

Public Meeting – November 13, 2013

**Baton Rouge, LA** 

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#### APPENDIX A

#### **PRIORITY PROJECT LIST 23 SELECTION PROCESS**

#### **Coastal Wetlands Planning, Protection and Restoration Act Guidelines for Development of the 23<sup>rd</sup> 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) 1-22; 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 1-22; 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 2013.
- 4) Regional boundary maps with basin boundaries and parish boundaries included.

#### II. <u>Project Nominations</u>

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. 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.

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. 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 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, then 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.

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.

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. <u>Selection of Phase 0 Candidate Projects</u>

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

B. Environmental and Engineering Work Groups and the Academic Advisory Group meet to refine project features and develop boundaries based on site visits.

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. <u>Selection of 23<sup>rd</sup> Priority Project List</u>

A. The selection of the 23<sup>rd</sup> 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 23<sup>rd</sup> PPL. The Technical Committee may also recommend demonstration projects for the 23<sup>rd</sup> PPL.

C. The CWPPRA Task Force will review the Technical Committee recommendations and determine which projects will receive Phase 1 funding for the 23<sup>rd</sup> PPL.

# 23<sup>rd</sup> Priority List Project Development Schedule (dates subject to change)

December 2012	Distribute public announcement of PPL 23 process and schedule
December 12, 2012	Winter Technical Committee Meeting, approve Phases I and II (Baton Rouge)
January 24, 2013	Winter Task Force Meeting (New Orleans)
January 29, 2013 January 30, 2013 January 31, 2013 February 19, 2013	Region IV Planning Team Meeting (Abbeville) Region III Planning Team Meeting (Morgan City) Regions I and II Planning Team Meetings (New Orleans) Coast-wide RPT Voting (via electronic vote)
February 25 – March 8, 2013	Agencies prepare fact sheets for RPT-nominated projects
March 20-21, 2013	Engineering/ Environmental Work Groups review project features, benefits & prepare preliminary cost estimates for nominated projects (Baton Rouge)
March 27, 2013	P&E Subcommittee prepares matrix of nominated projects showing initial cost estimates and benefits
April 16, 2013	Spring Technical Committee Meeting, select PPL 23 candidate project (New Orleans)
May/June	Candidate project site visits
June 4, 2013	Spring Task Force Meeting (Lafayette)
July/August/ September	Env/Eng/Econ Work Group project evaluations
September 11, 2013	Fall Technical Committee Meeting, O&M and Monitoring funding recommendations (Baton Rouge)
October 10, 2013	Fall Task Force meeting, O&M and Monitoring approvals (New Orleans)
October 18, 2013	Economic, Engineering, and Environmental analyses completed for PPL 23 candidates
November 13, 2013	PPL 23 Public Meeting (Baton Rouge)
December 12, 2013	Winter Technical Committee Meeting, recommend PPL 23 and Phase I and II approvals (Baton Rouge)
January 2014	Winter Task Force Meeting, select PPL 23 and approve Phase II requests (New Orleans)

# **Candidate Project Located in Region 1**

## PPL23 New Orleans Landbridge Shoreline Stabilization and Marsh Creation

#### **Project Location:**

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 Hurricanes Katrina and Rita. Within the project area, these storms 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 and infrastructure. 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 **192** acres of brackish marsh and to protect **12,716** linear feet of shoreline to maintain the structural integrity of the Orleans Landbridge, a critical landscape feature.

#### **Proposed Solution:**

Approximately 863,000 cubic yards of material will be dredged from two borrow areas in Lakes St. Catherine and Pontchartrain and from flotation access. Material will be placed in two restoration areas: a 107-acre area west of U.S. Highway 90 (MC 1), and an 85-acre area east of U.S. Highway 90 (MC 3). Approximately 12,716 linear feet of containment will be constructed with a top width of 20 feet (1V:5H side slopes) to serve as an enhanced earthen shoreline along both lake shorelines adding additional protection from wind-induced wave fetch. Of the shoreline protection, 2,129 linear feet would be constructed in front of existing marsh offering additional protection. Gaps are not proposed in the enhanced shoreline for MC 3. However, at least 4 gaps are proposed at historically natural bayous along the shoreline for MC 1 to allow for organism access. Vegetative plantings are proposed including five rows along the crown and two rows along the front slope of the shoreline protection berm and within the marsh creation areas.

#### **Project Benefits:**

The project would result in approximately 104 net acres over the 20-year project life.

#### **Project Costs:**

The total fully-funded cost is \$12,499,983.

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

Angela Trahan, FWS, angela\_trahan@fws.gov, 337-291-3137



# **Candidate Projects Located in Region 2**

# PPL23 Caminada Headlands Back Barrier Marsh Creation

#### **Project Location:**

Region 2, Barataria Basin, Lafourche Parish

#### **Problem:**

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

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

#### **Goals:**

The goals of this project are to: 1) Create and/or nourish 430 acres of back barrier marsh, by pumping sediment from an offshore borrow site; 2) Create a platform upon which the beach and dune can migrate, reducing the likelihood of breaching, improving the longevity of the barrier shoreline, and protecting wetlands and infrastructure to the north and west. The proposed project is expected to slow the current trend of degradation in the headland.

#### **Proposed Solution:**

This project would create 300 acres of back barrier intertidal marsh and nourish 130 acres of emergent marsh behind 3.5 miles of the Caminada beach using material dredged from the Gulf of Mexico. The marsh creation and nourishment cells are designed to minimize impacts on existing marsh and mangroves. Assuming some natural vegetative recruitment, vegetative plantings are planned at a 50% density, with half planned at project year one and half planned at project year 3. Containment dikes will be degraded or gapped by year three to allow access for estuarine organisms.

#### **Project Benefits:**

The project would result in approximately181 net acres over the 20-year project life.

#### **Project Costs:**

The total fully-funded cost is \$31,034,094.

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

Barbara Aldridge (EPA), (214) 665-2712; Stuart Brown, CPRA, (225) 342-4596



## PPL23 Wilkinson Canal Marsh Creation and Nourishment

#### **Project Location:**

The project is located in Region 2, Barataria Basin, in Plaquemines Parish

#### **Problem:**

There is widespread historic and continued rapid land loss within the project site and surrounding marshes resulting from subsidence, wind erosion, storms, and altered hydrology. Based on USGS data from 1984 to 2011, the wetland loss rate for the proposed project area is 1.04 %//year. The natural limits of Bayou Dupont are difficult to determine in some areas because land loss is causing the coalescence of the bayou with adjacent water bodies. Natural tidal flow and drainage patterns that once existed through the bayou are currently circumvented by the increasing area of open water. Data suggests that from 1932 to 1990, the basin lost over 245,000 ac of marsh, and from 1978 to 1990, Barataria Basin experienced the highest rate of wetland loss along the entire coast.

#### **Goals:**

The concept provides for the restoration of approximately 484 acres of emergent brackish marsh to help reestablish the banks of Bayou Dupont while also providing protection to the local flood protection levee.

#### **Proposed Solution:**

The proposed project's primary feature is to create 435 acres and nourish 49 acres of brackish marsh. Sediment will be hydraulically pumped from a borrow source in the Mississippi River (near the Myrtle Grove area). Containment dikes will be constructed around the marsh creation area to retain sediment during pumping. No later than three years post construction, the containment dikes will be degraded and/or gapped. Additionally, half of the newly constructed marsh (242 acres) will be planted following construction to stabilize the platform and reduce time for full vegetation.

#### **Project Benefits:**

The project would result in approximately 395 net acres over the 20-year project life.

#### **Project Costs:**

The total fully-funded cost is \$36,292,706.

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

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Patrick Williams, NOAA's National Marine Fisheries Service, (225) 389-0508, ext 208 Patrick.Williams@noaa.gov



# PPL23 Bayou Grande Cheniere Marsh and Ridge Restoration

#### **Project Location:**

Region 2, Barataria Basin, Plaquemines Parish

#### **Problem:**

Significant marsh loss has occurred south of Lake Hermitage with the construction of numerous oil and gas canals, subsidence, and sediment deprivation. The most significant loss occurred during the 1960s and 1970s. Based on the hyper-temporal analysis conducted by USGS for the extended boundary, loss rates in the project area are estimated to be -1.16% per year for the period 1984 to 2011.

#### **Goals:**

The primary goal is to re-create marsh habitat in the open water areas and nourish marsh along the eastern side of the Bayou Grande Cheniere ridge. Specific goals of the project are: 1) Create approximately 342 acres of marsh with dredged material from the Mississippi River; 2) create 10,820 linear feet (12 acres) of forested coastal ridge habitat.

#### **Proposed Solution:**

Riverine sediments will be hydraulically dredged and pumped via pipeline to create/nourish approximately 342 acres of marsh. Containment dikes will be constructed as necessary. The proposed design is to place the dredged material to a fill height of +2.0 ft NAVD88. Approximately 8,200 ft of pre-dredged tidal creeks are also proposed. Tidal creeks will be dredged approximately 5 feet deep, with side slopes of 1(V):3(H), and with a 10-ft bottom width.

Approximately 10,820 linear feet of forested coastal ridge will be constructed along Bayou Grande Cheniere. The ridge will have a 25-ft crown width, a height of +5.0 ft NAVD88, and side slopes of 1(V):5(H). The current proposal is to create the ridge using material dredged from the Mississippi River. Herbaceous plantings (e.g., seashore paspalum) will occur immediately after construction and bottomland hardwood species (seedlings and saplings) will be planted at Year 2. Funding for tallow control and maintenance plantings is also included.

#### **Project Benefits:**

The project would result in approximately 264 net acres over the 20-year project life.

#### **Project Costs:**

The total fully-funded cost is \$29,937,575.

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

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# **Candidate Projects Located in Region 3**

## **PPL23 Island Road Marsh Creation and Nourishment**

#### **Project Location:**

Region 3, Terrebonne Basin, Terrebonne 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. One-third of the Terrebonne Basin's remaining wetlands are estimated to be lost to open water by the year 2040. There has been a significant reduction in the marsh platform in the vicinity of Island Road (1.60%/year based on USGS data from 1984 to 2011) that has provided some historical wave energy protection. Island Road is the only land access to the Isle of Jean Charles located west of Pointe Aux Chenes which serves unique Native American and minority communities that historically relied on fishing for their livelihood.

#### **Goals:**

The restoration concept provides for the creation and/or nourishment of approximately 383 acres of emergent saline marsh that will form a land bridge along portions of the perimeter of Cutoff Canal, Twin Pipelines Canals, and Island Road.

#### **Proposed Solution:**

The proposed project's primary feature is to create 364 acres and nourish 19 acres of saline marsh. Sediment will be hydraulically pumped from a borrow source near Lake Felicity. Containment dikes will be constructed around the marsh creation area to retain sediment during pumping and will be degraded and/or gapped no later than three years post construction. Half of the newly constructed marsh (182 acres) will be planted following construction to stabilize the platform and reduce time for full vegetation.

#### **Project Benefits:**

The project would result in approximately 312 net acres over the 20-year project life.

#### **Project Costs:**

The total fully-funded cost is \$39,185,267.

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

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Patrick Williams, NOAA's National Marine Fisheries Service, (225) 389-0508, ext 208 Patrick.Williams@noaa.gov







# PL23 Grand Bayou Freshwater Enhancement

#### **Project Location:**

Region 3, Terrebonne Basin, Lafourche Parish

#### **Problem:**

The project area is located within the North Bully Camp Marsh (43,882) and St. Louis Canal (25,563 acres) mapping units. Between the years 1932 and 1990, these two mapping units lost an estimated 12,840 and 3,450 acres of marsh, respectively. A significant amount of the land loss in these areas since 1949 may be attributed to direct removal and altered hydrology from canal dredging. Altered hydrology remains a current cause of land loss along with high rates of subsidence which are estimated to be between 2.1 and 3.5 ft/century (LCWCRTF 1999).

Because of the high number of canals that have been dredged in the area, high salinity Gulf waters move rapidly northward into the marshes within the project area. The amount of high salinity waters moving north is increasing as the marshes continue to breakup and disappear. The only freshwater input to this area originates from the Gulf Intracoastal Waterway (GIWW) along the northern project boundary. The freshwater inflow from the GIWW is restricted by the small cross-section of the channel north of the Hwy. 24 bridge and continuing for several thousand feet south of that bridge. There is also a restriction (earthen plug) in Margaret's Bayou which prevents fresh water from moving east from Grand Bayou into the broken marshes.

#### **Goals:**

The primary goal of this project is to increase the flow of fresh water from the GIWW down Grand Bayou Canal. That increase is water would lower salinities and add nutrients to the wetlands south of the GIWW along the east and west banks of Grand Bayou Canal. *Specific goals*: 1) Increase the flow of fresh water from the GIWW into Grand Bayou Canal from approximately 600 cfs to 1,600 cfs; 2) redirect much of the freshwater from Grand Bayou Canal into the marshes east and west of Grand Bayou Canal, and 3) Create 112 acres of fresh marsh and nourish an additional 14 acres of intermediate marsh west of Grand Bayou near Hwy 24.

#### **Proposed Solution:**

This project would increase the Grand Bayou cross-section from an average of 628 cfs to 1,604 cfs with the use of a hydraulic dredge. Material dredged from the channel would be beneficially used to create approximately 126 acres of intermediate marsh. Along the west bank of the channel a rock plug would be replaced with a 5-48" flap-gated culvert water control structure, an increase of 122 cfs. Along the east bank an earthen plug would be removed to allow freshwater to flow directly into the marshes to the east down Margaret's Bayou, an increase in 385 cfs.

#### **Project Benefits:**

The project would result in approximately 676 net acres over the 20-year project life.

#### **Project Costs:**

The total fully-funded cost is \$22,618,793.

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

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### **PPL23 Southwest Pass Shoreline Protection**

#### **Project Location:**

Region 3, Teche/Vermilion Basin, Iberia and Vermilion Parishes

#### **Problem:**

Erosion of peninsulas in the project area is reducing the effectiveness of the landmass as a mainland barrier to gulf storm surge, wave energy and tidal flux reduction. Average losses of 10 ft/yr at Southwest Point and 8 ft/yr at Tojan Island were measured from 1998 to 2012. Southwest Point is only about 240 ft wide at its thinnest location and the gulf shoreline on Tojan Point is within less than 500 ft from interior tidal creeks leading to the interior.

#### **Goals:**

The project goal is to protect and stabilize critical points within Southwest Pass. The current width and subsequent flow pattern will be maintained by installing armor protection along the gulf front of Tojan Island and bay shoreline of Southwest Point. The rock protection will prevent widening of the pass and tidal currents from circumventing the restriction at the pass and breaching into adjacent marsh areas.

#### **Proposed Solution:**

Proposed is the installation of armored shoreline protection along the south shoreline of Vermilion Bay at Southwest Point to protect approximately 9,195 linear feet of shoreline and along the north shoreline of the Gulf of Mexico at Tojan Island to protect approximately 16,882 linear feet of shoreline. Shoreline protection would consist of typical rock construction.

#### **Project Benefits:**

The project would result in approximately 91 net acres over the 20-year project life.

#### **Project Costs:**

The total fully-funded cost is \$38,679,382.

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

Ron Boustany, NRCS, 337-291-3067, <u>ron.boustany@la.usda.gov</u> John Jurgensen, NRCS, 318-473-7694, <u>john.jurgensen@la.usda.gov</u>



# **Candidate Projects Located in Region 4**

# **PPL23** West Cove Marsh Creation and Nourishment

#### **Project Location:**

Region 4, Calcasieu-Sabine Basin, Cameron Parish

#### **Problem:**

The project area is located within the Mud Lake mapping unit (22,711 ac). Between the years 1932 and 1990, the mapping unit lost an estimated 4,630 acres of marsh. The majority of this loss (3,570 acres) occurred from 1956-1974. In 2005, marshes in the area were severely impacted as a result of Hurricane Rita and again in 2008 by Hurricane Ike.

With the recent increase in area salinities coupled with hurricane impacts, much of the marsh vegetation in the area has been stressed and in many cases lost. USGS performed a linear regression of land area values based on the land-water analysis of hyper-temporal data set (1984-2011) and estimated a loss rate of -0.80%/yr. If not addressed through some type of restoration, wind generated waves within the open water areas can cause an increase in shoreline erosion.

#### **Goals:**

The primary goal of this project is to divert material from an upland disposal site along the Calcasieu River Ship Channel and beneficially utilize that material to create and/or nourish approximately 409 acres of brackish marsh (388 acres created and 21 acres nourished).

#### **Proposed Solution:**

The proposed project will beneficially utilize material from the Calcasieu River Ship Channel dredged during routine maintenance dredging operations and create/nourish marsh by placing that material in an area with shallow open water and highly broken marsh located south and west of West Cove. Approximately 388 acres of brackish marsh would be restored and 21 acres nourished by beneficially using approximately 1.6 million cubic yards of material. Dredged material would be contained by earthen containment dikes to achieve a target marsh elevation of +1.4 ft. NAVD 88 (2 inches above the existing marsh elevation at Sonde CS20-15R and equal to the target elevations at the Sabine Marsh Creation Project Cycles 1 & 3).

Containment dikes will be degraded and/or adequately gapped within three years post construction. Tidal creeks will also be constructed with the use of a marsh buggy tracking along a predetermined path to initiate the establishment of those tidal creeks thus allowing tidal flow and estuarine organism access to the marsh restoration areas.

#### **Project Benefits:**

The project would result in approximately 359 net acres over the 20-year project life.

**Project Costs:** The total fully-funded cost is \$20,034,472.

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

Robert Dubois, Fish and Wildlife Service, (337) 291-3127 Scott Wandell, U.S. Army Corps of Engineers, (504) 862-1878



## PPL23 Southeast Pecan Island Marsh Creation and Freshwater Enhancement

#### **Project Location:**

The project is located in Region 4, Mermentau Basin, Vermilion Parish, east of Pecan Island and south of Highway 82.

#### **Problem:**

Virtually all of the project area marshes have experienced increased tidal exchange, saltwater intrusion, and reduced freshwater retention associated with the Freshwater Bayou Canal and the Humble Canal. Highway 82 traverses cheniers wherever possible, however, low spots between cheniers historically allowed drainage from the Lakes Subbasin south into the Chenier Subbasin. Currently, Highway 82 forms a hydrologic barrier that isolates those sub basins. Saltwater intrusion has been caused by blocking the normal north-south freshwater flow, retaining freshwater to the north in the Lakes subbasin, and by canals providing a direct route for saltwater to infiltrate the Chenier Subbasin. Recent land loss resulting from Hurricanes Rita and Ike has also left Louisiana State Highway 3147 and Front Ridge Road exposed to open water wave action and vulnerable to additional storm impacts.

#### **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 fresh water 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 receiving freshwater. The project would also create/nourish approximately 531 acres of emergent marsh and promote growth of submerged aquatic vegetation.

#### **Proposed Solution:**

Approximately 531 acres of marsh will be created and/or nourished from dredged material from the Gulf of Mexico.

The proposed freshwater introduction would restore/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 construction of an outlet structure at Front Ridge, 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 372 net acres over the 20-year project life.

**Project Costs:** The total fully-funded cost is \$39,835,500.

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

Troy Mallach, NRCS, (337) 291-3064.



# Southeast Pecan Island Marsh Creation and Freshwater Enhancement (PPL23 Candidate)



Map ID: USGS-NWRC 2013-11-0042 Map Date: September 10, 2013



USGS

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

# **PPL23 South Grand Chenier Marsh Creation – Baker Tract**

#### **Project Location:**

The project is located in Region 4, Mermentau Basin, south of Grand Chenier in Cameron Parish, Louisiana, between Highway 82 and Hog Bayou.

#### **Problem:**

Marshes within the Hog Bayou Unit are stressed due to limited freshwater input and seasonal salinity spikes exacerbated by construction of the Mermentau Ship Channel. The dredging of the Mermentau River Ship Channel and subsequent wetland loss has increased tidal amplitude and salt water intrusion into the watershed. Other contributors to land loss in the area are subsidence, compaction, and erosion of organic soils. Currently, the project area is characterized as large open water with degraded areas of wetland vegetation, low organic production, and large areas of wave fetch.

#### **Goals:**

The primary project goal is to create new wetland habitat, restore degraded marsh, and reduce wave erosion. The project would promote the expansion of emergent marsh and submerged aquatic vegetation throughout the project area. Primary focus is on substantial marsh creation to increase organic production and reduce tidal prism. Successful CWPPRA beneficial use and dedicated dredging marsh creation projects show that placement of dredged material in shallow open water areas can restore vegetated marsh within a few years post construction

#### **Proposed Solution:**

Approximately 420 acres of marsh will be created and nourished using material dredged from the Gulf of Mexico. Retention levees will be degraded and approximately 11,756 linear feet of tidal creeks will be constructed by tracking marsh buggies on the marsh platform for estuarine fisheries access. Smooth cordgrass plugs will be planted on 20-foot centers throughout the area (total 49,268 plants).

#### **Project Benefits:**

The project would result in approximately 393 net acres over the 20-year project life.

#### **Project Costs:**

The total fully-funded cost is \$25,441,833.

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

Troy Mallach, NRCS, (337) 291-3064



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 and Marsh Creation	1	Orleans	192	65	104	\$12,499,983	\$1,516,303	\$10,983,680	\$844,380	\$12,990	\$120,192
Bayou Grande Cheniere Marsh and Ridge Restoration	2	Plaquemines	354	146	264	\$29,937,575	\$2,742,302	\$27,195,273	\$2,047,855	\$14,026	\$113,400
Wilkinson Canal Marsh Creation and Nourishment	2	Plaquemines	484	223	395	\$36,292,706	\$3,490,445	\$32,802,261	\$2,477,962	\$11,112	\$91,880
Caminada Headlands Back Barrier Marsh Restoration	2	Lafourche	430	144	181	\$31,034,094	\$3,354,935	\$27,679,159	\$2,113,849	\$14,680	\$171,459
Grand Bayou Freshwater Enhancement	3	Lafourche	26,533	585	929	\$22,618,793	\$2,861,725	\$19,757,068	\$1,484,004	\$2,537	\$33,460
Island Road Marsh Creation and Nourishment	3	Terrebonne	383	166	312	\$39,185,267	\$3,721,447	\$35,463,820	\$2,738,405	\$16,496	\$125,594
Southwest Pass Shoreline Protection	3	Vermilion	100	35	91	\$38,679,382	\$3,045,177	\$35,634,205	\$2,577,022	\$73,629	\$425,048
Southeast Pecan Island Marsh Creation and Freshwater Enhancement	4	Vermilion	3,281	181	372	\$39,835,500	\$3,662,682	\$36,172,818	\$2,693,285	\$14,880	\$107,085
South Grand Chenier Marsh Creation- Baker Tract	4	Cameron	420	196	393	\$25,441,833	\$2,653,242	\$22,788,591	\$1,735,602	\$8,855	\$64,737
West Cove Marsh Creation and Nourishment	4	Cameron	409	178	359	\$20,034,472	\$2,534,043	\$17,500,429	\$1,370,842	\$7,701	\$55,806

rev 10/23/13

# **PPL23 Candidate Project Evaluation Matrix**

# Coastal Wetlands Flanning, Frotection and Restoration Act 23rd Friority Froject List Meeting Announcement

Date: November 13, 2013

**Time:** 7:00 p.m.

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

# 23rd Priority Project List (PPL) Public Meetings

A public meeting will be held to present the results of candidate project evaluations under review and consideration for CWPPRA PPL 23. The evaluation results will be presented for all the PPL 23 candidate projects. The public is invited to attend and provide comments on the candidate projects. The CWPPRA Technical Committee will meet on December 12, 2013 in Baton Rouge at the LA Dept of Wildlife and Fisheries to recommend projects for PPL 23 selection.



Written comments may be provided no later than November 26, 2013 to the CWPPRA Task Force by mail, fax or email to:

Colonel Richard Hansen District Engineer, New Orleans c/o: Brad Inman U.S. Army Corps of Engineers P.O. Box 60267 New Orleans, Louisiana

Fax: 504-862-2572 Email: Brad.L.Inman@usace.army.mil