

## **REGION 4**

# Coastal Wetlands Planning Protection & Restoration Act

## 24<sup>th</sup> Priority Project List



### Region 4 Regional Planning Team Meeting

February 11, 2014  
Lafayette, LA

CWPPRA

## 1. Welcome and Introductions



- RPT Region 4 Leader: [Darryl Clark - USFWS](#)

## CWPPRA

## Announcements

- Copies of the PPL 24 Selection Process & Schedule available at the sign-in table.
- PPL 24 RPT meetings to accept project nominees:
  - **Region IV, Estuarine Fisheries & Habitat Center, Feb. 11, 2014, 11:00 am**
  - Region III, Terrebonne Parish Main Library, Feb. 12, 2014, 9:00 am
  - Region I, USFWS SE LA Refuges Complex (Big Branch), Feb. 13, 2014, 8:00 am
  - Region II, USFWS SE LA Refuges Complex, Feb. 13, 2014, 11:30 am
- 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 during the Coastwide Electronic Vote.



## CWPPRA

## Region 4 Parishes

- Eligible parishes for basins in Region 4 include:
- Calcasieu-Sabine Basin
  - **Cameron Parish**
  - **Calcasieu Parish**
- Mermentau Basin
  - **Cameron Parish**
  - **Vermilion Parish**



## CWPPRA

## RPT Meetings

- Project proposals should be consistent with the 2012 State Master Plan.
- A project can only be nominated in one basin (except for coastwide projects – more info on coastwide projects after the following “RPT Meetings” slide).
- Proposals that cross multiple basins, excluding coastwide projects, shall be nominated in one basin only, based on the majority area of project influence.
- Coastwide 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.



## CWPPRA

## RPT Meetings

- Presenters must complete a PPL 24 Nomination Sign-Up Sheet for each project nominee (demo projects too).
- Limit project proposals to 5 minutes and Powerpoint presentations to 5 slides.
- Public comments on project proposals will be accepted orally during the RPT meetings and in writing by February 19, 2014.
- Limit comments/questions during meeting to PPL 24 subject proposals and processes.



## CWPPRA

## Coastwide Projects

- Proposes a technique applicable across the coast (e.g. vegetative planting)
- Nominated at any RPT meeting
- All coastal parishes & agencies will vote on selection of coastwide nominee
- Only one coastwide nominee may be selected from the coastwide nominee pool during the Electronic Coastwide Vote on February 25, 2014.
- The Technical Committee may or may not select a coastwide project in April 2014.



## CWPPRA

## Demonstration Projects

- Demonstrates a technology which can be transferred to other areas in coastal Louisiana
- Engineering/Environmental Workgroups will validate that demos fit CWPPRA Standing Operating Procedures criteria
- The RPTs select up to 6 demos during the Feb. 25 Coastwide Electronic Vote.
- The Technical Committee selects up to 3 demos in April 2014.
- Workgroups may recommend that no demos move forward to candidate stage
- Previous demo candidates must be **re-nominated** for PPL 24.



## CWPPRA

## Coastwide Electronic Vote

- **Feb. 25, 2014:** The Coastwide Electronic Vote to select 4 nominees per basin in Barataria and Terrebonne, 3 nominees per basin in Breton Sound and Pontchartrain, 2 nominees per basin in Mermentau, Calcasieu-Sabine, and Teche-Vermilion, and 1 nominee in the Atchafalaya Basin. 1 coastwide project and 6 demos may also be selected.
- Parishes of each basin are asked to **identify TODAY who will vote** during the Coastwide Electronic Vote.
- Each officially designated parish representative, each Federal agency, and the State (CPRA) will have one vote.
- 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).
- Public comments will be heard today and written comments must be submitted by 2/19/2014.



## CWPPRA

Coastwide Electronic  
Voting Process

- USACE will send out voting sheets as both Excel spreadsheet and PDF documents 1 week prior to the Coastwide Electronic Vote. Voters will only receive voting sheets for the basins that they are eligible to vote for & the column that they need to mark their vote will be highlighted. Voting instructions will be provided with the voting sheets.
- Parish representatives must **fill out a voting registration form** at the RPT meetings with their email addresses to receive the voting sheets in February.
- Voters may either email their voting sheets to [allison.murry@usace.army.mil](mailto:allison.murry@usace.army.mil) OR fax their voting sheets to 504-862-2572.  
**All votes must be received by 10:30 am on February 25, 2014.**



## CWPPRA

**Nominee Project Evaluations**

- Following the Coastwide Electronic Vote, an agency will be assigned to each project to prepare a Nominee Project factsheet (1 page + map).
- CWPPRA Engineering & Environmental Workgroups review draft features and assign preliminary cost and benefit ranges.
- Work groups will also review demo & coastwide projects and verify that they meet PPL 24 criteria.



## CWPPRA

**PPL 24 Candidate  
Project Selection**

- CWPPRA Technical Committee meeting, April 15, 2014 at 9:30 am, New Orleans District Corps of Engineers.
- Technical Committee ranks nominees and votes to select 10 candidate projects and up to 3 demos.
- Written public comments should be submitted to Corps of Engineers prior to Tech Comm meeting by April 1, 2014.
- Public comments also accepted orally during meeting.



## CWPPRA

## PPL 24 Candidate Project Evaluation & Selection

- Candidates evaluated between May and October
- Workgroups conduct site visits and meetings to identify needs and establish project baselines and boundaries.
- Workgroups determine benefits, project features, and cost estimates
- Technical Committee votes to select up to 4 candidate projects and up to 1 demo to recommend for Phase 1.
  - Dec. 11, 2014, Baton Rouge, 9:30 am
- Task Force final decision to select PPL 24 in January 2015.



## CWPPRA

## PPL 24 Timeline

- **Coastwide Electronic Vote, Feb. 25, 2014**
  - 21 basin-project nominees, 1 coastwide nominee, and 6 demos selected
- **Technical Committee Mtg, Apr. 15, 2014, New Orleans**
  - Selection of 10 candidates and up to 3 demos
- **Technical Committee Mtg, Dec. 11, 2014, New Orleans**
  - Recommend up to 4 projects for Phase 1 funding
- **Task Force Mtg, Jan. 2015, New Orleans**
  - Final Selection of projects for Phase 1 funding





**CWPPRA**


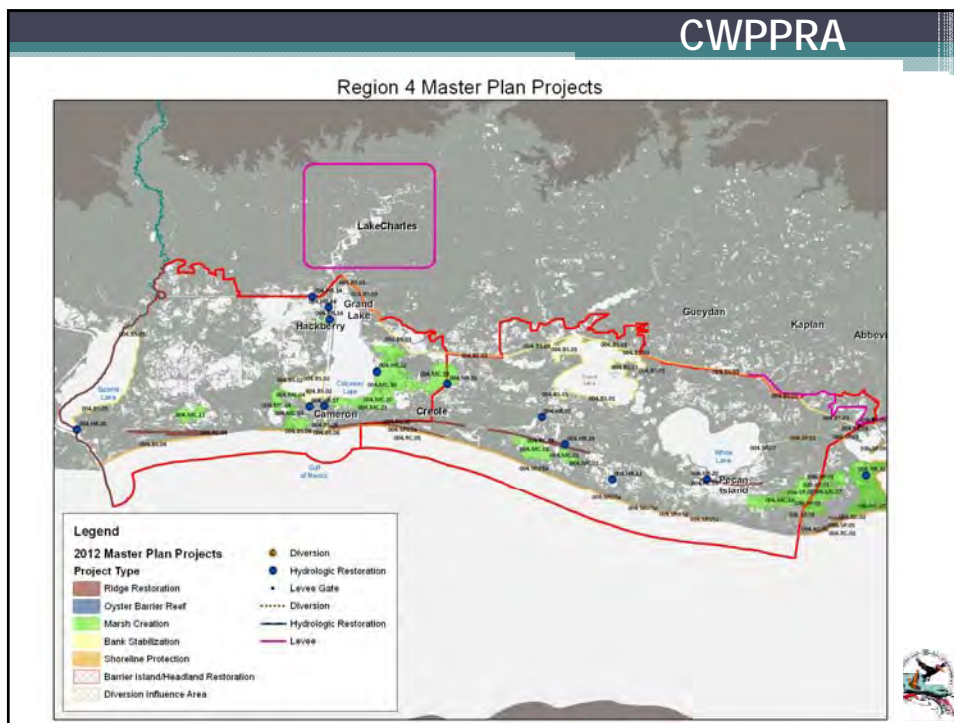
## Written Comments

- Send written comments on projects & demos proposed today to the CWPPRA program manager
- **Deadline: February 19, 2014**

**Brad Inman**  
**CWPPRA Program Manager**  
**U.S. Army Corps of Engineers**  
**P.O. Box 60267**  
**New Orleans, Louisiana 70160**

**Fax: 504-862-2572**  
**(Attn: Brad Inman)**

**Email: [Brad.L.Inman@usace.army.mil](mailto:Brad.L.Inman@usace.army.mil)**

## CWPPRA

Project Type	Project Name	Project Costs	Project No.
Bank Stabilization	Grand Lake Bank Stabilization: Bank stabilization through earthen fill placement and vegetative plantings of approximately 497,000 feet of perimeter shoreline at Grand Lake to preserve shoreline integrity and reduce wetland degradation from wave erosion.	\$74M	004.BS.01
Bank Stabilization	West Cove Bank Stabilization: Bank stabilization through earthen fill placement and vegetative plantings of approximately 106,000 feet of perimeter shoreline in the West Cove area of Calcasieu Lake to preserve shoreline integrity and reduce wetland degradation from wave erosion.	\$16M	004.BS.02
Bank Stabilization	GIWW Bank Stabilization (Freshwater Bayou to Calcasieu Ship Channel): Bank stabilization through earthen fill placement and vegetative plantings of approximately 421,000 feet of GIWW bankline between Freshwater Bayou Canal and Calcasieu Ship Channel.	\$63M	004.BS.03
Bank Stabilization	Sabine Lake Bank Stabilization: Bank stabilization through earthen fill placement and vegetative plantings of approximately 133,000 feet of the eastern shoreline of Sabine Lake to preserve shoreline integrity and reduce wetland degradation from wave erosion.	\$21M	004.BS.05
Bank Stabilization	Calcasieu Ship Channel Bank Stabilization (Gulf to Calcasieu Lake): Bank stabilization through earthen fill and placement of approximately 75,000 feet of Calcasieu Ship Channel bankline from the Gulf of Mexico to Calcasieu Lake to preserve shoreline integrity and reduce wetland degradation from wave erosion.	\$12M	004.BS.06
Hydrologic Restoration	Calcasieu Ship Channel Salinity Control Measures: Construction of measures designed to prevent saltwater from entering Calcasieu Lake through the Calcasieu Ship Channel. Measures would control salinity spikes, provide storm surge benefits, and would be constructed in a manner that would allow for the continued functioning, and ideally improvement and increased viability of the Calcasieu Ship Channel and the Port of Lake Charles.	\$398M	004.HR.06
Hydrologic Restoration	Little Pecan Bayou Sill: Construction of a saltwater sill at the confluence of Little Pecan Bayou and the Mermentau River to retain freshwater and reduce saltwater intrusion in the Mermentau watershed.	\$5M	004.HR.07

## CWPPRA

Project Type	Project Name	Project Costs	Project No.
Hydrologic Restoration	Sabine Pass Hydrologic Restoration: Isolation of the southern end of Sabine Lake from the Sabine Ship Channel through a rock dike to retain freshwater in Sabine Lake and reduce saltwater intrusion from the ship channel.	\$33M	004.HR.08
Hydrologic Restoration	Tom's Bayou Hydrologic Restoration: Construction of a sheetpile crested weir at Tom's Bayou to provide salinity control for Rainey Marsh.	\$1M	004.HR.12
Hydrologic Restoration	Deep Lake Hydrologic Restoration: Dredging of a 700-foot spillway structure (with 100-foot width and 15-foot depth) north of Deep Lake to increase freshwater exchange within the Rockefeller Wildlife Management Area and Game Preserve.	\$2M	004.HR.13
Hydrologic Restoration	Alkali Ditch Area Hydrologic Restoration: Construction of structures at Alkali Ditch, Crab Gully, and Black Lake Bayou to provide salinity control in the Calcasieu watershed.	\$38M	004.HR.14
Hydrologic Restoration	Oyster Bayou Hydrologic Restoration: Construction of a salinity barrier at Oyster Bayou south of West Cove, Calcasieu Lake to reduce saltwater intrusion into the Calcasieu watershed.	\$5M	004.HR.17
Hydrologic Restoration	Mermentau Basin Hydrologic Restoration (East of Calcasieu Lake): Construction of a water control structure east of Calcasieu Lake with operation to introduce freshwater to wetlands west of Highway LA-27 near Creole.	\$7M	004.HR.18
Hydrologic Restoration	Mermentau Basin Hydrologic Restoration (South of Grand Lake): Construction of a water control structure south of Grand Lake with operation to introduce freshwater to wetlands south of Highway LA-82 near Grand Chenier.	\$7M	004.HR.19

## CWPPRA

Project Type	Project Name	Project Costs	Project No.
Hydrologic Restoration	Mermentau Basin Hydrologic Restoration (South of White Lake): Construction of a water control structure south of White Lake with operation to introduce freshwater to wetlands south of Highway LA-82 near Pecan Island.	\$7M	004.HR.20
Hydrologic Restoration	East Calcasieu Lake Hydrologic Restoration: Dredging of a 1,500-foot spillway structure (with 200-foot width and 15-foot depth) in the Cameron-Creole Levee at East Calcasieu Lake to increase freshwater exchange with adjacent wetlands.	\$5M	004.HR.22
Marsh Creation	East Rainey Marsh Creation: Creation of approximately 3,080 acres of marsh in the eastern portion of Rainey Marsh to create new wetland habitat, restore degraded marsh, and reduce wave erosion.	\$429M	03b.MC.07
Marsh Creation	South Grand Chenier Marsh Creation: Creation of approximately 7,330 acres of marsh south of Highway LA-82 near Grand Chenier to create new wetland habitat, restore degraded marsh, and reduce wave erosion.	\$708M	004.MC.01
Marsh Creation	Mud Lake Marsh Creation: Creation of approximately 3,910 acres of marsh at Mud Lake south of West Cove, Calcasieu Lake to create new wetland habitat, restore degraded marsh, and reduce wave erosion.	\$581M	004.MC.04
Marsh Creation	West Rainey Marsh Creation: Creation of approximately 3,550 acres of marsh at Rainey Marsh near the southeast bank of the Freshwater Bayou Canal to create new wetland habitat, restore degraded marsh, and reduce wave erosion.	\$615M	004.MC.07
Marsh Creation	Southeast Calcasieu Lake Marsh Creation: Creation of approximately 7,600 acres of marsh southeast of Calcasieu Lake to create new wetland habitat, restore degraded marsh, and reduce wave erosion.	\$666M	004.MC.10

## CWPPRA

Project Type	Project Name	Project Costs	Project No.
Marsh Creation	Cameron Meadows Marsh Creation: Creation of approximately 3,290 acres of marsh at Cameron Meadows north of Johnsons Bayou to create new wetland habitat, restore degraded marsh, and reduce wave erosion.	\$290M	004.MC.13
Marsh Creation	East Pecan Island Marsh Creation: Creation of approximately 7,340 acres of marsh between Pecan Island and the west bank of the Freshwater Bayou Canal to create new wetland habitat, restore degraded marsh, and reduce wave erosion.	\$1,180M	004.MC.16
Marsh Creation	Calcasieu Ship Channel Marsh Creation: Creation of approximately 2,640 acres of marsh south of Calcasieu Lake near Cameron to create new wetland habitat, restore degraded marsh, and reduce wave erosion.	\$185M	004.MC.23
Marsh Creation	East Calcasieu Lake Marsh Creation: Creation of approximately 14,840 acres of marsh in the eastern Cameron-Creole watershed to create new wetland habitat, restore degraded marsh, and reduce wave erosion.	\$2,484M	004.MC.19
Marsh Creation	Kelso Bayou Marsh Creation: Creation of approximately 260 acres of marsh at Kelso Bayou immediately west of Calcasieu Ship Channel to create new wetland habitat, restore degraded marsh, and reduce wave erosion.	\$32M	004.MC.25
Ridge Restoration	Grand Chenier Ridge Restoration: Restoration of approximately 86,000 feet (200 acres) of historic ridge at Grand Chenier Ridge to provide coastal upland habitat, restore natural hydrology, and provide wave and storm surge attenuation.	\$11M	004.RC.01
Ridge Restoration	Cheniere au Tigre Ridge Restoration: Restoration of approximately 60,000 feet (140 acres) of historic ridge along Bill Ridge and Cheniere au Tigre near the Gulf shoreline to provide coastal upland habitat, restore natural hydrology, and provide wave and storm surge attenuation.	\$10M	004.RC.02

## CWPPRA

Project Type	Project Name	Project Costs	Project No.
Ridge Restoration	Pecan Island Ridge Restoration: Restoration of approximately 44,000 feet (100 acres) of historic ridge along Pecan Island Ridge to provide coastal upland habitat, restore natural hydrology, and provide wave and storm surge attenuation.	\$8M	004.RC.03
Ridge Restoration	Hackberry Ridge Restoration: Restoration of approximately 130,000 feet (300 acres) of historic ridge along Blue Buck and Hackberry Ridges to provide coastal upland habitat, restore natural hydrology, and provide wave and storm surge attenuation.	\$2M	004.RC.04
Ridge Restoration	Front Ridge Restoration: Restoration of approximately 147,000 feet (340 acres) of historic ridge along Front Ridge east of Cameron to provide coastal upland habitat, restore natural hydrology, and provide wave and storm surge attenuation.	\$26M	004.RC.05
Shoreline Protection	Freshwater Bayou Shoreline Protection (Belle Isle Canal to Lock): Shoreline protection through rock breakwaters of approximately 41,000 feet of Freshwater Bayou shoreline from Belle Isle Canal to Freshwater Bayou Lock to preserve shoreline integrity and reduce wetland degradation from wave erosion.	\$43M	03b.SP.01
Shoreline Protection	Gulf Shoreline Protection (Freshwater Bayou to Southwest Pass): Shoreline protection through rock breakwaters of approximately 90,000 feet of Gulf shoreline from Freshwater Bayou to Southwest Pass (near Marsh Island) to preserve shoreline integrity and reduce wetland degradation from wave erosion.	\$96M	03b.SP.05
Shoreline Protection	Calcasieu-Sabine Shoreline Protection-Component A: Shoreline protection through rock breakwaters of approximately 38,000 feet of Gulf shoreline between Sabine River and Calcasieu Ship Channel to preserve shoreline integrity and reduce wetland degradation from wave erosion.	\$48M	004.BS.04a
Shoreline Protection	Freshwater Bayou Canal Shoreline Protection: Shoreline protection through rock breakwaters of approximately 11,000 feet of Freshwater Bayou Canal bankline at Little Vermilion Bay to preserve shoreline integrity and reduce wetland degradation from wave erosion.	\$13M	004.SP.03

## CWPPRA

Project Type	Project Name	Project Costs	Project No.
Shoreline Protection	Gulf Shoreline Protection (Calcasieu River to Rockefeller): Shoreline protection through rock and low wave-action breakwaters of approximately 290,000 feet of Gulf shoreline between Calcasieu River and Freshwater Bayou to preserve shoreline integrity and reduce wetland degradation from wave erosion.	\$401M	004.SP.05a
Shoreline Protection	Northeast White Lake Shoreline Protection: Shoreline Protection through rock breakwaters of approximately 3,000 feet of White Lake shoreline near Schooner Bayou Canal to preserve shoreline integrity and reduce wetland degradation from wave erosion.	\$4M	004.SP.07
Shoreline Protection	Southwest Pass Shoreline Protection (West Side): Shoreline protection through rock breakwaters of approximately 37,000 feet of shoreline along Southwest Pass immediately west of Marsh Island to preserve shoreline integrity and reduce wetland degradation from wave erosion.	\$40M	03b.SP.08
Shoreline Protection	Schooner Bayou Canal Shoreline Protection: Shoreline protection through rock breakwaters of approximately 21,000 feet of Schooner Bayou Canal bankline from Highway 82 to North Prong to preserve shoreline integrity and reduce wetland degradation from wave erosion.	\$23M	004.SP.02



## ATTENDANCE RECORD



DATE February 11, 2014 11:00 A.M.	SPONSORING ORGANIZATION COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT	LOCATION Estuarine Fisheries & Habitat Center 646 Cajundome Blvd Lafayette, LA
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**PURPOSE**

MEETING OF THE REGIONAL PLANNING TEAM REGION IV

**PARTICIPANT REGISTER\***

NAME	JOB TITLE AND ORGANIZATION	PHONE NUMBER
JOHN FORET	WETLAND ECOL, NOAA/NMFS	337 291-2107
Erick Swenson	LSU	225 578 2730
BARRY HOBERT	LDWF	225 765 0833
Aaron Hoff	EPA	214. 665. 7319
Brad Crawford	EPA	214 665 7255
Stafford Comegys	LAKE ARTHUR CLUB	318-222-1066
KEVIN LONG	LAKE ARTHUR CLUB	318-221-3516
Bren Haase	CPRA	225-342-1475
Mike Rabalais	CPRA	225-342-4577
Julia Wall	CPRA	
BART A. YARUPZACK	GRAY LAW FIRM / GCPC, L.L.C., ETAL	337 494-0694
Kara Bonsall	CZ Administrator, Cameron Parish	337-775-2800
Harold Schoeffler	Seiver Club	337 417/550
Jesse Hite	CDirector IEAP	337 263 0318
Richard C. Russo	Self	337-230-1963
Dimitrios Demisis	McNeese State University	337-475-5059
Bruce Gays	TRAPBAG	832-860-4332
KEVIN DUDLEY	TRAPBAG	225-202-8264
Peter Fromme	GM Vermilion Corp	337 652 4191
Kevin Sagers	UPPT	337-303-4585
Charles Sasser	LSU	225-578-6375
Scottie Troclair	LDWF	337-491-2000



ATTENDANCE RECORD



DATE February 11, 2014 11:00 A.M.	SPONSORING ORGANIZATION COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT	LOCATION Estuarine Fisheries & Habitat Center 646 Cajundome Blvd Lafayette, LA
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PURPOSE  
MEETING OF THE REGIONAL PLANNING TEAM REGION IV

PARTICIPANT REGISTER\*

NAME	JOB TITLE AND ORGANIZATION	PHONE NUMBER
Chad Courville	Miami Corporation	337.264.1695
Laurie Cormier	CPTS	337 721-3650
MARTINA M. MURPHY	MO Miller MD Estate	504-616-7936
Angela Trahan	FWS	337-291-3137

\* If you wish to be furnished a copy of the attendance record,  
please indicate so next to your name.

## Region 4 – CALCASIEU-SABINE BASIN

<b>Project Number</b>	<b>Project Proposals</b>
R4-CS-01	East Holly Beach Gulf Shoreline Protection
R4-CS-02	Cameron Creole Marsh Restoration
R4-CS-03	West Cove Marsh Creation
R4- CS-04	Southwest Cameron Creole Marsh Creation
R4-CS-05	East Prong – Grand Bayou Marsh Creation
R4-CS-06	No Name Bayou Marsh Creation & Nourishment
<del>R4 CS 07</del>	<del>North Cameron Creole Marsh Creation</del> <i>combined with R4-CS-02</i>
<del>R4 CS 08</del>	<del>Wild Horse Ridge Protection</del> <i>(not consistent with 2012 State Master Plan)</i>
<del>R4 CS 09</del>	<del>No Name Bayou Marsh Creation &amp; Nourishment</del> <i>combined with R4-CS-06</i>
R4-CS-10	North Oyster Bayou Marsh Creation

## Region 4 – MERMENEAU BASIN

R4-ME-01	Deep Lake Hydrologic Restoration
R4-ME-02	Southwest Grand Lake Shoreline Protection
R4-ME-03	Southeast Pecan Island Marsh Creation & Freshwater Enhancement
R4-ME-04	East Pecan Island Marsh Creation – Increment 1
R4-ME-05	North Big Marsh Restoration
R4-ME-06	Umbrella Bay Shoreline Protection

## **Region 4 – CALCASIEU-SABINE BASIN**



**R4-CS-01**

**East Holly Beach Gulf Shoreline Protection**

**PPL24 PROJECT NOMINEE FACT SHEET**  
**January 28, 2014**

**Project Name**

East Holly Beach Gulf Shoreline Protection

**Master Plan Strategy**

Calcasieu-Sabine Shoreline Protection-Component A: Shoreline protection through rock breakwaters of approximately 38,000 feet of Gulf shoreline - 004.BS.04a. This project is also included in the 2013 Southwest Louisiana Coastal Study.

**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 Beach Nourishment project (CS-33 SF). Recent loss rates (1998-2008) were calculated from aerial photography at 26.5 ft/yr. In some of the areas proposed for protection, less than 25 feet of shoreline remains between Louisiana State Highway 82 and the Gulf of Mexico.

**Goals**

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 approximately 267 acres of beach, dune, and supratidal habitat created by (CS-33 SF) the state surplus project. The proposed project maintains a beach rim component of the coastal ecosystem and has a positive net impact on critical infrastructure (Highway 82). The project would also protect and restore critical habitat for the piping plover, a threatened/endangered species.

**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 220 – 250 ft with 150 ft gaps), placed 300 feet offshore and built to 3.8 ft NGVD will be created. This project will protect approximately 267 acres of beach created by the CS-33SF project using approximately 2 million cubic yards of sand from an offshore borrow site. The CS-33SF report concludes that those 267 created acres would be lost 20 years after construction.

**Preliminary Project Benefits**

1) *What is the total acreage benefited both directly and indirectly?* The total area benefitted is estimated at 267 acres.

2) *How many acres of wetlands will be protected/created over the project life?* The project would protect approximately **175 net acres** (75% of the 233 acres projected to be lost without project).

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 loss rate reduction throughout the area of direct benefit is estimated to be 75%.

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.* The proposed project would maintain a beach rim component of the coastal ecosystem. This area has also been designated as critical habitat for the threatened piping plover by the Fish and Wildlife Service.

5) *What is the net impact of the project on critical and non-critical infrastructure?* The proposed project would provide protection to Louisiana Highway 82 and the Gulf shoreline.

6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?* The proposed project is synergistic with the Holly Beach Breakwater Project (CS- 01), Holly Beach Breakwater Enhancement and Sand Management Project (CS-31), and a proposed state surplus project (CS-33 SF) that will create/nourish this area using sand from offshore borrow sites.

#### **Identification of Potential Issues**

There are no issues identified at this time.

#### **Preliminary Construction Costs (w/25% contingency)**

Approximately \$15 million

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

Troy Mallach, NRCS

[troy.mallach@la.usda.gov](mailto:troy.mallach@la.usda.gov)

John Jurgensen, NRCS

[john.jurgensen@la.usda.gov](mailto:john.jurgensen@la.usda.gov)



Map Produced By:  
 United States Department of Agriculture  
 Natural Resources Conservation Service  
 Alexandria, LA

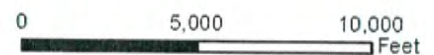
Data Source: NAIP 2013

Map Date: JANUARY 16, 2014



*PPL-24*  
**EAST HOLLY BEACH**  
**SHORELINE PROTECTION**

Legend	
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<span style="color: white;">—</span>	ROADS

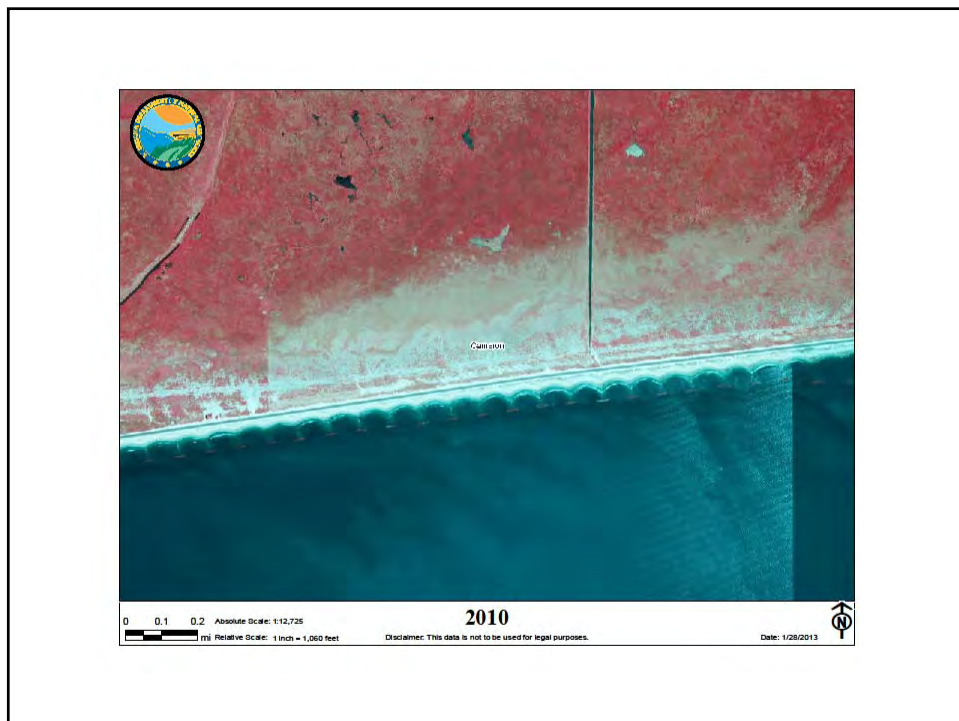


PPL 24  
Regional Planning Team  
February 11, 2014

Region 4  
Cal/Sab Basin

East Holly Beach Gulf Shoreline  
Protection

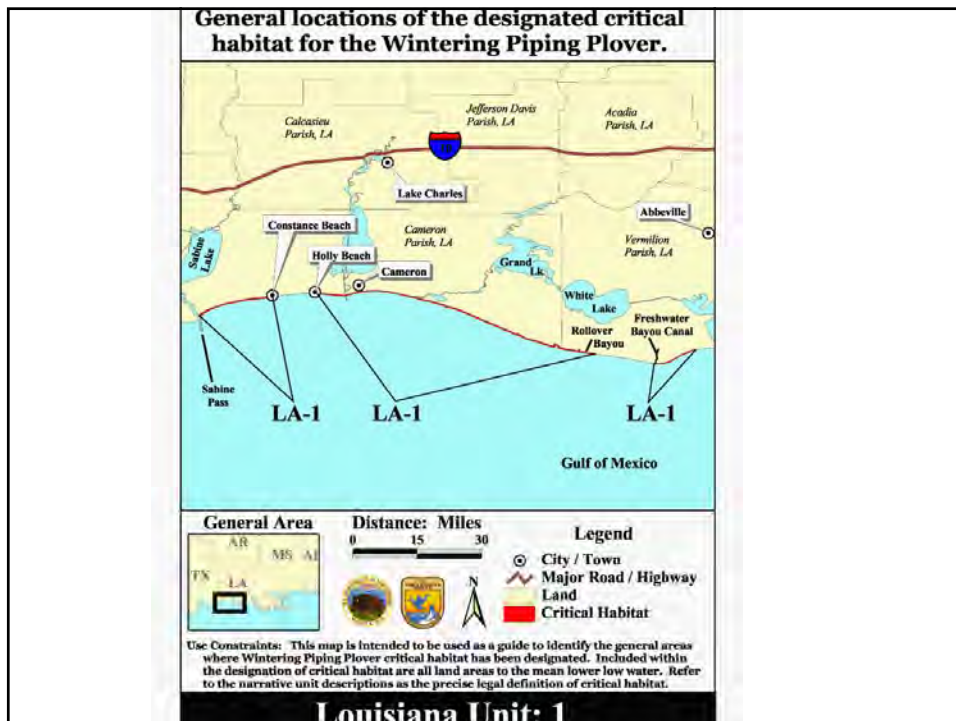






## East Holly Beach Gulf Shoreline Protection

- 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.
- The area benefited is approx. 267 acres of beach and supratidal habitat created by (CS-33 SF) the state surplus project.
- The CS-33SF report concludes that those 267 created acres would be lost 20 years after construction.
- Area designated as critical habitat for threatened piping plover.







**R4-CS-02**

**Cameron Creole Marsh Restoration**

**PPL24 PROJECT NOMINEE FACT SHEET**  
**February 20, 2014**

**Project Name**

Cameron Creole Marsh Restoration Project

**Master Plan Strategy**

Southeast Calcasieu Lake Marsh Creation 004.MC.10 and; East Calcasieu Lake Hydrologic Restoration - 004.HR.22. Features in this project are also included in the USACE 2013 Southwest Coastal Louisiana Study.

**Project Location**

Region 4, Calcasieu/Sabine Basin, Cameron Parish, east of Calcasieu Lake west of Highway 27.

**Problem**

To reduce Calcasieu Ship Channel impacts such as increased tidal exchange, saltwater intrusion, and reduced freshwater retention, the Cameron-Creole Watershed Project was completed in 1989. Subsequent wind action across large open water areas in the northern Cameron Creole Watershed, in combination with existing connecting canals and bayous has resulted in an artificial water circulation pattern throughout the north Peconi Bayou watershed that maintains high turbidities and facilitates saltwater intrusion into upper watershed low salinity zones. Also, the Cameron-Creole water control structures are not able to adequately remove excess water during seasonal periods and/or storm events resulting in periods of inundation that may be contributing to low vegetative production and marsh loss. Hurricanes Rita and Ike were responsible for additional marsh loss in the Cameron-Creole area. Repairs to the Cameron-Creole Watershed Project structures and levees have been completed; however, hydrology and marshes in the project area remain impaired.

**Goals**

The project goals are: 1) to create marsh in a number of strategically located marsh creation cells to reduce water circulation and restore a more natural hydrologic pattern and; 2) to promote the expansion of emergent marsh vegetation throughout the project area by reducing flood stress in marsh areas experiencing prolonged periods of inundation.

**Proposed Project Features**

The project proposes to create/nourish approximately 292 acres of marsh in a number of strategically located marsh creation cells to restore a more natural hydrologic pattern. A small borrow canal would also be filled to preclude un-natural water circulation patterns. Fill material for those features would come from USACE's upland disposal sites located along the east bank of the Ship Channel.

A spillway structure would be installed at two locations in the Cameron-Creole Levee. Each 7,500-foot spillway would have a 200-foot width and 15-foot depth and adjustable elevation capacities.

### **Preliminary Project Benefits**

1) *What is the total acreage benefited both directly and indirectly?* The total area benefitted is estimated at 15,000 acres.

2) *How many acres of wetlands will be protected/created over the project life?* The proposed marsh creation /nourishment features would protect/create at least **285 net acres**. However, benefits from reduced flooding stress have not yet been determined.

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 loss rate reduction throughout the area of direct benefit is estimated to be < 25%.

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.* The proposed project would protect and create wetlands that provide critical protection to the Cameron-Creole Levee and the east shoreline of Calcasieu Lake.

5) *What is the net impact of the project on critical and non-critical infrastructure?* The proposed project would provide protection to the Cameron-Creole Levee.

6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?* The proposed project is also synergistic with the Cameron-Creole Plugs project (CS-17), the Cameron-Creole Maintenance project (CS-04a), and the Cameron-Creole Freshwater Introduction project (CS-49) implemented and/or designed to reduce salinities and increase marsh production.

### **Identification of Potential Issues**

There are no issues identified at this time.

### **Preliminary Construction Costs**

The estimated construction cost including 25% contingency is approximately \$19 million.

### **Preparer of Fact Sheet**

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# Cameron-Creole Marsh Restoration Project

NRCS & FWS PPL 24 Nominee



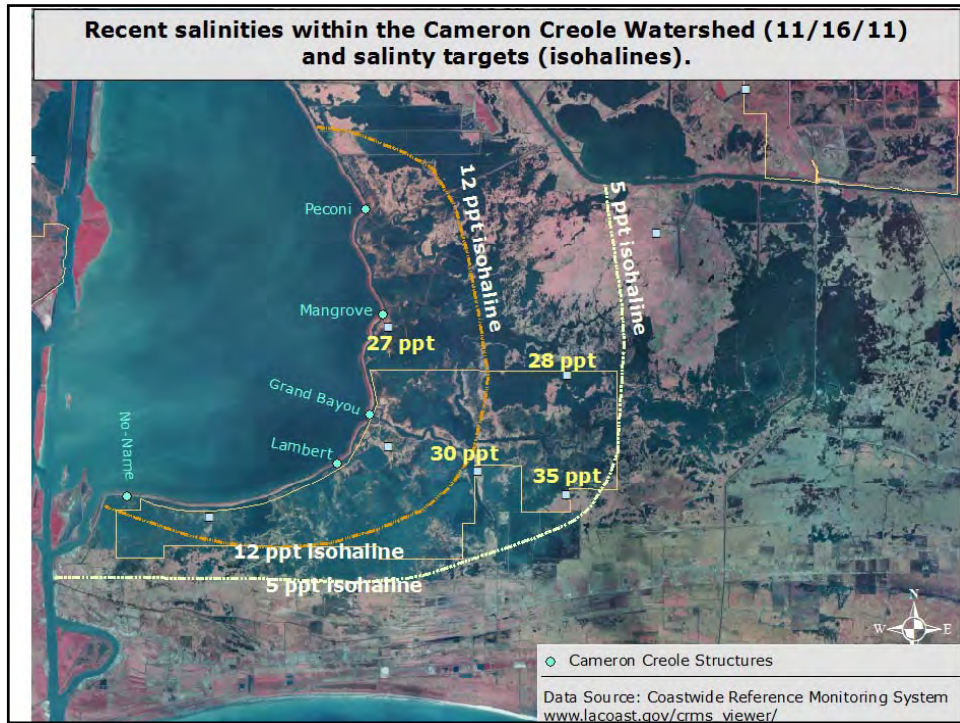
PPL 24  
Regional Planning Team  
February 11, 2014

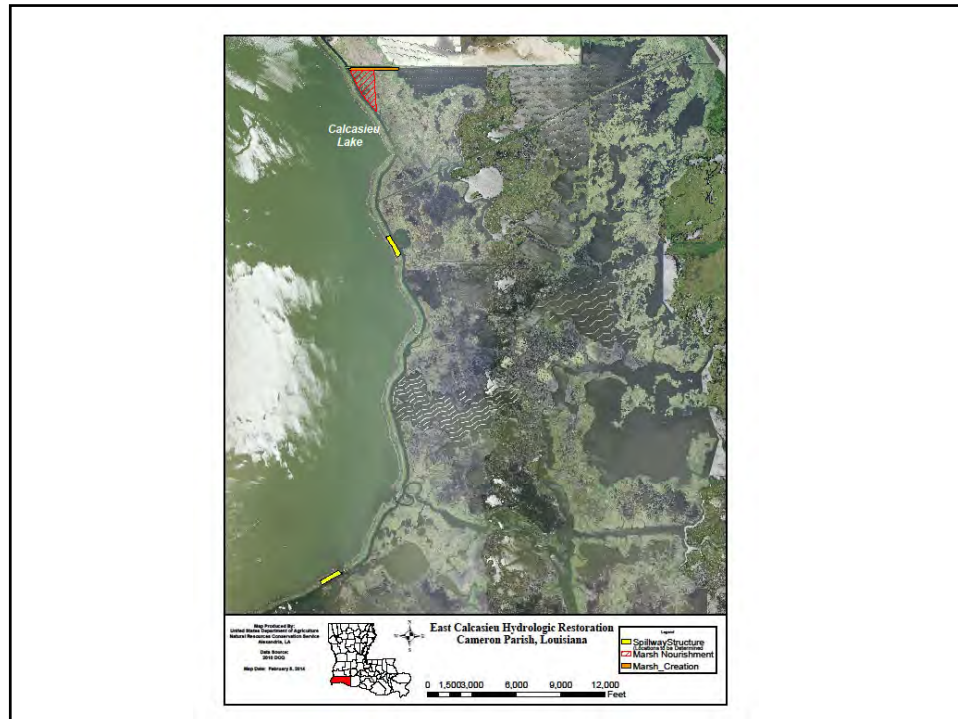
Region 4  
Cal/Sab Basin

East Calcasieu Lake Marsh Creation  
and Hydrologic Restoration

## Problems

- Salt water intrusion from Calcasieu Ship Channel
- Spillway structure needed to evacuate high water events





## East Calcasieu

- Create/nourish approx. 70 acres of marsh using barged in material
- Reduce prolonged periods of inundation by relieving flooding stress and restore the function, value, and sustainability to approximately 7,500 acres of marsh



**R4-CS-03**

**West Cove Marsh Creation**

**PPL24 PROJECT NOMINEE FACT SHEET**  
**February 11, 2014**

**Project Name**

West Cove Marsh Creation

**Project Location**

Region 4, Calcasieu-Sabine Basin, Cameron Parish. Within the Sabine National Wildlife Refuge, east of Hwy. 27 and north of Mud Lake.

**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. Land loss rates within the project area are estimated to be -0.36%/yr. as seen in the Mud Lake Polygon within the Louisiana Land Change Trends 1985-2009 USGS final regression document. If not addressed through some type of restoration, wind generated waves within the open water areas will continue to degrade this area and accelerate shoreline erosion.

**Goals**

The primary goal of this project is to beneficially utilize material from a Calcasieu Ship Channel maintenance dredging event, that would otherwise be placed in upland disposal, to create and/or nourish approximately 392 acres of emergent brackish marsh (372 acres created and 20 acres nourish) using sediment dredged from the Calcasieu Ship Channel.

**Proposed Solution**

This project will create and/or nourish 392 acres of emergent brackish marsh with material hydraulically pumped from the Calcasieu Ship Channel and placed into shallow open water site within the project area. This site will have constructed earthen dikes that will be used to contain dredged material. Material would be pumped to a healthy marsh elevation as determined by healthy marsh survey. Once material is in place and adequately dewatered, containment dikes will be gapped to allow tidal exchange of nutrients and aquatic organisms within the marsh. A series of trenasses could also be constructed within the constructed marsh if deemed necessary.

**Preliminary Project Benefits**

- 1) *What is the total acreage benefited both directly and indirectly?*  
This total project area is 392 ac.
- 2) *How many acres of wetlands will be protected/created over the project life?*  
Based on a 50% rate reduction to the projected -0.36%/yr land loss rate, marsh creation and nourishment in the project area would yield 360 net acres within the 20 year project life.
- 3) *What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (e.g., 50% reduction in the background loss rate)?*

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?*

Yes, helps to restore the integrity of West Cove rim (west side of Calcasieu Lake) and prevent coalescence of Lake Calcasieu with Mud Lake.

- 5) *What is the net impact of the project on critical and non-critical infrastructure?*

No major impacts to critical infrastructure. Oil and gas facilities, highway 27 in area would be benefited by the project acreage created.

- 6) *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 previously constructed CWPPRA project CS-20, East Mud Lake Marsh Management, which was completed in 1997.

#### **Identification of Potential Issues**

Potential issues concerning this project are as follows: Pipelines and Sediment Availability (Corps budget for maintenance dredging)

#### **Preliminary Construction Costs**

With beneficial use of dredge material from the Calcasieu Ship Channel, the estimated construction cost including 25% contingency is \$19,000,000.

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

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Scott Wandell, USACE, 504-862-1878 [Scott.F.Wandell@usace.army.mil](mailto:Scott.F.Wandell@usace.army.mil)

# PPL 24 West Cove Marsh Creation

West Cove



Legend:

- Marsh Creation
- Retention Dikes

4949 ft

Date: 5/5/2013

© 2013 Google  
lat: 29.844712° lon: -93.449485° elev: 0 ft

R4-C5-03

# West Cove Marsh Creation and Nourishment

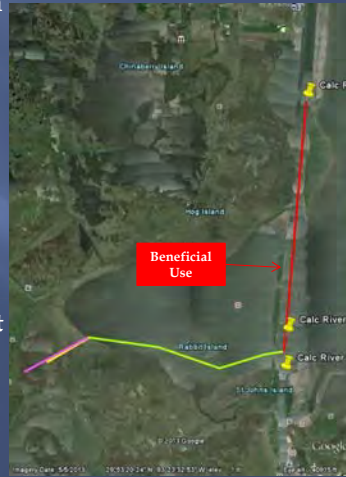
PPL 24  
Region 4  
Calcasieu-Sabine Basin





## Proposed Project Features:

- Restore 392 acre area of open water with emergent marsh (95% open water)
- Material would be dredged from Calcasieu River during USACE maintenance event
- Project Area approx 6 miles from Calcasieu River
- Containment built around entire Project Area.
- Estimated Construction cost + 25% contingency approx \$19M



## PPL 24 West Cove Marsh Creation



**R4-CS-04**

**Southwest Cameron Creole Marsh Creation**



**PPL24 PROJECT NOMINEE FACT SHEET**  
**January 28, 2014**

**Project Name:**

Southwest Cameron Creole Marsh Creation

**Project Location:**

Region 4, Calcasieu-Sabine Basin, Cameron Creole Watershed, Cameron Parish, South of Calcasieu Lake, partially within Cameron Prairie National Wildlife Refuge.

**Problem:**

The primary cause of marsh loss in this unit has been saltwater intrusion from the Calcasieu River Ship Channel and direct marsh loss due to hurricanes. Early losses and arguably the largest losses were after 1951 (ship channel) and 1957 (Hurricane Audrey). More recently Hurricanes Rita (2005) and Ike (2008) caused large amount of marsh loss. USGS has calculated a nearby project's 1998-2009 landloss at 1.66% per year. Marsh creation projects should be a priority in these areas that have experienced mechanical scraping of the marsh during recent hurricane events while water depths are relatively shallow.

**Goals :**

Create marsh in shallow open water areas that have recently been damaged by Hurricanes Rita and Ike.

*Specific goals:* 1) Create 469 acres and nourish 73 acres of emergent brackish marsh.

**Proposed Solution:**

This project would propose to create/nourish approximately 542 acres of emergent marsh by hydraulically dredging material from the Gulf of Mexico and placing that material in in shallow open water areas both within the Cameron Prairie NWR and private lands just south of that refuge. Dredge material would be placed in open water areas to a target height of +1.3 NAVD 88. All constructed containment dikes would be sufficiently gapped or degraded no later than 3 years post construction to allow for fisheries access.

**Preliminary Project Benefits:**

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

This total project area is 542 ac.

2) *How many acres of wetlands will be protected/created over the project life?*

Approximately 407 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?*

The project will help protect the cheniere and ridges located south of the project area.

---

5) *What is the net impact of the project on critical and non-critical infrastructure?*

None

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

This project would work synergistically with two projects (Maddison Bay Marsh Creation and Island Road Marsh Creation project) to tie together three ridges (Terrebonne Ridge, Isle St. Charles, and Point aux Cheine Ridge). This would also work with the TE-83 project that will be located just south of the project area.

**Identification of Potential Issues:**

There would most likely be some pipeline issues and numerous oyster leases within the project area.

**Preliminary Construction Costs:**

The estimated construction cost including 25% contingency is estimated between \$23 M.

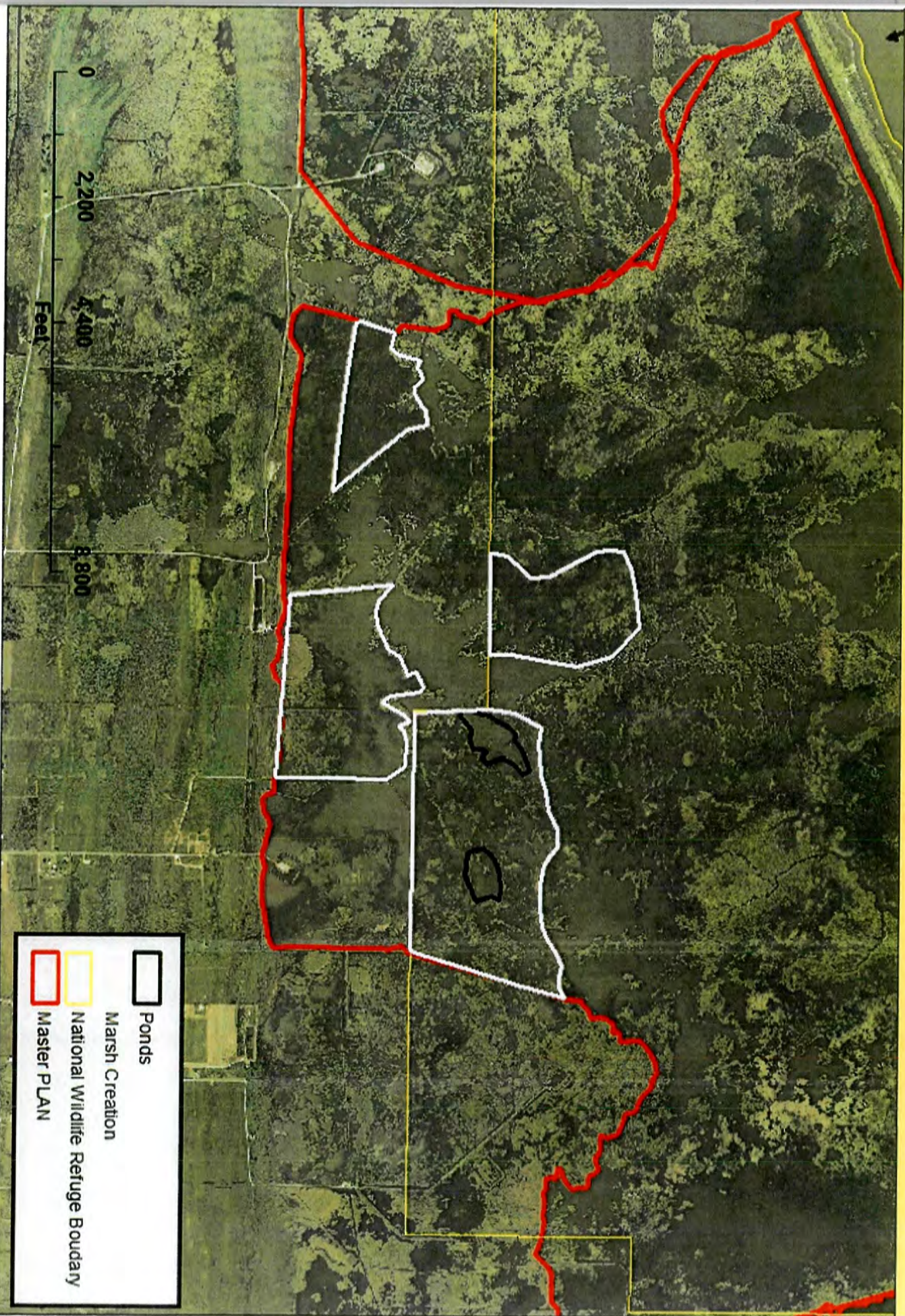
**Preparer(s) of Fact Sheet:**

Robert Dubois, USFWS, (337) 291-3127, Robert\_Dubois@fws.gov

R4-LS-04



# SOUTHWEST CAMERON CREOLE MARSH CREATION



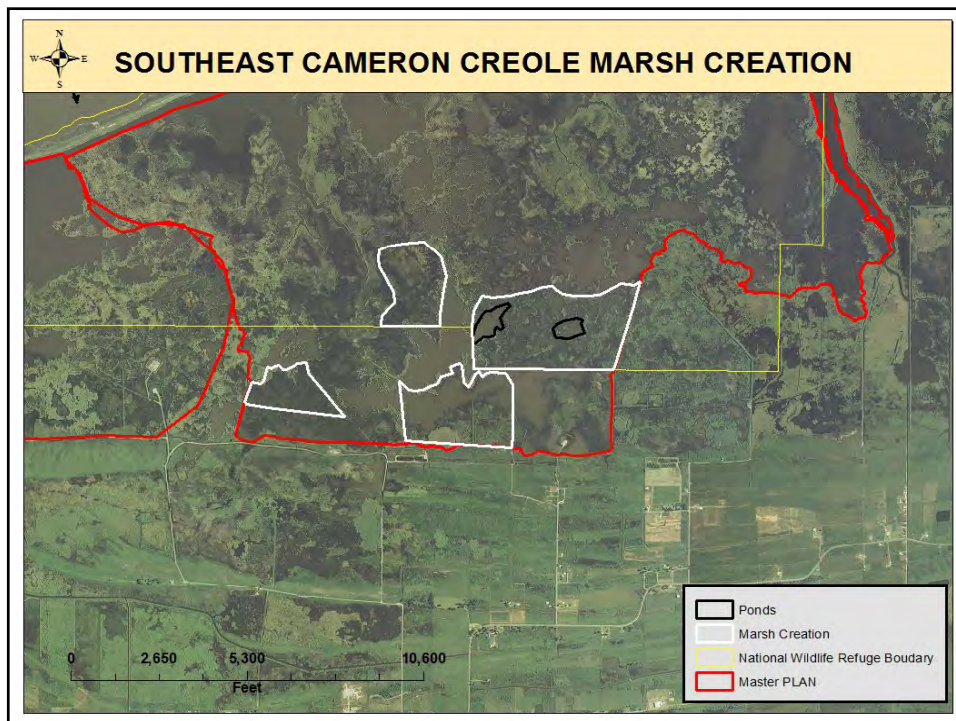
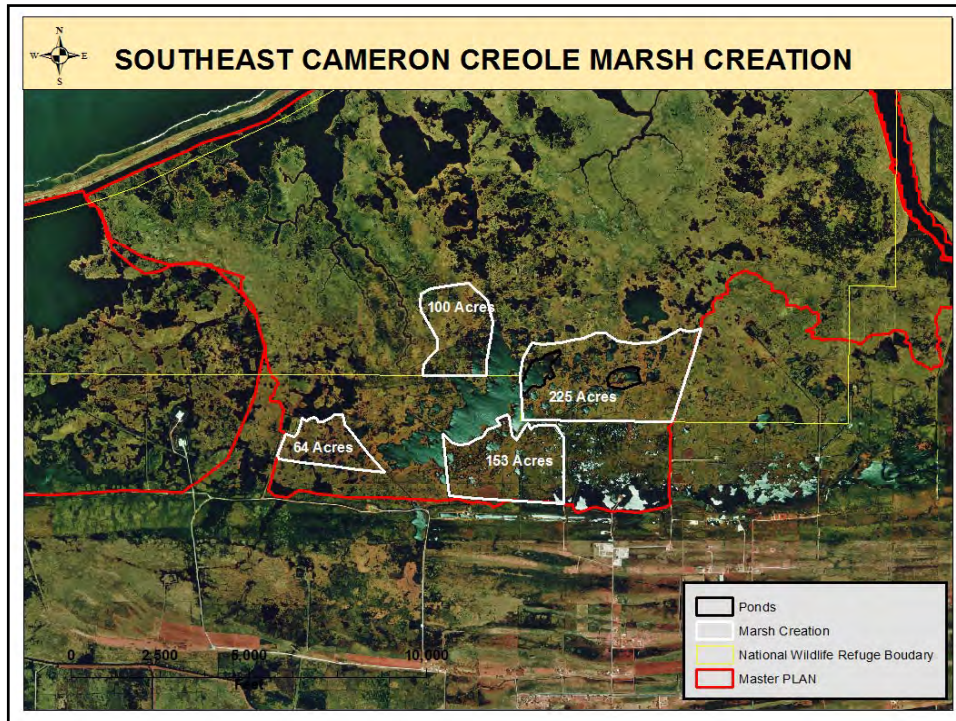
	Ponds
	Marsh Creation
	National Wildlife Refuge Boundary
	Master PLAN



## SOUTHWEST CAMERON CREOLE MARSH CREATION

### Problem

- Marsh loss- saltwater intrusion from the Calcasieu River Ship Channel (1951)
- Marsh loss- hurricanes (largest losses were 1957 (Hurricane Audrey)
- More recently Hurricanes Rita (2005) and Ike (2008)
- USGS has calculated a nearby project's 1998-2009 landloss at 1.66% per year.



## **SOUTHWEST CAMERON CREOLE MARSH CREATION**

- **Gulf borrow site**
- **469 acres created and 73 acres nourished**
- **Net acres = 407**
- **Construction plus contingency = \$23 M**
- **On both private land and Cameron Creole NWR**
- **Part of States Master Plan**
- **Not part of DMMP**
- **Should be done soon while water depths are shallow**

**R4-CS-05**

**East Prong – Grand Bayou Marsh Creation**

**PPL24 PROJECT NOMINEE FACT SHEET**  
**February 11, 2014**

**Project Name: East Prong - Grand Bayou Marsh Creation Project**

**Project Location:** Region 4, Calcasieu-Sabine Basin, Cameron Parish, 6 miles northeast from Cameron, LA, on the Cameron Prairie NWR north of East Prong.

**Problem:** Historically this area was dominated by saw grass marsh. Loss of the historical saw grass marsh in this area is attributable to saltwater intrusion from the Calcasieu Ship Channel (CSC) in the 1950s. Hurricane Audrey (1957) exacerbated the impacts to the dying saw grass system, clearing away the dead and deteriorated saw grass stands. A combination of these human-induced hydrologic changes and accompanied severe storm events has resulted in virtually all of the habitat changes and land losses in the Calcasieu-Sabine Basin (Hydrologic Investigation of the Chenier Plain Report 2002).

The CCWP was implemented by the NRCS in 1989 to reduce saltwater intrusion and stimulate restoration through revegetation. Hurricanes Rita and Ike in 2005 and 2008 breached the watershed levee scouring the marsh and allowing higher Calcasieu Lake salinities to enter the watershed causing more land loss. The Calcasieu-Sabine Basin lost 28 mi<sup>2</sup> (17,920 acres) (4.4%) as a result of Hurricane Rita (Barras et al. 2006). Land loss is estimated to be 1.33 percent/year based on USGS data from 1985 to 2009. It is likely that as marsh loss occurred unstable sediments settling out in open water areas including natural ponds and bayous staying within the system.

**Goals:** Project goals include restoring and nourishing marsh with dedicated dredged material to benefit fish and wildlife resources in the Cameron Prairie NWR and within the Calcasieu Lake estuary. Restoring these marshes will reduce wind induced erosion and will buffer higher saline waters from penetrating further inland protecting fresher marshes. Specific phase 0 goals include creating 511 acres and nourishing 75 acres of brackish marsh in open water areas north of East Prong-Grand Bayou. Approximately 282 acres of brackish marsh could be nourished and restored through spray dredging material that has silted into the natural bayous.

Restoring brackish marshes in the Cameron Creole Watershed would benefit Fish and Wildlife Service trust resources such as migratory waterfowl, shorebirds, and wading birds including Cameron Prairie NWR priority species such as the mottled duck and greater white fronted goose. At-risk species such as black rail, diamondback terrapin, and Louisiana eyed silkmoth would benefit by restoring coastal vegetated wetlands and providing refugia for those species.

**Proposed Solution:** Establish two marsh creation/nourishment areas north of East Prong to restore 511 acres and nourish 75 acres of brackish marsh using approximately 3 million cubic yards of dedicated dredge material from either Calcasieu Lake or the ship channel. An additional 212 acres of marsh will be re-nourished through spray dredging existing canals and bayous. Approximately 490,000 cyds of material are available through dredging of the natural bayous: assuming a 6-foot bottom depth and a 12-foot bottom width. Spray dredging can nourish 100 feet out from the bankline. Estimating 61,439 linear feet of bayou at a spray depth of 1.5 feet, approximately 282 acres could be benefited. Current estimates assume 75% of the area will benefit (212 acres).



**Project Benefits:** The project would restore 511 acres and nourish 287 acres of brackish marsh in the Cameron Creole Watershed. Approximately 485 (88%) net acres of brackish marsh would be created and protected over the 20-year project life.

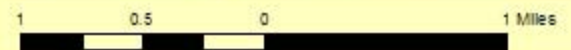
**Project Costs:** The estimated construction cost including 25% contingency is approximately \$20 million.

**Preparers of Fact Sheet:** Angela Trahan, Fish and Wildlife Service, (337) 291-3137,  
[Angela\\_Trahan@fws.gov](mailto:Angela_Trahan@fws.gov)



Calcasieu Lake

Cameron Prairie NWR

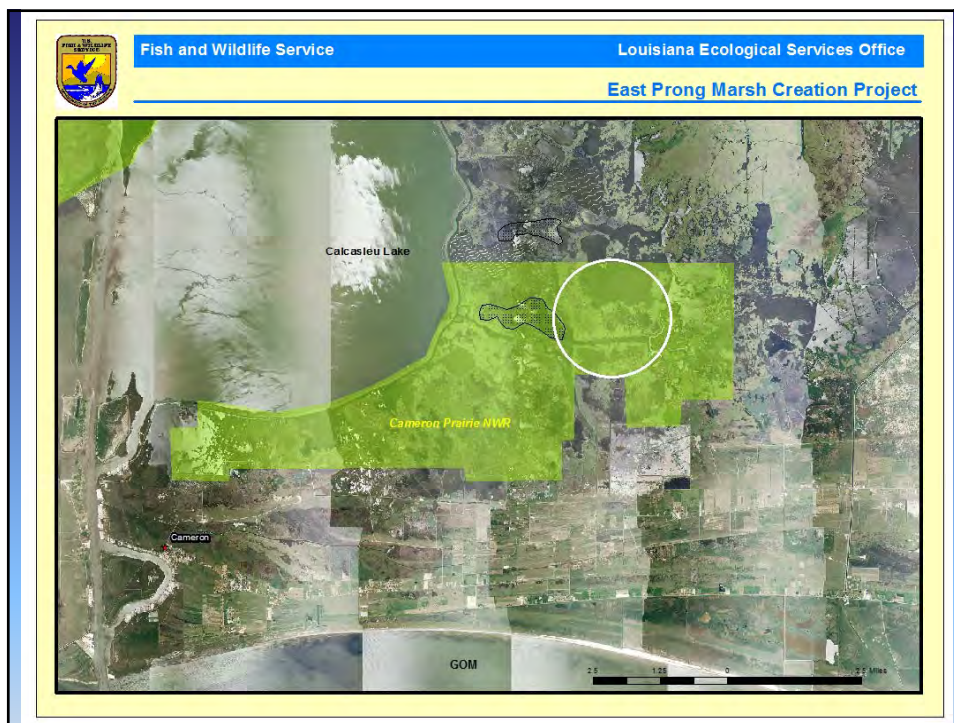


# East Prong Marsh Creation



PPL 24

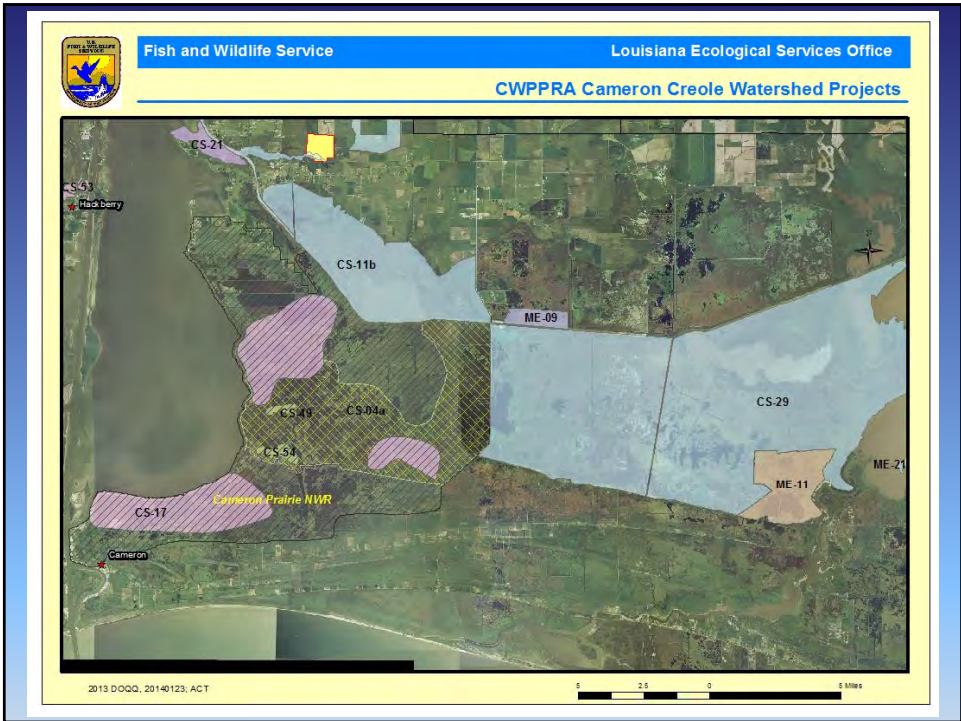
Region 4, Calcasieu - Sabine Basin

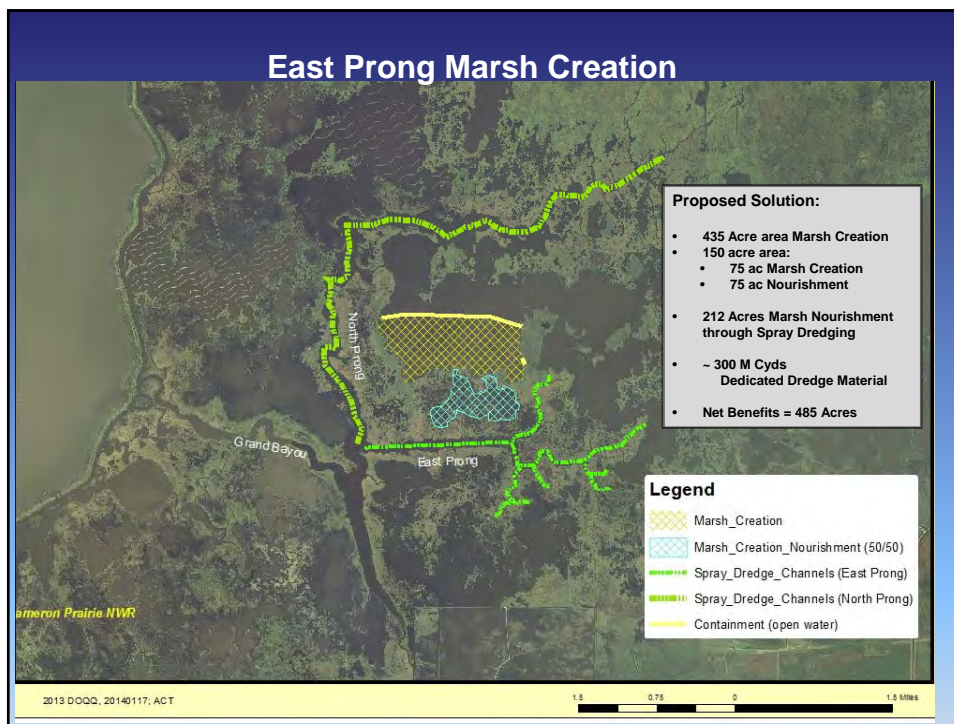


### East Prong Marsh Creation

Problem: salt water intrusion, wave induced erosion, storm-induced impacts, and prolonged inundation

Goal: restore marshes within large open water areas scoured by tropical storms and along the natural historic bayous





### East Prong Marsh Restoration

ME-16 Freshwater Intro. South of 82

- Potential Issues
- Estimated Cost (25% contingency): \$18.8 M

Sabine Marsh Creation Cycle 1

**R4-CS-06**

**No Name Bayou Marsh Creation & Nourishment**

**PPL24 PROJECT NOMINEE FACT SHEET**  
**February 18, 2014**

**Project Name**

No Name Bayou Marsh Creation and Nourishment

**Louisiana's 2012 Coastal Master Plan**

Marsh Creation – 004.MC.23

**Project Location**

Region 4, Calcasieu-Sabine Basin, Cameron Parish

**Problem**

The Calcasieu Ship Channel, immediately west of the project area, provides an avenue for the rapid movement of high-salinity water into the marshes around Calcasieu Lake. This movement increased salinity in the area, resulting in plant death and marsh loss. The weakened marshes located between the East Fork of the Calcasieu River and Calcasieu Lake have been decimated by hurricanes. Marshes that once provided a buffer to the southwest rim of Calcasieu Lake are now shallow open water areas.

**Proposed Solution**

The proposed project's primary feature is to create and/or nourish approximately 515 acres of marsh (438 acres created, 77 acres nourished) south of Calcasieu Lake. In order to achieve this, sediment will be hydraulically pumped from the upland disposal areas of the Calcasieu River immediately adjacent to (across East Fork), and into the shallow water marsh creation area. Clean out approximately 5,600 LF of the Cameron Creole Watershed Levee borrow channel to facilitate water movement into the newly created area. Approximately 12,000 LF of tidal creeks will be constructed in the newly created/nourished area. Minimal containment dikes will be constructed around the marsh creation area to keep material on site during pumping. Once pumping has been completed, the containment dikes will be degraded to the current platform elevation and gaps will be excavated. Additionally, 260 acres of vegetative plantings will occur within the newly created areas.

**Goals**

The project goal is to create and/or nourish approximately 515 ac of marsh (438 ac created, 77 ac nourished) of emergent brackish marsh using sediment from upland disposal sites of the Calcasieu River. If available, material from the Calcasieu Ship Channel maintenance cycles would also be considered.

**Preliminary Project Benefits**

- 1) *What is the total acreage benefited both directly and indirectly?*  
This total project area is 515 ac.
  
- 2) *How many acres of wetlands will be protected/created over the project life?* Based on a 50% rate reduction to the projected -1.36%/yr land loss rate, marsh creation and nourishment in the project area would yield 449 net acres, 20 years after initial construction.

- 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 over the project area is 50%.
- 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?*  
Yes, helps to prevent coalescence of Lake Calcasieu with the open water area around No Name Bayou.
- 5) *What is the net impact of the project on critical and non-critical infrastructure?* No major impacts to critical infrastructure. Oil and gas facilities in area would be benefited by the project acreage created.
- 6) *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:**

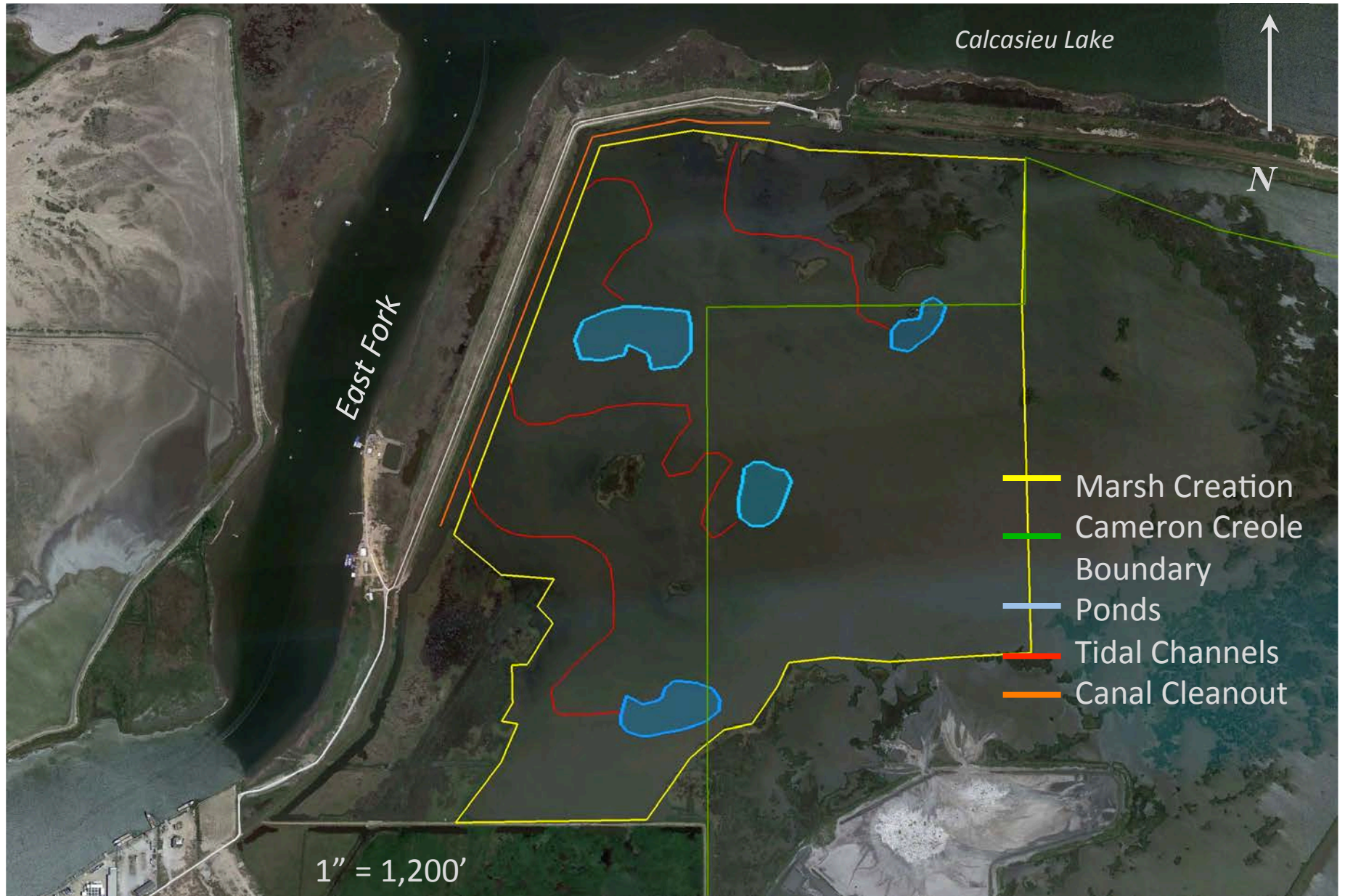
The estimated construction cost including 25% contingency is \$21,686,409. The fully funded cost range is \$25M-\$30M.

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

John D. Foret, Ph.D.; NOAA Fisheries Service, 337.291.2107 [John.Foret@noaa.gov](mailto:John.Foret@noaa.gov)  
Angela Trahan; USFWS, 337.291.3137; [Angela\\_Trahan@fws.gov](mailto:Angela_Trahan@fws.gov)



# PPL 24: No Name Bayou Marsh Creation (Cameron Parish)



# East Cove Marsh Creation



PPL 24

Region 4, Calcasieu - Sabine Basin



East Cove Marsh Creation Project

- 315 acres marsh creation
- 1.5 M cyds of maintenance dredged material
- 10,800 LF retention dikes
- 6,400 LF earthen weirs
- Cost: \$ 5.8 million (with 25% contingency)

\*incremental to the Corps Operations costs



~~**R4-CS-07**~~

~~**North Cameron Creole Marsh Creation**~~

*Combined with R4-CS-02*

**PPL24 PROJECT NOMINEE FACT SHEET**  
**February 11, 2014**

**Project Name:** North Cameron Creole Marsh Creation Project

**Coast 2050 Strategy:**

- Regional Strategy # 8 (dedicated sediment delivery to create marshes)

**Project Location:** Region 4, north Cameron Creole Watershed marshes

**Problem:** Wind action across the large open water areas in the northern Cameron Creole Watershed, in combination with existing connecting canals and bayous results in an artificial water circulation pattern throughout the north Peconi Bayou watershed that maintains high turbidities and facilitates saltwater intrusion into upper watershed low salinity zones. Terraces constructed in some of those open water areas have been eroded away and the circulation/turbidity/saltwater problems will likely worsen if no additional actions are taken.

**Proposed Solution:** Create a total of 405 acres of marsh in a number of strategically located marsh creation cells to subdivide the large open water areas into separate mini watersheds to reduce water circulation and restore a more natural hydrologic pattern. A canal plug would also be installed to further preclude un-natural water circulation patterns. Material for the proposed marsh creation could come from Calcasieu Ship Channel maintenance dredging, or from dedicated dredging in Calcasieu Lake. Low-salinity material from Sweet Lake would be better source resulting in improved revegetation rates and reduction of saltwater introduction impacts to adjoining marshes and SAVs, if obstacles could be overcome for use of that material.

**Project Benefits:** In addition to the benefits associated with the footprint of the created marshes, fetch and associated turbidities within the subdivided open water areas would be reduced, hopefully facilitating growth of SAV and reducing salinity fluxes associated with ongoing water circulation patterns. Eastern marsh creation cells would also dampen exchange between the open water areas and the pond system extending northwestward between Big Pasture Road and the GIWW. By reducing the water circulation system within the upper Peconi Bayou watershed and by dampening excessive water exchange (i.e., restoring normal exchange) between the Peconi Bayou system and the Big Pasture Road marshes, those low-salinity marshes would be protected from salinity spikes. After 20 years, the 405 acres of created marshes would be reduced to an estimated 402 acres, based on CWPPRA marsh creation protocols and the previously determined loss rate of -0.069% per year.

**Project Costs:** The estimated construction cost including 25% contingency, is approximately \$24.4 million.

**Preparers of Fact Sheet:** Ronny Paille, Fish and Wildlife Service, (337) 291-3117,  
Ronald\_Paille@FWS.GOV

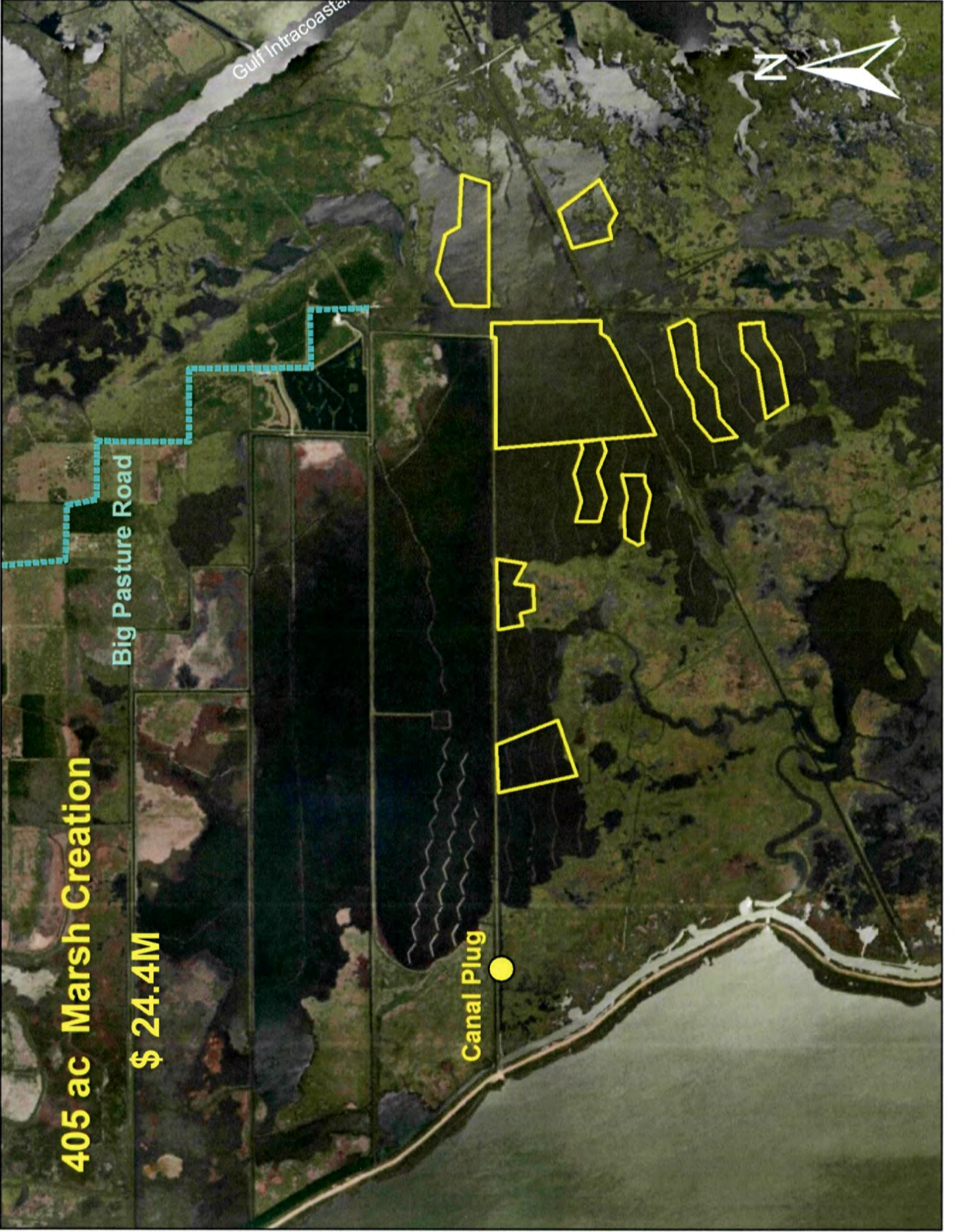
**405 ac Marsh Creation**

**\$ 24.4M**

Big Pasture Road

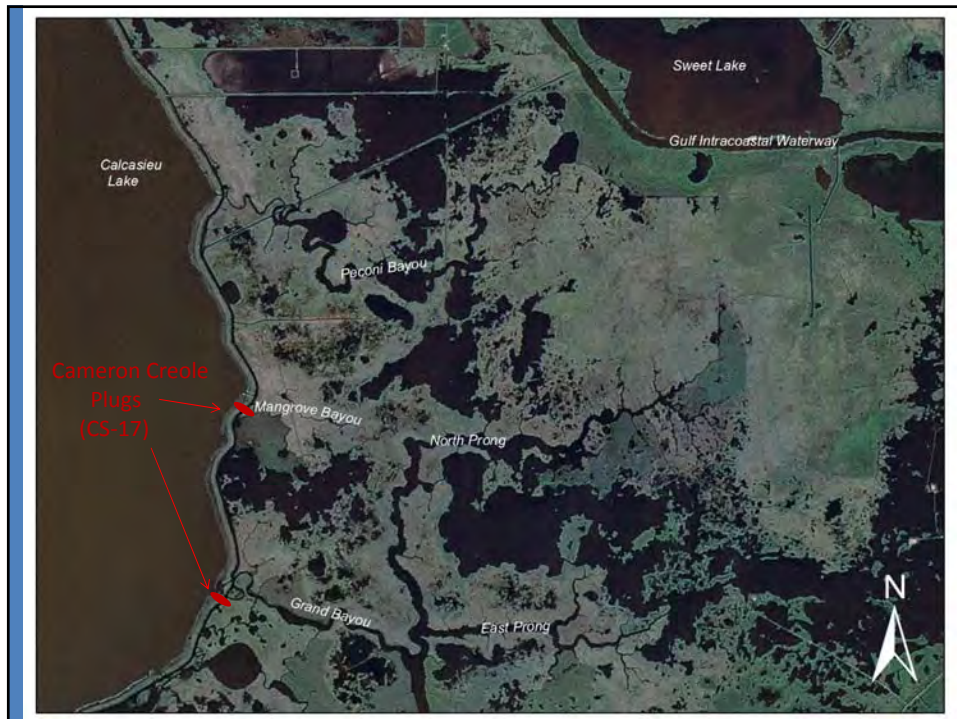
Canal Plug

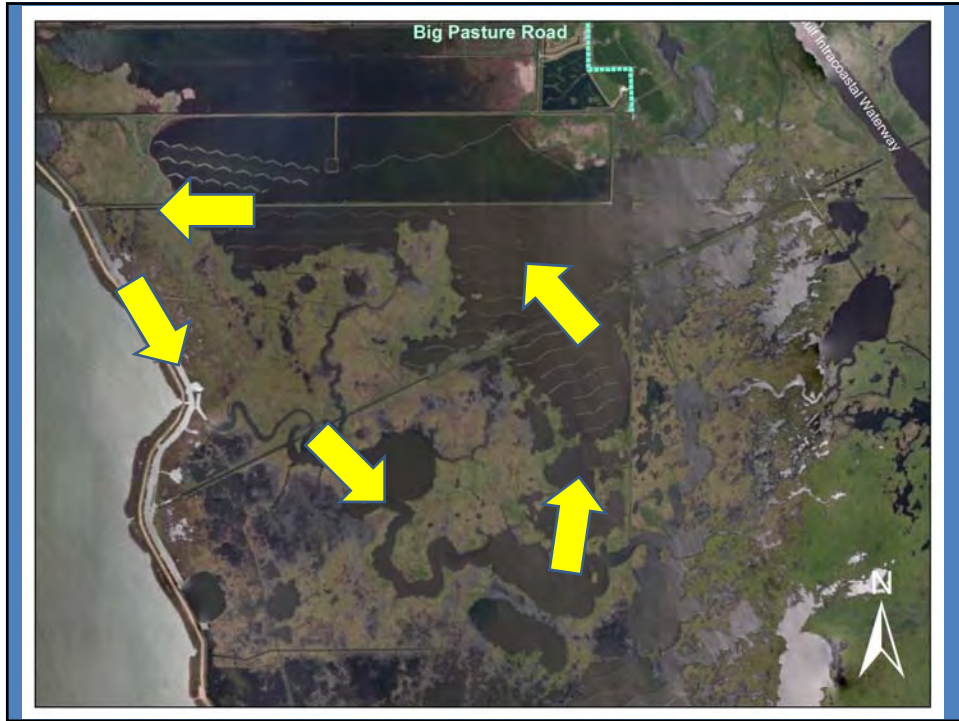
Gulf Intracoastal



# North Cameron Creole Marsh Creation Project

PPL 24 Nominee  
U.S. Fish and Wildlife Service







**~~R4-CS-08~~**

**~~Wild Horse Ridge Protection~~**

*Not consistent with 2012 State Master Plan*

**PPL24 PROJECT NOMINEE FACT SHEET**  
**January 28, 2014**

**Project Name:**

Wild Horse Ridge Protection Project

**Louisiana's 2012 Coastal Master Plan**

Bank Stabilization – 004.BS.03

**Project Location:**

Region 4, Calcasieu-Sabine Basin, located on the north shore of the Gulf Intracoastal Waterway (GIWW) about 7 miles from Vinton, Louisiana, and 7 miles from the Sabine River. It is bordered to the east by the Gum Cove Road Ferry Landing (no longer in operation), to the west by the Vinton Drainage Canal, and to the south by the GIWW.

**Problem:**

The project would restore marsh to offset levels of historic and ongoing wetland loss by shoreline erosion. Based on 1998 to 2013 imagery, the erosion rate ranges between 6.6-12.0 feet per year along the GIWW. The spoil bank has breached in at least three areas along the proposed project boundary. Additional breaching of the spoil bank in this area would lead to physical scour (erosion) and saltwater intrusion of the fragile, organic soils in the fresh-to-intermediate marshes north of the GIWW. Said breaches would also compromise the utilities corridor located immediately north of the bank line and present a potentially dangerous situation. Termination of the spoil bank through erosion will also eliminate a major line of storm surge defense for populated areas

**Goals:**

The project would prevent shoreline erosion along the GIWW, and it is expected that this project would trap sediments behind the rock dike as seen in the CWPPRA sponsored CS-22, CS-24, CS-27, and CS-30 projects.

**Proposed Solutions:**

Project features would also include a 23,065 foot-long foreshore rock dike with a top height of +3.5' NAVD beginning at the east side of the Vinton Drainage Canal eastward to the Gum Cove Ridge Ferry Crossing. As proposed, the dike would be constructed along the -2' contour with 5' wide crown and 3:1 side slopes. The conceptual dike design is based on the Black Bayou Hydrologic Restoration (CS-27) foreshore rock dike.

**Preliminary Project Benefits:**

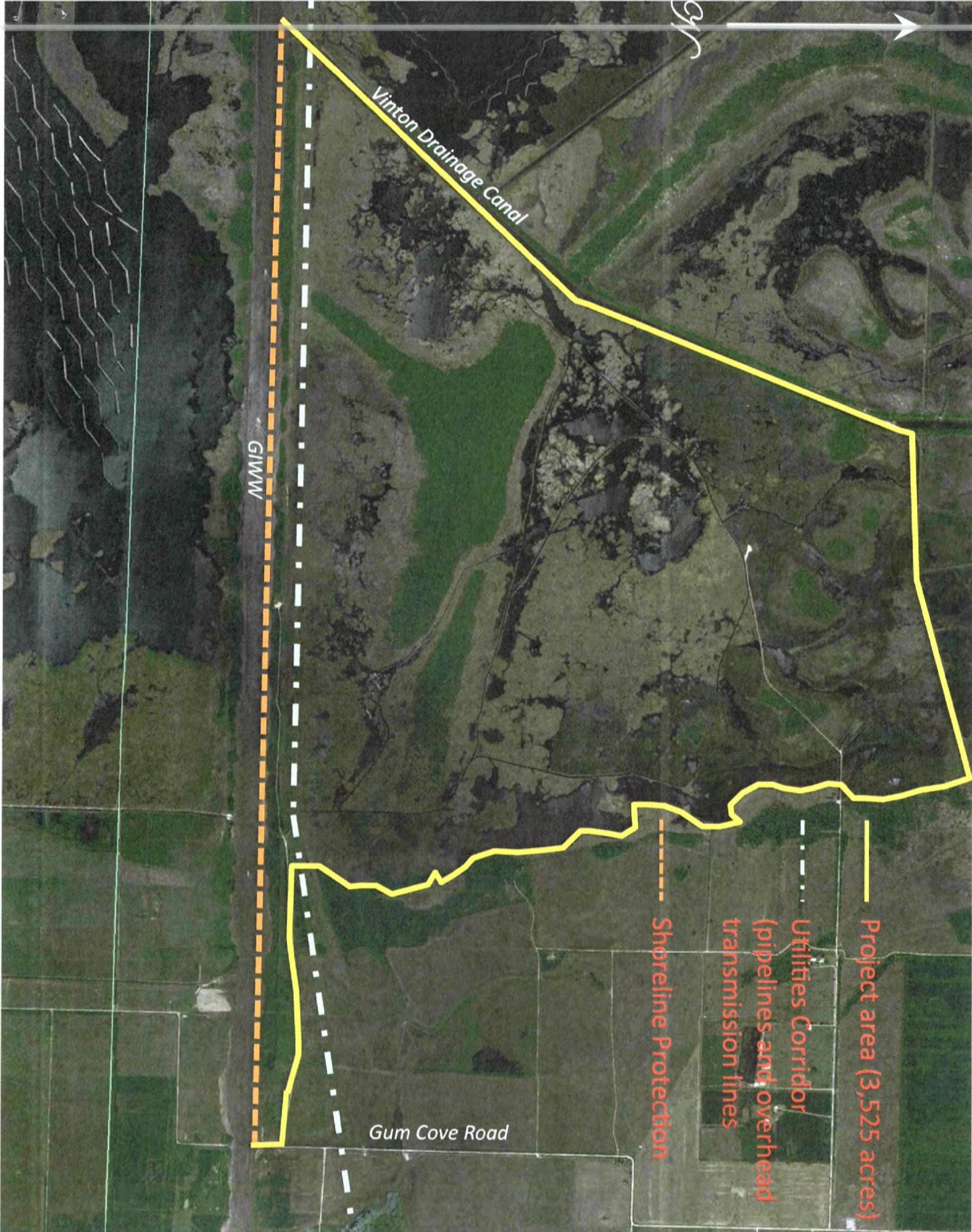
Based on a 100% rate reduction to the measured average erosion rate of 9.3'/year, the shoreline protection would prevent 98 acres from being eroded, 20 years after initial construction. In addition, the 2' contour is located approximately 100' from the existing bank line, and through entrapment of the suspended sediments, an additional 52 acres would be created during the 20 year project life.

**Preliminary Construction Costs:**

The cost plus 25% contingency is about \$12 million. The fully-funded cost range is \$10M-\$15M.

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

Bart R. Yakupzack, Gray Law Firm, (337) 494-0694; bryakupzack@graylawfirm.com



Vinton Drainage Canal

GIWW

Gum Cove Road

Project area (3,525 acres)

Utilities Corridor  
(pipelines and overhead  
transmission lines)

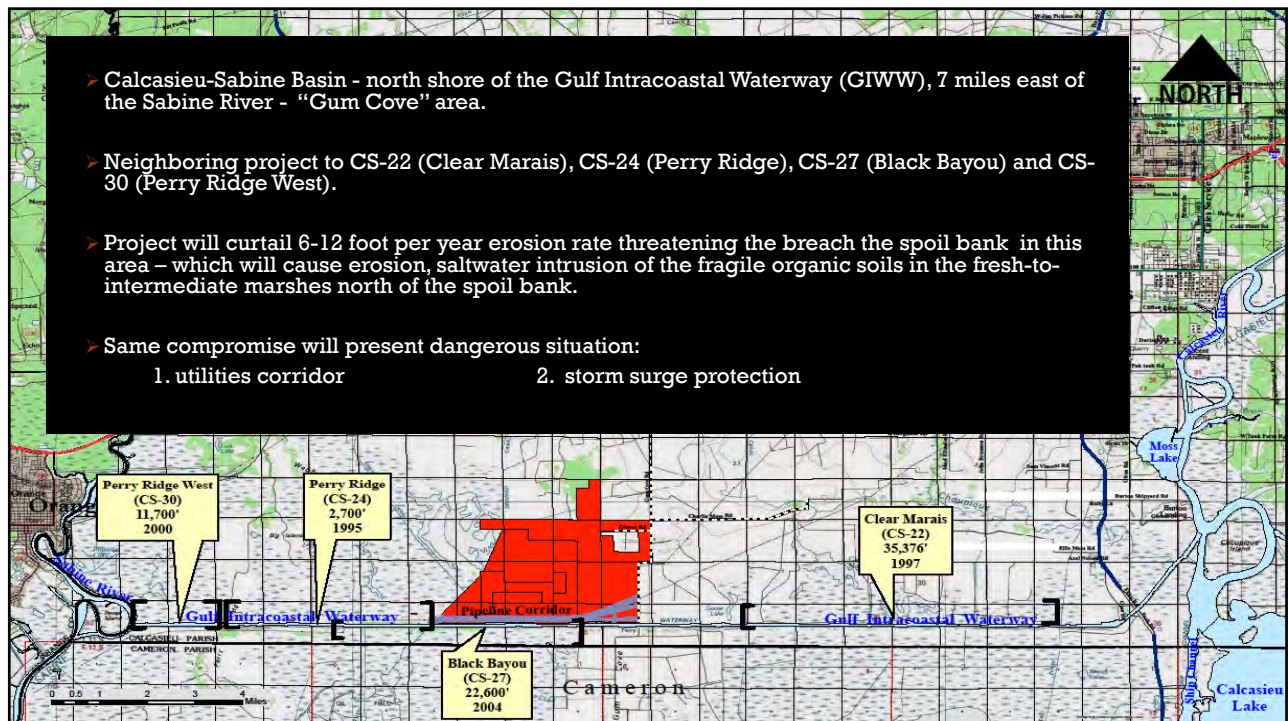
Shoreline Protection

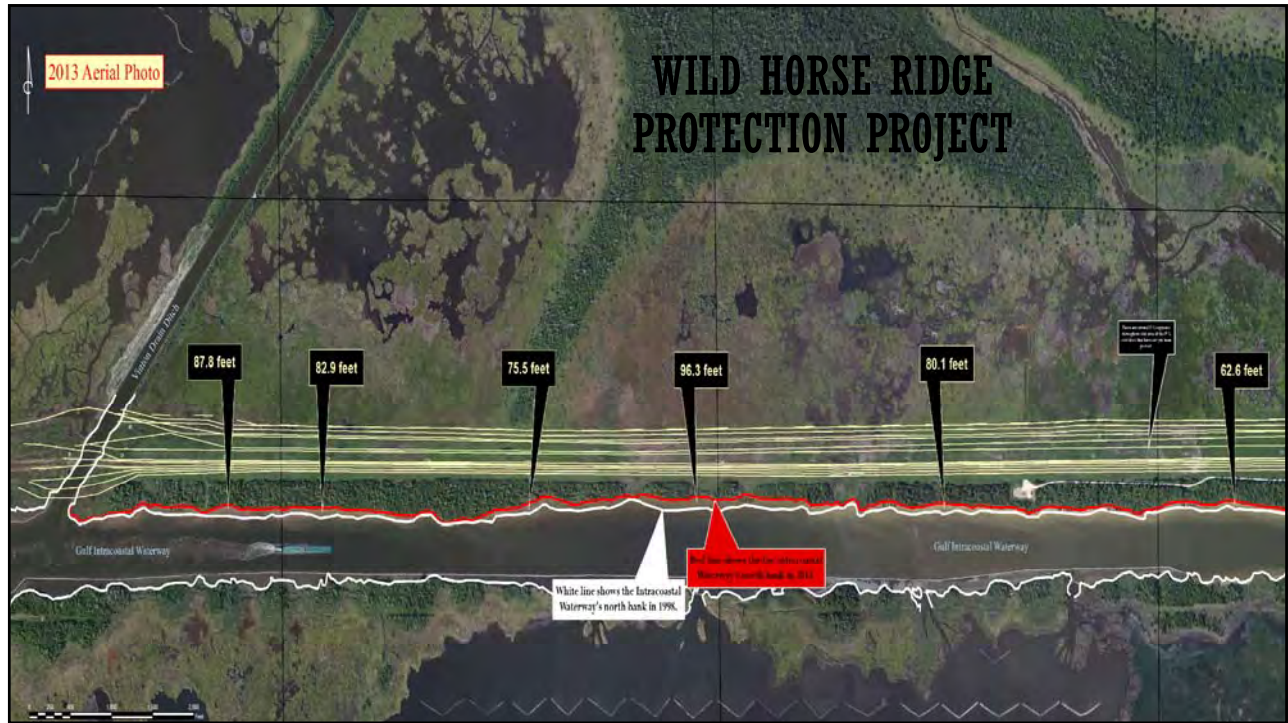
# WILD HORSE RIDGE PROTECTION PROJECT



PPL24 PROJECT NOMINEE  
REGION IV  
FEBRUARY 11, 2014

- Calcasieu-Sabine Basin - north shore of the Gulf Intracoastal Waterway (GIWW), 7 miles east of the Sabine River - "Gum Cove" area.
- Neighboring project to CS-22 (Clear Marais), CS-24 (Perry Ridge), CS-27 (Black Bayou) and CS-30 (Perry Ridge West).
- Project will curtail 6-12 foot per year erosion rate threatening the breach the spoil bank in this area - which will cause erosion, saltwater intrusion of the fragile organic soils in the fresh-to-intermediate marshes north of the spoil bank.
- Same compromise will present dangerous situation:
  1. utilities corridor
  2. storm surge protection





## WILD HORSE RIDGE PROTECTION PROJECT

- ABILITY TO CONTAIN THE GIWW WITHIN ITS BANKS
- GEOTECH WORK IS DONE
- SUBSTRATE TO SUPPORT THE WEIGHT OF THE ROCKS
- ACCRETION AS A RESULT OF THE POROUS NATURE OF THE DESIGN

This block contains a photograph of a rocky shoreline of the Gulf Intracoastal Waterway (GIWW). The rocks are arranged in a line along the water's edge. In the background, there are trees and a cloudy sky. An inset aerial photograph in the bottom left corner shows the project location, with a red T-shaped marker indicating the specific area shown in the main photograph. The inset also includes a north arrow and a scale bar. To the right of the photograph is a list of four bullet points describing the project's benefits. A red circular seal is located in the bottom right corner of the block.

# **WILD HORSE RIDGE PROTECTION PROJECT**

- **BUSIEST SECTION OF GIWW FOR COMMERCE (BETWEEN HOUSTON AND NOLA – HUGE WAKES**
- **PROVEN PROJECTS – CLEAR MARAIS, PERRY RIDGE, PERRY RIDGE WEST, BLACK BAYOU**

**~~R4-CS-09~~**

**~~No Name Bayou Marsh Creation & Nourishment~~**

*Combined with R4-CS-06*

**PPL24 PROJECT NOMINEE FACT SHEET**  
**February 11, 2014**

**Project Name**

No Name Bayou Marsh Creation and Nourishment

**Louisiana's 2012 Coastal Master Plan**

Marsh Creation – 004.MC.23

**Project Location**

Region 4, Calcasieu-Sabine Basin, Cameron Parish

**Problem**

The Calcasieu Ship Channel, immediately west of the project area, provides an avenue for the rapid movement of high-salinity water into the marshes around Calcasieu Lake. This movement increased salinity in the area, resulting in plant death and marsh loss. The weakened marshes located between the East Fork of the Calcasieu River and Calcasieu Lake have been decimated by hurricanes. Marshes that once provided a buffer to the southwest rim of Calcasieu Lake are now shallow open water areas.

**Proposed Solution**

The proposed project's primary feature is to create and/or nourish approximately 515 acres of marsh (438 acres created, 77 acres nourished) south of Calcasieu Lake. In order to achieve this, sediment will be hydraulically pumped from the upland disposal areas of the Calcasieu River immediately adjacent to (across East Fork), and into the shallow water marsh creation area. Clean out approximately 5,600 LF of the Cameron Creole Watershed Levee borrow channel to facilitate water movement into the newly created area. Approximately 12,000 LF of tidal creeks will be constructed in the newly created/nourished area. Minimal containment dikes will be constructed around the marsh creation area to keep material on site during pumping. Once pumping has been completed, the containment dikes will be degraded to the current platform elevation and gaps will be excavated. Additionally, 260 acres of vegetative plantings will occur within the newly created areas.

**Goals**

The project goal is to create and/or nourish approximately 515 ac of marsh (438 ac created, 77 ac nourished) of emergent brackish marsh using sediment from upland disposal sites of the Calcasieu River.

**Preliminary Project Benefits**

- 1) *What is the total acreage benefited both directly and indirectly?*  
This total project area is 515 ac.
- 2) *How many acres of wetlands will be protected/created over the project life?* Based on a 50% rate reduction to the projected -1.36%/yr land loss rate, marsh creation and nourishment in the project area would yield 449 net acres, 20 years after initial construction.



- 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 over the project area is 50%.*
- 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?*  
Yes, helps to prevent coalescence of Lake Calcasieu with the open water area around No Name Bayou.
- 5) *What is the net impact of the project on critical and non-critical infrastructure? No major impacts to critical infrastructure. Oil and gas facilities in area would be benefited by the project acreage created.*
- 6) *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).

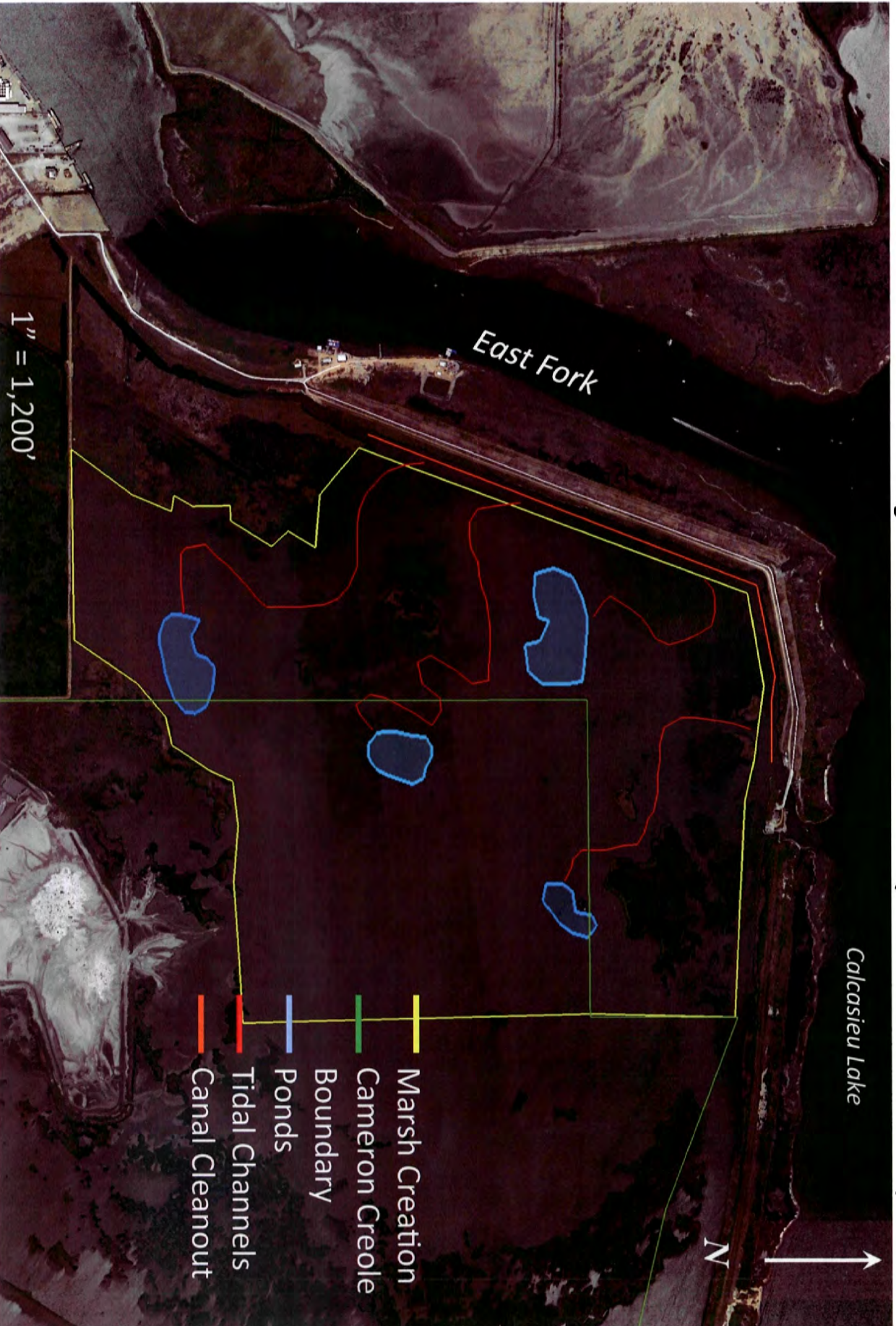
**Preliminary Construction Costs:**

The estimated construction cost including 25% contingency is \$21,686,409. The fully funded cost range is \$25M-\$30M.


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

John D. Foret, Ph.D.; NOAA Fisheries Service 337.291.2107 [John.Foret@noaa.gov](mailto:John.Foret@noaa.gov)


# PPL 24: No Name Bayou Marsh Creation (Cameron Parish)



Science, Service, Stewardship




## No Name Bayou Marsh Creation and Nourishment (Cameron Parish) Region IV – Calcasieu-Sabine Basin



**NOAA  
FISHERIES  
SERVICE**

February 11, 2014

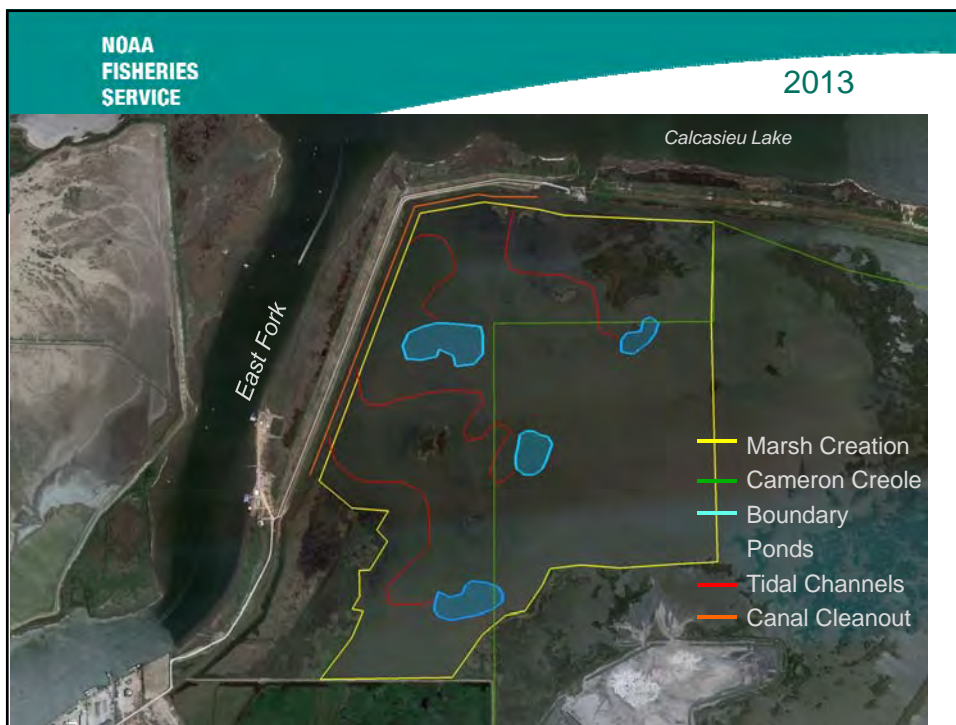
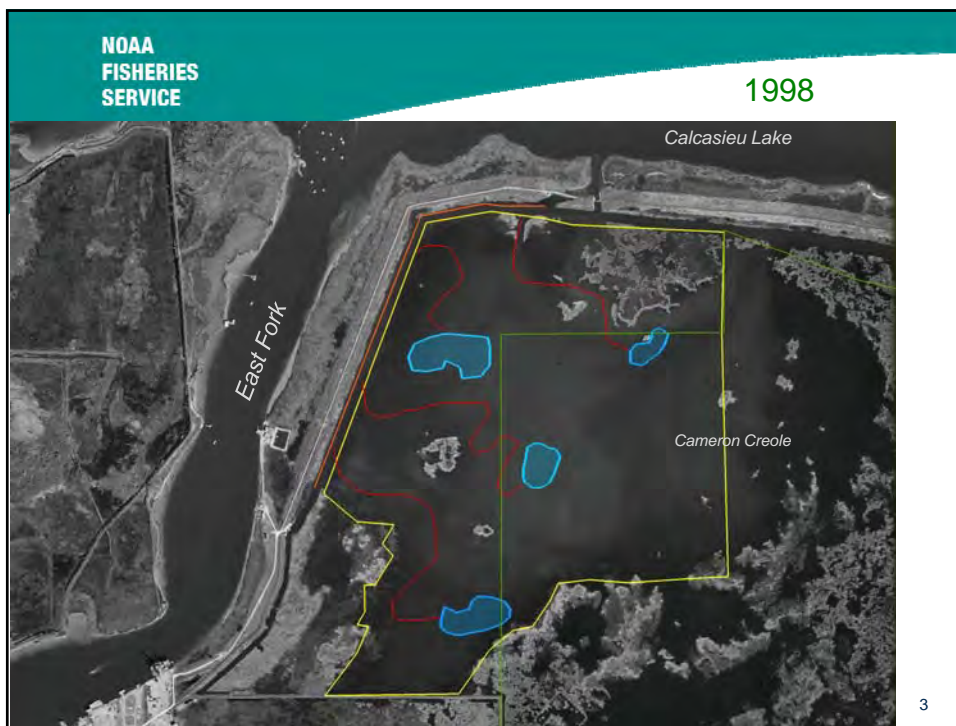
**NOAA  
FISHERIES  
SERVICE**

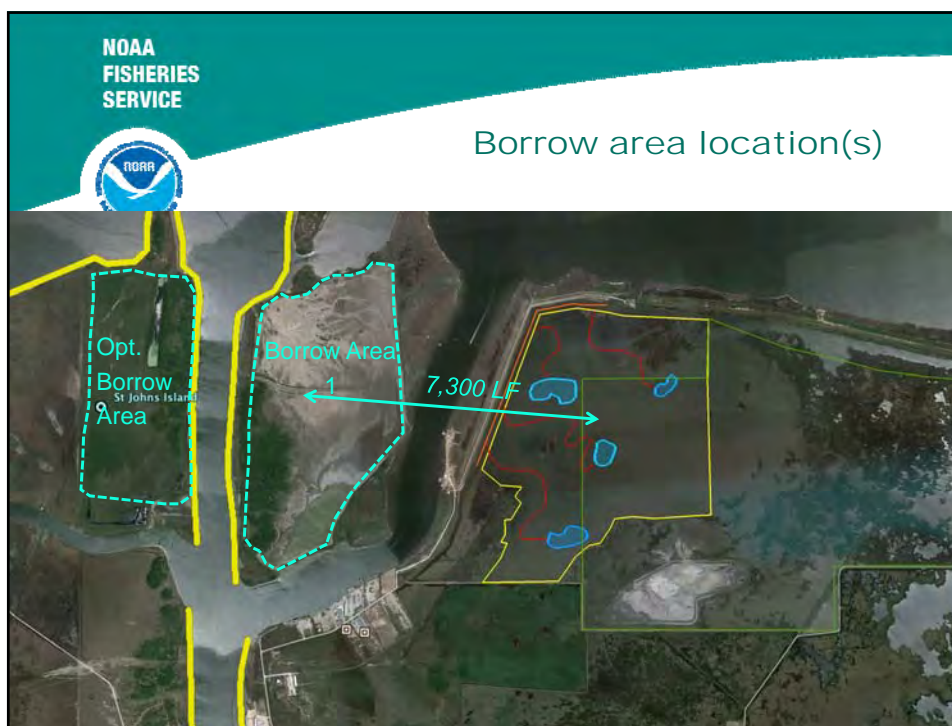


### Problem

- High land loss rates in this area of Cal/Sab Basin
- Rapid salinity increases from ship channel weakened plant communities, ultimately leading to vegetation die-off and marsh breakup, allowing hurricanes to scour the area
- Marshes that once provided a buffer to the south rim of Calcasieu Lake are now shallow open water areas
- Historically, these marshes served as storm surge reduction for communities to the north

2





NOAA  
FISHERIES  
SERVICE

Project Features

- Total Acres = 515 acres (438 created, 77 nourished)
- Reestablishes marsh at the intersection of Calcasieu River and Calcasieu Lake
- Borrow from outside immediate project area from upland disposal site(s)
- Clean out 5,000 LF of existing borrow canal to facilitate water exchange to the newly created wetlands
- Approximately 12,000 LF of tidal channels will be constructed.
- Consistent with State Master Plan
- 449 net acres @ TY20
- Construction Cost with 25% contingency = \$21.7 million

6

**R4-CS-10**

**North Oyster Bayou Marsh Creation**

**PPL24 PROJECT NOMINEE FACT SHEET**  
**February 11, 2014**

**Project Name:**

North Oyster Bayou Marsh Creation

**Louisiana's 2012 Coastal Master Plan**

Marsh Creation – 004.MC.04

**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 and analysis of 1978 to 2000 data and Corps of Engineers data from 1974 to 1990, landloss ranges from 4.8 acres to 18.8 acres per year for the project area. 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 400 to 600 acres of saline marsh.

**Proposed Solutions:**

Sediment would be mined from the offshore disposal area used for CS-59 and placed in multiple disposal areas to create between 400 to 600 acres of saline marsh. Disposal areas would be constructed between the CS-59 marsh creation areas and terrace field depicted on the concept map (red polygon). Disposal would be semi-confined and the created elevations would be planted with smooth cordgrass plugs. Possible expansion of the marsh creation area is shown on the concept map as yellow polygons. Although marsh creation via dedicated dredging of sediment would be the primary technique, opportunities may exist to include some terracing where warranted, but that is not included in the benefit/cost estimates at this time. All restoration options would be coordinated to avoid required marsh creation mitigation in the area.

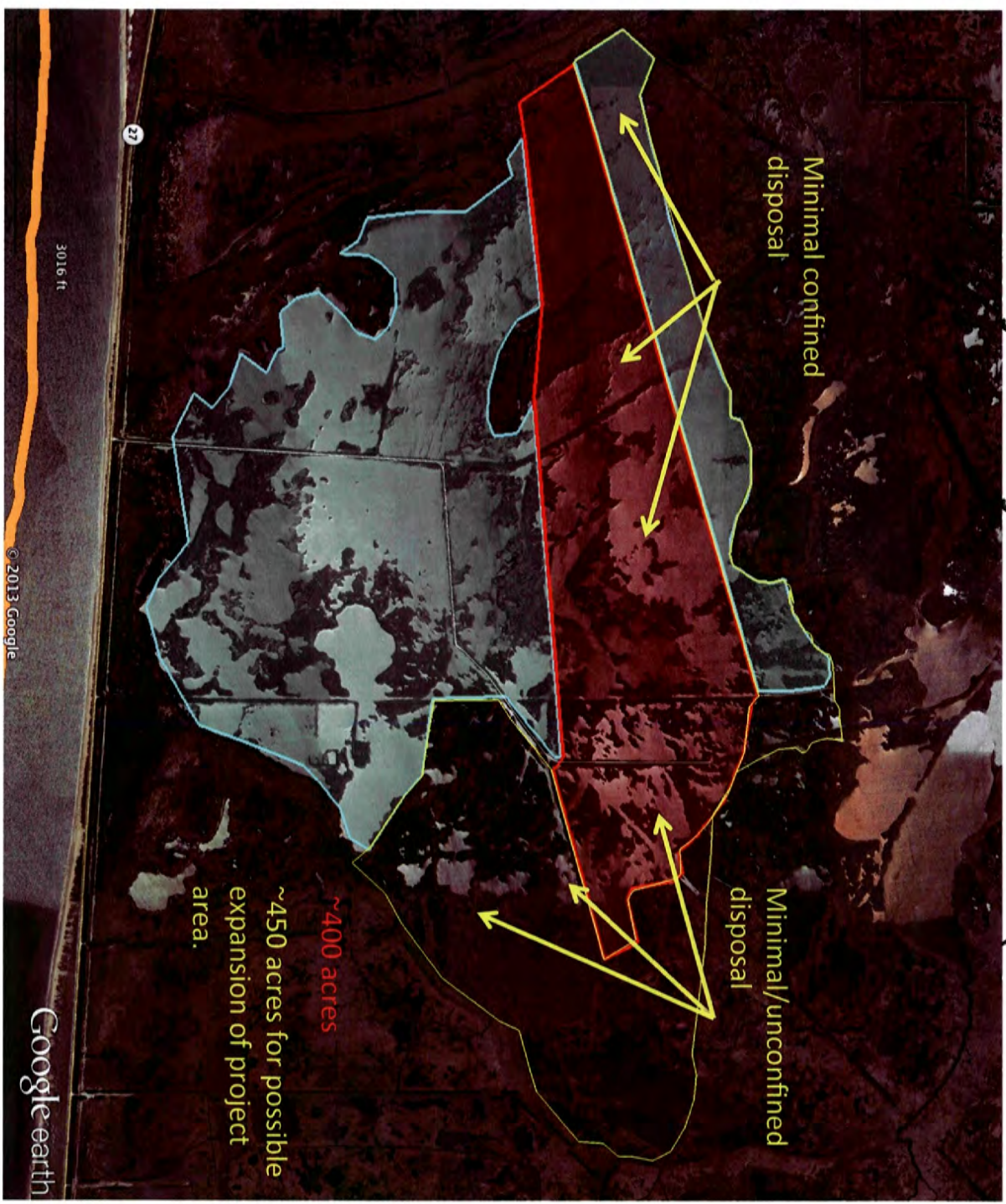
**Preliminary Construction Costs:**

The cost plus 25% contingency is about \$24 million (400 acres). The fully-funded cost range is \$25M-\$30M.

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

John D. Foret, Ph.D., NOAA's National Marine Fisheries Service, (337) 291.2107;  
[john.foret@noaa.gov](mailto:john.foret@noaa.gov)

# PPL 24: North Oyster Bayou Marsh Creation (Cameron Parish)



Google Earth Pro

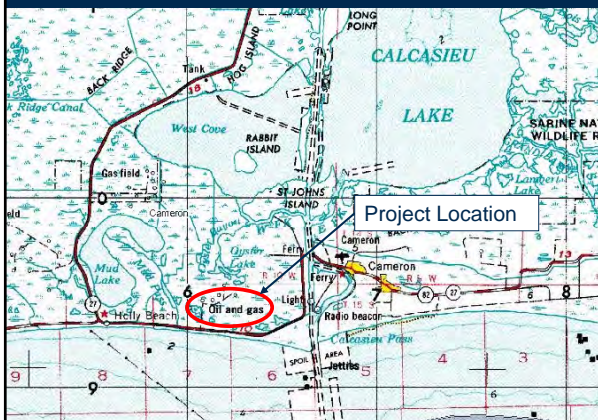




Science, Service, Stewardship



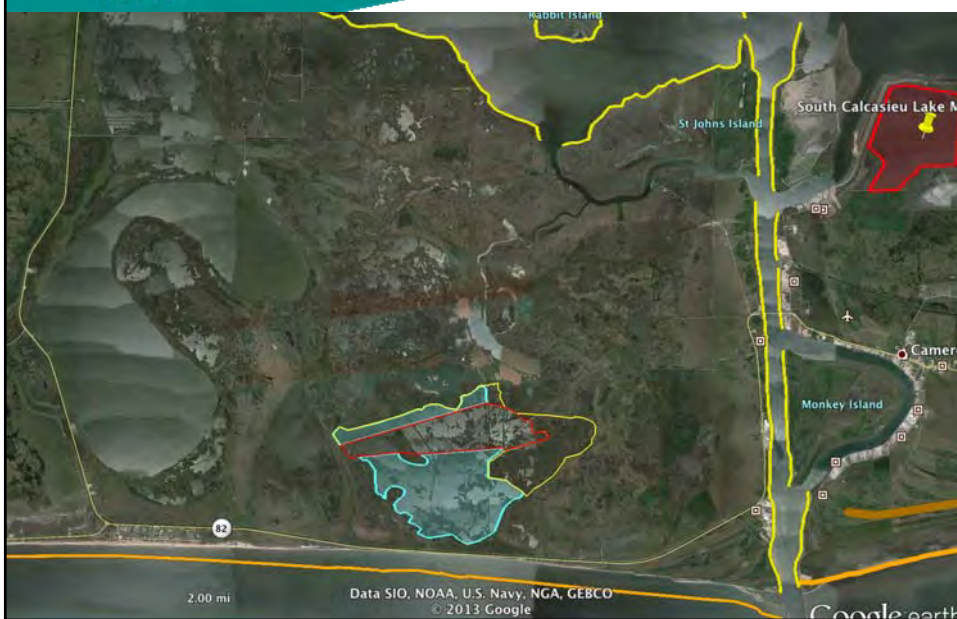
# North Oyster Bayou Marsh Creation and Nourishment (Cameron Parish) Region IV – Calcasieu/Sabine Basin

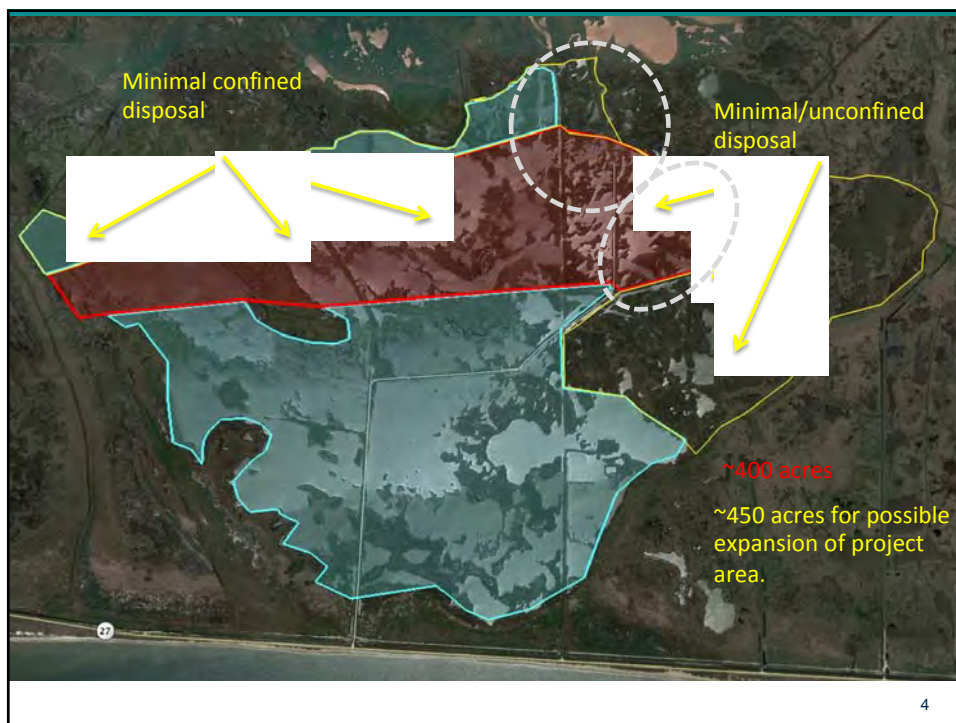
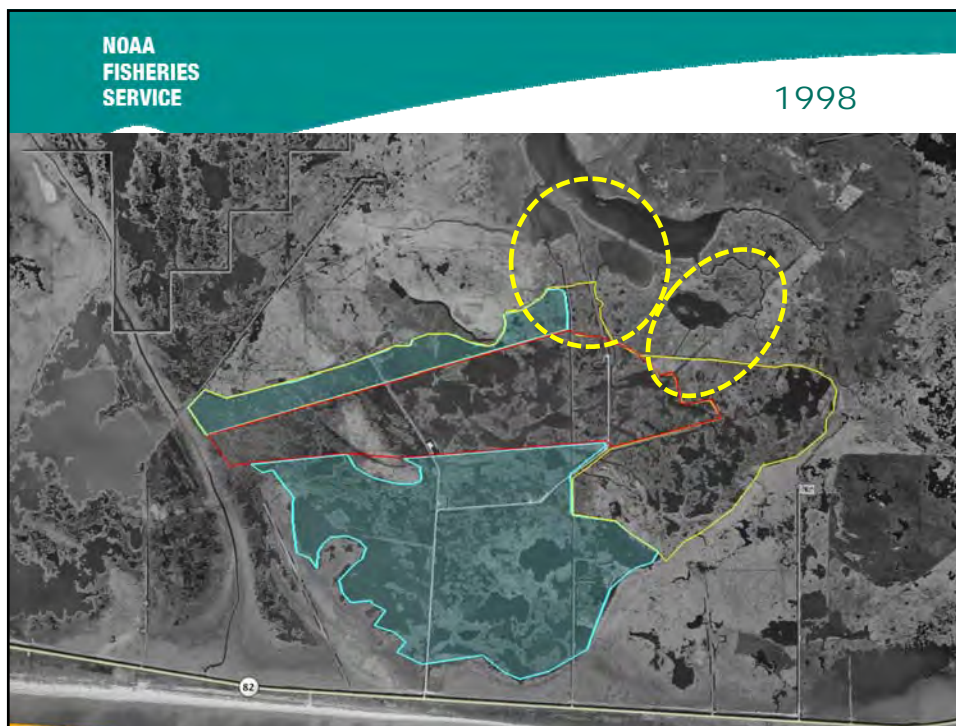


## NOAA FISHERIES SERVICE

February 11, 2014


## NOAA FISHERIES SERVICE







NOAA  
FISHERIES  
SERVICE



### Project Features

- Total Acres = 405 acres
- Project is expandable to **852 acres**
- Re-establishes land bridge feature between LA Highway 82 and Oyster Lake
- Re-establishes marsh platform with ponds
- Borrow from identified, surveyed CS-59 offshore area
- Complements CS-59 and Parish restoration activities in the area
- Consistent with State Master Plan
- Provides protection to Hackberry
- Construction Cost with 25% contingency = \$24 million

6

## **Region 4 – MERMENTAU BASIN**

**R4-ME-01**

**Deep Lake Hydrologic Restoration**

**PPL24 PROJECT NOMINEE FACT SHEET**

January 28, 2014

**Project Name**

Deep Lake Hydrologic Restoration

**Master Plan Strategy**

Deep Lake Hydrologic Restoration 004.HR.13

**Project Location**

Region 4, Mermentau Basin, Cameron Parish, Rockefeller Wildlife Refuge

**Problem**

Construction of La. Highway 82 restricts drainage of local communities and marshes north of the highway to outlets located on Rockefeller Wildlife Refuge. That restriction can result in prolonged periods of inundation during high rainfalls and flooding events.

**Goals**

The proposed project will reduce prolong periods of inundation to relieve flooding stress and restore the function, value, and sustainability to thousands of acres of marsh. The proposed project will also allow Rockefeller Wildlife Refuge to accommodate additional water flow during flooding events to relieve flooding of local communities.

**Proposed Project Features**

The proposed project would construct a spillway structure at the north end of Deep Lake and replace two existing plugs with structures that allow drainage. The project would also restore the East End Lock to allow for improved operations.

**Preliminary Project Benefits**

- 1) *What is the total acreage benefited both directly and indirectly?* Drainage through this area is important to the entire Mermentau Basin.
- 2) *How many acres of wetlands will be protected/created over the project life?* Has not yet been determined.
- 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 loss rate reduction throughout the area of direct benefit is estimated to be >25%.
- 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.* Proposed project improves drainage across La. Highway 82.
- 5) *What is the net impact of the project on critical and non-critical infrastructure?* The project would restore the East End Lock which is a necessary outlet for Superior Canal.

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

**Identification of Potential Issues**

There are no issues identified at this time.

**Preliminary Construction Costs**

The estimated construction cost including 25% contingency is approximately \$8 million.

**Preparer of Fact Sheet**

Troy Mallach, NRCS, (337) 291-3064, [troy.mallach@la.usda.gov](mailto:troy.mallach@la.usda.gov)

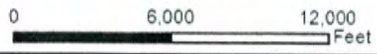
Phillip Trosclair, Rockefeller Wildlife Refuge, (337) 491-2000, [ptrosclair@wlf.la.gov](mailto:ptrosclair@wlf.la.gov)






Map Produced By:  
 United States Department of Agriculture  
 Natural Resources Conservation Service  
 Alexandria, LA  
 Data Source: NAIP 2013  
 Map Date: JANUARY 23, 2014



**PPL-24  
 DEEP LAKE  
 HYDROLOGIC RESTORATION**



	EXISTING_LOCK
	EXISTING_PLUGS
	PROPOSED_SPELLWAY



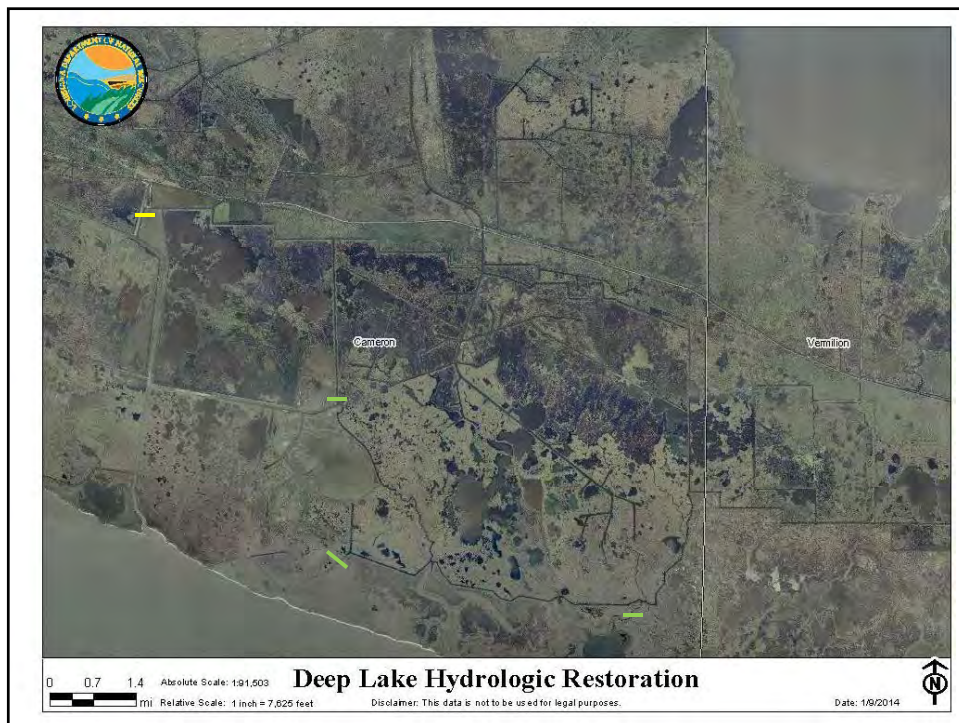
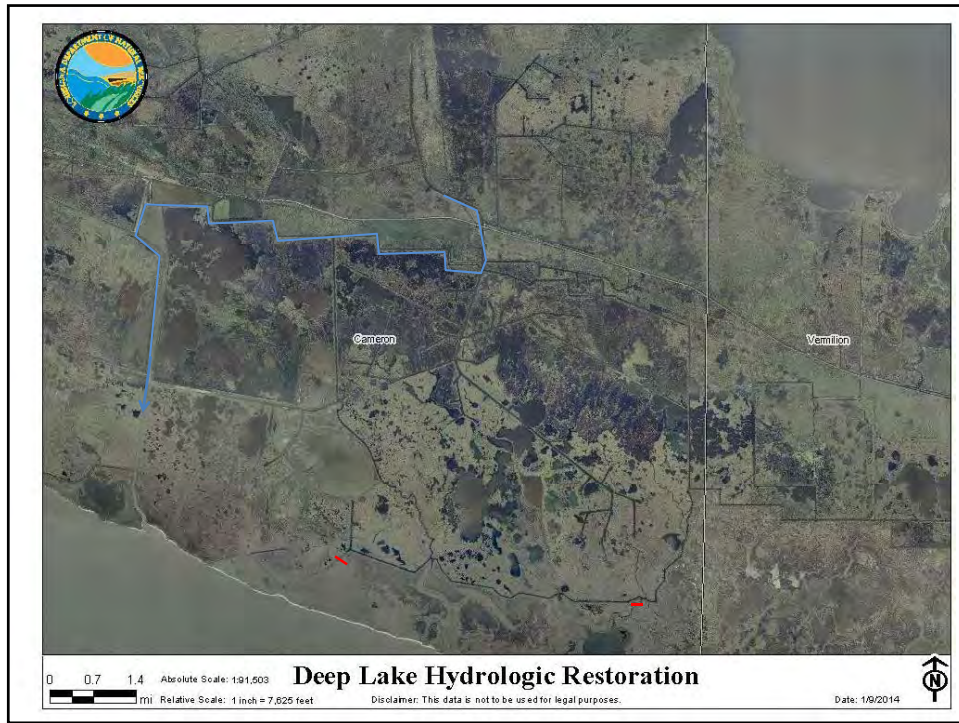
PPL 24  
Regional Planning Team  
February 11, 2014

Region 4  
Mermentau Basin

Deep Lake Hydrologic Restoration

## Problems

- Construction of La. Highway 82 restricts drainage of local communities and marshes north of the highway to outlets located on Rockefeller Wildlife Refuge.
- That restriction can result in prolonged periods of inundation during high rainfalls and flooding events.





## Deep Lake

- Reduce prolonged periods of inundation by relieving flooding stress and restore the function, value, and sustainability to thousands of acres of marsh
- Allow Rockefeller Wildlife Refuge to accommodate additional water flow during flooding events to relieve flooding of local communities.
- Enhance marsh acreage south of existing plugs

**R4-ME-02**

**Southwest Grand Lake Shoreline Protection**

**PPL24 PROJECT NOMINEE FACT SHEET**

January 28, 2014

**Project Name**

Southwest Grand Lake Shoreline Protection

**Master Plan Strategy**

Grand Lake Bank Stabilization 004.BS.01.

**Project Location**

Region 4, Mermentau Basin, Cameron Parish, Grand Lake Mapping Unit, southwest shoreline.

**Problem**

This portion of the Grand Lake shoreline is experiencing erosion of approximately 11 to 32 ft/yr (ME-21). In some areas the historic lake rim is completely lost and interior organic soils are exposed to high wave energies. According to the Coast 2050 Plan, shoreline protection of the lake rim is expected to preserve a major amount of marsh. This project would complete the protection of the southern shoreline and protect small interior ponds from coalescing with the lake.

**Goals**

The proposed project will protect emergent marsh and interior ponds from high wave energies associated with Grand Lake. The shoreline feature would protect approximately  $(21.5\text{ft} \times 42000\text{ft} / 43560\text{acre}/\text{ft}^2)$  20 acres from erosion. Portions of the ME-21 project completed by CIAP 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 96 acres of marsh creation behind the dike.

**Proposed Project Features**

The project will construct approximately 42,000 linear feet of rock breakwater shoreline protection with beneficial use of material dredged for floatation creating approximately 96 acres of marsh  $(42,000\text{ft} \times 100\text{ft} / 43560\text{acre}/\text{ft}^2)$ .

**Preliminary Project Benefits**

1) *What is the total acreage benefited both directly and indirectly?* Protection of the Catfish Lock infrastructure is important to the entire Mermentau Basin.

2) *How many acres of wetlands will be protected/created over the project life?* The project would protect/create approximately **116 marsh acres** (20 protection + 96 created).

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 loss rate reduction throughout the area of direct benefit is estimated to be >75%.

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.* The project would protect the southwest shoreline of Grand Lake.

5) *What is the net impact of the project on critical and non-critical infrastructure?* The project would protect Catfish Lock.

6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?* The project would have a synergistic effect with the ME-21 Grand Lake Shoreline Protection project.

**Identification of Potential Issues**

There are no issues identified at this time.

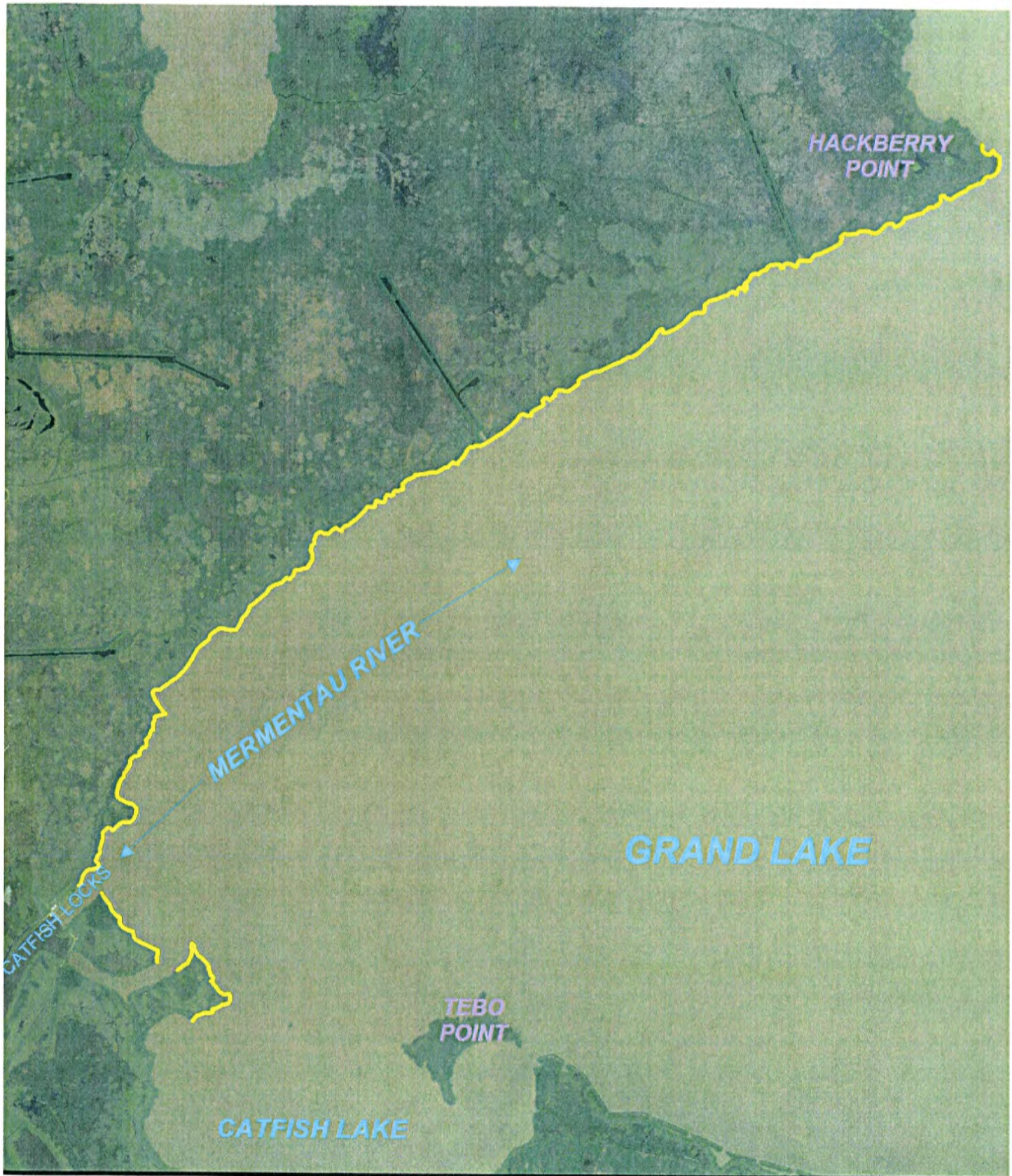
**Preliminary Construction Costs**

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

**Preparer of Fact Sheet**

Troy Mallach, NRCS, (337) 291-3064, [troy.mallach@la.usda.gov](mailto:troy.mallach@la.usda.gov)

Chad Courville, Miami Corp, (337) 264-1695, [cjcourville1@bellsouth.net](mailto:cjcourville1@bellsouth.net)



Map Produced By:  
 United States Department of Agriculture  
 Natural Resources Conservation Service  
 Alexandria, LA


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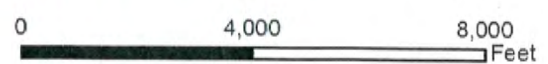
Map Date: JANUARY 23' 2014



**PPL-24**  
**SOUTHWEST GRAND LAKE**  
**SHORELINE PROTECTION**

Legend

 SHORELINE\_PROTECTION



PPL 24  
Regional Planning Team  
February 11, 2014

Region 4  
Mermentau Basin

Southwest Grand Lake Shoreline  
Protection

## Problems

- Shoreline erosion of approximately 22 feet per year.
- Potential to circumvent critical infrastructure at Catfish Lock.







## Southwest Grand Lake

- The project also includes approximately 42,000 linear feet of shoreline protection
- Approximately 116 acres of marsh would be created/protected

**R4-ME-03**

**Southeast Pecan Island Marsh Creation & Freshwater  
Enhancement**

**PPL24 PROJECT NOMINEE FACT SHEET**  
**January 28, 2014**

**Project Name**

Southeast Pecan Island Marsh Creation and Freshwater Enhancement

**Master Plan Strategy**

East Pecan Island Marsh Creation – 004.MC.16  
Introduce Freshwater to wetlands south of Highway 82 – 004.HR.20

**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 from freshwater runoff.

**Goals**

The project goals are to restore/improve hydrologic conditions and promote the expansion of emergent marsh vegetation throughout the project area. The proposed freshwater introduction feature would restore/improve hydrologic conditions by allowing water from the Lakes Subbasin to drain south across Highway 82 into the Chenier Subbasin. The marsh creation feature would create new wetland habitat, restore degraded marsh, and reduce wave erosion.

**Proposed Project Features**

The project proposes approximately 270 acres of marsh creation and 90 acres of marsh nourishment. The project also includes 55,300 linear feet of terraces.

The majority of the necessary freshwater introduction infrastructure exists and would require minimal improvement/cleanout and the construction of an outlet structure at Front Ridge.

**Preliminary Project Benefits**

- 1) *What is the total acreage benefited both directly and indirectly?* The total area benefitted is approximately 4,083 acres.
- 2) *How many acres of wetlands will be protected/created over the project life?* The project would protect/create approximately **348 net acres** (315 MC + 33 FWI).
- 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 loss rate reduction throughout the area of direct benefit is estimated to be 50-74%.

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.* The project would protect the Front Ridge Chenier.

5) *What is the net impact of the project on critical and non-critical infrastructure?* The project would help protect Louisiana Highway 82.

6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?* The project would provide protection for the constructed Pecan Island Terracing project (ME-14).

#### **Identification of Potential Issues**

There are no issues identified at this time.

#### **Preliminary Construction Costs**

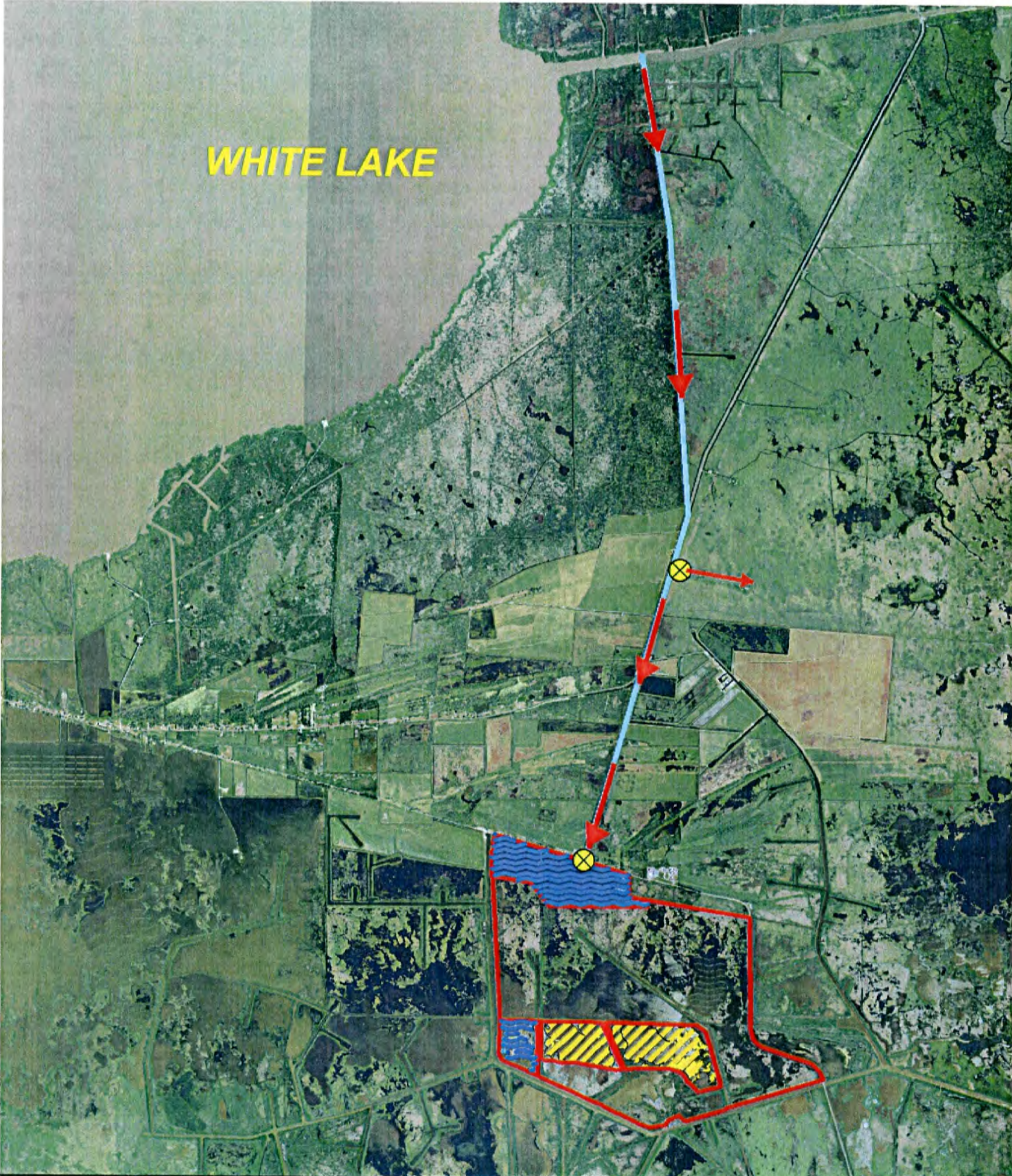
The fully-funded cost range is \$30M-\$35M.

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

Troy Mallach, NRCS, (337) 291-3064, [troy.mallach@la.usda.gov](mailto:troy.mallach@la.usda.gov)

Billy Broussard, Vermilion Corps, (337) 893-0268, [bbillypb@kaplantel.net](mailto:bbillypb@kaplantel.net)

**WHITE LAKE**

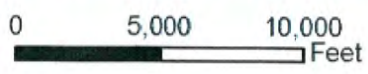


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 United States Department of Agriculture  
 Natural Resources Conservation Service  
 Alexandria, LA

Data Source: NAIP 2013  
 Map Date: January 16, 2014



**PPL-24**  
**SOUTHEAST PECAN ISLAND**  
**MARSH CREATION AND**  
**FRESHWATER ENHANCEMENT**



Legend	
	WATER_CONTROL_STRUCTURE
	WEST_TERRACES_CLIP
	FRONT_RIDGE_TERRACES_CLIP
	FRONT_RIDGE_BOUNDARY
	PROJECT_BOUNDARY
	CELLS_MARSH_CREATION_Clip
	ISLAND_Clip
	FRESH_WATER_INTRODUCTION_ROUTE
	DIKE_LENGTH_3-25-13

PPL 24  
Regional Planning Team  
February 11, 2014

Region 4  
Mermentau Basin

Southeast Pecan Island Marsh Creation  
and Freshwater Enhancement

## Problems

- 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 forms a hydrologic barrier that isolates those sub basins from freshwater runoff

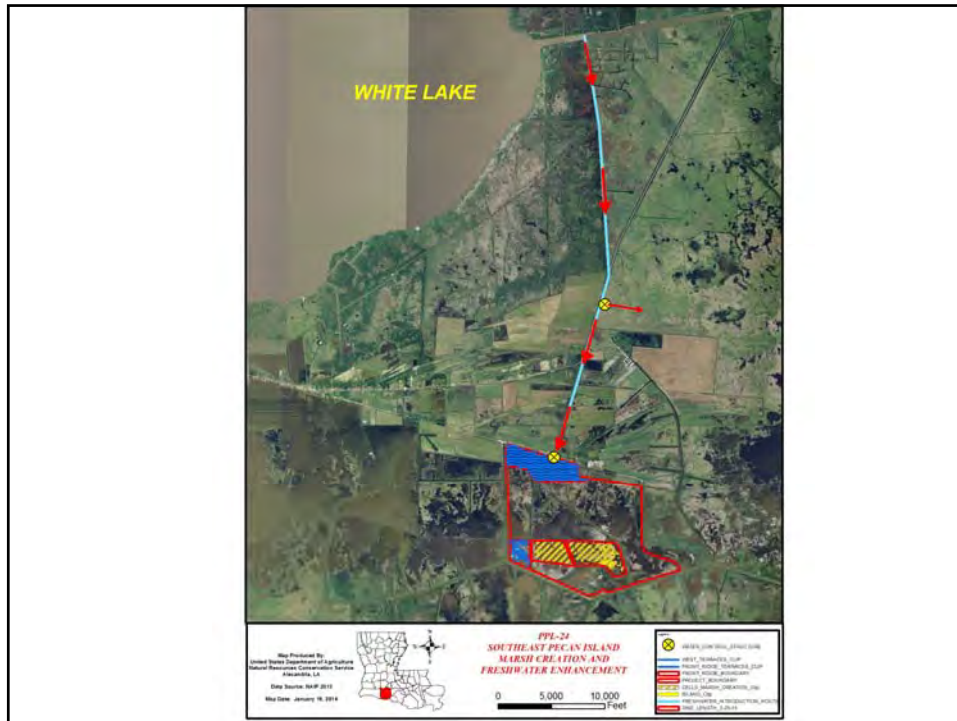
## Front Ridge 2004



## Front Ridge 2008









## Southeast Pecan Island

- Project includes approximately 270 acres of marsh creation and 90 acres of marsh nourishment
- The project also includes 55,300 linear feet of terraces
- The total area benefitted from fresh water enhancement is approximately 4,083 acres.

**R4-ME-04**

**East Pecan Island Marsh Creation – Increment 1**

## PPL 24 PROJECT NOMINEE FACT SHEET

February 11, 2014

**Project Name:**

East Pecan Island Marsh Creation – Increment I

**2012 Master Plan Strategy:**

004.MC.16 – East Pecan Island Marsh Creation: Creation of approximately 7,340 acres of marsh between Pecan Island and the west bank of the Freshwater Bayou Canal to create new wetland habitat, restore degraded marsh, and reduce wave erosion.

**Project Location:**

The project is located in Region 4, Mermentau Basin, Vermilion Parish, west of the Freshwater Bayou Navigation Channel.

**Problem:**

The marshes to the west of the Freshwater Bayou Navigation Channel have experienced severe land loss and habitat conversion. What was once a productive fresh water marsh has been converted to open water due to the negative effects of exchange from the Freshwater Bayou Navigation Canal on soils followed by major hurricane impacts.

**Goals:**

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

**Proposed Solutions:**

This project intends to create and nourish 506 acres of marsh using approximately 3.5M C.Y. of marsh fill material borrowed from offshore within state waters. Some historical ponds will be retained and creeks will be included to promote exchange with the surrounding marsh and provide marsh functionality. Half of the acreage will be planted to encourage rapid vegetation. Earthen containment dikes will be gapped upon construction completion and included in the operations and maintenance.

**Preliminary Project Benefits:**

The project will result in approximately 450 net acres of marsh over the 20-year project life. It will work synergistically with two existing CWPPRA projects: the Freshwater Bayou Wetland Protection project (ME-04, constructed) and the Freshwater Bayou Marsh Creation project (ME-31, in engineering and design).

**Preliminary Construction Costs:**

The preliminary project cost estimate including 25% contingency \$30 - \$35 million.

**Preparers of Fact Sheet:**

Adrian Chavarria, EPA, (214) 665-3103

Brad Crawford, EPA (214) 665-7255 [crawford.brad@epa.gov](mailto:crawford.brad@epa.gov)

## East Pecan Island Marsh Creation – Increment 1



Coastal Wetlands Planning, Protection and Restoration Act

## Project Features

- 506 ac MC using approximately 3.5M cy borrowed from offshore
- Retain historical ponds and add creeks for functionality (14 ac)
- Cost + 25% contingency = \$30 - \$35 million

Coastal Wetlands Planning, Protection and Restoration Act

## East Pecan Island Marsh Creation



Coastal Wetlands Planning, Protection  
and Restoration Act

# Questions?

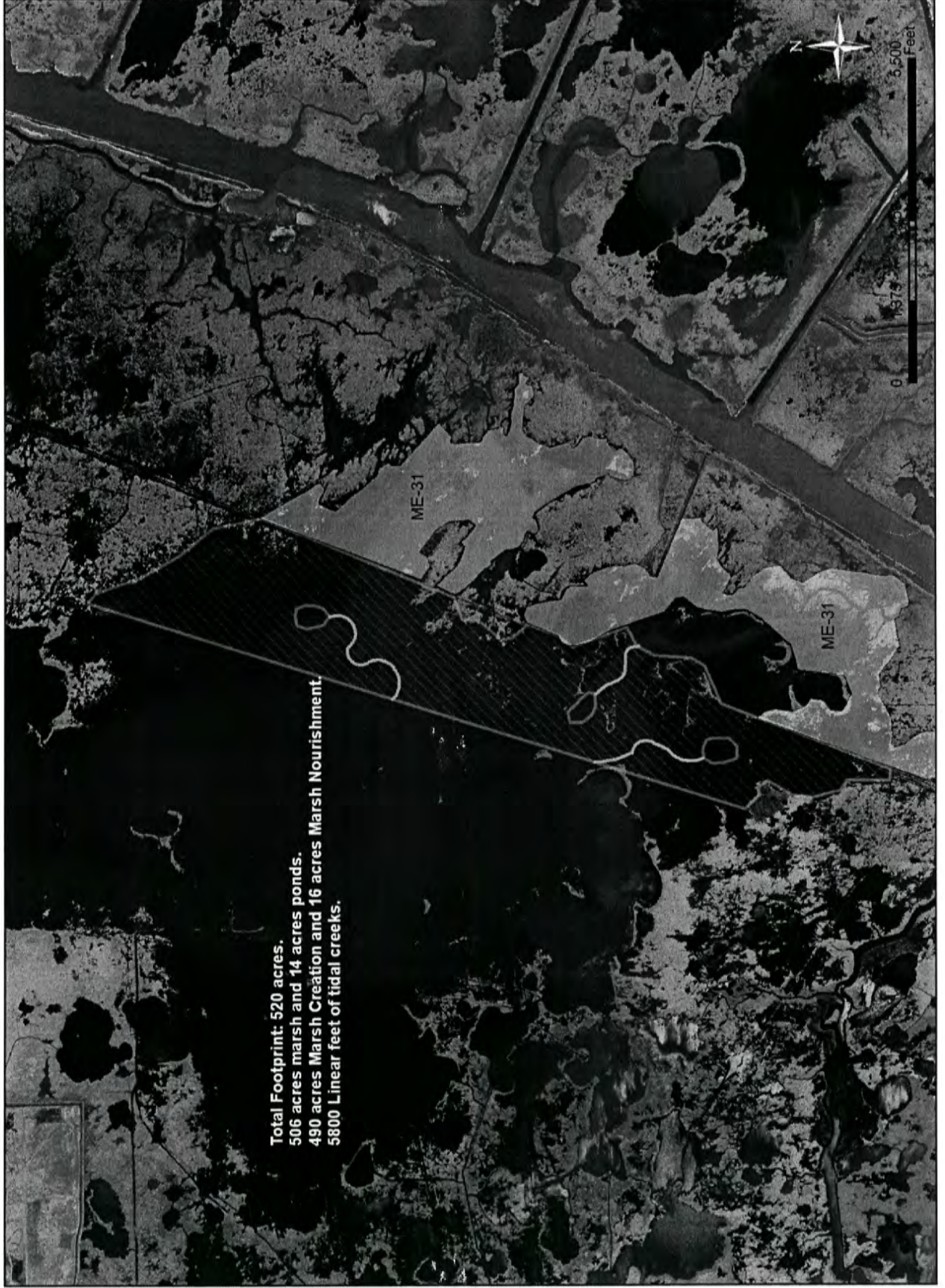


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Coastal Wetlands Planning, Protection  
and Restoration Act

## East Pecan Island Marsh Creation - Increment 1





**R4-ME-05**

**North Big Marsh Restoration**

**PPL24 PROJECT NOMINEE FACT SHEET**  
**February 11, 2014**

**North Big Marsh Restoration Project**

**State Master Plan Consistency**

This project is located within and consistent with the State Master Plan "East Pecan Island Marsh Creation" project (No. 004.MC.16) which consists of marsh creation between Pecan Island and Freshwater Bayou Canal.

**Project Location**

Region 4, Vermilion Parish, Northeast Pecan Island, west of Freshwater Bayou Canal.

**Problem**

The Big Marsh unit lost a total of 11% marsh (-3,810 acres) from 1932 to 1990 with the greatest loss during the 1956-1979 period from the dredging of Freshwater Bayou Canal. That canal caused wake erosion, altered hydrology and increased losses due to storm activity. Although the Coast 2050 study predicted an additional 10% loss (3,000 acres) by 2050, that loss has accelerated due to Hurricanes Rita (2005) and Ike (2008). A large approximately 4,700-acre shallow open water area has developed in the center of Big Marsh mostly due to those hurricanes. The 36,000-acre Big Marsh unit consisted of 57% (21,360 acres) fresh, 25% (9,330 acres) intermediate, 3% (1,180 acres) brackish marshes, and 10% open water in 1998 (Coast 2050 Report).

**Goals**

- 1) Restore and nourish 450 acres of fresh and intermediate marsh in the northern portion of Big Marsh; 2) Introduce freshwater from White Lake.

**Proposed Project Features**

Restore and nourish over 450 acres of fresh to intermediate marsh in Big Marsh west of Freshwater Bayou Canal with dredged material from the Gulf of Mexico. Introduce freshwater (~100 cfs) via 2 to 3, 48-inch-diameter culverts at Hwy 82 from White Lake. Water depths = 1.5 to 2.0 feet.

**Preliminary Project Benefits**

- 1) The total net marsh acreage benefited directly over the 20-year project life would be approximately 433 acres assuming an erosion rate of 0.18 %/year. 2) The project would restore the northern portion of Big Marsh and provide protection to marshes to the north and west.

**Identification of Potential Issues**

No significant issues have been identified for this project.

**Preliminary Construction Costs**

The estimated construction cost is \$17 M to \$20 M.

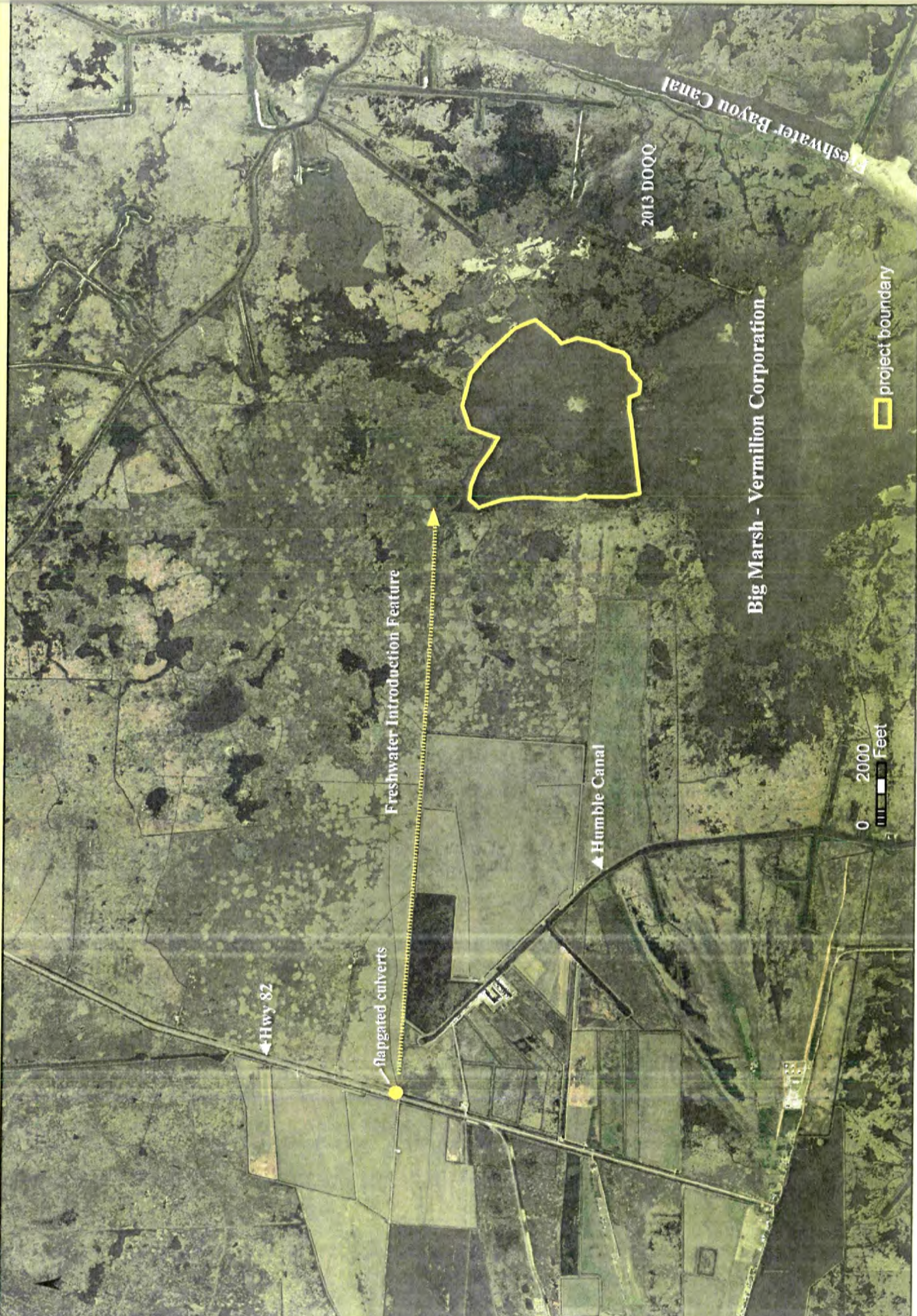
**Preparers of Fact Sheet**

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Vermilion Corporation/  
U.S. Fish & Wildlife Service

Louisiana Ecological Services Field Office  
North Big Marsh Restoration - 2013 Imagery



project boundary

0 2000 Feet

Big Marsh - Vermilion Corporation

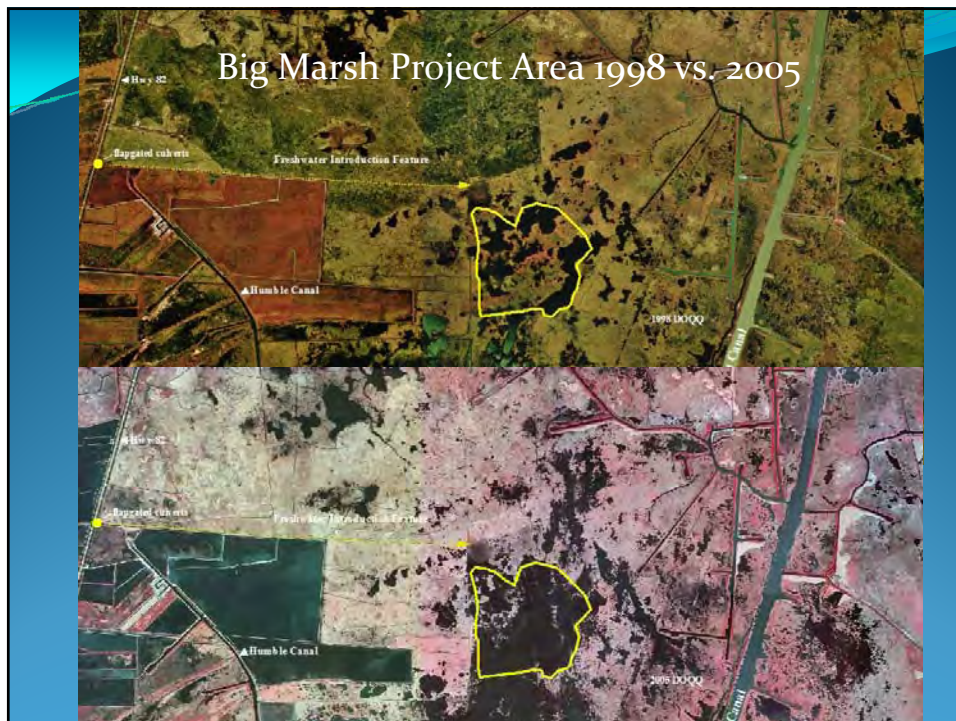
# North Big Marsh Restoration Project

## Problem

- Big Marsh unit lost 11% marsh (-3,810 acres) (1932 to 1990). Greatest loss after FW Bayou Canal dredging (1956-1979).
- Coast 2050 Study predicted another 10% loss to 2050 (3,000 acres), recent loss has accelerated due to hurricanes.
- A large 4,700-acre shallow open water area developed mostly due to Hurricanes Rita (2005) & Ike (2008).

## Goals

- 1) Restore and nourish 450 acres of fresh & intermediate marsh in North Big Marsh;
- 2) Introduce freshwater from White Lake.





**Features** – 1) Restore & nourish over 450 acres of fresh to intermediate marsh in Big Marsh west of Freshwater Bayou Canal with dredged material from the Gulf of Mexico.

- 2) Introduce freshwater (~100 cfs ) via 2 to 3, 48-inch-diameter culverts at Hwy 82 from White Lake.
- **Preliminary Project Benefits** – 1) Total net marsh acreage benefited over the 20-year project life would be 433 acres at the current erosion rate of 0.18 %/year.
- 2) The project would restore the northern portion of Big Marsh & provide protection to adjacent marshes.
- **Cost** - Estimated construction cost is \$17 to \$20 M.

**R4-ME-06**

**Umbrella Bay Shoreline Protection**

**PPL24 PROJECT NOMINEE FACT SHEET**  
**February 11, 2014**

**Umbrella Bay Shoreline Protection Project** (Revised from Region 4 RPT Meeting)

**State Master Plan Consistency**

Consistent with the State Master Plan Grand Lake Bank Stabilization project (No. 004.BS.01) consisting of stabilization along the shoreline of Grand Lake. It is also consistent with the Coast 2050 Regional Strategy – Stabilization of the Grand Lake shoreline.

**Project Location**

Region 4, Cameron Parish, eastern Grand Lake-Umbrella Bay shoreline.

**Problem**

The project area experiences shoreline erosion estimated at an average of 15 feet per year (4 feet to 30 feet/year, based on 1952 to 2008 GIS analysis). Approximately 242 acres of marsh will be lost over the next 20 years in the project area. Shoreline breaches have caused small interior lakes to become part of Grand Lake; continued shore loss will increase connectivity with Grand Lake and introduce greater energy to the interior marsh.

**Goals**

- 1) Reduce shoreline erosion along the eastern Grand Lake at Umbrella Bay. 2) Prevent shoreline breaches into interior ponds.

**Proposed Project Features** - The project consists of constructing 35,100 linear feet (6.6 miles) of 30 foot-wide (crown) by 50-foot wide base by 4.5 feet-high earthen berm with lakeward concrete revetment shore stabilization. The berm would consist of material dredged from an adjacent Grand Lake access channel borrow area (234,000 cubic yards). Natural bayous would remain open to maintain hydrology. The berm would have lakeside and marshside slopes of 1:5, and 1:3, and a settled elevation of +2.5 feet NAVD 88 (1 to 1.5 feet above marsh level initially). The earthen berm would be protected by a lakeside revetment placed in shallow water adjacent to the existing shoreline at the 1 to 1.5 foot depth contour, and vegetated with 4 rows of Roseau cane, panicum sprigs or other vegetation on 5-foot centers (30,000 sprigs).

**Preliminary Project Benefits** - 40 acres created via the shoreline berm; 242 acres protected (15 feet/year erosion rate), totaling 282 acres protected and restored. Umbrella Bay and adjacent area shoreline erosion would be reduced 100% by the concrete revetment and earthen berm. The project would prevent breaches that would connect interior ponds to Grand Lake. The project would combine with the existing Grand-White Lakes Landbridge Shoreline Protection and the South Grand Lake SP projects to the south to further protect the Grand Lake shoreline.

**Identification of Potential Issues** - No significant issues have been identified at this time.

**Preliminary Construction Costs** - The estimated construction cost is \$16 to \$17 M.

**Preparers of Fact Sheet**

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# Umbrella Bay Shoreline Protection Project

Lake Arthur Club/Fish & Wildlife Service

## Problem

- 15 feet/year shoreline erosion (4 feet to 30 feet/year, 1952 to 2008 GIS analysis).
- 183 acres of marsh will be lost over the next 20 years in the project area.
- Shoreline breaches have caused small interior lakes to coalesce with Grand Lake; continued shore loss will increase connectivity with Grand Lake & cause future interior marsh loss.

## Goals

- 1) Halt shoreline erosion & restore marsh along the eastern Grand Lake-Umbrella Bay shoreline. 2) Prevent shoreline breaches into interior ponds.





**Features** - Construct 26,500 linear feet (5 miles) of 30 foot-wide by 4.5 foot-high earthen berm with lakeside revetment.

- Berm constructed from material dredged from Grand Lake access channel & placed at the 1 to 2 foot depth contour.
- **Preliminary Project Benefits** - 1) Total net marsh acreage benefited over the 20-year project life would be 213 acres (30 acres restored & 183 protected).
- 2) Shoreline erosion along the Grand Lake Umbrella Bay shoreline would be reduced by 100%.
- **Cost** - Estimated construction cost is \$12 to \$13 M.