Priority Project List 24
Candidate Projects

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APPENDIX A

PRIORITY PROJECT LIST 24 SELECTION PROCESS

Coastal Wetlands Planning, Protection and Restoration Act Guidelines for Development of the 24th Priority Project List

FINAL

I. Development of Supporting Information

A. COE staff prepares spreadsheets indicating status of all restoration projects (CWPPRA Priority Project Lists (PPL) 1-23; Louisiana Coastal Area (LCA) program, Corps of Engineers Continuing Authorities 1135, 204, 206; and State only projects). Also, indicate net acres at the end of 20 years for each CWPPRA project.

B. CPRA/USGS staff prepare basin maps indicating:

1) Boundaries of the following projects types (PPLs 1-23; LCA program, COE 1135, 204, 206; and State only).
2) Locations of completed projects.
3) Projected land loss by 2050 including all CWPPRA projects approved for construction through January 2014.
4) Regional boundary maps with basin boundaries and parish boundaries included.

II. Project Nominations

A. The four Regional Planning Teams (RPTs) will meet individually to examine basin maps, discuss areas of need, discuss strategies within Louisiana's Comprehensive Master Plan for a Sustainable Coast (State Master Plan), and accept project nominations by hydrologic basin. Project nominations will be accepted in the following hydrologic basins – Pontchartrain, Breton Sound, Barataria, Terrebonne, Atchafalaya, Teche/Vermilion, Mermentau, and Calcasieu/Sabine. Project nominations will not be accepted in the Mississippi River Delta Basin as strategies for this basin are not included within the State Master Plan. 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. The RPT leaders, in coordination with the project proponents and the P&E Subcommittee, will determine which basin to place multi-basin projects. Alternatively, multi-basin projects can be broken into multiple projects to be considered individually in the basins which they occur. Project nominations that are legitimate coast-wide applications will be accepted separate from the eight basins at any of the four RPT meetings.

Proposed project nominees shall be consistent with the State Master Plan. Those projects determined to be inconsistent with the State Master Plan will be removed from consideration as PPL24 nominees. Representatives of the State will be present at the RPT meetings to provide guidance on the consistency of project nominations. Nominations for demonstration projects will also be accepted at any of the four RPT meetings. Those wishing to propose projects are encouraged to work with representatives of the State prior to the RPT meetings to develop projects that are consistent with the State Master Plan

In the event that 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.

The RPTs will not vote to select nominee projects at the individual regional meetings. Rather, voting will be conducted after the individual regional meetings via email or fax. All CWPPRA agencies and parishes will be required to provide the name and contact information during the RPT meetings for the official representative who will vote to select nominee projects.

B. Voting for project nominees (including basin, coast-wide and demonstration project nominees) will be conducted after the individual RPT meetings (date to be determined). The RPTs will select four projects in the Barataria and Terrebonne Basins and three projects in the Breton Sound and Pontchartrain Basins based on the high loss rates (1985-2010) in those basins. Two projects will be selected in the Mermentau, Calcasieu/Sabine, and Teche/Vermilion Basins. Because the Atchafalaya Basin is currently in a land gain situation, only one project will be selected in that basin.

A total of up to 21 basin projects could be selected as nominees. Each officially designated parish representative in the basin will have one vote and each federal CWPPRA agency and the State will have one vote. If coast-wide projects have been presented, the RPTs will select one coast-wide project nominee to compete with the 21 basin nominees for candidate project selection. Selection of a coast-wide project nominee will be by consensus, if possible. If voting is required, officially designated representatives from all coastal parishes will have one vote and each federal CWPPRA agency and the State will have one vote. The RPTs will also select up to six demonstration project nominees at this coast-wide meeting. Selection of demonstration project nominees will be by consensus, if possible. If voting is required, officially designated representatives from all coastal parishes will have one vote and each federal CWPPRA agency and the State will have one vote.

C. Prior to voting on project nominees, the Environmental and Engineering Work Groups will screen each coast-wide project nominated at the RPT meetings to ensure that each qualifies as a legitimate coast-wide application. Should any of those projects not qualify as a coast-wide application, the RPT leaders, in coordination with the project proponents and the P&E Subcommittee, will determine which basin the project should be placed in.

Also, prior to voting on project nominees, the Environmental and Engineering Work Groups will screen each demonstration project nominated at the RPT meetings. Demonstration projects will be screened to ensure that each meets the qualifications for demonstration projects as set forth in the CWPPRA Standard Operating Procedures (SOP), Appendix E.

D. A lead Federal agency will be designated for the nominees and demonstration project nominees to prepare preliminary project support information (fact sheet, maps, and potential designs and benefits). The RPT Leaders will then transmit this information to the P&E Subcommittee, Technical Committee and other RPT members.

III. Preliminary Assessment of Nominated Projects

A. Agencies, parishes, landowners, and other individuals informally confer to further develop projects. Nominated projects shall be developed to support the strategies and goals of the State Master Plan. For help in the development of projects that are consistent with the State Master Plan, please contact State CWPPRA representatives.

B. The lead agency designated for each nominated project will prepare a brief Project Description that discusses possible features. Fact sheets will also be prepared for demonstration project nominees.

C. Engineering and Environmental Work Groups meet to review project features, discuss potential benefits, and estimate preliminary fully funded cost ranges for each project. The Work Groups will also review the nominated demonstration projects and verify that they meet the demonstration project criteria and that they represent potentially viable restoration techniques. If it is determined that a demonstration project is unlikely to be utilized in restoration or has been evaluated previously, the Engineering and Environmental Work Groups may recommend to the Technical Committee that these projects not move forward.

D. P&E Subcommittee prepares matrix of cost estimates and other pertinent information for nominees and demonstration project nominees and furnishes to Technical Committee.

IV. Selection of Phase 0 Candidate Projects

A. Technical Committee meets to consider the project costs and potential wetland benefits of the nominees. Technical Committee will select ten candidate projects for detailed assessment by the Environmental, Engineering, and Economic Work Groups. At this time, the Technical Committee may select up to three demonstration project candidates for detailed assessment by the Environmental, Engineering, and Economic Work Groups.

B. Technical Committee assigns a Federal sponsor for each project to develop preliminary Wetland Value Assessment (WVA) data and engineering cost estimates for Phase 0 as described below.

V. Phase 0 Analysis of Candidate Projects

A. Environmental and Engineering Work Groups and the Academic Advisory Group meet to refine project features and develop boundaries for the project and extended boundaries for estimating land loss.

B. Sponsoring agency coordinates site visits for each project. A site visit is vital so each agency can see the conditions in the area. There will be no site visits conducted for demonstration projects.

C. Sponsoring agency develops a draft WVA and prepares Phase 1 engineering and design cost estimates and Phase 2 construction cost estimates. Sponsoring agency should use formats approved by the applicable work group.

D. Environmental Work Group reviews and approves all draft WVAs. Demonstration project candidates will be evaluated as outlined in Appendix E of the CWPPRA SOP.

E. Engineering Work Group reviews and approves Phase 1 and 2 cost estimates.

F. Economics Work Group reviews cost estimates and develops annualized (fully funded) costs.

G. Corps of Engineers staff prepares information package for Technical Committee. Packages consist of:

1) updated Project Fact Sheets;
2) a matrix for each region that lists projects, fully funded cost, average annual cost, Wetland Value Assessment results in net acres and Average Annual Habitat Units (AAHUs), and cost effectiveness (average annual cost/AAHU); and
3) a qualitative discussion of supporting partnerships and public support.

H. Technical Committee will host a public hearing to present the results from the candidate project evaluations. Public comments will be accepted during the meeting and in writing.

VI. Selection of 24th Priority Project List

A. The selection of the 24th PPL will occur at the Winter Technical Committee and Task Force meetings.

B. Technical Committee meets and considers matrix, Project Fact Sheets, and public comments. The Technical Committee will recommend up to four projects for selection to the 24th PPL. The Technical Committee may also recommend demonstration projects for the 24th PPL.

C. The CWPPRA Task Force will review the Technical Committee recommendations and determine which projects will receive Phase 1 funding for the 24th PPL.

24th Priority List Project Development Schedule (dates subject to change)

December 2013	Distribute public announcement of PPL 24 process and schedule
December 12, 2013	Winter Technical Committee Meeting, approve Phases I and II (Baton Rouge)
January 16, 2014	Winter Task Force Meeting (New Orleans)
February 11, 2014	Region IV Planning Team Meeting (Lafayette)
February 12, 2014	Region III Planning Team Meeting (Houma)
February 13, 2014	Regions I and II Planning Team Meetings (Lacombe)
February 25, 2014	Coast-wide RPT Voting (via electronic vote)
February 26 – March 7, 2014	Agencies prepare fact sheets for RPT-nominated projects
March 19-20, 2014	Engineering/ Environmental Work Groups review project features, benefits & prepare preliminary cost estimates for nominated projects (Baton Rouge)
March 2014	P&E Subcommittee prepares matrix of nominated projects showing initial cost estimates and benefits
April 15, 2014	Spring Technical Committee Meeting, select PPL 24 candidate projects (New Orleans)
May/June	Candidate project site visits
May 22, 2014	Spring Task Force Meeting (Lafayette)
July/August/ September	Env/Eng/Econ Work Group project evaluations
September 11, 2014	Fall Technical Committee Meeting, O&M and Monitoring funding recommendations (Baton Rouge)
October 23, 2014	Fall Task Force meeting, O&M and Monitoring approvals (New Orleans)
October 2014	Economic, Engineering, and Environmental analyses completed for PPL 24 candidates
December 11, 2014	Winter Technical Committee Meeting, recommend PPL 24 and Phase I and II approvals (Baton Rouge)
January 16, 2015	Winter Task Force Meeting, select PPL 24 and approve Phase II requests (New Orleans)

Candidate Projects Located in Region 1

PPL24 New Orleans Landbridge Shoreline Stabilization and Marsh Creation

Project Location:
The project is located in Region 1, Pontchartrain Basin, Orleans Parish

Problem:
Since 1956, the project area has lost more than 110 acres of wetlands along the east shore of Lake Pontchartrain between Hospital Road and the Greens Ditch area. The shoreline in the area has retreated approximately 450 feet since 1956. Wetland losses were accelerated by winds and storm surge caused by Hurricane Katrina. Within the project area, Hurricane Katrina alone converted approximately 70 acres of interior marsh to open water. Flooding of nearby communities during strong northwest winds may be partially attributed to these high wetland losses. Stabilizing the shoreline and protecting the remaining marsh would protect natural coastal resources, communities, the Fort Pike State Historical Site, and infrastructure including U.S. Highway 90. USGS land change analysis determined a loss rate of -0.35% per year for the 1984 -2011period of analysis. Subsidence in this unit is relatively low and is estimated at 0-1 ft/century (Coast 2050).

Goals:
The project goal is to restore and enhance 271 acres of brackish marsh and to enhance 15,340 linear feet of shoreline to maintain the structural integrity of the Orleans Landbridge.

Proposed Solution:
Approximately 1.6 million cubic yards of material will be dredged from two borrow areas in Lakes St. Catherine and Pontchartrain to create 169 acres and nourish 102 acres of brackish marsh. Containment dikes will be constructed around four marsh creation areas to retain sediment during pumping. Approximately 15,340 linear feet of lake shoreline will be enhanced with an earthen berm, with a top width of 20 feet, to add additional protection from wind-induced wave fetch. This berm will also function as containment for dredged material. No later than three years post construction, containment dikes that are not functioning as shoreline enhancement will be degraded and/or gapped. Vegetative plantings are proposed including five rows along the crown and two rows along the front slope of the shoreline protection berm, as well as within the marsh platform area.

Project Benefits:
The project would result in approximately 167 net acres over the 20-year project life.

Project Costs:
The total fully-funded cost is $17,549,317.

Preparers of Fact Sheet:
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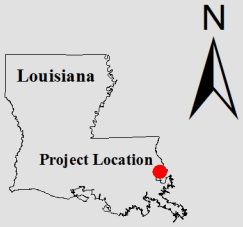
New Orleans Landbridge Shoreline Stabilization and Marsh Creation (PPL24 Candidate)



Earthen Berm*

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 2014-11-0021
Map Date: August 20, 2014

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

PPL24 Shell Beach South Marsh Creation

Project Location:
Region 1, Pontchartrain Basin, South Lake Borgne Mapping Unit, St. Bernard Parish, north bank of the Mississippi River Gulf Outlet (MRGO) in the vicinity of Shell Beach.

Problem:
The marsh boundary separating Lake Borgne and the MRGO has undergone both interior and shoreline wetland losses due to subsidence, impacts related to construction and use of the MRGO (i.e., deep draft vessel traffic), and wind-driven waves. Although much of the project area is protected from edge erosion by shoreline protection measures, interior wetland loss due to subsidence continues to cause marsh fragmentation and pond enlargement. Wetland loss rates in the project area are estimated to be -0.60 percent a year based on USGS analysis.

Goals:
The project would create and/or nourish 634 acres (ac) of emergent brackish marsh to stabilize the landform separating Lake Borgne from the MRGO. Using fill material from Lake Borgne, 346 ac of new marsh would be created and 288 ac nourished.

Proposed Solution:
The proposed project will create and nourish 634 acres of marsh using dredged sediment from Lake Borgne. Existing high shorelines along Lake Borgne, remnants of previous containment dikes and marsh edge, would be used for containment to the extent practical. Constructed containment dikes would be breached/gapped as needed to provide tidal exchange after fill materials settle and consolidate. The project would create 346 acres of marsh and nourish at least 288 acres of existing fragmented marsh. A target fill elevation of +1.2 feet is envisioned to enhance longevity of this land form. Additionally, 187 acres of vegetative planting will occur within the newly created areas. Due to the presence of existing banklines, dredged slurry overflow could potentially be discharged immediately adjacent to the project polygons, resulting in nourishment of additional areas.

Project Benefits:
The project would result in approximately 344 net acres over the 20-year project life.

Construction Costs
The total fully-funded cost is $28,101,520.

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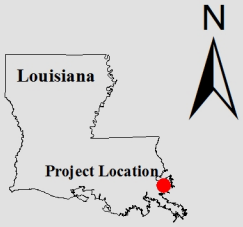
Shell Beach South Marsh Creation
(PPL24 Candidate)



Marsh Creation *

Project Boundary

* denotes proposed features

0.5 0 0.5 Kilometers

0.5 0 0.5 Miles

Scale 1:40,000

Map ID: USGS-NWRC 2014-11-0023
Map Date: July 11, 2014

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

PPL24 Bayou Bienvenue Marsh Creation

Project Location:
Region 1, Pontchartrain Basin, Orleans Parish, adjacent to St. Bernard Parish.

Problem:
Over the past decades, the wetlands and wetland function in the area have been lost because of altered hydrology due to impoundment, subsidence, and saltwater intrusion. The area was heavily impacted by the construction of the MRGO in the 1960's. The majority of the area is shallow open water, littered with cypress stumps and snags. The land loss rate for the project area is -2.04% per year.

Goals:
The goal of the project is to create/nourish 351 acres of emergent marsh in the triangle area adjacent to Bayou Bienvenue using sediment mined from the Mississippi River. Specific goals include:

1. Create 337 acres of marsh and nourish 14 acres of existing marsh using Mississippi River sediment; and
2. Restore the historic bankline along Bayou Bienvenue.

Proposed Solution:
Sediment from the Mississippi River will be hydraulically dredged and pumped via pipeline to create/nourish approximately 351 acres of wetlands by converting open water into marsh and nourishing existing marsh remnants in the triangular-shaped area adjacent to the headwaters of Bayou Bienvenue. To help stabilize the new marsh platform, approximately half of the project area (176 ac) will be planted after construction to reduce time for full vegetation. Containment dikes will be constructed around the marsh creation area to keep material within the project area during pumping, which will be degraded in appropriate areas no later than three years after construction is completed. Restoration in this area will build New Orleans' defenses against hurricanes and flooding and offer opportunities for public recreation and wildlife habitat.

Project Benefits:
The project would result in approximately 276 net acres over the 20-year project life.

Project Costs:
The total fully-funded cost is $34,219,915.

Preparers of Fact Sheet:
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Bayou Bienvenue Marsh Creation (PPL24 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 2014-11-0026
Map Date: September 19, 2014

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 Digital Orthophoto Quarter Quadrangles

Candidate Projects Located in Region 2

PPL24 Grand Bayou Marsh Creation and Terracing

Project Location:
Region 2, Barataria Basin, Plaquemines Parish

Problem:
Within the Lake Hermitage basin, between Bayou Grande Cheniere and the Mississippi River, significant marsh loss has occurred with the construction of oil/gas canals, subsidence, and sediment deprivation. From examination of aerial photography, it appears that the majority of this loss occurred during the 1960s and 1970s when numerous oil/gas canals were dredged in the area. Based on the hyper-temporal analysis conducted by USGS for the extended project boundary, loss rates in the project area are estimated to be -1.49% per year for the period 1984 to 2011.

Goals:
The primary goals of this project are; 1) restore marsh habitat in the open water areas via marsh creation and terracing and 2) reduce fetch and wave energy in open water areas via the construction of terraces. Specific goals of the project are: 1) Create approximately 366 acres of marsh with dredged material from the Mississippi River; 2) create 52,650 linear feet (37 acres) of terraces.

Proposed Solution:
Sediments from a Mississippi River borrow site will be hydraulically dredged and pumped via pipeline to create/nourish approximately 366 acres of marsh. The proposed design is to place the dredged material to a fill height of +2.0 ft NAVD88 (per the BA-42 Lake Hermitage Marsh Creation Project). 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 will be planted. Containment dikes will be gapped.

Approximately 52,650 linear feet of terraces (35 acres) will be constructed in open water areas east and west of Grand Bayou. Terraces will have a 15-ft crown width, a height of +2.5 ft NAVD88, and side slopes of 1(V):6(H). A barge-mounted bucket dredge and marsh buggies will be utilized for construction. The terraces will be planted with seashore paspalum on the crown and smooth cordgrass on the side slopes.

Project Benefits:
The project would result in approximately 340 net acres over the 20-year project life.

Project Costs:
The total fully-funded cost is $37,405,780.

Preparer of Fact Sheet:
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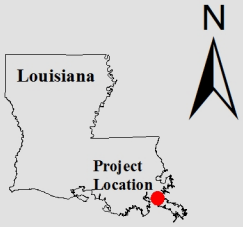
Grand Bayou Marsh Creation and Terracing (PPL24 Candidate)



Marsh Creation *

Terrace Field *

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 2014-11-0020
Map Date: July 02, 2014

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

PPL24 East Leeville Marsh Creation and Nourishment

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

Problem:
There is historic and continued rapid land loss within the project and surrounding areas resulting from oil and gas exploration, subsidence, wind erosion, storms, and altered hydrology. 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. A large section of the western bank of South Lake has been lost increasing wave fetch and further coalescence of natural lakes with adjacent waters that were once marsh. Natural tidal flow and drainage patterns which once existed are currently circumvented by the increasing area of open water. The wetland loss rate for the project area is -1.15%/year based on USGS data from 1984 to 2011.

Goals:
The project goal is to create approximately 352 acres and nourish 130 acres of saline marsh east of Leeville.

Proposed Solution:
After consideration of three potential alternatives, an alignment was selected to re-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 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 establish tidal connection and function. Additionally, 50% 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 326 net acres over the 20-year project life.

Project Costs:
The total fully-funded cost is $34,883,208.

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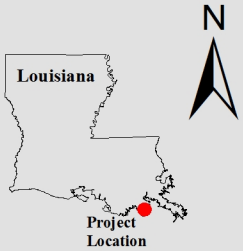
East Leeville Marsh Creation and Nourishment (PPL24 Candidate)



Marsh Creation *

Project Boundary

* denotes proposed features

0.5 0 0.5 Kilometers

0.5 0 0.5 Miles

Scale 1:35,000

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

Map ID: USGS-NWRC 2014-11-0024
Map Date: June 25, 2014

Candidate Projects Located in Region 3

PPL24 West Fourchon Marsh Creation and Marsh Nourishment

Project Location:
The project is located in Region 2, Terrebonne Basin, in Lafourche Parish

Problem:
The primary causes of land loss in the project area are oil and gas canals, subsidence, and sediment deprivation, which have resulted in an estimated rate of -0.41% per year based on hyper-temporal analysis conducted by USGS for the extended project boundary for the years 1984 to 2012. Bounded by Bayou Lafourche to the east and Timbalier Bay to the west the project area is also subject to shoreline erosion.

Goals:
The goals of this project are to create and nourish 614 acres of marsh, by pumping sediment from an offshore borrow site in the Gulf of Mexico. This project will create new marsh habitat and increase the longevity of exiting habitat. The project will also help protect the people and infrastructure of Port Fourchon.

Proposed Solution:
This project would create 302 acres of saline intertidal marsh and nourish 312 acres of emergent marsh using material dredged from the Gulf of Mexico, southwest of the project area. Earthen containment dikes will be constructed along the project boundary to contain the material. Vegetative plantings are planned at a 50% density, with half planned at TY1 and half planned at TY3 if necessary. Containment dikes will be degraded or gapped by TY3 to allow access for estuarine organisms. Funding will be set aside for the creation of tidal creeks if needed. This project, along with TE-23 and TE-52, will help stabilize the edge of the marshes and protect Port Fourchon from the west. The initial construction elevation is +2.4 feet NADV 88; after settlement, marsh is expected to be +1.4 NAV 88.

Project Benefits:
The project would result in approximately 304 net acres over the 20-year project life.

Project Costs:
The total fully-funded cost is $29,405,764.

Preparers of Fact Sheet:
Costal Restoration and Protection Authority
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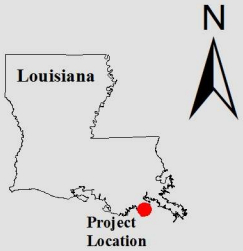
Stuart Brown, stuart.brown@la.gov; (225) 342-4596

West Fourchon Marsh Creation and Marsh Nourishment (PPL24 Candidate)



Marsh Creation *

Project Boundary

* denotes proposed features

0.4 0 0.4 Kilometers

0.4 0 0.4 Miles

Scale 1:30,000

Map ID: USGS-NWRC 2014-11-0025
Map Date: June 25, 2014

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

PPL24 Bayou Dularge Ridge Restoration and Marsh Creation

Project Location:
Region 3, Terrebonne Basin, Terrebonne Parish, Bayou Dularge at Grand Pass

Problem:
The Bayou Dularge Ridge is a prominent feature in the south central Terrebonne Basin forming a diagonal ridge extending from northeast to southwest that historically restricted the Gulf marine influence into Central Terrebonne marshes. The project location provides a unique opportunity to manage salinity intrusion into a vast area where historically salinity was naturally moderated through intact land features. The Grand Pass, a 900 ft wide artificial cut through the Bayou Dularge Ridge, south of Lake Mechant, is currently being addressed in the CWPPRA TE-66 project. However, the integrity of the ridge is also of concern due to erosion of the adjacent marshes. Loss of this important land bridge separating Lake Mechant from Sister Lake would undermine efforts to restore the fresh and intermediate marshes to the north and eliminate an important landscape feature of critical importance to basin hydrology. The State Master Plan has also identified the ridge as a restoration priority.

Goals:
The project will create/restore a ridge feature and marsh in the landbridge that separates Lake Mechant from Sister Lake to insure the integrity of the ridge and the important function of sustaining optimal salinity gradients and promote healthy marsh recovery in the region.

Proposed Solution:
The project would create approximately 20,182 linear feet (26 acres) of forested coastal ridge south of Bayou Dularge and create/nourish approximately 464 acres of marsh. Lake sediments will be hydraulically dredged and pumped via pipeline to supply material to the marsh creation locations. Containment dikes will be constructed around marsh creation areas to retain material during pumping. Additionally, the ridge feature will be fully planted with appropriate hardwood species.

Project Benefits:
The project would result in approximately 304 net acres of emergent marsh and forested coastal ridge over the 20-year project life.

Project Costs:
The total fully-funded cost is $42,725,312.

Preparers of Fact Sheet:
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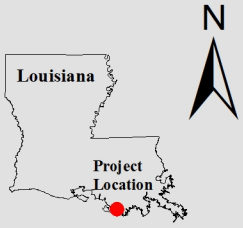
John Jurgensen, NRCS, (318) 473-7694, john.jurgensen@la.usda.gov

Bayou Dularge Ridge Restoration and Marsh Creation (PPL24 Candidate)



Ridge Restoration *

Marsh Creation *

Project Boundary

* denotes proposed features

0.75 0 0.75 Kilometers

0.75 0 0.75 Miles

Scale 1:60,000

Map ID: USGS-NWRC 2014-11-0028
Map Date: September 03, 2014

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

PPL24 South Humble Marsh Creation and Nourishment

Project Location:
The project is located in Region 3, Teche - Vermilion Basin, in Vermilion Parish

Problem:
Project area wetlands are being lost at a rate of -0.78 % per year based on USGS analysis (1985-2010). Marshes in this area are subject to losses from shoreline erosion, subsidence/sediment deficit, hurricane impacts, and interior ponding. Shoreline erosion along the Freshwater Bayou Canal has resulted in direct wetland loss as the canal has widened from an authorized width of less than 200 feet to 800 feet. In addition to these direct losses, significant interior marsh loss has resulted from saltwater intrusion and hydrologic changes associated increasing tidal influence, storm surge impacts, and herbivory. The ensuing erosion creates water turbidity within the interior ponds, this coupled with increased pond depth, decreases the coverage of submerged aquatic vegetation. Recent hurricane scour sites are not likely to recover unaided. Erosion of the eastern bank line of Freshwater Bayou has resulted in formation of three breaches, allowing boat wakes and hydrologic action to adversely affect the interior project area marshes. The wakes from passing vessels and tidal action are also causing the export of organic material from the project area.

Goals:
The project goal is to create and/or nourish approximately 516 ac of marsh (301 ac created, 215 ac nourished) of emergent brackish marsh using sediment from the Gulf.

Proposed Solution:
The proposed project would create and/or nourish approximately 516 acres of marsh (301 acres created, 215 acres nourished). Sediment will be hydraulically pumped from the Gulf of Mexico into the shallow water marsh creation area. Containment dikes will be constructed around the marsh creation area to keep material on site during pumping. The saline effluent will be direct toward Freshwater Bayou and will not be discharged eastward into existing marshes. Once pumping has been completed, dikes will be gapped, tidal channels will be constructed and some vegetative plantings will occur if needed within the newly created areas.

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

Project Costs:
The total fully funded cost is $34,489,655.

Preparer(s) of Fact Sheet:
Ronald Paille: U.S. Fish and Wildlife Service; 337-291-3117

South Humble Marsh Creation and Nourishment (PPL24 Candidate)

Water Control Structure *

Tidal Creeks *

Marsh Creation *

Project Boundary

* denotes proposed features

0.3 0 0.3 Kilometers

0.3 0 0.3 Miles

Scale 1:25,000

Map ID: USGS-NWRC 2014-11-0029
Map Date: July 21, 2014

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

Candidate Projects Located in Region 4

PPL24 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 0.84 %/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.

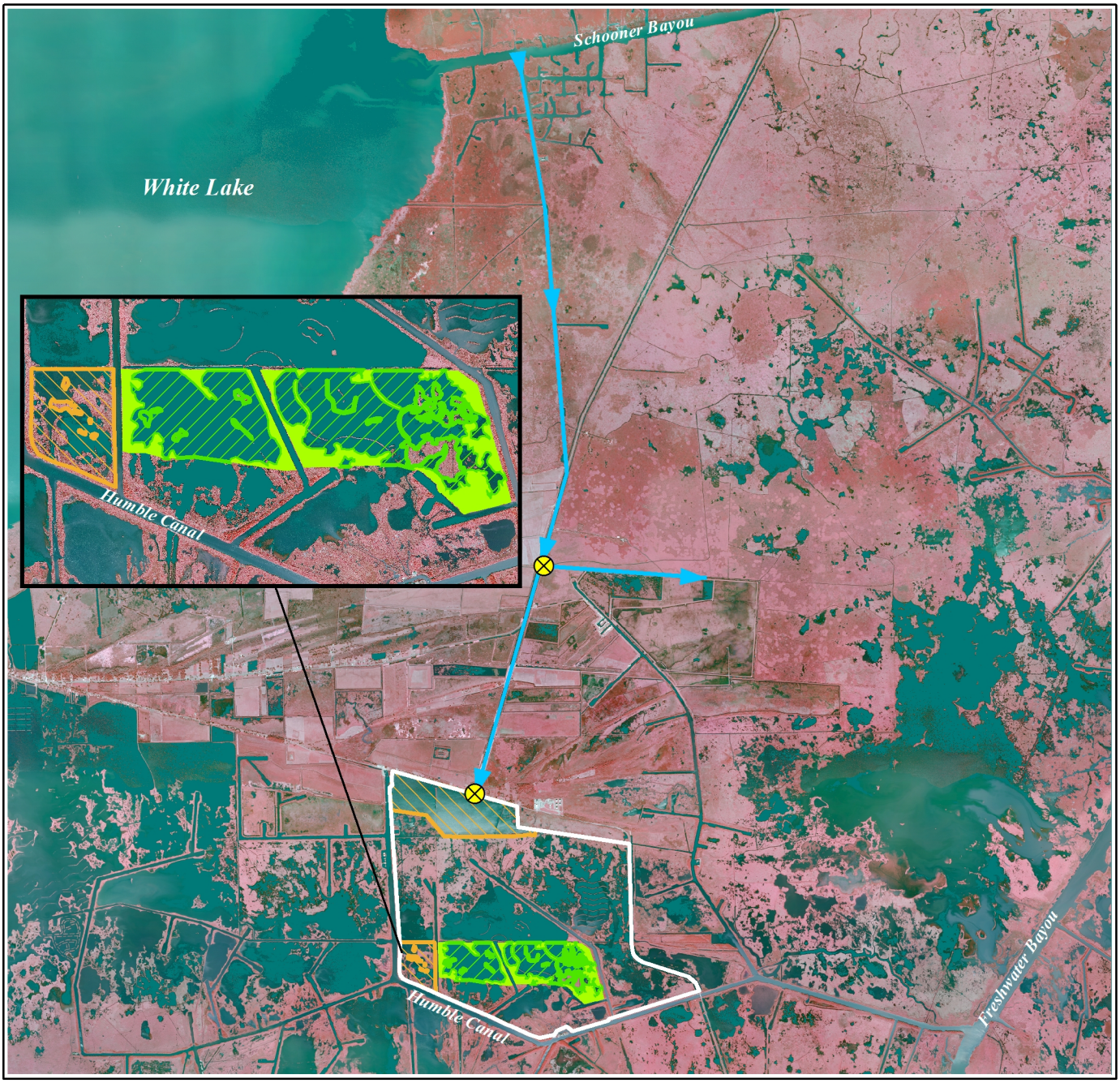
Proposed Solution:
The project would create/nourish approximately 401 acres of emergent marsh; create 55,348 linear feet (45 acres) of terraces; and promote growth of submerged aquatic vegetation.

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 388 net acres over the 20-year project life.

Project Costs:
The total fully-funded cost is $38,586,563.

Preparers of Fact Sheet:
Troy Mallach, NRCS, (337) 291-3064, troy.mallach@la.usda.gov
Billy Broussard, Vermilion Corps, (337) 893-0268, bbillypb@kaplantel.net



Southeast Pecan Island Marsh Creation and Freshwater Enhancement (PPL24 Candidate)

Culvert with Flapgate *

Freshwater Introduction *

Marsh Creation *

Marsh Nourishment *

Terrace Field *

Influence Area/Project Boundary *

* denotes proposed features

1 0 1 Kilometers

1 0 1 Miles

Scale 1:100,000

Map ID: USGS-NWRC 2014-11-0027
Map Date: September 10, 2014

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

PPL24 No Name Bayou Marsh Creation and Nourishment

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

Problem:
The project area is located in the Cameron-Creole Watershed Management Area which protects approximately 64,000 acres in the watershed. It includes a 16.5 mile levee along Calcasieu Lake and five large concrete water control structures to manage the unit and prevent the effects of saltwater intrusion, by managing salinity, tidal exchange, water levels, and estuarine organism movement into and out of the watershed. The Calcasieu Ship Channel, immediately west of the project area, provides an avenue for the rapid movement of high-salinity water into the marshes around Calcasieu Lake. This movement increased salinity in the area, resulting in plant death and marsh loss. The weakened marshes located between the East Fork of the Calcasieu River and Calcasieu Lake has also been decimated by hurricanes. Marshes that once provided a buffer to the southwest rim of Calcasieu Lake are now shallow open water areas.

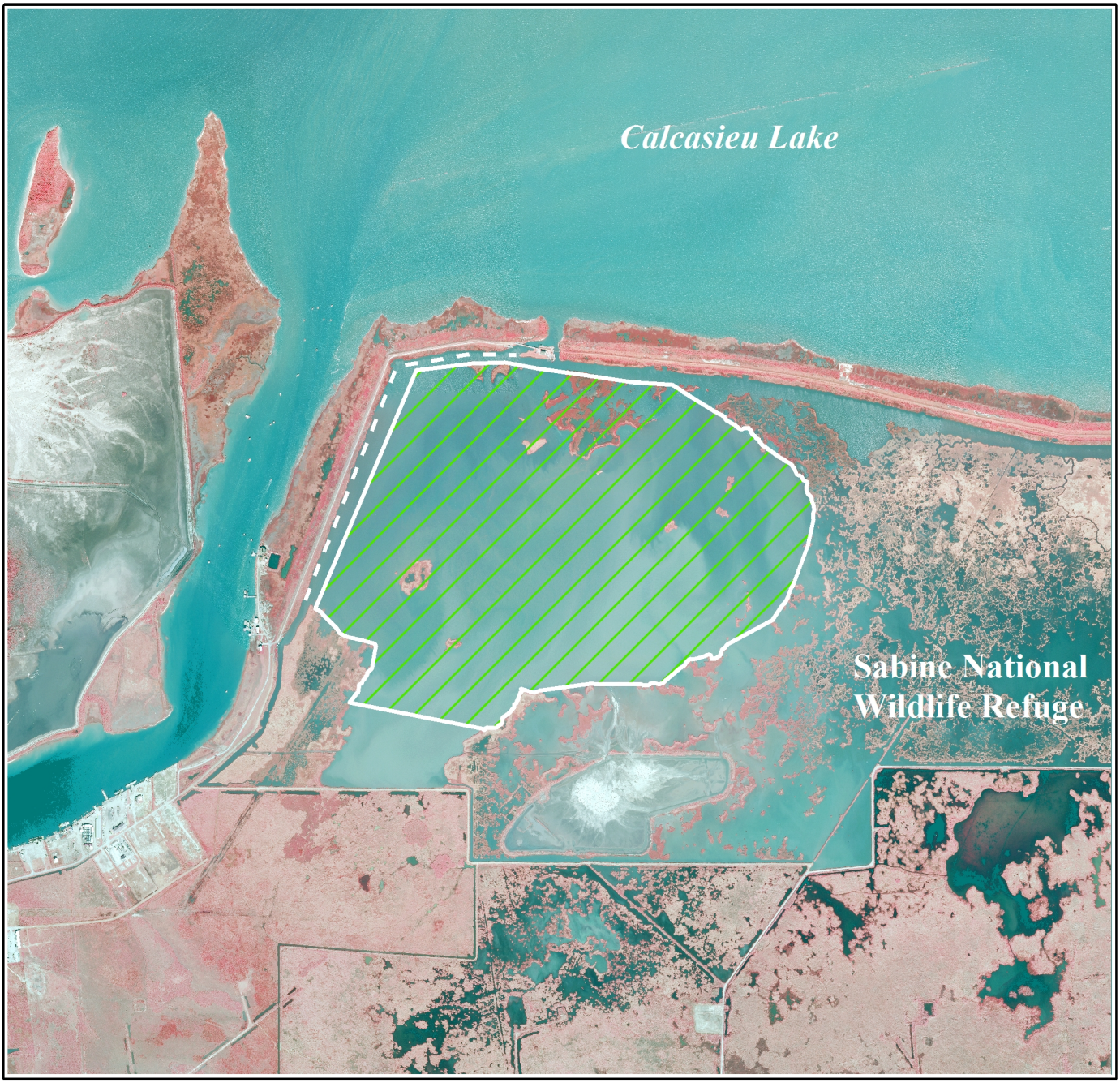
Goals:
The project goal is to create and/or nourish approximately 533 acres of emergent saline marsh within the Cameron-Creole watershed along the Calcasieu Lake rim using sediment from upland disposal sites of the Calcasieu River.

Proposed Solution:
The proposed project's primary feature is to create and/or nourish approximately 533 acres of saline marsh (502 acres created, 21 acres nourished) south of Calcasieu Lake. In order to achieve this, approximately 3.5 million cubic yards of sediment will be hydraulically pumped from the upland disposal areas of the Calcasieu River immediately adjacent to (across East Fork), and into the shallow water marsh creation area to an elevation of 1.4 ft NAVD 88. Clean out approximately 5,000 LF of the Cameron Creole Watershed Levee borrow channel to facilitate water movement into the newly created area. Containment dikes will be constructed around the marsh creation area to keep material on site during pumping. Once pumping has been completed, the containment dikes will be degraded to the current platform elevation and gaps will be excavated. Additionally, 251 acres of vegetative plantings will occur within the newly created areas. Approximately 10,000 linear feet of tidal creeks and two 2.5 acre ponds will be constructed to help facilitate hydrologic flow of water in and out of project area.

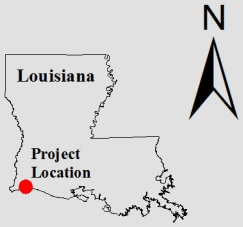
Project Benefits:
The project will result in approximately 497 net acres over the 20-yr project life.

Project Costs:
The total fully funded cost is $28,253,137.

Preparer(s) of Fact Sheet:
John D. Foret, Ph.D, NOAA's National Marine Fisheries Service, (337) 291-2107, John.Foret@noaa.gov
Kimberly Clements, NOAA's National Marine Fisheries Service, (225) 389-0508, extension 204, Kimberly.Clements@nooa.gov



No Name Bayou Marsh Creation and Nourishment (PPL24 Candidate)



Channel Cleanout *

Marsh Creation *

Project Boundary

* denotes proposed features

0.35 0 0.35 Kilometers

0.35 0 0.35 Miles

Scale 1:25,000

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

Map ID: USGS-NWRC 2014-11-0022
Map Date: June 25, 2014

Candidate Demonstration Project

PPL24 Innovative Bedload Sediment Collector Demonstration Project

Potential Demonstration Project Location:
Coastwide

Problem:
Sediments for restoration projects are typically excavated from static borrow sources by disruptive and costly dredge platforms and dredging operations. These sediment borrow sources have limited capacity, with nominal natural replenishment rates following their excavation.

Goals:
The goal of this project is to demonstrate the potential use and effectiveness of the Innovative Bedload Sediment Collector technology for passively collecting sediment at its natural transport rate, as an alternative to conventional dredging.

Proposed Solution:
The Innovative Bedload Sediment Collector demonstration project will consist of (3) 12' high capacity collectors at three separate locations of varying environments, for a 12 month duration, to monitor and evaluate the removal of bedload sediment for beneficial reuse. Each site will include one complete Streamside Systems 12' collector system with supporting equipment. The stainless steel 12' collector will be set in the main channel of a river or bayou and will be located at or just above grade of the channel bottom to collect migrating sediment. After the sediment is collected, it will be hydraulically pumped to adjacent beneficial reuse sites. Each site will be approximately one acre and fully contained.

Project Benefits:
Potential benefits include: 1) passive collection and delivery of sediments for the purpose of beneficial use; 2) capture sediment that would otherwise migrate out of the system; 3) reduce impacts by optimally collecting sediment in a non-disruptive, non-intrusive, and sustainable manner.

Project Costs:
The fully-funded cost is $2,608,601.

Preparer of Fact Sheet:
Scott Wandell, USACE, 504-862-1878, scott.f.wandell@usace.army.mil
Brian Halm, Streamside Environmental LLC, 419-423-1290, bhalm@streamsideenvironmental.com

Sediment Collectors

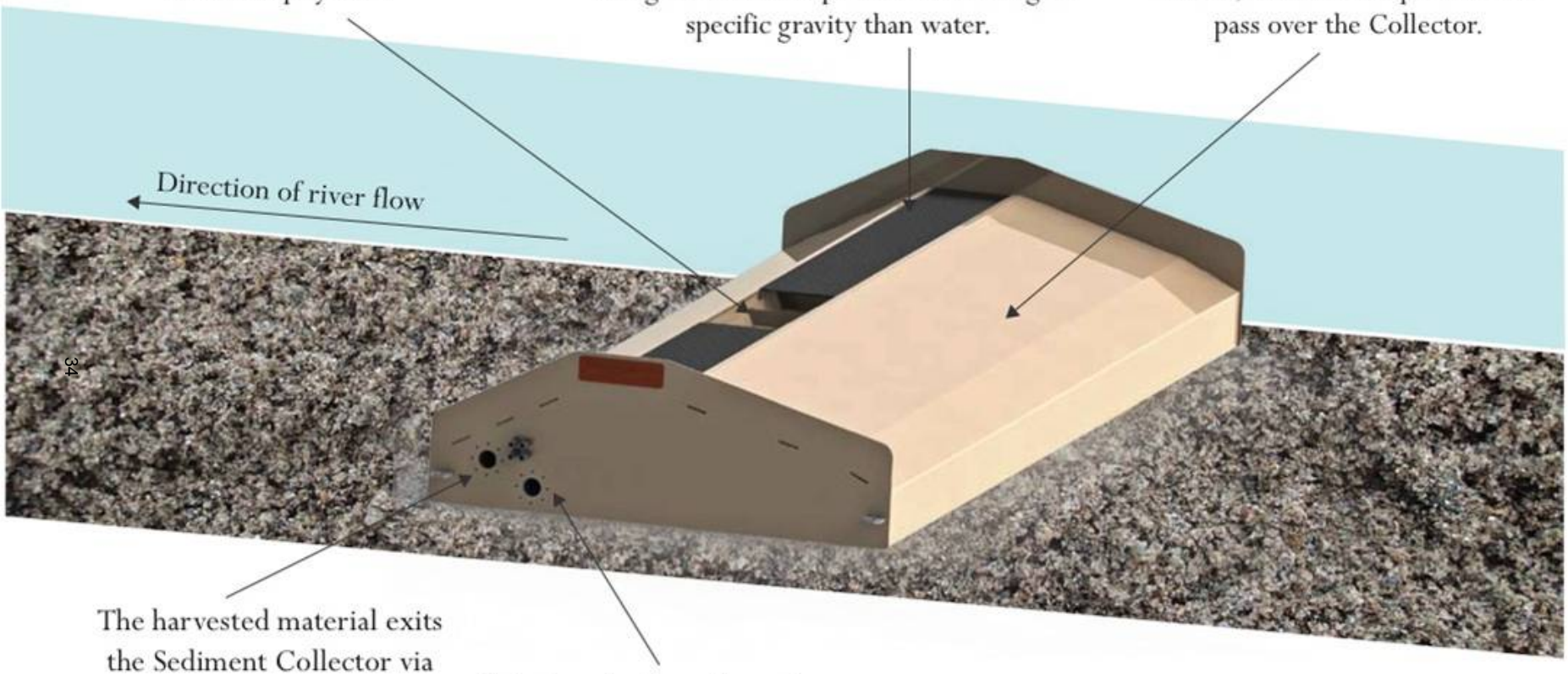
- Sediment Collectors represent a new, innovative technology, using simple physical principles to capture bedload sediments.
  - Passive Collectors allow the energy of the stream to move bedload sediment up the Collector's ramp and into a hopper. As the sediment fills the hopper, it is pumped to a beneficial use site.

STREAMSIDE TECHNOLOGY
simplified thinking.

Once the material has passed through the grate system, it is collected within the hopper. The hopper acts as a collection basin that contains alternating suction and inject ports, which allows for a modified closed-loop system.

The grate system installed above the hopper acts as a screen to selectively remove a specified particle size and allow for larger sized material to continue moving downstream. The Sediment Collector is designed to collect particles with a higher specific gravity than water.

Coarse-grained sediment – fine sands to gravel – migrates as bedload and travels up the ramp of the Sediment Collector. Finer sediments (silts & clays), as well as other organic matter, remain in suspension and pass over the Collector.



The harvested material exits the Sediment Collector via suction ports and is pumped as a slurry to a placement or dewatering site.

Inject ports allow the water from the dewatering system to be returned to the Collector, this helps to reduce impingement and minimize discharge of water to the river.

Large-Scale Sediment Collector

Summary of Sediment Collector Technology

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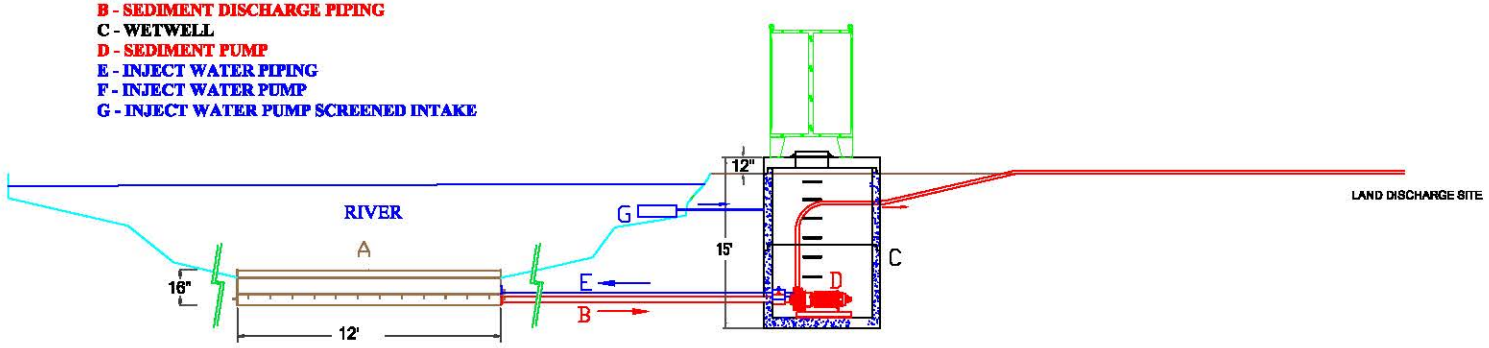
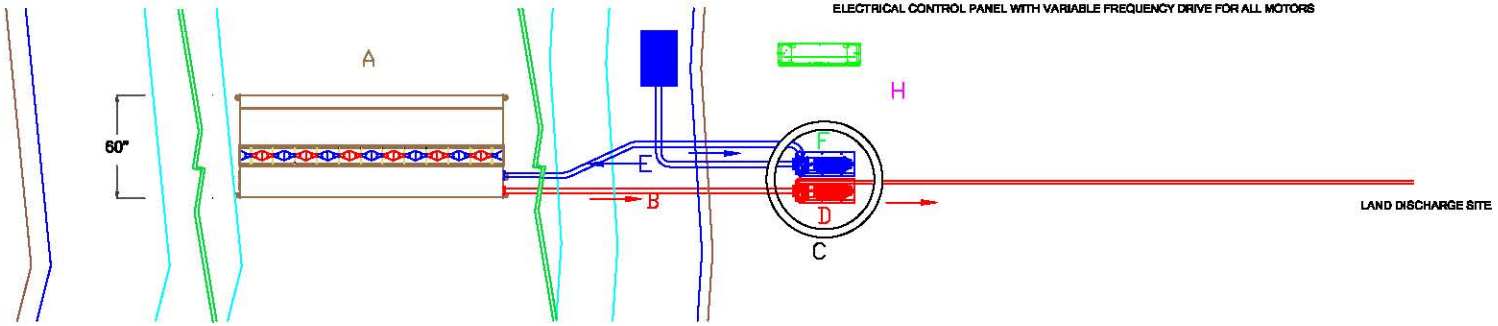
STREAMSIDE TECHNOLOGY simplified thinking.

A - 12' SEDIMENT COLLECTOR
B - SEDIMENT DISCHARGE PIPING
C - WETWELL
D - SEDIMENT PUMP
E - INJECT WATER PIPING
F - INJECT WATER PUMP
G - INJECT WATER PUMP SCREENED INTAKE



STREAMSIDE SYSTEMS ®
12' COLLECTOR W/ LAND APPLICATION OF DISCHARGE
CONCEPTUAL DRAWING (SIDE VIEW)

STREAMSIDE SYSTEMS PATENTED BEDLOAD SEDIMENT COLLECTOR
MODEL 60 X 144 X 16 HIGH CAPACITY WITH RETURN WATER INJECT TO REDUCE IMPINGEMENT
(4) EXTERNAL ANCHORING POINTS, (5) 2 FOOT PANELS OF 3/8" OPENING STAINLESS STEEL GRATES
4" DISCHARGE PIPING AND 4" INJECT PIPING,
ALL STAINLESS STEEL WELDED CONSTRUCTION, .120" STEEL INTERNAL SUPPORTS , 1/4"" END PLATES , .120" RAMP DECKS
DISCHARGE PIPING AND INJECT PIPING MUST BE HDPE DR11
(1) WETWELL SIZED FOR THE PUMP, TO A DEPTH NO GREATER THAN THE COLLECTOR, (SUPPLIED BY CONTRACTOR)
20 HP DREDGE PUMP IN WETWELL, 420 GPM WITH 60 FEET OF HEAD
SYSTEM CAN BE EITHER 230/3/60 OR 460/3/60:
ELECTRICAL CONTROL PANEL WITH VARIABLE FREQUENCY DRIVE FOR ALL MOTORS



STREAMSIDE SYSTEMS ®
12' COLLECTOR W/ LAND APPLICATION OF DISCHARGE
CONCEPTUAL DRAWING (PLAN VIEW)

STREAMSIDE TECHNOLOGY LLC
D D-2101-A

PPL24 Candidate Project Evaluation Matrix

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)
New Orleans Landbridge Shoreline Stabilization & Marsh Creation	1	Orleans	271	94	167	$17,549,317	$1,942,143	$15,607,174	$1,170,739	$12,455	$105,086
Shell Beach South Marsh Creation	1	St. Bernard	634	184	344	$28,101,520	$3,176,569	$24,924,951	$1,883,180	$10,235	$81,690
Bayou Bienvenue Marsh Creation	1	Orleans	351	85	276	$34,219,915	$3,801,431	$30,418,484	$2,315,093	$27,236	$123,985
Grand Bayou Marsh Creation & Terracing	2	Plaquemines	1,201	174	340	$37,405,780	$3,263,637	$34,142,143	$2,511,573	$14,434	$110,017
East Leeville Marsh Creation & Nourishment	2	Lafourche	484	196	326	$34,883,208	$3,971,658	$30,911,550	$2,333,005	$11,903	$107,004
West Fouchon Marsh Creation & Marsh Nourishment	3	Terrebonne	614	195	304	$29,405,764	$3,201,929	$26,203,835	$1,976,277	$10,135	$96,729
Bayou Dularge Ridge Restoration & Marsh Creation	3	Terrebonne	490	176	304	$42,725,312	$3,840,532	$38,884,780	$2,897,022	$16,460	$140,544
South Humble Marsh Creation & Nourishment	3	Vermilion	523	183	294	$34,489,655	$3,600,021	$30,889,634	$2,318,781	$12,671	$117,312
Southeast Pecan Island Marsh Creation & Freshwater Enhancement	4	Vermilion	3,280	215	388	$38,586,563	$3,903,670	$34,682,893	$2,566,812	$11,939	$99,450
No Name Bayou Marsh Creation & Nourishment	4	Cameron	533	231	497	$28,253,137	$2,724,524	$25,528,613	$1,884,364	$8,157	$56,847

rev 11/04/14

PPL 24 Demonstration Project Evaluation Matrix

10/27/2014

(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		
Innovative Bedload Sediment Collector DEMO	USACE	$2,608,601	3	1	1	2	1	1	**9**	9.7

"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 11, 2014
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 24 candidate projects. The public is invited to attend and provide comments on the candidate projects. The Technical Committee will vote & recommend projects for PPL 24 selection. The Technical Committee will also consider requests for construction (Phase II) approvals.

Written comments may be provided no later than November 26, 2014 to the CWPPRA Task Force by mail, fax or email to:

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District Engineer, New Orleans
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