

REGION 2

Coastal Wetlands Planning Protection & Restoration Act

24th Priority Project List



Region 2 Regional Planning Team Meeting

February 13, 2014
Lacombe, LA

CWPPRA

1. Welcome and Introductions



- RPT Region 2 Leader: [Brad Inman - USACE](#)

CWPPRA

Announcements

- Copies of the PPL 24 Selection Process & Schedule available at the sign-in table.
- PPL 24 RPT meetings to accept project nominees:
 - Region IV, Estuarine Fisheries & Habitat Center, Feb. 11, 2014, 11:00 am
 - Region III, Terrebonne Parish Main Library, Feb. 12, 2014, 9:00 am
 - Region I, USFWS SE LA Refuges Complex (Big Branch), Feb. 13, 2014, 8:00 am
 - **Region II, USFWS SE LA Refuges Complex, Feb. 13, 2014, 11:30 am**
- Parish representatives must identify themselves during the RPT meetings and **fill out a voting registration form**, including contact information for the primary and secondary voting representatives that will cast votes during the Coastwide Electronic Vote. (See Josh Carson)



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Region 2 Parishes

- Eligible parishes for basins in Region 2 include:
- Barataria Basin
 - **Plaquemines Parish**
 - **Jefferson Parish**
 - **Orleans Parish**
 - **Ascension Parish**
 - **Assumption Parish**
 - **St. James Parish**
 - **St. Charles Parish**
 - **Lafourche Parish**
 - **St. John the Baptist Parish**
- Breton Sound Basin
 - **Plaquemines Parish**
 - **St. Bernard Parish**



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RPT Meetings

- Project proposals should be consistent with the 2012 State Master Plan.
- A project can only be nominated in one basin (except for coastwide projects – more info on coastwide projects after the following “RPT Meetings” slide).
- Proposals that cross multiple basins, excluding coastwide projects, shall be nominated in one basin only, based on the majority area of project influence.
- Coastwide projects apply across basin boundaries; their benefits are not tied to one basin. They can be nominated from any basin and can be presented in all RPT meetings.



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RPT Meetings

- Presenters must complete a PPL 24 Nomination Sign-Up Sheet for each project nominee (demo projects too). *Please give 3 factsheets to Allison, Michelle & Anne before your presentation (if you have one).*
- Limit project proposals to 5 minutes and Powerpoint presentations to 5 slides.
- Public comments on project proposals will be accepted orally during the RPT meetings and in writing by February 19, 2014.
- Limit comments/questions during meeting to PPL 24 subject proposals and processes.



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Coastwide Projects

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



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Demonstration Projects

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



Coastwide Electronic Vote (Feb 25) to select:

Projects per Basin

(Determined by loss rates, the highest loss rates have the most projects)

4 Barataria
 4 Terrebonne
 3 Breton Sound
 3 Pontchartrain
 2 Mermentau
 2 Calcasieu/Sabine
 2 Teche/Vermilion
 1 Atchafalaya
1 Coastwide
 22 Total

& up to 6 demos

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Coastwide Electronic Vote

- Parishes of each basin are asked to ***identify TODAY who will vote*** during the Coastwide Electronic Vote.
- Each officially designated parish representative, each Federal agency, and the State (CPRA) will have one vote.
- No additional projects can be nominated after the RPTs.
- No significant changes to projects proposed at the first round of RPT meetings will be allowed (this includes combining projects).
- Public comments will be heard today and written comments must be submitted by 2/19/2014.



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Coastwide Electronic Voting Process

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



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Nominee Project Evaluations

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



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PPL 24 Candidate Project Selection

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



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PPL 24 Candidate Project Evaluation & Selection

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



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PPL 24 Timeline

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



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Written Comments

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

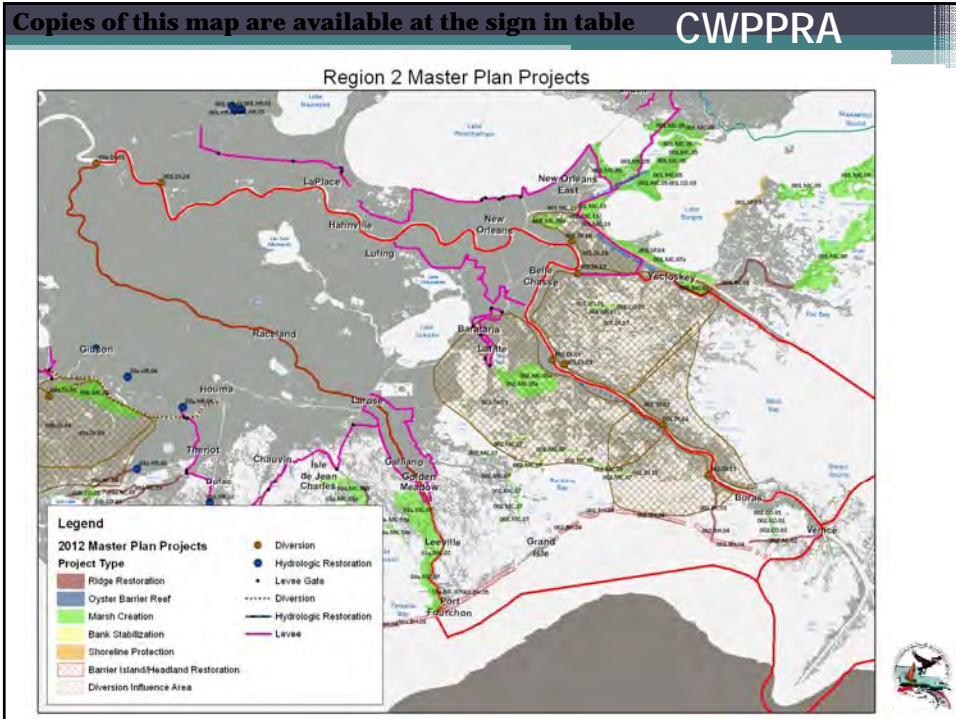
**Brad Inman
CWPPRA Program Manager
U.S. Army Corps of Engineers
P.O. Box 60267
New Orleans, Louisiana 70160**

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

Email: Brad.L.Inman@usace.army.mil

(this information is on the back of the agenda)





CWPBRA

| Project Type | Project Name | Project Costs | Project No. |
|-------------------------------------|---|---------------|-------------|
| Barrier Island/Headland Restoration | Barataria Pass to Sandy Point Barrier Island Restoration: Restoration of Barataria Bay barrier islands between Barataria Pass and Sandy Point to provide dune and back barrier marsh habitat and to provide storm surge and wave attenuation for the Barataria Basin. | \$535M | 002.BH.04 |
| Barrier Island/Headland Restoration | Belle Pass to Caminada Pass Barrier Island Restoration: Restoration of Barataria Bay barrier islands between Belle Pass and Caminada Pass to provide dune, beach, and back barrier marsh habitat and to provide storm surge and wave attenuation for the Barataria Basin. | \$281M | 002.BH.05 |
| Marsh Creation | Grand Liard Marsh/Ridge Restoration: Restoration of 560 acres of marsh and historic ridge in the vicinity of Grand Liard to provide wetland and upland habitat, restore natural hydrology, and provide wave and storm surge attenuation. | \$34M | 002.CO.01 |
| Marsh Creation | Large-Scale Barataria Marsh Creation-Component E (1st Period Increment): Creation of approximately 8,070 acres of marsh in the Barataria Basin to address the Barataria Landbridge to create new wetland habitat, restore degraded marsh, and reduce wave erosion. | \$495M | 002.MC.05e |
| Marsh Creation | Large-Scale Barataria Marsh Creation-Component E (2nd Period Increment): Creation of approximately 8,070 acres of marsh in the Barataria Basin to address the Barataria Landbridge to create new wetland habitat, restore degraded marsh, and reduce wave erosion. | \$1,980M | 002.MC.05e |
| Marsh Creation | Barataria Bay Rim Marsh Creation: Creation of approximately 2,010 acres of marsh along northern rim of Barataria Bay to create new wetland habitat, restore degraded marsh, and reduce wave erosion. | \$216M | 002.MC.07 |
| Marsh Creation | South Lake Lery Marsh Creation: Creation of approximately 450 acres of marsh along the south shore of Lake Lery to create new wetland habitat, restore degraded marsh, and reduce wave erosion. | \$36M | 001.CO.01 |

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 |



ATTENDANCE RECORD



| | | |
|---|---|--|
| DATE February 13, 2014 8:00 A.M. & 11:30 A.M. | SPONSORING ORGANIZATION COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT | LOCATION USFWS SE LA Refuges Complex 61389 Hwy 434 Lacombe, LA 70445 |
|---|---|--|

PURPOSE

MEETING OF THE REGIONAL PLANNING TEAM REGION I & 2

PARTICIPANT REGISTER*

| NAME | JOB TITLE AND ORGANIZATION | PHONE NUMBER |
|------------------|---|----------------|
| David Brunet | Coastal Proj. Manager St. Tammany | 985-898-2442 |
| Bren Haase | CPRA | 225-342-1475 |
| BARRY HEBERT | LDWF | 225-765-0233 |
| Brad Crawford | EPA | 214 665 7255 |
| Barbara Aldridge | EPA | 214 665 2712 |
| Aaron Hoff | EPA | 214.665.7319 |
| Alvin James | USDA NRCS | |
| Carol Giardina | LCCA | 504 331 5326 |
| Maurice Baurd | City Council Dist E. New Orleans | 504 658-1050 |
| Patrick Williams | NOAA/NMFS | 225-389-0508 |
| Kim Clements | NOAA | 225-389-0508 |
| Jason Smith | Jefferson Parish Dept. of Environmental Affairs | 504/731-4612 |
| Joe Gonzales | Manson Construction Co. | 985-580-1900 |
| Angela Trehon | FWS | 337-291-3137 |
| KARL PECKHAUS | RECON | 713 875 2442 |
| Charles Sasser | LSU | 225 578 6375 |
| John Boatman | NRCS | 985-331-9084 |
| Marisa Escudero | Land Trust for Louisiana, ^{Development} Director | (504) 908-0648 |
| Quin Finley | NRCS | 225-665-4253 |
| Ron Boutang | NRCS | 337 291-3067 |
| Oliver M. Kelly | PPG | 609.912.5973 |
| Tim Welp | USACE Engineer Research + Dev Center | 601-415-3438 |

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



ATTENDANCE RECORD



| | | |
|--|--|---|
| <p align="center">DATE February 13, 2014 8:00 A.M. & 11:30 A.M.</p> | <p align="center">SPONSORING ORGANIZATION COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT</p> | <p align="center">LOCATION USFWS SE LA Refuges Complex 61389 Hwy 434 Lacombe, LA 70445</p> |
|--|--|---|

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|---|
| <p align="center">PURPOSE MEETING OF THE REGIONAL PLANNING TEAM REGION 1 & 2</p> |
|---|

PARTICIPANT REGISTER*

| NAME | JOB TITLE AND ORGANIZATION | PHONE NUMBER |
|-----------------|---------------------------------|--------------------|
| Marnie Winter | Director, Jeff. Parish Environ. | (504) 736-6443 |
| Vickie Duffourc | cbi/Shaw Coastal | (504) 8 |
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* If you wish to be furnished a copy of the attendance record, please indicate so next to your name.

Region 2 – BARATARIA BASIN

| Project Number | Project Proposals |
|-----------------------|--|
| R2-BA-01 | Bayou Dupont Sediment Delivery – Marsh Creation 4 |
| R2-BA-02 | Caminada Headlands Back Barrier Marsh Creation 2 |
| R2-BA-03 | Grand Bayou Marsh Creation & Terracing |
| R2- BA-04 | East Bayou Lafourche Marsh Creation & Terracing |
| R2- BA-05 | St. Joseph Bay Shoreline Protection & Marsh Creation |
| R2- BA-06 | Bayou Long Marsh & Ridge Restoration |
| R2- BA-07 | Bay Dos Gris Marsh Creation |
| R2- BA-08 | Barataria Bay Rim Marsh Creation |
| R2- BA-09 | Barataria Bay Waterway East Marsh Creation |
| R2-BA-10 | East Leeville Marsh Creation & Nourishment |
| R2-BA-11 | Grand Pierre Island Restoration |
| R2-BA-12 | Wilkinson Canal Marsh Creation & Terracing |

Region 2 – BRETON SOUND BASIN

| | |
|---------------------|---|
| R2-BS-01 | Long Distance Sediment Transport East – Breton Sound Marsh Creation <i>(not consistent with 2012 State Master Plan)</i> |
|---------------------|---|

Region 2 – BARATARIA BASIN

R2-BA-01

Bayou Dupont Sediment Delivery – Marsh Creation 4

PPL24 PROJECT NOMINEE FACT SHEET

February 13, 2014

Project Name:

Bayou Dupont Sediment Delivery – Marsh Creation 4

Louisiana's Comprehensive Master Plan for a Sustainable Coast

1st Implementation Period. Large Scale Barataria Marsh Creation Component E. 002.MC.05e

Utilization of sediment outside the system from the Mississippi River

Project Location:

Region 2, Barataria Basin, Plaquemines and Jefferson Parishes.

Problem:

The wetlands in the Barataria Basin were historically nourished by the fresh water, sediment and nutrients delivered by the Mississippi River and the many distributary channels. Following the creation of levees along the lower river for flood control and navigation, these inputs ceased. In addition, numerous oil and gas canals in the area contributed significantly to wetland losses. Data suggests that from 1932 to 1990, the basin lost over 245,000 ac of marsh, and from 1978 to 1990, Barataria Basin experienced the highest rate of wetland loss along the entire coast.

Goals:

The primary goal of this project is to create/nourish approximately 300 ac of emergent intermediate marsh using sediment from the Mississippi River. This project would tie in to the previously constructed BA-39 project and the recently approved PPL22 Bayou Dupont #3 project. The project will also complement the BA-48 project and the State's Long Distance Sediment Pipeline Project.

Proposed Solution:

Creation/nourishment of approximately 300 acres of emergent intermediate marsh by hydraulically pumping sediment from the Mississippi River via pipeline. Tidal creeks and appropriate marsh vegetation will be included (funds are budgeted to plant 50% of the created marsh acres/150 ac) as part of the project concept.

Project Benefits:

The project would result in approximately 300 ac of emergent intermediate marsh.

Project Costs:

The preliminary construction cost plus 25% is \$22.5 Million.

Preparer of Fact Sheet:

Brad Crawford, EPA, (214) 665-7255; crawford.brad@epa.gov

Barbara Aldridge, EPA, 214-665-2712; aldridge.barbara@epa.gov

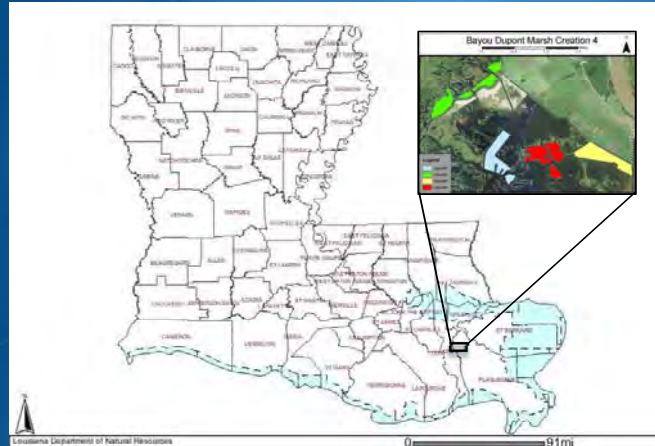
Bayou Dupont Marsh Creation 4



Legend

 Fill Area

Bayou Dupont Marsh Creation #4



Coastal Wetlands Planning, Protection
and Restoration Act

Problem

- Marshes disconnected from Mississippi River deltaic processes (sediment, freshwater, nutrients)
- Marsh loss

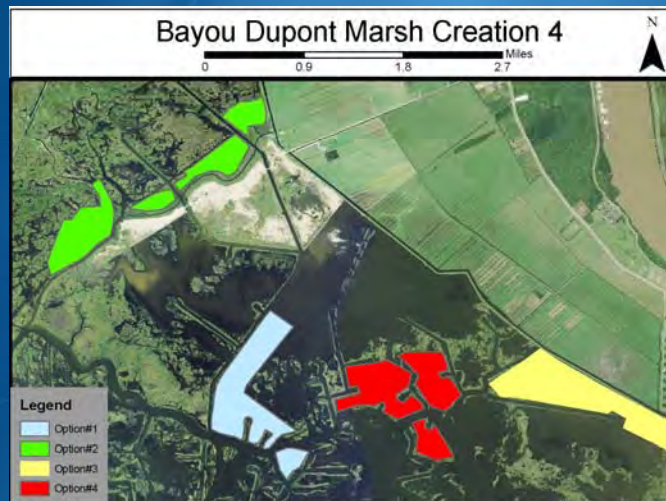
Coastal Wetlands Planning, Protection
and Restoration Act

Solution

- Create 300 acres of emergent marsh habitat
- Build upon previous Bayou Dupont success
- Utilize renewable sediment from Mississippi River
- Several alternatives available
- Estimated Cost \$20 - \$25 million

Coastal Wetlands Planning, Protection
and Restoration Act

Project Features



Coastal Wetlands Planning, Protection
and Restoration Act



Questions?

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EPA Region 6
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Coastal Wetlands Planning, Protection
and Restoration Act

R2-BA-02

Caminada Headlands Back Barrier Marsh Creation 2

PPL 24 PROJECT NOMINEE FACT SHEET
February 13, 2014

Project Name

Caminada Headlands Back Barrier Marsh Creation 2

Master Plan Strategy

002.BH.05 – Belle Pass to Caminada Pass Barrier Island Restoration

Project Location

Region 2, Barataria Basin. The project is located directly behind the Caminada headland beach, to the east of West Belle Pass, in Lafourche and Jefferson Parishes, Louisiana.

Problem

Caminada headland has experienced some of the highest shoreline retreat rates in Louisiana, measuring between 55 and 65 feet per year from 1998 to 2010 (historically, up to 100 feet per year). At the same time the area is also experiencing extremely high loss rates of interior marshes. As the barrier headland continues to retreat, overwashed sediment will be lost into newly formed open water and these land loss rates will be exacerbated.

Goals

Create and nourish up to 728 acres of back barrier marsh using sediment from an offshore borrow site. This will create a platform for the headland to migrate onto, which will slow its retreat while protecting nearby associated wetlands and infrastructure.

Proposed Project Features

This project would create up to 357 acres and nourish up to 371 acres of emergent marsh using sediment from an offshore borrow site. This will be placed behind approximately 2.75-4 miles of Caminada beach as the front containment, using as much of the existing pipe canal levees elsewhere.

Preliminary Project Benefits

- 1) *What is the total acreage benefited both directly and indirectly?*
Cells A&B: 521 ac; Cells A&C: 394 ac; Cells A–D: 728 ac
- 2) *How many acres of wetlands will be protected/created over the project life?*
The average wetland loss rate for the Port Fourchon Shoreline sub-unit is -0.49% per year. Using a loss rate reduction of 50%, an expected loss rate of -0.25% per year is used, with net acreages at TY20 totaling 218 ac for Cells A&B, 151 ac for A&C, and 356 ac for A–D.
- 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 anticipated throughout the entire project area.
- 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 back barrier marsh created in this project will serve as a platform for the overwashed beach sediment to fall back against, which would otherwise be lost to open water. This will assist with the preservation of the beach dune and the Caminada Headlands.

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

Caminada Headland serves as a critical barrier between the gulf and lower Lafourche and Jefferson Parishes. The project helps protect infrastructure in the immediate area such as LA-1 and parts of Port Fourchon.

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

This project will build on the Caminada Headland Backbarrier Marsh project that was approved for Phase 1 funding in PPL 23, which supports the Caminada 1 beach restoration effort that is currently under construction with funding from CIAP. According to CPRA, there were significant budget savings on the Caminada 1 project, so CPRA is proposing a second beach project, Caminada 2, which will cover the remainder of the beach up to Elmer's Island. This project will provide holistic benefits to both approved projects as well as the proposed Caminada 2 project due to its location. It will provide protection against breaches and capture any beach overwash from the planned Camindada 2 beach project.

Identification of Potential Issues

At least two pipelines bisect the entire length of the project. Also, a pump station appears to be active along the northern containment of Cell F. In Cell E, there appears to be a fishing camp located on the northern pipe canal levee. A ditch along "Shell Road" to the East of E&F looks to be used by locals for recreation/fishing, they may want to see it preserved.

Preliminary Construction Costs

Cells A&B: +25% contingency - \$19.9M (EPA-preferred alternative)

Cells A&C: +25% contingency - \$15.7M

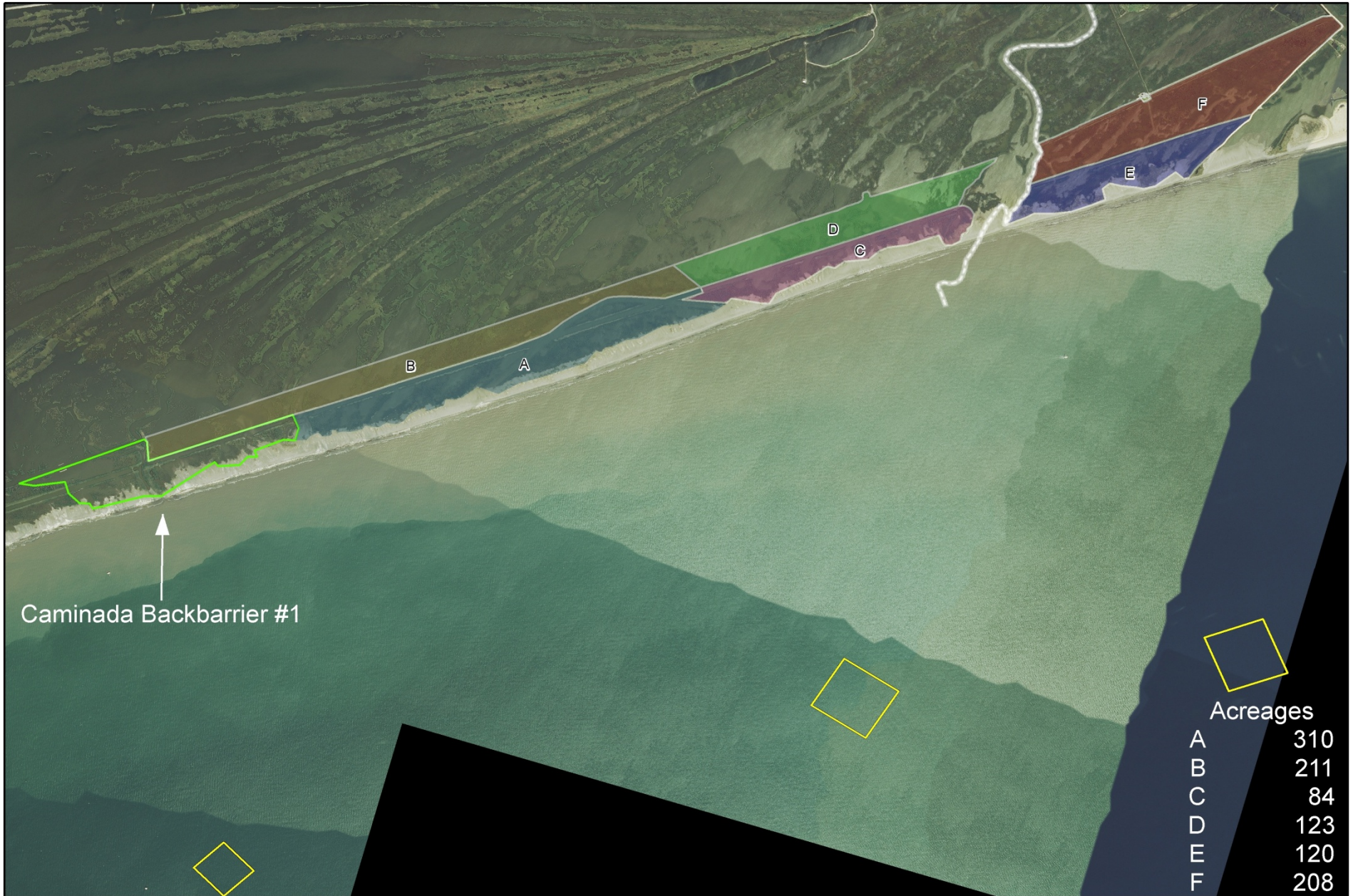
Cells A–D: +25% contingency - \$29.5M

Preparer of Fact Sheet

Aaron Hoff, EPA (214) 665-7319, hoff.aaron@epa.gov

Adrian Chavarria, EPA (214) 665-3103, chavarria.adrian@epa.gov

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



Caminada Backbarrier #1

| Acreages | |
|----------|-----|
| A | 310 |
| B | 211 |
| C | 84 |
| D | 123 |
| E | 120 |
| F | 208 |

Cells

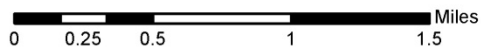
- A
- B
- C
- D
- E
- F

Features

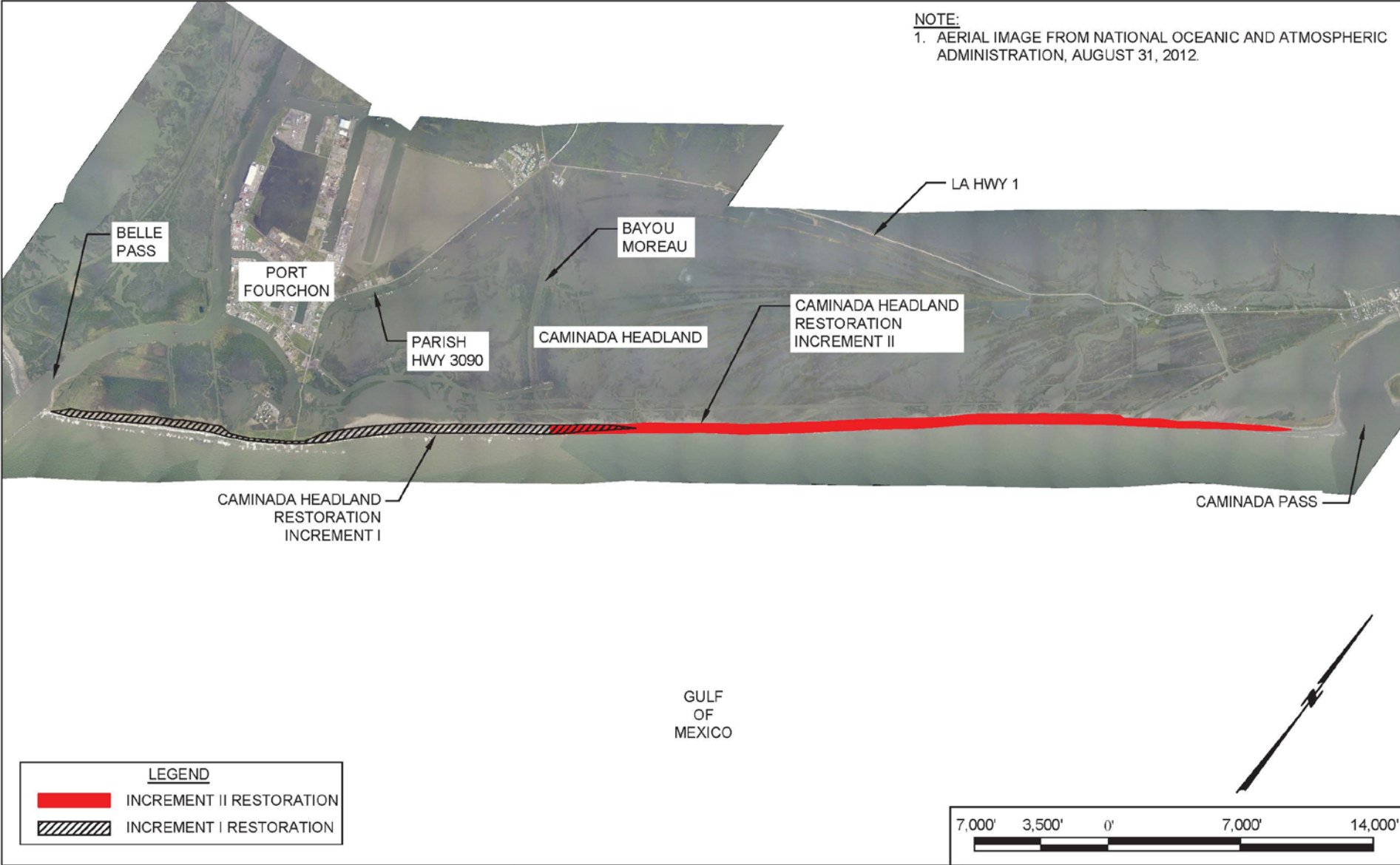
- Caminada BB #1
- Borrow Areas

Caminada Backbarrier Marsh Creation #2

Basemap: 2013 NAIP DOQQ
 Produced by: EPA Region 6, Dallas, TX



NOTE:
 1. AERIAL IMAGE FROM NATIONAL OCEANIC AND ATMOSPHERIC
 ADMINISTRATION, AUGUST 31, 2012.



LEGEND

INCREMENT II RESTORATION

INCREMENT I RESTORATION



NRDA CAMINADA HEADLAND BEACH
 AND DUNE RESTORATION (BA-143)
 INCREMENT II

HEADLAND OVERVIEW MAP

FIGURE 1-2



Caminada Headlands Back Barrier Marsh Creation #2




Louisiana Department of Natural Resources

0 91mi




Coastal Wetlands Planning, Protection and Restoration Act



Problem

- One of the highest rates of shoreline retreat
 - 55-65 ft/yr from 1998-2010
 - Historically, up to 100 ft/yr
- Compound effects from interior marsh loss
 - Retreating beach dune has no platform to migrate onto, sediments lost to mostly open water



Coastal Wetlands Planning, Protection and Restoration Act

Solution

- Create from 394 to 728 acres of backbarrier marsh habitat
- Supplement existing and future Caminada beach/backbarrier projects
- Utilize sediment from an offshore borrow site
- Several alternatives available
- Estimated preliminary cost \$20 - \$30 million, depending on chosen alternative

Coastal Wetlands Planning, Protection and Restoration Act



Project Features



Coastal Wetlands Planning, Protection and Restoration Act





Questions?

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Coastal Wetlands Planning, Protection
and Restoration Act

R2-BA-03

Grand Bayou Marsh Creation & Terracing

PPL24 PROJECT NOMINEE FACT SHEET
February 13, 2014

Project Name

Grand Bayou Marsh Creation and Terracing

Project Location

Region 2, Barataria Basin, Plaquemines Parish, Grand Bayou near West Pointe a la Hache

Problem

From 1932 to 1990, the West Point a la Hache Mapping Unit lost 38% of its marsh. Through 2050, 28% of the 1990 marsh acreage is expected to be lost. Significant marsh loss has occurred south of Lake Hermitage and along Grand Bayou with the construction of numerous oil and gas canals. USGS calculated a loss rate of -1.16 %/yr (1984-2011) for this area during PPL23 project evaluations.

Goals

The primary goal is to re-create marsh habitat along Grand Bayou and to complement other restoration projects (e.g., Lake Hermitage Marsh Creation, West Pointe a la Hache Siphon Enhancement) in the area. Terraces are proposed to reduce fetch in open water areas and to capture suspended sediment delivered via the West Pointe a la Hache siphons.

Proposed Project Features

1. Riverine sediments will be hydraulically dredged and pumped via pipeline to create approximately 375 acres (Option A) or 480 acres (Option B) of marsh.
2. Approximately 77,000 linear feet (53 acres-Option A) or 70,000 linear feet (48 acres-Option B) will be constructed.
3. Containment dikes will be gapped and terraces will be planted.

Preliminary Project Benefits

- 1) *What is the total acreage benefited both directly and indirectly?* Approximately 1,475(A)/1,480(B) acres would be benefited directly and indirectly. Direct benefits include 375(A)/480(B) acres of marsh creation and 53(A)/48(B) acres of terraces. Indirect benefits would occur to surrounding marshes and within the 1,100(A)/1,000(B)-acre terrace field.
- 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 388(A)/432(B) 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 some protection to flood protection levees east of the project area along Hwy. 23.

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 Lake Hermitage Marsh Creation Project (PPL15) and the West Pointe a la Hache Siphon Enhancement Project (PPL3). All of these projects would work in conjunction to restore wetlands within the West Pointe a la Hache Mapping Unit.

Identification of Potential Issues

Oil and gas infrastructure.

Preliminary Construction Costs

Preliminary construction costs are estimated at \$29M(A)/\$27.6M(B), which includes a 25% contingency.

Preparer of Fact Sheet

Kevin Roy, USFWS, (337) 291-3120, kevin_roy@fws.gov



U.S. Fish & Wildlife Service

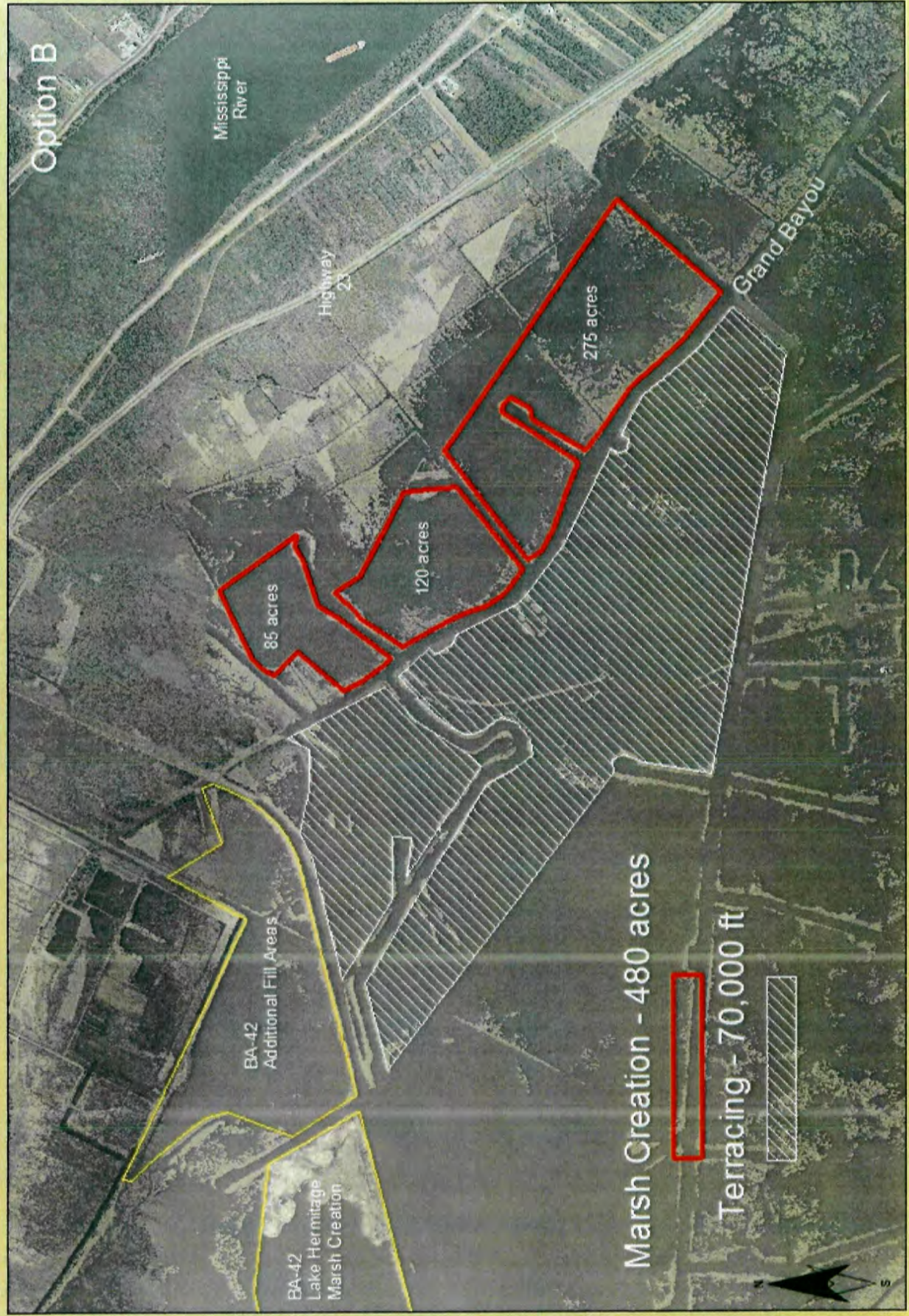
Louisiana Ecological Services Field Office
Grand Bayou Marsh Creation and Terracing





U.S. Fish & Wildlife Service

Louisiana Ecological Services Field Office
Grand Bayou Marsh Creation and Terracing



Option B

Mississippi River

Highway 23

Grand Bayou

85 acres

120 acres

275 acres

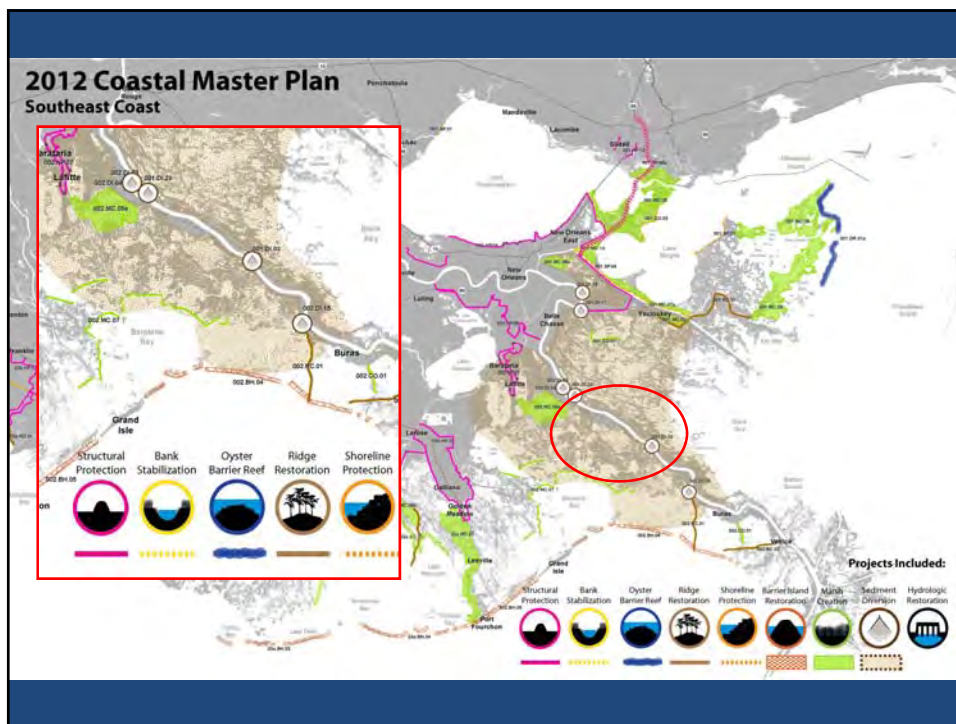
BA-42
Additional Fill Areas

BA-42
Lake Hermitage
Marsh Creation

Marsh Creation - 480 acres

Terracing - 70,000 ft







Grand Bayou Marsh Creation & Terracing

- Mississippi River borrow site
- 375/480 acres of marsh creation/nourishment
- 77,000/70,000 feet of terraces (53/48 acres)
- Net acres = 388/432
- Construction plus contingency = \$29M/\$27.6M

R2-BA-04

East Bayou Lafourche Marsh Creation & Terracing

PPL24 PROJECT NOMINEE FACT SHEET
February 13, 2014

Project Name

East Bayou Lafourche Marsh Creation and Terracing

Project Location

Region 2, Barataria Basin, Lafourche Parish, south of Golden Meadow adjacent to Bayou Lafourche

Problem

The project area is within the Coast 2050 Caminada Bay mapping unit which encompasses approximately 130,000 acres. From 1932 to 1990, approximately 26,600 acres of marsh were lost from the initial 63,110 acres. An extensive network of oil and gas canals, resulting in altered hydrology, was one of the major causes of this loss. Subsidence, wind erosion, and altered hydrology continue to result in marsh loss. USGS calculated a 1985-2009 loss rate of -0.9% per year for the Lake Palourde unit.

Goals

The primary goal of this project is to restore marsh along the Highway 1-Bayou Lafourche corridor via marsh creation and terracing.

Proposed Project Features

1. Sediments will be hydraulically dredged in Little Lake, west of Bayou Lafourche, and pumped via pipeline to create/nourish approximately 450 acres of marsh. The maximum pump distance for the proposed Little Lake borrow site is approximately 48,000 feet (9.1 miles). Caminada Bay or one of the small bays north of Caminada Bay may offer other options for borrow material. However, the pipeline route may be more problematic.
2. Containment dikes will be constructed as necessary and gapped upon project completion.
3. Terraces (49,000 linear ft-34 ac) will be constructed in open water and deteriorated marsh areas to reduce fetch, provide protection to the created marsh, and provide marsh edge habitat.

Preliminary Project Benefits

- 1) *What is the total acreage benefited both directly and indirectly?* Approximately 1,225 acres would be benefited directly and indirectly. Direct benefits include 450 acres of marsh creation and 34 acres of terraces. Indirect benefits would occur to surrounding marshes and within the 775-acre terrace field.
- 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 409 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.* The project would restore marsh along what remains of the historical natural levee ridge along Bayou Lafourche.

5) *What is the net impact of the project on critical and non-critical infrastructure?* Some protection could be afforded to Highway 1 which is not elevated along this reach.

6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?* None are known at this time.

Identification of Potential Issues

Oil and gas infrastructure and oyster leases. SONRIS database indicates very few oyster leases in Little Lake.

Preliminary Construction Costs

The estimated construction cost including 25% contingency is \$24.2M.

Preparer of Fact Sheet

Kevin Roy, USFWS, (337) 291-3120, kevin_roy@fws.gov

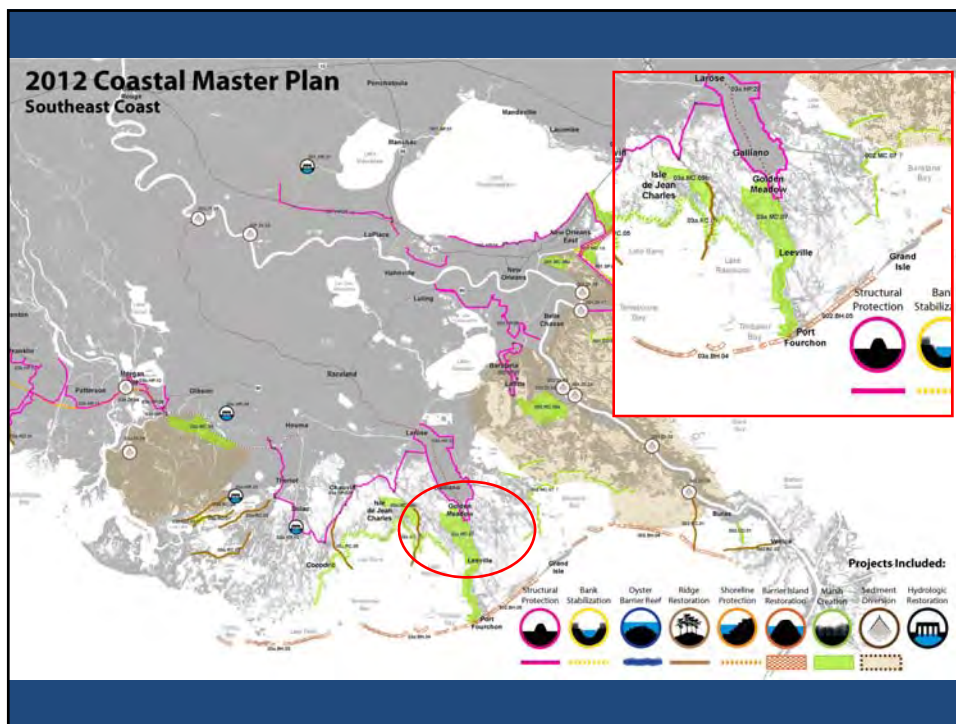


U.S. Fish & Wildlife Service

Louisiana Ecological Services Field Office

East Bayou Lafourche Marsh Creation and Terracing





East Bayou Lafourche Marsh Creation & Terracing

- Little Lake borrow site
- Maximum pump distance of feet
- 450 acres of marsh creation/nourishment
- 49,000 linear feet of terraces – 34 acres
- Net acres = 409
- Construction plus contingency = \$24.2M

R2-BA-05

St. Joseph Bay Shoreline Protection & Marsh Creation

PPL24 PROJECT NOMINEE FACT SHEET
January 30, 2014

Project Name: St. Joseph Bay Shoreline Protection and Marsh Creation

Project Location:

Region 2, Barataria Basin, Lafourche Parish, southwest of Little Lake

Problem:

Historic wetland loss in the area was caused mainly by altered hydrology from canals and levees, wind erosion and the shoreline of Little Lake, sediment deprivation, and natural subsidence. Based on the hyper-temporal analysis conducted by USGS for the extended project boundary of the Northwest Turtle Bay project during PPL21 analysis, loss rates in the area are estimated to be -0.61% per year for the period 1984 to 2011. Using maps from 1998 and 2012, shoreline erosion rates were calculated along the St. Josephs Bay area. Shoreline erosion rates in that area ranged from 76 ft./yr to 10 ft./yr. A 6,615 LF section of shoreline was estimated to have an average erosion rate of 10 ft./yr and a second section (9,134 LF) was estimated to have an average erosion rate of 40 ft./yr.

Goals :

The goals of the project are to 1) protect approximately 15,749 feet of critical shoreline, 2) protect approximately 116 acres of marsh habitat, and 3) create approximately 208 acres of marsh and nourish approximately 149 acres of marsh (357 acres total) with dredged material from Little Lake.

Proposed Solutions:

The proposed project would protect approximately 15,749 feet of critical shoreline and preserve 116 acres of existing marsh by constructing a foreshore rock dike along the shoreline at the 1.5 foot contour. Maintenance of the shoreline protection feature would be included.

The proposed project would also create approximately 208 acres and nourish approximately 149 acres of marsh using sediment hydraulically dredged from Little Lake. Existing canal spoil banks, emergent marsh, and segments of containment dikes will be used to guide the distribution of the dredged material. Containment dikes will be degraded/gapped as necessary to reestablish hydrologic connectivity with adjacent wetlands.

Preliminary Project Benefits:

1) What is the total acreage benefited both directly and indirectly? Approximately 556 acres would be benefited directly.

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 305 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%). 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.

This project would contribute to protection of the Central Barataria Basin Landbridge and protect a portion of the Little Lake shoreline.

5) What is the net impact of the project on critical and non-critical infrastructure? There are several camps and oil and gas infrastructure that would benefit from this project as well as numerous pipelines would benefit from reducing land loss in the area.

6) To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects? This project would work in sync with BA-2, BA-27, BA-20, BA-23, BA-03a, BA-26, BA-36 (and associated CIAP project), and BA-41, contributing to protection of the Central Barataria Basin Landbridge.

Identification of Potential Issues:

The proposed project has the following potential issues: there are pipelines in the project area and in Little Lake. Little Lake is designated as an oyster seed ground. O&M is also included for the shoreline protection feature.

Preliminary Construction Costs:

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

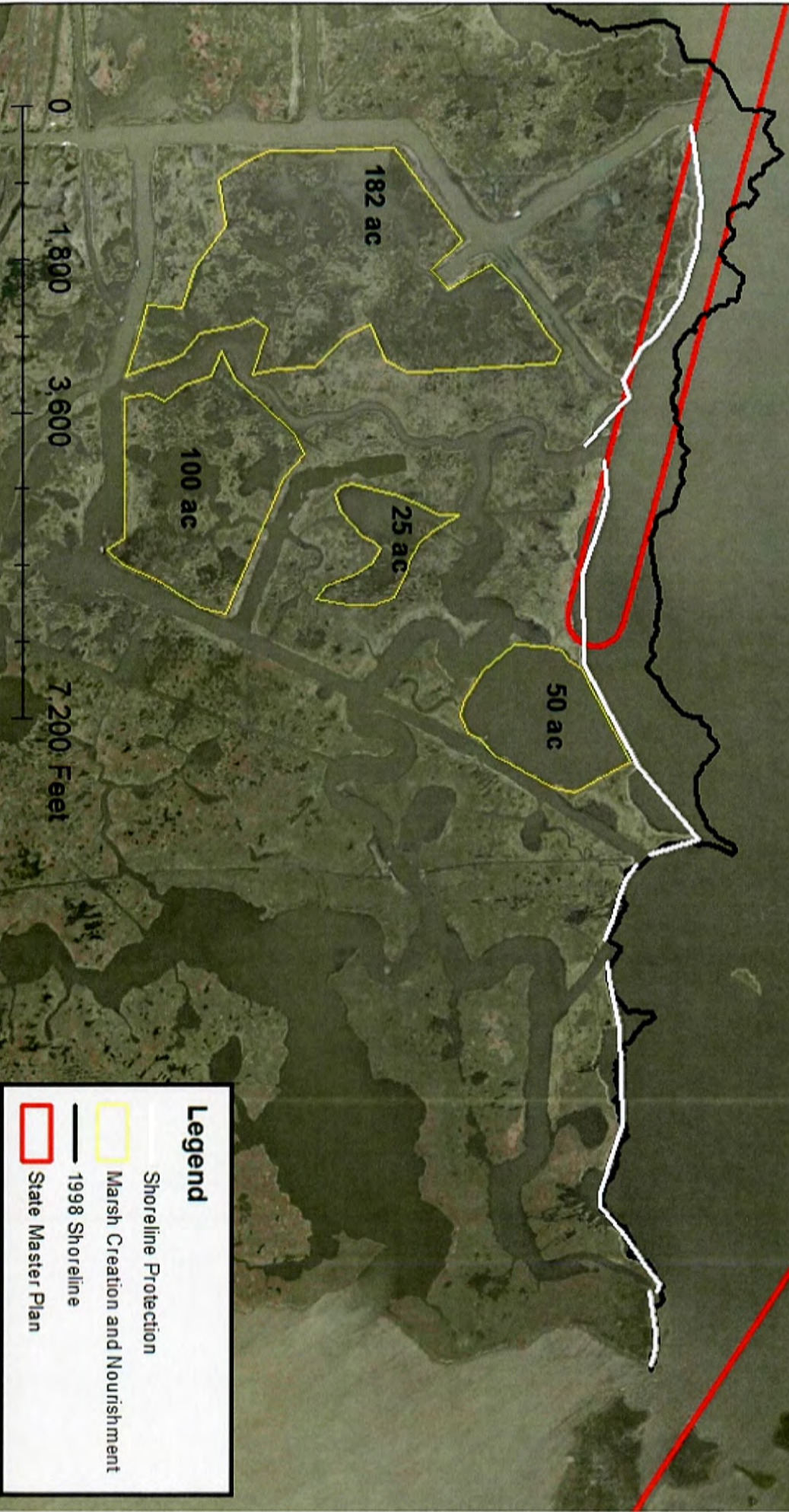
Preparer(s) of Fact Sheet:

Robert Dubois (337) 257-4345 robert_dubois@fws.gov



ST JOESPH BAY SHORELINE PROTECTION AND MARSH CREATION

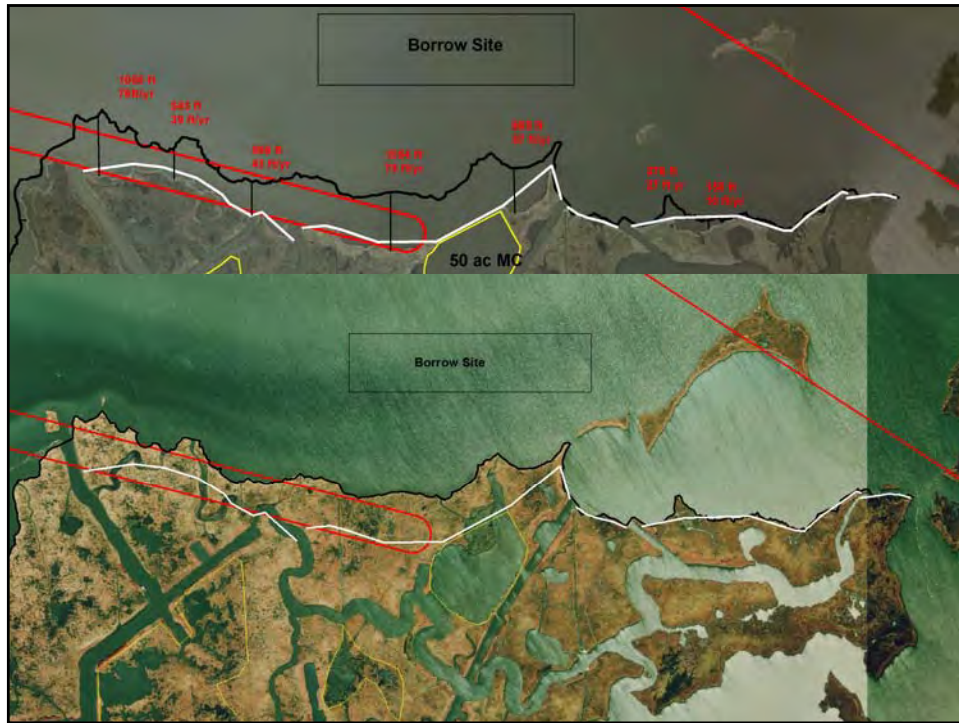
Borrow Site



Legend

- Shoreline Protection
- Marsh Creation and Nourishment
- 1998 Shoreline
- State Master Plan





ST JOSEPH BAY SHORELINE PROTECTION AND MARSH CREATION

Goals:

- protect 15,749 feet of critical shoreline
- protect 116 acres of marsh habitat
- Create 208 and nourish 149 acres of marsh (357 acres total) with Little Lake material

Net Acres:

- The total net acres is 305 acres

Potential Issues:

- pipelines in the project area and in Little Lake
- Little Lake is designated as an oyster seed ground
- O&M is also included for the shoreline protection feature

Preliminary Construction Costs

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



R2-BA-06

Bayou Long Marsh & Ridge Restoration

PPL24 PROJECT NOMINEE FACT SHEET
February 13, 2014

Project Name

Bayou Long Marsh and Ridge Restoration – Increment 1**

Project Location

Region 2, Barataria Basin, Plaquemines Parish, along Bayou Long near Empire, LA.

Problem

The Bastian Bay Mapping Unit was historically characterized as having a series of north-south bayous and associated ridges that facilitated Mississippi River water into the Lower Barataria Basin. From 1932 to 1990, the Bastian Bay Mapping Unit lost 85% of its marsh. Significant marsh loss has occurred due to subsidence and construction of numerous oil and gas canals. Without the restoration of the Barataria barrier island chain, the Coast 2050 Report anticipates the remaining marsh acreage to be lost by 2050 due to increased tidal exchange. Further, subsidence is high in this unit, ranging from 6 – 24 mm/year depending on the source of information (Coast 2050 and State Master Plan).

Goals

The primary goal is to restore marsh and ridge habitat along the eastern side of Bayou Long. Specific goals of the project are: 1) Create approximately 200 acres of marsh with dredged material from the Mississippi River; 2) create approximately 9,400 linear feet (14 acres) of forested coastal ridge habitat, and 3) install approximately 11,000 linear feet of shoreline protection (gabion mats) to reduce wind induced wave energy coming from the west across Adams Bay. The restoration of the Barataria barrier islands helps to reduce increased tidal exchange. The next step to restoring the Lower Barataria Basin is restore the ridge features associated with river outlets thereby establishing the skeletal framework that supports the marsh complex. Restoring this ridge feature and marsh complex will support Fish and Wildlife Service trust resources such as neo-tropical migrants, migratory waterfowl, shorebirds, wadingbirds and raptors. Several at-risk species would benefit such as Osprey, black rail, diamondback terrapin, and the Louisiana eyed silkmoth.

Proposed Project Features

Riverine sediments will be hydraulically dredged and pumped via pipeline to create/nourish approximately 400 acres of marsh. Containment dikes will be constructed as necessary. The proposed design is to place the dredged material to a fill height of +2.0 ft NAVD88. Approximately 9,400 linear feet of forested coastal ridge will be constructed along Bayou Long. The ridge will have a 25-ft crown width, a height of +5.0 ft NAVD88, and side slopes of 1(V):5(H). The current proposal is to create the ridge using material dredged from the Mississippi River. Funding for tallow control and maintenance plantings is also included. To protect the marsh creation area from wind driven wave fetch across Adams Bay, approximately 11,000 linear feet of marsh shoreline will be protected with gabion mats.

Preliminary Project Benefits

1) *What is the total acreage benefited both directly and indirectly?* Approximately 214 acres would be benefited directly. Direct benefits include 200 acres of marsh creation/nourishment and 14 acres of ridge.

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 X 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 11,000 linear feet (14 acres) of natural levee ridge habitat along Bayou Long.

5) *What is the net impact of the project on critical and non-critical infrastructure?* The project would not protect any significant infrastructure.

6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?* The project would work synergistically with the Barataria Barrier Islands Restoration efforts to restore the Bastian Bay Mapping Unit in the Lower Barataria Basin.

Identification of Potential Issues

Numerous oil and gas canals; pipelines; oyster leases.

Preliminary Construction Costs

The estimated construction cost including 25% contingency is \$35-40M.

****Costs were reduced by dividing the benefit area in half (Increment 1).**

Preparer of Fact Sheet

Angela Trahan, USFWS, (337) 291-3137, angela_trahan@fws.gov

Bayou Long Ridge Restoration & Marsh Creation



Increment 1

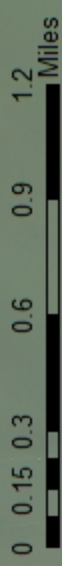
Adams Bay

Bayou Long

Bastian Bay

Legend

- Shoreline Protection
- MS_R_Borrow
- Ridge
- marsh_creation

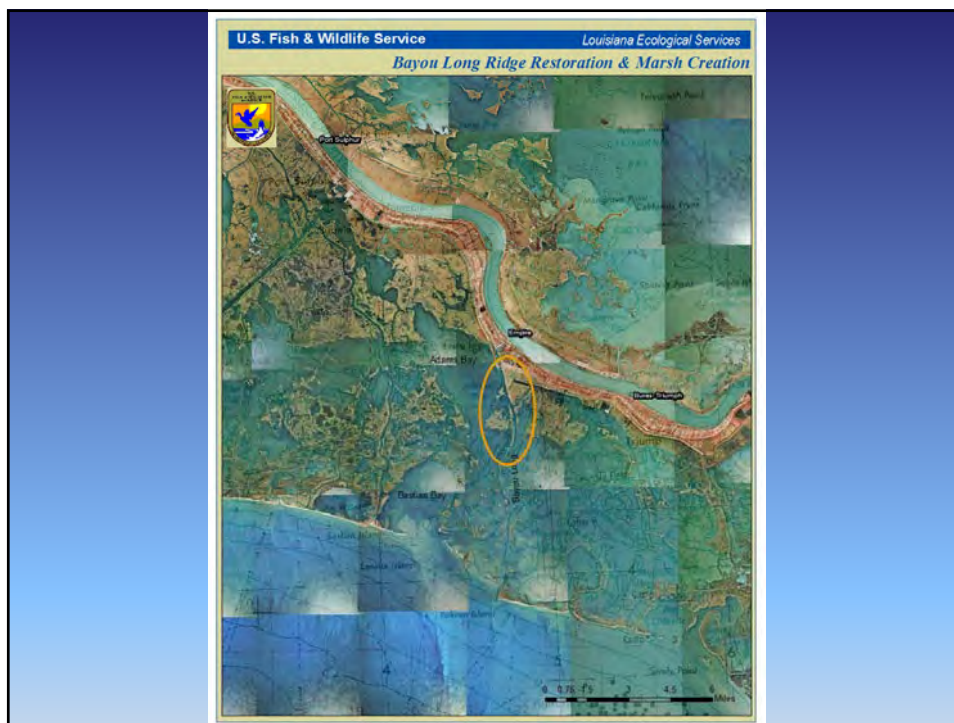


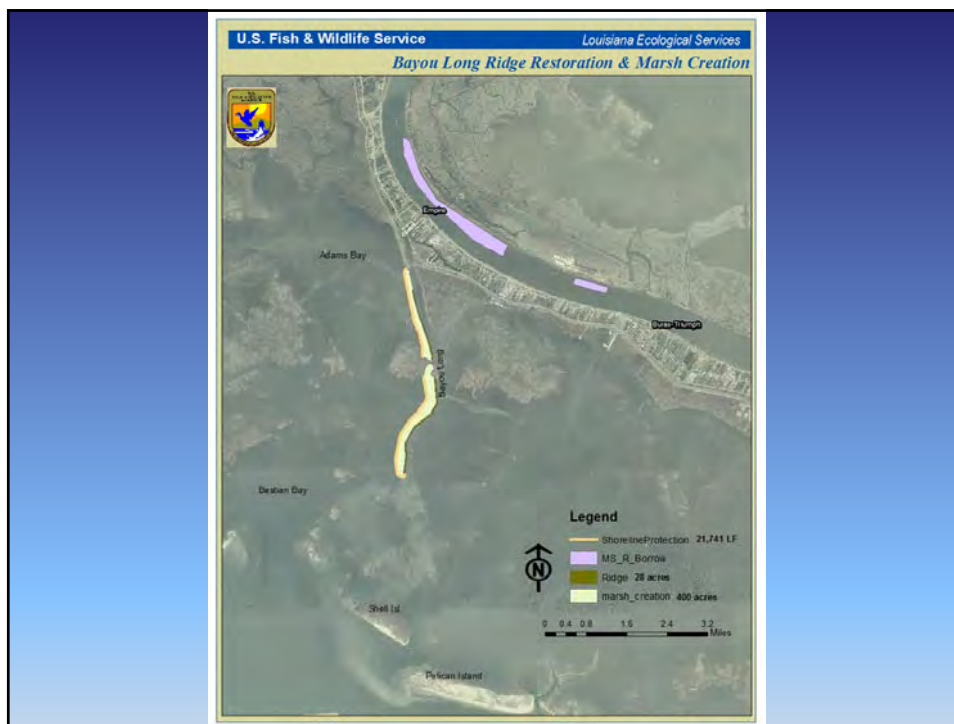
Bayou Long Ridge Restoration and Marsh Creation Project



PPL 24

Region 2, Barataria Basin





- Marsh Creation
 - 400 acres
 - 2.9 M cyds from Ms R Source
- Ridge Habitat
 - 28 acres
 - Target Elevation = +5 ft NAVD
 - 274,000 cyds
- Shoreline Protection:
 - 21,000 LF
- Cost:
 - \$50-55 M, including 25% contingency

U.S. Fish & Wildlife Service Louisiana Ecological Services
 Bayou Long Ridge Restoration & Marsh Creation

Legend

- ShorelineProtection 21,741 LF
- MS_R_Borrow
- Ridge 28 acres
- marsh_creation 400 acres

Scale: 0 0.175 0.35 0.7 1.05 1.4 Miles

R2-BA-07

Bay Dos Gris Marsh Creation

PPL24 PROJECT NOMINEE FACT SHEET
January 13, 2014

Project Name

Bay Dosgris Marsh Creation

Project Location

Region 2, Barataria Basin, Jefferson Parish

Problem

Historic wetland loss in the area occurs in the form of interior marsh loss and shoreline erosion along Turtle Bay and Little Lake. The interior loss is caused by subsidence, sediment deprivation, and construction of access and pipeline canals. The Little Lake Coast 2050 mapping unit land loss rate for the period of 1983 to 1990 was 1.6% per year.

Goals

The goal of the project is to create approximately 213 acres of marsh and nourish approximately 441 acres of marsh (654 acres total) with dredged material from Little Lake.

Proposed Solution

The proposed project would create approximately 213 acres and nourish approximately 441 acres of marsh using sediment dredged from Little Lake. The dredged material would be fully contained. Containment dikes will be degraded as necessary to reestablish hydrologic connectivity with adjacent wetlands. In case the area does not re-vegetate on its own, the maintenance cost estimate will include funds to plant 25% of the created marsh at Year 3.

Preliminary Project Benefits

- 1) *What is the total acreage benefited both directly and indirectly?* 654 directly benefited; indirect benefit not yet determined.
- 2) *How many acres of wetlands will be protected/created over the project life?* Not yet been determined.
- 3) *What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (e.g., 50% reduction in the background loss rate)?* The anticipated land loss rate reduction throughout the area of direct benefits will be 50% over the projects life.
- 4) *Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc?*
This project would help stabilize and contribute to protection of the very fragmented and vulnerable land mass the separates Barataria Bay from Little Lake.
- 5) *What is the net impact of the project on critical and non-critical infrastructure?* The communities of Lafitte and Barataria lie to the north of this important landmass which serves to buffer the effect of tropical weather events. Numerous pipelines would benefit from reducing land loss in the area.

6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?* This project would be synergistic with BA-37, contributing to stabilization of the very fragmented and vulnerable land mass that separates Barataria Bay from Little Lake.

Identification of Potential Issues

The proposed project has the following potential issues: Pipelines in project vicinity.

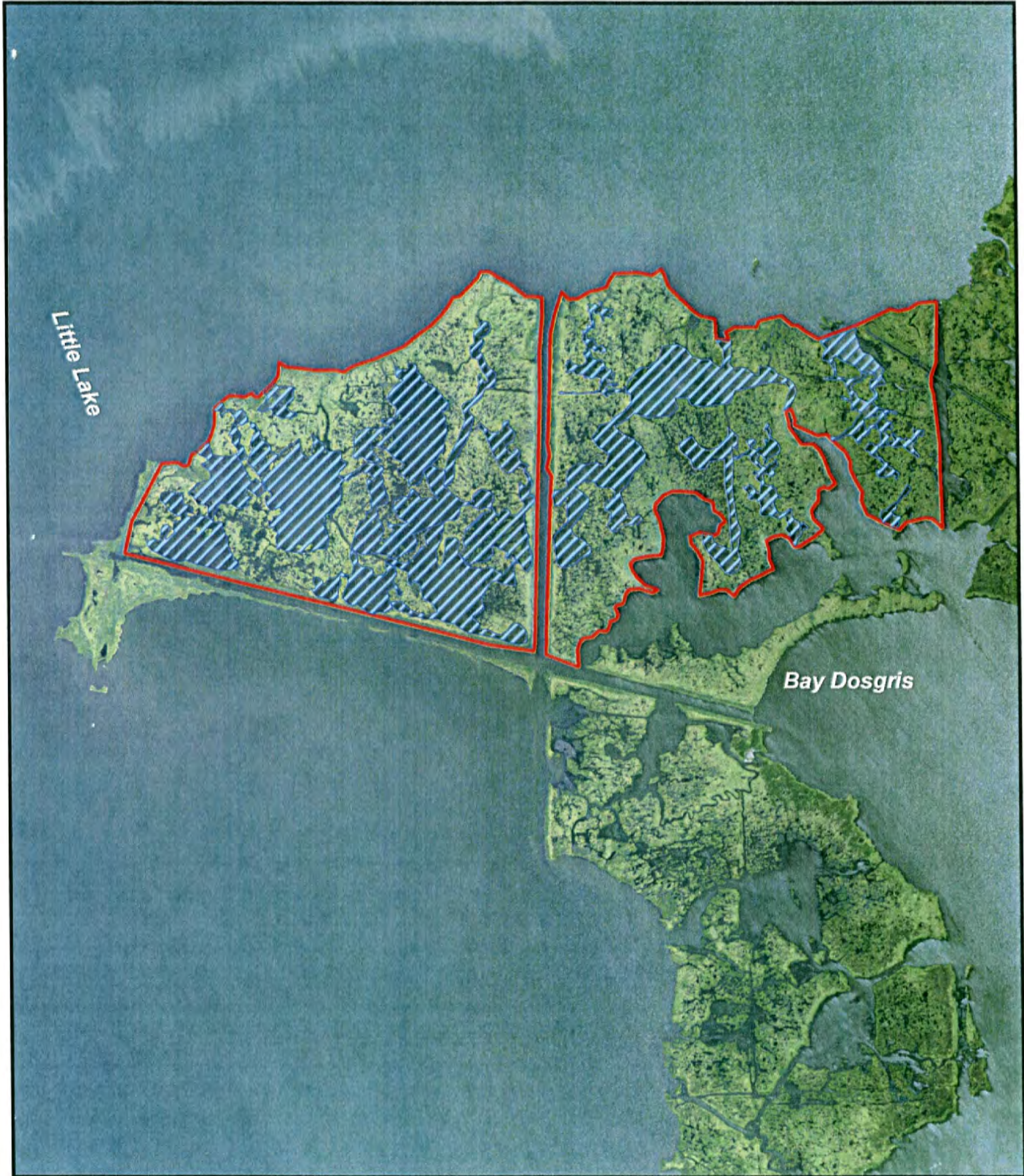
Preliminary Construction Costs

\$ 18.3 million (including 25% contingency). The fully funded cost range is \$20M-\$25M.

Preparers of Fact Sheet:

Quin Kinler, USDA-NRCS, 225-382-2047, quin.kinler@la.usda.gov

Jason Kroll, USDA-NRCS, 225-389-0347, jason.kroll@la.usda.gov





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

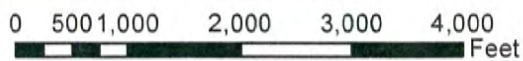
Data Source:
 2010 Imagery

Map Date: December 23, 2013



Legend

-  Open_Water
-  Marsh Creation/Nourishment



**Bay Dosgris Marsh Creation
 Jefferson Parish
 PPL 24**



PPL 24
Regional Planning Team
February 13, 2014

Region 2
Barataria Basin

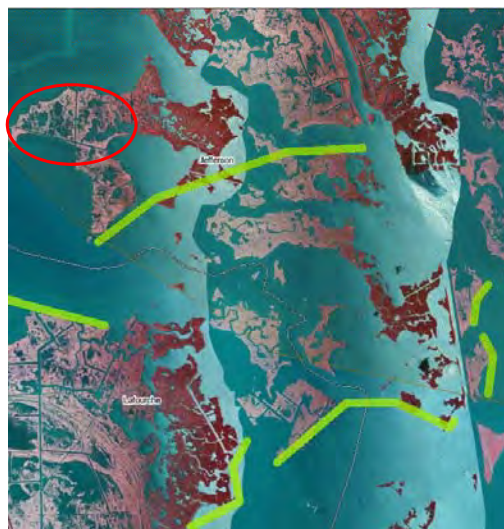
Bay Dos Gris
Marsh Creation

Problems

- Widespread Loss of Emergent Marsh
- Shoreline Erosion



Bay Dos Gris and the Master Plan



Bay Dos Gris

- 213 acres of marsh creation
- 441 acres of marsh nourishment
- Preliminary Construction Cost
\$18.3 million (including 25%
contingency)

R2-BA-08

Barataria Bay Rim Marsh Creation

PPL24 PROJECT NOMINEE FACT SHEET
January 13, 2014

Project Name

Barataria Bay Rim Marsh Creation

Project Location

Region 2, Barataria Basin, Jefferson and Plaquemines Parishes

Problem

Historic wetland loss in the area occurs in the form of interior marsh loss and shoreline erosion along Barataria Bay. The interior loss is caused by subsidence, sediment deprivation, and construction of access and pipeline canals.

Goals

The goal of the project is to create approximately 232 acres of marsh and nourish approximately 322 acres of marsh (554 acres total) with dredged material from Barataria Bay.

Proposed Solution

The proposed project would create approximately 232 acres and nourish approximately 322 acres of marsh using sediment dredged from Barataria Bay. The dredged material would be fully contained. Containment dikes will be degraded as necessary to reestablish hydrologic connectivity with adjacent wetlands. In case the area does not re-vegetate on its own, the maintenance cost estimate will include funds to plant 25% of the created marsh at Year 3.

Preliminary Project Benefits

- 1) *What is the total acreage benefited both directly and indirectly?* 554 directly benefited; indirect benefit not yet determined.
- 2) *How many acres of wetlands will be protected/created over the project life?* Not yet been determined.
- 3) *What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (e.g., 50% reduction in the background loss rate)?* The anticipated land loss rate reduction throughout the area of direct benefits will be 50% over the projects life.
- 4) *Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc?*
This project would create and nourish marsh that would help stabilize the northern rim of Barataria Bay.
- 5) *What is the net impact of the project on critical and non-critical infrastructure?* The communities of Lafitte and Barataria lie to the north of this important landmass which serves to buffer the effect of tropical weather events.
- 6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?* This project would be the first in a potential series of projects

focused on stabilizing the northern rim of Barataria Bay, a strategy presented in the State's 2012 Master Plan.

Identification of Potential Issues

The proposed project has the following potential issues: pipelines would have to be avoided for borrow site and containment dikes.

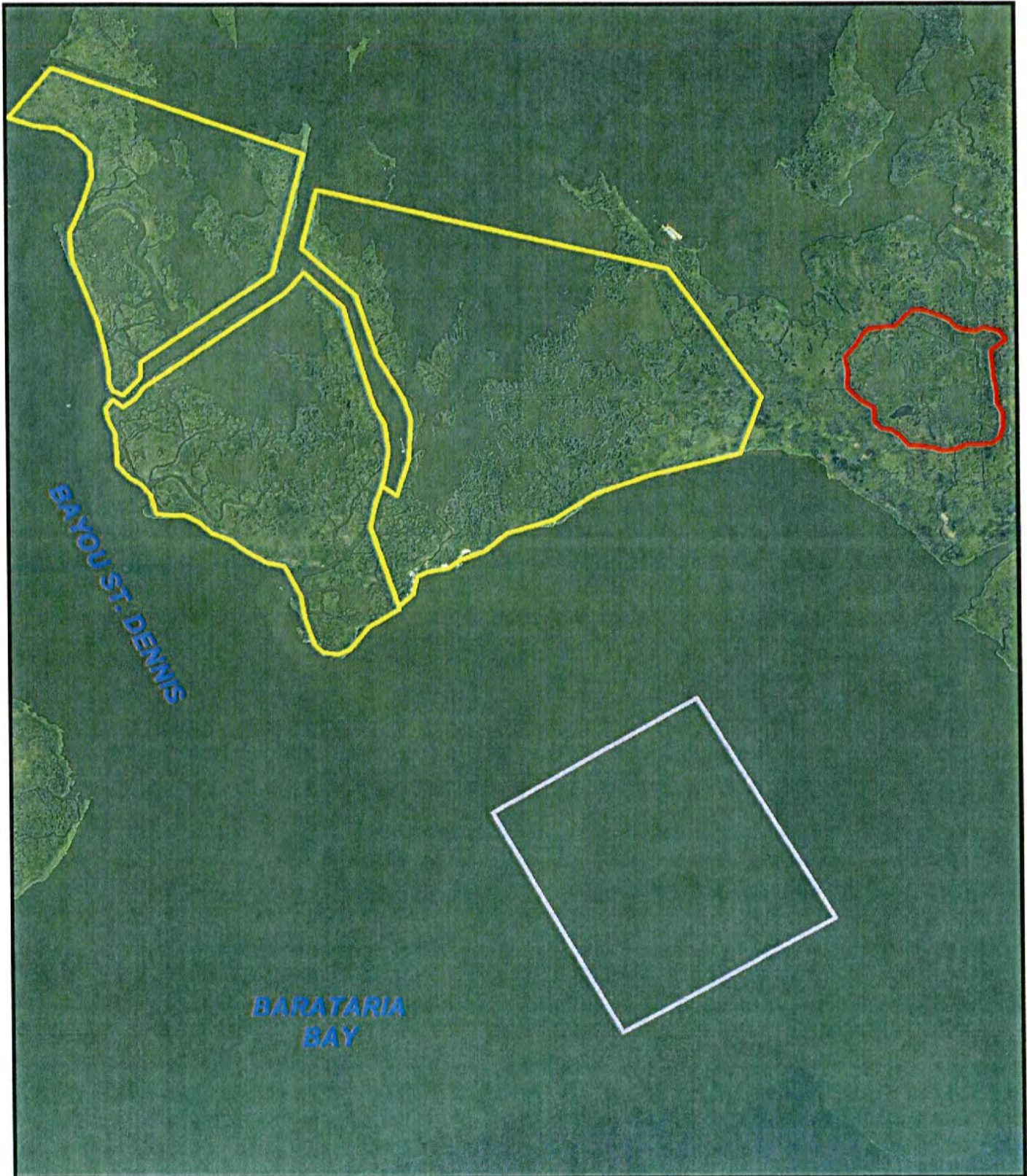
Preliminary Construction Costs

\$ 14.2 million (including 25%contingency). The fully funded cost range is \$15M-\$20M.

Preparers of Fact Sheet:

Quin Kinler, USDA-NRCS, 225-382-2047, quin.kinler@la.usda.gov

Jason Kroll, USDA-NRCS, 225-389-0347, jason.kroll@la.usda.gov



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

Data Source: NAIP 2013




Map Date: JANUARY 13, 2014



PPL-24 BARATARIA BAY RIM MARSH CREATION PROJECT MAP

0 1,000 2,000 Feet

Legend

-  Traditional_Marsh_Creation
-  Semi-Contained_Marsh_Creation
-  Borrow_Area

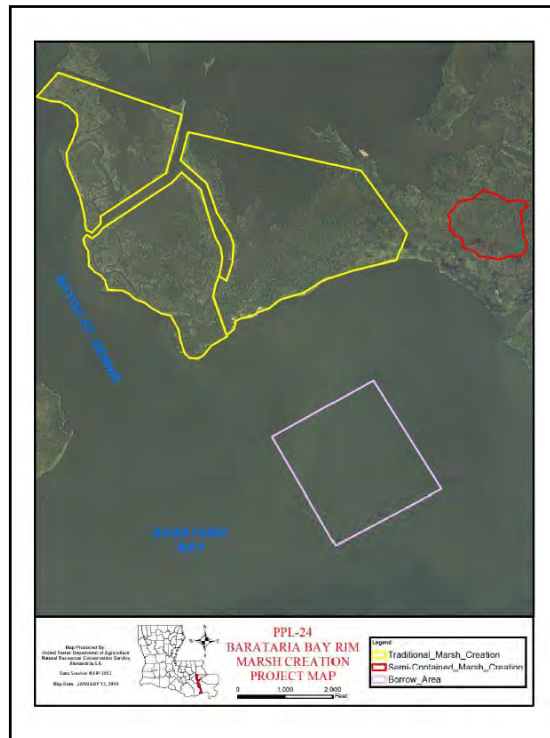
PPL 24
Regional Planning Team
February 13, 2014

Region 2
Barataria Basin

Barataria Bay Rim
Marsh Creation

Problems

- Widespread Loss of Emergent Marsh
- Loss of this landmass would cause significant expansion of Barataria Bay



Barataria Bay Rim MC and the Master Plan



Barataria Bay Rim MC

- 232 acres of marsh creation
- 322 acres of marsh nourishment
- Preliminary Construction Cost
\$14.2 million (including 25%
contingency)

R2-BA-09

Barataria Bay Waterway East Marsh Creation

PPL24 PROJECT NOMINEE FACT SHEET
January 28, 2014

Project Name

Barataria Bay Waterway East Marsh Creation

Project Location

Region 2, Barataria Basin, Jefferson Parish

Problem

The marshes located east of the Barataria Bay Waterway and north of the Bayou Barataria ridge have completely converted to open water. This loss of marsh was caused by subsidence, sediment deprivation, and construction of access canals, including Barataria Waterway.

Goals

The goal of the project is to create approximately 241 acres of marsh with dredged material from the Mississippi River.

Proposed Solution

The proposed project would create approximately 241 acres of marsh using sediment dredged from the Mississippi River. The dredged material would be fully contained. Containment dikes will be degraded as necessary to reestablish hydrologic connectivity with adjacent wetlands. In case the area does not re-vegetate on its own, the maintenance cost estimate will include funds to plant 25% of the created marsh at Year 3.

Preliminary Project Benefits

1) *What is the total acreage benefited both directly and indirectly?* 241 acres directly benefited; indirect benefit not yet determined.

2) *How many acres of wetlands will be protected/created over the project life?* Not yet been determined.

3) *What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (e.g., 50% reduction in the background loss rate)?* The anticipated land loss rate reduction throughout the area of direct benefits will be 50% over the projects life.

4) *Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc?* The project will serve to complete a band of healthy marsh extending from the Bayou Barataria ridge northward to Bayou Dupont.

5) *What is the net impact of the project on critical and non-critical infrastructure?* This project would buffer the effect of tropical weather events for the communities of Lafitte and Barataria which lie to the north.

6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?* This project would be synergistic with the CWPPRA BA-41

project and the State-only small-dredge marsh creation project, completing a band of healthy marsh extending from the Bayou Baratavia ridge northward to Bayou Dupont.

Identification of Potential Issues

The proposed project has the following potential issues: pipelines would have to be avoided for containment dikes.

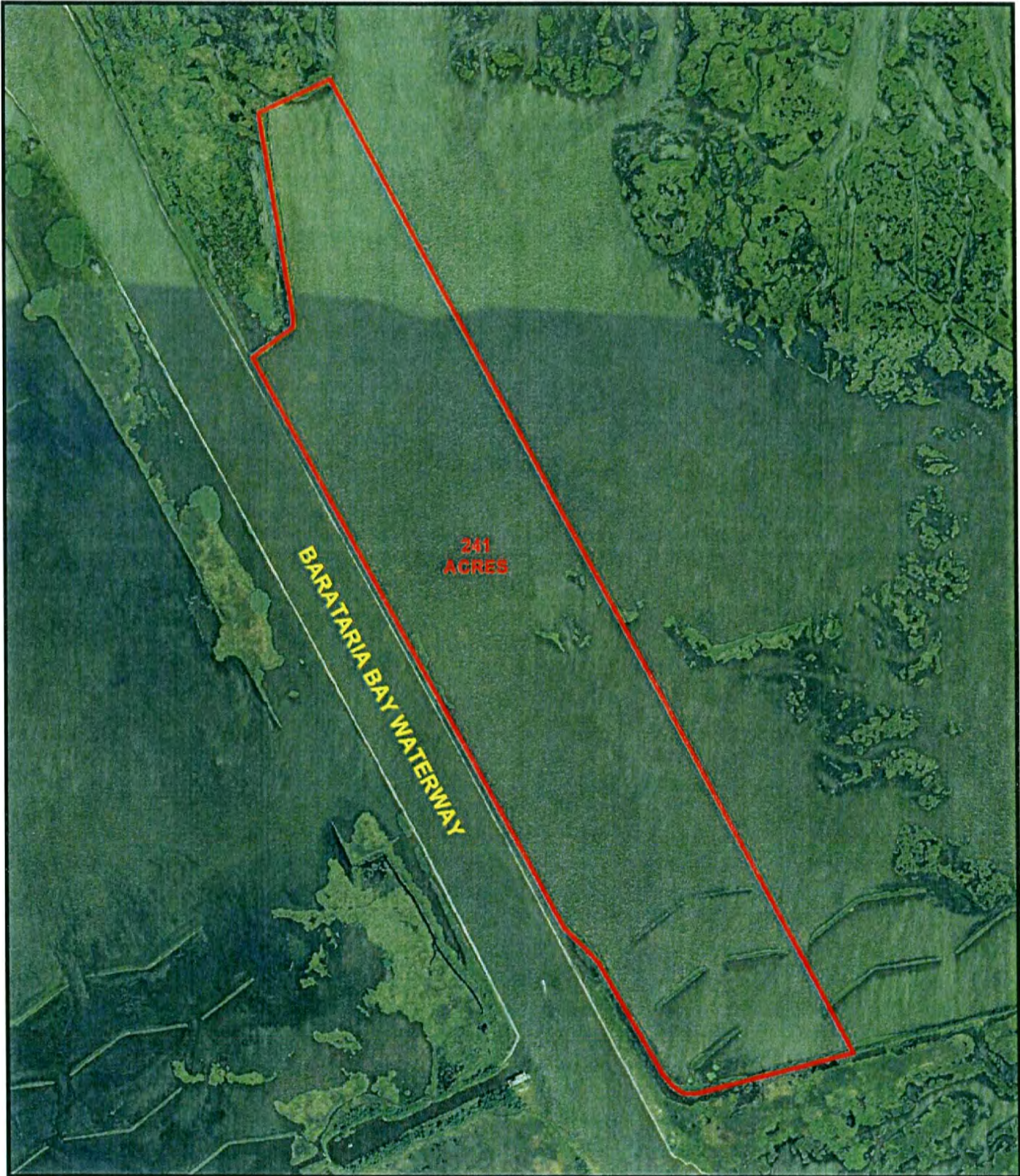
Preliminary Construction Costs

\$ 29.2 million (including 25%contingency). The fully funded cost range is \$35M-\$40M.

Preparers of Fact Sheet:

Quin Kinler, USDA-NRCS, 225-382-2047, quin.kinler@la.usda.gov

Jason Kroll, USDA-NRCS, 225-389-0347, jason.kroll@la.usda.gov



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


Data Source: NAIP 2013

Map Date: JANUARY 13, 2013



PPL-24 BARATARIA BAY WATERWAY EAST MARSH CREATION

Legend

 Marsh_Creation

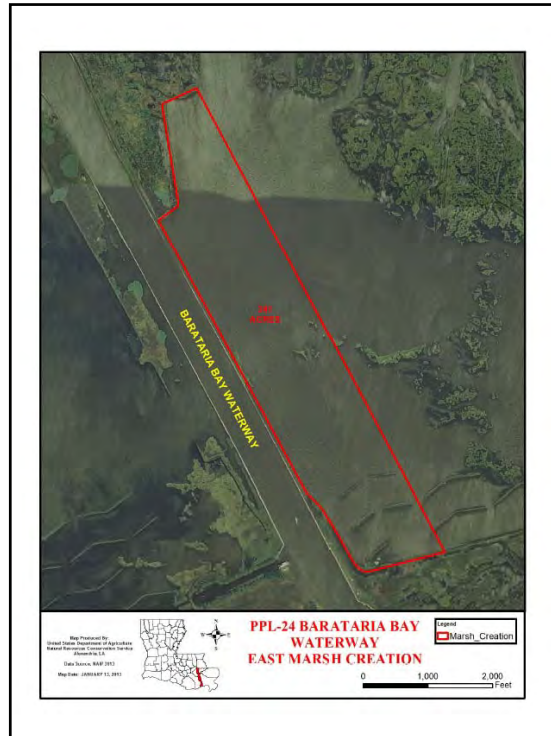


PPL 24
Regional Planning Team
February 13, 2014

Region 2
Barataria Basin

Barataria Bay Waterway East
Marsh Creation





BBWW East MC and the Master Plan



BBWW East MC

- 241 acres of marsh creation
- Furthers concept of Long Distance Dredge Project
- Preliminary Construction Cost \$29.2 million (including 25% contingency)

R2-BA-10

East Leeville Marsh Creation & Nourishment

PPL23 PROJECT NOMINEE FACT SHEET
February 18, 2014

Project Name

East Leeville Marsh Creation and Nourishment Project

Louisiana's 2012 Coastal Master Plan

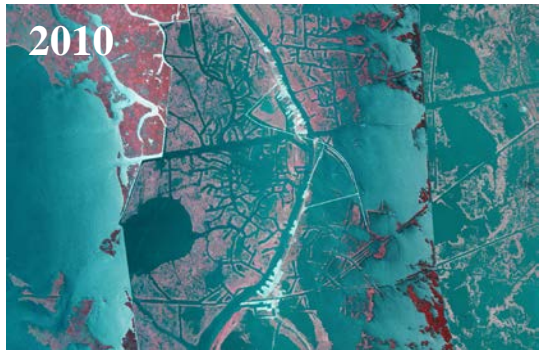
Marsh Creation – 03a.MC.07

Project Location

Region 2, Barataria Basin, Lafourche Parish (primary)
Region 3, Terrebonne Basin, Lafourche Parish

Problem

There is widespread historic and continued rapid land loss within the project site and surrounding areas resulting from subsidence, wind erosion, storms, and altered hydrology. The wetland loss rate for the Timbalier Bay and Lake Palourde subunit is -0.4%/year and -0.9%/year, respectively, based on USGS data from 1995 to 2009. Furthermore, the limits of Southwestern Louisiana Canal are difficult to determine in some areas because land loss is causing the coalescence of the canal with adjacent water bodies. Natural tidal flow and drainage patterns that once existed are currently circumvented by the increasing area of open water. Data suggests that from 1932 to 1990, the basin lost over 245,000 ac of marsh, and from 1978 to 1990, Barataria Basin experienced the highest rate of wetland loss along the entire coast.



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 in 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 approximately 400 acres of emergent saline marsh east of Leeville. If the project is selected for further review, incorporation of features west of Leeville may be considered.

Preliminary Project Benefits

- 1) *What is the total acreage benefited both directly and indirectly?*
This total project area is approximately 400 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 -0.9%/year, the marsh creation and nourishment would result in 325 net acres after 20 years (assuming 350 of marsh creation and 50 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 -0.9%/year [weighted] to -0.45%/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.
- 5) *What is the net impact of the project on critical and non-critical infrastructure?*
Minor oil and gas facilities and pipelines in the area would benefit from an increase in marsh acreage. Facilities along Bayou Lafourche would benefit from marsh creation away from Bayou Lafourche.
- 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 and provides synergy with a marsh creation mitigation project.

Identification of Potential Issues

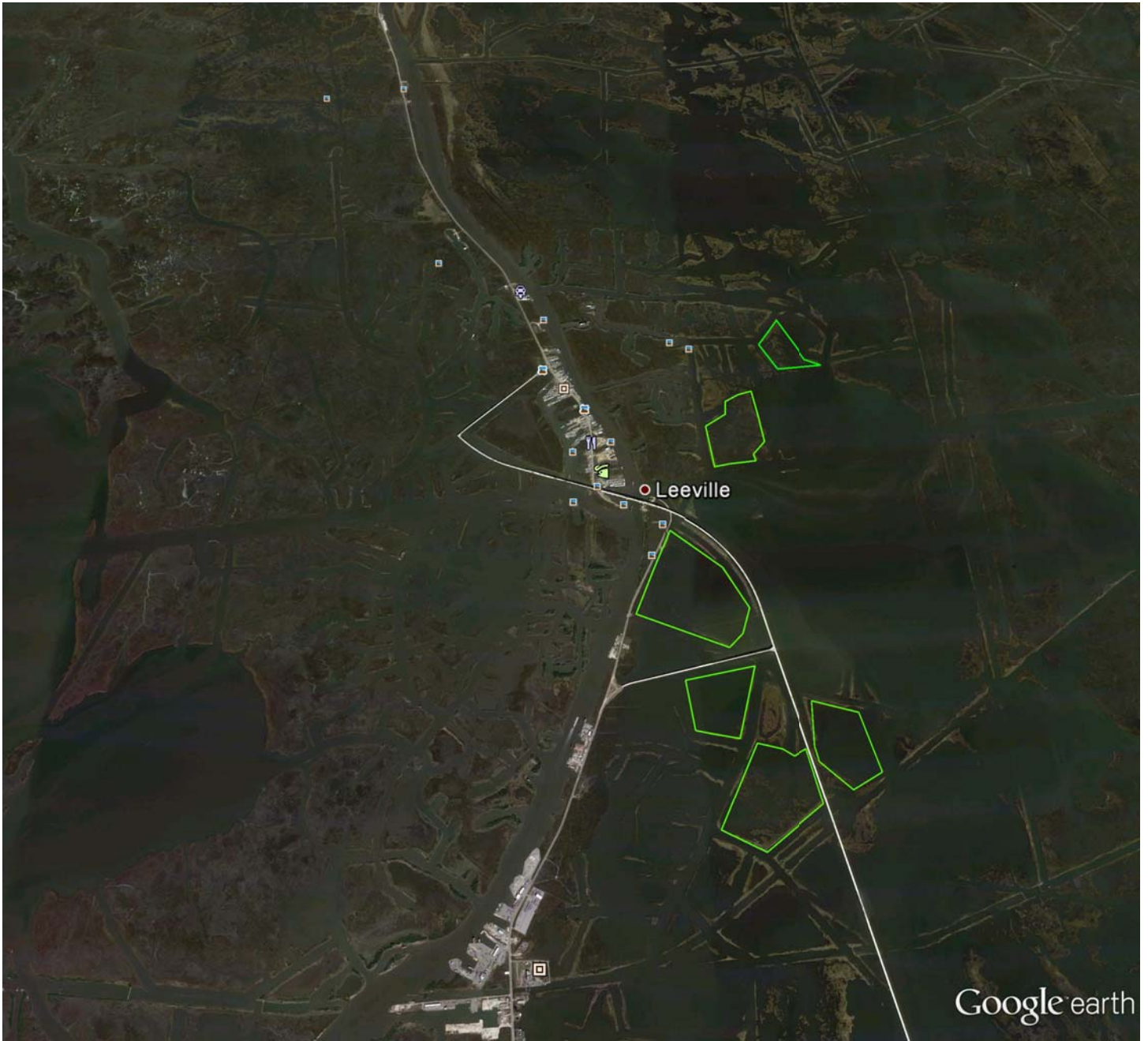
The proposed project has potential utility/pipeline issues.

Preliminary Construction Costs

The estimated construction cost including 25% contingency is approximately \$28.0 million. The fully funded cost estimate ranges between \$35-40M.

Preparer(s) of Fact Sheet:

Patrick Williams, NMFS, 225-389-0508, ext 208, patrick.williams@noaa.gov



Google Earth Pro


miles 2
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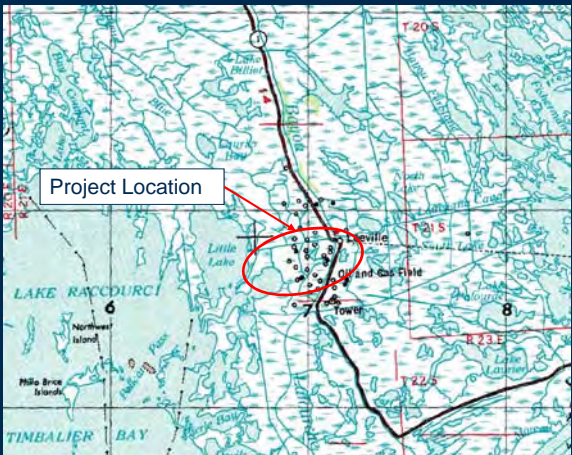
PPL 24: Bayou Lafourche Near Leeville Marsh Creation and Nourishment Project
(Lafourche Parish)



Science, Service, Stewardship




Bayou Lafourche Near Leeville Marsh
Creation and Nourishment (Lafourche
Parish)
Region II – Barataria Basin



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February 13, 2014

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Problem

- High land loss rates in the Barataria Basin
- Wind and tidal erosion due to large open water areas
- Heavy oil and gas exploration impacts in the area
- High subsidence in the area
- Loss of natural limits of Southwestern Louisiana Canal
- Losses have accelerated as area becomes fragmented

2



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Project Features

- Total Acres = 440 acres
- Reestablishes portion of Southwestern Louisiana Canal
- Borrow from Little Lake
- Consistent with State Master Plan
- Construction Cost with 25% contingency = \$28.0 million

4



R2-BA-11

Grand Pierre Island Restoration

PPL24 Grand Pierre Island Restoration

Louisiana's 2012 Coastal Master Plan:

Compliant

Project Location:

Region 2, Barataria Basin, Plaquemines Parish

Problem:

As part of the Barataria Barrier Shoreline, Grand Pierre Island is dominated by marine processes including overwash. The island has receded rapidly and decreased in elevation. The extent of fragmentation is not as advanced as other island projects; therefore, the present island status may lend itself to greater ease of construction and cost effectiveness. The land loss rate is -0.27% based on data from 1985 to 2009 in the Barataria Barrier Island LCA mapping subunit. The 1884 to 2000 Gulf shoreline erosion rate is -50.6 ft/yr and is -46.8 ft/yr from 1988 to 2000.

Goals:

The project goal is to complete the missing link in the Barataria Barrier Shoreline Complex. The project goal is to create 127 acres of beach/dune habitat and enhance 229 acres of back barrier marsh.

Proposed Solution:

The proposed features consist of constructing 127 acres of beach/dune and create and nourish 229 acres of back barrier marsh. Approximately 1.45 million cubic yards of sediment would be mined from a previously surveyed and cleared borrow site in the Gulf of Mexico. The project includes planting dune, swale, and marsh vegetation as well as construction of sand fences.

Preliminary Project Benefits

- 1) *What is the total acreage benefited both directly and indirectly?*
This total project area is 356 ac. Some indirect benefits to marsh north of the proposed restoration footprint may result.
- 2) *How many acres of wetlands will be protected/created over the project life?*
Between 200 and 258 ac of barrier island habitat will be protected/created over the project life are estimated at this time.
- 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%)?*
Using a 50% reduction in the background rate, 258 acres would remain. A performance analysis has not yet been projected for Grand Pierre. Alternatively, 57% of the target year 1 constructed acres are projected to remain at year 20 based upon the average from all island projects (i.e., 200 acres).
- 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 restores a barrier island.

-
- 5) *What is the net impact of the project on critical and non-critical infrastructure?*
The project will have a minor net positive effect on non-critical infrastructure.
- 6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?*
The project provides synergy with the overall Barataria Barrier Shoreline Complex as well as the adjacent constructed East Grand Terre Project and the planned Cheniere Ronquille Project.

Identification of Potential Issues

The proposed project may have potential land rights issues yet to be determined.

Preliminary Construction Costs

The estimated construction cost including 25% contingency is estimated to be approximately \$18.5 million with a fully funded cost in the range of \$20-\$25 million.

Preparer(s) of Fact Sheet:

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K2-BA-11

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Grand Pierre Island Restoration

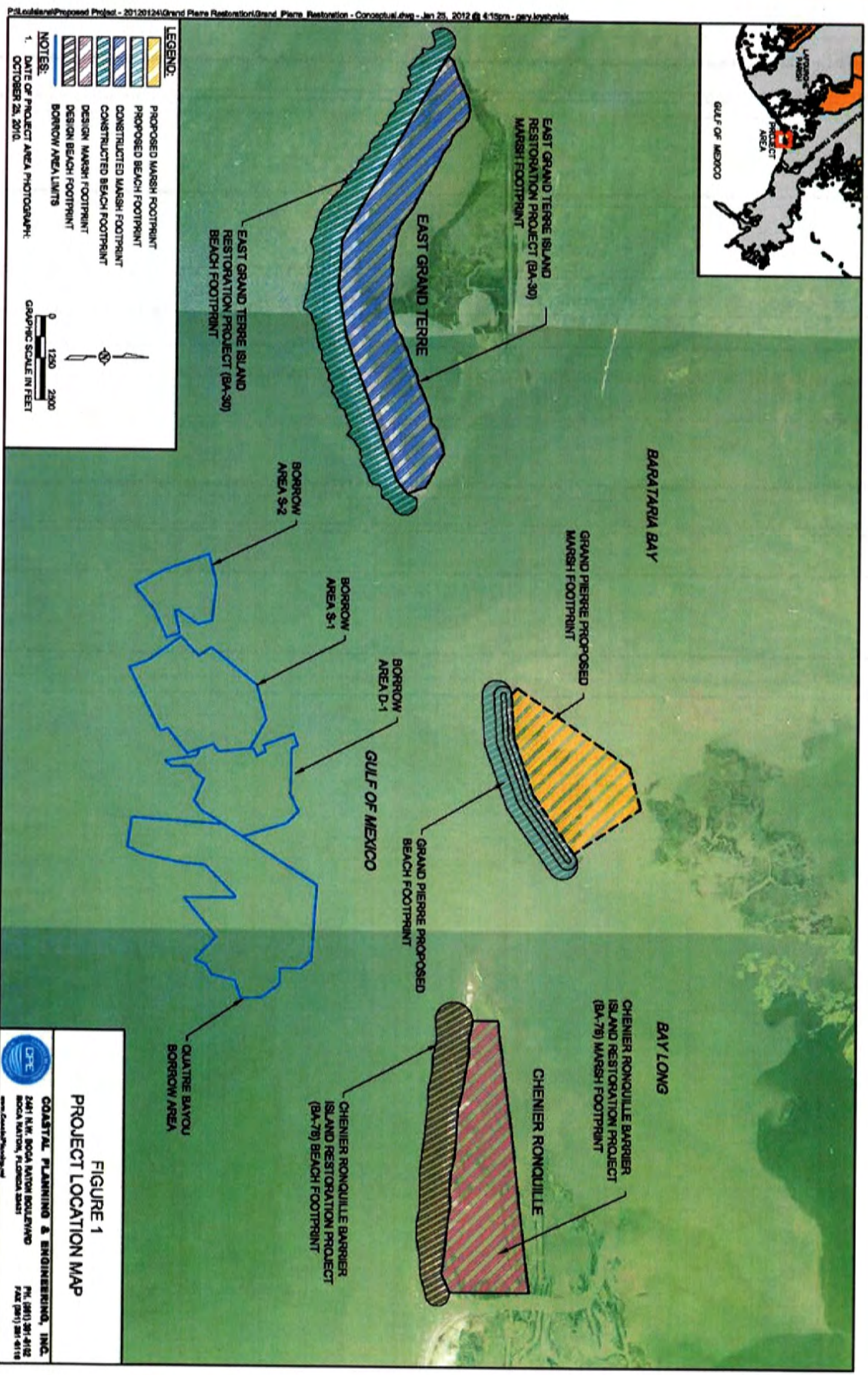


FIGURE 1
PROJECT LOCATION MAP



COASTAL PLANNING & ENGINEERING, INC.
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FIGURE 1

Science, Service, Stewardship

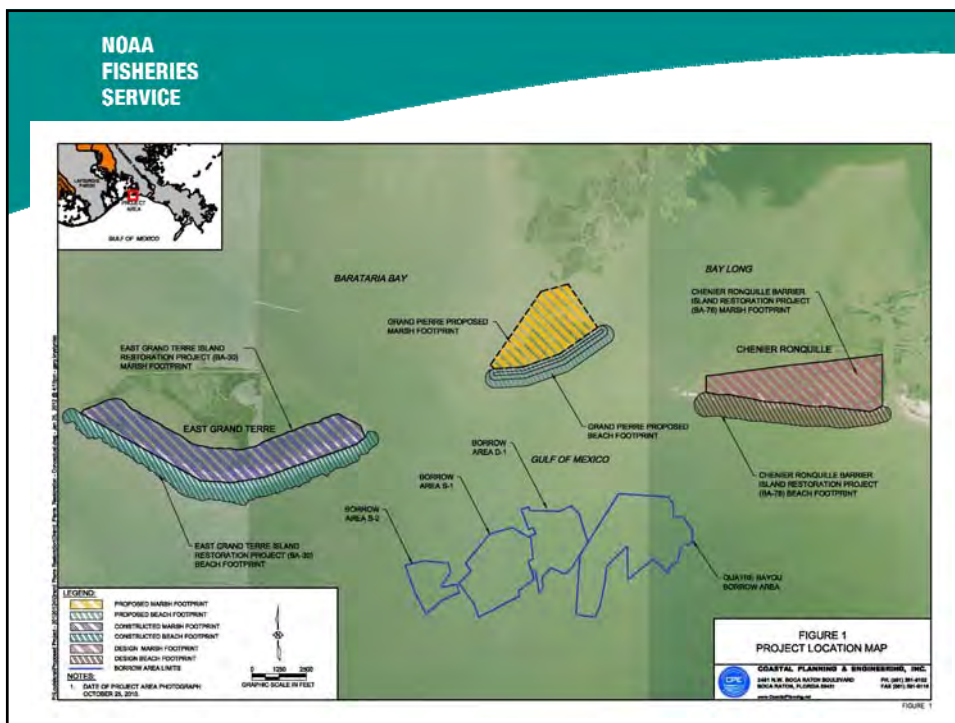


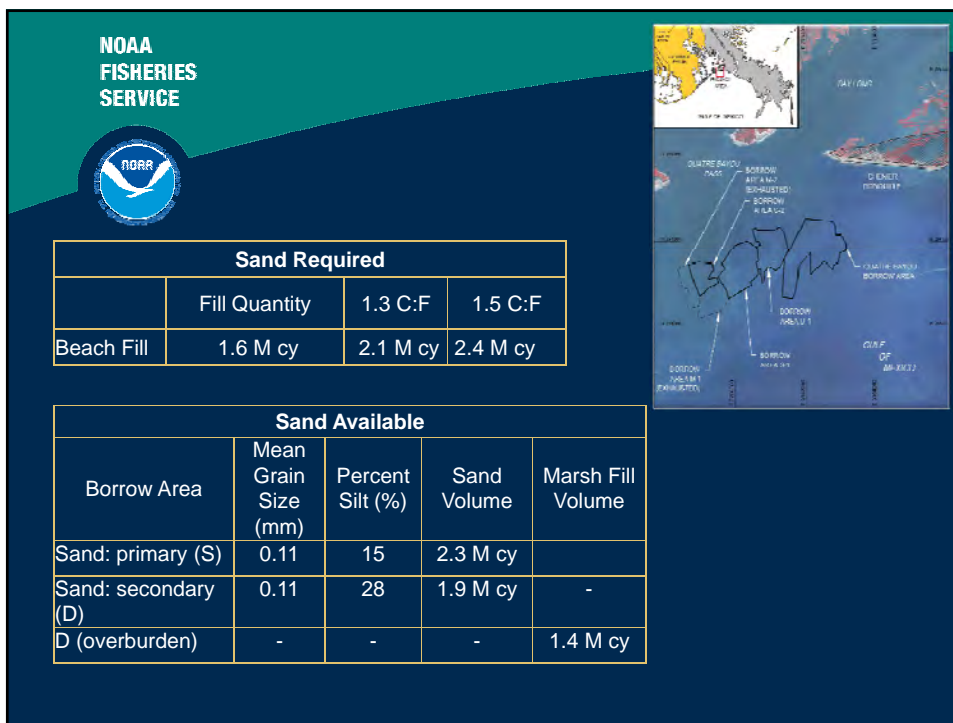
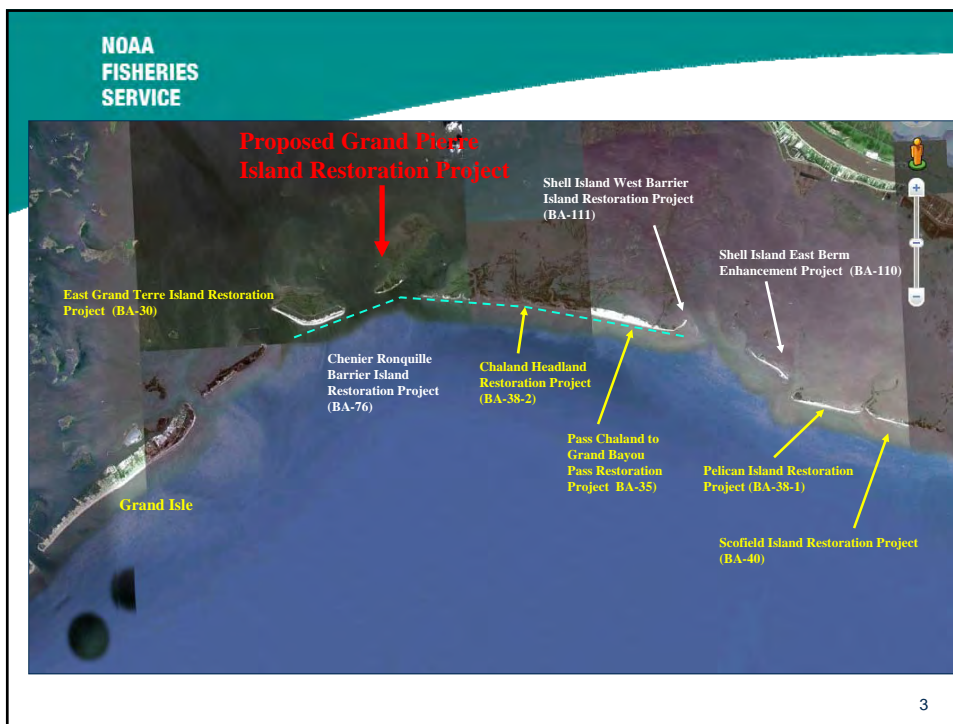
Grand Pierre Barrier Island Restoration Region 2 – Barataria Basin



NOAA FISHERIES SERVICE

January 31, 2013





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Project Summary

Complete barrier island complex

- High shoreline retreat rates
- Missing link in over 14 miles of barrier island complex
- Beach/dune = 127 acres
- Marsh creation/nourishment = 229 acres
- Existing near-shore borrow areas (1.45 MCY projected need)
- Construction cost = \$18,593,000

R2-BA-12

Wilkinson Canal Marsh Creation & Terracing

PPL24 Wilkinson Canal Marsh Creation and Terracing February 13, 2014

Louisiana's 2012 Coastal Master Plan:

Consistent with Marsh Creation Subunit – 002.MC.05e

Project Location:

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

Problem:

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

Goals:

The project goals are to:

- Create and/or nourish up to 465 acres of emergent brackish marsh
- Construct up to 24,150 linear feet (13 acres) of terraces in a 345 acre open water terrace field adjacent to the marsh creation/nourishment

Proposed Solutions:

The concept provides for the restoration of approximately 465 acres of emergent brackish marsh (425 acres of creation and 40 acres of nourishment) to help reestablish the banks of Bayou Dupont while also providing protection to the local flood protection levee. Sediment will be hydraulically pumped from a borrow source in the Mississippi River (near the Myrtle Grove area). Containment dikes will be constructed around the marsh creation area to retain sediment during pumping. No later than three years post construction, the containment dikes will be degraded and/or gapped. Additionally, half of the newly constructed marsh (212 acres) will be planted following construction to stabilize the platform and reduce time for full vegetation. The project will also construct 24,150 ft. (13 acres) of terraces in 345 acres of shallow open water just south of the marsh platform to help reduce wave fetch in the area. Terraces would be constructed to an elevation of +2.0 feet NAVD 88, with a 15-ft crown width, and would be planted.

Preliminary Project Benefits

- 1) *What is the total acreage benefited both directly and indirectly?*
This total project area is approximately 815 acres (425 acres of marsh creation and 40 acres of marsh nourishment + 345 acre terrace field).
- 2) *How many acres of wetlands will be protected/created over the project life?*

Assuming a 50% reduction in the background loss rate (PPL23 Candidate Project Wilkinson Canal USGS Extended Boundary Loss Rate, -1.04%/year), the marsh creation, nourishment, and constructed terraces would result in 399 net acres after 20 years.

- 3) *What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (e.g., 50% reduction in the background loss rate)?*
A 50% loss rate reduction is assumed for the marsh creation, marsh nourishment, and terraces. (PPL23 Candidate Project Wilkinson Canal USGS Extended Boundary Loss Rate, -1.04%/year to -0.52%/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 a portion of the natural eastern bankline of Bayou Dupont
- 5) *What is the net impact of the project on critical and non-critical infrastructure?*
The project will provide additional protection to Plaquemines Levee. 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?*
(BA-48) Bayou Dupont Marsh and Ridge Creation, (BA-39) Bayou Dupont Sediment Delivery System, and (BA-164) Bayou Dupont Sediment Delivery, Marsh Creation #3.

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 \$28,091,798. The fully-funded cost range is \$25M - \$30M.

Preparer(s) of Fact Sheet:

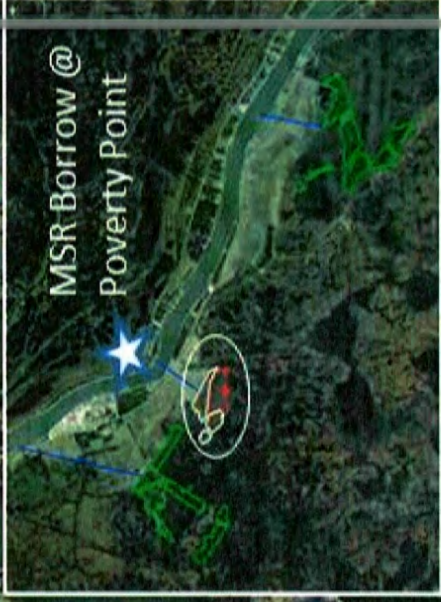
Kimberly Clements, NOAA Fisheries, 225-389-0508 ext 204, kimberly.clements@noaa.gov
Patrick Williams, NOAA Fisheries, 225-389-0508, ext 208, patrick.williams@noaa.gov

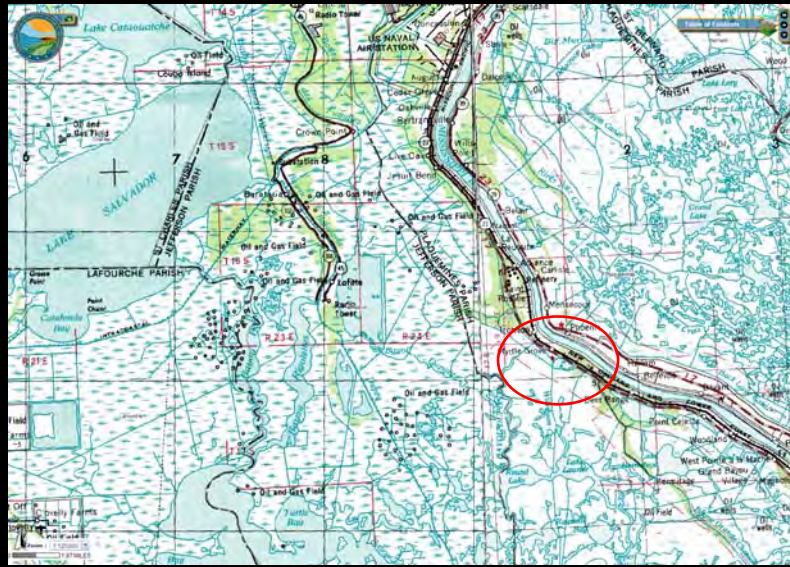
PPL24 Wilkinson Canal Marsh Creation and Terracing



Project Features

- 465 ac Marsh Creation
- 345 ac Terrace Field





PPL24 WILKINSON CANAL MARSH CREATION AND TERRACING

PPL24 Region 2 RPT, February 13, 2014

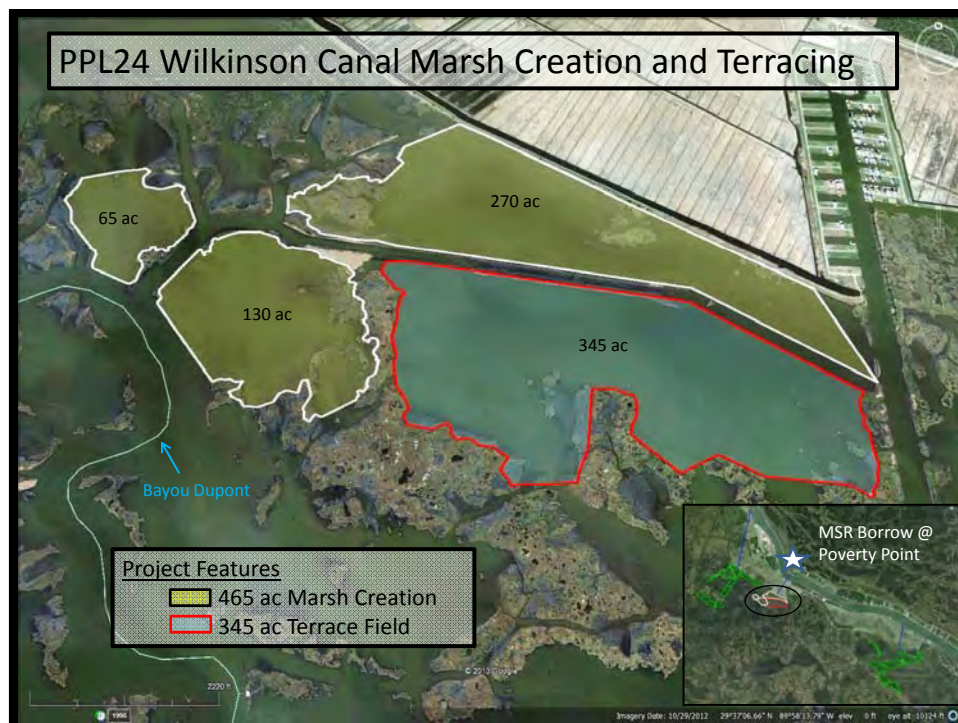
Kimberly Clements

National Marine Fisheries Service



Problems near Bayou Dupont Area:

- High Land Loss rates in Barataria Basin, lost over 245,000 ac of marsh between 1932 and 1990
- High Subsidence in the area, 2.1-3.5 ft/century, Coast 2050 Myrtle Grove Unit
- Wetland Loss Rate from PPL23 Island Road WVA derived by USGS is -1.04%/year
- Reduced intermediate/brackish habitat for fisheries in the area



Project Features and Benefits

- Total habitat restored is 478 acres, (465 acres of marsh and 13 acres of terraces)
- Borrow from Mississippi River near Poverty Point
- Consistent with State Master Plan, Marsh Creation Subunit – 002.MC.05e, “create wetland habitat, restore degraded marsh, and reduce wave erosion to address Barataria Landbridge”
- Supports “J1” Concept for Plaquemines and Jefferson Parish, 4th Annual Coastal Restoration Workshop
- Construction + 25% Contingency is \$28 M



Region 2 – BRETON SOUND BASIN

~~R2-BS-01~~

**~~Long Distance Sediment Transport East Breton Sound
Marsh Creation~~**

Not consistent with 2012 State Master Plan