

## **REGION 3**

# Coastal Wetlands Planning Protection & Restoration Act

## 23<sup>rd</sup> Priority Project List



### Region 3 Regional Planning Team Meeting

January 30, 2013  
Morgan City, LA

## CWPPRA

### 1. Welcome and Introductions



- RPT Region 3 Leader: [Ron Boustany](#) - NRCS

## CWPPRA

## Announcements

- Copies of the PPL 23 Selection Process & Schedule available at the sign-in table.
- PPL 23 RPT meetings to accept project nominees:
  - Region IV, Vermilion LSU Ag Center, Jan. 29, 2013, 11:00 am
  - **Region III, Morgan City Auditorium (W Concourse), Jan. 30, 2013, 9:00 am**
  - Region I, New Orleans Corps of Engineers, Jan. 31, 2013, 8:00 am
  - Region II, New Orleans Corps of Engineers, Jan. 31, 2013, 11:30 am
- Coastwide Electronic Vote to select project nominees for all basins:
  - February 19, 2013 by 10:30 am
  - The new voting process will be explained later in the presentation
- 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 agencies will be assigned responsibilities for preparing nominee fact sheets after the Coastwide Electronic Vote.



## CWPPRA

## Region 3 Parishes

- Eligible parishes for basins in Region 3 include:
- Terrebonne Basin
  - St. Mary Parish
  - Terrebonne Parish
  - Assumption Parish
  - Lafourche Parish
  - Iberia Parish
  - St. Martin Parish
- Atchafalaya Basin
  - St. Mary Parish
  - Iberia Parish
  - Terrebonne Parish
- Tech-Vermilion Basin
  - St. Mary Parish
  - Iberia Parish
  - Vermilion Parish



## CWPPRA

## 2. PPL 23 Process and Ground Rules



## CWPPRA

### RPT Meetings

- Jan. 29-31, 2013 to accept project and demo proposals in 4 coastal regions broken into 8 basins (no limit on number of projects that can be proposed).
- 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

- Project presenters can split multi-basin or coastwide projects into multiple individual projects. This must occur during the RPT meeting where the project is first presented. If a presenter does not choose a basin from which to propose a project, the RPT leaders, in conjunction with the CWPPRA Planning & Evaluation (P&E) Committee, will decide collectively after the RPT meetings but before the Coastwide Electronic Vote.
- Presenters must complete a PPL 23 Nomination Sign-Up Sheet for each project nominee (demo projects too).
- Public comments on project proposals will be accepted orally during the RPT meetings and in writing by February 8, 2013.
- Limit project proposals to 5 minutes and Powerpoint presentations to 5 slides.
- Limit comments/questions during meeting to PPL 23 subject proposals and processes.



## CWPPRA

## Coastwide Electronic Vote

- Feb. 19, 2013: Coastwide Electronic Vote
- RPTs, consisting of CWPPRA agencies & coastal parishes, will 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, 1 nominee in the Atchafalaya Basin, plus 6 demos. If proposed, 1 coastwide may be chosen for inclusion as a nominee.
- CWPPRA agencies and parishes will electronically submit their ranked votes by basin.
- Parishes vote only in basins they occupy. Parishes vote on all demonstration and coastwide projects.



## 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 23 criteria.
- CWPPRA Planning and Evaluation Committee prepares cost/benefit summary matrix for Technical Committee.



## CWPPRA

## PPL 23 Candidate Project Selection

- CWPPRA Technical Committee meeting, April 16, 2013 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 2, 2013.
- Public comments also accepted orally during meeting.
- Technical Committee will assign CWPPRA agencies to develop Phase 0 candidate projects.



## CWPPRA

## PPL 23 Candidate Project Evaluation

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



## CWPPRA

## CWPPRA PPL 23 Selection

- 1 public meeting to present Phase 0 evaluation results:
  - Baton Rouge, Louisiana Department of Wildlife and Fisheries (Louisiana Room), Nov. 13, 2013, 7:00 pm
- Technical Committee votes to select up to 4 candidate projects and up to 1 demo to recommend for Phase 1.
  - Dec. 12, 2013, Baton Rouge, 9:30 am
- Task Force final decision to select PPL 23 in January 2014.





## CWPPRA

Project Type	Project Name	Project Costs	Project No.
Barrier Island/Headland Restoration	Isles Dernieres Barrier Island Restoration: Restoration of the Isles Dernieres barrier islands to provide dune, beach, and back barrier marsh habitat and to provide storm surge and wave attenuation in the Terrebonne Basin.	\$343M	03a.BH.03
Barrier Island/Headland Restoration	Timbalier Islands Barrier Island Restoration: Restoration of the Timbalier barrier islands to provide dune, beach, and back barrier marsh habitat and to provide storm surge and wave attenuation in the Terrebonne Basin.	\$524M	03a.BH.04
Hydrologic Restoration	Central Terrebonne Hydrologic Restoration: Modification of structure on Liners Canal to improve freshwater flow to Lake Decade and installation of a structure in Grand Pass to restrict the opening to Lake Mechant.	\$14M	03a.HR.02
Hydrologic Restoration	Chacahoula Basin Hydrologic Restoration: Installation of three water control structures (culverts) to increase hydraulic connectivity in the Chacahoula Basin on either side of Highway 182.	\$7M	03a.HR.04
Hydrologic Restoration	HNC Lock Hydrologic Restoration: Construction of a lock on the Houma Navigation Canal and operation to reduce saltwater intrusion and distribute freshwater to the surrounding wetlands.	\$180M	03a.HR.10
Marsh Creation	Terrebonne Bay Rim Marsh Creation Study: Planning, engineering and design to develop marsh creation along the northern rim of Terrebonne Bay (approximately 3,370 acres). PLANNING AND DESIGN ONLY.	\$91M	03a.MC.03p
Marsh Creation	Belle Pass-Golden Meadow Marsh Creation (1st Period Increment): Creation of approximately 14,420 acres from Belle Pass to Golden Meadow to create new wetland habitat, restore degraded marsh, and reduce wave erosion.	\$732M	03a.MC.07

## CWPPRA

Project Type	Project Name	Project Costs	Project No.
Marsh Creation	North Terrebonne Bay Marsh Creation-Component B: Creation of approximately 4,940 acres of marsh south of Montegut between Bayou St. Jean Charles and Bayou Pointe au Chien to create new wetland habitat, restore degraded marsh, and reduce wave erosion.	\$1555M	03a.MC.09b
Marsh Creation	Terrebonne GIWW Marsh Creation: Creation of approximately 1,190 acres of marsh along the GIWW in Terrebonne Basin to create new wetland habitat, restore degraded marsh, and reduce wave erosion.	\$37M	03b.MC.05
Marsh Creation	Belle Pass-Golden Meadow Marsh Creation (2nd Period Increment): Creation of approximately 14,420 acres from Belle Pass to Golden Meadow to create new wetland habitat, restore degraded marsh, and reduce wave erosion.	\$2,927M	03a.MC.07
Marsh Creation	North Lost Lake Marsh Creation: Creation of approximately 850 acres of marsh between Lake Pagie and Bayou Decade to create new wetland habitat, restore degraded marsh, and reduce wave erosion.	\$125M	03b.CO.01
Oyster Barrier Reef	West Cote Blanche Bay Oyster Barrier Reef Restoration: Creation of approximately 28,000 feet of oyster barrier reef in West Cote Blanche Bay from Dead Cypress Point (near Cypremort Point) to near Bayou Michael (NW corner of Marsh Island) to provide oyster habitat, reduce wave erosion, and prevent further marsh degradation.	\$20M	03b.OR.02
Oyster Barrier Reef	East Cote Blanche Bay Oyster Barrier Reef Restoration: Creation of approximately 30,000 feet of oyster barrier reef in East Cote Blanche Bay from Marone Point to Lake Point (NE corner of Marsh Island) to provide oyster habitat, reduce wave erosion, and prevent further marsh degradation.	\$22M	03b.OR.03
Ridge Restoration	Bayou DeCade Ridge Restoration: Restoration of approximately 47,000 feet (110 acres) of historic ridge along Bayou DeCade from Lake Decade to Racourci Bay to provide coastal upland habitat, restore natural hydrology, and provide wave and storm surge attenuation.	\$38M	03a.RC.01

## CWPPRA

Project Type	Project Name	Project Costs	Project No.
Ridge Restoration	Bayou DuLarge Ridge Restoration: Restoration of approximately 106,000 feet (240 acres) of historic ridge along Bayou DuLarge to provide coastal upland habitat, restore natural hydrology, and provide wave and storm surge attenuation.	\$56M	03a.RC.02
Ridge Restoration	Small Bayou LaPointe Ridge Restoration: Restoration of approximately 55,000 feet (130 acres) of historic ridge along Small Bayou LaPointe to provide coastal upland habitat, restore natural hydrology, and provide wave and storm surge attenuation.	\$29M	03a.RC.03
Ridge Restoration	Mauvais Bois Ridge Restoration: Restoration of approximately 60,000 feet (140 acres) of historic ridge at Mauvais Bois to provide coastal upland habitat, restore natural hydrology, and provide wave and storm surge attenuation.	\$37M	03a.RC.04
Ridge Restoration	Bayou Terrebonne Ridge Restoration: Restoration of approximately 55,000 feet (130 acres) of historic ridge along the southern portions of Bayou Terrebonne to provide coastal upland habitat, restore natural hydrology, and provide wave and storm surge attenuation.	\$38M	03a.RC.05
Ridge Restoration	Bayou Pointe au Chien Ridge Restoration: Restoration of approximately 57,000 feet (130 acres) of historic ridge along the southern portions of Bayou Pointe au Chien to provide coastal upland habitat, restore natural hydrology, and provide wave and storm surge attenuation.	\$30M	03a.RC.06
Ridge Restoration	Bayou Sale Ridge Restoration: Restoration of approximately 36,000 feet (80 acres) of historic ridge along Bayou Sale to provide coastal upland habitat, restore natural hydrology, and provide wave and storm surge attenuation.	\$22M	03b.RC.01
Sediment Diversion	Atchafalaya River Diversion (150,000 cfs): Sediment diversion off of the Atchafalaya River into or to benefit Penchant and southwest Terrebonne marshes, 150,000 cfs capacity (modeled at 60% of southward Atchafalaya flow exceeding 50,000 cfs).	\$783M	03a.DI.05

## CWPPRA

Project Type	Project Name	Project Costs	Project No.
Ridge Restoration	Bayou Long Ridge Restoration: Restoration of approximately 49,000 feet (110 acres) of historic ridge along Bayou Long/Bayou Fontanelle to provide coastal upland habitat, restore natural hydrology, and provide wave and storm surge attenuation.	\$37M	002.RC.01
Ridge Restoration	Spanish Pass Ridge Restoration: Restoration of approximately 53,000 feet (120 acres) of historic ridge along the banks of Spanish Pass near Venice to provide coastal upland habitat, restore natural hydrology, and provide wave and storm surge attenuation.	\$43M	002.RC.02
Ridge Restoration	Bayou LaLoutre Ridge Restoration: Restoration of approximately 117,000 feet (270 acres) of historic ridge along Bayou LaLoutre to provide coastal upland habitat, restore natural hydrology, and provide wave and storm surge attenuation.	\$61M	001.RC.01
Sediment Diversion	Mid-Barataria Diversion (250,000 cfs- 1st Period Increment): Sediment diversion into mid-Barataria in the vicinity of Myrtle Grove to build and maintain land, maximum capacity 50,000 cfs (modeled at 50,000 cfs when the Mississippi River flow exceeds 600,000 cfs, at 8% of river flows between 200,000-600,000 cfs, and no operation below 200,000 cfs). NOTE: This project is the first implementation period component of a 250,000 cfs diversion to mid-Barataria. The influence area shown is for the total 250,000 cfs project upon completion in the second implementation period.	\$275M	002.DI.03
Sediment Diversion	Mid Barataria Diversion (250,000 cfs- 2nd Period Increment): Sediment diversion into Mid-Barataria in the vicinity of Myrtle Grove to build and maintain land, 250,000 cfs capacity. NOTE: This project represents the incremental expansion of the 50,000 cfs diversion (002.DI.03) to mid-Barataria (constructed in the 1st Implementation Period) for a total capacity of 250,000 cfs (modeled at 250,000 cfs when Mississippi River flow exceeds 900,000 cfs, at 50,000 cfs for river flows between 600,000-900,000 cfs, at 8% of river flows between 200,000-600,000 cfs, and no operation when river flow is below 200,000 cfs).	\$820M	002.DI.03a
Sediment Diversion	Lower Barataria Diversion (50,000 cfs): Sediment diversion into lower Barataria Bay in the vicinity of Empire, 50,000 cfs capacity (modeled at capacity when Mississippi River flow exceeds 600,000 cfs; modeled at 8% of river flow from 600,000 cfs down to 200,000 cfs; no operation below 200,000 cfs).	\$203M	002.DI.15
Sediment Diversion	Lower Breton Diversion (50,000 cfs): Sediment diversion into lower Breton Sound in the vicinity of Black Bay to build and maintain land, 50,000 cfs capacity (modeled at 50,000 cfs when Mississippi River flow exceeds 600,000 cfs, at 8% of river flows between 200,000-600,000 cfs, and no operation when river flow is below 200,000 cfs).	\$212M	001.DI.02

## CWPPRA

Project Type	Project Name	Project Costs	Project No.
Sediment Diversion	Increase Atchafalaya Flow to Eastern Terrebonne: Dredging of the GIWW east of the Atchafalaya and installation of a bypass structure at the Bayou Boeuf Lock to increase freshwater and sediment flows from Atchafalaya River to Terrebonne marshes (modeled to maintain a minimum of 20,000 cfs east along GIWW towards HNC).	\$292M	03b.DI.04
Shoreline Protection	Vermilion Bay and West Cote Blanche Bay Shoreline Protection (Critical Areas): Shoreline protection through rock breakwaters of approximately 83,000 feet of shoreline along Vermilion Bay and West Cote Blanche Bay to preserve shoreline integrity and reduce wetland degradation from wave erosion.	\$86M	03b.SP.06a
Shoreline Protection	GIWW Shoreline Protection (Intracoastal City to Amelia): Shoreline protection of approximately 690,000 feet of GIWW shoreline between Intracoastal City and Amelia to preserve shoreline integrity and reduce wetland degradation from wave erosion.	\$765M	03b.SP.09

## CWPPRA

## 4. Coastwide Electronic Vote



## CWPPRA

## Coastwide Electronic Vote

- **Feb. 19, 2013:** 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.
- 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 2/8/2013.



## CWPPRA

## Coastwide Electronic Vote

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





## CWPPRA

## Coastwide Electronic Vote: The NEW 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 19, 2013.**



## CWPPRA

## 5. PPL 23 Project Nominations



## 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 19, 2013
- The Technical Committee may or may not select a coastwide project in April 2013.



## CWPPRA

## Demonstration Projects

- Demonstrates a new technology
- Demonstrates a technology which can be transferred to other areas in coastal Louisiana
- Are unique and not duplicative in nature
- Engineering/Environmental Workgroups will validate that demos fit CWPPRA Standing Operating Procedures criteria and select sites for proposed demonstration projects.
- The RPTs select 6 demos during the Feb. 19 Coastwide Electronic Vote.
- The Technical Committee selects up to 3 demos in April 2013.
- Previous demo candidates must be **re-nominated** for PPL 23.



## CWPPRA

## 6. Announcements of Upcoming Meetings



## CWPPRA

### PPL 23 Timeline

- **Coastwide Electronic Vote, Feb. 19, 2013**
  - 21 basin-project nominees, 1 coastwide nominee, and 6 demos selected
- **Technical Committee Mtg, Apr. 16, 2013, New Orleans**
  - Selection of 10 candidates and up to 3 demos
- **PPL Public Comment Mtg**
  - Nov. 13, 2013, Baton Rouge
- **Technical Committee Mtg, Dec. 12, 2013, New Orleans**
  - Recommend up to 4 projects for Phase 1 funding
- **Task Force Mtg, Jan. 2014, 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 8, 2013**

**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)**





## ATTENDANCE RECORD



DATE	SPONSORING ORGANIZATION	LOCATION
January 30, 2013 9:00 A.M.	COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT	Morgan City Auditorium 728 Myrtle Street Morgan City, LA
PURPOSE MEETING OF THE REGIONAL PLANNING TEAM REGION III		
PARTICIPANT REGISTER*		
NAME	JOB TITLE AND ORGANIZATION	PHONE NUMBER/EMAIL
ARCHIE CHATISSON	PARISH ADMINISTRATOR - LAF. PARISH	985-446-9127
Amanda Perick	CZM Permit Coordinator	985-632-4666
Ron Bayliss	NRCS	337-291-3078
Michael P. Lull	NRCS	337-893-5664
Michael Perry	NRCS	337-893-5664
Jason Curale	CPRA	504-858-6826
TODD Hubbell	CPRA	985-447-0994
Lawrence Rodrigue	CPRA	985-447-0994
Elaine Lear	CPRA	985-447-0994
Cassidy Lejeune	LDWF	337-373-2032
Ken Teague	EPA	214-665-6687
Glen Curale	CPRA	985-447-0995
VILLERE J. CROSS	MATTHEWS BROTHERS INC	228-223-6229
Kevin Sagnier	Vermilion Parish police Jany	337-303-4585
Angela Trahan	FWS	337-291-3137
Kevin Roy	FWS	337-291-3120
Ronny Paille	FWS	337-291-3117
MIKE CARLOSS	LDWF	225-765-2812
Chris Allen	CPRA	225-342-4736
Joe Gonzales	Manson Construction Co.	985-580-1900
Phillip Parker	NOAA Fisheries	225-578-8341
Judge Edwards	Vermilion Corporation	337-893-0268



## ATTENDANCE RECORD



DATE	SPONSORING ORGANIZATION	LOCATION
January 30, 2013 9:00 A.M.	COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT	Morgan City Auditorium 728 Myrtle Street Morgan City, LA
PURPOSE MEETING OF THE REGIONAL PLANNING TEAM REGION III		
PARTICIPANT REGISTER*		
NAME	JOB TITLE AND ORGANIZATION	PHONE NUMBER/EMAIL
Vicki Summers	Terrebonne	985-873-6889
BAIRD McELROY	ConocoPhillips Staff Agent	985-853-3014
Mandy York	NRCS District Conservationist (Terr/Laf)	985-447-3871 x3
Patrick Williams	NOAA/NMFS	225/389-0508 EXT 208
Robert Dubois	FWS	337-291-3127
PAUL NAQUIN	St. Mary Parish President	337-230-0374
Nic Mathyge	Terrebonne Parish Coastal Rest. Dir.	985-873-6889
Stacy Sign	ST MARY	985-518-5792
JOHN FORET	NOAA/NMFS	337.291.2107
Charles Sasser	LSU	225 578 6375
David M. LEE	CPRA	985 447 0991
Chad Courville	Miami Corporation	337.264.1695
Randy Moartle	EA McIlhenny Enterprises	(985) 956-3630
Steve Beck	LDWF	
BARRY HERBERT	LDWF	225 791 0355
Michael Chabloch	Port of MC	985-686-8391
Harold Schoeffsky	Sierra Club Acadia, La.	355 417 1550
Justin Shaw	C.H. Fenstermaker	337-237-2200
Patricia Ghergich	NRCS	337-828-1461
Jessie Judge	Duels Unlimited	985-209-3270
Vicki Carver	CPRA Engineer	225-342-0242
Bruce Haase	CPRA	225-392-1475



## ATTENDANCE RECORD

[illegible]

## **Region 3 – TECHE-VERMILION BASIN**

<b>Project Number</b>	<b>Project Proposals</b>
R3-TV-01	State Wildlife Chenier & Lake Restoration
R3-TV-02	South Humble Marsh Creation & Nourishment
<del>R3-TV-03</del>	<i>combined with R3-TV-02</i>
<del>R3-TV-04</del>	<del>Cote Blanche Freshwater/Sediment Intro Shoreline Protection</del> <i>(not consistent with 2012 State Master Plan)</i>
R3-TV-05	North Marsh Island Shoreline Protection
R3-TV-06	Southwest Pass Shoreline Protection

## **Region 3 – ATCHAFALAYA BASIN**

<del>R3-AT-01</del>	<del>Bayou Chene Terracing &amp; Containment</del> <i>(not consistent with 2012 State Master Plan)</i>
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## **Region 3 – TERREBONNE BASIN**

R3-TE-01	Carenco Bayou Freshwater Intro
R3-TE-02	East Catfish Lake Marsh Creation
R3-TE-03	Bayou Pointe aux Chenes Marsh Creation
R3-TE-04	Small Bayou LaPointe Marsh & Ridge Restoration
R3-TE-05	Island Road Marsh Creation & Nourishment
R3-TE-06	West Belle Pass Marsh Creation
R3-TE-07	West Bayou Lafourche Marsh Creation
R3-TE-08	Raccoon Island Barrier Island Restoration



R3-TE-09	Bayou Terrebonne Ridge Restoration & Marsh Creation
R3-TE-10	West Fourchon Marsh Creation & Marsh Nourishment
R3-TE-11	Timbalier Island Restoration (Shoreline Sediment Nourishment)
R3-TE-12	East Island Beach & Barrier Marsh Restoration
R3-TE-13	Lake Tambour Marsh Creation
R3-TE-14	Terrebonne Bay Shoreline Protection via Oyster Reef Construction
R3-TE-15	Grand Bayou Freshwater Enhancement
R3-TE-16	Bayou Blue Dredge & Marsh Creation
R3-TE-17	Bayou Dularge Ridge Restoration & Marsh Creation

## **Region 3 – TECHE-VERMILION BASIN**

**R3-TV-01**

**State Wildlife Chenier & Lake Restoration**

*Consistent with 2012 State Master Plan*

**PPL23 PROJECT NOMINEE FACT SHEET****January 29, 2013****Project Name**

State Wildlife Chenier and Lake Restoration

**State Master Plan Consistency**Southwest Coast 1<sup>st</sup> Implementation Period: 03b.MC.07 and 004.HR.12.Central Coast 2<sup>nd</sup> Implementation Period: 03b.SP.06a**Project Location**

The project is located in Region 3, Vermilion Basin, Vermilion Parish at State Wildlife Refuge

**Problem**

Shoreline wetlands erosion has been eroding approximately between 3 to 7 feet/year along the lake shorelines estimated by LDWF staff.

Erosion of the peninsula has increased fetch around Lake Fearman, increasing shoreline erosion, turbidity and decreasing emergent and submerged vegetation. Shoreline erosion at North Lake is opening the lake to Vermilion Bay and will create bay erosion rates, rather than interior lake erosion. Bayou Fearman has widened and deepened over time, and tidal exchanges have increased the salinity of Lake Fearman. As a result, saltwater intrusion has been a persistent problem in the wetlands south and east of Belle Isle via Tom's Bayou.

**Proposed Solution**

Re-establish approximately 25 acres of the Fearman Lake peninsula with borrow from sediments from Vermilion Bay that acts to reestablish the natural break in the fetch of the lake, and recreate approximately 8,400 linear feet of vegetated lake rim on the southeast and southwest portions of the Lake. Approximately 4,000 linear feet of earthen dike would be constructed to contain pumped sediment. These containment dikes would be 5 foot crown 1:6 side slope of approximately +2.0' NAVD88.

Create a 13-acre chenier at North Lake planted with woody vegetation. Reestablish approximately 6,000 linear feet of vegetated lake rim along the north and east sides of North Lake.

The lake rim would be constructed with a 15 ft crown (+3.0' NAVD88) 1:5 slopes in 2 ft of water. Appropriate species of vegetation would be planted at each created area.

Install a rock weir with boat bay in Tom's Bayou to reestablish historical bayou dimensions.

**Preliminary Project Benefits**

Approximately 50 acres of wetlands would be created from reestablishment of the peninsula and lake rims, and the North Lake chenier. Approximately 50 acres of marsh would be protected by reducing shoreline erosion by 50-74%. The project would increase the colonization of submerged aquatic vegetation by reducing water turbidity. Wetland benefits (increased productivity) from salinity reduction in Tom's Bayou have not been accounted for at this time.

**Identification of Potential Issues**

None

**Preliminary Construction Costs + 25%**

\$2-3 Million

**Preparer of Fact Sheet:**

Randy Moertle

1008 Mar Dr.

Lockport, LA 70374

(985) 856-3630

rmoertle@bellsouth.net





### Project Features

- 1) 25 acre peninsula
- 2) Weir w/boat bay in Tom's Bayou
- 3) 450' breach repair + 2,000 LF of earthen bank stabilization
- 4) 2,300 LF (13 acre) Chenier
- 5) 6,000 LF earthen bank stabilization
- 6) 6,300 LF earthen bank stabilization

Vermilion



## State Wildlife PPL 23

0 0.35 0.7 Absolute Scale: 1:45,490

0 1 inch = 3,781 feet  
Relative Scale

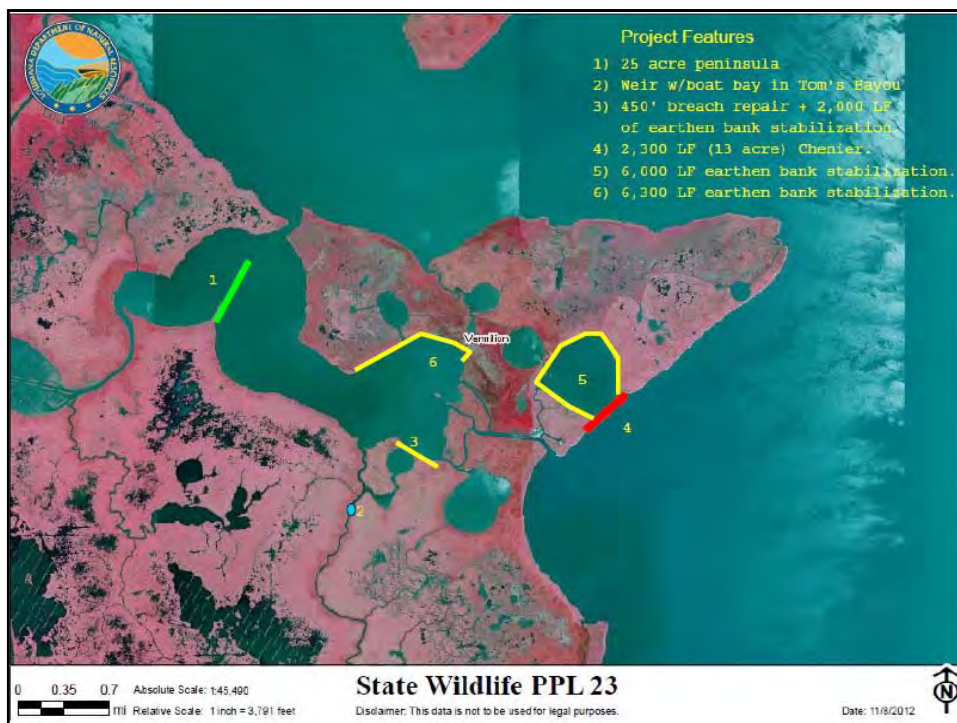
Disclaimer: This data is not to be used for legal purposes.

Date: 11/6/2012



# STATE WILDLIFE PROJECT

Region III - PPL23 Nomination  
Morgan City, LA  
1/30/13



**R3-TV-02**

**South Humble Marsh Creation & Nourishment**

*Consistent with 2012 State Master Plan*



**PPL23 PROJECT NOMINEE FACT SHEET**  
**January 30, 2013**

**South Humble Marsh Creation and Nourishment**

**Louisiana's 2012 Coastal Master Plan**  
Marsh Creation – 004.MC.07

**Project Location**

Region 3, Teche - Vermilion Basin, Vermilion Parish

**Problem**

Project area wetlands are undergoing losses at rates of -0.3 %/year based on USGS analyses conducted through 2009. Marshes in this area are subject to losses from shoreline erosion, subsidence/sediment deficit, and interior ponding. Shoreline erosion along the Freshwater Bayou Canal has resulted in direct wetland loss as the canal has widened from an authorized width of less than 200 feet to 800 feet. In addition to these direct losses, significant interior marsh loss has resulted from saltwater intrusion and hydrologic changes associated increasing tidal influence, and herbivory. As hydrology within this area has been modified, habitats have shifted to more of a floatant marsh type, resulting in increased susceptibility to tidal energy and storm damages. Habitat shifts and hydrologic stress reduce marsh productivity, a critical component of vertical accretion in intermediate wetlands. The ensuing erosion creates water turbidity within the interior ponds, this coupled with increased pond depth, decreases the coverage of submerged aquatic vegetation. Additionally, recent hurricanes have resulted in large and wide spread losses. It is unlikely that many of these areas will recover unaided. As evidenced from aerial photography the project area is part of a larger feature of weakened interior marsh from the project area south and west to include those marshes south of Pecan Island. If left to deteriorate, the project area would eventually open Vermilion Bay into Freshwater Bayou. This would then threaten the integrity of Freshwater Bayou, exposing a larger interior marsh area to conversion to open water. In the specific project area, erosion of the eastern bank line of Freshwater Bayou has resulted in formation of three breaches, allowing boat wakes and hydrologic action to adversely affect the interior marsh east of the canal. The wakes from passing vessels and tidal action are causing the export of organic material from the project area.

**Proposed Solution**

The proposed project's primary feature is to create and/or nourish approximately 500 acres of marsh (365 acres created, 135 acres nourished). Sediment will be hydraulically pumped from the Gulf of Mexico into the shallow water marsh creation 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. Approximately 12,000 LF of tidal channels, along with two 50-100 acre ponds are planned for the newly created marsh. Additionally, 50 acres of vegetative plantings will occur within the newly created areas.

**Goals**

The project goal is to create and/or nourish approximately 500 ac of marsh (365 ac created, 135 ac nourished) of emergent brackish marsh using sediment from the Gulf.

**Preliminary Project Benefits:**

Based on a 50% rate reduction to the projected -0.30%/yr land loss rate, marsh creation and nourishment in the project area would yield 485 net acres, 20 years after initial construction.

**Preliminary Construction Costs:**

The estimated construction cost including 25% contingency is \$22,095,565.

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

Darryl Clark; US Fish and Wildlife Service; 337.291.3111; [Darryl\\_Clark@fws.gov](mailto:Darryl_Clark@fws.gov)  
John D. Foret, Ph.D.; NOAA Fisheries Service; 337.291.2107 [John.Foret@noaa.gov](mailto:John.Foret@noaa.gov)  
Judge Edwards; Vermilion Corporation; 337.893.0268; [vermilioncorporation@connections-lct.com](mailto:vermilioncorporation@connections-lct.com)



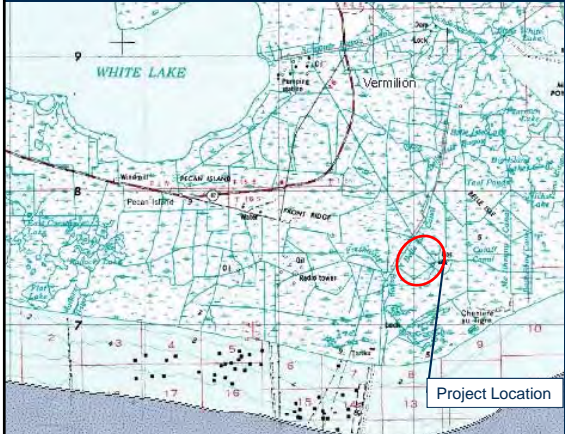




Science, Service, Stewardship




## Belle Isle Marsh Creation and Nourishment (Vermilion Parish) Region III – Teche - Vermilion Basin



**NOAA  
FISHERIES  
SERVICE**

January 30, 2013

**NOAA  
FISHERIES  
SERVICE**




### Problem

- Land loss rates in this area result of FW Bayou breaching into hydrologically modified marsh
- Increasing tidal influence along with saltwater intrusion weakened plant communities, ultimately leading to vegetation die-off and marsh breakup, export to FW Bayou, and allowing for Hurricanes Rita and Ike to scour the area
- Marshes that once provided a buffer between FW Bayou and Belle Isle are now shallow open water areas
- Part of a larger feature of weakened interior marsh between Vermilion Bay and areas south of Pecan Island

2

NOAA  
FISHERIES  
SERVICE

 Project Features

- Total Acres = 492 acres (369 created, 123 nourished)
- Reestablishes critical land bridge between Belle Isle and FW Bayou
- Borrow from outside immediate project area from GOM
- Create ~ 12,000 LF of tidal channels within newly created area
- Consistent with State Master Plan
- 477 net acres @ TY20
- Construction Cost with 25% contingency = \$29.0 million

3



**~~R3-TV-04~~**

**~~Cote Blanche Freshwater/Sediment Intro Shoreline  
Protection~~**

*Not consistent with 2012 State Master Plan*

**R3-TV-05**

**North Marsh Island Shoreline Protection**

*Consistent with 2012 State Master Plan*

23-TV-05

**PPL23 PROJECT NOMINEE FACT SHEET**  
**January 2013**

**Project Name:**

North Marsh Island Shoreline Protection Project

**Project Location:**

Region III, Teche/Vermilion Basin, Iberia Parish, Marsh Island Refuge (LDWF ownership)

**Coast 2050 Strategy:**

Strategy 13 – Construct interior reefs to protect lake shoreline and/or for restoring hydrology

**Master Plan:**

Project No. 03b.SP.04

**Problem:**

Vermilion Bay historically contained numerous shell reefs that have largely been mined over the past several decades. These hard shallow reefs have been attributed in part to providing stability and protection to marsh shorelines along the periphery of the bay. Consequently, much of the bay's shorelines have experienced moderate to severe erosion. The north shore of Marsh Island has experienced an average shoreline erosion of 12 feet per year from 1998 to 2005. Reestablishing the physical structure of historic reefs in areas of chronic erosion along with vegetative plantings will greatly reduce the vulnerability of the shoreline while allowing substrate for redevelopment of oyster populations.

**Goals:**

The goal of this project is to mimic shell reef shoreline protection of 29,000 linear feet of shoreline from bank erosion and provide substrate to promote oyster development.

**Proposed Project Features:**

The project will construct 29,000 linear feet of a low reef shoreline protection with a design based on the configuration of natural shell reefs found nearby in Southwest Pass. The structure will consist of a low rock structure at a height of +1.5 to +2.0 feet (or roughly just above marsh height) and crown width of 10-12 feet along the north shore of Marsh Island. The shoreline will be planted with smoothcord grass.

**Preliminary Project Benefits:**

The shoreline protection will stop 12 feet of average annual erosion across 29,000 linear feet, which is equivalent to eight acres per year or 160 acres over 20 years.

**Identification of Potential Issues:**

There are no potential issues anticipated with this proposed project.

**Preliminary Construction Costs:**

The anticipated construction cost, with contingency, is \$17,000,000.

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

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Ron Boustany, (337) 291-3067, [ron.boustany@la.usda.gov](mailto:ron.boustany@la.usda.gov)





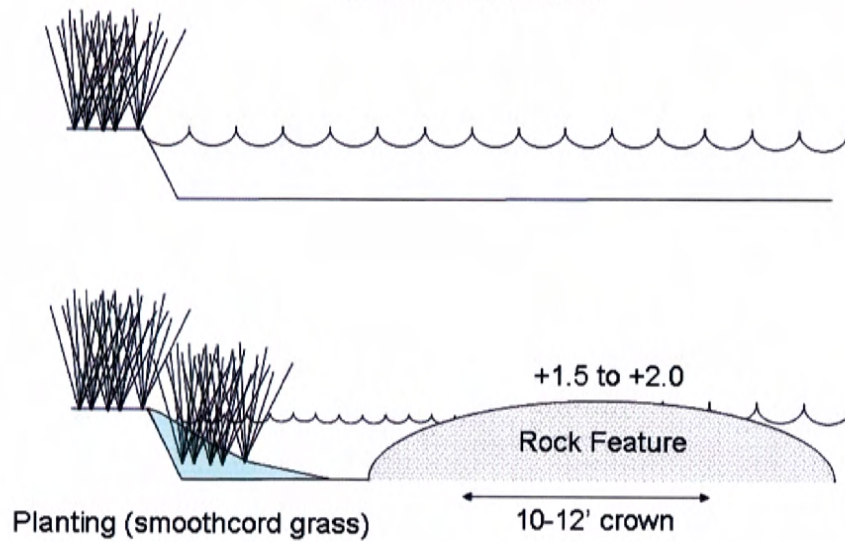
# North Marsh Island Shoreline Protection Project PPL - 23

5.5 miles of nearshore segmented shoreline protection

~ \$17 Million



## EXAMPLE CROSS SECTION



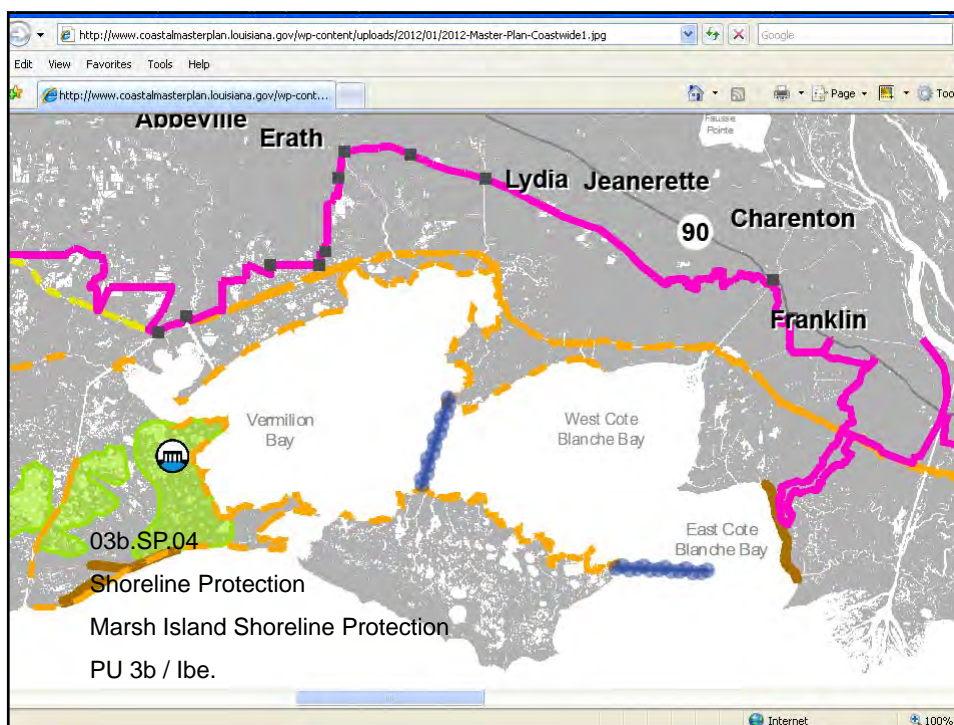


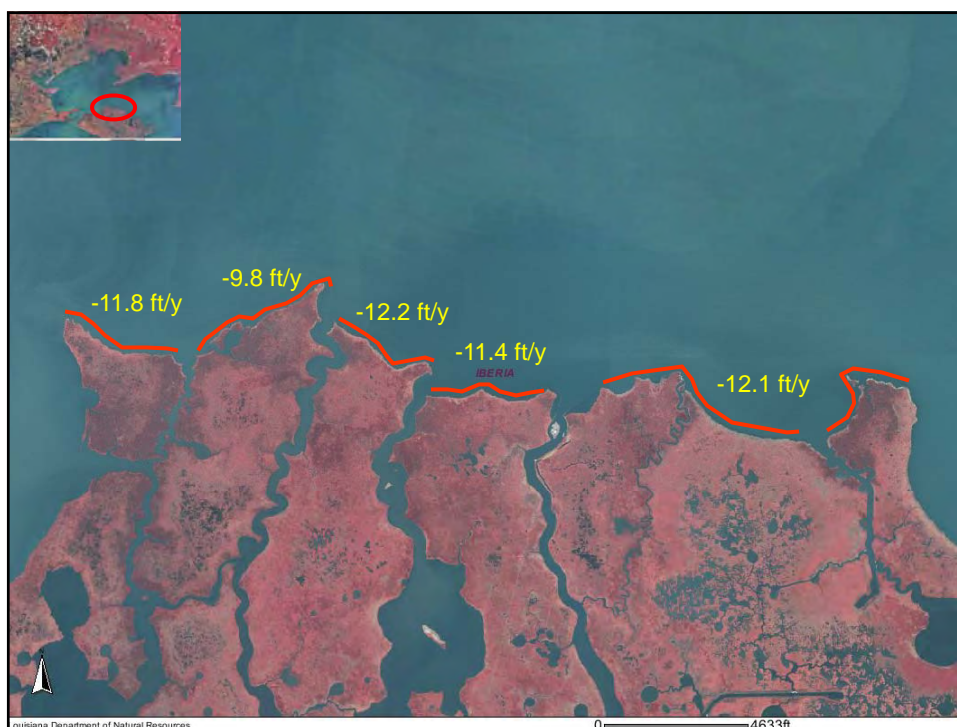
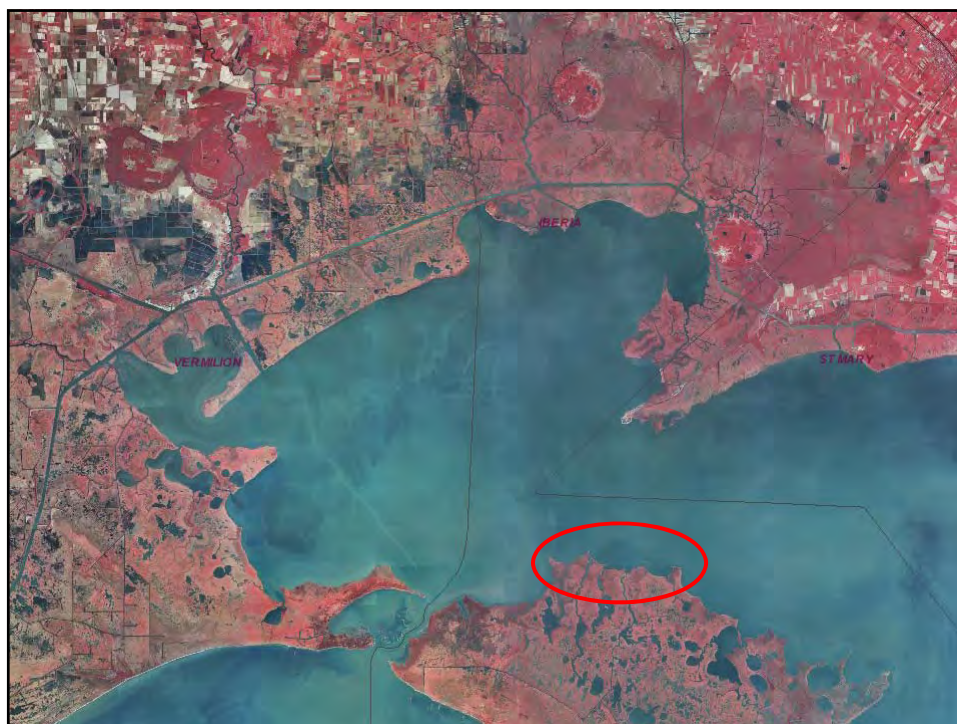


# North Marsh Island Shoreline Protection and Planting Project

PPL 23 – Morgan City, LA

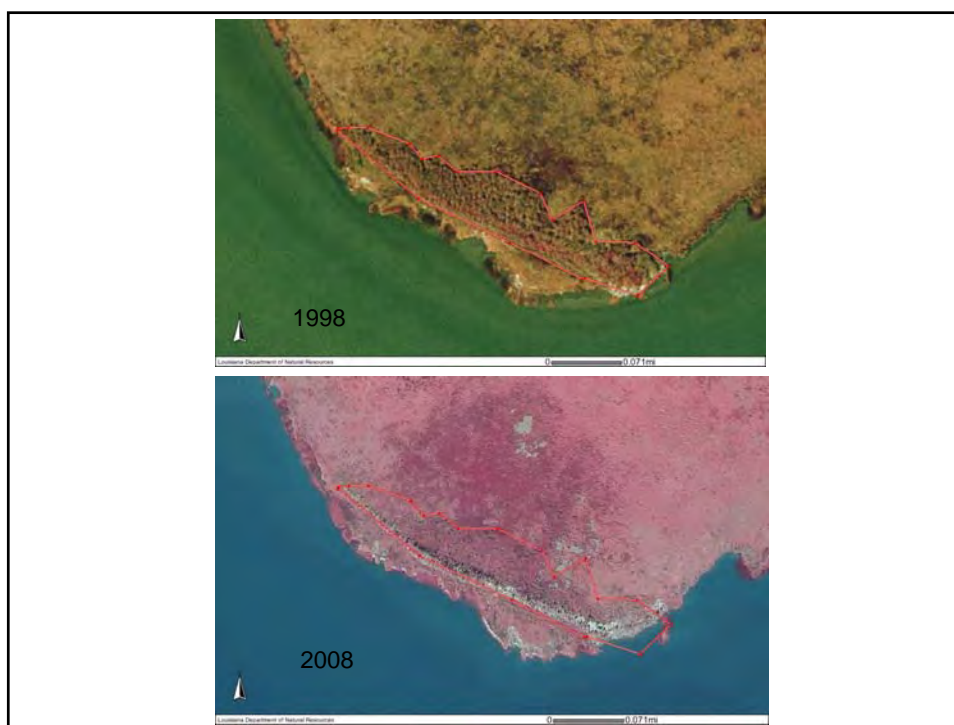
Cassidy Lejeune  
LDWF – Coastal and Nongame Resources Division  
New Iberia, LA

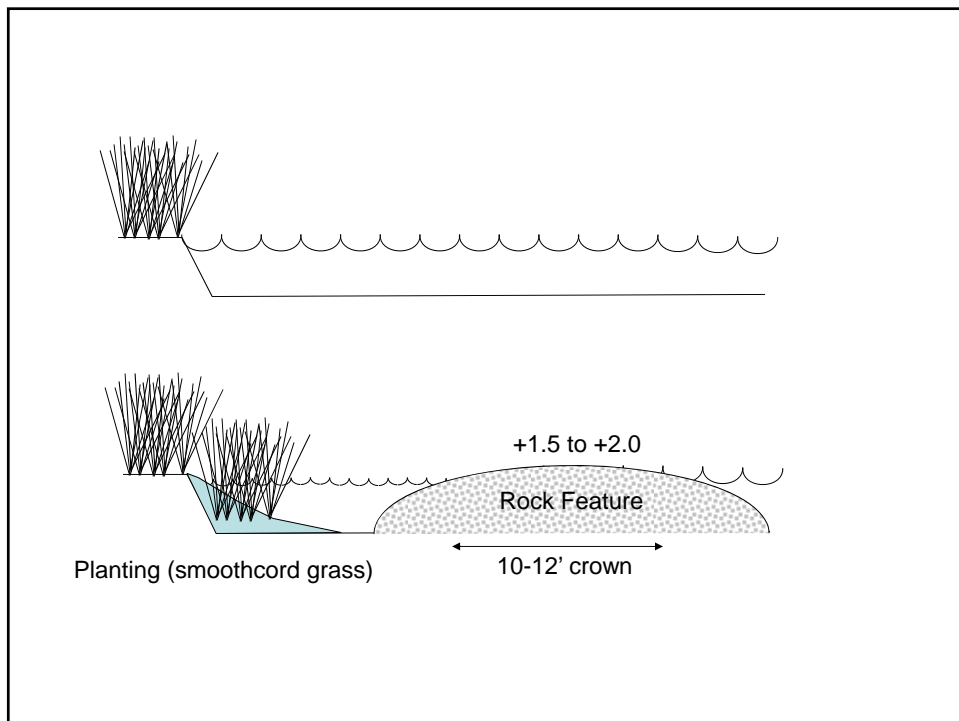
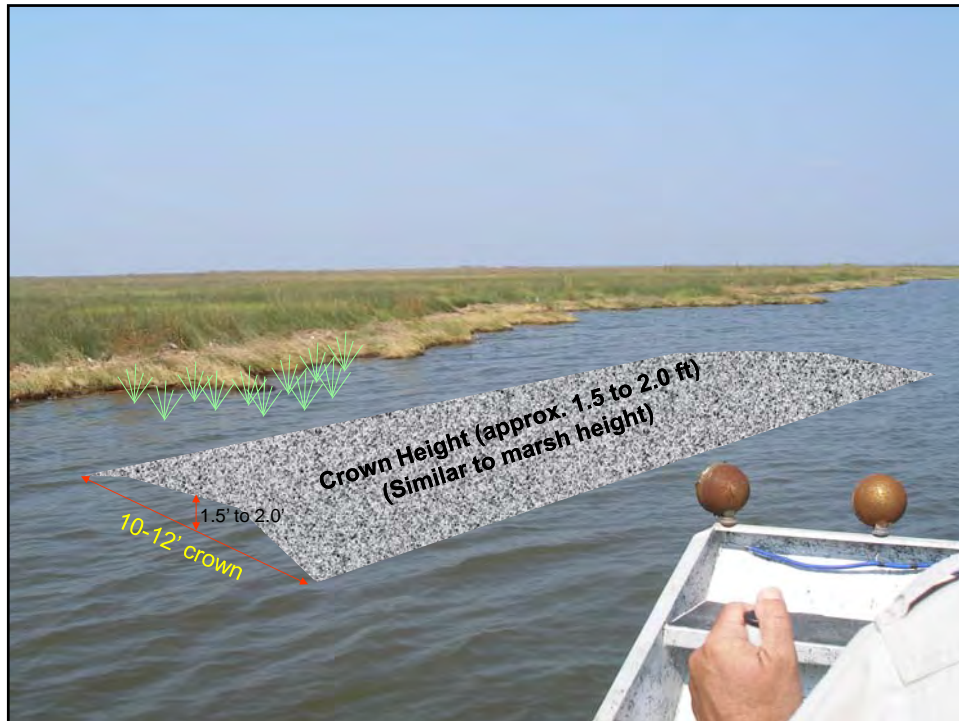


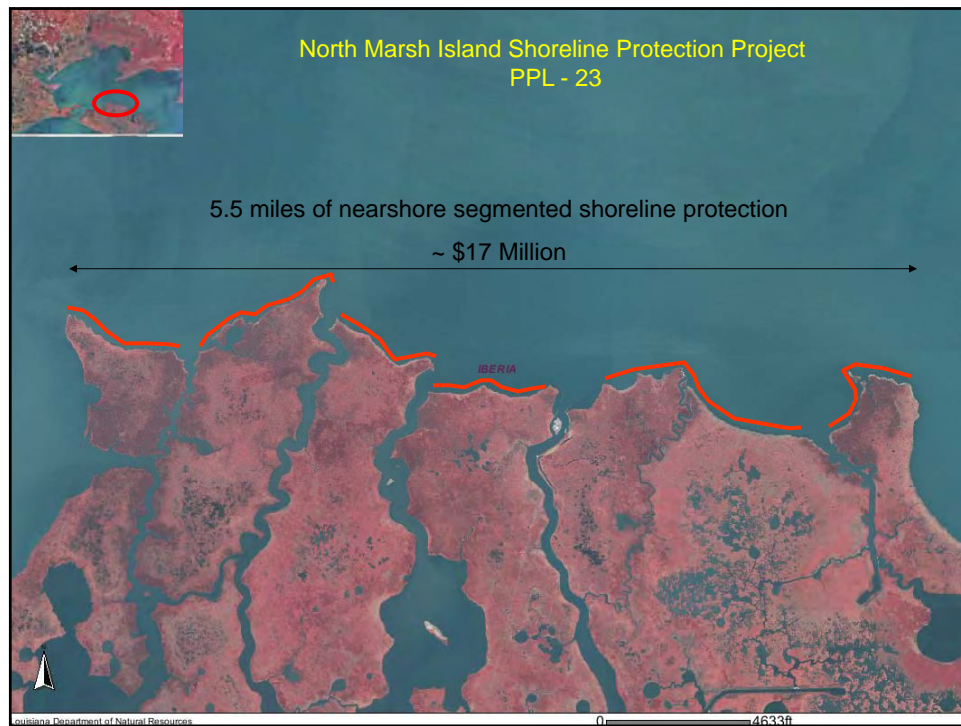












## Questions or Comments?

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LA Dept of Wildlife and Fisheries  
Coastal and Nongame Resources Division  
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**R3-TV-06**

**Southwest Pass Shoreline Protection**

*Consistent with 2012 State Master Plan*



**PPL23 PROJECT NOMINEE FACT SHEET**  
**January 30, 2013**

**Project Name**

Southwest Pass Shoreline Protection

**State Master Plan**

03b.SP.08 and 03b.SP.05 Southwest Pass Shoreline Protection (West Side) and Gulf Shoreline Protection (Freshwater Bayou to Southwest Pass).

**Project Location**

The project is located in the Region 3, Teche/Vermilion Basin, between the Marsh Island Wildlife Refuge in Iberia Parish and Paul J. Rainey Wildlife Sanctuary in Vermilion Parish.

**Problem**

Erosion of peninsulas in the project area is reducing the effectiveness of the landmass as a mainland barrier to gulf storm surge, wave energy and tidal flux reduction. Average losses of 8.4 ft/yr at Southwest Point and 10 ft/yr at Tojan Island were measured from 1998 to 2010. Southwest point is only about 240 ft wide at its thinnest location and the gulf shoreline on Tojan Point is within less than 500 ft from interior tidal creeks leading to the interior.

**Proposed Project Features**

Proposed is the installation of armored shoreline protection along the south shoreline of Vermilion Bay at Southwest Point for approximately 8,761 linear feet and along the north shoreline of the Gulf of Mexico at Tojan Island for approximately 7,147 linear ft. Shoreline protection would consist of typical rock construction.

**Goals**

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

**Preliminary Project Benefits**

The project would significantly reduce marsh losses through shoreline protection. The shoreline protection features would maintain approximately 67 acres of the Gulf shoreline along a barrier island and peninsula that will in turn help maintain a landmass that plays a significant role in regulating the hydrology of the Vermilion Bay system.

**Identification of Potential Issues**

There is a potential for oyster lease issues and disturbance of existing oyster seed grounds. The project would not interfere with navigation.

**Preliminary Construction Costs**

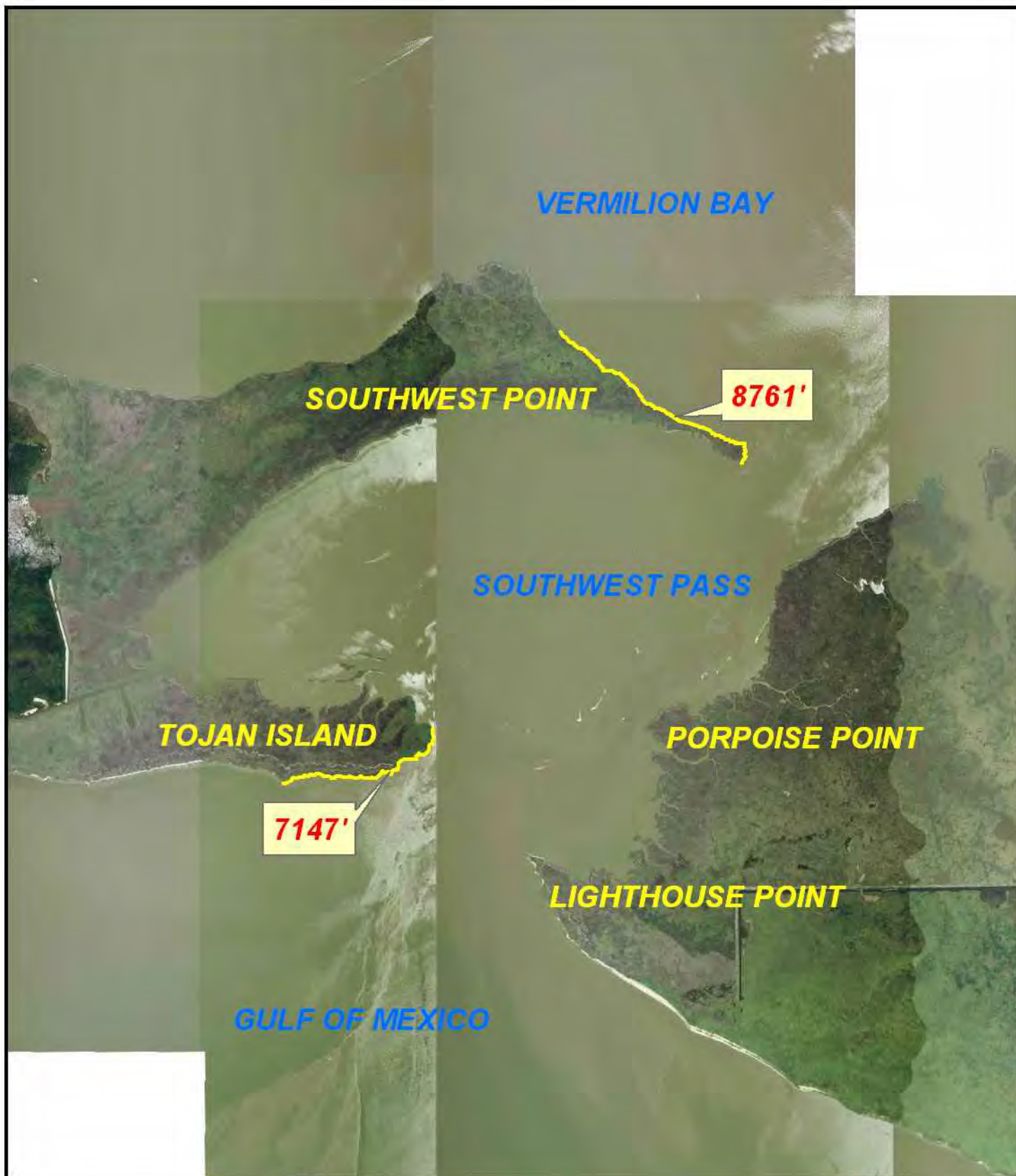
The estimated construction cost with 25% contingency is \$9.8 million.

**Preparer of Fact Sheet**

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Troy Mallach, NRCS, 337-291-3060, [Troy.Mallach@la.usda.gov](mailto:Troy.Mallach@la.usda.gov)





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

Data Source: NAIP 2010

Map Date: FEBRUARY 4, 2013



## ***SOUTHWEST PASS SHORELINE PROTECTION***

Legend

 SHORELINE\_PROTECTION

1 inch = 4,477 feet

## **Region 3 – ATCHAFALAYA BASIN**

**~~R3-AT-01~~**

**~~Bayou Chene Terracing & Containment~~**

*Not consistent with 2012 State Master Plan*

## **Region 3 – TERREBONNE BASIN**

**R3-TE-01**

**Carenco Bayou Freshwater Intro**

*Consistent with 2012 State Master Plan*

**PPL23 PROJECT NOMINEE FACT SHEET**  
**January 29, 2013**

**Project Name:** Carencro Bayou Freshwater Introduction Project

**Coast 2050 Strategy:**

- Regional Strategy # 4 (enhance Atchafalaya River influence to Terrebonne marshes, excluding upper Penchant marshes)

**Project Location:** Region 3, Terrebonne Basin, 2 miles northeast of Carencro Lake

**Problem:** Plugs in the existing Tennessee Gas Pipeline Canal preclude it from carrying sediment laden Atchafalaya River freshwater into the tidal marshes south of the upper Penchant Basin.

**Proposed Solution:** Two existing oilfield canal plugs can be removed to allow inputs of Atchafalaya River freshwater (from Bayou Penchant) into the reach of the Tennessee Gas Pipeline Canal immediately northwest of Carencro Bayou. Four to six gated outlet structures would be established along the north bank of Carencro Bayou to discharge water into the bayou and establish a flow-through system to encourage the flow of brown Atchafalaya River water into interior marshes. The existing Biscuit Bayou weir might also be modified to facilitate greater freshwater flow from the pipeline canal into Lake Carencro. The additional volume of freshwater reaching Carencro Bayou would also benefit downstream marshes north of Lost Lake and Lake Mechant.

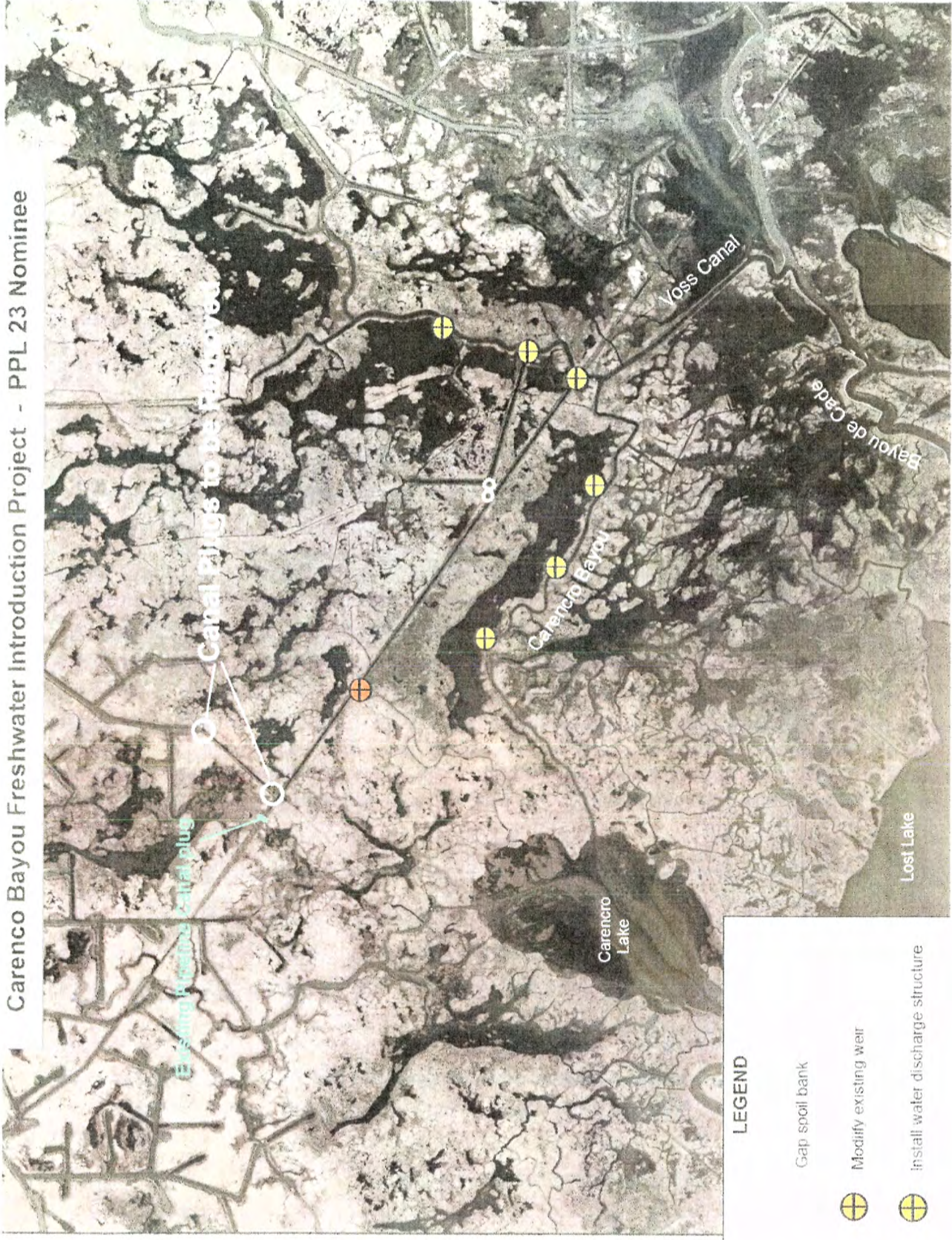
**Project Benefits:** The project-induced freshwater inputs into interior marshes north of Carencro Bayou might benefit approximately 4,000 acres. Additional undetermined benefits would accrue to downstream marshes north of Lost Lake and north of Lake Mechant.

**Project Costs:** The estimated construction cost including 25% contingency, is approximately \$4.1 million.

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



Carencro Bayou Freshwater Introduction Project - PPL 23 Nominee

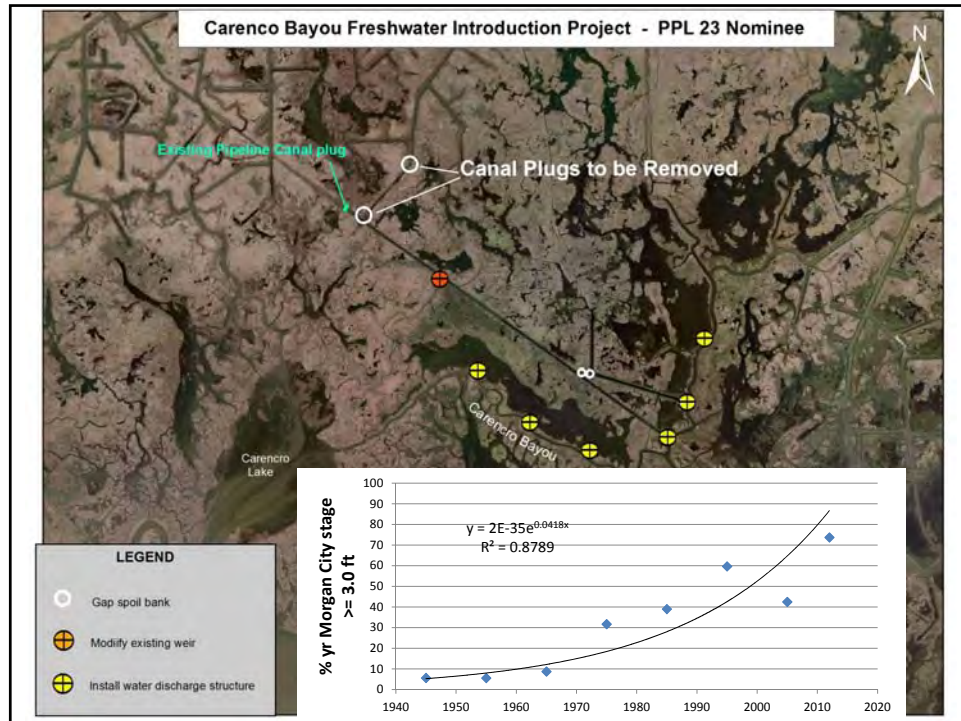












**R3-TE-02**

**East Catfish Lake Marsh Creation**

*Consistent with 2012 State Master Plan*



**PPL23 PROJECT NOMINEE FACT SHEET**  
**January 30, 2013**

**Project Name**

East Catfish Lake Marsh Creation

**Project Location**

Region 3, Terrebonne Basin, Lafourche Parish, adjacent to Golden Meadow hurricane protection levee

**Problem**

Examination of historical aerial photography clearly indicates significant marsh loss around Catfish Lake. Subsidence, canal dredging, a lack of freshwater input, saltwater intrusion, and altered hydrology are all important factors contributing to this loss. Of particular note, is the area between Catfish Lake and Golden Meadow. Canal dredging, associated with oil and gas activities, has resulted in the rapid deterioration of this area. USGS calculated a 1985-2010 loss rate of -0.79% per year for the PPL22 North Catfish Lake Marsh Creation Project.

**Goals**

The primary goal is to restore 380 acres of saline marsh habitat along the western alignment of the Golden Meadow hurricane protection levee.

**Proposed Project Features**

1. Sediments will be hydraulically dredged in Catfish Lake and pumped via pipeline to create/nourish approximately 380 acres of marsh.
2. Containment dikes will be constructed as necessary and gapped upon project completion.
3. The maximum pump distance for a Catfish Lake borrow site is approximately 31,000 feet (5.9 miles).
4. Pump distances for other borrow sites using water routes are as follows: a) Bay Courant – 9.5 miles, b) Lake Raccourci – 14.2 miles, c) Little Lake – 16.9 miles, d) Gulf of Mexico – 29 miles.

**Preliminary Project Benefits**

- 1) *What is the total acreage benefited both directly and indirectly?* Approximately 380 acres of marsh would be benefited directly. Indirect benefits would occur to the Golden Meadow hurricane protection levee.
- 2) *How many acres of wetlands will be protected/created over the project life?* The total net acres protected/created over the project life is approximately 232 acres.
- 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%.
- 4) *Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc.* No.

5) *What is the net impact of the project on critical and non-critical infrastructure?* The project would afford protection to the Golden Meadow Hurricane Protection Levee.

6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?* The project would complement other restoration projects in the area including the PPL22 North Catfish Lake Marsh Creation Project and CIAP/Parish marsh creation projects in the Catfish Lake area.

**Identification of Potential Issues**

Oil and gas infrastructure and oyster leases in Catfish Lake.

**Preliminary Construction Costs**

The estimated construction cost including 25% contingency is \$14.2M.

**Preparer of Fact Sheet**

Kevin Roy, USFWS, (337) 291-3120, [kevin\\_roy@fws.gov](mailto:kevin_roy@fws.gov)





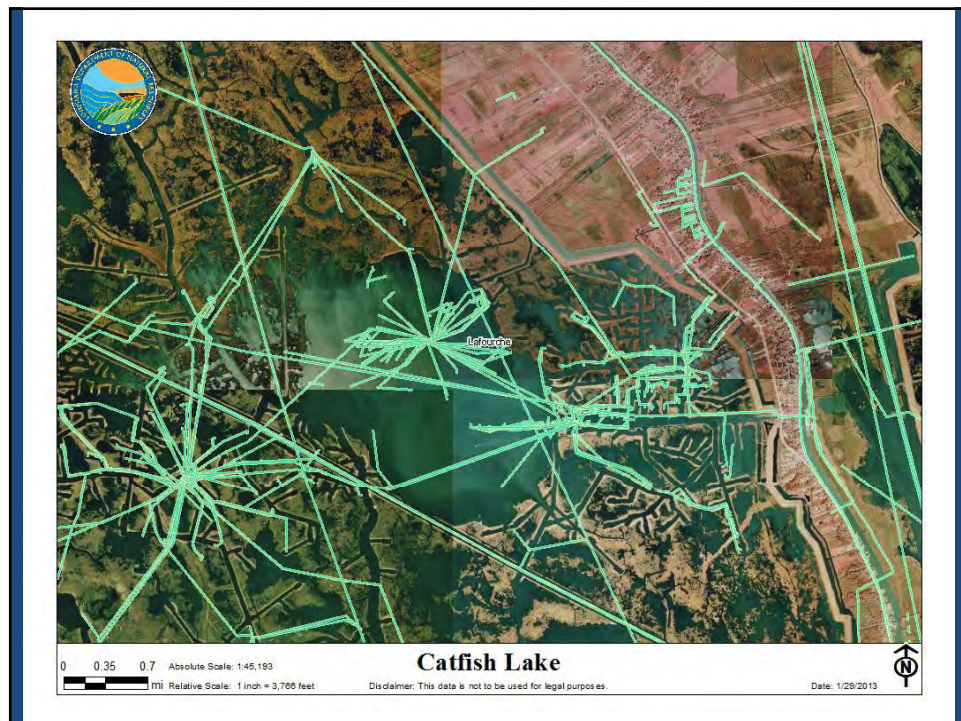
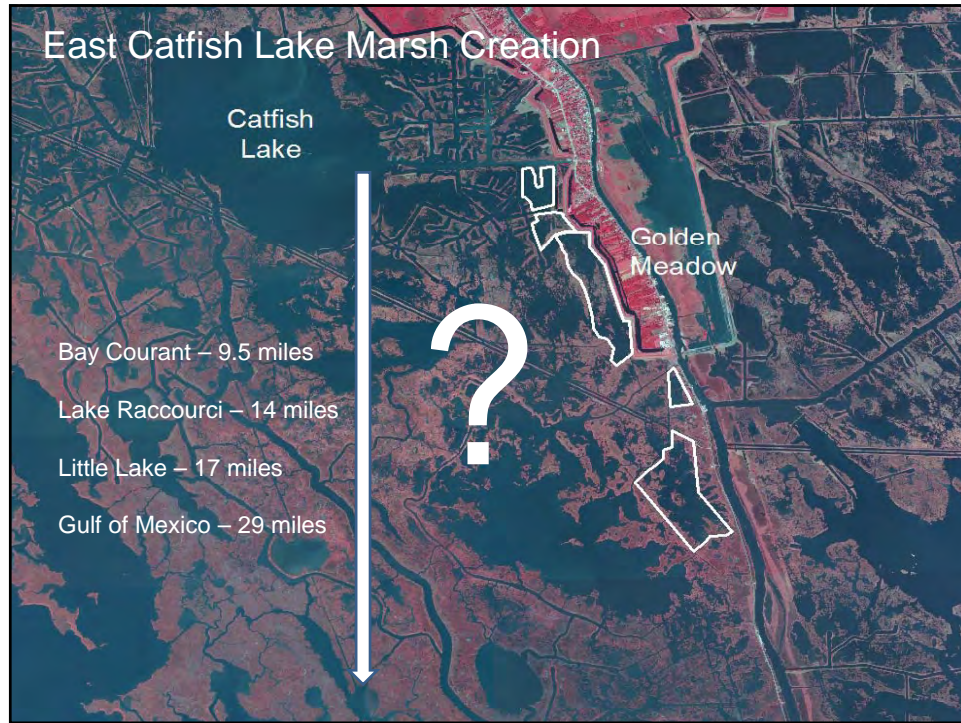
## U.S. Fish & Wildlife Service

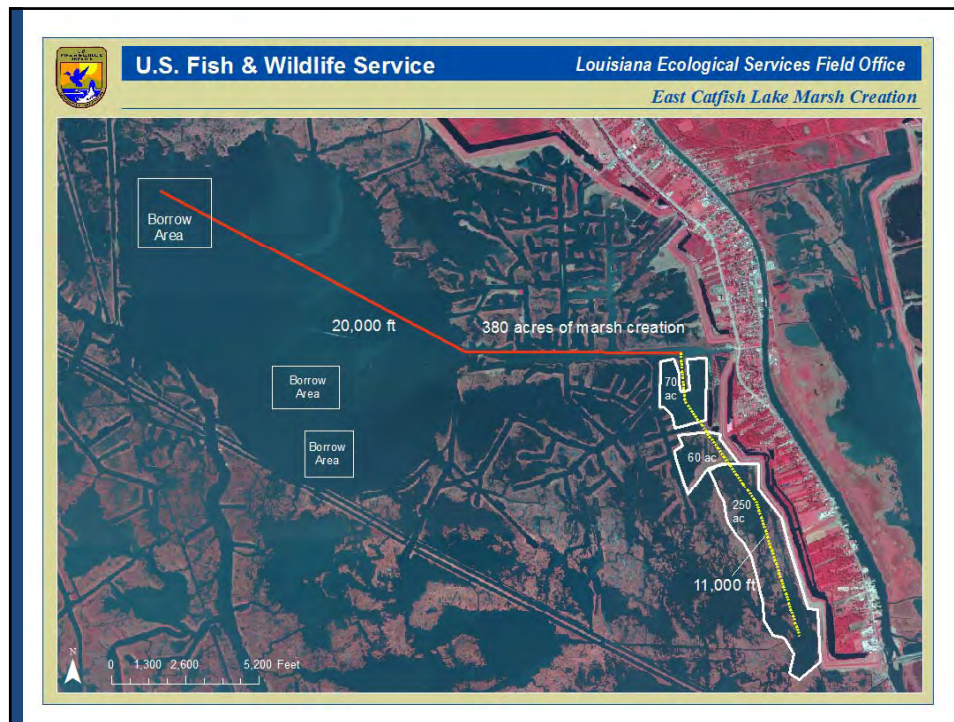
Louisiana Ecological Services Field Office

### East Caffish Lake Marsh Creation









## East Catfish Lake Marsh Creation

- Catfish Lake borrow site
- Maximum pump distance of 31,000 feet
- 380 acres of marsh creation/nourishment
- Net acres = 232
- Construction plus contingency = \$14.2M

**R3-TE-03**

**Bayou Pointe aux Chenes Marsh Creation**

*Consistent with 2012 State Master Plan*



**PPL23 PROJECT NOMINEE FACT SHEET**  
**January 30, 2013**

**Project Name**

Bayou Pointe aux Chenes Marsh Creation

**Project Location**

Region 3, Terrebonne Basin, Terrebonne Parish, south of the twin pipelines, western side of Bayou Pointe aux Chenes ridge

**Problem**

Examination of historical aerial photography clearly indicates significant marsh loss in the vicinity of the project area, particularly in the area between Bayou Pointe aux Chenes and Isle de Jean Charles. Subsidence, canal dredging, a lack of freshwater input, saltwater intrusion, and altered hydrology are all important factors contributing to marsh loss in the area. USGS calculated a 1985-2009 loss rate of -0.4% per year for the Timbalier Bay LCA polygon. A loss rate of -0.87% per year was calculated for the adjacent Wonder Lake polygon.

**Goals**

The primary goal is to restore 490 acres of saline marsh habitat along the western side of the Bayou Pointe aux Chenes ridge.

**Proposed Project Features**

1. Sediments will be hydraulically dredged in Lake Chien and pumped via pipeline to create/nourish approximately 490 acres of marsh.
2. Containment dikes will be constructed as necessary and gapped upon project completion.
3. The maximum pump distance for a Lake Chien borrow site is approximately 25,600 feet (4.8 miles).

**Preliminary Project Benefits**

1) *What is the total acreage benefited both directly and indirectly?* Approximately 490 acres of marsh would be benefited directly from marsh creation. Indirect benefits may extend to approximately 100 acres of surrounding marsh.

2) *How many acres of wetlands will be protected/created over the project life?* The total net acres protected/created over the project life is approximately 376 acres.

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%.

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. The project would extend the longevity of the Bayou Pointe aux Chenes ridge.

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?* There are no approved and/or constructed restoration projects in this area.

**Identification of Potential Issues**

Oil and gas infrastructure and oyster leases in Lake Chien.

**Preliminary Construction Costs**

The estimated construction cost including 25% contingency is \$19.2M.

**Preparer of Fact Sheet**

Kevin Roy, USFWS, (337) 291-3120, [kevin\\_roy@fws.gov](mailto:kevin_roy@fws.gov)





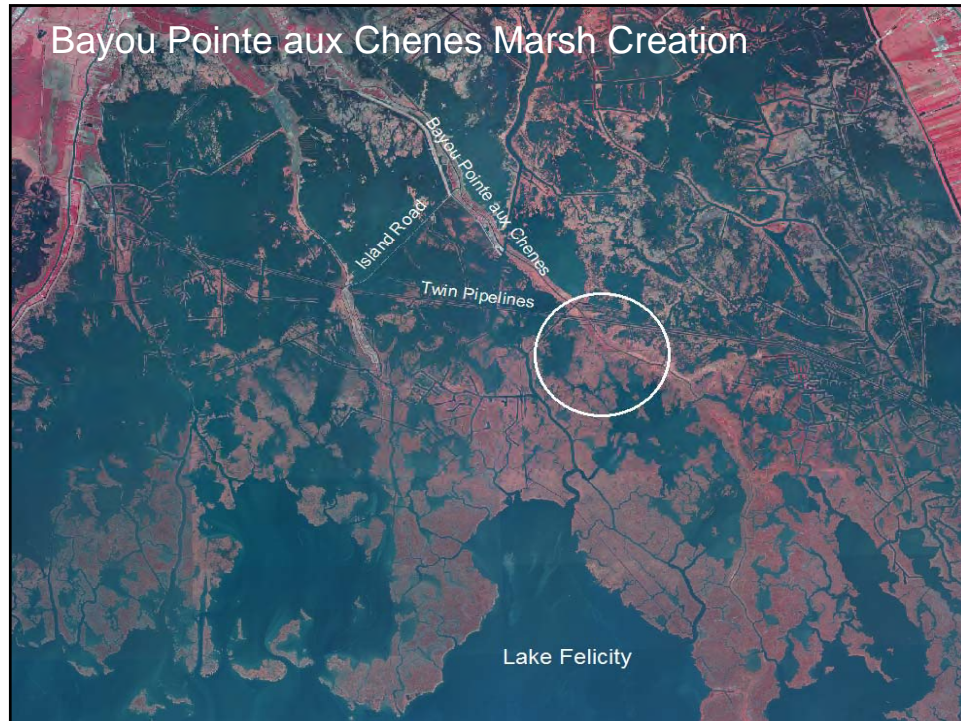
## U.S. Fish & Wildlife Service

Louisiana Ecological Services Field Office

### Bayou Pointe aux Chenes Marsh Creation







## Bayou Pointe aux Chenes Marsh Creation

- Lake Chien borrow site
- Maximum pump distance of 25,600 feet
- 490 acres of marsh creation/nourishment
- Net acres = 376
- Construction plus contingency = \$19.2M

**R3-TE-04**

**Small Bayou LaPointe Marsh Creation & Ridge Restoration**

*Consistent with 2012 State Master Plan*



**PPL23 PROJECT NOMINEE FACT SHEET**  
**January 30, 2013**

**Project Name**

Small Bayou LaPointe Marsh and Ridge Restoration

**Project Location**

Region 3, Terrebonne Basin, Terrebonne Parish, east of Raccourci Bay, adjacent to Small Bayou LaPointe

**Problem**

Examination of historical aerial photography clearly indicates significant marsh loss in the vicinity of the project area, particularly in the area between Small Bayou LaPointe and Bayou DeCade. Subsidence, canal dredging, saltwater intrusion, and altered hydrology are all important factors contributing to marsh loss in the area. USGS calculated a 1985-2009 loss rate of -0.45% per year for the Lake Mechant LCA polygon. In addition, forested ridge no longer exists along Small Bayou LaPointe. The ridge has subsided over several centuries and is now marsh.

**Goals**

The goals are to: 1) Restore 240 acres of intermediate/brackish marsh habitat along the northern side of Small Bayou LaPointe and 2) Restore ridge habitat along Small Bayou LaPointe.

**Proposed Project Features**

1. Sediments will be hydraulically dredged in Lake Mechant and pumped via pipeline to create/nourish approximately 240 acres of marsh.
2. Containment dikes will be constructed as necessary and gapped upon project completion.
3. The maximum pump distance for the Lake Mechant borrow site is approximately 26,700 feet (5.1 miles).
4. Approximately 15,500 ft of ridge will be constructed along the northern side of Small Bayou LaPointe. The bayou channel will be dredged to obtain this material. Other options may exist. Proposed ridge dimensions include a settled elevation of +6 ft, a 25 ft top width, 1V:6H side slopes, and a base width of 85 ft. Chinese tallow tree control and hardwood plantings are included.

**Preliminary Project Benefits**

- 1) *What is the total acreage benefited both directly and indirectly?* Approximately 240 acres of marsh would be benefited directly from marsh creation. Ridge restoration would result in 24 acres of ridge habitat and 6 acres of marsh.
- 2) *How many acres of wetlands will be protected/created over the project life?* The total net acres protected/created over the project life is approximately 194 acres.
- 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%.

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. The project would restore a forested ridge along Small Bayou LaPointe.

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?* The project would provide a synergistic effect with the North Lake Mechant Landbridge Restoration Project (TE-44) located to the west. Both projects would work together to maintain the intermediate Landbridge between Lake Mechant and fresher marsh types to the north.

**Identification of Potential Issues**

Oyster leases in Lake Mechant.

**Preliminary Construction Costs**

The estimated construction cost including 25% contingency is \$14.7M.

**Preparer of Fact Sheet**

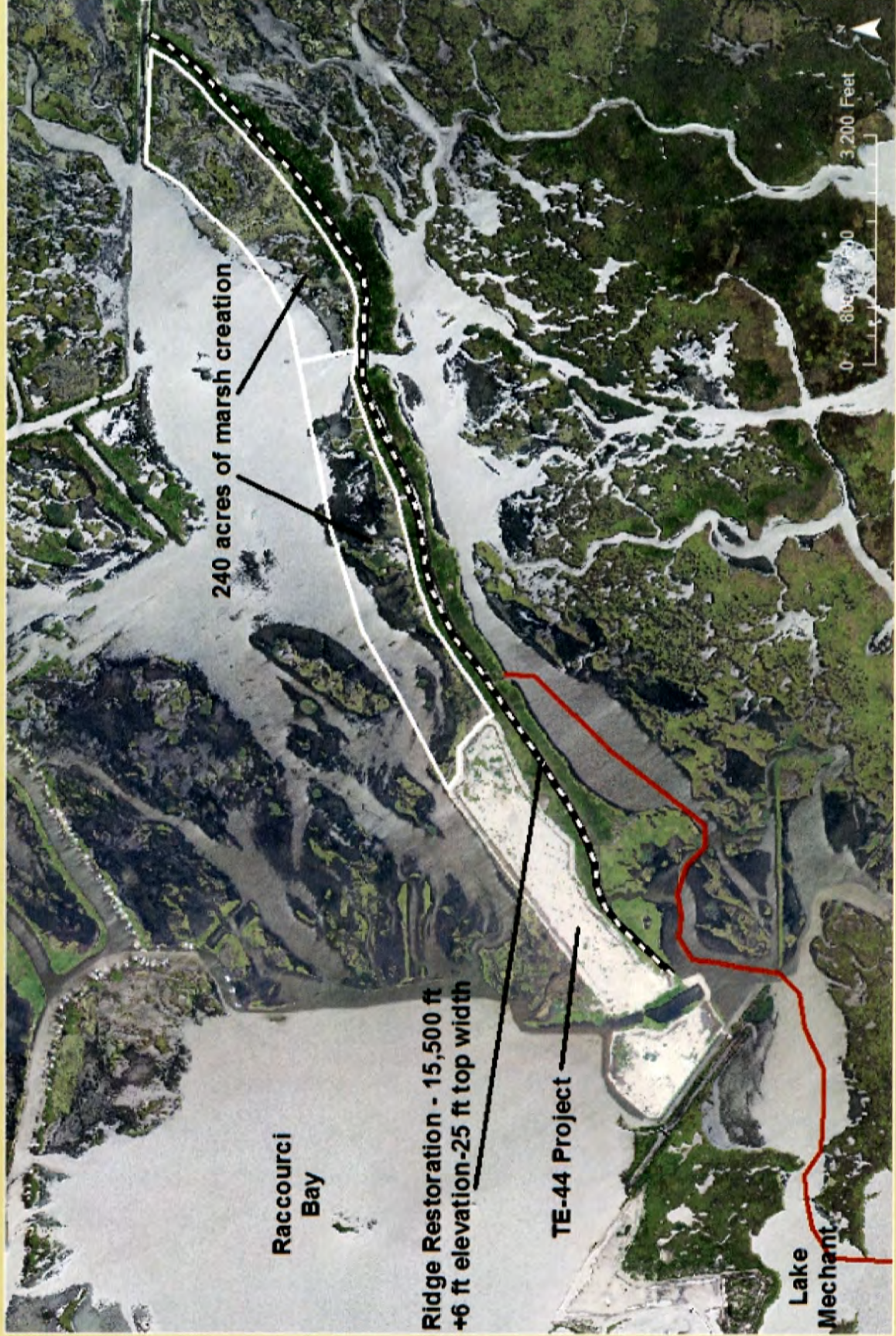
Kevin Roy, USFWS, (337) 291-3120, [kevin\\_roy@fws.gov](mailto:kevin_roy@fws.gov)



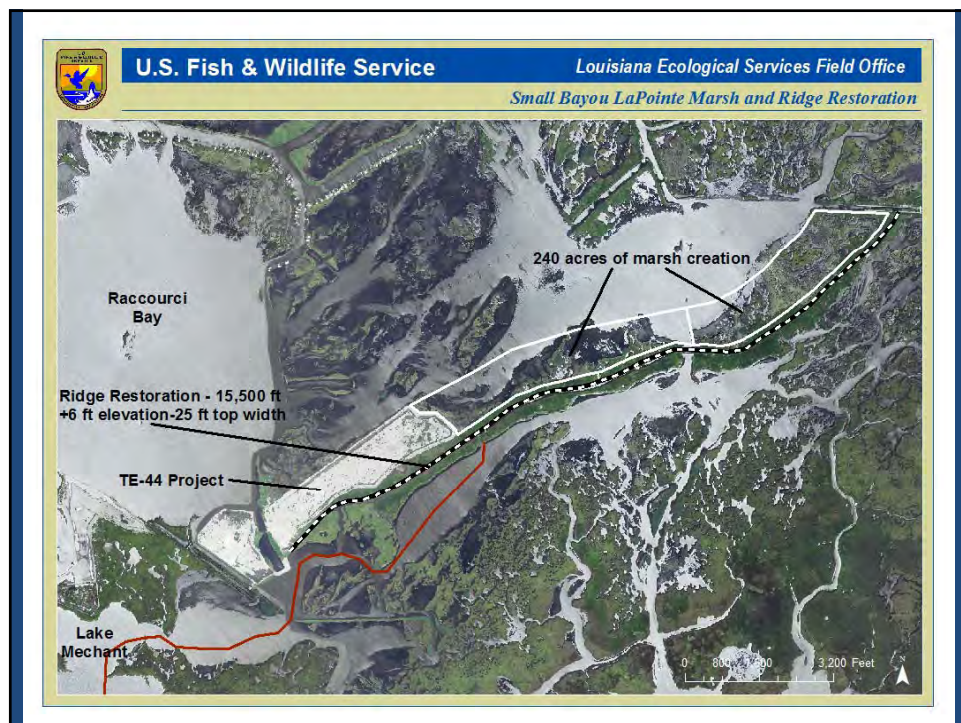
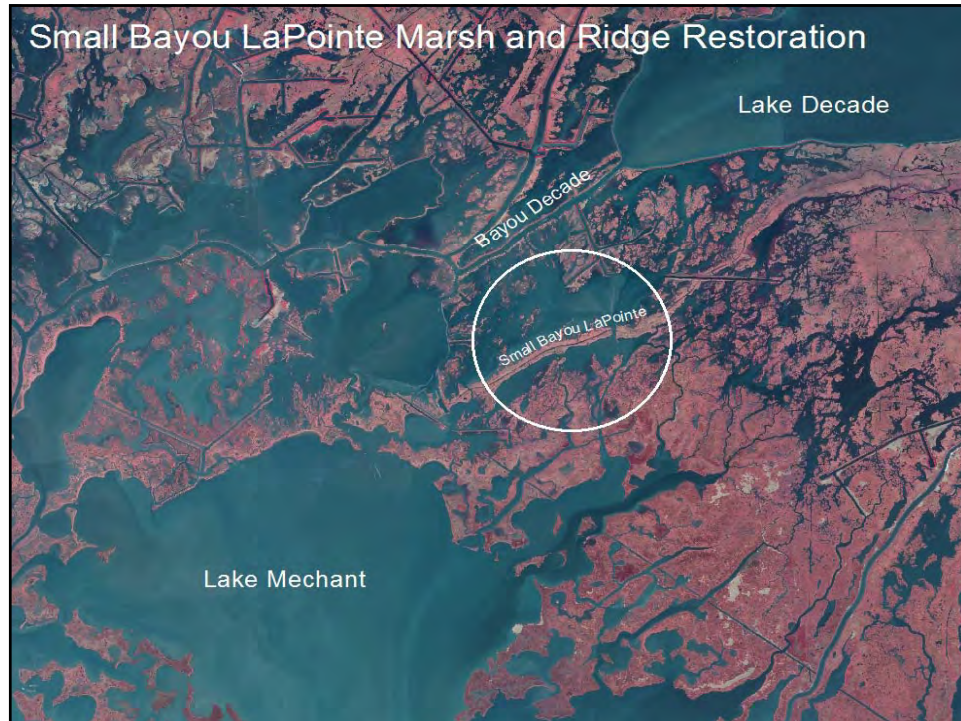


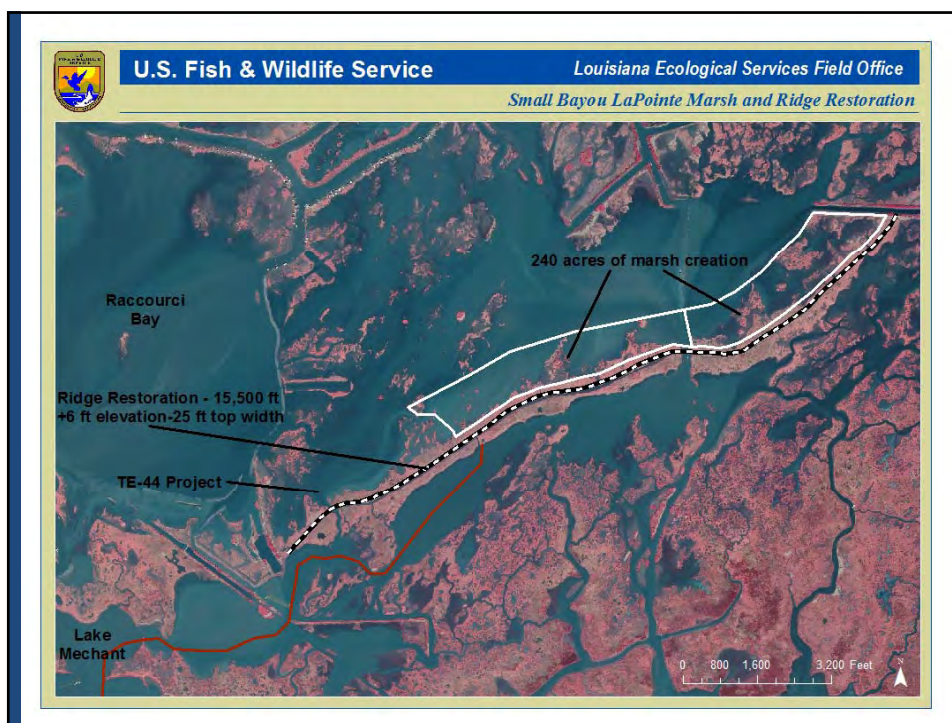
**U.S. Fish & Wildlife Service**

*Louisiana Ecological Services Field Office  
Small Bayou LaPointe Marsh and Ridge Restoration*









## Small Bayou LaPointe Marsh and Ridge Restoration

- Lake Mechant borrow site
- Maximum pump distance of 26,700 feet
- 240 acres of marsh creation/nourishment
- 15,500 ft of ridge restoration
- Net acres = 194
- Construction plus contingency = \$14.7M

**R3-TE-05**

**Island Road Marsh Creation & Nourishment**

*Consistent with 2012 State Master Plan*



**PPL23 PROJECT NOMINEE FACT SHEET**  
**January 30, 2013**

**Project Name**

Island Road Marsh Creation and Nourishment Project

**Louisiana's 2012 Coastal Master Plan**

Marsh Creation - 03a.MC.09b

**Project Location**

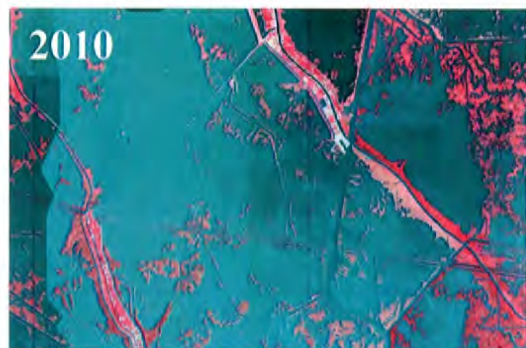
Region 3, Terrebonne Basin, Terrebonne Parish

**Problem**

The Terrebonne Basin is an abandoned delta complex, characterized by a thick section of unconsolidated sediments that are undergoing dewatering and compaction, contributing to high subsidence, and a network of old distributary ridges extending southward from Houma. Historically, subsidence and numerous oil and gas canals and pipelines in the area have contributed significantly to wetland losses. Since 1932, the Terrebonne Basin has lost approximately 20% of its wetlands. Current loss rates range from approximately 4,500 to 6,500 acres/year. This loss amounts to up to 130,000 acres during the next 20 years. One-third of the Terrebonne Basin's remaining wetlands would be lost to open water by the year 2040. The wetland loss rate for the Wonder Lake subunit is -0.87%/year based on USGS data from 1995 to 2009.



There has been a significant reduction in the marsh platform in the vicinity of Island Road that has provided some historical wave energy protection. Island Road is the only land access to the Isle of Jean Charles located west of Pointe Aux Chenes which serves a unique community comprised of 46% Native American Indian and 90% minority which have historically relied on fishing for their livelihood.



**Proposed Solution**

The proposed project's primary feature is to create and/or nourish existing marsh. In order to achieve this, sediment will be hydraulically pumped from a borrow source near Lake Felicity. Containment dikes will be constructed around the marsh creation area to retain sediment during pumping. No later than three years post construction, the containment dikes will be degraded and/or gapped. Additionally, the newly constructed marsh will be planted following construction to stabilize the platform and reduce time for full vegetation.

The restoration concept provides for the creation and/or nourishment of approximately 390 acres that will form a land bridge along the perimeter along Cutoff Canal and the twin pipelines. This concept allows for future restoration projects between Island Road and the newly constructed marsh platform providing further benefit to the area. Ducks Unlimited has already expressed interest in complementary restoration projects within the area.



## **Goals**

The project goal is to create and/or nourish up to 390 acres of emergent brackish marsh.

## **Preliminary Project Benefits**

- 1) *What is the total acreage benefited both directly and indirectly?*  
This total project area is approximately 390 acres.
- 2) *How many acres of wetlands will be protected/created over the project life?*  
Assuming a 50% reduction in the background loss rate of -0.87%/year, the marsh creation and nourishment would result in 332 net acres after 20 years (assuming 361 of marsh creation and 29 acres of marsh nourishment at 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%)?*  
A 50% loss rate reduction is assumed for the marsh creation, and marsh nourishment. (from -0.87%/year to -0.44%/year).
- 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 provide restore a portion of Cutoff Canal and Bayou Jean LaCroix and help maintain Island Road.
- 5) *What is the net impact of the project on critical and non-critical infrastructure?*  
The project will provide protection to Island Road that provides access to the residents of Isle of Jean Charles. The project would also provide positive impacts to non-critical (i.e., minor oil and gas facilities) infrastructure. Minor oil and gas facilities and pipelines in the area would benefit from an increase in marsh acreage. The loss of wetlands in this area increases the vulnerability of infrastructure to wave energy.
- 6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?*  
The project may have indirect synergy with the Madison Bay Marsh Creation and Terracing (TE-51) project and the Ducks Unlimited marsh management unit on Point aux Chien Wildlife Management Area.

## **Identification of Potential Issues**

The proposed project has potential utility/pipeline issues.

## **Preliminary Construction Costs**

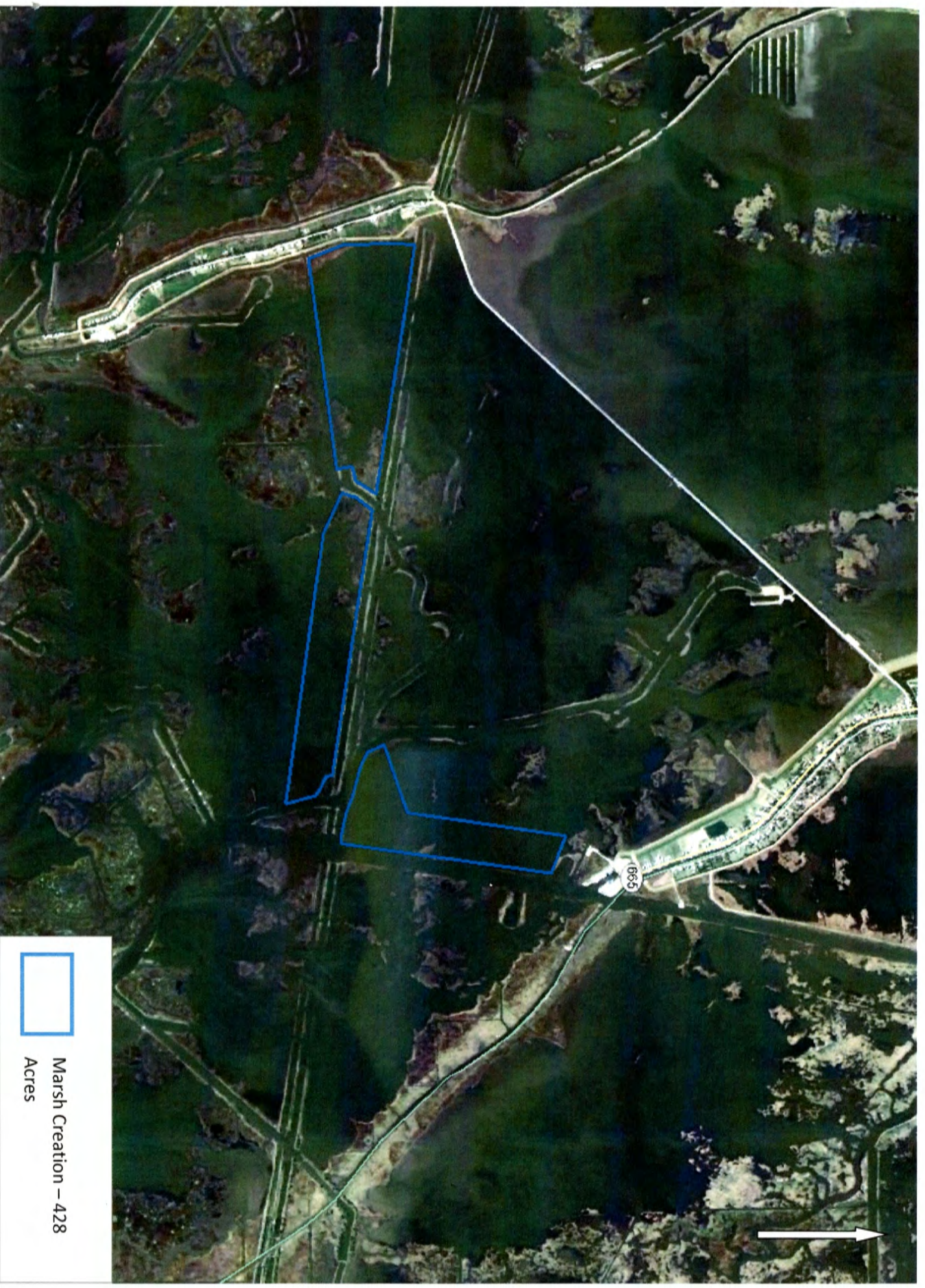
The estimated construction cost including 25% contingency is approximately \$28.1 million. The fully funded cost estimate ranges between \$35-40M.

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

Phillip Parker, NMFS, 225-578-8341, phillip.parker@noaa.gov




PPL 23: Island Road Marsh Creation and Nourishment Project (Terrebonne Parish)






Science, Service, Stewardship




## Island Road Marsh Creation and Nourishment (Terrebonne Parish) Region III – Terrebonne Basin



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January 30, 2013

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SERVICE**



## Problem

- High land loss rates in the Terrebonne Basin
- Island Road is the only land access to Isle de Jean Charles located west of Pointe Aux Chenes
- Lack of protection for Isle de Jean Charles, a unique community comprised of 46% Native American Indian and 90% minority which have historically relied on fishing for their livelihood
- Terrebonne Parish has made recent investments into providing access to the area

2



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## Project Features

- Total Acres = 428 acres
- Establishes land bridge feature between Isle de Jean Charles and Point Aux Chenes
- Re-establishes western edge of Cut-off Canal
- Borrow from outside immediate project area
- Allows for additional restoration activities in the area (specifically concepts proposed by Ducks Unlimited)
- Consistent with State Master Plan
- Provides additional protection to Isle de Jean Charles
- Construction Cost with 25% contingency = \$28.1 million

4





**R3-TE-06**

**West Belle Pass Marsh Creation**

*Consistent with 2012 State Master Plan*

## **PPL23 PROJECT NOMINEE FACT SHEET**

### **January 30, 2013**

#### **Project Name**

West Belle Pass Marsh Creation Project

#### **Louisiana's 2012 Coastal Master Plan**

Marsh Creation - 03a.MC.07

#### **Project Location**

Region 3, Terrebonne Basin, Lafourche Parish

#### **Problem**

The Terrebonne Basin is an abandoned delta complex, characterized by a thick section of unconsolidated sediments that are undergoing dewatering and compaction, contributing to high subsidence, and a network of old distributary ridges extending southward from Houma. Historically, subsidence and numerous oil and gas canals and pipelines in the area have contributed significantly to wetland losses. Since 1932, the Terrebonne Basin has lost approximately 20% of its wetlands. Current loss rates range from approximately 4,500 to 6,500 acres/year. This loss amounts to up to 130,000 acres during the next 20 years. One-third of the Terrebonne Basin's remaining wetlands would be lost to open water by the year 2040. The wetland loss rate for the Timbalier Bay subunit is -0.4%/year based on USGS data from 1995 to 2009.

#### **Proposed Solution**

Records suggest that approximately 300,000 CY of material is dredged annually from West Belle Pass and placed along the Gulf shoreline adjacent to the jetties. While this method beneficially uses the dredge material, there is some debate as to its quality for beach construction due to high silt content. It is generally accepted that over time the silt fraction is released from the placed fill and lost offshore due to wave action. To reduce this large offshore loss, the material could provide longer term benefits if it were placed in an area with a lower wave climate.

The proposed project's primary feature is marsh creation. Containment dikes will be constructed around the marsh creation area to retain sediment during pumping. No later than three years post construction, the containment dikes will be degraded and/or gapped. Additionally, the newly constructed marsh will be planted following construction to stabilize the platform and reduce time for full vegetation.

In addition, interior marsh shorelines are subject to continuous erosion due to back-bay waves. Over time, erosion of the marshes exposes more shoreline to wave attack causing land loss rates to increase exponentially.

#### **Goals**

The project goal is to:

- Create 244 acres of marsh to optimize the use of material dredged from Belle Pass during annual maintenance cycles and utilize material dredged from outside the system.
- Enhance the marsh behind the West Belle Pass barrier headland creating a synergistic effect with the TE-52 project.



### **Preliminary Project Benefits**

- 1) *What is the total acreage benefited both directly and indirectly?*  
This total project area is approximately 243 acres.
- 2) *How many acres of wetlands will be protected/created over the project life?*  
Assuming a 50% reduction in the background loss rate of -0.40%/year, the marsh creation and nourishment would result in 233 net acres after 20 years (assuming 243 of marsh creation and 0 acres of marsh nourishment at 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%)?*  
A 50% loss rate reduction is assumed for the marsh creation, and marsh nourishment. (from -0.4%/year to -0.2%/year).
- 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 is located along the northern side of the West Belle Pass Barrier Headland Restoration (TE-52) and provides additional back barrier marsh platform.
- 5) *What is the net impact of the project on critical and non-critical infrastructure?*  
The project would also provide positive impacts to non-critical (i.e., minor oil and gas facilities) infrastructure as well as further protection to the Port Fourchon.
- 6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?*  
The project may be adjacent to the West Belle Pass Barrier Headland Restoration (TE-52) and provides further protection to bayside of the project.

### **Identification of Potential Issues**

The proposed project has potential pipeline issues.

### **Preliminary Construction Costs**

The estimated construction cost including 25% contingency is approximately \$10.4 million. The fully funded cost estimate ranges between \$10-15M.

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

Phillip Parker, NMFS, 225-578-8341, [phillip.parker@noaa.gov](mailto:phillip.parker@noaa.gov)


Support and information provided by Gordon Thomson and Whitney Thompson with Coastal Planning & Engineering, Inc. (CPE), a Shaw Group Company

PPL 23: West Belle Pass Marsh Creation Project (Lafourche Parish)

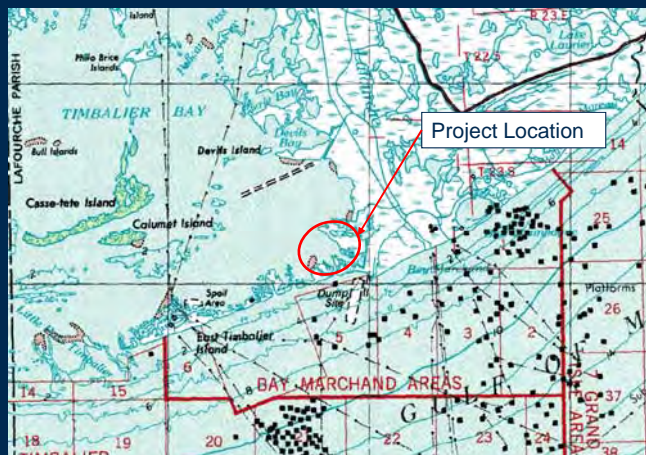




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## West Belle Pass Marsh Creation (Lafourche Parish) Region III – Terrebonne Basin



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January 30, 2013

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## Problem

- Approximately 300,000 cubic yards of material is dredged annually from Belle Pass and placed along the Gulf shoreline
- Due to the high silt content of this material, most of this material is lost offshore due to wave action (CPE, 2009)

CL3

2



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SERVICE




## Dredging History within Bayou Lafourche

Completion Date	Placement Location	Volume (cy)
July 1998	Marsh West of Belle Pass	1,500,000
July 1998	Beach West of Belle Pass	240,000
August 2001	Bank East of Belle Pass	128,000
August 2001	Beach West of Belle Pass	1,830,700
December 2004	Beach West of Belle Pass	1,020,300
May 2006	Beach West of Belle Pass	605,000
2006 CL4	Marsh West of Belle Pass	426,000
2007	Beach West of Belle Pass	111,000
October 2008	Beach East of Belle Pass	425,000

3



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 Project Features

- Total Acres = 243 acres
- Maximize use of beneficial dredge material
- Beneficially use 2.0M cubic yards of fill material over 7 years
- Synergistic with other projects
- Construction Cost with 25% contingency = \$10.4 million

5



**R3-TE-07**

**West Bayou Lafourche Marsh Creation**

*Consistent with 2012 State Master Plan*



**PPL23 PROJECT NOMINEE FACT SHEET**  
**January 30, 2013**

**Project Name**

West Bayou Lafourche Marsh Creation and Nourishment Project

**Louisiana's 2012 Coastal Master Plan**

Marsh Creation - 03a.MC.07

**Project Location**

Region 3, Terrebonne Basin, Lafourche Parish

**Problem**

The Terrebonne Basin is an abandoned delta complex, characterized by a thick section of unconsolidated sediments that are undergoing dewatering and compaction, contributing to high subsidence, and a network of old distributary ridges extending southward from Houma. Historically, subsidence and numerous oil and gas canals and pipelines in the area have contributed significantly to wetland losses. Since 1932, the Terrebonne Basin has lost approximately 20% of its wetlands. Current loss rates range from approximately 4,500 to 6,500 acres/year. This loss amounts to up to 130,000 acres during the next 20 years. One-third of the Terrebonne Basin's remaining wetlands would be lost to open water by the year 2040. The wetland loss rate for the S. Pointe Aux Chenes State WMA subunit is -0.89%/year based on USGS data from 1995 to 2009.



**Proposed Solution**

The proposed project's primary feature is to create and/or nourish approximately 374 acres existing marsh. In order to achieve this, sediment will be hydraulically pumped from a borrow source near Little Lake. Containment dikes will be constructed around the marsh creation area to retain sediment during pumping. No later than three years post construction, the containment dikes will be degraded and/or gapped. Additionally, the newly constructed marsh will be planted following construction to stabilize the platform and reduce time for full vegetation.



**Goals**

The project goal is to create and/or nourish up to 374 acres of emergent brackish marsh.

**Preliminary Project Benefits**

- 1) *What is the total acreage benefited both directly and indirectly?*  
This total project area is approximately 374 acres.

- 2) *How many acres of wetlands will be protected/created over the project life?*  
Assuming a 50% reduction in the background loss rate of -0.89%/year, the marsh creation and nourishment would result in 280 net acres after 20 years (assuming 299 of marsh creation and 74 acres of marsh nourishment at 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%)?*  
A 50% loss rate reduction is assumed for the marsh creation, and marsh nourishment. (from -0.89%/year to -0.44%/year).
- 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 restore the backside of the natural Bayou Lafourche bank.
- 5) *What is the net impact of the project on critical and non-critical infrastructure?*  
The project will provide additional protection to LA 1 south of Golden Meadow. The project would also provide positive impacts to non-critical (i.e., minor oil and gas facilities) infrastructure. Minor oil and gas facilities and pipelines in the area would benefit from an increase in marsh acreage.
- 6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?*  
This is an area of need due to the lack of previous restoration efforts.

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

The proposed project has potential utility/pipeline issues along with oyster leases along the dredge pipeline path.

#### **Preliminary Construction Costs**

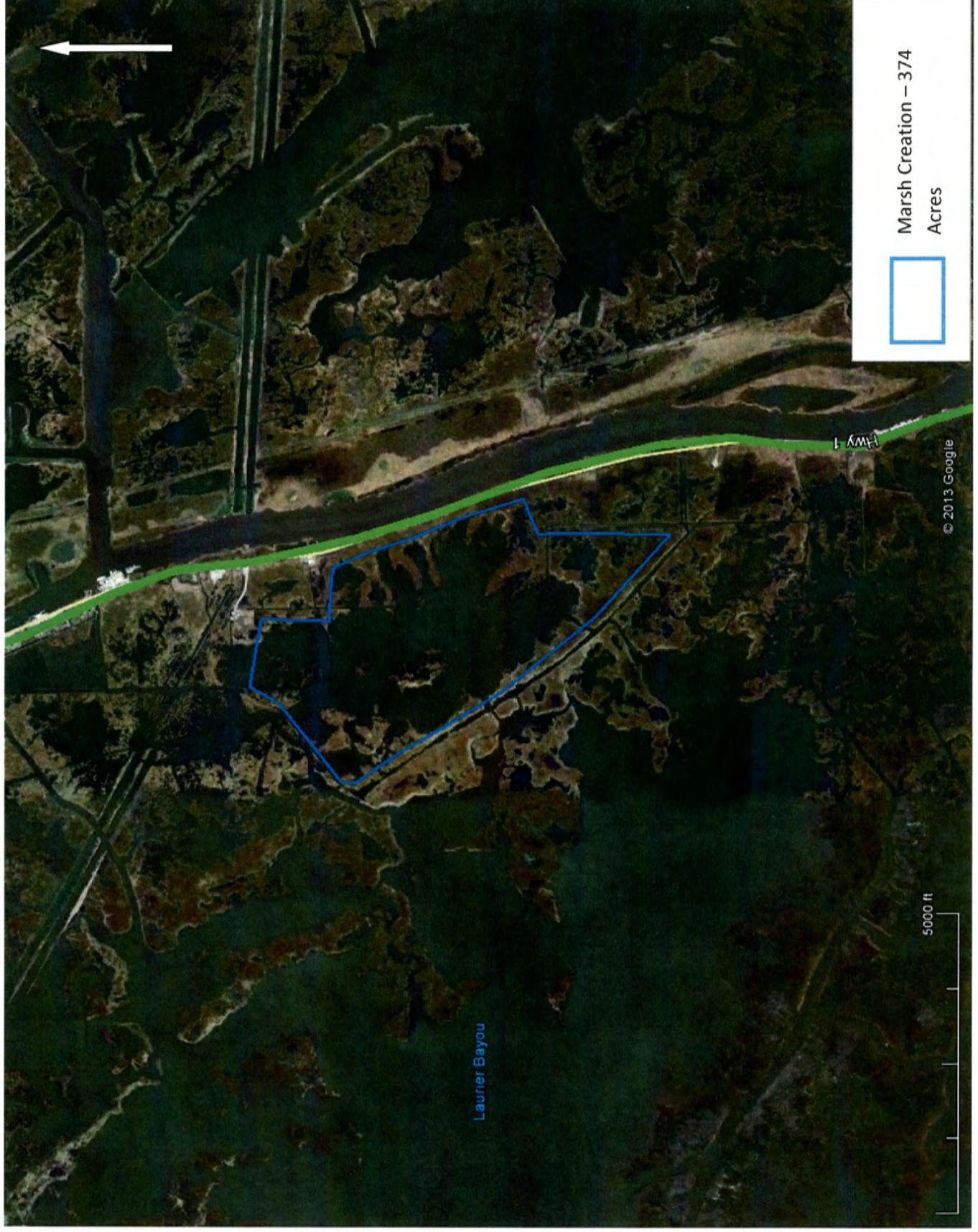
The estimated construction cost including 25% contingency is approximately \$19.6 million. The fully funded cost estimate ranges between \$25-30M.

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

Phillip Parker, NMFS, 225-578-8341, [phillip.parker@noaa.gov](mailto:phillip.parker@noaa.gov)




PPL 23: West Bayou Lafourche Marsh Creation and Nourishment Project (Lafourche Parish)



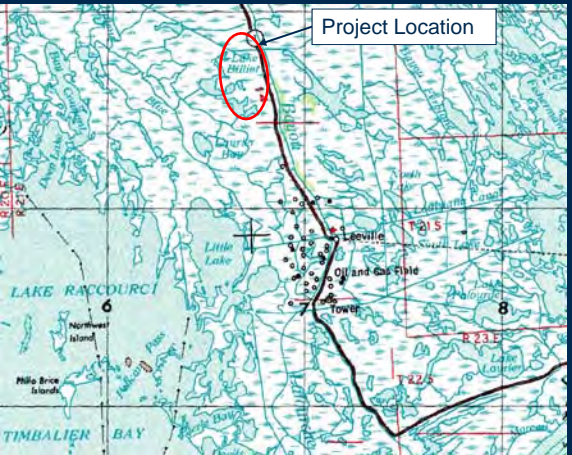


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## West Bayou Lafourche Marsh Creation and Nourishment (Lafourche Parish)


### Region III – Terrebonne Basin



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January 30, 2013

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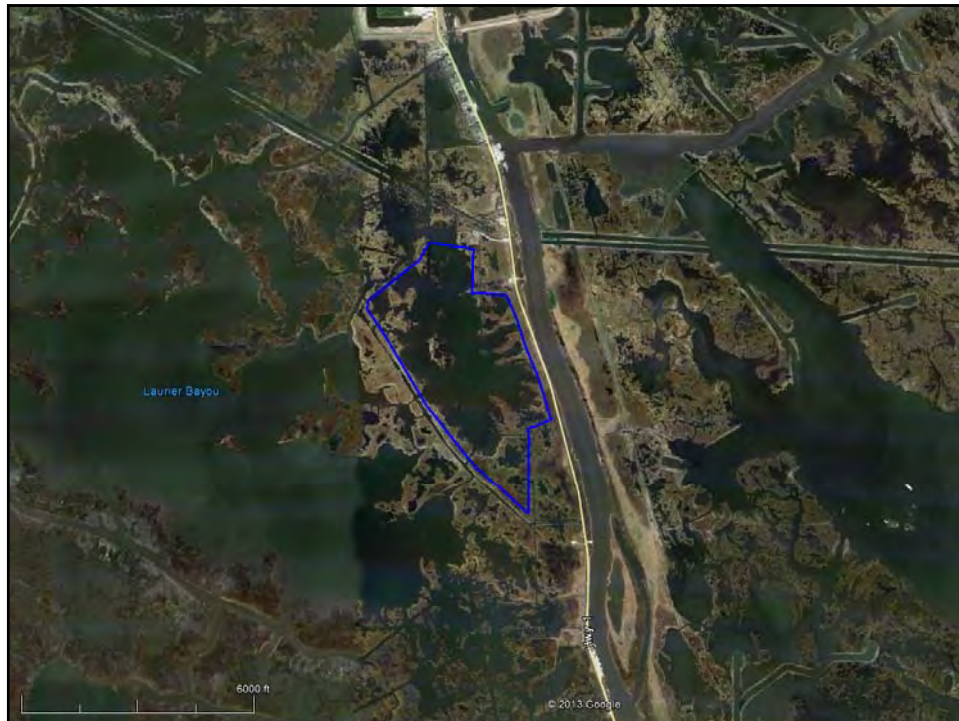


## Problem

- High land loss rates in the Terrebonne Basin
- High subsidence in the area
- Limited protection to the western side of LA 1
- Wetland loss rate for the S. Pointe Aux Chenes State WMA subunit is -0.89%/year

CL3

2

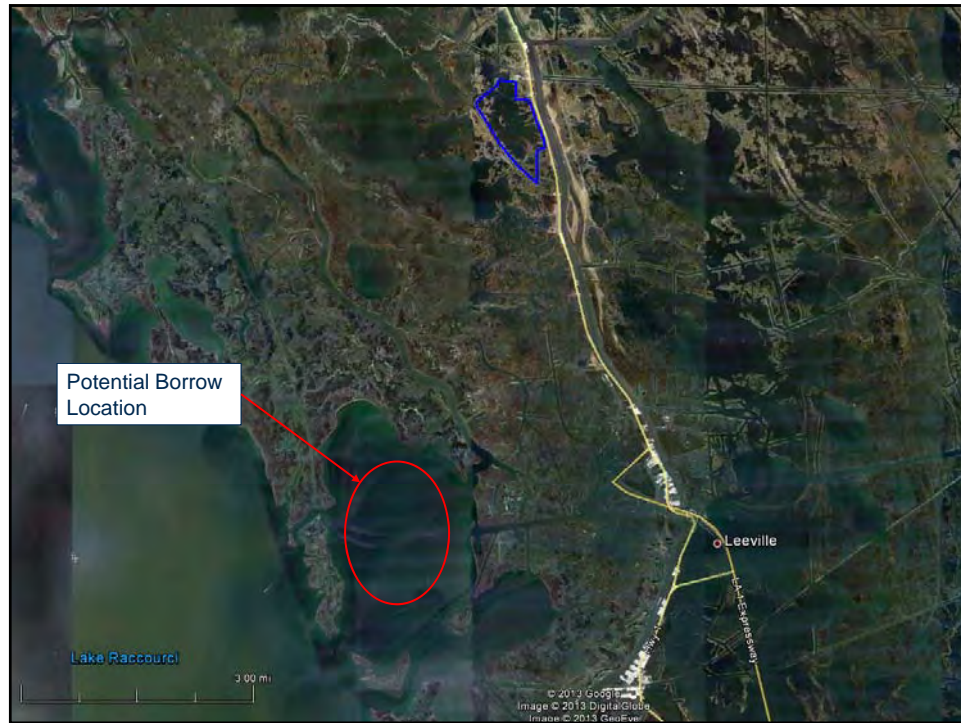


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## Project Features

- Total Acres = 374 acres
- Borrow from outside immediate project area
- Consistent with State Master Plan
- Construction Cost with 25% contingency = \$19.6 million
- Provides protection to LA 1





**R3-TE-08**

**Raccoon Island Barrier Island Restoration**

*Consistent with 2012 State Master Plan*

123-TE-08

**PPL23 PROJECT NOMINEE FACT SHEET**  
**January 2013**

**Project Name:**

Raccoon Island Barrier Island Restoration Project

**Project Location:**

Region III, Terrebonne Basin, Terrebonne Parish, Isle Dernieres Barrier Islands Refuge (LDWF ownership)

**Coast 2050 Strategy:**

Regional: [14.] Restore and maintain barrier islands and gulf shorelines

Mapping Unit: [33.] Isle Dernieres – Protect bay/gulf shoreline

**Master Plan:**

Project No. 03a.BH.03

**Problem:**

The Isles Dernieres barrier island chain is experiencing some of the highest rates of erosion of any coastal region in the world. A simple analysis of aerial imagery from 1998 to 2008 revealed an average loss of 110 feet per year on the western portion of Raccoon Island (i.e., the spit), which is the western most island of the chain. Raccoon Island serves as breeding bird habitat for a variety of avian species including brown pelicans, terns, gulls, and wading birds. During peak years of nest success, well over 30,000 nests have been documented at Raccoon Island. As a result of erosional processes (particularly hurricane activity over the past 10 years), the western end of Raccoon Island has degraded to roughly 20 acres and is at risk of being a subaqueous sand shoal in the near future. This portion of the island no longer serves as breeding bird habitat due to lack of elevation and rapid shoreline loss.

**Goals:**

The goal of this project is to restore the western portion of Raccoon Island to (roughly) pre-Hurricane Andrew conditions.

**Proposed Solutions:**

Project features include the restoration of approx. 230 acres of barrier island habitat including beach, dune, swale, salt marsh, and tidal flat habitat types. The island would be recreated by depositing offshore dredge material on the western end of Raccoon. Vegetative plantings, both herbaceous and woody, will follow the construction of the dune/beach platform to provide improved breeding bird habitat and to stabilize the island.

**Preliminary Project Benefits:**

Raccoon Island will be restored to productive avian habitat and expand the storm buffering capabilities of the Isle Dernieres barrier island chain. Approximately 20 acres will be dune habitat, 120 acres will become supratidal habitat, and 90 acres will comprise tidal/subtidal habitat. The proposed project will have a significant synergistic effect on the existing Raccoon Island CWPPRA restoration projects (TE-48 and TE-29).

**Identification of Potential Issues:**

There are no potential issues anticipated with this proposed project.

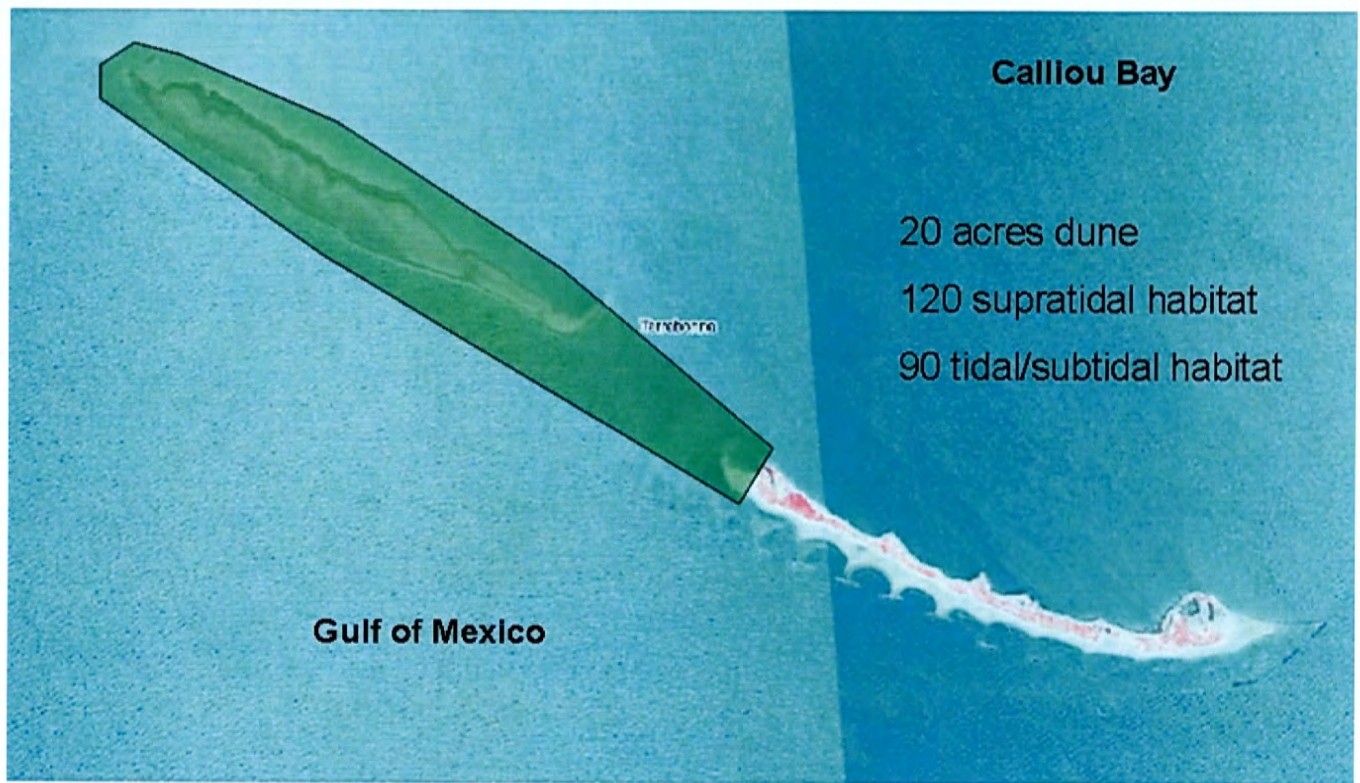
**Preliminary Construction Costs:**

The anticipated construction cost, with contingency, is \$27,000,000.

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

Cassidy Lejeune, (337) 373-0032, [clejeune@wlf.la.gov](mailto:clejeune@wlf.la.gov)

Loland Broussard, (337) 291-3060, [loland.broussard@la.usda.gov](mailto:loland.broussard@la.usda.gov)



**Barrier Island Restoration – 230 acres**  
**~ \$27 Million / Offshore Borrow / No Breakwaters**





# Raccoon Island Barrier Island Restoration Project

PPL 23 – Morgan City, LA

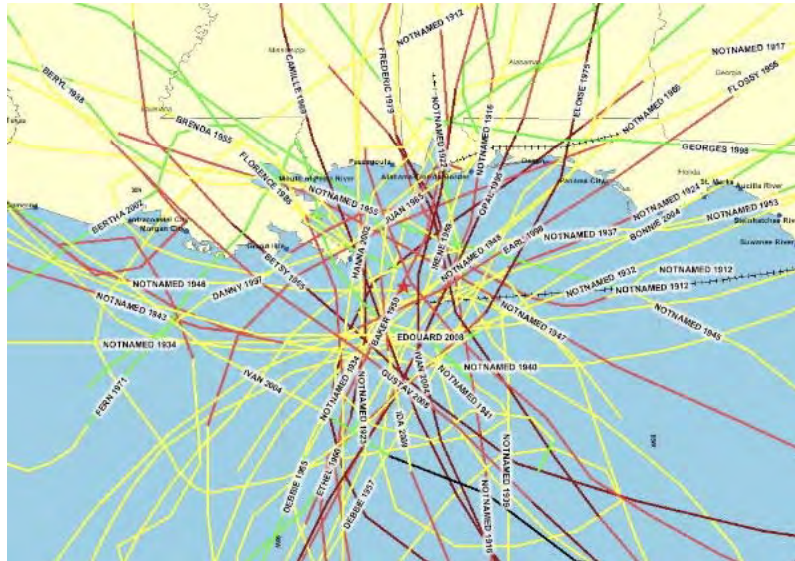
Cassidy Lejeune  
LDWF – Coastal and Nongame Resources Division  
New Iberia, LA

## Historical Footprint of IDBIR



IDBIR est. 1992  
Roughly 2,000 acres  
Includes Raccoon, Whiskey, Trinity, East, and  
Wine Islands

## Hurricanes in GOM - NOAA



## IDBIR and Hurricane Impacts

- Cindy – July 7, 2005
- Katrina – August 29, 2005
- Rita – September 23, 2005
- T. Storm Eduardo – August 5, 2008
- Gustav – September 1, 2008
- Ike – September 9, 2008
- Ida – November 9, 2009
- T. Storm Lee – September 1, 2011
- Hurricane Isaac – August 28, 2012

## Benefits of Barrier Island Restoration

- Protects inland marshes and decreases wave energy due to a decrease in fetch
- Storm surge reduction
- Regulates tidal fluctuations
- Habitat for wildlife and fishery resources







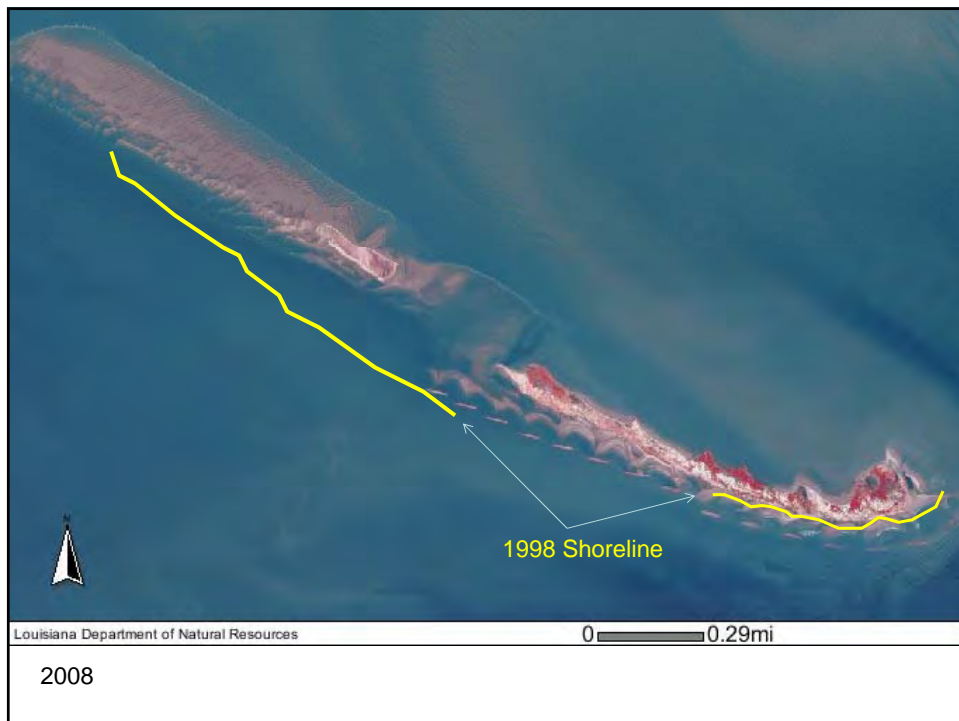
Raccoon Island Breeding Bird Surveys					
Species	2008 Ground	2009 Ground	2010 Ground	2011 Ground	2012 Ground
Royal Tern	9980	4680		3575	4419
Sandwich Tern	4640	2870		4148	5679
Black Skimmer	1100	480		1271	1150
American Oystercatcher	2	5		1	4
Black-crowned Night Heron	120	31		30	29
Brown Pelican	7600	7125		1010	2544
Great Egret	150	152		80	249
Gull-billed Tern	15	5		22	10
Laughing Gull	8000	4540		1060	2174
Reddish Egret	20	4		6	4
Roseate Spoonbill	30	70		32	3
Snowy Egret	80	19		0	0
Tri-colored Heron	400	93		60	0
White Ibis	70	5		1	0
Least Tern	0	0		0	0
	32207	20079		11296	16265

## Raccoon Island Shoreline Loss Rates

1998 to 2008:

1,100 feet (spit) (110 ft/yr) – no breakwaters

Acreage **gained** behind breakwater field:  
+1.6 acres/year from 1998 to 2005



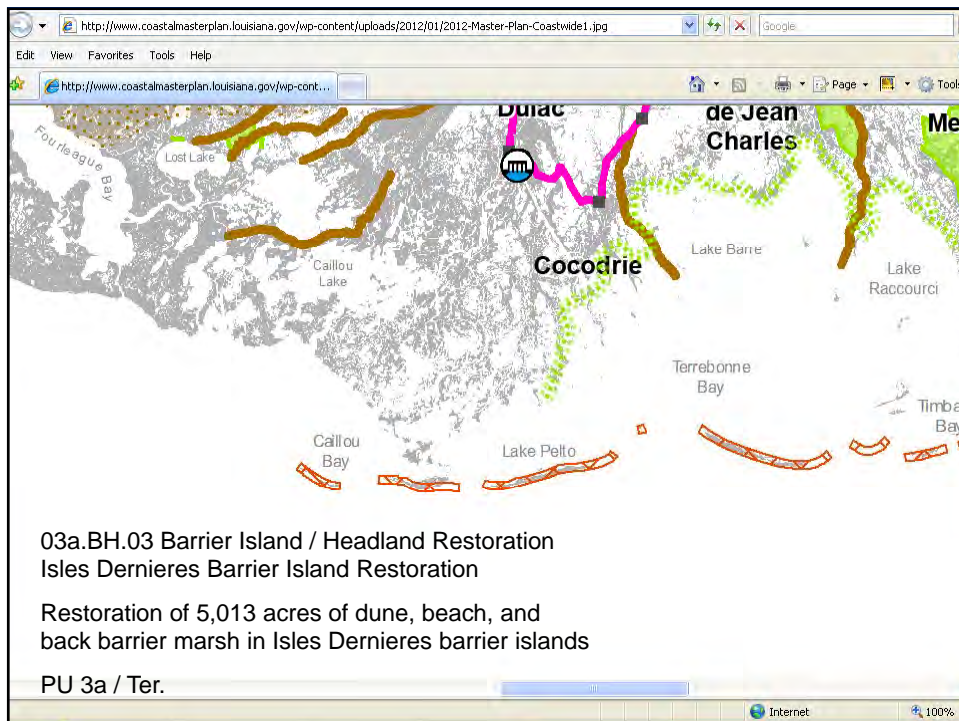
## Frequency of Restoration

- Whiskey – 1999/2000, 2009, and TE-100
- Wine – 1991, 93-94, 2007
- Trinity – 1998
- East – 1998 and 2007
- Raccoon – 1994 (Post-Andrew) and TE-29 and TE-48









It's for the birds...



Questions or Comments?

Cassidy Lejeune  
LA Dept of Wildlife and Fisheries  
Coastal and Nongame Resources Division  
2415 Darnall Rd.  
New Iberia, LA 70560  
337-654-1312  
clejeune@wlf.la.gov



**R3-TE-09**

**Bayou Terrebonne Ridge Restoration and Marsh Creation**

*Consistent with 2012 State Master Plan*

**PPL 23 PROJECT NOMINEE FACT SHEET****Project Name**

Bayou Terrebonne Ridge Restoration and Marsh Creation

**Master Plan Strategy:**

- 03a.RC.05 – Bayou Terrebonne Ridge Restoration

**Project Location**

The project is located directly along Bayou Terrebonne, northwest of Cocodrie, in Terrebonne Parish, Louisiana.

**Problem**

Terrebonne Bay was historically structured by a series of north-south ridges—remnants of the many distributaries of Bayou Lafourche. Much of the habitat function of these ridges has been lost over the last half-century to erosion, subsidence, and development. Landloss projections predict that the ridge and surrounding marshes will be converted to open water by 2050.

**Goals**

- 1) Restore both the structural and habitat functions of Bayou Terrebonne Ridge.
- 2) Create 200 acres of marsh.

**Proposed Project Features**

Create a 21,000 foot ridge along the east bank of Bayou Terrebonne. The ridge will have a +5.2 ft settled top height, a 15-foot top width, and a 7:1 side slopes. The ridge feature would result in 15 acres of marsh and 26 acres of ridge habitat. Ridge material will come from Bayou Terrebonne. The borrow sites will be noncontiguous, as not to facilitate the northward flow of saltwater. The project will also include 200 acres of marsh creation adjacent to the ridge component. Borrow for the marsh creation component will either come from Bayou Terrebonne or Terrebonne Bay.

**Preliminary Project Benefits**

The project would restore 26 acres of resting and foraging habitat necessary to support transient migratory landbirds in the spring and fall. Additional benefits of restoring the ridge include helping reduce storm surge and restoring natural hydrologic patterns in the area. The ridge and marsh components of this project would also help restore and protect the eastern bank of Bayou Terrebonne.

**Identification of Potential Issues**

Oyster leases.

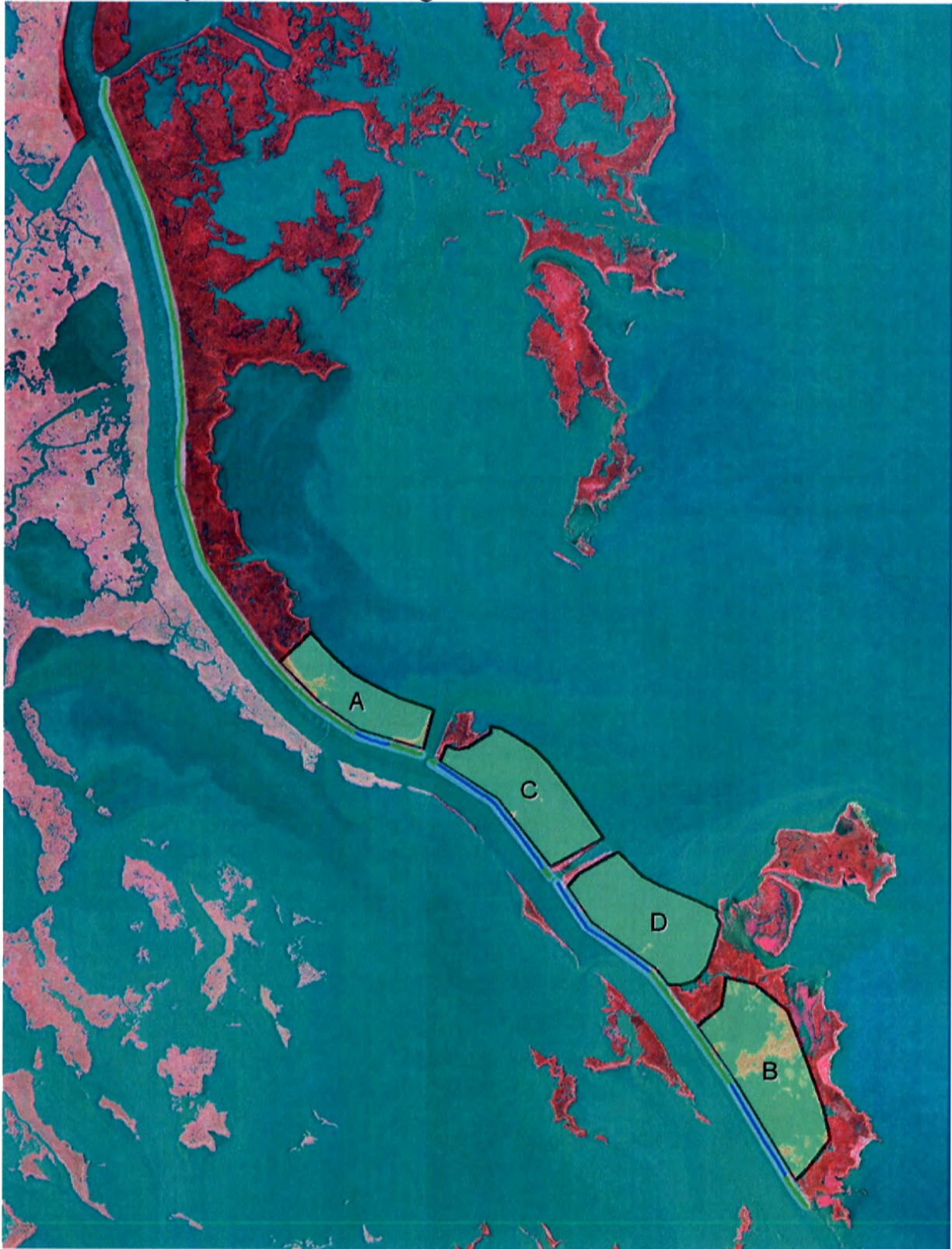
**Preliminary Construction Costs**

Preliminary Construction Costs + 25% contingency: \$22.1M

**Preparer of Fact Sheet**

Stuart Brown, CPRA (225) 342-4596, [stuart.brown@la.gov](mailto:stuart.brown@la.gov)

## Bayou Terrebonne Ridge Restoration and Marsh Creation



Ridge: 21,000 feet long. 15 ft. top width. 7:1 side slopes. Target top elevation +5.2 ft.  
Marsh: 200 acres.



PPL-23  
Bayou Terrebonne Ridge and Marsh  
Restoration  
1/30/2013

Bayou Terrebonne Ridge South Increment



Preliminary Construction Costs + 25% contingency:  
**\$25 Million.**

Ridge: 21,000 feet long. 15 ft. top width. 7:1 side slopes. Target top elevation +5.2 ft.

Marsh: 200 acres.

Borrow material will be dredged from a noncontiguous borrow area in Bayou Terrebonne.



**R3-TE-10**

**West Fourchon Marsh Creation & Marsh Nourishment**

*Consistent with 2012 State Master Plan*



**PPL 23 PROJECT NOMINEE FACT SHEET****Project Name**

West Fourchon Marsh Creation and Marsh Nourishment

**Master Plan Strategy:**

- 03a.MC.07 - Belle Pass-Golden Meadow Marsh Creation.

**Project Location**

The project is located west of Port Fourchon, north of West Belle Pass, in Lafourche Parish, Louisiana.

**Problem**

Historic wetland loss in the project area stems from interior marsh loss stems from subsidence, sediment deprivation, and construction of pipeline canals. Over the last twenty years the interior marsh in the project area has deteriorated dramatically (Figure 1).

**Goals**

The goals of this project are to create and nourish 614 acres of marsh, by pumping sediment from an offshore borrow site.

**Proposed Project Features**

This project would create 314 acres of marsh and nourish 300 acres of emergent marsh, using material dredged from the Gulf of Mexico.

**Preliminary Project Benefits**

This project would create and nourish 614 acres of marsh habitat, utilizing offshore borrow. The project will fill in pipeline canals, reducing the artificial exchange of saltwater. In addition to habitat benefits, this project will restore and increase the longevity of marshes that help protect Highway 1, Port Fourchon and Bayou Lafourche.

**Identification of Potential Issues**

Pipelines: at least three pipelines bisect the project. \*The landowner, LL&E, has indicated that we would be able to place material and create marsh in the pipeline canals.

**Preliminary Construction Costs**

Preliminary Construction Costs + 25% contingency: \$27.0M

**Preparer of Fact Sheet**

Stuart Brown, CPRA (225) 342-4596, [stuart.brown@la.gov](mailto:stuart.brown@la.gov)

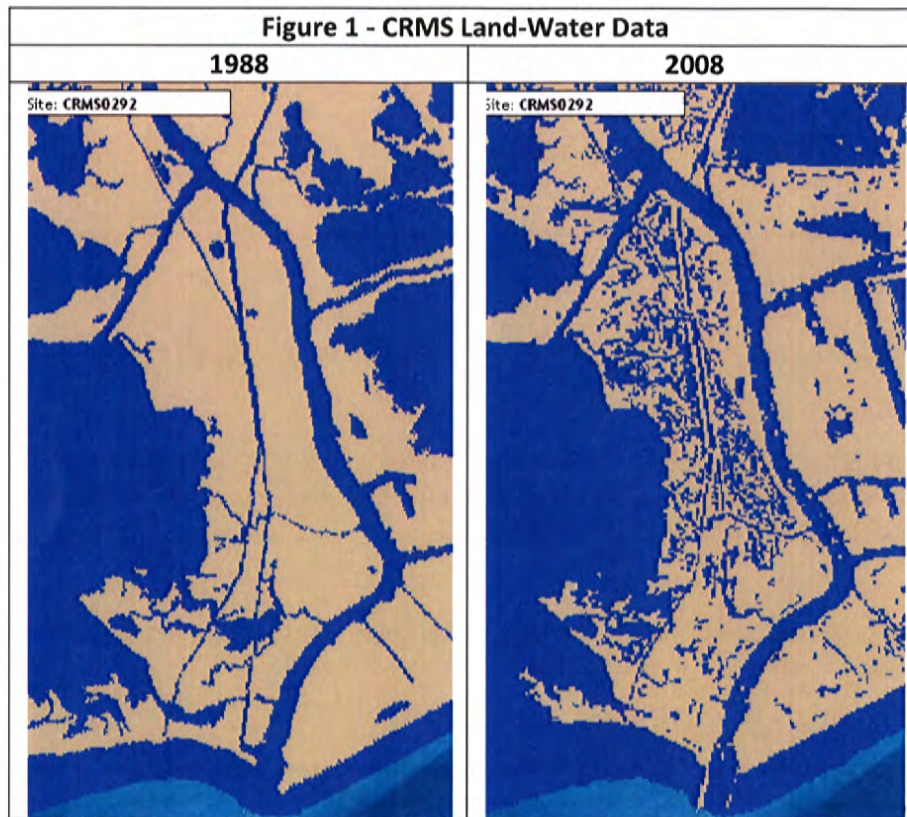


Figure 2 - Project Map:





PPL 23  
West Fourchon Marsh Creation and  
Nourishment  
1/30/2013

Original Concept



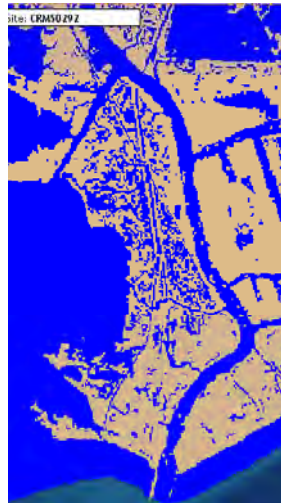


## Land-Water

1988



2008



## Current Alignment

### 614 Acres

314 Marsh Creation  
300 Marsh Nourishment

Offshore Borrow Source

Construction +25%:  
**\$26.5M**



**R3-TE-11**

**Timbalier Island Restoration (Shoreline Sediment  
Nourishment)**

*Consistent with 2012 State Master Plan*

# PPL23 PROJECT NOMINEE FACT SHEET

February 5, 2013

## Project Name

Timbalier Island Restoration

## Coast 2050 Strategy

Coastwide Common Strategies-Dedicated dredging to create, restore, or protect wetlands; Vegetative planting; Offshore and riverine sand and sediment resources. Region 2 Ecosystem Strategies- Restore and sustain marshes; 8) Dedicated delivery of sediment for marsh building by any feasible means; Restore barrier islands and Gulf shorelines; 12) Restore and maintain the Isles Derrieres and Timbalier barrier island chains, Marsh Island, Point au Fer, and Cheniere au Tigre (including back barrier beaches).

## Master Plan

Project No. 03a.BH.04

## Project Location

Region 3, Terrebonne Basin, Terrebonne Parish, approximately 38 miles south of Houma, LA.

## Problem

The Lafourche Delta headland and barrier island system, including Timbalier Island, plays an important role in protecting the Terrebonne barrier-built estuary and its surrounding wetlands from the destructive forces of high wave energy, storm surges and salt water intrusion (van Heerden and DeRouen 1997). Additionally, the number and size of the tidal inlets influence the tidal prism. Finally, the habitats provided by barrier islands are highly valuable, particularly for colonial nesting birds and shorebirds, and for nekton. Unfortunately, Timbalier Island and the rest of the Lafourche Delta headland and barrier island system, is one of the most rapidly deteriorating barrier shorelines in Louisiana, averaging -13.1 ft/yr of erosion from the 1990s through 2005 in the proposed project area. Recent hurricanes have breached the island in the proposed project area.

## Proposed Project Features

This project will place sediment on the Gulf and bay side of Timbalier Island. Placing sediment on the bay side of Timbalier Island will increase the area of backbarrier marsh which will provide a stable platform which the island needs to migrate landward. Placement of dredge material on the Gulf side of Timbalier Island will provide sand that can be redistributed along the island's shoreline by currents and waves. Sediment fences and plantings will be utilized to manage new placed sediments.

## Goals:

- Close the breach in the island
- Provide a backbarrier platform to enable sustainable and successful island migration
- Extend the life of this barrier island by increasing its width
- Create about 76 acres of intertidal marsh using new dredged material and vegetative plantings
- Fortify/protect the platform and marsh by creating 104 acres of beach and 16 ac of dune.
- Protect the Terrebonne estuary and its surrounding wetlands from waves, storm surges, and salt water intrusion
- Add sand to this sand-starved barrier island system

## Preliminary Project Benefits

- Creation of 196 ac of beach, dune, and marsh habitat
- Protect approximately 100 ac of barrier island habitat over 20 years

## Identification of Potential Issues

None

## Preliminary Construction Costs

The estimated construction costs including 25% contingency is \$21,686,257

## Preparers of Fact Sheet:

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# Timbalier Island Shoreline Sediment Nourishment



Coastal Wetlands Planning, Protection and Restoration Act

# Timbalier Island Shoreline Sediment Nourishment



Coastal Wetlands Planning, Protection and Restoration Act

## Timbalier Island Shoreline Sediment Nourishment



### Goals/Preliminary Benefits:

- Close breach
- Provide backbarrier platform
- Extend life of the island
- Create 76 ac of marsh
- Protect marsh by creating 104 ac beach, 16 ac dune
- Protect Terrebonne estuary and surrounding wetlands from waves, storm surges, saltwater intrusion
- Add sand to this sand-starved barrier island system

### Preliminary Cost Estimate:

- \$21.7 million



Coastal Wetlands Planning, Protection  
and Restoration Act

## Questions



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Coastal Wetlands Planning, Protection  
and Restoration Act

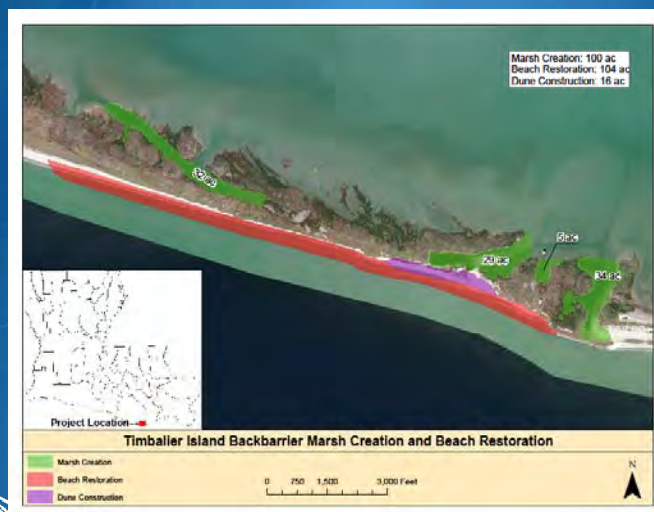


# Timbalier Island Shoreline Sediment Nourishment



Coastal Wetlands Planning, Protection and Restoration Act

# Timbalier Island Shoreline Sediment Nourishment



and Restoration Act

## Timbalier Island Shoreline Sediment Nourishment



### Goals/Preliminary Benefits:

- Close breach
- Provide backbarrier platform
- Extend life of the island
- Create 100 ac of marsh
- Protect marsh by creating 100 ac beach, 16 ac dune
- Protect Terrebonne estuary and surrounding wetlands from waves, storm surges, saltwater intrusion
- Add sand to this sand-starved barrier island system

### Preliminary Cost Estimate:

- \$20.5 million



Coastal Wetlands Planning, Protection  
and Restoration Act

## Questions



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Coastal Wetlands Planning, Protection  
and Restoration Act

**R3-TE-12**

**East Island Beach & Barrier Marsh Restoration**

*Consistent with 2012 State Master Plan*



## PPL23 Project Nominee Fact Sheet

### January 30, 2013

**Project Name**

East Island Beach and Backbarrier Marsh Restoration

**Coast 2050 Strategy**

Coastwide Common Strategies- Dedicated dredging to create, restore, or protect wetlands; Vegetative planting; Offshore and riverine sand and sediment resources.

Region 2 Ecosystem Strategies- Restore and sustain marshes- #8. Dedicated delivery of sediment for marsh building by any feasible means; Restore barrier islands and Gulf shorelines-#12. Restore and maintain the Isles Dernieres and Timbalier barrier island chains, Marsh Island, Point au Fer, and Cheniere au Tigre (including back barrier beaches).

Mapping Unit Strategies- #33. Protect bay/gulf shorelines

**Master Plan**

Project No. 03a.BH.03

**Project Location**

Region 3, Terrebonne Basin, Terrebonne Parish, part of the Isles Dernieres, approximately 38 miles south of Houma, LA

**Problem**

East/Trinity Island is part of the Isles Dernieres barrier island chain, one of the most rapidly deteriorating barrier shorelines in the U.S. These barrier islands play an important role in protecting the Terrebonne barrier-built estuary and its surrounding wetlands from the destructive forces of high wave energy, storm surges and salt water intrusion (van Heerden and DeRouen 1997). Additionally, the number and size of the tidal inlets influence the tidal prism. Finally, the habitats provided by barrier islands are highly valuable, particularly for colonial nesting birds and shorebirds, and for nekton. Unfortunately, East Island and the rest of the Isles Dernieres barrier island system, is rapidly deteriorating, averaging -36.4 ft/yr of gulfside erosion, and -8.9 ft/yr of bayside erosion, during the period 1887-1988 (McBride and Byrnes 1997). In addition, Louisiana deltaic barriers lack stable subaerial backbarrier platforms upon which barrier island can migrate landward (McBride and Byrnes 1997).

**Proposed Project Features**

Sediment will be placed on the landward side of the island, creating additional backbarrier marsh, and along the Gulf shoreline, creating additional intertidal beach and dune. Sand fences will be installed to retain sand and create and maintain supratidal and dune habitat. Appropriate plant species will be planted to help stabilize sediment and to create marsh, dune, and swale habitats. Besides the habitat values, the former will provide a stable backbarrier platform on which the island can migrate landward, while the latter will provide additional sand for redistribution by currents and waves along the entire island's Gulf beach.

**Goals**

- provide a backbarrier platform to enable successful island migration
- extend the life of this barrier island by increasing its width
- create 130 ac of vegetated intertidal marsh using new dredged material and vegetative plantings
- create 60 ac of vegetated dune using sand, sand fencing, and vegetative plantings
- create 80 ac of intertidal gulf beach
- protect the Terrebonne estuary and vegetated wetlands against direct exposure to the Gulf of Mexico
- add sand to this sand-starved barrier island system

**Preliminary Project Benefits**

The project would benefit about 2148 acres of barrier island habitat. Approximately 270 acres of barrier island habitat would be created initially with an estimated 175 protected over the 20-year project life.

**Identification of Potential Issues**

None

**Preliminary Construction Costs**

The estimated construction cost including 25% contingency is \$23.5 Million.

**Preparers of Fact Sheet:**

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Aaron Hoff, ORISE intern, EPA Region 6, (214) 665-7319

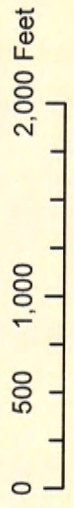


Marsh Creation: 130 ac  
Beach Restoration: 180 ac  
Dune Construction: 60 ac

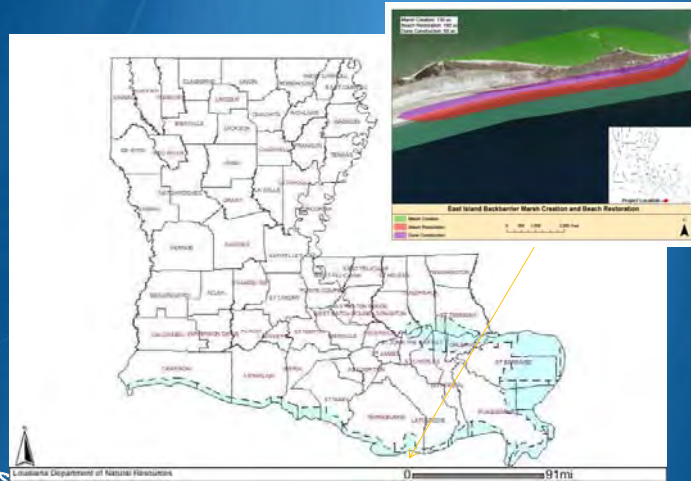


# East Island Backbarrier Marsh Creation and Beach Restoration

- Marsh Creation
- Beach Restoration
- Dune Construction

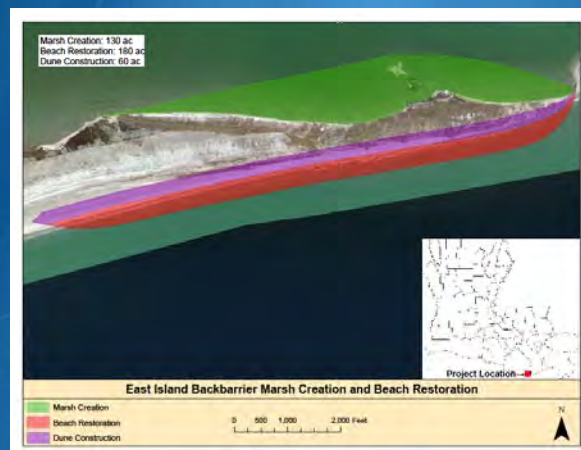


# East Island Dune and Marsh Restoration



Coastal Wetlands Planning, Protection and Restoration Act

# East Island Dune and Marsh Restoration



Coastal Wetlands Planning, Protection and Restoration Act



# East Island Dune and Marsh Restoration



## Goals:

- Create 130 ac backbarrier marsh
- Create 60 ac dune
- Create 180 ac of beach
- Total of 250 ac BI habitat

## Preliminary Project Benefits:

- 175 net ac over 20 years

## Identification of Potential Issues:

- None

## Preliminary Construction Costs:

- \$23.5 million



Coastal Wetlands Planning, Protection  
and Restoration Act

# Questions



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Coastal Wetlands Planning, Protection  
and Restoration Act

**R3-TE-13**

**Lake Tambour Marsh Creation**

*Consistent with 2012 State Master Plan*

**PPL23 PROJECT NOMINEE FACT SHEET**  
**January March 30, 2013**

**Project Name:**

Lake Tambour Marsh Creation

**Project Location:**

Region 3, Terrebonne Basin, Terrebonne Parish. South of Madison Bay and east of Highways 55 and 56. Beginning along the eastern side of TE-83 continuing to Lake Tambour.

**Problem:**

Marshes north of Terrebonne Bay have a very high marsh loss rate, estimated by USGS to be 1.16% per year (1985-2009). The reasons for these high erosion rates include a lack of sediment input and a limited supply of freshwater coupled with past dredging of oil and gas canals. This rapid loss of land has dramatically increased the tidal prism north of Terrebonne Bay and directly contributes to the increasing flooding problems of many communities along Bayou Terrebonne including the town of Montegut. This rapidly increasing tidal prism is likely accelerating the interior marsh loss rates for those marshes directly north of Terrebonne Bay. By filling in open water areas and nourishing broken marsh within the project area, it is hoped that this will begin to reduce the tidal prism therefore slowing the amount of high saline waters that move north causing flooding and damaging the lower saline marshes north of Madison Bay and even in Lake Boudreaux.

**Goals :**

Create 350 ac of emergent marsh in shallow open waters and nourish an additional 375 ac of emergent marsh.

**Proposed Solution:**

Create 350 acres and nourish 375 acres of emergent marsh through hydraulically dredging material from Terrebonne Bay and placing that material north of Terrebonne Bay. Dredge material would be contained by earthen dikes and containment dikes would be sufficiently gapped or degraded no later than 3 years post construction to allow for fisheries access.

**Preliminary Project Benefits:**

Creation and/or nourishment of 725 acres of brackish marsh which will help maintain the natural southern Terrebonne Bay shoreline and several major area Bayous. This project would work synergistically with the already constructed Terrebonne Bay Shoreline Protection Demo project. It would also work synergistically with the TE-83 Terrebonne Bay Marsh Creation Project currently in Phase I.

**Identification of Potential Issues:**

There are at least two pipelines and two wells within the footprint of the potential marsh creation sites. There are also numerous oyster leases within the project area.

**Preliminary Construction Costs:**

The estimated construction cost including 25% contingency is \$27,095,826.

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

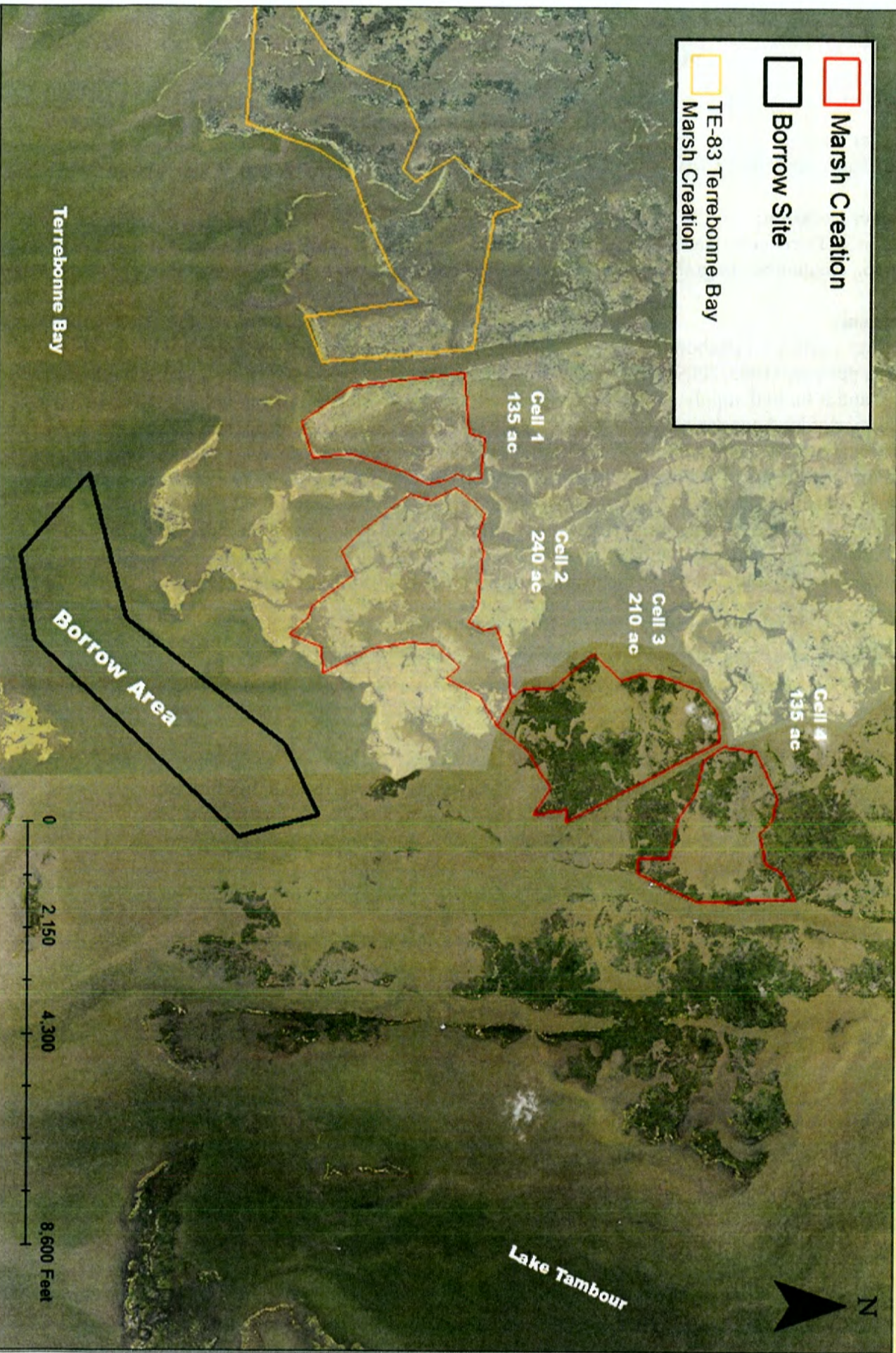
Robert Dubois, USFWS, (337) 291-3127, Robert\_Dubois@fws.gov



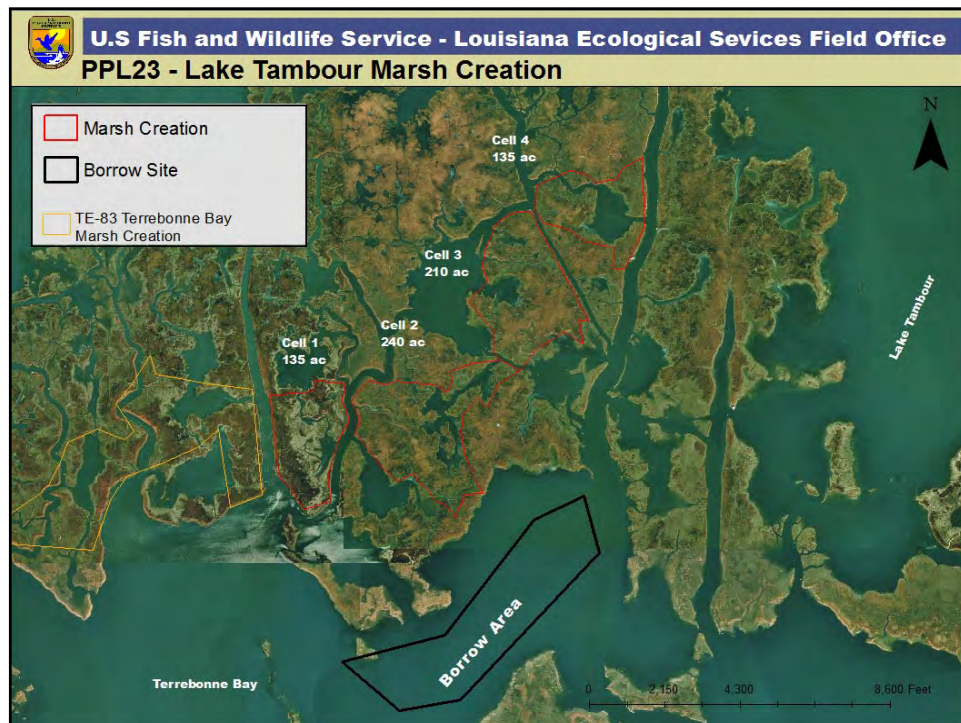


# U.S Fish and Wildlife Service - Louisiana Ecological Services Field Office

## PPL23 - Lake Tambour Marsh Creation









## Project Name- Lake Tambour Marsh Creation Project

### Problem

Marshes north of Terrebonne Bay have been eroding as fast or faster than almost any other marshes along coastal Louisiana. Reasons for this include subsidence, a lack of sediment input, and a limited supply of fresh water coupled with past dredging of oil and gas canals. As these marshes convert to shallow open water, the tidal prism will increase which will in turn increase the frequency and duration of tides north of Terrebonne Bay.

### Proposed Solution

The proposed features of this project consist of filling approximately 350 acres of shallow open water and nourishing 375 acres of broken marsh with material hydraulically dredged from Terrebonne Bay/Lake Barre. The target settled elevation will be +1.4 NAVD 88, but will ultimately correspond to surrounding healthy marsh. Containment dikes would be constructed around each marsh creation/nourishment site and be of sufficient height to retain the dredged slurry. Containment dikes would be gapped within 3 years to allow for tidal and estuarine organism access. This project would be the second phase of a comprehensive plan to protect the northern shoreline of Terrebonne Bay and the interior marshes from further erosion and reduce the tidal prism. This would also work synergistically with the Terrebonne Bay Demonstration Project, and Terrebonne Bay Marsh Creation Project.



## **Project Name- Lake Tambour Marsh Creation Project**

### **Goals**

Fill shallow open water areas north of Terrebonne Bay/Lake Barre which would reduce the tidal prism north of Terrebonne Bay and reduce interior land loss from tidal scouring.

***Specific Project Goals:*** Create 350 acres of intertidal emergent marsh and nourish 375 acres of broken marsh.

### **Preliminary Construction Costs**

The estimated construction cost is estimated to be **\$27 M with 25% contingency**).

**R3-TE-14**

**Terrebonne Bay Shoreline Protection via Oyster Reef  
Construction**

*Consistent with 2012 State Master Plan*

**PPL23 PROJECT NOMINEE FACT SHEET**  
**January 30, 2013**

**Project Name**

Terrebonne Bay Shoreline Protection via Oyster Reef Construction

**Project Location**

Region 3, Terrebonne Basin, Terrebonne Parish. South of Madison Bay and east of Highways 55 and 56 along the northern shoreline of Terrebonne Bay.

**Problem**

Marshes north of Terrebonne Bay have a high marsh loss rate, estimated to be 1.16%/yr (USGS-1985-2009). The shoreline erosion rate in some areas along the northern Terrebonne Bay shoreline has been shown to be 8 to 34 ft/yr (TE-45 Demo Project). Other estimates (FWS – Ronnie Paille) are as high as 30 ft/yr. The reasons for these high erosion rates include subsidence, a lack of sediment input and a limited supply of freshwater, and a dramatically increased tidal prism north of Terrebonne Bay. The increase in the tidal prism directly contributes to the increasing flooding problems of many communities along Bayou Terrebonne including the town of Montegut. As emergent marshes in this area convert to open water, tidal surges will continue to increase thus increasing the flooding north of the bay.

**Proposed Solution**

This project would protect approximately 20,000 linear feet of Terrebonne Bay shoreline through the construction of habitats suitable for the establishment of oyster reefs. This would be done by installing rock-filled gabion mats along the shoreline and “A-Jax”-like structures across any open water areas. This would promote the creation of oyster reefs which would reduce the shoreline erosion rates with little to no maintenance. This should reduce area loss rates by over 95%. This equates to protecting approximately 183 acres of emergent marsh throughout the 20 project life.

**Goals**

The goals of the project are to reduce shoreline erosion along 20,000 linear feet of Terrebonne Bay shoreline and to prevent the bay shoreline from breaking into interior marsh ponds.

**Identification of Potential Issues**

This area has many oyster leases, but through the light loading of material and shallow draft equipment the impacts to the leases should be small.

**Preliminary Construction Costs**

The estimated construction cost plus 25% contingency is \$24.8 M.

**Preparer(s) of Fact Sheet**

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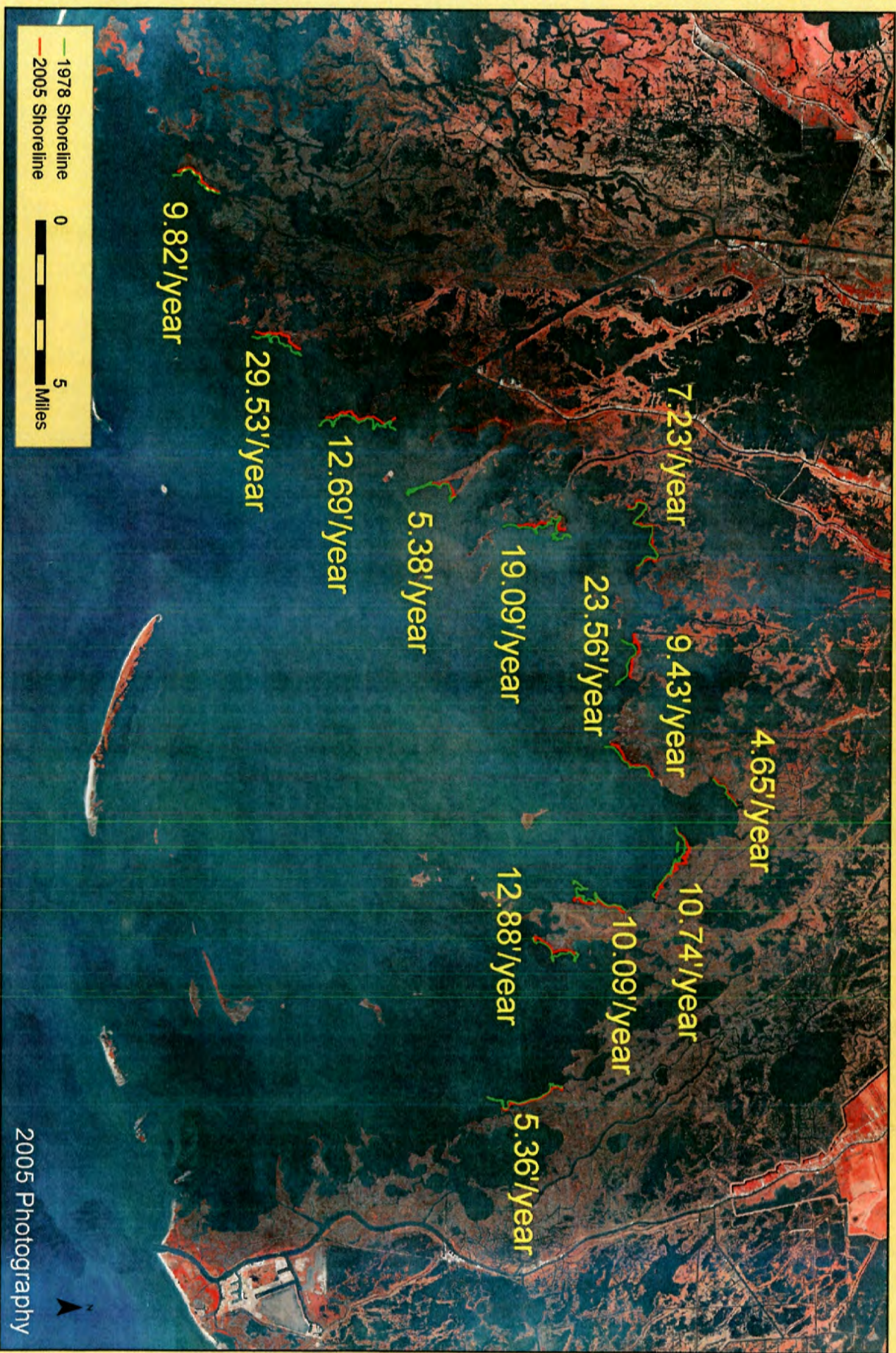




# U.S. Fish & Wildlife Service

Louisiana Ecological Services Field Office

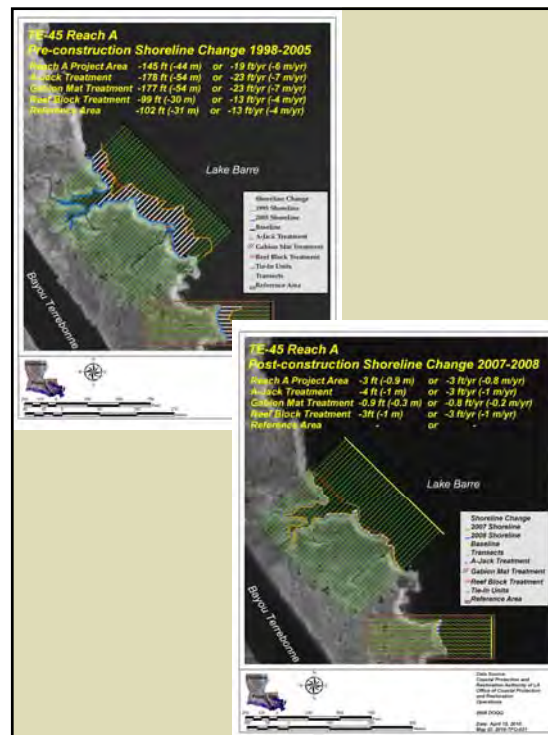
1978 & 2005 Shorelines - Terrebonne Bay

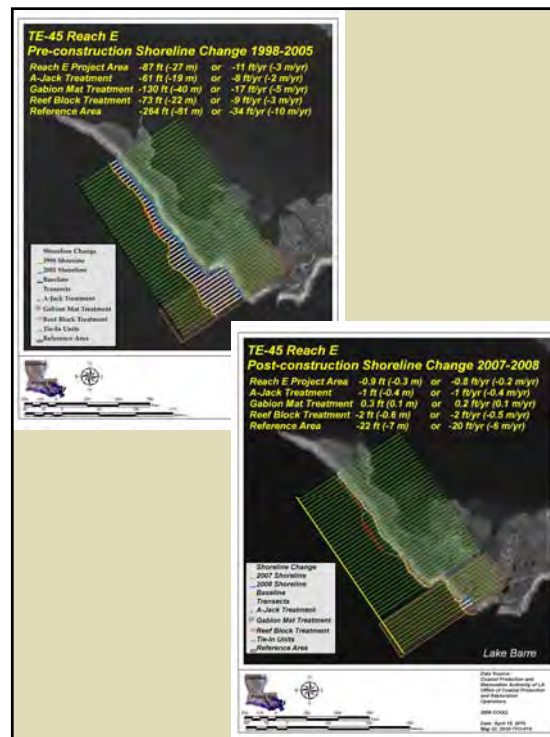
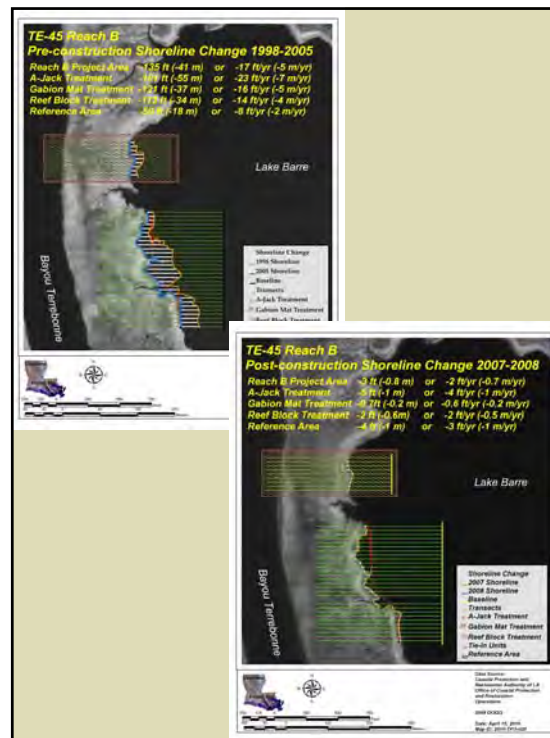


2005 Photography



## Terrebonne Bay Shoreline Protection via Oyster Reef







## Terrebonne Bay Shoreline Protection via Oyster Reef

### Goals

#### *Specific Project Goals:*

- 1) Protect 183 acres of emergent brackish marsh.  
(20 ft/yr \* 20 yr \* 43,560)
- 2) Protect 20,000 LF of Terrebonne Bay Shoreline.
- 3) Create artificial reef habitat with the establishment of 20,000 LF of oyster reef.

#### **Preliminary Construction Costs**

The estimated construction cost is estimated to be **\$24.8 M with 25% contingency).**

**\* Estimated prices are from New Orleans Landbridge Shoreline Protection Project – Gabion mats 5’\*36’\*18”**

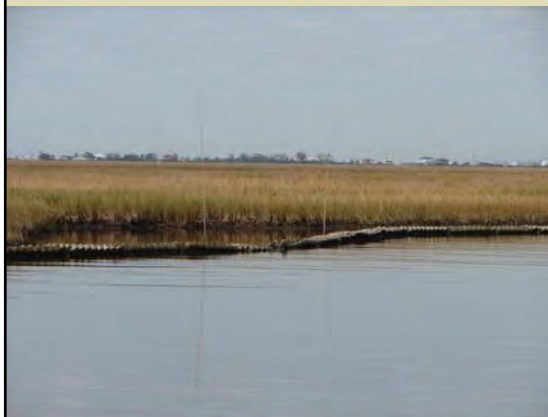
### Gabion Mat, Fall 2007



**Gabion Mats, December 2009**



**A-Jax-Like Material Fall 2007**



**A-Jax Like Material, December 2009**





**R3-TE-15**

**Grand Bayou Freshwater Enhancement**

*Consistent with 2012 State Master Plan*

## **PPL23 Project Nominee Fact Sheet**

### **Project Name**

Grand Bayou Freshwater Enhancement

### **Project Location:**

Region 3, Terrebonne Basin, Lafourche Parish, Marshes east and west of Grand Bayou Canal (GBC) extending from the Gulf Intracoastal Waterway (GIWW) to the marshes located just south of Margaret's Bayou, partially on Point aux Chene WMA.

### **Problem:**

Project area salinities are increasing due to the loss of marshes south of the project area. Freshwater inflows into this area originate from the GIWW along the northern project boundary. The freshwater inflow from the GIWW is restricted by small channel cross-sections along the northern section of GBC. Margaret's Bayou is also plugged keeping fresh water from moving east from GBC into the broken marshes. The project area encompasses 26,533 acres of which 10,018 acres were marsh and the remaining 16,515 acres were open water as of 2010. Land loss rates west of GBC are estimated at -0.328 percent/year and -0.583 percent/year east of GBC.

### **Goals:**

The overall goals of this project are to increase the flow of fresh water down GBC from the GIWW and create/nourish marsh using material dredged from the enlargement of GBC and from the creation of terraces. Specific project goals include: (1) increase the flow of fresh water from the GIWW from approximately 600 cfs to 1,600 cfs; (2) redirect much of the fresh water from GBC into the marshes east and west; (3) Create 135 acres and nourish 41 acres of intermediate marsh.

### **Proposed Solution:**

Enlarge the cross-sectional area of GBC by hydraulically dredging and placing approximately 612,674 cubic yards of sediments into an open water area to create/nourish 176 acres of intermediate marsh. Construct a fixed crest weir (with barge bay) in GBC south of Margaret's Bayou. Reconnect Margaret's Bayou with GBC and enlarge Margaret's Bayou. Replace a rock plug along GBC with a water control structure.

### **Project Benefits:**

The project would result in approximately 564 net acres over the 20-year project life.

### **Project Costs:**

The construction cost plus 25% contingency \$14.5M.

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

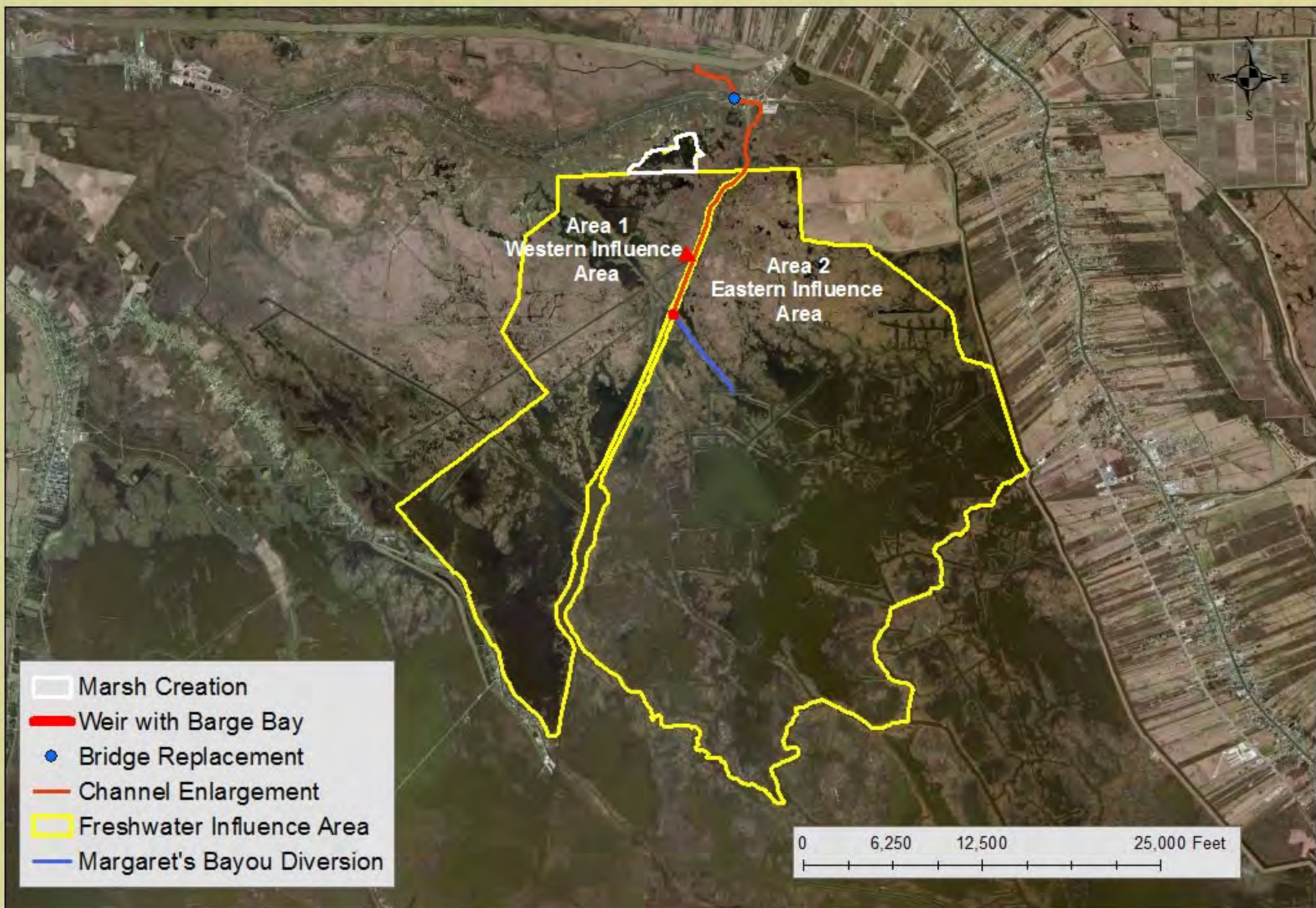
Robert Dubois, FWS, (337) 291-3127; robert\_dubois@fws.gov



# U.S. Fish & Wildlife Service

Louisiana Ecological Services Field Office

## Grand Bayou Freshwater Enhancement





**Grand Bayou Freshwater  
Enhancement and Terracing Project  
PPL 23  
Region 4  
Terrebonne and Lafourche Parishes**



## **Grand Bayou Freshwater Enhancement and Terracing**

### **Problem**

Project area salinities are increasing due to the loss of marshes south of the project area. Freshwater inflows into this area originate from the GIWW along the northern project boundary. The freshwater inflow from the GIWW is restricted by small channel cross-sections along the northern section of GBC. Margaret's Bayou is also plugged keeping fresh water from moving east from GBC into the broken marshes. The project area encompasses 26,533 acres of which 10,018 acres were marsh and the remaining 16,515 acres were open water as of 2010. Land loss rates west of GBC are estimated at -0.328 percent/year and -0.583 percent/year east of GBC.

### **Proposed Solution**

Enlarge the cross-sectional area of GBC by hydraulically dredging and placing approximately 612,674 cubic yards of sediments into an open water area to create/nourish 176 acres of intermediate marsh. Construct a fixed crest weir (with barge bay) in GBC south of Margaret's Bayou. Reconnect Margaret's Bayou with GBC and enlarge Margaret's Bayou. Replace a rock plug along GBC with a water control structure. Create 183,000 linear feet of earthen terraces south of Margaret's Bayou.

## **Grand Bayou Freshwater Enhancement and Terracing**

### **Goals**

The overall goals of this project are to increase the flow of fresh water down GBC from the GIWW and create/nourish marsh using material dredged from the enlargement of GBC and from the creation of terraces. Specific project goals include: (1) increase the flow of fresh water from the GIWW from approximately 600 cfs to 1,600 cfs; (2) redirect much of the fresh water from GBC into the marshes east and west; (3) Create 135 acres and nourish 41 acres of intermediate marsh; and (4) Create 183,000 linear feet of terraces (97 acres of marsh) near the southern Point aux Chene WMA boundary and near the LaRose to Golden Meadow hurricane protection levee.

### **Preliminary Project Benefits**

The project would result in approximately 655 net acres over the 20-year project life.

### **Preliminary Construction Costs**

The estimated construction cost is estimated to be **\$20.7 M** with 25% contingency. (from PPL 22 Final Candidate Cost Sheet)

**R3-TE-16**

**Bayou Blue Dredge & Marsh Creation**

*Consistent with 2012 State Master Plan*



**PPL23 PROJECT NOMINEE FACT SHEET**  
**January 30, 2013**

**Project Name:** Bayou Blue Dredge and Marsh Creation

**Master Plan Strategy:**

Central Coast; Lafourche Parish; marsh creation/structural protection (03.a.HP.20)

**Project Location:**

Region 3, Terrebonne Basin, Lafourche Parish, adjacent to Golden Meadow protection levee

**Problem:**

Eastern Terrebonne Basin is significantly isolated from the riverine influences of the Mississippi and Atchafalaya Rivers. Consequently, both subsidence and erosion of shorelines have occurred at some of the highest rates in Louisiana exposing communities to increased vulnerability to storm events. The protection levee system is exposed to open water in many areas. Bayou Blue has largely silted in and thus conveys very little freshwater from Grand Bayou through its 12 to 15 mile historic track. The bayou has potential to be reactivated as a viable distributor of water originating from the Atchafalaya River via the GIWW and Grand Bayou by dredging the channel and beneficially using the material to create marsh along the protect levee.

**Goals:**

The goal of the project is to strategically create marsh and reduce shoreline loss along the Larose to Golden Meadow protection levee by reconstructing marsh in areas that have subsided/eroded immediately adjacent to the levee. The goal will also be to dredge Bayou Blue for the dual purposes of providing borrow material for marsh creation and reconstituting the original course and flow of the bayou.

**Proposed Solutions:**

The project will create marsh along the toe of the Larose to Golden Meadow protection levee using a hydraulic dredge and reactivate flow through Bayou Blue to the marshes located to the east of Grand Bayou. It is estimated that dredging the 15 miles of channel at 70 ft wide and 8 ft deep would yield almost 2 million cubic yards of material that can be beneficially used to create over 300 acres of marsh.

**Preliminary Project Benefits:**

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

The project will directly benefit approximately 392 total acres including 353 acres of marsh creation and 39 acres of nourishment of existing marshes.

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

The total net acres protected/created over the project life is approximately 362 acres.

*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.*

Yes, the project would protect the tow of the Golden Meadow levee.

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

The project is adjacent to the Lafourche protection levee.

6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?* None located in immediate area.

**Identification of Potential Issues:**

The proposed project has the following potential issues: oil and gas flowlines.

**Preliminary Construction Costs:**

The estimated construction cost is approximately \$27.4 million

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

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John Jurgensen, NRCS, (337) 473-7694, [john.jurgensen@la.usda.gov](mailto:john.jurgensen@la.usda.gov)

Archie Chaisson, Lafourche Parish, (985) 632-4666, [chaissonap@lafourchegov.org](mailto:chaissonap@lafourchegov.org)





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

Data Source: NAIP

Map Date: January 18, 2013



**PPL-23 BAYOU BLUE DREDGE  
FOR MARSH CREATION  
LAFOURCHE PH, LA**

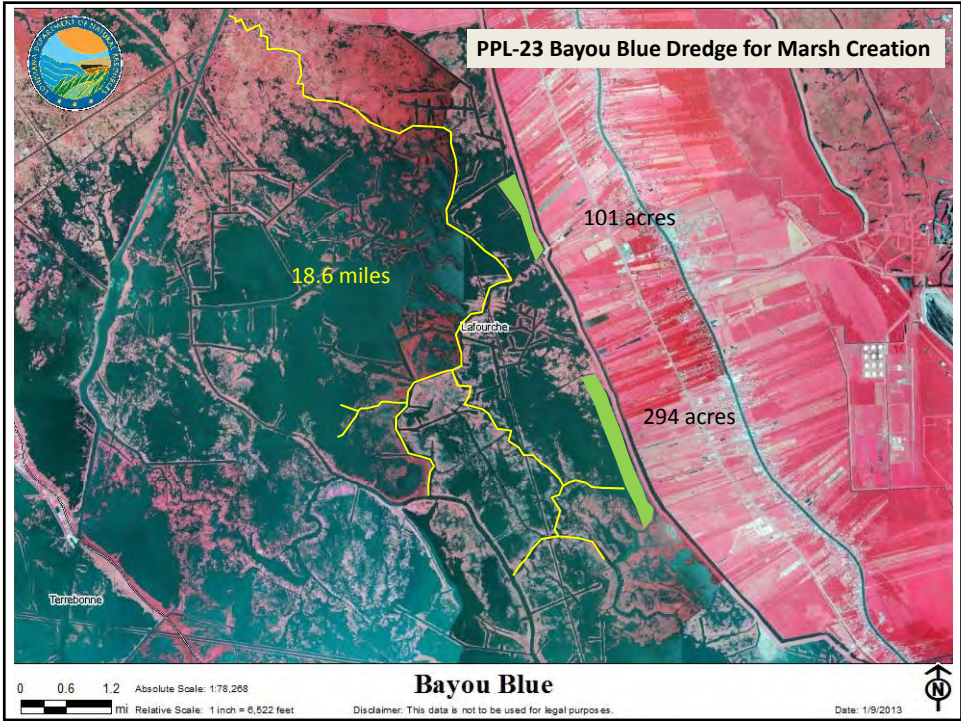
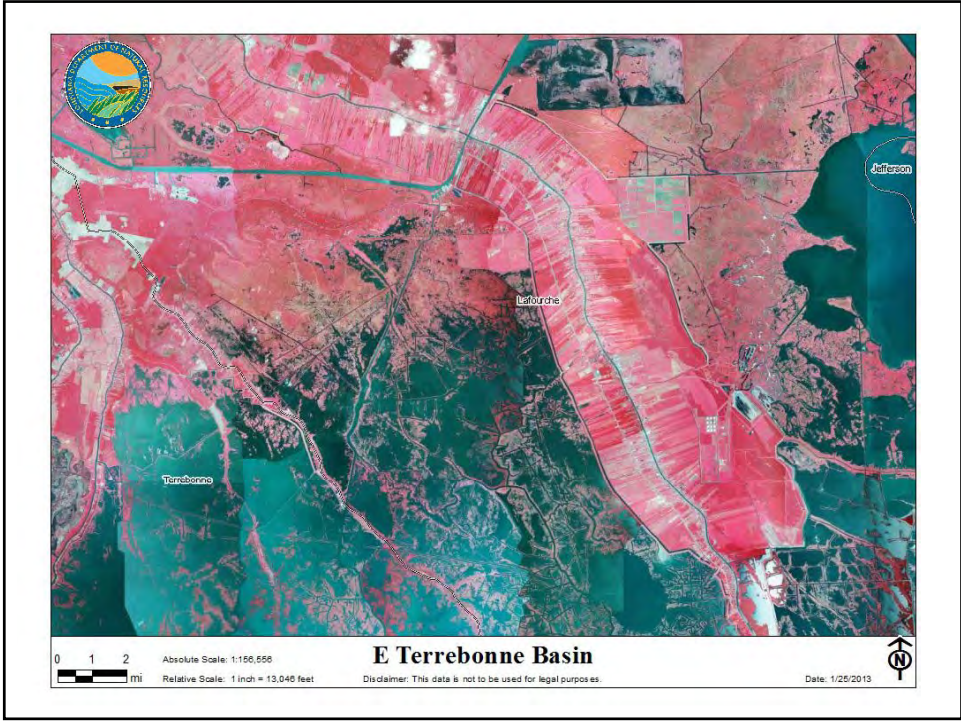
1 inch = 10,321 feet

Legend

— BAYOU\_BLUE

▭ MARSH\_CREATION





## Advantages

- Reconstitutes original tract of the bayou
- Provides a source of borrow material to create marsh in isolated upper basin (potentially renewable)
- Enhances the conveyance of freshwater to the marshes east of Grand Bayou.

**R3-TE-17**

**Bayou Dularge Ridge Restoration & Marsh Creation**

*Consistent with 2012 State Master Plan*



**PPL23 PROJECT NOMINEE FACT SHEET**  
**1/30/2013 - RPT**

**Project Name**

Bayou Dularge Ridge Restoration and Marsh Creation Project

**Master Plan Strategy**

Central Coast, Ridge Restoration; Bayou Dularge Ridge Restoration-03a.RC.02.

**Project Location**

Region 3, Terrebonne Basin, Terrebonne Parish, Bayou Dularge at Grand Pass

**Problem**

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

**Goals**

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

**Proposed Solutions**

The project would creation of approximately 27,000 linear feet of ridge feature north of Bayou Dularge along with approximately 568 acres of marsh creation and nourishment.

**Preliminary Project Benefits**

- 1) *What is the total acreage benefited both directly and indirectly?* The total acreage benefited would be approximately 568 total acres consisting of marsh creation, nourishment and ridge restoration.
- 2) *How many acres of wetlands will be protected/created over the project life?* The acres of wetlands created/protected over the project life is estimated at 568 acres with approximately 40% being marsh creation and ridge restoration (227 acres) and 60% resulting from marsh nourishment (341 acres).
- 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 over the project life 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.?* The project will reestablish a portion of the historic Bayou Dularge ridge.
- 5) *What is the impact of the project on critical and non-critical infrastructure?* The project will reestablish a major ridge feature in the Terrebonne Basin.
- 6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?* The project provides a synergistic effect with TE-66 by improving the integrity of the ridge and marsh adjacent to the proposed weir structure across Grand Pass.

**Identification of Potential Issues**

The proposed project has the following potential issues: oyster seed grounds

**Preliminary Costs**

The construction cost plus 25% contingency estimated is \$30 million

**Preparer of Fact Sheet**

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**DIKE LENGTH = 23,830'**  
**MARSH CREATION ACRES = 220**  
**RIDGE LENGTH = 11,110'**

**DIKE LENGTH = 31,571'**  
**MARSH CREATION ACRES = 336**  
**RIDGE LENGTH = 15,236'**

**LAKE MECHANT**

**BAYOU DULARGE**

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



Data Source: HAIP

Map Date: JANUARY 22, 2013



**PPL-23 BAYOU DULARGE  
RIDGE RESTORATION AND  
MARSH CREATION**

Legend

 CONTAINMENT\_DIKE  
 RIDGE\_RESTORATION

1 inch = 3,598 feet



