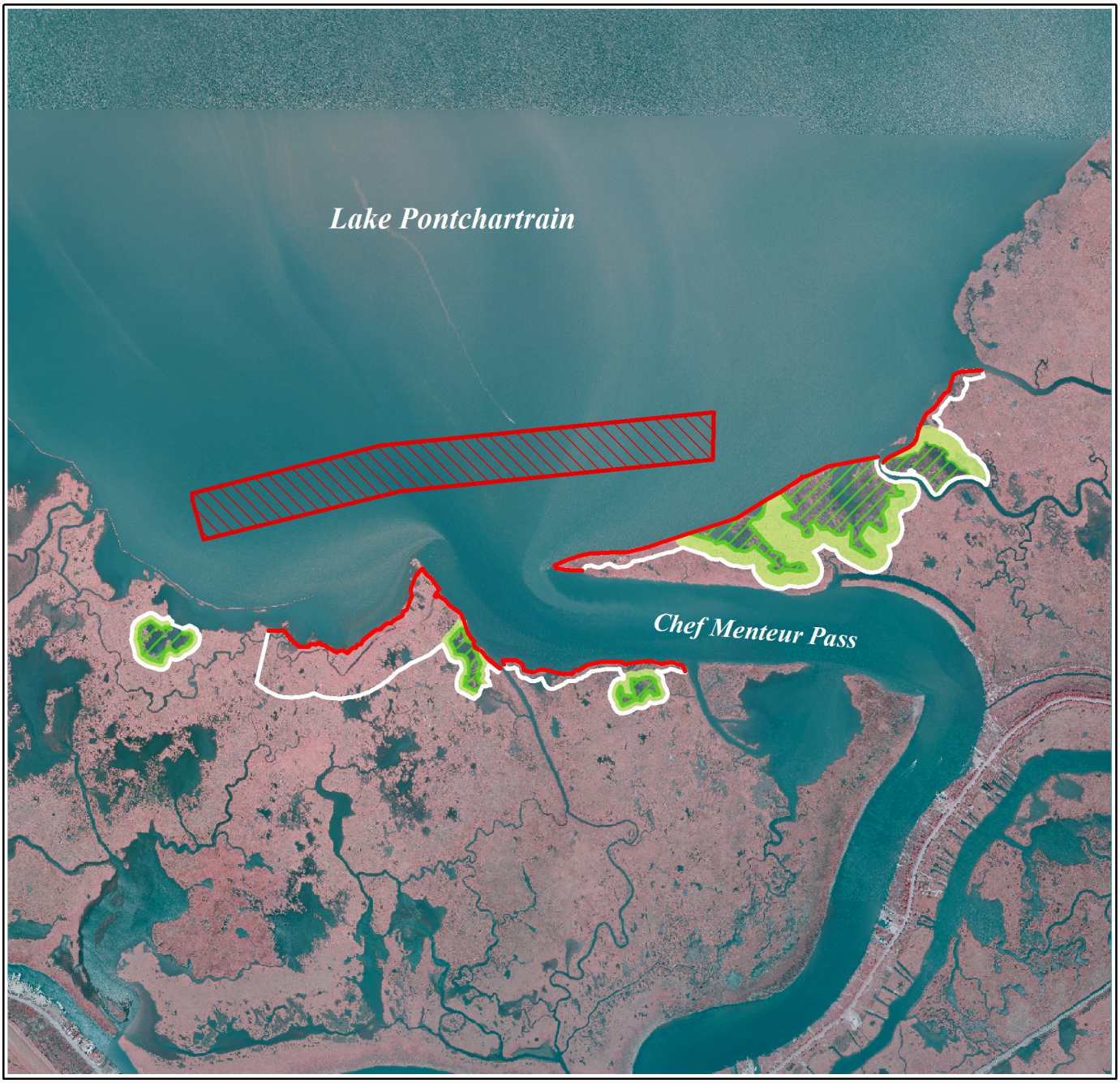
Proposed Solution:
Sediments from a Lake Pontchartrain borrow site will be hydraulically dredged and pumped via pipeline to create/nourish approximately 219 acres of marsh. The proposed design is to place the dredged material to a fill height of +0.85 ft. NAVD88 based on CRMS station 002. Dewatering and compaction of dredged sediments should produce marsh elevations conducive to the establishment of emergent marsh and within the intertidal range. Containment dikes will be constructed as necessary. Perimeter containment dikes exposed to high wave energy (Lake Pontchartrain) will be overlain with articulated concreate mats (ACM) and planted.

Approximately 13,000 ft. of Lake Pontchartrain shoreline would be protected with the construction of shoreline revetment. In areas that do not contain existing marsh, approximately 7,000 ft. of rock foreshore dike would be constructed. Along the open water areas adjacent to the marsh creation cells, approximately 4,000 feet of containment dike will be constructed and armored with ACM.

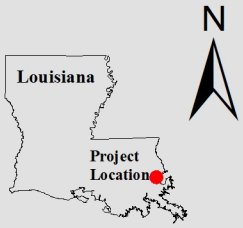
Project Benefits:
The project would result in approximately 214 net acres over the 20-year project life.

Project Costs:
The total fully-funded cost is $35,996,522.

Preparer of Fact Sheet:
Robert Dubois, FWS, Robert_Dubois@fws.gov, 337-291-3127



St. Catherine Island Marsh Creation and Shoreline Protection (PPL26 Candidate)



Shoreline Protection *
Marsh Creation *
Marsh Nourishment *
Borrow Site *
Project Boundary

* denotes proposed features

0.5 0 0.5 Kilometers

0.5 0 0.5 Miles

Scale 1:35,000

USGS science for a changing world

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

Image Source:
2012 DOQQ

Map ID: USGS-NWRC 2016-11-0034
Map Date: August 29, 2016

Candidate Projects Located in Region 2

PPL26 Elmer's Island Back Barrier Marsh Creation

Project Location:
Region 2, Barataria Basin, Jefferson Parish

Problem:
As part of an erosional headland, Elmer's Island is dominated by marine processes including over wash. The island narrowed and decreased in elevation escalating the rate of over wash and breaching near the confluence with the headland as well as along Caminada Pass. The spit along the pass is breached. Resiliency to over wash and breaching is related to both island height and width. Construction of beach and dune under Caminada Beach and Dune Restoration Increment 2 Project (BA-143) is addressing sand and dune height needs. Residual vulnerability from breaching may remain due to island width. The 1985 to 2009 USGS loss rate for the Port Fourchon mapping unit is -0.92% per year. The loss rate in the project area is estimated to be -0.79%/yr based on USGS hyper temporal data from 1984 to 2016.

Goals:
The project goal is to create/nourish approximately 265 acres (ac) of back-barrier marsh and maintain or improve hydrology by connecting the lagoon to the Bayou Thunder Von Tranc and Moreau watershed west of Elmer's Road.

Proposed Solution:
Marsh creation via dedicated dredging of sediment is the primary technique along with culvert placement to restore hydrologic connectivity to marsh located west of the project area. Sediment would be mined from an offshore borrow site and placed in the project area to create approximately 228 acres and nourish approximately 37 acres of saline marsh. The borrow site would be located to avoid inducing wave refraction/diffraction impacts on the shoreline. Material would be placed to achieve a settled target elevation of +0.87 feet NAVD 88, GEOID 12A based on CRMS station 0167. The marsh creation would be confined disposal with the dike along the lagoon gapped no later than three years after construction at a rate of 25 ft wide every 250 ft. Half of the created elevations (228 acres) would be planted with smooth cordgrass plugs. Two 36 inch culverts would be installed in four locations under Elmer's Road (total of eight culverts) to improve connection of marsh with the lagoon and vice versa.

Project Benefits:
The project would result in approximately 222 net acres over the 20-year project life.

Project Costs:
The total fully-funded cost is $27,774,583.

Preparer(s) of Fact Sheet:
Twyla Cheatwood, NOAA's National Marine Fisheries Service, (225) 389-0508, ext 209; Twyla.Cheatwood@noaa.gov.
Brandon Howard, NOAA's National Marine Fisheries Service, (225) 389-0508, ext. 207; Brandon.Howard@noaa.gov

Elmer's Island Back Barrier Marsh Creation (PPL26 Candidate)

Culverts *

Marsh Creation *

Project Boundary

* denotes proposed features

0.5 0 0.5 Kilometers

0.5 0 0.5 Miles

Scale 1:40,000

USGS science for a changing world

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

Image Source:
2012 DOQQ

Map ID: USGS-NWRC 2016-11-0036
Map Date: August 01, 2016

PPL26 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 -1.42% per year for the period 1984 to 2016.

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.

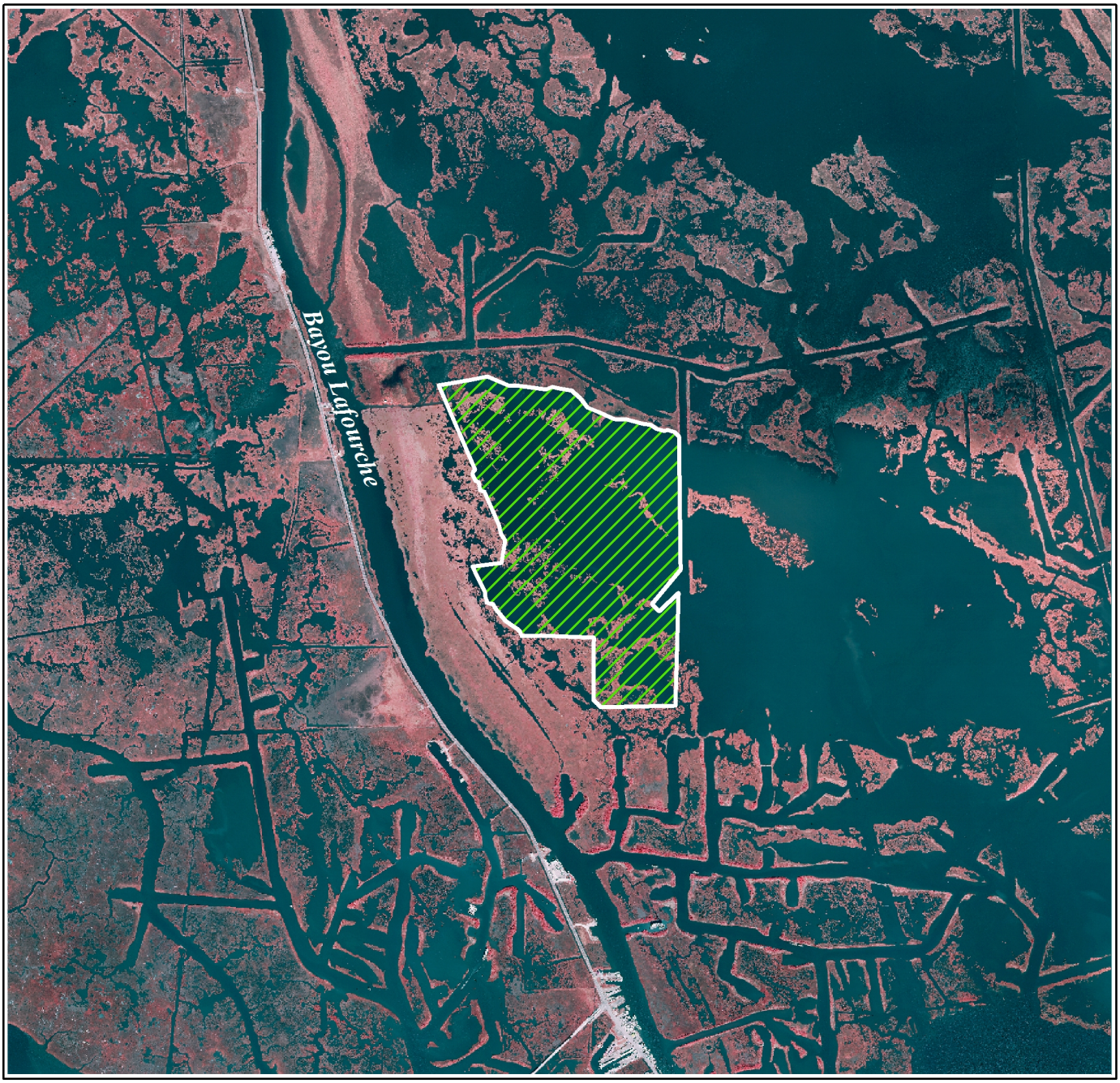
The specific goal of the project is create approximately 417 acres (368 acres of marsh creation and 49 acres of marsh nourishment) of marsh with dredged material.

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. 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.

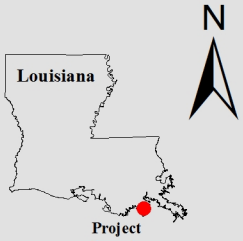
Project Benefits:
The project would result in approximately 325 net acres over the 20-year project life.

Project Costs:
The total fully-funded cost is $36,784,975.

Preparer of Fact Sheet:
Kevin Roy, FWS, Kevin_Roy@fws.gov, 337-291-3120



East Bayou Lafourche Marsh Creation
(PPL26 Candidate)



Marsh Creation *

Project Boundary

* denotes proposed features

0.5 0 0.5 Kilometers

0.5 0 0.5 Miles

Scale 1:35,000

USGS science for a changing world

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

Image Source:
2012 DOQQ

Map ID: USGS-NWRC 2016-11-0026
Map Date: June 20, 2016

Candidate Projects Located in Region 3

PPL26 Bayou Terrebonne Freshwater Diversion

Project Location:
Region 3, Terrebonne Basin, Terrebonne Parish along Bayou Terrebonne between the towns of Montegut and Pointe aux Chenes in Terrebonne Parish. The primary project area is located within the Louisiana Department of Wildlife and Fisheries Pointe aux Chenes WMA.

Problem:
The Central and Eastern Terrebonne marshes are greatly deprived of freshwater, nutrients and sediments from riverine sources. Consequently, subsidence and saltwater intrusion have resulted in high rates of land loss. More recently, efforts have been underway to try to optimize freshwater flows to some of these areas where possible; however, the sources of freshwater are greatly limited. The Gulf Intracoastal Waterway (GIWW) has been recognized as a lateral source of freshwater from the Atchafalaya River extending from west to east across the entire Terrebonne Basin. This resource provides the potential to reroute freshwater through the bayous to the Central and East Terrebonne marshes.

Goals:
The project goals are 1) convey freshwater, nutrients and sediments from the Atchafalaya River east via the GIWW and Bayou Terrebonne into the Central and Eastern Terrebonne marshes and 2) create marsh habitat through construction of marsh terracing.

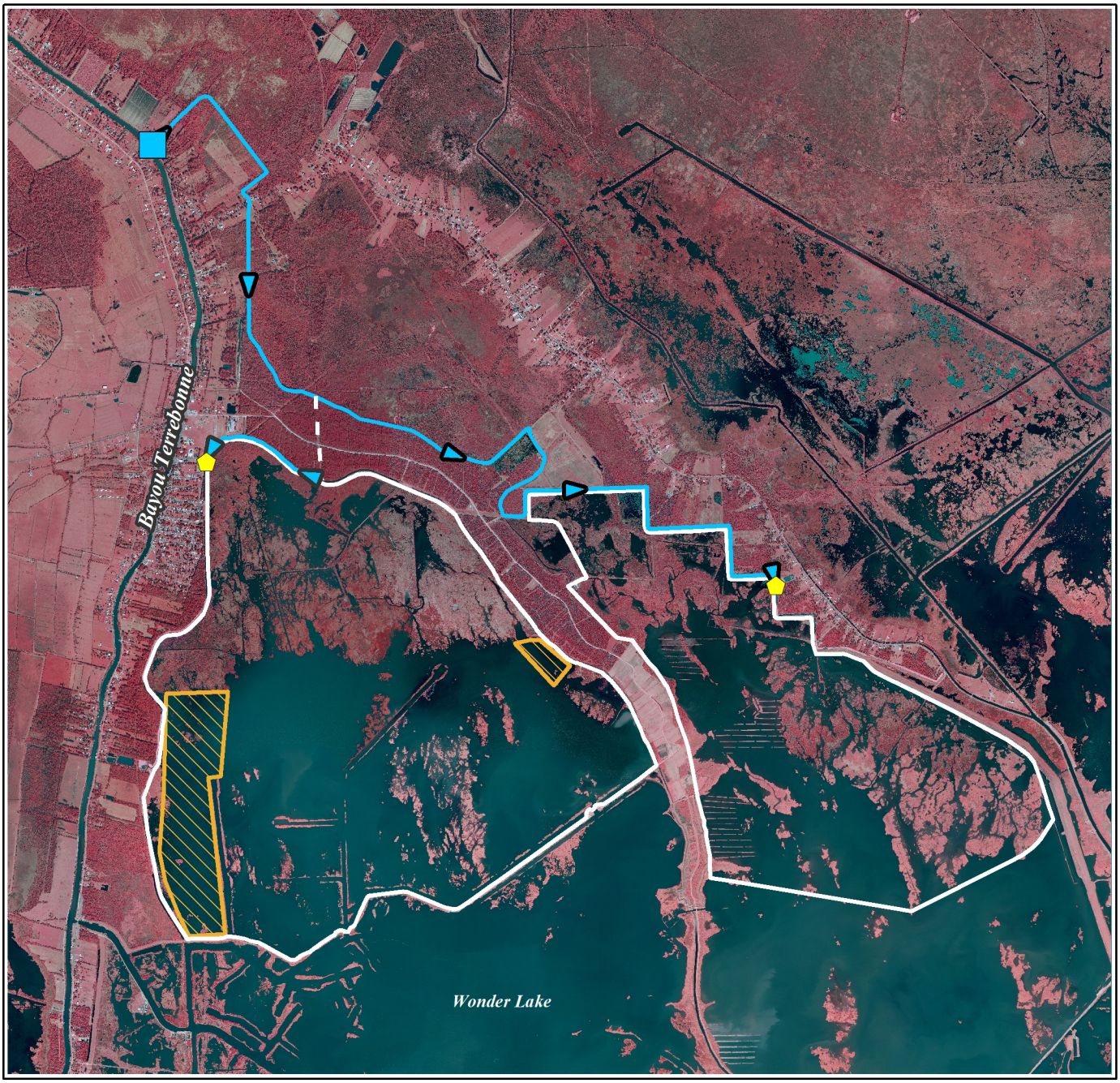
Proposed Solution:
Freshwater Diversion: The project will construct a freshwater diversion to move freshwater, nutrients and sediments originating largely from the Atchafalaya River via the GIWW and Bayou Terrebonne into the Montegut Unit and Pointe aux Chenes marshes in Central and Eastern Terrebonne Parish. The project will include rerouting water from Bayou Terrebonne through an existing canal system where a series of forced drainage pumps will be used to move freshwater into two adjacent marsh complexes. Two additional project-specific pumps will be installed at existing pump facilities to divert freshwater when forced drainage systems are not in service.

Terraces: Approximately 26,000 linear feet of terraces will be constructed in the Montegut Unit to create approximately 16 acres of marsh.

Project Benefits:
The project would result in approximately 173 net acres of marsh over the 20-year project life.

Project Costs:
The total fully-funded cost is $22,636,335.

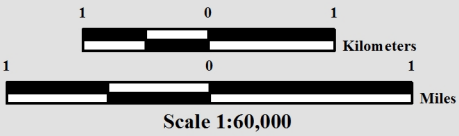
Preparer(s) of Fact Sheet: Ron Boustany, NRCS, (337) 291-3067, ron.boustany@la.usda.gov
Loland Broussard, NRCS-Engineer, (337) 291-3069, loland.broussard@la.usda.gov
Todd Baker, LA Dept. of Wildlife and Fisheries, (225) 765-2814, tbaker@wlf.la.gov



Bayou Terrebonne Freshwater Diversion (PPL26 Candidate)

Freshwater Diversion
Pump
Freshwater Flow *
Channel Cleanout *
Terrace Field *
Freshwater Influence/ Project Boundary

* denotes proposed features



Scale 1:60,000

Map ID: USGS-NWRC 2016-11-0028
Map Date: September 09, 2016

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

Image Source:
2012 DOQQ

PPL26 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 -1.05%/year based on USGS hyper temporal data from 1984 to 2016.

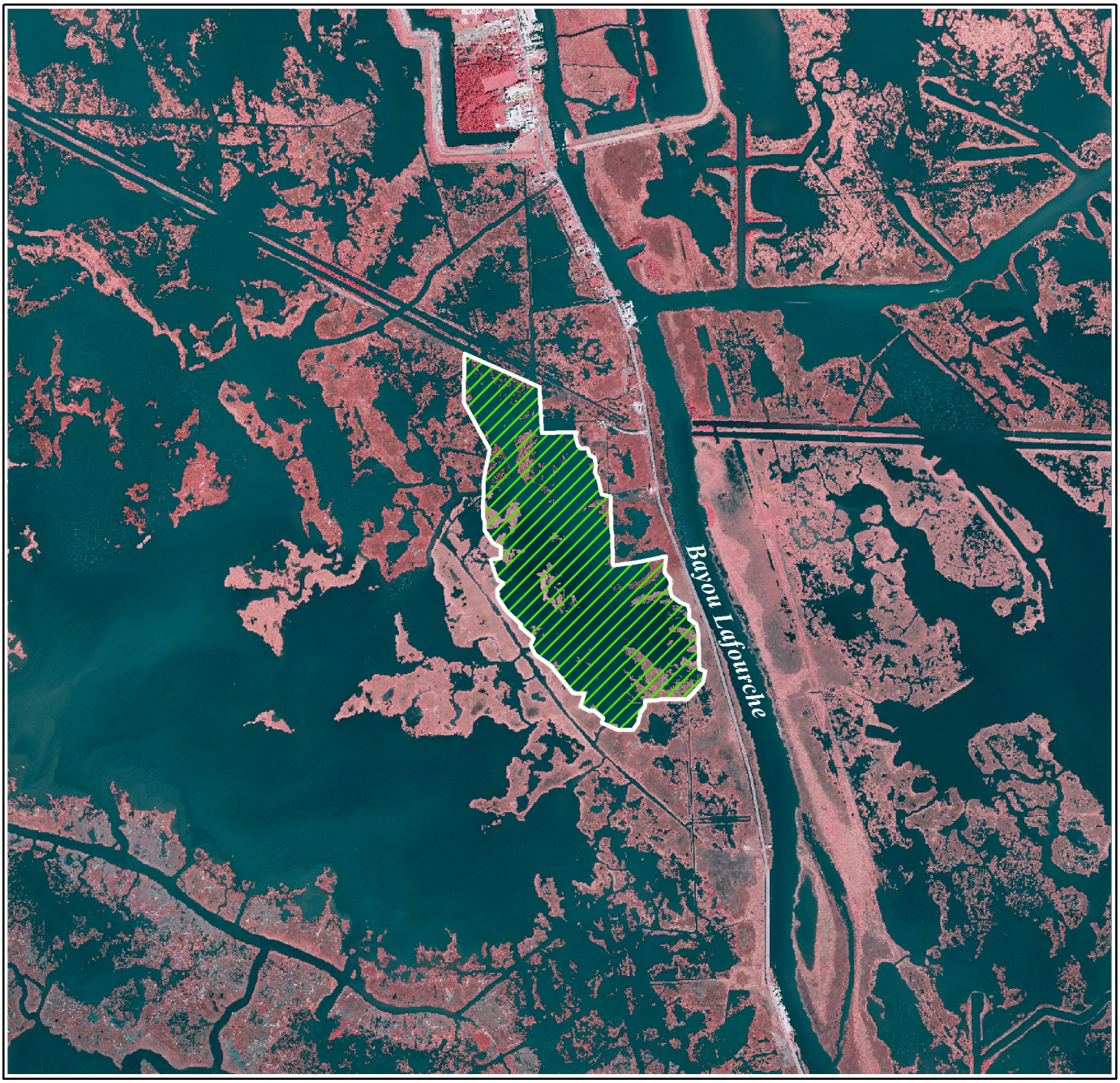
Goals:
The project goal is to create and/or nourish up to 346 acres of saline marsh.

Proposed Solution:
Sediment will be hydraulically pumped from a borrow source in Catfish Lake to create and/or nourish approximately 346 acres of emergent marsh (292 acres of marsh creation and 54 acres of marsh nourishment). Material would be placed to achieve a settled target elevation of +0.64 ft NAVD88 Geoid 12A. 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. A robust engineering and design cost is included for full flexibility during Phase 1 to investigate additive or alternate marsh creation features to the west and possibly north of the proposed project.

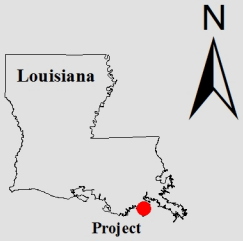
Project Benefits:
The project would result in approximately 267 net acres over the 20-year project life.

Project Costs:
The total fully-funded cost is $31,868,399.

Preparer(s) of Fact Sheet:
Dawn Davis, NOAA Fisheries, (225) 389-0508, ext. 206; dawn.davis@noaa.gov.;
Patrick Williams, NOAA Fisheries, 225-389-0508, ext. 208, patrick.williams@noaa.gov



West Louisiana Highway 1 Marsh Creation (PPL26 Candidate)



Marsh Creation *

Project Boundary

* denotes proposed features

0.5 0 0.5 Kilometers

0.5 0 0.5 Miles

Scale 1:35,000

Map ID: USGS-NWRC 2016-11-0032
Map Date: July 01, 2016

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

Image Source:
2012 DOQQ

PPL26 Bayou DeCade Ridge and Marsh Creation

Project Location:
Region 3, Terrebonne Basin, Terrebonne Parish, Lake Mechant Mapping Unit

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 to wetland loss. 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 -0.79%/year based on USGS data from 1984 to 2016.

Goals:
The project goals are to construct 11,726 linear feet of ridge along the northern bank of Bayou DeCade and create and/or nourish approximately 501 acres of intermediate marsh along the northern bank of Bayou DeCade.

Proposed Solution:
The proposed project's primary feature is to restore 11,726 feet of Bayou DeCade northern ridge, create approximately 398 acres, and nourish approximately 107 acres of intermediate marsh adjacent to Lake DeCade. The ridge will be constructed to a crown elevation of +5.0 feet NAVD88, 15 feet wide, and will be planted on the crown and slopes. The ridge will be constructed by bucket dredging material from inside the marsh creation area and/or within Bayou DeCade. Sediment for marsh creation will be hydraulically pumped from a borrow source in Lake DeCade. The borrow area in Lake DeCade will be located and designed in a manner to avoid and minimize environmental impacts to the maximum extent practicable. Containment dikes will be constructed around the marsh creation area to retain sediment during pumping. Containment dikes will be gapped within three years post construction.

Project Benefits:
The project is would result in approximately 378 net acres over the 20-year project life.

Project Costs:
The total fully-funded cost is $34,403,849.

Preparer(s) of Fact Sheet:
Kent Bollfrass, CPRA, 225-342-4733, kent.bollfrass@la.gov
Dawn Davis, NOAA Fisheries, 225-389-0508 ext 206, dawn.davis@noaa.gov
Patrick Williams, NOAA Fisheries, 225-389-0508, ext 208, patrick.williams@noaa.gov

Bayou De Cade Ridge and Marsh Creation (PPL26 Candidate)

Bankline Restoration *

Marsh Creation *

Project Boundary

* denotes proposed features

0.5 0 0.5 Kilometers

0.5 0 0.5 Miles

Scale 1:35,000

Map ID: USGS-NWRC 2016-11-0031
Map Date: September 20, 2016

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

Image Source:
2012 DOQQ

Candidate Projects Located in Region 4

PPL26 East Pecan Island Marsh Creation

Project Location:
Region 4, Mermentau Basin, Vermilion Parish, and west of the Freshwater Bayou Navigation Channel

Problem:
The marshes to the west of the Freshwater Bayou Navigation Channel have experienced severe land loss and habitat conversion. What was once a productive freshwater marsh has been converted to open water due to the negative effects of exchange from the Freshwater Bayou Navigation Canal on soils followed by major hurricane impacts. Based on USGS hyper temporal data analysis (1984 to 2014), land loss for the area is -0.85% per year. The subsidence rate is estimated at 3.8 mm per year according to the 2012 Louisiana State Master Plan Appendix C.

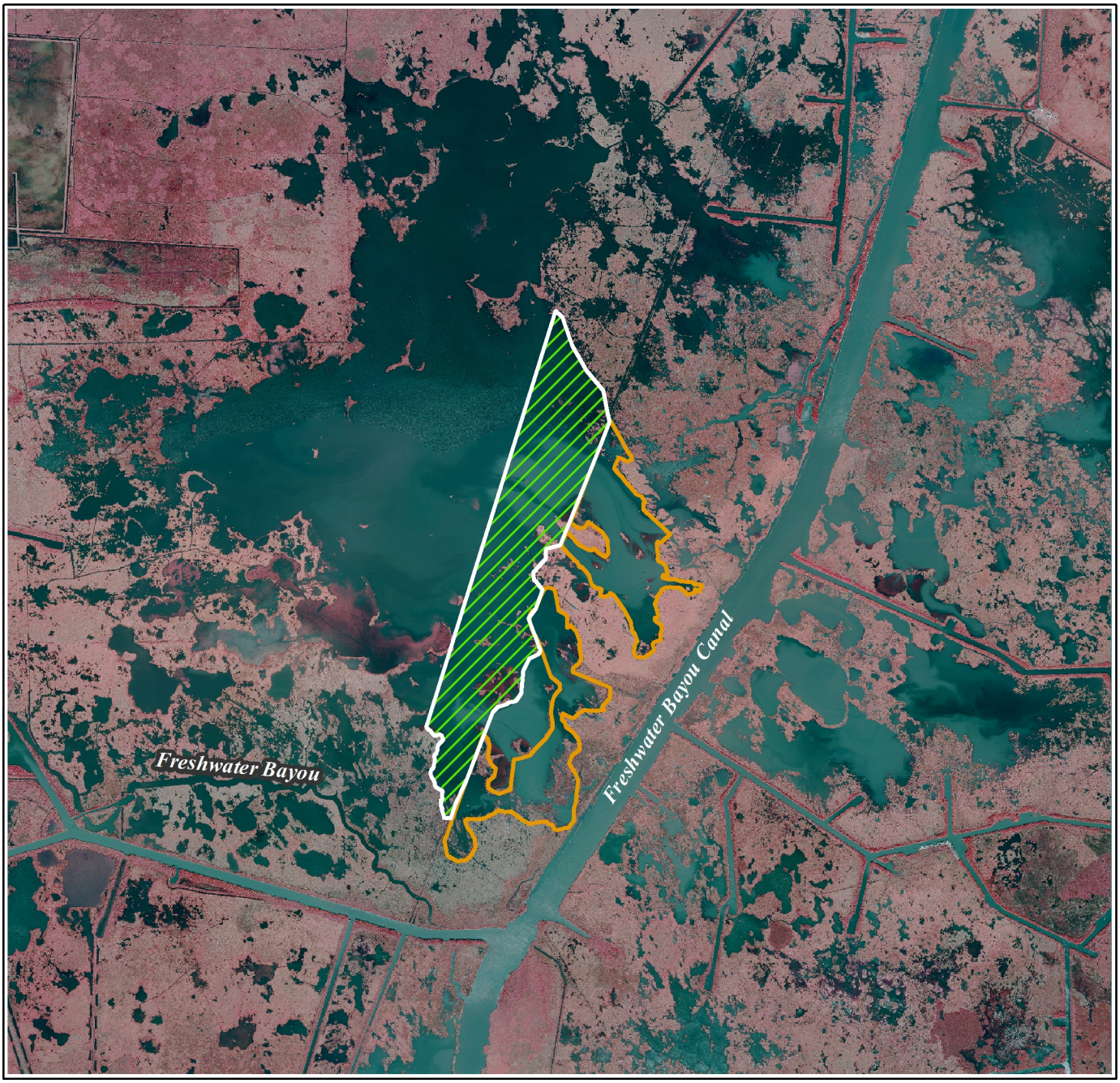
Goals:
The primary goal of this project is to create marsh through dedicated dredging and vegetative plantings on the western side of the Freshwater Bayou Navigation Channel. This project will also help to reduce the potential for exchange between the target marshes and the Freshwater Bayou Navigation Channel by working synergistically with the ME-31 Freshwater Bayou Marsh Creation Project.

Proposed Solution:
This project will create and/or nourish 521 acres of marsh using approximately 3.5 million cubic yards of dredged fill material from an offshore borrow site within state waters. Once material is in place and adequately dewatered, containment dikes will be adequately gapped to allow tidal exchange of nutrients and aquatic organisms with the marsh. Additionally the project site would be planted at a 50% density at project year one in order to reestablish the plant productivity within the marsh. Material would be placed to achieve a settled target elevation of +1.1 feet NAVD88 based on CRMS station 0580. 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.

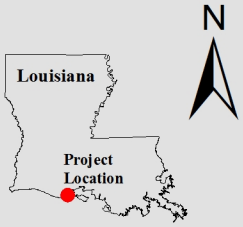
Project Benefits:
The project would result in approximately 459 net acres over the 20-year project life.

Project Costs:
The total fully-funded cost is $54,825,078.

Preparer(s) of Fact Sheet:
Adrian Chavarria, EPA; (214) 665-3103; chavarria.adrian@epa.gov
Sharon Osowski, Ph.D., EPA; (214) 665-7506; osowski.sharon@epa.gov
Scott Wandell, USACE; (504) 862-1878; scott.f.wandell@usace.army.mil



East Pecan Island Marsh Creation
(PPL26 Candidate)



Marsh Creation *

ME-31 Project Boundary

Project Boundary

* denotes proposed features

0.75 0 0.75 Kilometers

0.75 0 0.75 Miles

Scale 1:50,000

USGS science for a changing world

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

Image Source:
2012 DOQQ

Map ID: USGS-NWRC 2016-11-0027
Map Date: June 20, 2016

PPL26 North Mud Lake Marsh Creation and Nourishment

Project Location:
Region 4, Calcasieu-Sabine Basin, Cameron Parish

Problem:
Altered hydrology, saltwater intrusion, conversion of marsh to open water, and other anthropogenic changes have caused the area to undergo interior marsh breakup. Impacts from Hurricane Rita in 2005 and Hurricane Ike in 2008 increased wetland loss north of Mud Lake. Based on USGS data from the extended boundary during 1984 to 2016, the Mud Lake project area loss rate was −0.76% 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 492 acres of brackish marsh and convert 168 acres of an upland disposal area to saline marsh. One quarter of the created acres in the CDF marsh creation area will be planted with vegetation.

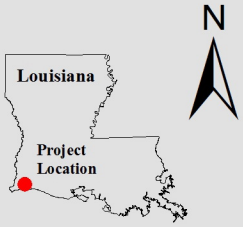
Proposed Solution:
Sediment would be mined from an upland former confined disposal facility (CDF) along the Calcasieu Ship Channel to create 466 acres and nourish 26 acres of brackish marsh; an additional 168 acres of saline marsh would be created in the upland disposal area. Material would be placed to achieve a settled target elevation of +1.5 feet NAVD88 (GEOID12A) based on CRMS station 0685. Containment dikes would be constructed around the marsh creation area to keep material on-site during pumping. To facilitate estuarine fisheries access, containment dikes will be degraded and/or gapped no later than three years post-construction if the dikes do not naturally degrade, and approximately 10,000 linear feet (5.3 acres) of tidal creeks will be constructed. A portion of the former CDF will be mined to approximately +1.5 feet NAVD88 (GEOID12A), reestablishing approximately 168 acres as emergent saline marsh from its current state (upland disposal). The CDF containment dike at the borrow area marsh creation area would be gapped on the Calcasieu Lake side to improve hydrologic access to the created marsh. A quarter of the CDF marsh creation area will be planted using bare root plugs.

Project Benefits:
The project would result in approximately 590 net acres over the 20-year project life.

Project Costs:
The total fully-funded cost is $59,930,304.

Preparer(s) of Fact Sheet:
Donna Rogers, NOAA National Marine Fisheries Service; (225) 636-2095;
donna.rogers@noaa.gov.

North Mud Lake Marsh Creation
(PPL26 Candidate)



Marsh Creation *

Borrow Site *

Project Boundary

* denotes proposed features

1 0 1 Kilometers

1 0 1 Miles

Scale 1:80,000

USGS science for a changing world

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

Image Source:
2012 DOQQ

Map ID: USGS-NWRC 2016-11-0033
Map Date: September 29, 2016

Coastwide Candidate Project

PPL26 *Salvinia* Weevil Propagation Facility

Project Location:
Coastwide project in fresh and low salinity marshes

Problem:
The invasive plant, giant *Salvinia*, was first observed in Chenier Plain marshes in 2009. Since then it has spread throughout most the Louisiana Chenier Plain marshes. This plant can stack up above the water surface to as much as 6 to 12 inches. Under such conditions, oxygen exchange is greatly reduced, and decay of shaded *Salvinia* can easily cause anoxic conditions in affected areas. As a result, habitat quality of badly infested areas is severely degraded, and may affect many species typical of fresh and intermediate marshes, including many species of management concern (alligator snapping turtle, mottled duck [including critical brood rearing habitat], wintering migratory waterfowl, black rail, king rail, little blue heron, whooping crane, and peregrine falcon). Because of anoxic conditions, estuarine-dependent fish and shellfish that would normally use these marshes may be precluded from using them.

Goals:
Operate a weevil propagation facility in Jeanerette, like that previously operated by LSU in Houma, to make weevils available free of charge to landowners in coastal Louisiana.

Proposed Solution:
The project would fund the LSU Ag. Center to operate a pond in Jeanerette to produce weevil-infested *Salvinia*. Costs associated with this project consist primarily of supplies and one part-time position to operate the pond, coordinate public weevil harvests, keep records of release locations, monitor *Salvinia* problem areas, assist landowners conduct weevil releases, relay infested *Salvinia* to new locations, and conduct public outreach to promote the program.

Project Benefits:
Although *Salvinia* mats deposited on the marsh surface may smother and kill marsh vegetation, its primary impact is to severely degrade the fish and wildlife habitat functions provided by marsh ponds and waterbodies. The proposed project would help to prevent marsh smothering impacts and restore habitat and fisheries nursery functions lost as a result of *Salvinia* infestations. The project is projected to result in 26 net acres over the 20-year project life.

Project Costs:
The total fully funded cost is $3,802,748.

Preparer of Fact Sheet:
Ronny Paille, FWS, Ronald_Paille@fws.gov, 337-291-3117

Candidate Demonstration Projects

PPL26 EcoBale Shoreline Protection Demonstration Project

Potential Demonstration Project Location:
Coastwide: Eroding Shorelines

Problem:
Louisiana is experiencing rapid land loss along the shorelines of lakes, bays, and channels. Historically, heavy materials such a rock and rip rap have been used to protect shorelines from erosion. Yet, in many shoreline areas, underlying soils are poor and not able to support the weight of rock and rip rap. The demonstration project would introduce an innovative solution for protecting shores from erosive wave energy and help prevent nearby broken marsh areas from converting to larger open water areas, maintaining and enhancing marsh habitat & function.

Goals:
The goal of an EcoBale demonstration project would be to demonstrate its application and versatility for protecting shorelines by reducing wave energy and aid in restoring marshes and shorelines by re-establishing or creating new growth of vegetation in areas protected from erosion. The EcoBale would serve as an alternative to rock, rip rap & concrete shoreline protection applications.

Proposed Solution:
One EcoBale unit consists of 20 ft of plastic matrix rolls positioned onto a 4" diameter x 21' marine coated schedule 40 pipe (FIGURE 1). A pad eye welded onto each end serves as the anchor point. Each EcoBale is anchored in place using a helical anchor system. Standard roll diameter is four and a half feet however the diameter can be customized to project site water depths (FIGURE 2). The pre-installed weight of one EcoBale unit is 40 pounds per foot or 800 pounds. A vegetated matrix strip will be attached to the surface of each EcoBale. The plugs are planted in 2 rows with 4 plants/ft. There will be 2520' of pre-planted strip for 2700' of EcoBales (20' of strip per EcoBale). 10,080 total plugs are planted in 2520' of pre-planted strips. The demonstration would include 3-900' sections of EcoBale (42 units in each 900' section). Each 20' EcoBale unit would be separated by an 18" gap. Water depths would range from 2 to 4 feet. The total project would be 2700 linear feet. Project effectiveness would be monitored and evaluated. See conceptual treatment in Figure 3.

Project Benefits:
Project benefits include a non-rock alternative to shoreline protection in locations where underlying soils will not support traditional rock or other hard structures.

Project Costs:
The total fully-funded cost is $2,714,293.

Preparer of Fact Sheet:
Ted Martin, Martin Ecosystems, (225) 292-6750, ted@martinecosystems.com
Susan M. Hennington, (504) 862-2504, susan.m.hennington@usace.army.mil

FIGURE 1: Front View

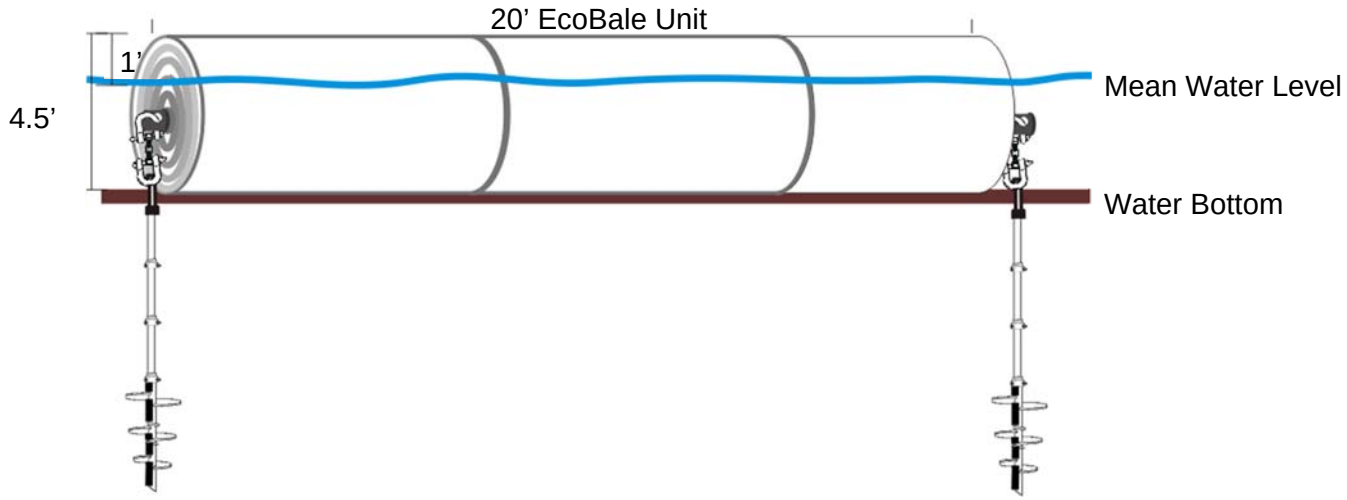


FIGURE 2: Side View

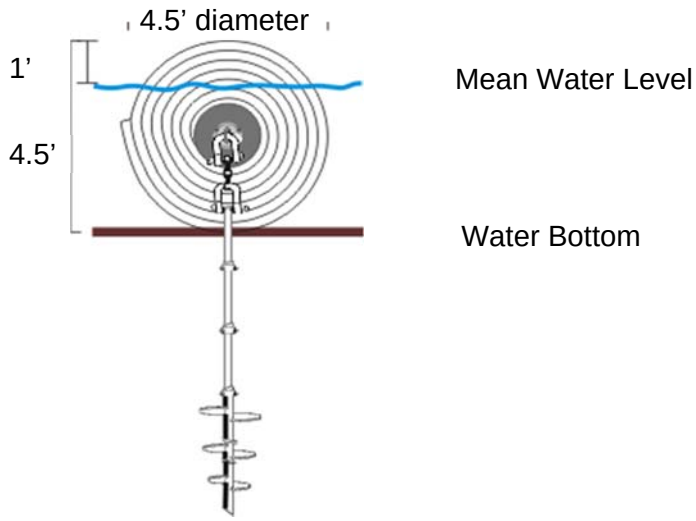
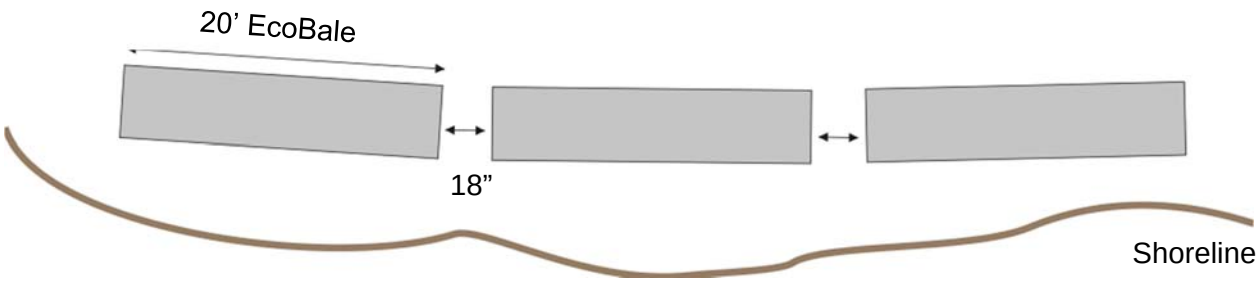


FIGURE 3: Placement near shoreline (900’ = 42 EcoBale Units)



PPL26 Enhancing Restoration Transplant Survival via Stress Acclimation Demonstration Project

Potential Demonstration Project Location:
Coastwide

Problem:
Barrier island restoration projects represent a $1B investment to provide important habitat for migrating bird species and storm protection for coastal Louisiana. The success of these projects depends of the successful installation and survival of vegetation to secure freshly established dredge spoil sediment. This demonstration project would explore the use of drought and salt conditioning in dune and swale species to improve transplant success and survival.

Goals:
Incorporate a barrier island planting effort with an experimental approach to determine the effect of using pre-transplantation salt and drought conditioning techniques to enhance survival of five barrier island dune and swale species.

Proposed Solution:
Scientifically test the practice of salt conditioning and progressive drought conditioning as a means to enhance barrier island transplant survival through stress acclimation in five plant species commonly used for barrier island restoration plantings. Salinity treatments would characterize various durations of pre-transplant salinity exposure, including gradual increments of salinity. Drought conditioning would consist of three watering regimes representing ambient conditions and two degrees of drought. Following the stress conditioning period, plants will be relocated to each of four transplant scenarios. Scientific monitoring of plant survival, morphology, and physiology will be done to assess and compare experimental units. Findings from these studies are expected inform restoration practices and enhance restoration planting success in future efforts.

Project Benefits:
1. Enhanced knowledge of stress physiology of common restoration species
2. Development of new plant nursery methods or justification of current methods
3. Enhance transplant survival success in future restoration efforts

Project Costs:
The total fully-funded cost is $1,044,632.

Preparer(s) of Fact Sheet:
Taylor Sloey, PhD. Coastal Environments, Inc. (402) 580-9002; tsloey@coastalenv.com
Kent Bollfrass, CPRA, (225) 342-4733; kent.bollfrass@la.gov

PPL26 SHORE|LINKS® Demonstration Project

Potential Demonstration Project Location:
Coastwide

Problem:
Many Louisiana coastal restoration projects are faced with the combined challenges of foundation issues and shallow, environmentally sensitive access routes. Often, shorelines and similar man-made features are subject to erosion from waves and currents. Combating erosion with heavy materials (e.g. rock) often requires access dredging. Depending on the project scale, the equipment and dredging requirements may make projects impracticable. Additionally, poor foundations may not support heavier stabilization materials.

Goals:
The specific goal of this proposal is to equip the CWPPRA program with the SHORE|LINKS® system, a scalable tool for economically and effectively mitigating the effects of scour and erosion. SHORE|LINKS® will allow the CWPPRA program to efficiently create vegetated earthen-core berms resistant to erosion.

Proposed Solution:
Patented by the LSU AgCenter with exclusive license rights to Delta Land Services, SHORE|LINKS® consists of lightweight, clay aggregate in a poly mesh fabric casing. The mesh contains multiple, aggregate-filled lobes, which minimizes the weight of the units while maximizing unit height. These features allow for interlocking of the units and the entrapment of sediments. The SHORE|LINKS® system offers Articulating Revetments (10’ x 10’ x 3”) and Tiling Mats (26” x 17” x 3”) for armoring and vegetating shorelines and embankments and a Breakwater Log (10” height x 6’ long) to aid in dissipation of wave energy at earthen berms, terraces or containment dikes. More information can be found at www.shore-links.com.

Project Benefits:
Project benefits include:

1) A non-rock alternative for armoring earthen berms, terraces or containment dikes in locations where wave energy makes these features vulnerable to excessive erosion.
2) Combines armored protection with living shoreline by allowing for easy planting and establishment of vegetation.
3) Offers at least three configurations of the material (articulation revetments, tiling mats and breakwater logs) for flexible design to suite location.

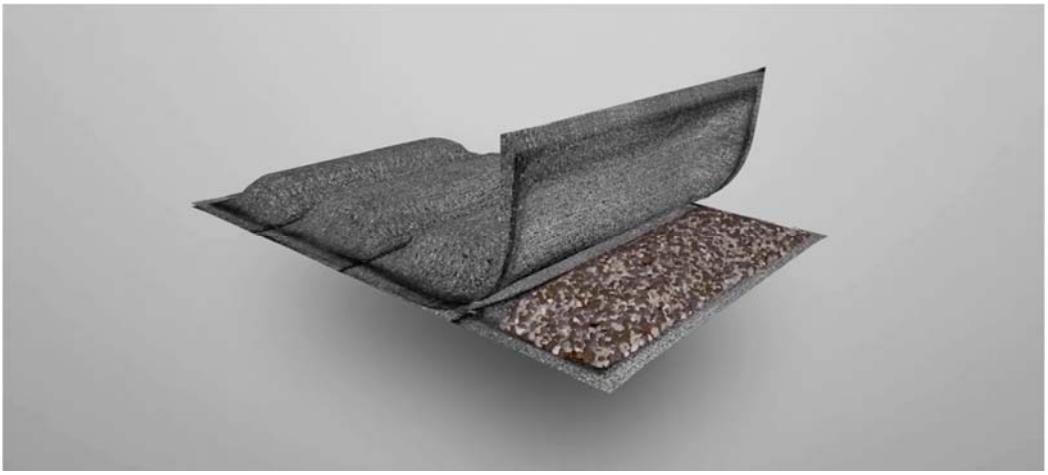
Project Costs:
The fully-funded cost is $3,404,704.

Preparer of Fact Sheet:
Ron Boustany, NRCS, 337-291-3067, ron.boustany@la.usda.gov
Cody Colvin, 225-665-4253, x112, cody.colvin@la.usda.gov
Tyler Ortego, Delta Land-Services, 337-591-6110, tyler@oratechnologies.com
Tyler Thigpen, Delta Land-Services, 337-591-6110, tyler@deltaland-services.com

SHORE|LINKS®

1 Year Later

Laying out SHORE|LINKS® on newly constructed berm and planting smooth cord-grass and seashore paspalum



PPL26 Candidate Project Evaluation Matrix

11/3/2016

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)
Bayou La Loutre Ridge Restoration and Marsh Creation	1	Pontchartrain	453	104	187	$29,762,138	$3,236,952	$26,525,186	$1,882,905	$18,105	$159,156
St. Catherine Island Marsh Creation and Shoreline Protection	1	Pontchartrain	339	91	214	$35,996,522	$2,389,308	$33,607,214	$1,974,900	$21,702	$168,208
Elmer's Island Back Barrier Marsh Creation	2	Barataria	265	121	222	$27,774,583	$2,813,856	$24,960,727	$1,759,298	$14,540	$125,111
East Bayou Lafourche Marsh Creation	2	Barataria	417	175	325	$36,784,975	$3,137,510	$33,647,465	$2,326,760	$13,296	$113,185
Bayou Terrebonne Freshwater Diversion	3	Terrebonne	6,309	55	173	$22,636,335	$2,885,986	$19,750,349	$1,290,130	$23,457	$130,846
West LA Hwy 1 Marsh Creation	3	Terrebonne	346	148	267	$31,868,399	$3,351,303	$28,517,096	$2,029,315	$13,712	$119,357
Bayou DeCade Ridge and Marsh Creation	3	Terrebonne	517	133	378	$34,403,849	$3,282,292	$31,121,557	$2,166,067	$16,286	$91,015
East Pecan Island Marsh Creation	4	Mermentau	521	177	459	$54,825,078	$4,205,285	$50,619,793	$3,552,003	$20,068	$119,445
North Mud Lake Marsh Creation and Nourishment	4	Calcasieu-Sabine	665	298	590	$59,930,304	$4,542,955	$55,387,349	$3,883,605	$13,032	$101,577
Salvinia Weevil Propagation Facility		Coastwide	33,262	597	26	$3,802,748	$158,300	$3,644,448	$169,877	$285	$146,260

PPL 26 Demonstration Project Evaluation Matrix

11/1/2016

(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		
Ecobale Shoreline Protection DEMO Project	USACE	$2,714,293	2	2	2	2	2	2	**12**	11.6
Enhancing Restoration Transplant Survival via Stress Acclimation DEMO Project	CPRA	$1,044,632	1	2	1	2	1	2	**9**	9.3
SHORE|LINKS® DEMO Project	NRCS	$3,404,704	2	2	3	2	2	2	**13**	12.3

"Total Score" calculation: Individual parameter scores were determined from the score having the majority of the vote.
Example - if 4 agencies cast a vote of "3" and 3 agencies cast a vote of "2", then a score of "3" was given.

"Averaging of Agency Scores" calculation: Calculated by averaging the Total Scores from each Agency.

Demonstration Project Parameters

(P_1) *Innovativeness* - The demonstration project should contain technology that has not been fully developed for routine application in coastal Louisiana or in certain regions of the coastal zone. The technology demonstrated should be unique and not duplicative in nature to traditional methods or other previously tested techniques for which the results are known. Techniques which are similar to traditional methods or other previously tested techniques should receive lower scores than those which are truly unique and innovative.

(P_2) *Applicability or Transferability* - Demonstration projects should contain technology which can be transferred to other areas of the coastal zone. However, this does not imply that the technology must be applicable to all areas of the coastal zone. Techniques, which can only be applied in certain wetland types or in certain coastal regions, are acceptable but may receive lower scores than techniques with broad applicability.

(P_3) *Potential Cost Effectiveness* - The potential cost-effectiveness of the demonstration project's method of achieving project objectives should be compared to the cost-effectiveness of traditional methods. In other words, techniques which provide substantial cost savings over traditional methods should receive higher scores than those with less substantial cost savings. Those techniques which would be more costly than traditional methods, to provide the same level of benefits, should receive the lowest scores. Information supporting any claims of potential cost savings should be provided.

(P_4) *Potential Environmental Benefits* - Does the demonstration project have the potential to provide environmental benefits equal to traditional methods? somewhat less than traditional methods? above and beyond traditional methods? Techniques with the potential to provide benefits above and beyond those provided by traditional techniques should receive the highest scores.

(P_5) *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.

(P_6) *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 7, 2016

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 26 candidate projects. The public is invited to attend and provide comments on the candidate projects. The Technical Committee will vote & recommend projects for PPL 26 selection. The Technical Committee will also consider requests for construction (Phase II) approvals.

Written comments may be provided no later than November 30, 2016 to the CWPPRA Task Force by mail or email to:

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

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