CWPPRA Priority Project List 19 Candidate Project Evaluation Results



Public Meetings November 17 & 18, 2009 Abbeville and New Orleans

Overview of Project Nomination Process

- Regional Planning Team meetings were held January 27-29, 2009 (Rockefeller Refuge, Morgan City, and New Orleans) for each Coast 2050 region to accept project ideas from the public and government participants.
- Regional Planning Teams voted on February 18, 2009 at a Coastwide Voting Meeting to select 20 nominee projects and five demonstration projects.
- The Technical Committee selected 10 candidate projects and 3 demo candidates for detailed evaluation on April 15, 2009.

Project Evaluation Procedures

- Interagency site visits were conducted with landowners and local governments.
- The Environmental Workgroup conducted Wetland Value Assessments (WVA) to estimate wetland benefits.
- The Engineering Workgroup reviewed project designs and cost estimates for each candidate and demonstration project.
- The demonstration projects were also evaluated by the Environmental and Engineering Workgroups.
- The Economics Workgroup developed fully funded costs for engineering and design, construction, and 20 years of operations, maintenance, and monitoring for each project.

PPL19 Project Candidates





Fritchie Marsh Terracing and Marsh Creation

Labranche East Marsh Creation

<u>Fritchie Marsh Terracing and Marsh</u> <u>Creation</u>

- Located in St. Tammany Parish, Fritchie Marsh watershed, east of Highway 90 and on Big Branch Marsh NWR
- Hydraulically dredged material from Lake Pontchartrain would be used to create/nourish 400 acres of marsh
- 130,000 linear feet of earthen terraces and installation of culverts to improve tidal connectivity and marine organism access
- Approximately 449 net acres of marsh would be created over the 20-year project life
- The total fully funded cost is \$24,273,654



Labranche East Marsh Creation

- Located in St. Charles Parish, between Lake Pontchartrain and I-10, adjacent to Bayou Labranche Wetland Creation Project
- Hydraulically dredged material from Lake Pontchartrain would be used to create/nourish 931 acres of marsh
- Approximately 10,000 linear feet of tidal creeks will be constructed to provide tidal connectivity and access for marine organisms
- Approximately 715 net acres of marsh would be created over the 20-year project life
- The estimated fully funded cost is \$32,323,291





Monsecour Siphon

Dedicated Sediment Delivery and Water Conveyance for Marsh Creation Near Big Mar

Breton Marsh Restoration

Bayou Dupont to Bayou Barataria Marsh Creation

Cheniere Ronquille Barrier Island Restoration

Monsecour Siphon

- Located in Plaquemines Parish, east bank of the Mississippi River, north of Phoenix, LA, west of River aux Chenes
- Diverts water from the Mississippi River via a 2,000 cfs siphon
- May include some outfall management features such as plugs and spoil bank gapping for water distribution
- Approximately 990 acres of marsh would be created/protected over the 20-year project life.
- The estimated fully funded cost is \$10,607,905



<u>Dedicated Sediment Delivery and Water</u> <u>Conveyance for Marsh Creation Near Big Mar</u>

- Located in Plaquemines Parish, within the Caernarvon outfall area, west of Lake Lery
- Sediments would be hydraulically dredged in Lake Lery to create 434 acres of marsh
- A conveyance channel would be created across Big Mar to better distribute Caernarvon outfall southwest of Big Mar
- Approximately 853 acres of marsh would be created/protected over the 20-year project life
- The estimated fully funded cost is \$20,443,392



Breton Marsh Restoration

- Located in Plaquemines Parish, southeast of Delacroix, LA, along Bayou Gentilly
- Sediment would be hydraulically dredged in Lake Lery and pumped via pipeline to create and nourish 436 acres of marsh
- Tidal creeks would be constructed within the marsh platform to provide tidal connectivity and access for marine organisms
- Approximately 275 acres of marsh would be created/protected over the 20-year project life
- The estimated fully funded cost is \$14,599,655



<u>Bayou Dupont to Bayou Barataria</u> <u>Marsh Creation</u>

- Jefferson Parish, southward from the PPL17 Bayou Dupont Marsh/Ridge Restoration Project to the Bayou Barataria ridge
- Hydraulically dredged sediments will be utilized to create 313 acres of marsh, nourish 200 acres of marsh, and create 17 acres of ridge habitat
- 1,740 feet of rock dike along the Barataria Bay Waterway
- Approximately 292 acres of marsh and ridge would be created/protected over the 20-year project life
- The estimated fully funded cost is \$37,631,550



<u>Cheniere Ronguille Barrier Island</u> <u>**Restoration**</u>

- Plaquemines Parish, between Pass Ronquille and Pass Chaland
- Gulf of Mexico sediments will be dredged to create 127 acres of beach/dune and 259 acres of marsh and tie into two recently constructed barrier shoreline restoration projects to the east
- Dune and marsh will be intensively planted with herbaceous and woody species
- Approximately 234 acres of barrier island habitat would be created/protected over the 20-year project life
- The estimated fully funded cost is \$43,828,285





Lost Lake Marsh Creation and Hydrologic Restoration

Lost Lake Marsh Creation and Hydrologic Restoration

- Terrebonne Parish, area surrounding Lake Pagie and Lost Lake
- Hydraulically dredged sediment would be utilized to create 465 acres of marsh between Lake Pagie and Bayou Decade, north of Bayou Decade and on the northwestern Lost Lake shoreline
- Fixed-crest weirs and plugs would be replaced with more open structure to increase freshwater and sediment delivery
- Approximately 749 acres of marsh would be created/protected over the 20-year project life
- The estimated fully funded cost is \$22,943,866





Freshwater Bayou Marsh Creation

Cameron-Creole Watershed Grand Bayou Marsh Creation

Freshwater Bayou Marsh Creation

- Located in Vermilion Parish, on the western side of Freshwater Bayou Canal north of Humble Canal
- Sediment from an offshore site would be hydraulically dredged to create/nourish 401 acres of marsh
- Potential exists to reduce project costs by using material dredged from Freshwater Bayou Canal during routine maintenance
- Approximately 279 acres of marsh would be created/protected over the 20-year project life
- The estimated fully funded cost is \$25,523,755



<u>Cameron-Creole Watershed Grand</u> <u>Bayou Marsh Creation</u>

- Located in Cameron Parish, within the Cameron-Creole Watershed near Grand Bayou
- Hydraulically dredge sediments in Calcasieu Lake to create/nourish 617 acres of marsh
- Tidal creeks will be constructed to provide tidal connectivity and access for marine organisms
- Approximately 550 acres of marsh would be created/protected over the 20-year project life
- The estimated fully funded cost is \$23,380,486



Demonstration Projects

- Contain technology that has not been fully developed for routine application in coastal Louisiana or in certain regions of the coastal zone.
- Contain new technology which can be transferred to other areas of the coastal zone.
- Are unique and are not duplicative in nature.



- Demonstration Projects were nominated at the 4 Regional Planning Team meetings.
- Five demonstration nominees were selected at the February 18, 2009 Coastwide Voting Meeting.
- The Technical Committee selected 3 candidate demos on April 15, 2009.

Proposed Demonstration Projects

Bayou Backer

Viper Wall

EcoSystems Wave Attenuator

Bayou Backer

- <u>Goals</u>: Determine the effectiveness of this bio-grass product to reduce shoreline erosion.
- <u>Features</u>: Bayou Backer is a bio-degradable plastic product manufactured in 3 inch to 6 inch wide strips. Ribbons or plugs several feet in length are driven into the soil along the shoreline to be treated. The upper portion of the ribbon extends into the water column to reduce wave energy. Two spacing plans will be evaluated at two different types of shorelines. The product will be evaluated as a low-cost option for shoreline protection until vegetation is established.
- <u>Cost</u>: The estimated fully funded cost is \$910,893

Bayou Backer Demonstration Project



Viper Wall

- <u>Goals</u>: Determine the effectiveness of the Viper Wall technology in reducing shoreline erosion at sites where conditions limit or preclude traditional methods (e.g., rock).
- <u>Features</u>: The Viper Wall technology would first be tested as part of a Research and Development effort through a local university. Wave tank analysis would be conducted in Year 1 to test the current design. If proven effective, a field trial in a low-energy environment would be conducted in Year 2 and, if proven successful, would then be tested in a high-energy environment. Shoreline and bathymetry changes would be monitored for a minimum of two years at each site.
- <u>Cost</u>: The estimated fully funded cost is \$1,427,154

Viper Wall Demonstration Project



EcoSystems Wave Attenuator

- <u>Goals</u>: Determine the effectiveness of the EcoSystems Wave Attenuator in reducing shoreline erosion at sites where conditions limit or preclude traditional methods (e.g., rock).
- <u>Features</u>: The EcoSystems Wave Attenuator consists of concrete discs with imbedded limestone rocks. Several discs are mounted on a piling which is driven into the ground in front of an eroding shoreline. Several rows of pilings can be placed to maximize wave dissipation.
- <u>Cost</u>: The estimated fully funded cost is \$2,214,945



EcoSystems Wave Attenuator





Written Comments Should be Mailed to the CWPPRA Task Force (Deadline: November 20, 2009)

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Natural Resources Conservation Service











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