

Region 4

Coastal Wetlands Planning, Protection and Restoration Act

21st Priority Project List



Region 4

Regional Planning Team Meeting



January 25, 2011

LSU Cooperative Extension Service, Abbeville, LA

1. Welcome and Introductions



RPT Region 4
Leader:
Darryl Clark - USFWS

Announcements

- PPL 21 Selection Process Packages
- PPL 21 RPT meetings to accept project nominees:
 - **Region IV, Vermilion LSU Ag Center, Jan. 25, 2011, 1:00 pm**
 - Region III, Morgan City Auditorium (W Concourse), Jan. 26, 2011, 9:00 am
 - Region II, New Orleans Corps of Engineers, Jan 27, 2011, 9:00 am
 - Region I, New Orleans Corps of Engineers, Jan 27, 2011, 1:00 pm
- Coast-wide Voting meeting to select project nominees for all basins:
February 22, 2011, 10:00 am
LA Department of Wildlife and Fisheries, 2000 Quail Dr., Baton Rouge
- Parish representatives must identify themselves during the RPT meetings and **fill out a voting registration form**, including contact information for the primary and secondary voting representatives that will cast votes at the coast-wide voting meeting.
- CWPPRA agencies will be assigned responsibilities for preparing nominee fact sheets after the coast-wide voting meeting.

Region 4 Parishes

Eligible parishes for basins in Region 4 include:

Calcasieu-Sabine Basin

Cameron Parish

Calcasieu Parish

Mermentau Basin

Cameron Parish

Vermilion Parish

2. PPL 21 Process and Ground Rules



RPT Meetings

- Jan. 25-27, 2011 to accept project and demo proposals in 4 coastal regions broken into 9 basins (no limit on number of projects that can be proposed).
- Project proposals should support a Coast 2050 Regional or Coast-wide Strategy.
- A project can only be nominated in one basin (except for coast-wide projects- more info on coast-wides after the following “RPT Meetings” slide).
- Proposals that cross multiple basins, excluding coast-wide projects, shall be nominated in one basin only, based on the majority area of project influence.
- Coast-wide projects apply across basin boundaries; their benefits are not tied to one basin. They can be nominated from any basin and can be presented in all RPT meetings.

RPT Meetings

- Project presenters can split multi-basin or coast-wide projects into multiple individual projects. This must occur during the RPT meeting where the project is first presented. If a presenter does not choose a basin from which to propose a project, the RPT leaders, in conjunction with the CWPPRA Planning & Evaluation (P&E) Subcommittee, will decide collectively after the RPT meetings but before the Coast-wide Voting Meeting.
- Public comments on project proposals will be accepted orally during the RPT meetings and in writing by February 10, 2011.
- Limit project proposals to 3 to 5 minutes.
- Limit comments/questions during meeting to PPL 21 subject proposals and processes.

Coast-wide Voting Meeting

- Feb. 22, 2011: Coast-Wide Voting (CWV) Meeting.
- RPTs, consisting of CWPPRA Agencies & Coastal Parishes, will select 2 nominees per basin, except 3 each in Barataria, Terrebonne, & Pontchartrain & 1 in the Atchafalaya, plus 6 demos. If only 1 project is nominated for the Miss. River Basin, 3 nominees will be assigned to Breton Sound. If proposed, 1 coast-wide may be chosen for inclusion as a nominee.
- Selection will be by consensus if possible. If not, CWPPRA agencies and parishes will submit ranked votes by basin.
- Parishes vote only in basins they occupy. Parishes vote on all demonstration and coast-wide projects.
- No public comments taken during CWV meeting (Public comments will be heard today & written comments should be submitted by 2/10/2011 to the CWPPRA Program Manager, Ms. Melanie Goodman - POC details on next to last slide).

Nominee Project Evaluations

- Following the coast-wide voting meeting, an agency will be assigned to each project to prepare a Nominee Project fact sheet (1 page + map).
- CWPPRA Engineering & Environmental Workgroups review draft features and assign preliminary cost and benefit ranges.
- Work groups will also review demo & coast-wide projects and verify that they meet PPL 21 criteria.
- CWPPRA Planning and Evaluation Subcommittee prepares cost/benefit summary matrix for Technical Committee.

PPL 21 Candidate Project Selection

- CWPPRA Technical Committee meeting, April 19, 2011 (this date may change) at 9:30 am, New Orleans District Corps of Engineers.
- Technical Committee ranks nominees and votes to select ten candidate projects and up to three demos.
- Written public comments should be submitted to Corps of Engineers prior to TC meeting by April 5, 2011.
- Public comments also accepted orally during meeting.
- Technical Committee will assign CWPPRA agencies to develop Phase 0 candidate projects.

PPL 21 Candidate Project Evaluation

- Candidates evaluated between May and October
- CWPPRA Workgroups
 - Workgroups conduct site visits and meetings to identify needs and establish project baselines and boundaries.
 - Environmental Workgroup WVA meetings to calculate benefits.
 - Engineering Workgroup meetings to refine features and project costs.
 - Engineering and Environmental Workgroup meetings to develop demonstration project scopes and costs.
 - Economics Workgroup conducts economic analyses to develop fully funded cost estimates for 20 year project.

CWPPRA PPL 21 Selection

- 2 Public meetings to present Phase 0 Evaluation results:
 - Abbeville, Courthouse, Nov. 16, 2011, 7:00 pm
 - New Orleans, Corps of Engs, Nov. 17, 2011, 7:00 pm
- Technical Committee votes to select up to 4 candidate projects and up to 1 demo to recommend for Phase I.
 - Nov. 30, 2011, Baton Rouge, 9:30 am
- Task Force final decision to select PPL 21 in January 2012.

3. Region 4 Coast 2050 Regional Strategies



Projects nominated should be:

- consistent with the Coast 2050
Regional Ecosystem or
Coastwide Strategies

Restore and Sustain Wetlands

- Operate locks in Mermentau basin to evacuate excess water
- Operate Calcasieu Lock to evacuate water after building new lock on a parallel channel for navigation.
- Manage Mermentau watershed to reduce rapid inflow to Lakes Subbasin
- Move water N to S across Hwy 82 in Mermentau Basin

Restore and Sustain Wetlands

- Restore connection of original Mermentau River to Gulf and constrict Ship Channel to authorized dimensions
- Dedicated dredging of sediment for wetland creation in Region 4
- Maintain Atchafalaya River water and sediment inflow thru the GIWW into the Mermentau Basin

Salinity Control in Calcasieu/Sabine Basin

- Control Calcasieu Ship Channel between Gulf and Calcasieu Lake
- Maintain Sabine River inflow
- Salinity control at Sabine Pass
- Salinity reduction in Sabine Lake at the Causeway
- Salinity control on east shoreline of Sabine Lake
- Salinity control of GIWW east of Sabine River

Restore, Protect and Maintain All Shorelines

- Stabilize Grand/White Lake shorelines
- Stabilize Gulf shoreline in vicinity of Rockefeller Refuge
- Stabilize Gulf shoreline from Calcasieu Pass to Johnson's Bayou
- Maintain Atchafalaya mudstream in Gulf
- Restore longshore sediment flow across mouth of Calcasieu Pass
- Restore longshore sediment flow across mouth of Mermentau River Ship Channel

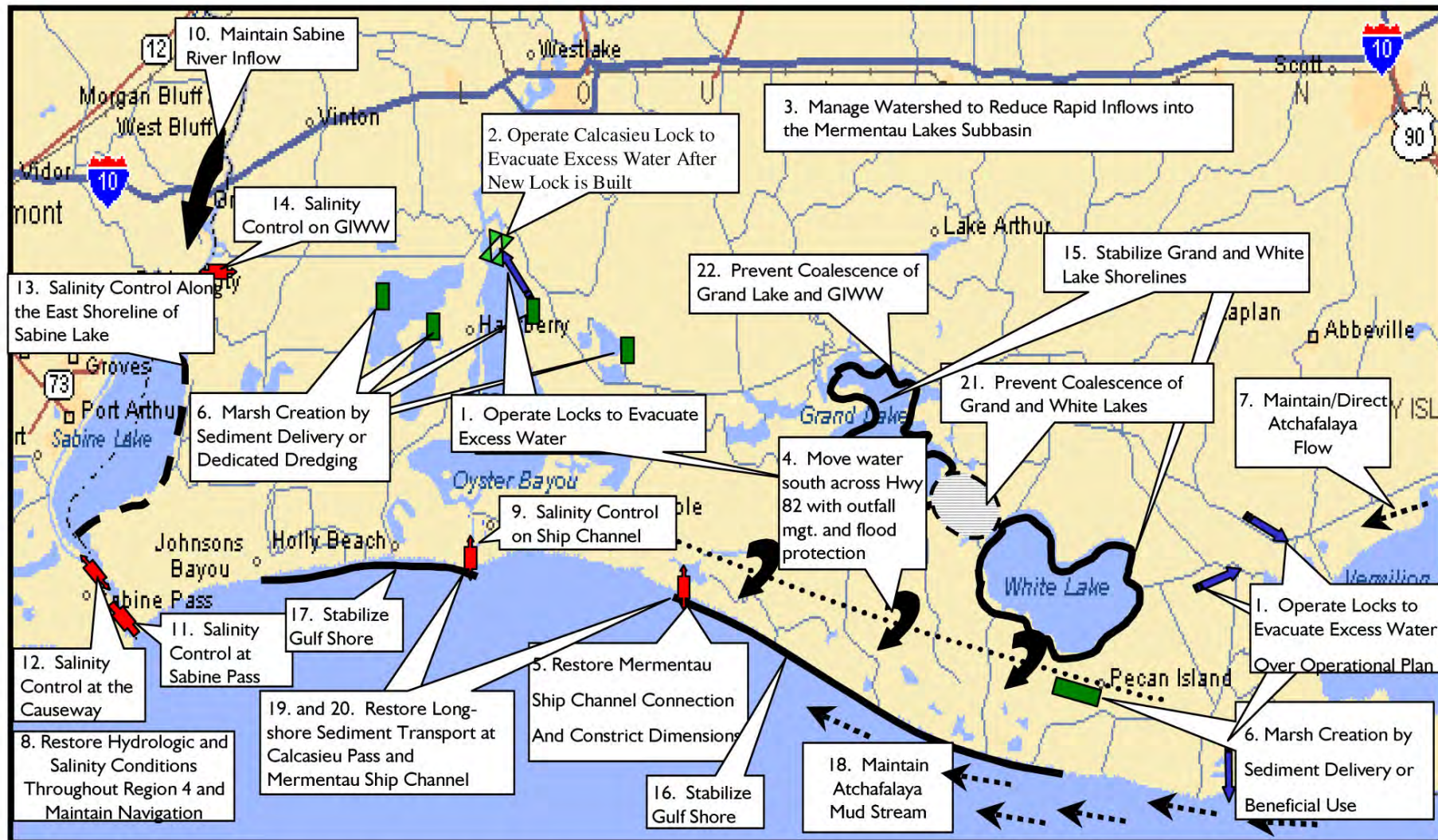
Maintain critical landforms

- Prevent coalescence of Grand and White Lakes
- Prevent coalescence of Grand Lake and GIWW

Coast 2050 Coastwide Strategies



- Beneficial Use of Dredged Material
- Dedicated Dredging for Wetland Creation
- Herbivory Control
- Stabilization of Major Navigation Channels
- Management of Bay/Lake Shoreline Integrity
- Management of Pump Outfall
- Vegetative Planting
- Maintain or Restore Ridge Function
- Terracing



Coast 2050 Region 4 regional ecosystem strategies.

4. PPL 21 Project Nominations



Coast-wide Projects

- Proposes a technique applicable across the coast (e.g., vegetative plantings)
- Nominated at any RPT meeting
- All coastal parishes & agencies will vote on selection of coast-wide nominee
- Only one coast-wide nominee may be selected from the coast-wide nominee pool at the Coast-wide Voting Meeting on Feb 22nd
- The Technical Committee may or may not select a coast-wide project in April 2011.

Demonstration Projects

- Demonstrates a new technology
- Demonstrates a technology which can be transferred to other areas in coastal Louisiana
- Are unique and not duplicative in nature
- Engineering/Environmental Workgroups will validate that demos fit CWPPRA Standard Operating Procedures criteria and select sites for proposed demonstration projects
- The RPTs select 6 demos at the Feb. 22nd coast-wide voting meeting. The Tech. Comm. selects up to 3 demos in April 2011.
- Previous demo candidates must be ***re-nominated*** for PPL 21.

5. Announcement of Coast-wide Voting Meeting



Coast-wide Voting Meeting

- Feb. 22, 2011: meet in Baton Rouge to choose 2 project nominees per basin (except will choose 3 in Barataria, Terrebonne, and Pontchartrain Basins and 1 in Atchafalaya Basin). If only 1 project is nominated for the Mississippi River Basin, 3 nominees will be assigned to Breton Sound Basin. Plus, 1 coast-wide project and 6 demos may be selected.
- Parishes of each basin are asked to *identify who will vote* at the coast-wide meeting TODAY.
- No additional projects can be nominated after the RPTs.
- No significant changes to projects proposed at the first round of RPT meetings will be allowed (this includes combining projects).
- No public comments accepted at the coast-wide meeting (public comments will be heard today and written comments must be submitted by 2/10/2011).

Coast-wide Voting Meeting

- Each officially designated parish representative, each Federal agency, & the State (OCPR) will have one vote.
- Voting will be by ranked vote.
- Each voting entity will be provided a ballot.
- Each voting entity will provide a ranked score for all projects – the highest ranking project will receive the highest vote and the lowest will receive a vote of “1”.
- Points will be totaled for all projects within each basin.

Coast-wide Voting Meeting: Coast-wide Category

- The two nominees per basin (three each in Barataria, Terrebonne and Pontchartrain, & Breton Sound Basins if only one in MR Basin, and one in Atchafalaya Basin) receiving the highest vote will be included in the list of 20 nominee projects. If a coast-wide project is selected, the total will increase to 21 nominees.
- All demo projects will be voted upon in same manner with one coast-wide ballot.
- 15 minutes will be allowed for voting in each basin, and for demos and coast-wide projects.

6. Announcements of Upcoming Meetings



PPL 21 Upcoming Meetings

Coast-wide Voting Mtg, Feb 22, 2011, Baton Rouge
**20 basin-project nominees, 1 coast-wide nominee,
and 6 demos selected**

Technical Committee Mtg, in Apr '11, New Orleans
Selection of 10 candidates and up to 3 demos

Public Meetings

16 Nov 11, Abbeville

17 Nov 11, New Orleans

Technical Committee Mtg, 30 Nov 11, New Orleans
Recommend up to 4 projects for Phase I funding

Task Force Mtg, in Jan '12, New Orleans
Final selection of projects for Phase I funding

Send Written Comments on Projects & Demos Proposed Today to the CWPPRA Program Manager (Deadline: February 10, 2011)

Melanie Goodman
CWPPRA Program Manager
U.S. Army Corps of Engineers
P.O. Box 60267
New Orleans, Louisiana 70160

Fax to 504-862-1892
Attn: Melanie Goodman

Email: Melanie.L.Goodman@usace.army.mil

7. Adjourn





ATTENDANCE RECORD



DATE	SPONSORING ORGANIZATION	LOCATION
January 25, 2011 1:00 P.M.	COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT	Vermilion LSU Ag Center 1105 West Port Street Abbeville, LA
PURPOSE MEETING OF THE REGIONAL PLANNING TEAM REGION IV		
PARTICIPANT REGISTER*		
NAME	JOB TITLE AND ORGANIZATION	PHONE NUMBER/EMAIL
Sherrill SAGRETT	Vermilion RCT	337 652 0632
Charles E. Braumark	Vermilion RCT	337 - 442-5287
Chad Courville	Mar. Corp	337.264.1695
Ron Bowtong	NRCS	(337)291-3067
Ly Mullock	NRES	337/291-3064
LOUIS BROUSSARD	NRES	337-291-3069
Wayne Syron	USFWS	337/774-5923 wayne-54@usfws.gov
Wayne Henderson	Land Manager - MAC Enterprises LLC	225-922-4612
Daryl Clark	USFWS	337-291-3111
Bart Farmer	Providence Eng.	225-413-2213
D. Charles Stoneman	NRES	337-893-5664
LAUREN AVERIE	USACE	504-862-2112
Eddie Fiske	Orion Marine	504-305-2630
Marc Berard	Berard, Habetz and Assoc.	337-367-1400
James Landry	City of New Iberia	337-369-2354
BARRY JERON	LDWF	225 765 2333
Tim Creswell	VER-PAR Police Team	337-652-8535
Duff Butard	" "	337 319 0300
Frank Chapman	DC NRCS	337 436 5020 frank.chapman@louisiana.gov
William Hindeman	Gulf Coast SWCD	225 578 2730 eswensow@lsu.edu
Erick Swenson	LSU	
HEATHER FINLEY	LDWF	225.465.2956



ATTENDANCE RECORD



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PURPOSE MEETING OF THE REGIONAL PLANNING TEAM REGION IV		
PARTICIPANT REGISTER*		
NAME	JOB TITLE AND ORGANIZATION	PHONE NUMBER/EMAIL
Chris Allen	CRS - OCPR	225-342-4736
Stuart Brown	CRS - OCPR	Stuart.brown@la.gov 337-291-2107
JOHN FORSTER	NOAA - NMFS	JOHN.FORSTER@NOAA.GOV
Laurie Cormier	Calcasieu Parish Police Jury	337 721 3645
Jenneke Visser	ULL	337 482 6966
Nathan Doyan	USACE - ENV	504-862-2580
Nedra Davis	PBS & J / Atkins	225.333.8234
Sally Angers	CAO - Iberia Parish Gov	337-365-8246
TODD VINCENT	SELLERS ASSOC.	337-232-0777
Linda Duhon	V PPT	337-898-4300
Woodward	Chair, Sierra Delta Chapter	337-232-7953
Herschel Skayfle	Sierra Club - Acad Parish	337 356 9764
Angela Trahan	USFWS	337-291-3137
Judge Edwards	Vermilion Corporation	337-893-0268
Charlie Mestayer	Self	337-247-0838
Ken Teague	EPA	214-665-6687

Region 4– Calcasieu-Sabine Basin

R4-CS-01	Cameron Meadows Marsh Creation and Wetland Restoration
R4-CS-02	Oyster Bayou Restoration
R4-CS-03	Sabine Beneficial Use of Dredge Spoil at Sabine National Wildlife Refuge
R4-CS-04	East Holly Beach Gulf Shoreline Protection
R4-CS-05	North Willow Lake Restoration
R4-CS-06	West Cove Marsh Creation and Nourishment

Region 4– Mermentau Basin

R4-ME-01	Willow Cutoff Wetland Restoration
R4-ME-02	Southwest White Lake Shoreline Protection
R4-ME-03	Front Ridge Freshwater Introduction and Marsh Creation Project
R4-ME-05	Southeast Pecan Island Levee and Marsh Restoration Project #2
R4-ME-06	Dedication Dredging in White Lake

Region 4-
Calcasieu-Sabine Basin

R4-CS-01

Cameron Meadows Marsh Creation and Wetland Restoration

Region 4-RPT
PPL21 PROJECT NOMINEE FACT SHEET
January 25, 2011

Project Name:

Cameron Meadows Marsh Creation and Wetland Restoration Project

Coast 2050 Strategy:

Restore and Sustain Wetlands (*Regional Ecosystem Strategy*)

Dedicated Dredging for Wetlands Creation (*Coastwide Common Strategy*)

Terracing (*Coastwide Common Strategy*)

Vegetative Plantings (*Coastwide Common Strategy*)

Restore Hydrology in the Burton-Sutton Canal (*Mapping Unit Strategy*)

Project Location:

Region 4, Calcasieu/Sabine, Cameron Parish, approximately 18 miles West of Cameron, 5 miles north of Gulf of Mexico shoreline, northeast of Johnsons Bayou, immediately south of Cameron Meadows Gas Field.

Problem:

Significant marsh loss is attributed to rapid fluid and gas extraction beginning in 1931, Hurricanes Rita, Gustav and Ike. Rapid fluid and gas extraction resulted in a surface down warping of the marsh surface along distinguished geologic fault lines. In the decades that followed, organic matter filled the low area and an emergent marsh community became established. During the hurricanes of 2005 and 2008, the physical removal of the marsh coupled with low rainfall after Hurricane Ike has resulted in the conversion of intermediate to brackish emergent marsh to approximately 7,000 acres of shallow open water. In addition to these direct losses, significant interior marsh loss has resulted from saltwater intrusion and hydrologic changes associated with storm damage and blocked drainages. Habitat shifts and hydrologic stress reduce marsh productivity, a critical component of vertical accretion in intermediate wetlands. It is unlikely that many of these areas will recover unaided.

Goals:

- (1) Create approximately 610 acres of marsh with dredge material and terraces,
- (2) Restore coastal marsh habitat, and
- (3) Reverse the conversion of wetlands to shallow open water in the project area through reestablishment of hydrologic connectivity.

Proposed Solutions:

Construct 350 acres of marsh in two adjacent areas utilizing dredge material from the Gulf of Mexico. Target marsh elevation is 1.5'. Construct 10,000 linear feet of earthen terraces, oriented in such a way as to reduce wind generated wave fetch. Terraces would be constructed with +3', 20' crown width and planted. Terrace construction is estimated to create about 20 acres. Project features would include cleaning out approximately 50,000 linear feet of drainage canals of filled in as a result of the hurricanes. In addition,

Identification of Potential Issues:

Oil and gas infrastructure is within the project area and would need to be avoided by dredge/fill activities.

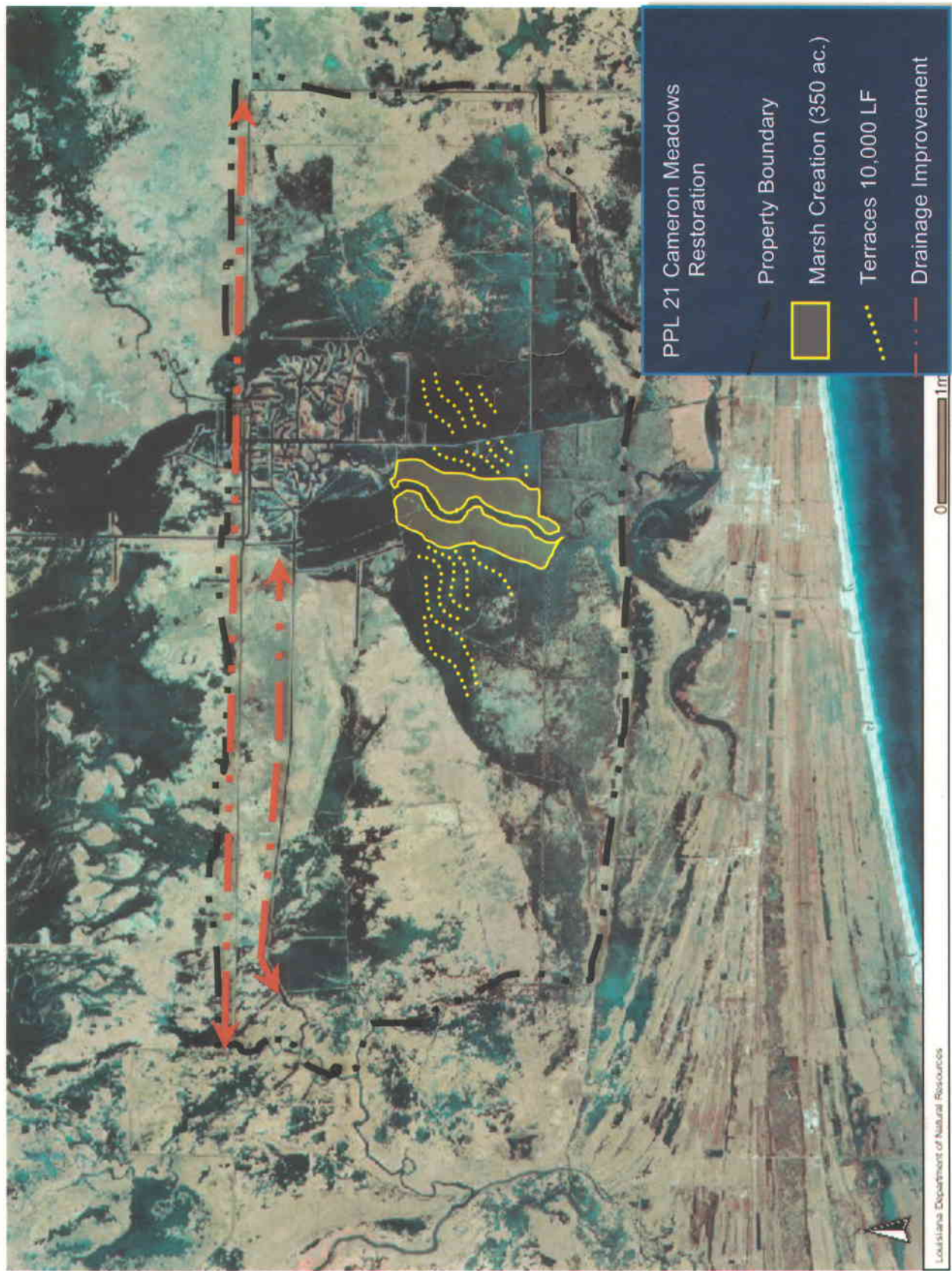
Preliminary Construction Costs:

Estimated construction costs plus 25% contingency = \$27.7M.

If approved for construction, the landowner has pledged \$1,000,000 towards Phase 2, construction, of this project.

Preparer of Fact Sheet:

John D. Foret. Ph.D., NOAA Fisheries Service, (337) 291-2107, john.foret@noaa.gov.



PPL 21 Cameron Meadows
Restoration

- Property Boundary
- Marsh Creation (350 ac.)
- Terraces 10,000 LF
- Drainage Improvement

0 1mi

R4-CS-02

Oyster Bayou Restoration

PPL21 PROJECT NOMINEE FACT SHEET
January 25, 2011

Project Name:

Oyster Bayou Restoration

Coast 2050 Strategy:

Coastwide – Dedicated Dredging to Create, Restore, or Protect Wetlands

Region 4 Ecosystem Strategy 6. Use dedicated dredging or beneficial use of sediment for wetland creation or protection

Project Location:

Region 4, Calcasieu-Sabine Basin, located west of the Calcasieu Ship Channel and south of the west fork of the Calcasieu River

Problem:

The project would restore marsh to offset levels of historic and ongoing wetland loss. Based on USGS data from 1985 to 2009, landloss is -0.15% per year for the project area (Mud Bayou Polygon). Saltwater intrusion, drought stress, and hurricane induced wetland losses have resulted in interior marsh breakup and coalescence of Oyster Lake with interior water bodies.

Goals:

The project would create between 300 to 400 acres of saline marsh and potentially an undetermined amount of ridge restoration.

Proposed Solutions:

Sediment would be mined from offshore and placed in multiple disposal areas to create between 300 to 400 acres of saline marsh. Disposal areas have not yet been selected; however, optional disposal areas could include any, but not all of those depicted in the concept map. The numbers on the concept represent the acreage of the individual polygons delineated. Disposal would be semi-confined and the created elevations would be planted with smooth cordgrass plugs. Post 2008 field data is needed to refine site selection and input from the landowners and Regional Planning Team is welcomed. Although marsh creation via dedicated dredging of sediment would be the primary technique, opportunities exist to include some terracing where warranted. The total length of terraces from which to select from represented by all the yellow lines in the nominee map 53,895 feet. Ridge restoration along Mud Pass is potential restoration feature. As conceptualized, Mud Pass would be dredged by marsh buggy to minimize intrusion by equipment and a relatively low ridge would be constructed. The conceptual ridge footprint depicted is 25 acres. Lastly, cleanout of sediment along Highway 82 to facilitate any surplus water delivery from First Bayou to the Oyster Bayou area via the water control structures installed by the Gravity Drainage District could be considered through further coordination with the landowners as long as to not affect water introduction into Mud Lake.

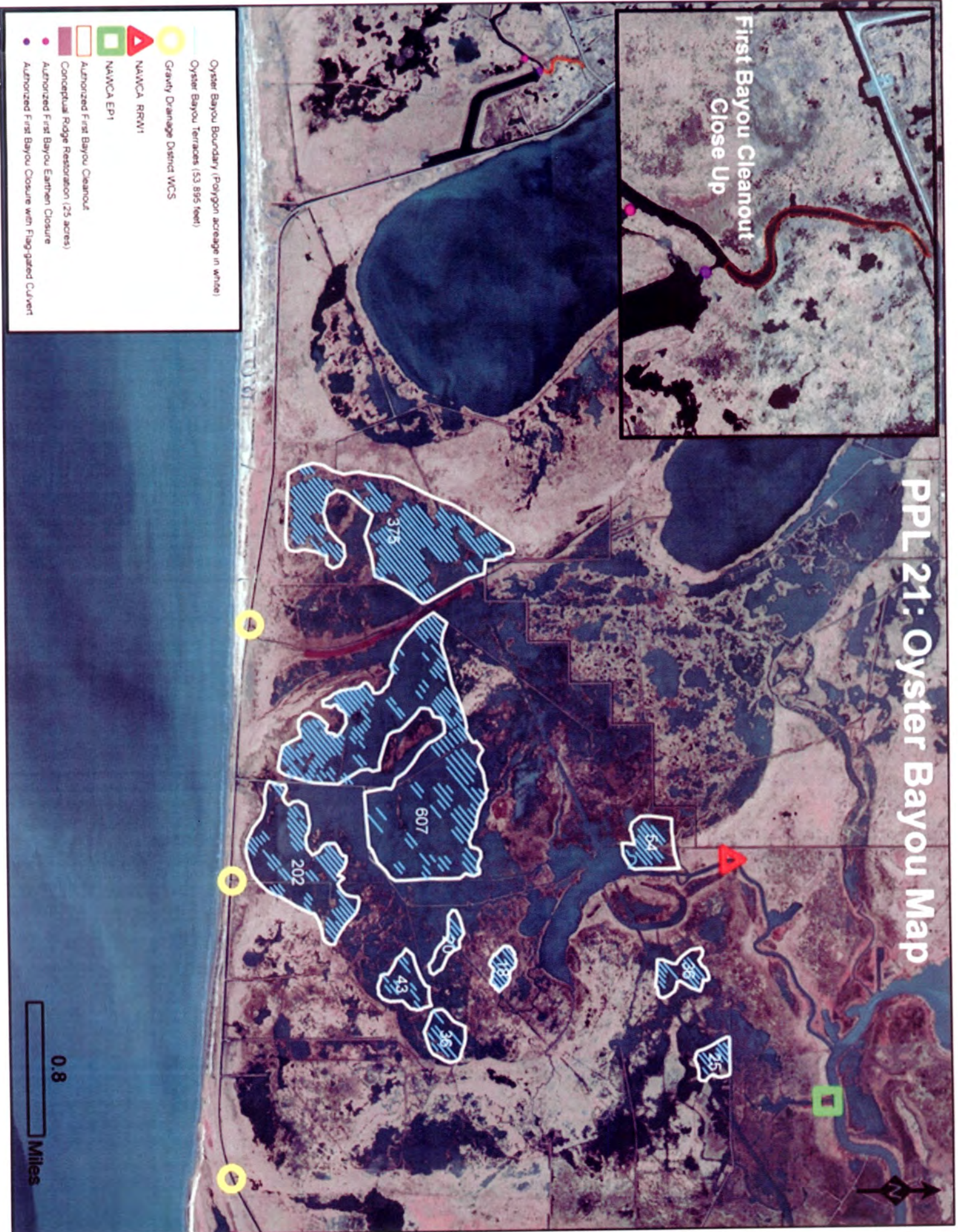
Preliminary Construction Costs:

The cost plus 25% contingency is about \$30 million for 300 acres of marsh creation, 50,000 feet of terraces, and approximately 1 mile or 25 acres of ridge restoration.

Preparer(s) of Fact Sheet:

John Foret NOAA's National Marine Fisheries Service, (337)291-3107; john.foret@noaa.gov
or Patrick Williams (225) 389-0508, extension 208; patrick.williams@noaa.gov

PPL 21: Oyster Bayou Map



- Oyster Bayou Boundary (Polygon acreage in white)
- Oyster Bayou Terraces (53,895 feet)
- Gravely Drainage District WACS
- NAWCA RRM1
- NAWCA EPI
- Authorized First Bayou Cleanout
- Conceptual Ridge Restoration (25 acres)
- Authorized First Bayou Earthen Closure
- Authorized First Bayou Closure with Flap-gated Culvert

R4-CS-03

Sabine Beneficial Use of Dredge Spoil at Sabine National Wildlife
Refuge

PPL21 PROJECT NOMINEE FACT SHEET**January 25, 2011****Project Name**

Beneficial Use of Dredge Spoil at Sabine National Wildlife Refuge

Coast 2050 Strategy

Coastwide: Dedicated dredging to create, restore, or protect wetlands

Regional: Restore and Sustain Marshes

Project Location

Region 4, Calcasieu-Sabine Basin, Cameron Parish

Problem

Historically, the wetlands in this portion of Cameron Parish have been significantly altered by hydrologic modifications, saltwater intrusion, and conversion of marsh to open water.

Anthropogenic factors such as the construction of the Calcasieu Ship Channel and LA Highway 27 have caused significant hydrologic changes to this system. These factors contributed to the weakening of the wetland plant community, such that the community could not respond to increasing salinities and flood duration. The conversion of wetlands to open water also occurred during increased tidal action (i.e. tropical events), the wetland vegetation is physically removed, leaving open water areas. Salinity levels and flood duration have been improved with time, however water depths are not conducive for the reestablishment of emergent vegetation. In addition, SAV habitat in the project is also limited by wave action within the large, open water area.

Proposed Solution

The proposed project's primary feature is to create and/or nourish approximately 550 ac (510 ac created, 40 ac nourished) of marsh, and approximately 10,000 linear ft of tidal creeks. In order to achieve this, sediment will be hydraulically pumped from the upland disposal areas of the Calcasieu Ship Channel into the shallow water marsh creation area. The project will utilize the existing Hog Island Gully channel as a pipeline corridor, and LA Highway 27 crossing. Containment dikes will be constructed around the marsh creation area to keep material on site during pumping and the tidal creeks and ponds will be constructed. Once pumping has been completed, the containment dikes will be degraded to the current platform elevation and gaps will be made in the containment dike, hydraulically connecting the constructed tidal creeks to the adjacent water. Additionally, the newly constructed marsh will be assessed to determine if vegetative plantings will be necessary. Funds are budgeted to plant 50% of the created marsh acres (275 ac).

Goals

The project goal is to create and/or nourish approximately 550 ac (510 ac created, 40 ac nourished) of emergent brackish marsh using sediment from the upland disposal areas along the Calcasieu Ship Channel and protect 344 ac of emergent brackish marsh over the project's life, and provide direct protection to Louisiana State Highway 27, the region's only northward hurricane evacuation route.

Preliminary Project Benefits

- 1) *What is the total acreage benefited both directly and indirectly?*

This total project area is 550 ac.

- 2) *How many acres of wetlands will be protected/created over the project life?*
Approximately 344 ac of brackish marsh will be protected/created over the project life.
- 3) *What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (<25%, 25-49%, 50-74%, and >75%)?*
The anticipated land loss rate reduction throughout the area of direct benefits will be 50-74% over the projects life.
- 4) *Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc?*
No.
- 5) *What is the net impact of the project on critical and non-critical infrastructure?*
The project will have a net positive effect on a critical hurricane evacuation route.
- 6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?*

Identification of Potential Issues

The proposed project has potential navigation issues that will have to be taken into account..

Preliminary Construction Costs

The estimated construction cost including 25% contingency is \$22,501,363. The fully funded cost estimate ranges between \$30-40M.

Preparer(s) of Fact Sheet:

John D. Foret, Ph.D., NMFS, 337-291-2107, john.foret@noaa.gov



PPL 21 Beneficial Use of Dredge Spoil
at Sabine National Wildlife Refuge

--- Project Boundary

■ Marsh Creation (550 ac.)

..... Interior Channels

■ Borrow Area(s)

..... Dredge pipe corridor

0 1mi

Louisiana Department of Natural Resources

R4-CS-04

East Holly Beach Gulf Shoreline Protection

PPL21 PROJECT NOMINEE FACT SHEET
January 25, 2011

East Holly Beach Gulf Shoreline Protection

Coast 2050 Strategy

Coastwide: Maintain, Protect, or Restore Ridge Functions; Maintenance of Gulf, Bay, and Lake Shoreline Integrity.

Regional: 18. Stabilize Gulf of Mexico shoreline from Calcasieu Pass to Johnson's Bayou.

Project Location

Region 4, Calcasieu-Sabine Basin, Cameron Parish, South of State Highway 82, west of the Calcasieu Ship Channel.

Problem

The project will be designed to reduce erosion of the Gulf Shoreline and protect the State's proposed Beach Nourishment project. Recent loss rates (1998-2008) were calculated from aerial photography at 26.5 ft/yr. In 2010, approximately 25 feet of shoreline remained between Louisiana State Highway 82 and the Gulf of Mexico.

Proposed Project Features

The project proposes approximately 15,000 linear feet (2.8 miles) of breakwaters similar to the Holly Beach Breakwater Project (CS- 01) to protect the most critical shoreline area along Highway 82. Breakwaters will be designed on the CS-01 template, using all the lessons learned from the Holly Beach Breakwater Enhancement and Sand Management Project (CS-31). Approximately 40 round rubble breakwaters (ranging from 150 – 170 ft with 250 - 300 ft gaps), placed 300 – 700 feet offshore and built to 3.8 ft NGVD will be created. This project will protect a proposed state surplus project that will create/nourish this beach using sand from offshore borrow sites.

Preliminary Project Benefits

The project is designed to reduce wave energies on the gulf shoreline west of the Calcasieu Ship Channel and trap sediment between the breakwaters and shoreline. The total area benefited is several hundred acres, with **137 acres** directly protected as a result of 75% reduction in loss rate. This project maintains a beach rim component of the coastal ecosystem and has a positive net impact on critical infrastructure (Highway 82) and would have a synergistic effect on the proposed state surplus project. This project would also protect/restore critical habitat for the piping plover, a threatened/endangered species.

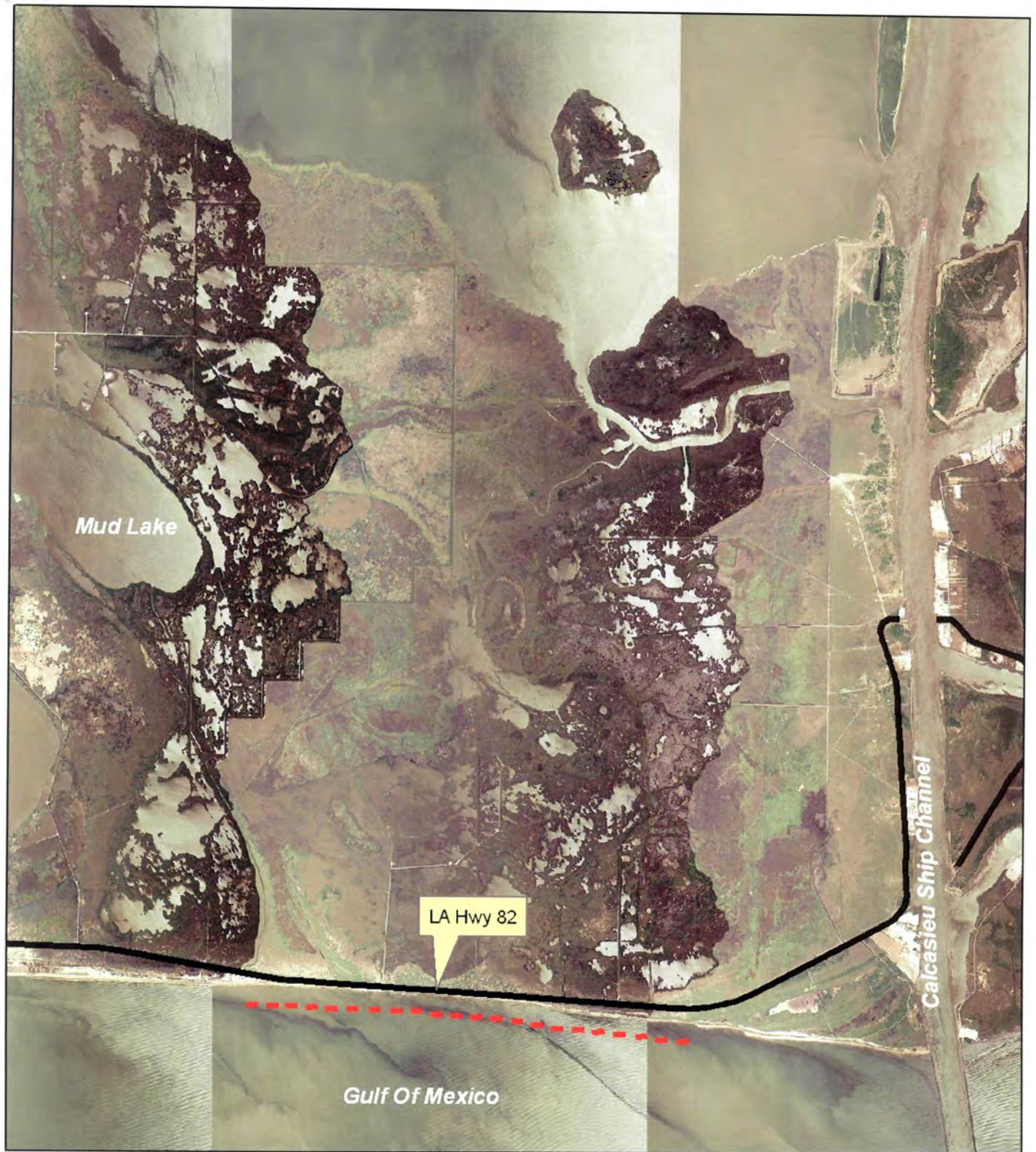
Preliminary Construction Costs (w/25% contingency)

\$17 million

Preparers of Fact Sheet

Troy Mallach, NRCS

troy.mallach@la.usda.gov



Legend

- Breakwaters
- primary roads



0 1,550 3,100 6,200 9,300 12,400
Feet

East Holly Beach
Gulf Shoreline Protection
Cameron Parish, Louisiana
PPL 21

R4-CS-05

North Willow Lake Restoration

PPL 21 PROJECT NOMINEE FACT SHEET
1/25/2011

Project Name

North Willow Lake Restoration

Coast 2050 Strategy

Use of sediment for wetland creation.

Project Location

Region 4, Calcasieu-Sabine Basin, Cameron Parish, Sweet/Willow Lakes Mapping Unit, area northeast of Calcasieu Lake and north of GIWW.

Problem

The most significant environmental problem affecting the marshes in this area is deterioration and conversion to open water. Additionally, several breaches between Willow Lake and interior open water areas have developed since Hurricane Rita. Those areas were again impacted by Hurricane Ike and rapid deterioration from organic soil export is occurring.

Proposed Project Features

The project will protect approximately 7,000 linear feet of Willow Lake shoreline, construct approximately 150 acres of marsh, and create approximately 60,000 linear feet of terraces with approximately 300 foot spacing.

Preliminary Project Benefits

The proposed project will protect/create/restore approximately **193 acres** by reestablishing the north shoreline of Willow Lake. Approximately 150 acres of emergent marsh would be created with dedicated dredge material and an additional 43 acres would be created with terraces. SAV habitat would be restored by reducing wave energy and tidal scour associated with fetch and water exchange.

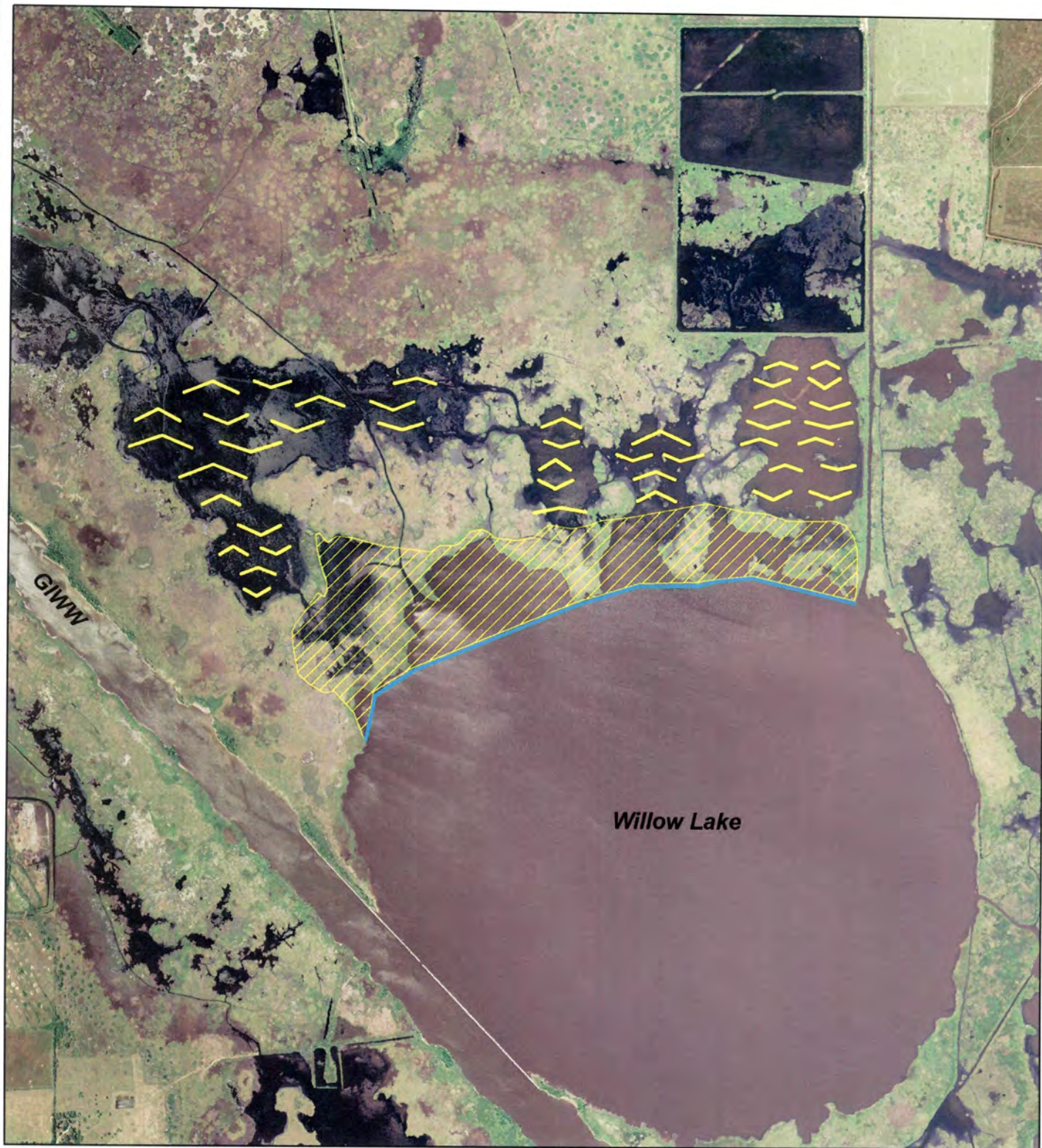
Preliminary Construction Costs

\$10 million




Preparer of Fact Sheet

Troy Mallach, NRCS

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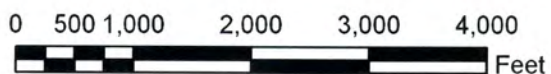


Legend

-  Terraces
-  Shoreline Protection
-  Marsh Creation/Nourishment



**North Willow Lake Restoration
Cameron Parish, Louisiana
PPL 21**



R4-CS-06

West Cove Marsh Creation and Nourishment

PPL21 PROJECT NOMINEE FACT SHEET
January 25, 2011

Project Name

West Cove Marsh Creation and Nourishment

Coast 2050 Strategy

Coastwide: Dedicated dredging to create, restore, or protect wetlands

Regional: Marsh Creation by Sediment Delivery or Dedicated Dredging

Project Location

Region 4, Calcasieu-Sabine Basin, Cameron Parish

Problem

The Calcasieu Ship Channel, immediately east of the project area, provides an avenue for the rapid movement of high-salinity water into the marshes around Mud Lake. This movement increased salinity in the area, resulting in plant death and marsh loss. The marshes located between Mud Lake and West Cove were decimated by Hurricane Rita in 2005 and Ike in 2008. Marshes that once provided a buffer to the southwest rim of West Cove are now shallow open water areas.

Proposed Solution

The proposed project's primary feature is to create and/or nourish approximately 623ac of marsh (143 ac created, 479 ac nourished). In order to achieve this, sediment will be hydraulically pumped from offshore into the shallow water marsh creation 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 made in the containment dike. Additionally, the newly constructed marsh will be assessed to determine if vegetative plantings will be necessary.

Goals

The project goal is to create and/or nourish approximately 623 ac of marsh (143 ac created, 479 ac nourished) of emergent brackish marsh using sediment from offshore.

Preliminary Project Benefits

- 1) *What is the total acreage benefited both directly and indirectly?*

This total project area is 623 ac.

- 2) *Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc?*

Yes, helps to restore the rim of West Cove (west side of Lake Calcasieu) and prevent breaching of Lake Calcasieu into the adjacent marsh

- 4) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?*

This project would have a synergistic effect with CWPPRA project CS-20, East Mud Lake Marsh Management, which was completed in 1997. The objective of that project is to

create a hydrologic regime conducive to restoration, protection, and enhancement of the Mud Lake area by using various types of water control structures and vegetation plantings. Structural components include culverts with flap gates, two variable crest weirs, three earthen plugs, and repair of an existing levee (CPRA, 2009).

Preliminary Construction Costs

The estimated construction cost including 25% contingency is \$13.8 million.

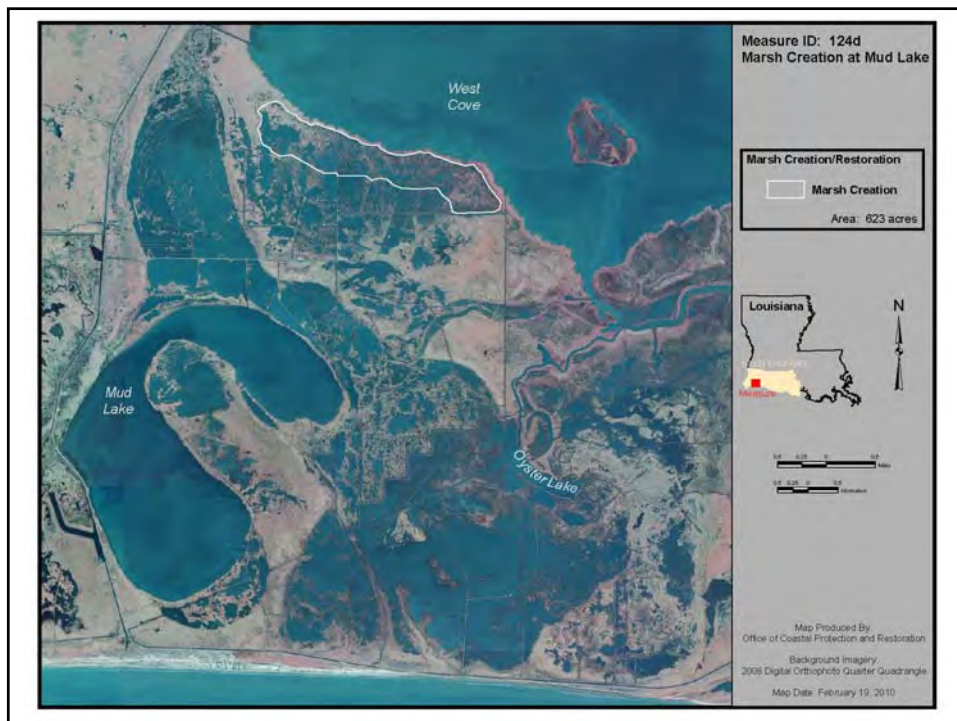
Preparer(s) of Fact Sheet:

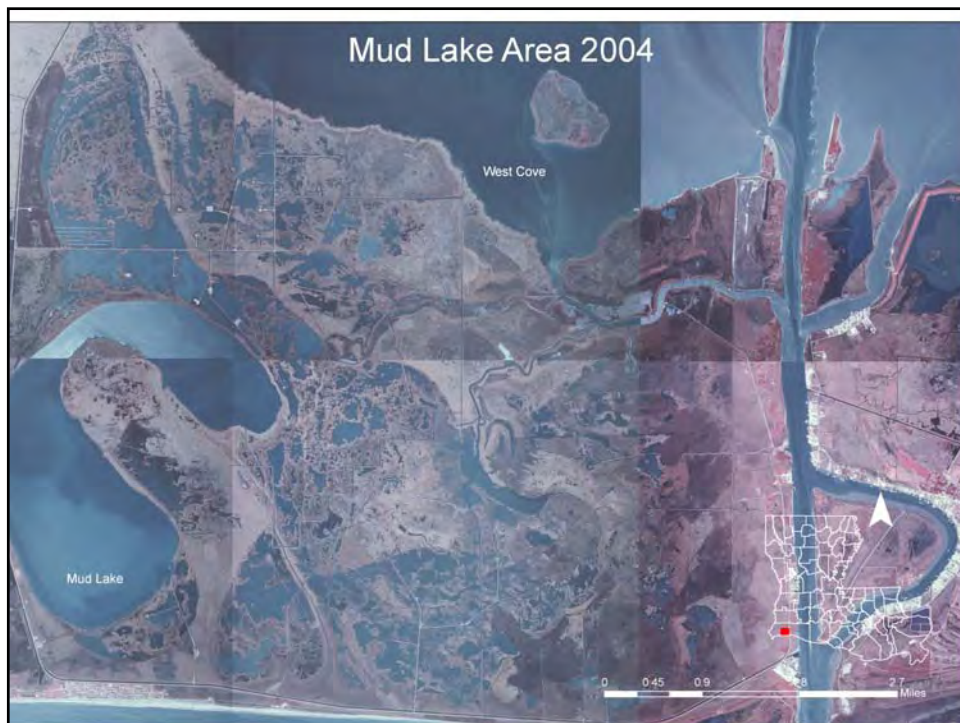
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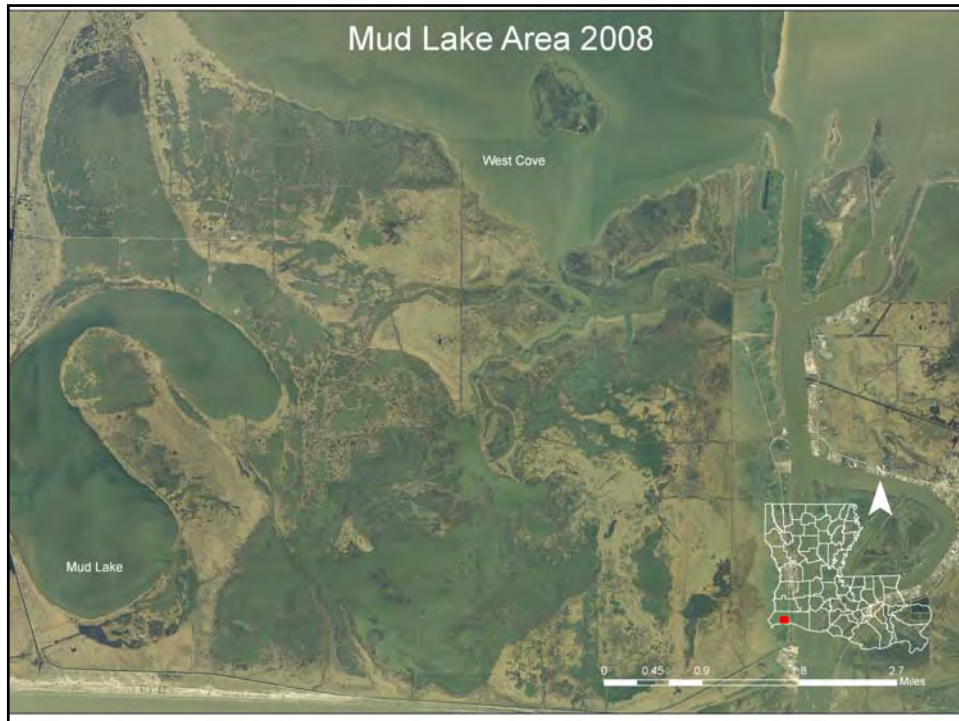


West Cove Marsh Creation and Nourishment

PPL 21
Region 4
Calcasieu-Sabine Basin







Proposed Project Features:

- Restore 623 acres of marsh (143 acres created/479 acres nourished)
- Material would be mined from an offshore borrow site
- Containment dikes/earthen overflow weirs built around Marsh Creation site



Preliminary Project Benefits:

- Create 143 acres of new emergent brackish/saline marsh
- Nourish 479 acres of existing degraded marsh
- Help protect and restore the rim of West Cove and prevent coalescence with adjacent marshes and eventually Mud Lake

Region 4-
Mermentau Basin

R4-ME-01

Willow Cutoff Wetland Restoration

PPL 21 Project Fact Sheet

Willow Cutoff Wetland Restoration (Segmented Breakwaters with Plantings)

Project Name:

Willow Cutoff Wetland Restoration- (Segmented Breakwaters)

Regional Strategy:

Strategy # 8 Restore historic hydrologic conditions throughout Region 4 to protect wetlands from hydrologic modification.

Location:

Region 4, Mermentau Basin/Lakes Sub-basin, Cameron Parish. The project is located on Lacassine Bayou.

Problem

This once productive freshwater marsh system, which consisted of high quality emergent and submerged wetland plants, has been so severely degraded that the emergent vegetation areas have eroded and the entirety of the original habitat has been completely covered by the very turbid waters of Lacassine Bayou.

The project area is now mostly open, turbid, water that is void of all submerged aquatic vegetation (SAV); it has very little emergent vegetation, and almost no habitat for waterfowl and aquatic organisms over approximately 400 acres.

Goals

The proposed segmented breakwaters (3 feet high with a 21 foot-wide base) will dramatically decrease the turbidity of the project area by acting as a barrier that decreases the water's current, thereby allowing suspended solids to fall out of the water column. As a result sunlight will reach the water bottom to increase SAV production. Increased SAVs and decreased erosion will increase the chances for establishment of high quality forage and wintering habitat for migrating waterfowl. Also, the proposed segmented breakwaters will also retard any further water bottom erosion of the emergent vegetation areas. The proposed segmented breakwaters would have two 50-foot-wide gaps (spaced approximately 500 feet apart) and therefore would not restrict the access of aquatic organisms or the public to the area. In addition, the east side of the rock levee will still be connected to both Lacassine Bayou and the Mermentau River via oil field canals. Dissolved oxygen levels will increase in the newly created clear water due to the input of oxygen from submerged aquatic plants and from decreased biological oxygen demand from suspended carbon. The increase in available oxygen will benefit aquatic organisms.

Objectives

Stop shoreline erosion and encourage establishment of emergent and submergent (SAV) aquatic vegetation by constructing a rock breakwater and planting vegetation along Lacassine Bayou while allowing the migration and emigration of organisms and exchange of water between the nursery habitat being protected and the open waters of Lacassine Bayou by the placement of two gaps within the segmented breakwaters.

Proposed Solution

The project will involve construction of a 1,430 foot segmented breakwater (3 feet high with a 21 foot base) with two 50-foot gaps in the middle. Dredged material removed to provide access to barges and equipment will be placed behind the breakwater.

Once the breakwater is constructed and the waters have visibly cleared, volunteers could be used to transplant beneficial plants such as giant cut-grass (*Zizaniopsis miliacea*) and/or bullwhip (*Scirpus californicus*).

The work will include; surveying, plat drawings, mobilization/demobilization of materials and equipment into the project area, and placing the materials across the opening. In addition we will have to purchase the materials (large limestone rock and geotextile fabric). The rock will then be placed on top of the geotextile fabric to reduce subsidence.

**Projected Budget: Estimated construction costs plus 25% contingency = \$700,000
(1,430 foot of rock at \$390 per linear foot or: \$557,700.00)**

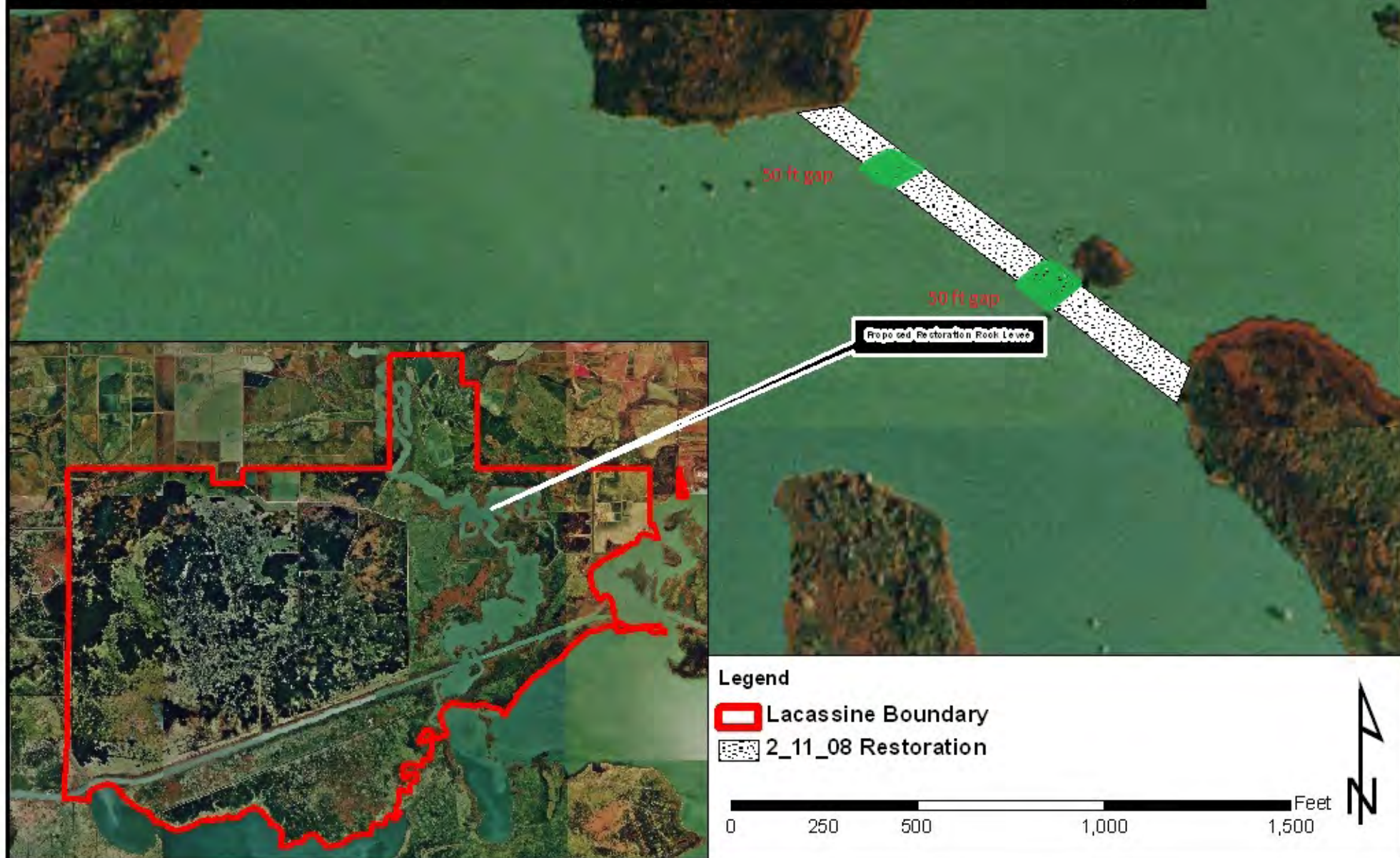
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Lacassine National Wildlife Refuge Proposed Restoration Project



R4-ME-02

Southwest White Lake Shoreline Protection

PPL 21 PROJECT NOMINEE FACT SHEET
1/25/2011

Project Name

Southwest White Lake Shoreline Protection

Coast 2050 Strategy

Stabilize Grand Lake and White Lake shorelines

Project Location

Region 4, Mermentau Basin, Vermilion and Cameron Parish, White Lake Mapping Unit, southwest shoreline.

Problem

This portion of the White Lake shoreline is experiencing significant erosion of approximately 15 ft/yr (ME-22 Design Report). In some areas the historic lake rim is completely lost and interior organic soils are exposed to high wave energies. Shoreline protection of the lake rim is expected to preserve a major amount of marsh by 2050. This project would complete the protection of the southern shoreline and protect small interior ponds from coalescing with the lake.

Proposed Project Features

The project will construct approximately 35,200 linear feet (6.7 miles) of rock breakwater shoreline protection and approximately 45,000 linear feet of terracing with 300 ft. spacing in an adjacent interior open water body.

Preliminary Project Benefits

The proposed project will protect emergent marsh and interior ponds from high wave energies associated with White Lake. The shoreline feature would protect approximately 242 acres from erosion and the terraces would create an additional 28 acre of wetlands. According to the ME-22 Design Report, project surveys and geotechnical investigations have revealed that sufficient material would be available from dredging the floatation channel to raise the substrate behind the rock dike to marsh elevation. The recommended best-fit alignment should provide approximately 90 acres of marsh creation behind the dike. Total estimated project benefits = 360 marsh acres.

Preliminary Construction Costs

\$9.5 Million

Preparer of Fact Sheet

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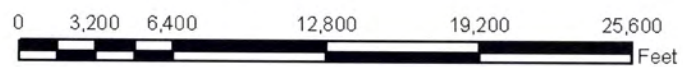


White Lake

Legend

- Proposed Breakwaters
- ME-22_Breakwaters
- Terraces

Southwest White Lake Shoreline Protection
Vermilion Parish, Louisiana
PPL 21



R4-ME-03

Front Ridge Freshwater Introduction and Marsh Creation Project

PPL21 PROJECT NOMINEE FACT SHEET
1/25/2011

Front Ridge Freshwater Introduction and Marsh Creation Project

Coast 2050 Strategy

Regional Strategy 4: *Move water from Lakes Subbasin across Highway 82 with including outfall management and flood protection where needed. Restore historic hydrologic and salinity conditions throughout Region 4 to protect wetlands from hydrologic modification.*

Regional Strategy 6: *Use dedicated dredging or beneficial use of sediment for wetland creation or protection.*

Project Location

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 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.

Proposed Project Features

Approximately 450 acres of emergent marsh would be created/nourished with dedicated dredge material.

Approximately 18,000 feet of terraces would be constructed to direct introduced freshwater to the marsh creation sites.

Conventional structures demonstrate the projects benefits and are applicable; however structure type and design would be completed during E & D and target the most appropriate flow rates.

Preliminary Project Benefits

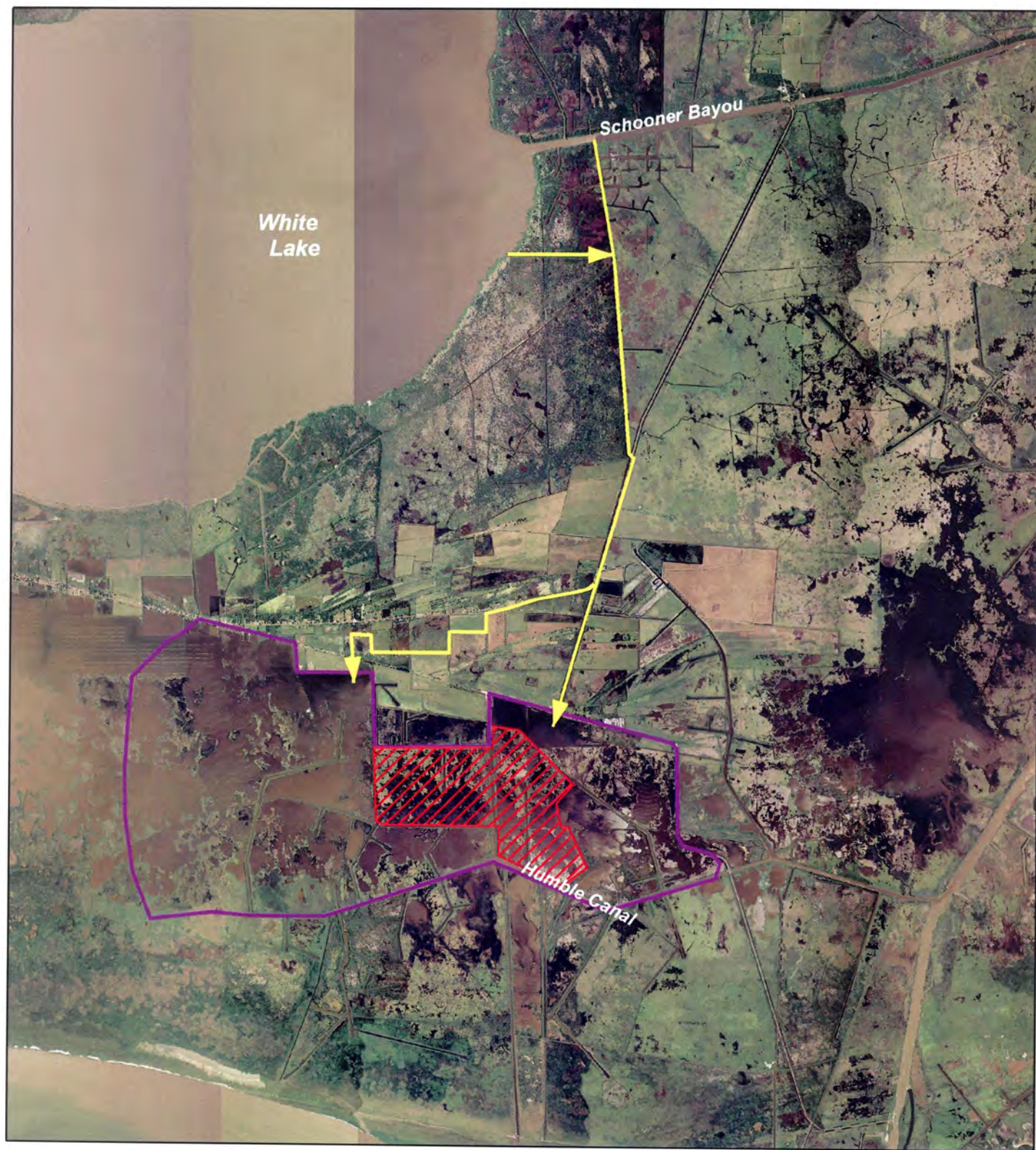
The proposed freshwater introduction project would create approximately 450 acres of marsh and provide increased organic productivity and sediment to the project area as well as restore/improve hydrologic conditions.

Preliminary Construction Costs




The estimated construction cost plus 25% contingency is \$21.5 million

Preparer of Fact Sheet

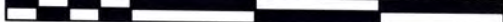
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Legend

-  Freshwater Introduction
-  Marsh Creation/Nourishment
-  Area_of_Influence



0 3,125 6,250 12,500 18,750 25,000
 Feet

**Front Ridge
Freshwater Introduction and
Marsh Creation
Vermilion Parish, Louisiana
PPL 21**

R4-ME-05

Southeast Pecan Island Levee and Marsh Restoration Project #2

PPL21 PROJECT NOMINEE FACT SHEET
1/25/2011

Southeast Pecan Island Marsh Creation Project

Coast 2050 Strategy

Regional Strategy 6: *Use dedicated dredging or beneficial use of sediment for wetland creation or protection.*

Project Location

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 Humble Canal. This area was also damaged by Hurricanes Rita and Ike. This area has lost the ability to repair itself because of hydrologic alterations. 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.

Proposed Project Features

Approximately 340 acres of emergent marsh would be created/nourished with dedicated dredge material. Borrow material would be delivered from the Gulf of Mexico via Freshwater Bayou and Humble Canal with a total distance of approximately 8 miles.

Average water depths are approximately 2 ft. and the target marsh elevation would be 1.1 feet NAVD88.

Preliminary Project Benefits

The proposed marsh creation project would create approximately 340 acres of marsh and that would provide increased organic productivity to the project area.

Preliminary Construction Costs

The estimated construction cost plus 25% contingency is \$15 million

Preparer of Fact Sheet

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SE Pecan Island Levee & Marsh Restoration Project

Vicinity Map
Vermillion Parish, LA
Map # 1



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SE Pecan Island Levee & Marsh Restoration Project

Section 8 & 9 T16S – R1E

Vermillion Parish, LA

Map # 2 (9/29/04)



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SE Pecan Island Levee & Marsh Restoration Project

Section 8 & 9 T16S – R1E

Vermillion Parish, LA

Map # 3 (8/24/09)



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SE Pecan Island Levee & Marsh Restoration Project

Section 14, T16S – R1E

Vermillion Parish, LA

Map # 4 (9/29/04)



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SE Pecan Island Levee & Marsh Restoration Project

Section 14, T16S – R1E

Vermillion Parish, LA

Map # 5 (8/24/09)

R4-ME-06

Dedicated Dredging in White Lake

Region 3-RPT
PPL21 PROJECT NOMINEE FACT SHEET
February 3, 2011

Project Name:

Dedicated Dredging in White Lake

Coast 2050 Strategy:

Restore and Sustain Wetlands (*Regional Ecosystem Strategy*)

Dedicated Dredging, to Create, Restore, or Protect Wetlands (*Coastwide Common Strategy*)

Vegetative Plantings (*Coastwide Common Strategy*)

Project Location:

Region 4, Mermentau Basin, Vermilion Parish, White Lake

Problem:

Project area wetlands are undergoing losses from shoreline erosion, subsidence, and coalescence of interior ponds. Future land loss will most likely occur in areas of existing loss and may become more apparent along Louisiana Highway 82. Disturbances to the landscape from hurricanes and herbivory have resulted in the breakup and export of large sections of interior marsh. The ensuing erosion creates water turbidity within the interior ponds, this coupled with increased pond depth, decreases the coverage of submerged aquatic vegetation. Additionally, recent hurricanes have resulted in large and wide-spread losses. It is unlikely that many of these areas will recover unaided.

Goals:

- (1) Create approximately 500 acres of intermediate-to-brackish emergent marsh by creation; and
- (2) Protect interior marshes from erosion.

Proposed Solutions:

Sediment would be mined from the original Gulf Intra-Coastal Waterway through White Lake and placed in multiple disposal areas to create between 400 to 500 acres of intermediate-to-brackish marsh; although not considered an “external” source of material, significant sediment inflows into this area may result in re-filling of the borrow area. The proposed borrow area is approximately 14 miles long, and is authorized to -12 feet. The average water depth along the borrow area is 6 feet, leaving approximately 6 feet of dredge material, or 1.5-2.0 MCY, for marsh creation and nourishment. Disposal areas have not yet been selected; however, optional disposal areas could include any, but not all of those depicted in the concept map. Target marsh elevation is +1.4’ NAVD.

Identification of Potential Issues:

Oil and gas infrastructure is within the project area and would need to be avoided by dredge/fill activities.

Preliminary Construction Costs:

The estimated construction cost including 25% contingency is \$16,000,000.

Preparer of Fact Sheet:

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PPL 21 Dedicated Dredging at White Lake

White
Lake

“Old” GIWW

Hwy. 82

Dedicated Dredging at White Lake

— . . Borrow Area

Potential Receiving
Areas:

- A (340 ac.),
- B (400 ac.),
- C (210 ac.),
- D (175 ac.)

A
B
C
D