REGION 2

Coastal Wetlands Planning Protection & Restoration Act

25th Priority Project List

Region 2

Regional Planning Team Meeting

January 29, 2015
Lacombe, LA

CWPPRA

1. Welcome and Introductions

- RPT Region 2 Leader: Brad Inman - USACE

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Announcements

- Copies of the PPL 25 Selection Process & Schedule available at the sign-in table.
- PPL 25 RPT meetings to accept project nominees:
  - Region IV, Estuarine Fisheries & Habitat Center, Jan. 27, 2015, 11:00 am
  - Region III, Terrebonne Parish Main Library, Jan. 28, 2015, 9:00 am
  - Region I, USFWS SE LA Refuges Complex (Big Branch), Jan. 29, 2015, 8:00 am
  - **Region II, USFWS SE LA Refuges Complex, Jan. 29, 2015, immediately following Region 1**
- 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.

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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 without factsheets **MUST** complete a PPL 25 Nomination Sign-Up Sheet for <u>each</u> project nominee (demo projects too).
- Presenters with factsheets, please give 3 factsheets to Allison, Michelle & Kylie <u>before</u> your presentation.
- 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 18, 2015.
- Limit comments/questions during meeting to PPL 25 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 24, 2015.
- The Technical Committee may or may not select a coastwide project in April 2015.

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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 Standard Operating Procedures criteria
- The RPTs select up to 6 demos during the Feb. 24 Coastwide Electronic Vote.
- The Technical Committee selects up to 3 demos in April 2015.
- Workgroups may recommend that no demos move forward to candidate stage
- Previous demo candidates must be ***re-nominated*** for PPL 25.

Coastwide Electronic Vote (Feb 24) 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 2/18/2015.

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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 24, 2015.

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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 25 criteria.

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PPL 25 Candidate Project Selection

- CWPPRA Technical Committee meeting, April 16, 2015 at 9:30 am, Louisiana Department of Wildlife and Fisheries in Baton Rouge.
- 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, 2015.
- Public comments also accepted orally during meeting.

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PPL 25 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. 10, 2015, Baton Rouge, 9:30 am
- Task Force final decision to select PPL 25 in January 2016.

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PPL 25 Timeline

- **Coastwide Electronic Vote, Feb. 24, 2015**
  - 21 basin-project nominees, 1 coastwide nominee, and 6 demos selected
- **Technical Committee Mtg, Apr. 16, 2015, Baton Rouge**
  - Selection of 10 candidates and up to 3 demos
- **Technical Committee Mtg, Dec. 10, 2015, New Orleans**
  - Recommend up to 4 projects for Phase 1 funding
- **Task Force Mtg, Jan. 2016, 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 18, 2015**

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)

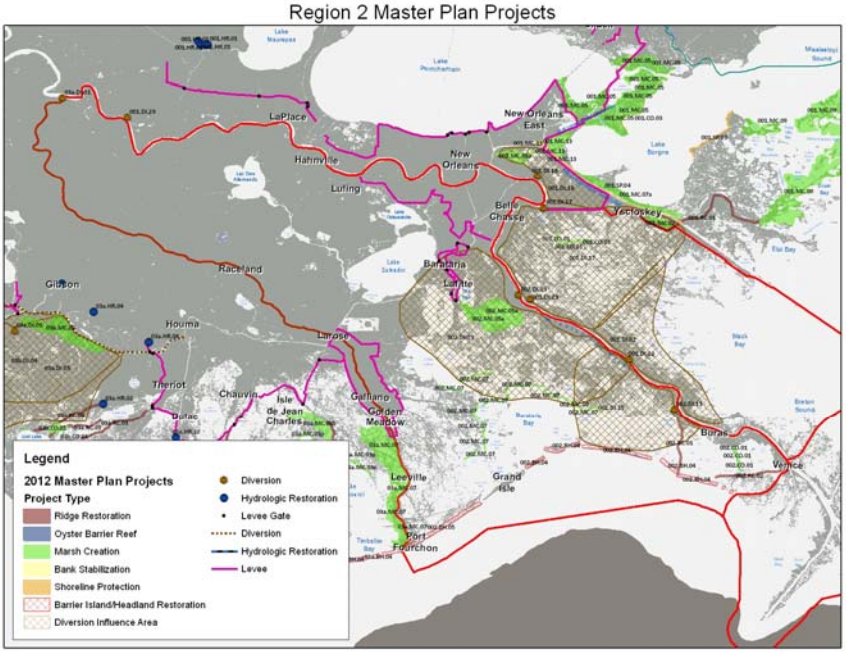
Email: Brad.L.Inman@usace.army.mil

(this information is on the back of the agenda)

Copies of this map are available at the sign in table

CWPPRA

Region 2 Master Plan Projects



CWPPRA

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	SPONSORING ORGANIZATION	LOCATION
January 29, 2015 8:00 A.M.	COASTAL WETLANDS PLANNING, PROTECTION AND RESTORATION ACT	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	Env. Progr Manager St. Tammany	985-898-2552
Lisa Abernathy	Biologist NMFS	225-389-0508
Kim Clements	Fishery Biologist NMFS	225-389-0508 x20
Lisa Landry	Biologist LDWF	985-634-4743
BARRY HEBERT	LDWF	225 765 0233
Sharon Osowski	EPA	214-665-7506
Carol Giardina		504 3315326
Christine McKinley	PPG Coastal Manager	504-912-5973
Donna Rogers	NOAA	225-936-6812
Eric Lundin	City of Slidell	985-646-4320
Logan Bordelon	CPRA	225-342-2624
Patrick Williams	NMFS	225-389-0508
Brad Inman	USACE	504-862-2124
Brad Crawford	EPA	214 665 7255
Nina Reins	MWH	(504)2965037
J. D. Zach Lea		985-871-9407
Amanda Phillips	Secretary Treasurer Edward Wisner	504-210-1152
John Pettibon	USACE	504-862-2732
Ron Boustany	NRCS	337 291-3067
Quin Kinler	NRCS	225-665-4233
Renee Bennett	CPRA	225-342-4592
Gary Shaffer	Southeastern	985-542-2105

LMV FORM 683-R
JAN 88

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

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PARTICIPANT REGISTER*

NAME	JOB TITLE AND ORGANIZATION	PHONE NUMBER
Randy Moertle	Clovelly Farms	(985) 856-3630
Charles Sasser	LSU	225 578 6375
Will McCartney	St. Bernard Parish Gov't.	504 442-2426
Cindy Stagg	CVS - NRCS Water Resources	225-665-4253 x 111
Kenneth Roy	Landowner	504-342-2909
Marnie Winter	Jeff Parish	504-736-6443
Vickie Duffourc	" "	504-833-4880
Mel Landry	NOAA	225-778-7380
Jason Kroll	NOAA	225-757-5411

LMV FORM 583-R
JAN 88

* 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	East Leeville Marsh Creation & Nourishment
R2-BA-02	Coffee Bay Shoreline Protection & Marsh Creation
R2-BA-03	Barataria Bay Rim Marsh Creation
R2- BA-04	Bay Dos Gris Marsh Creation
R2- BA-05	Barataria Bay Waterway East Marsh Creation
R2- BA-06	Caminada Headlands Back Barrier Marsh Creation #2
R2- BA-07	Bayou Long Marsh & Ridge Restoration – Increment 1
R2- BA-08	Grand Bayou Marsh Creation & Terracing
R2- BA-09	East Bayou Lafourche Marsh Creation & Terracing
R2-BA-10	Bay Coquette Ridge Restoration
R2-BA-11	Rattlesnake Bayou Marsh Creation
R2-BA-12	Spanish Pass Ridge & Marsh Creation
R2-BA-13	Bayou Dupont Delivery – Marsh Creation 4
R2-BA-14	Grand Pierre Island Restoration
R2-BA-15	Wilkinson Canal Marsh Creation & Terracing

Region 2 – BRETON SOUND BASIN

~~R2-BS-01~~	~~40-Arpent Canal Diversion~~ *(not consistent with 2012 State Master Plan)*

Region 2 PPL25 Nominated Projects

Barataria Basin Project

R2-BA-01 East Leeville Marsh Creation and Nourishment
R2-BA-02 Coffee Bay Shoreline Protection and Marsh Creation
R2-BA-03 Barataria Bay Rim Marsh Creation
R2-BA-04 Bay Dosgris Marsh Creation
R2-BA-05 Barataria Bay Waterway East Marsh Creation
R2-BA-06 Caminada Headlands Back Barrier Marsh Creation, Increment #2
R2-BA-07 Bayou Long Ridge Restoration and Marsh Creation
R2-BA-08 Grande Bayou Marsh Creation and Terracing
R2-BA-09 East Bayou Lafourche Marsh Creation and Terracing
R2-BA-10 Bay Coquette Ridge Restoration
R2-BA-11 Rattlesnake Bayou Marsh Creation
R2-BA-12 Spanish Pass Ridge and Marsh Restoration
R2-BA-13 Bayou Dupont Sediment Delivery - Marsh Creation 4
R2-BA-14 Grand Pierre Island Restoration
R2-BA-15 Wilkinson Canal Marsh Creation and Terracing

Breton Sound Basin Project

R2-BS-01 40 Arpent Canal Diversion
(Not consistent with 2012 State Master Plan)

4 0 4 8 Kilometers

4 0 4 8 Miles

Region 2 PPL25
Regional Planning Team Meeting
USFWS Southeast Louisiana Refuges Complex (Big Branch)
Lacombe, LA
January 29, 2015
Background Image:
2010 Landsat Thematic Mapper 5 Mosaic

Region 2 – BARATARIA BASIN

R2-BA-01

East Leeville Marsh Creation & Nourishment

R2-BA-01

PPL25 PROJECT NOMINEE FACT SHEET

January 29, 2015

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 historic and continued rapid land loss within the project and surrounding areas resulting from oil and gas exploration, subsidence, wind erosion, storms, and altered hydrology. 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. A large section of the western bank of South Lake has been lost increasing wave fetch and further coalescence of natural lakes with adjacent waters that were once marsh. Natural tidal flow and drainage patterns which once existed are currently circumvented by the increasing area of open water. The wetland loss rate for the project area is -1.15%/year based on USGS data from 1984 to 2011.

Proposed Solution
After consideration of three potential alternatives, an alignment was selected to re-establish an arc of wetlands along the north side of Southwestern Canal, Lake Jesse, and the west side of South Lake. This is to begin rebuilding the structural framework of wetlands east of Leeville and provide protection for Leeville from southeasterly winds and tides. A robust engineering and design cost was included for full flexibility during Phase 1 to expand the project if cost allows or to assess alternative configurations, if necessary. The proposed features consist of hydraulically mining sediment from a borrow source in Little Lake west of Leeville and pumping material to create and nourish marsh east of Leeville. The disposal areas would be fully contained during construction and gapped no later than three years post construction to establish tidal connection and function. Additionally, 50% of the created marsh acres would be planted with smooth cordgrass following construction to help stabilize the created platform by increasing the rate of colonization.

Goals
The project goal is to create approximately 352 acres and nourish 130 acres of saline marsh east of Leeville.

Preliminary Project Benefits

1) *What is the total acreage benefited both directly and indirectly?*
   This total project area is approximately 484 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 -1.15%/year, the marsh creation and nourishment would result in 326 net acres after 20 years.

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.

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 bank line of Lake Jesse, South Lake, and a portion of bank line along Southwestern Canal.

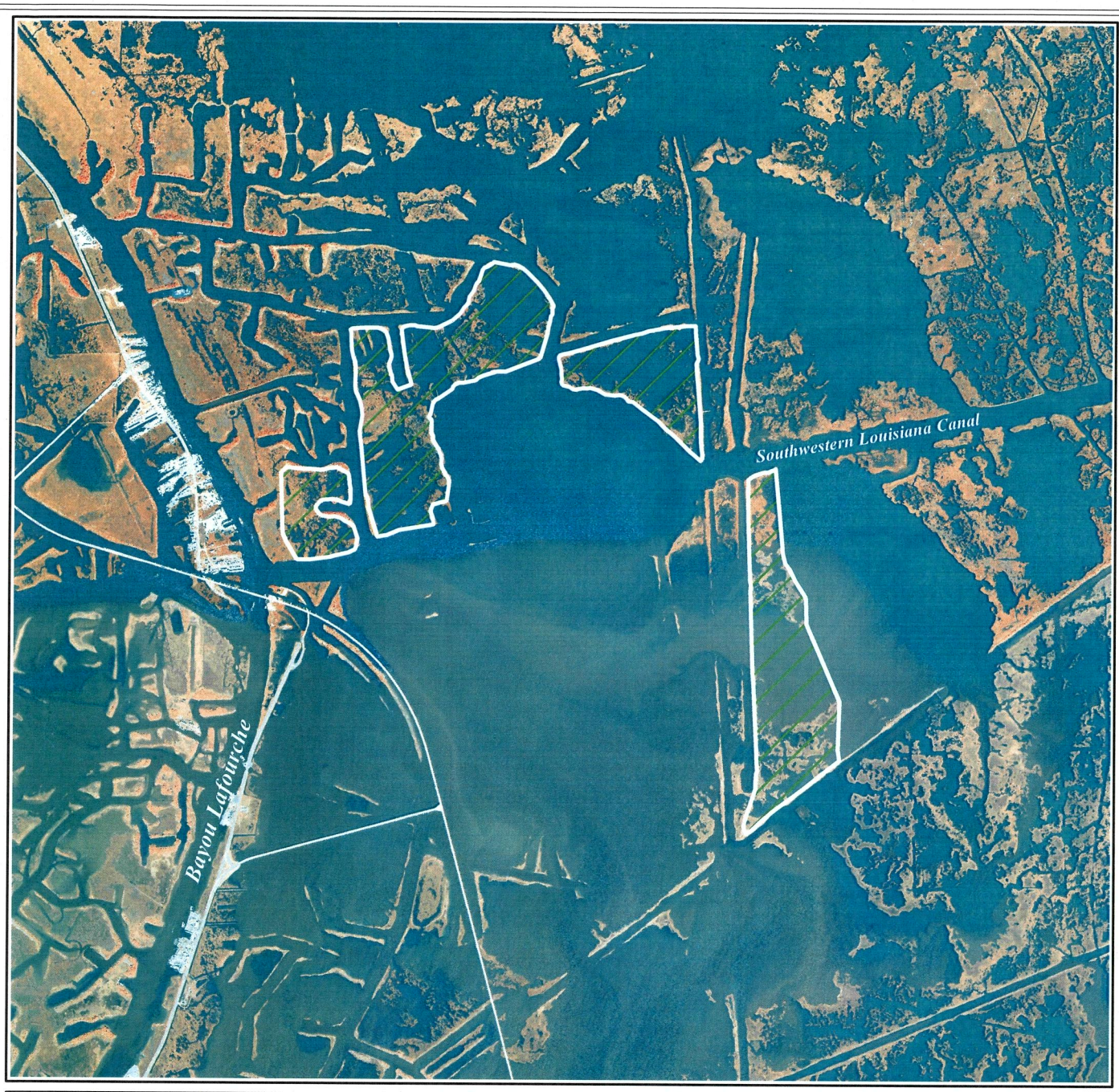
5) *What is the net impact of the project on critical and non-critical infrastructure?*
Minor oil and gas facilities and pipelines in the area would benefit from an increase in marsh acreage. Facilities along Bayou Lafourche in Leeville could benefit from marsh creation along Bayou Lafourche, Southwestern Louisiana Canal, Lake Jesse, and South Lake.

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.

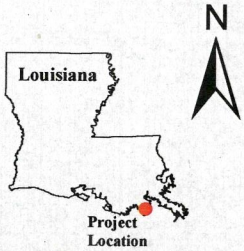
Identification of Potential Issues
The proposed project has potential oyster and pipeline/utility.

Preliminary Construction Costs
The estimated construction cost including 25% contingency is approximately $25,185,787 million. The fully funded cost estimate range is $30M - $35M.

Preparer(s) of Fact Sheet:
Patrick Williams, NMFS, 225-389-0508, ext 208, patrick.williams@noaa.gov



East Leeville Marsh Creation and Nourishment (PPL25 Nominee)



Marsh Creation *

Project Boundary

* denotes proposed features

0.5 0 0.5 Kilometers

0.5 0 0.5 Miles

Scale 1:35,000

Map Date: January 23, 2015

USGS science for a changing world

Produced by:
U.S. Department of the Interior
U.S. Geological Survey
National Wetlands Research Center
Coastal Restoration Assessment Branch
Baton Rouge, La

Image Source:
2012 DOQQ

Science, Service, Stewardship

East Leeville Marsh Creation and Nourishment (Lafourche Parish)

Region II – Barataria Basin

January 30, 2015

NOAA FISHERIES SERVICE

NOAA FISHERIES SERVICE

Problem

- High land loss rates in the Barataria Basin
- High subsidence in the area
- Wind, wake, and tidal erosion
- Heavy oil and gas exploration impacts in the area
- Loss of Southwestern Louisiana Canal limits
- Losses have accelerated as area becomes more fragmented
- **No restoration projects to date**

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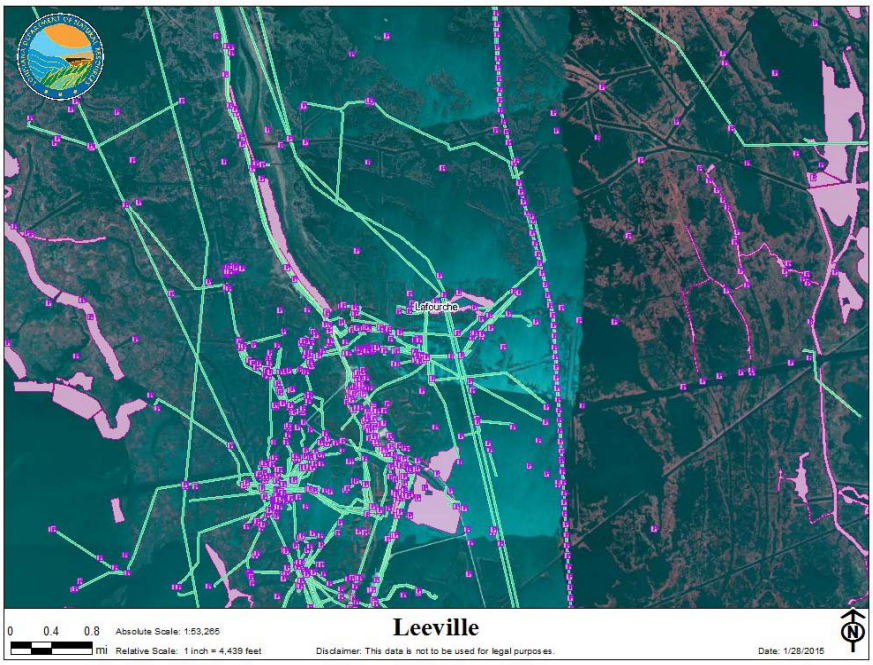
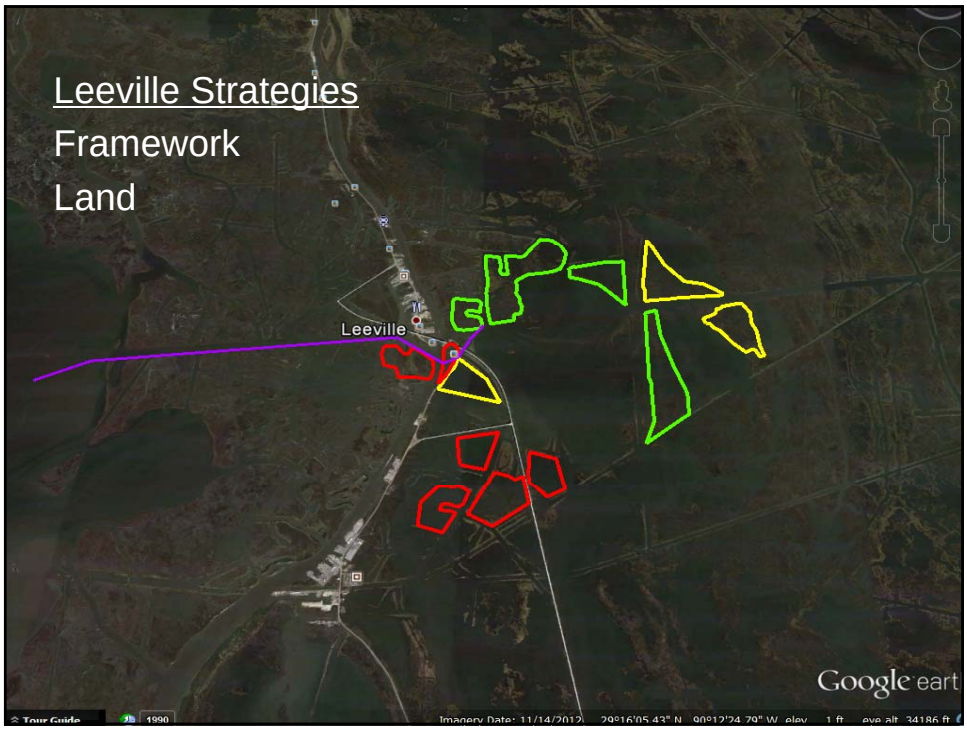

Lafourche
0 0.4 0.8 mi
Absolute Scale: 1:53,265
Relative Scale: 1 inch = 4,439 feet
Leeville
Disclaimer: This data is not to be used for legal purposes.
Date: 1/28/2015


Leeville Strategies
Framework
Land
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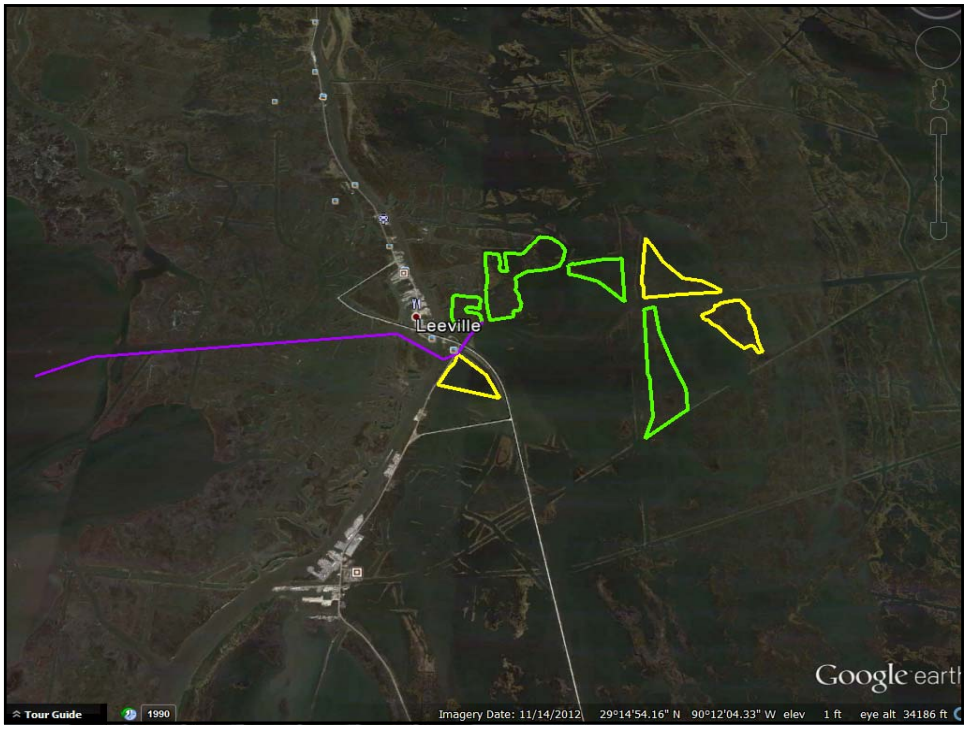

NOAA FISHERIES SERVICE

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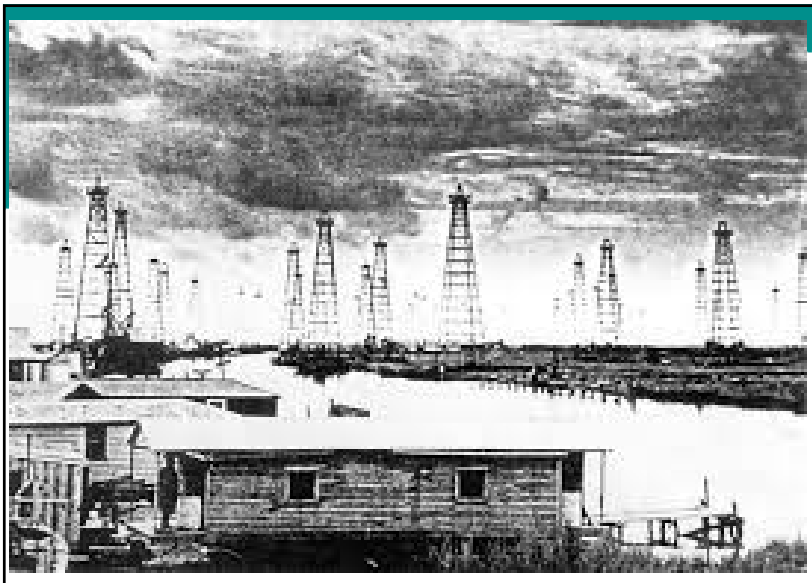
NOAA FISHERIES SERVICE

Project Features

- Total Acres = 352 marsh creation and 130 marsh nourishment; 326 net acres over 20-yr life
- Reestablishes portion of Southwestern Louisiana Canal, Lake Jesse, and South Lake, and backfills a portion of the Shell MARS pipeline corridor
- Borrow from Little Lake
- Consistent with State Master Plan
- Construction Cost with 25% contingency = $25.1M million; $34.9M FFC

7

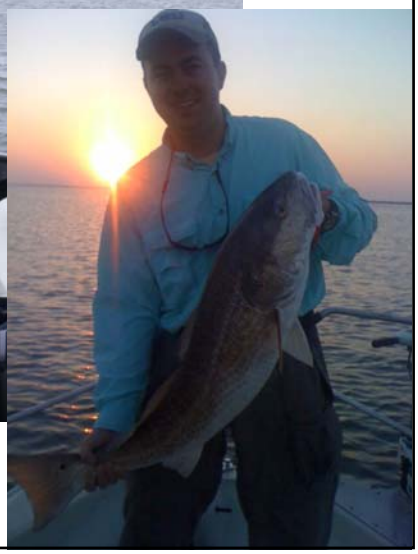


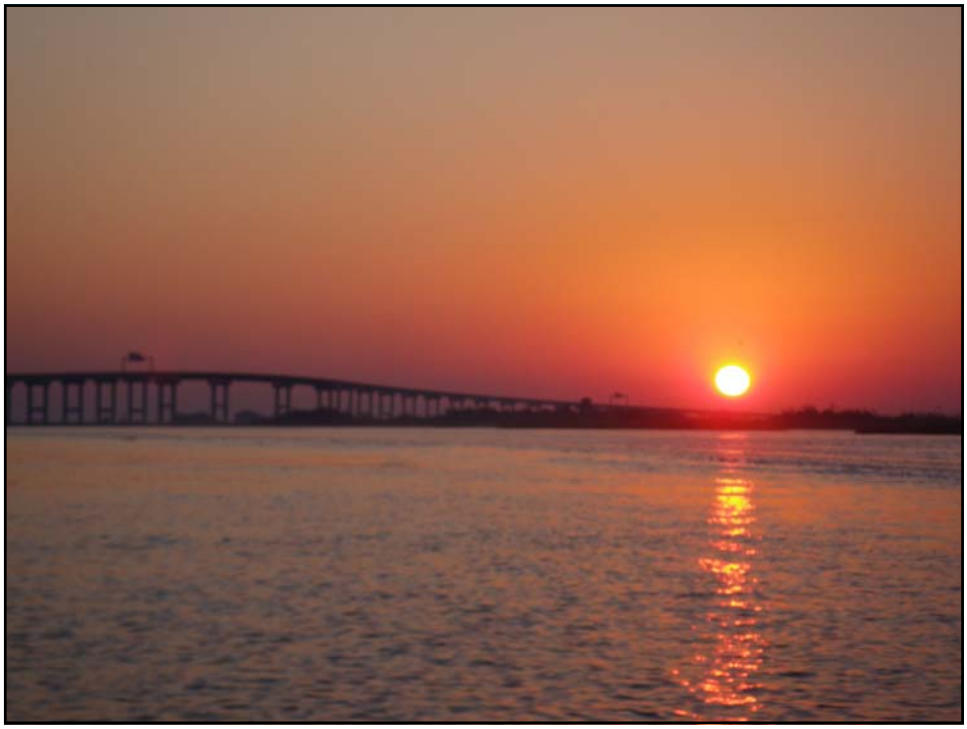
Leeville Oil Field Derricks circa 1930s

8

Lefort Cemetery

Intersection of SW Louisiana Canal and Bayou Lafourche





R2-BA-02

Coffee Bay Shoreline Protection & Marsh Creation

PPL25 PROJECT NOMINEE FACT SHEET
January 29, 2015

Project Name: Coffee 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 Coffee Bay area. Shoreline erosion rates in that area ranged from 50 f.t/yr to 8 ft./yr. A 28,466 LF section of shoreline was estimated to have an average erosion rate of 22 ft./yr.

Goals :
The goals of the project are to 1) protect approximately 28,000 feet of critical shoreline, 2) protect approximately 219 acres of marsh habitat, and 3) create approximately 173 acres of marsh and nourish approximately 138 acres of marsh (311 acres total) with dredged material from Little Lake.

Service goals include the creation of habitat or improvement of habitat for rare species, species of concern, and threatened and endangered species. The creation of brackish intertidal marsh habitat would be beneficial to several species that are currently on the lists of rare species and species of concern. These include, but are not limited to Least Bittern, Black Rail, Mottled Duck, Brown Pelican, King Rail, Louisiana Eyed Silkmoth and Saltwater topminnow. Keeping these species off the threatened and endangered list is a goal of FWS because at that point ALL Federal agencies must then address those species.

Proposed Solutions:
With the currently proposed project, 21,000 ft of foreshore rock dike would be constructed to protect approximately 28,000 feet of critical shoreline and preserve 219 acres of existing marsh. The rock dike would be constructed along the 2.0 foot contour. Maintenance of the shoreline protection feature would be included.

The currently proposed project would also create approximately 173 acres of marsh and nourish an additional 138 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 521 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 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%). Loss rate reduction should be >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, protect a portion of the Little Lake shoreline, and give some protection to the Bayou L'Ours Ridge.

5) What is the net impact of the project on critical and non-critical infrastructure? There are numerous camps and several oil and gas facilities that would be protected with this project as well as numerous pipelines benefiting from a reduction of cover.

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 $27 M.

Preparer(s) of Fact Sheet:
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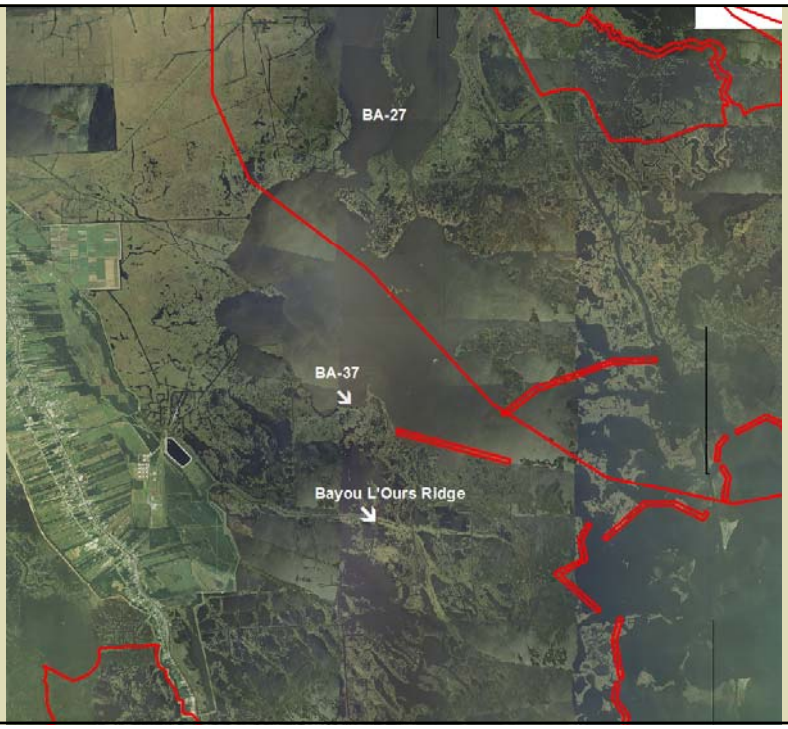
PPL 25

COFFEE BAY

SHORELINE PROTECTION AND MARSH CREATION

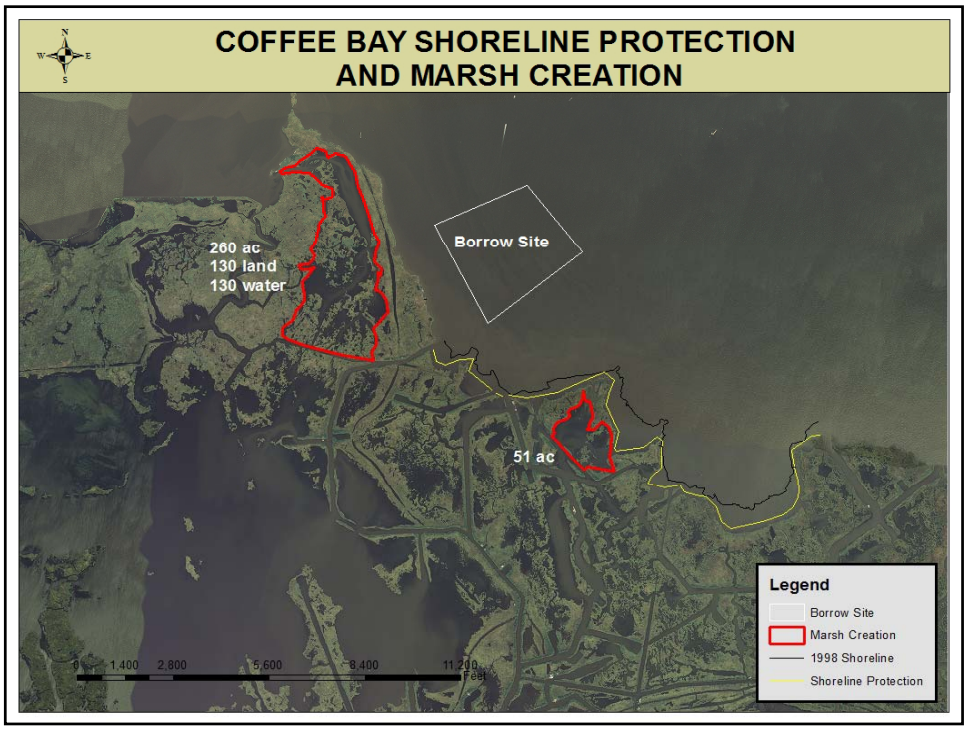


COFFEE BAY SHORELINE PROTECTION AND MARSH CREATION

Problem:

- **Shoreline Erosion**
- **Erosion rates between 10-70 ft/yr**
- **Used an Average erosion rate of 22 ft/yr**


575 ft
38 ft/yr
800 ft
53 ft/yr
520 ft
35 ft/yr
1,033 ft
68 ft/yr
370 ft
25 ft/yr
871 ft
58 ft/yr


COFFEE BAY SHORELINE PROTECTION
AND MARSH CREATION
260 ac
130 land
130 water
Borrow Site
51 ac
Legend
Borrow Site
Marsh Creation
1998 Shoreline
Shoreline Protection
0
1,400
2,800
5,600
8,400
11,200
Feet

COFFEE BAY SHORELINE PROTECTION AND MARSH CREATION

Solution

- **21,000 ft of foreshore rock dike**
- **2 ft contour to 3 ft height**
- **Protect 219 acres**
- **Create 173 acres marsh**
- **Nourish 138 acres of marsh**
- **Borrow from Little Lake with Hydraulic Dredge**

COFFEE BAY SHORELINE PROTECTION AND MARSH CREATION

Goals:

- protect 28,000 feet of critical shoreline with 21,000 ft of foreshore rock dike
- protect 219 acres
- Create 173 and nourish 138 acres of marsh (Total 311 acres) material from Little Lake

Net Acres:

- The total net acres is 362 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 $27M.

Species of Concern and Rare Species

- Least Bittern
- Black Rail
- Mottled Duck
- Saltmarsh topminnow
- Brown Pelican
- Louisiana Eyed Silkmoth
- King Rail

R2-BA-03

Barataria Bay Rim Marsh Creation

R2-BA-03

PPL25 PROJECT NOMINEE FACT SHEET
January 26, 2015

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 benefitted; 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
$12 million

Preparers of Fact Sheet:
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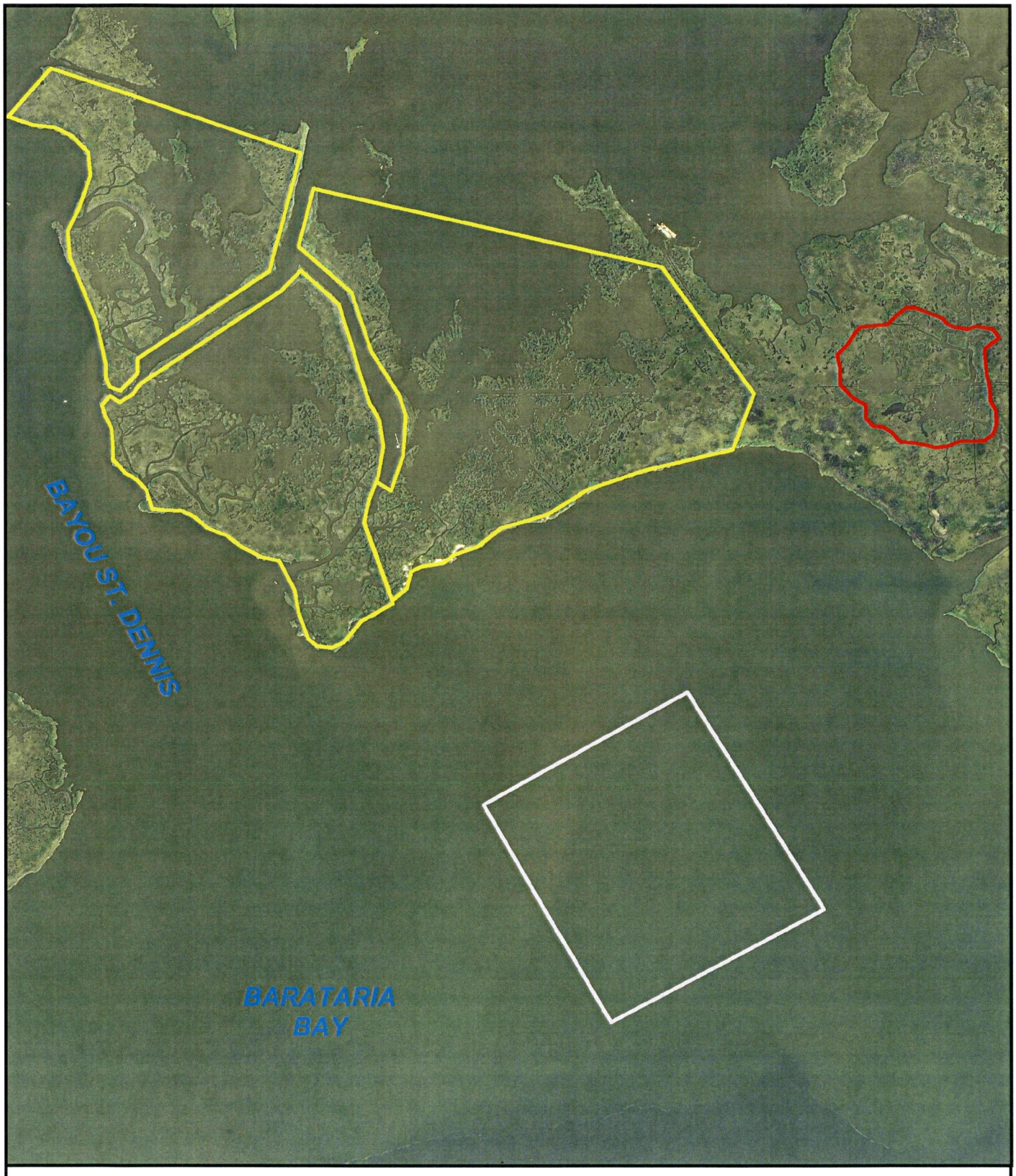

USDA

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

Data Source: NAIP 2013

Map Date: JANUARY 8, 2015

PPL-25
BARATARIA BAY RIM MARSH CREATION PROJECT MAP

0 1,000 2,000 Feet

Legend
- Traditional_Marsh_Creation
- Semi-Contained_Marsh_Creation
- Borrow_Area

PPL 26
Regional Planning Team
January 29, 2015

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 $12 million

R2-BA-04

Bay Dos Gris Marsh Creation

R2-BA-04

PPL25 PROJECT NOMINEE FACT SHEET
January 26, 2015

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 214 acres of marsh and nourish approximately 418 acres of marsh (632 acres total) with dredged material from Little Lake.

Proposed Solution
The proposed project would create approximately 214 acres and nourish approximately 418 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? 632 directly benefitted; 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 the 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
$15 million.

Preparers of Fact Sheet:
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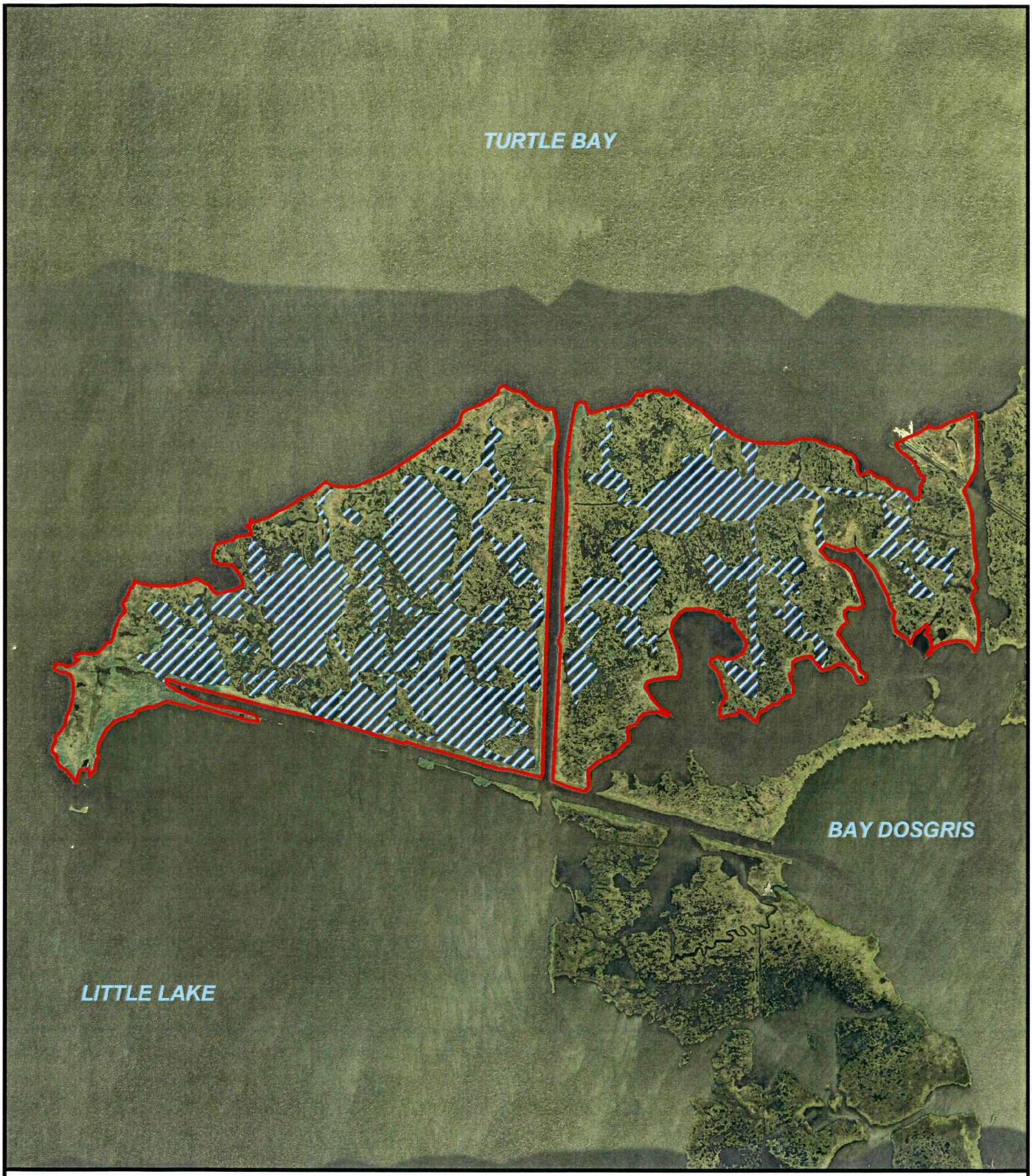


USDA

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

Data Source: NAIP 2013 IMAGERY

Map Date: JANUARY 8, 2015

PPL 25
BAY DOSGRIS
MARSH CREATION

Legend

- Marsh Creation_Nourishment
- Open_Water

0 1,000 2,000 Feet

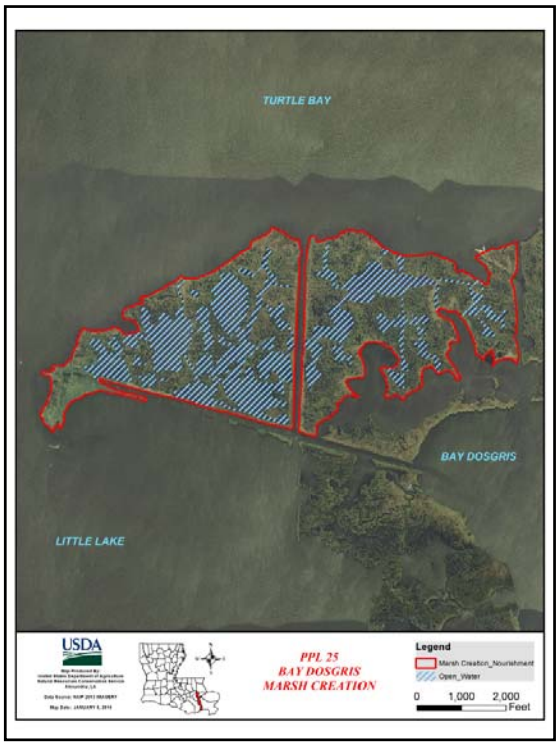
PPL 25
Regional Planning Team
January 29, 2015

Region 2
Barataria Basin

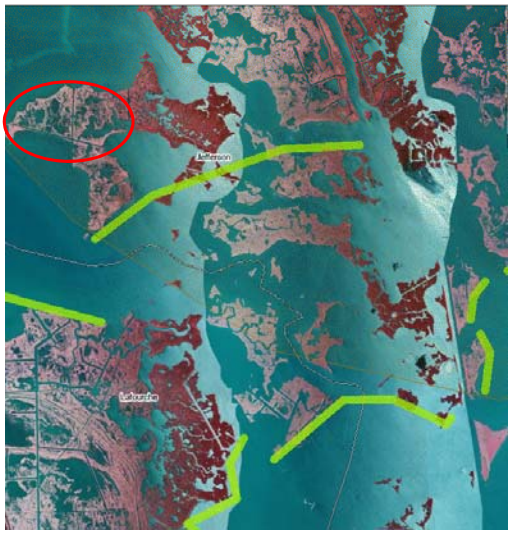
Bay Dos Gris
Marsh Creation

Problems

- Widespread Loss of Emergent Marsh
- Shoreline Erosion



Bay Dos Gris and the Master Plan



Bay Dos Gris

- 214 acres of marsh creation
- 418 acres of marsh nourishment
- Preliminary Construction Cost $15 million

R2-BA-05

Barataria Bay Waterway East Marsh Creation

R2-BA-05

PPL25 PROJECT NOMINEE FACT SHEET
January 26, 2015

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 240 acres of marsh with dredged material from the Mississippi River.

Proposed Solution
The proposed project would create approximately 240 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 estimated cost includes funds to plant 50% of the created marsh.

Preliminary Project Benefits
1) What is the total acreage benefited both directly and indirectly? 240 acres directly benefitted; indirect benefit not yet determined.

2) How many acres of wetlands will be protected/created over the project life? 229 net acres.

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)?* Background loss rate currently estimated to be -0.49%/year. The anticipated land loss rate reduction throughout the area of direct benefits will be 50% over the project 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 Barataria 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
$31 Million

Preparers of Fact Sheet:
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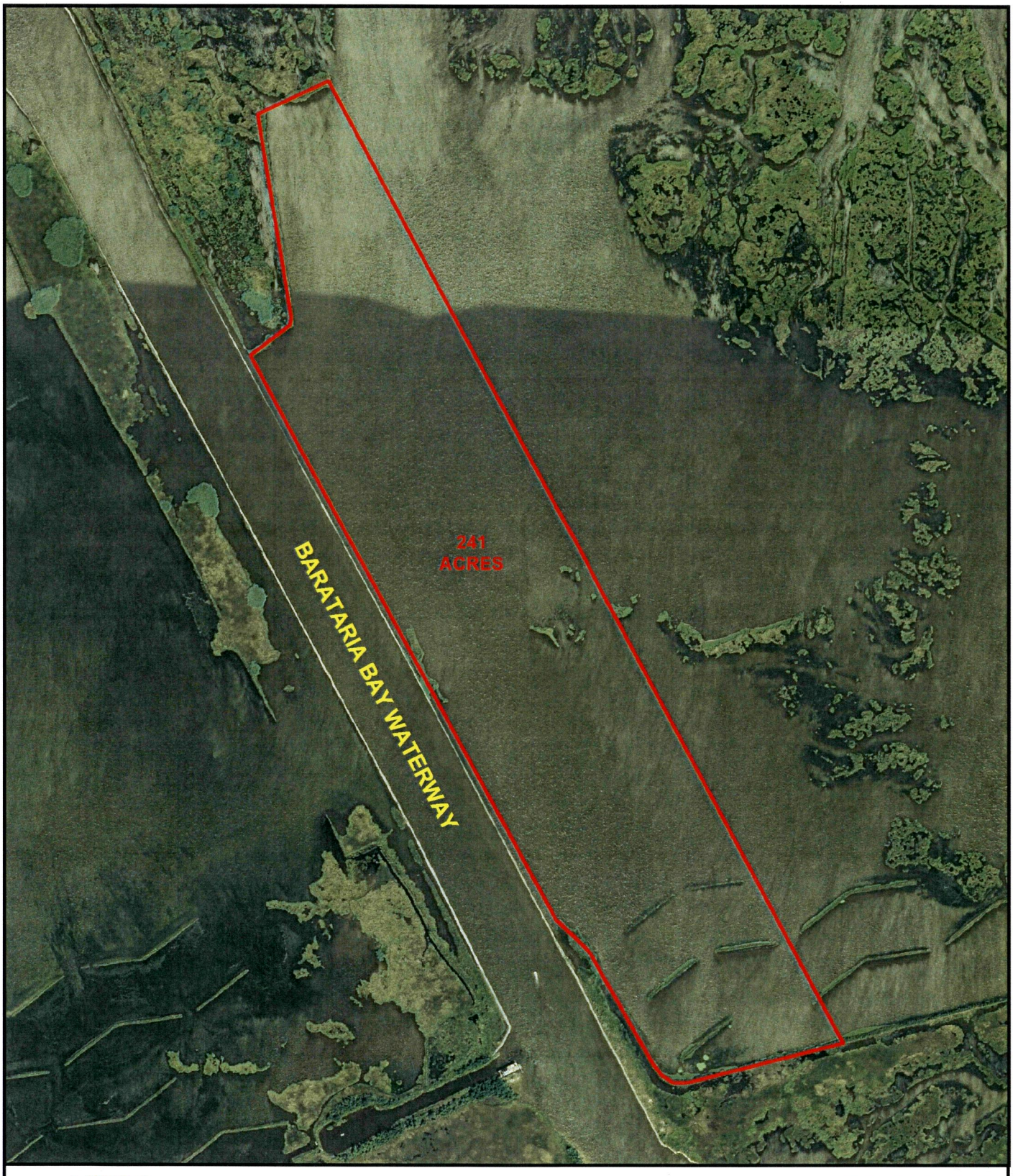
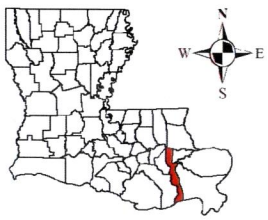


USDA

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

Data Source: NAIP 2013

Map Date: JANUARY 8, 2015



PPL-25 BARATARIA BAY WATERWAY EAST MARSH CREATION

Legend
Marsh_Creation

0 1,000 2,000
Feet

PPL 25
Regional Planning Team
January 29, 2015

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 $31 million

R2-BA-06

Caminada Headlands Back Barrier Marsh Creation #2

PPL 25 PROJECT NOMINEE FACT SHEET
January 29, 2015

Project Name
Caminada Headlands Back Barrier Marsh Creation, Increment #2

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.

Master Plan Strategy
002.BH.05 – 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.

Problem
The 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 513 acres of back barrier marsh using sediment from an offshore borrow site (see Appendix A). 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 257 acres and nourish 256 acres of emergent marsh using sediment from an offshore borrow site. This will be placed behind approximately 4 miles of Caminada beach as the front containment, while using as much of the existing pipe canal levees and healthy mangrove marsh as containment elsewhere. In areas where use of the existing marsh is not possible, other tactics may be employed, such as the use of hay bales or sheetpile. Where open water exists over longer distances along the proposed containment, borrow from the outside of the cell may be used. Total constructed containment (including earthen, hay bales, and sheetpile) will total to 7411 ft. Vegetative planting will occur on 50% of the project area.

Preliminary Project Benefits
1) *What is the total acreage benefited both directly and indirectly*?
   Option #1 - Cells A&B: 521 ac; **Option #2 - Cells A, C, E: 513 ac**; Option #3 - Cells A–D: 728 ac. Option #2 is the preferred alignment which is used throughout this fact sheet.

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 -0.245% per year is used, with net acreages at TY20 totaling **256 ac** for Option #2.

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 Caminada 2 beach project (see Appendix B).

Identification of Potential Issues
At least two pipelines bisect the entire length of the project. Since one of these pipelines will be used as containment, borrow from inside the project area to create containment will not be possible. This issue is addressed in the "Proposed Project Features" section above. 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, C, E (preferred alternative):	+25% contingency -	$20.9M
	Fully funded range -	$25M - $30M

Preparer of Fact Sheet
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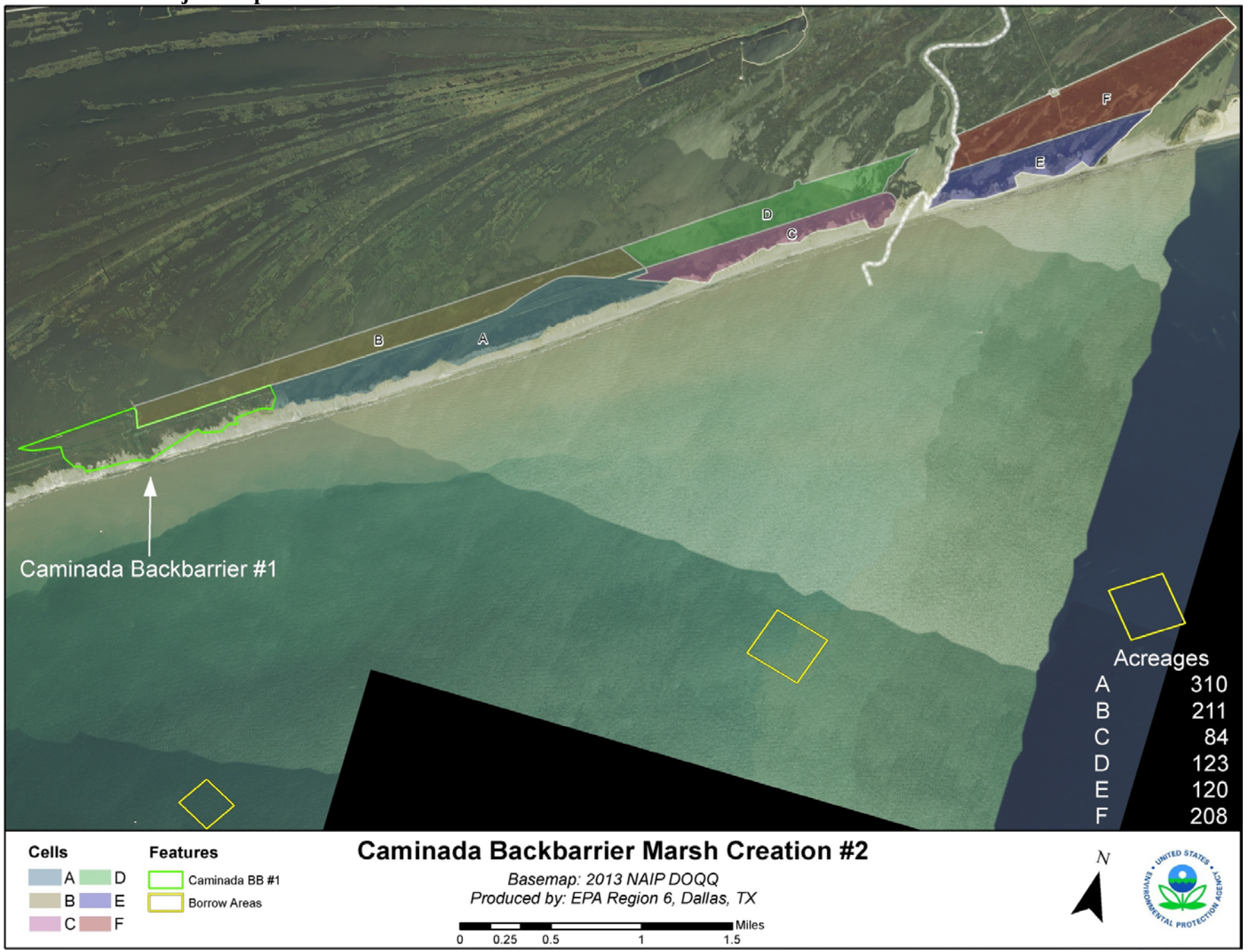
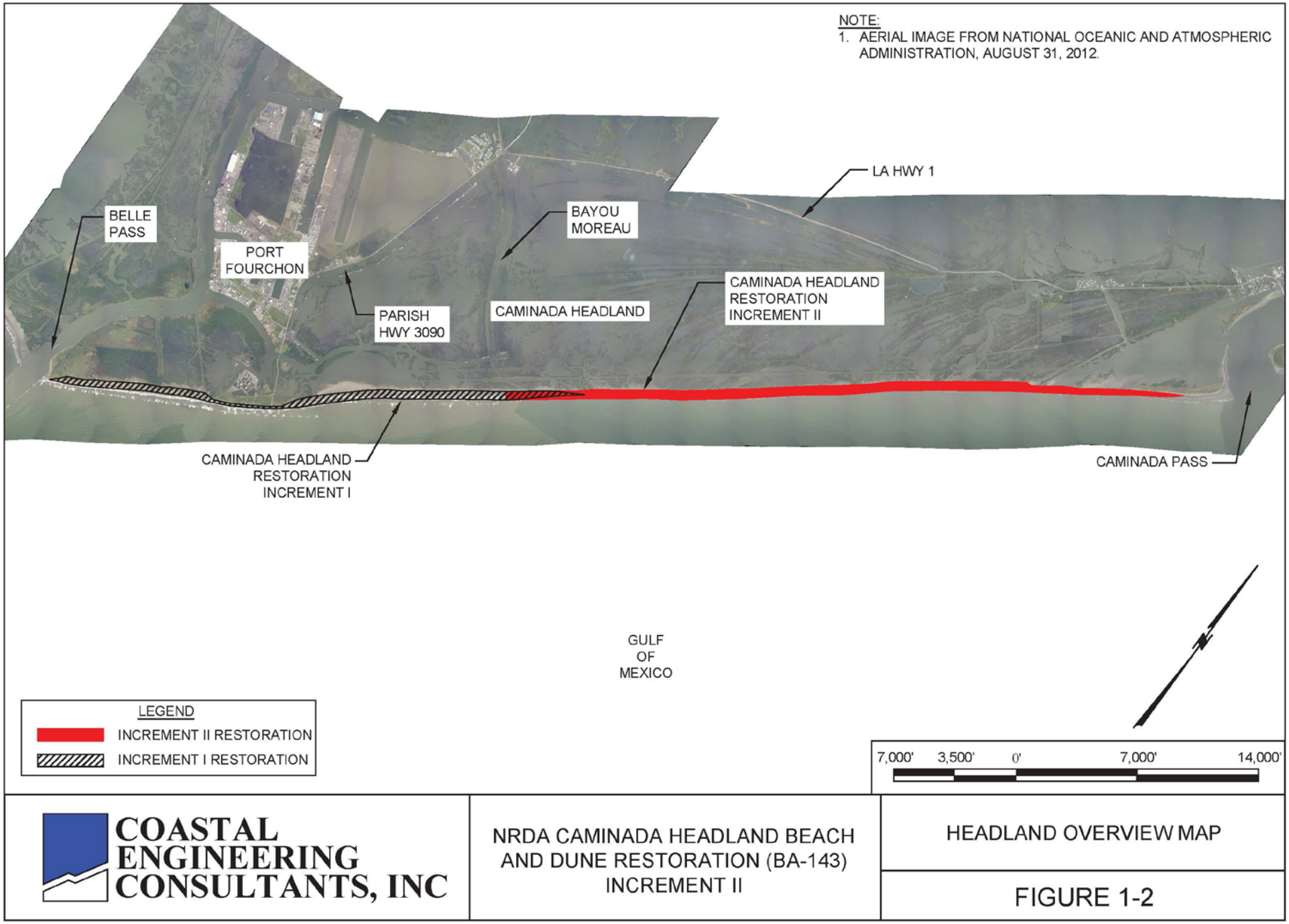
APPENDIX A: Project Map



APPENDIX B: Project map for Caminada Headland Beach and Dune Restoration, Increment #2 (separate project)



Caminada Headlands Back Barrier Marsh Creation #2

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

State Master Plan: 002.BH.05 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.

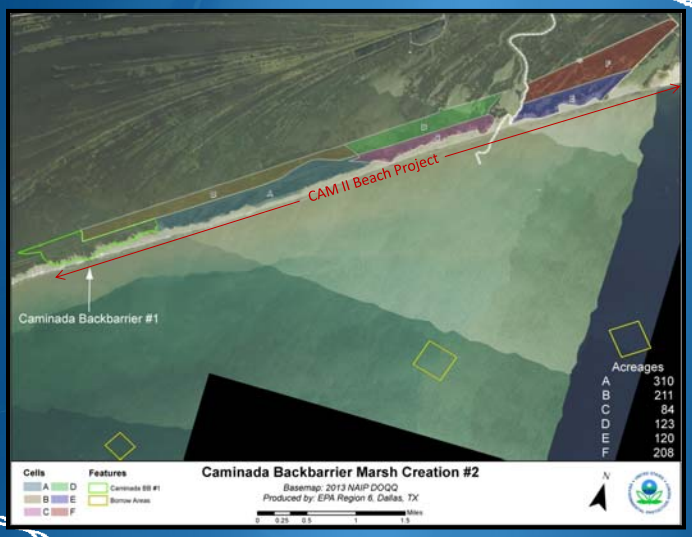
Coastal Wetlands Planning, Protection and Restoration Act

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-07

Bayou Long Marsh & Ridge Restoration – Increment 1

R2-BA-01

PPL24 PROJECT NOMINEE FACT SHEET
January 29, 2015

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 142 acres of marsh with dredged material from the Mississippi River; 2) create approximately 9,535 linear feet (8 acres) of forested coastal ridge habitat, and 3) install approximately 10,000 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 restoration of the ridge features associated with river outlets thereby establishing the skeletal framework that supports the marsh complex.

Restoring ridge features and marsh complexes is a conservation strategy identified by the FWS' *Vision for a Healthy Gulf of Mexico Watershed,* and would benefit Fish and Wildlife Service trust resources such as neo-tropical migrants, migratory waterfowl, shorebirds, wading birds and raptors. Depending on design features several at-risk species could benefit such as Osprey, black rail, and the Louisiana eyed silkmoth.

Proposed Project Features
Riverine sediments will be hydraulically dredged and pumped via pipeline to create/nourish approximately 150 acres of marsh and ridge habitat. Containment dikes will be constructed as necessary. The proposed design is to place the dredged material to a fill height of +2.5 ft NAVD88. Approximately 9,500 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):6(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 10,000 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 150 acres would be benefited directly. Direct benefits include 142 acres of marsh creation/nourishment and 8 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 75% since gabion mats would be used along the shoreline of Adam's Bay.

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 9,500 linear feet (8 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.

Preparer of Fact Sheet

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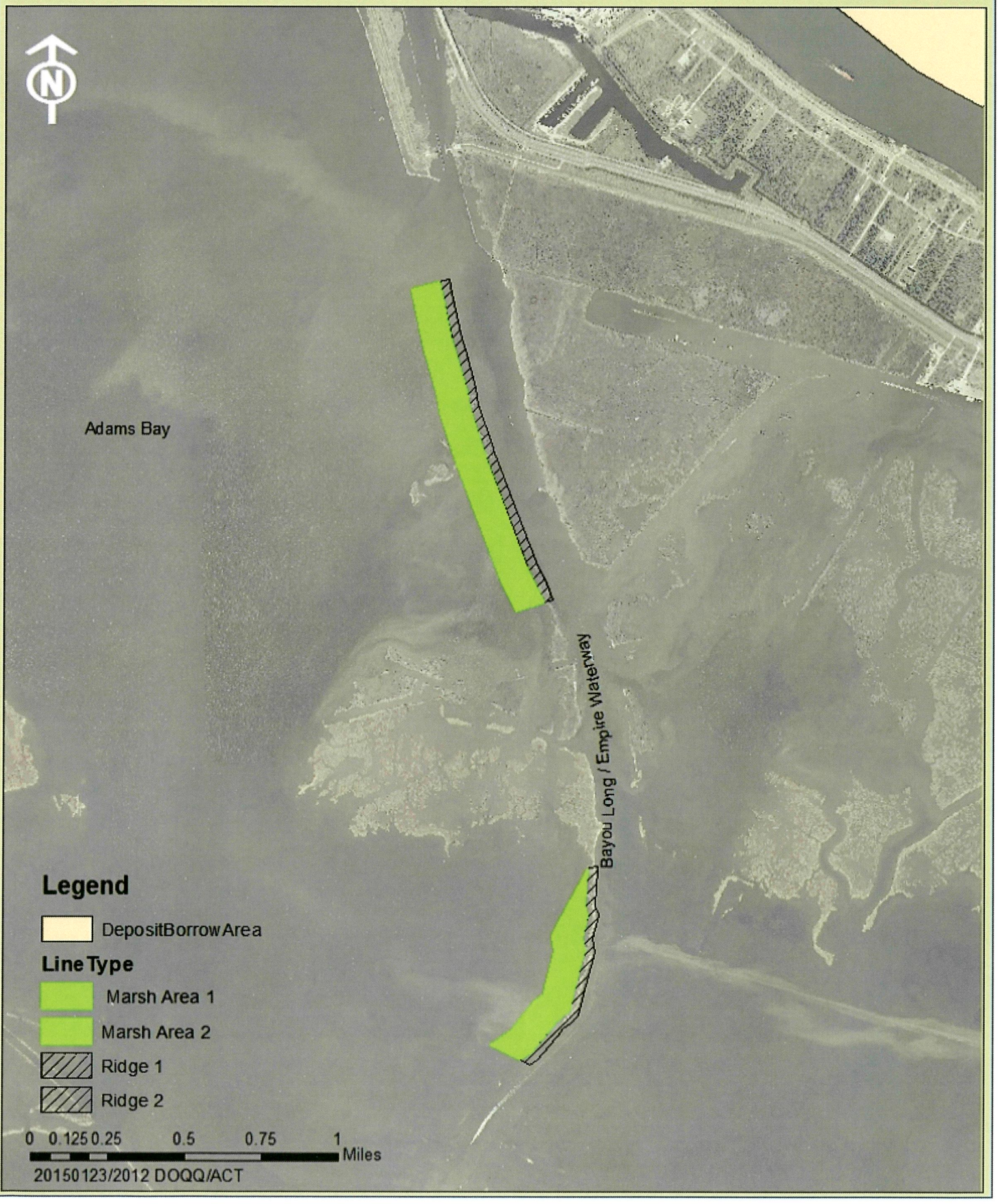
U.S. Fish & Wildlife Service

Louisiana Ecological Services

Bayou Long Ridge Restoration & Marsh Creation

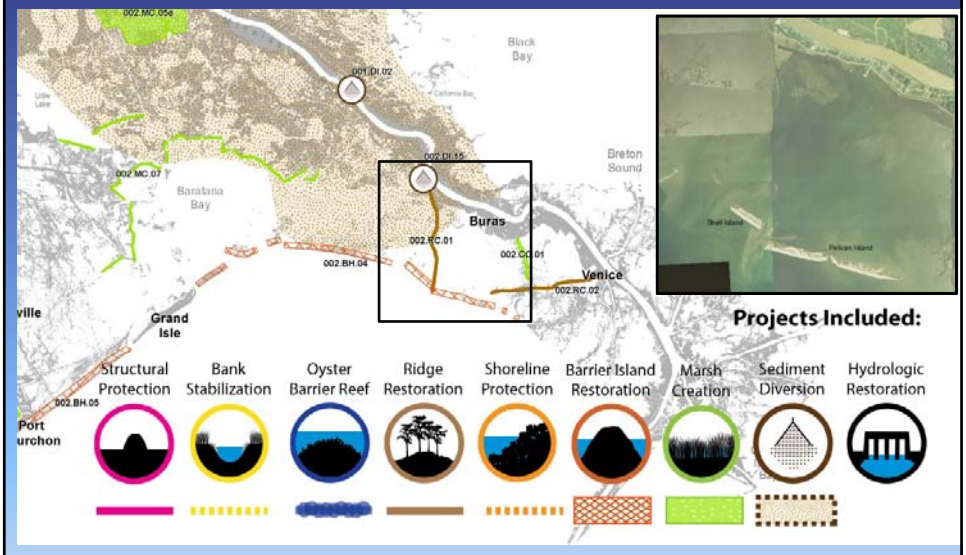


Bayou Long Ridge Restoration and Marsh Creation Project

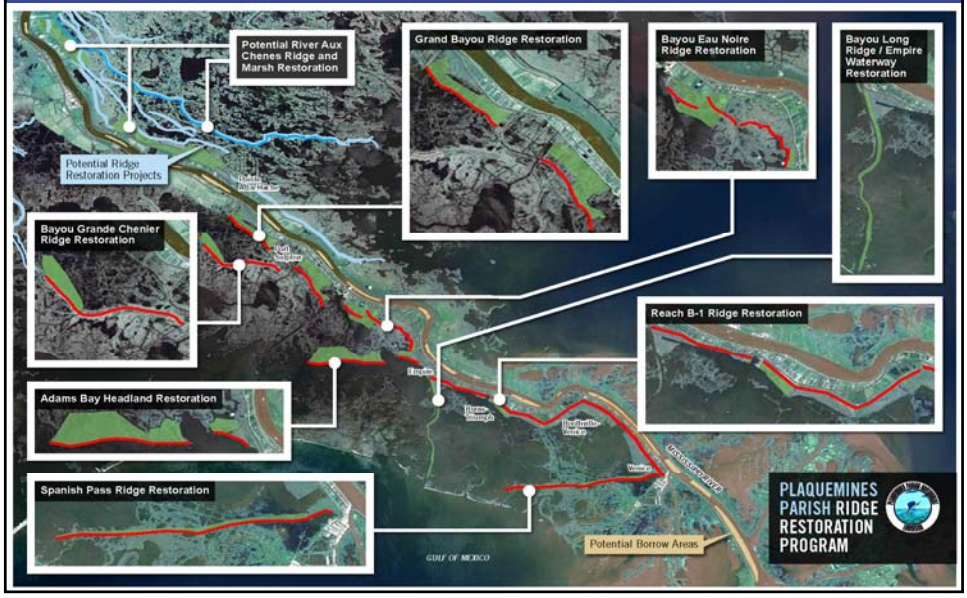
PPL 25

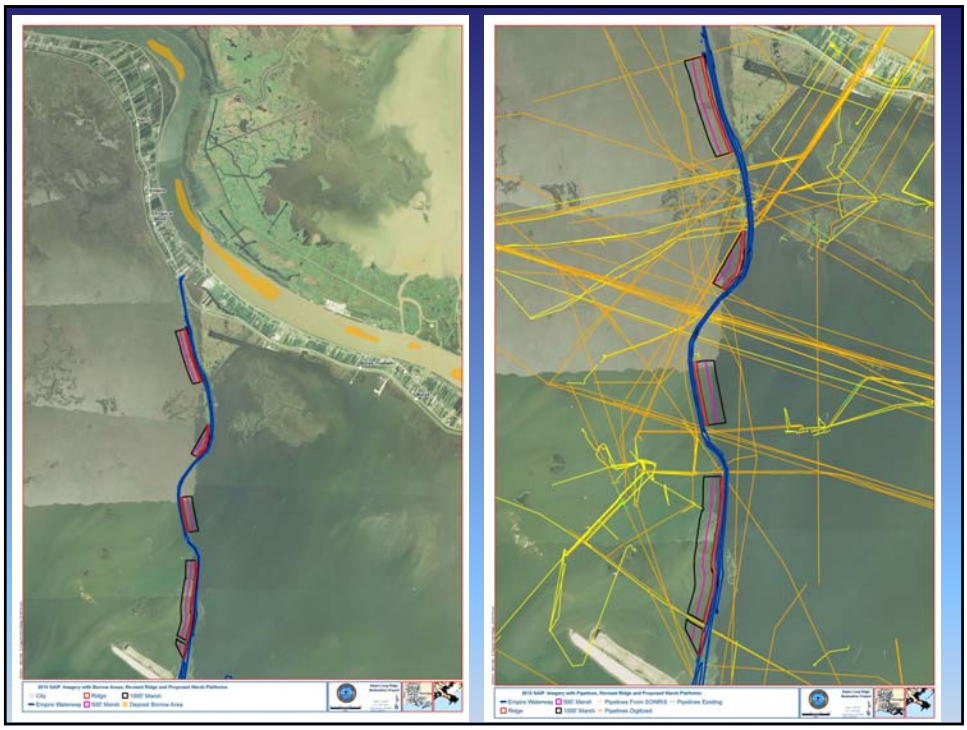
Region 2, Barataria Basin

2012 State Master Plan



Plaquemines Parish
Ridge Restoration Program





- Marsh Creation
  - 142 acres
  - 2.3-2.5 M cyds from MS River source
- Ridge Habitat
  - 8 acres
  - Target Elev. = +5 ft NAVD
  - 530,000 -580,000 cyds
- Shoreline Protection:
  - 10,000 LF
- Cost:
  $35-40 M, including 25% contingency

R2-BA-08

Grand Bayou Marsh Creation & Terracing

R2-BA-08

PPL25 PROJECT NOMINEE FACT SHEET
January 29, 2015

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 -1.49 %/yr (1984-2011) for this area during PPL24 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, Bayou Grand Cheniere Marsh and Ridge Restoration) 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.

Service goals include restoration/protection of habitat for threatened and endangered species and other at-risk species. This project would restore habitat potentially utilized by the black rail and Louisiana eyed silkmoth which are both petitioned for listing as threatened/endangered species. The project could also benefit other species of concern including the peregrine falcon, osprey, mottled duck, and seaside sparrow.

Proposed Solution
1. Riverine sediments will be hydraulically dredged and pumped via pipeline to create approximately 365 acres (Option A) or 490 acres (Option B) of marsh.
2. Approximately 21,700 linear feet (15 acres-Option A) or 39,200 linear feet (28 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 700 acres (Option A)/1,050 acres (Option B) would be benefited directly and indirectly. Direct benefits include 365 acres (Option A)/490 acres (Option B) of marsh creation and 15 acres (Option A)/28 acres (Option B) of terraces. Indirect benefits would occur to surrounding marshes and within the 335-acre (Option A)/560-acre (Option B) 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 319 acres (Option A)/396 acres (Option B).

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 Bayou Grande Cheniere Marsh and Ridge Restoration Project (PPL23), the Lake Hermitage Marsh Creation Project (PPL15) and the West Pointe a la Hache Siphons.

Identification of Potential Issues
Oil and gas infrastructure.

Preliminary Construction Costs
The estimated construction cost including 25% contingency is $27.5M (Option A)/$28.4M (Option B).

Preparer of Fact Sheet
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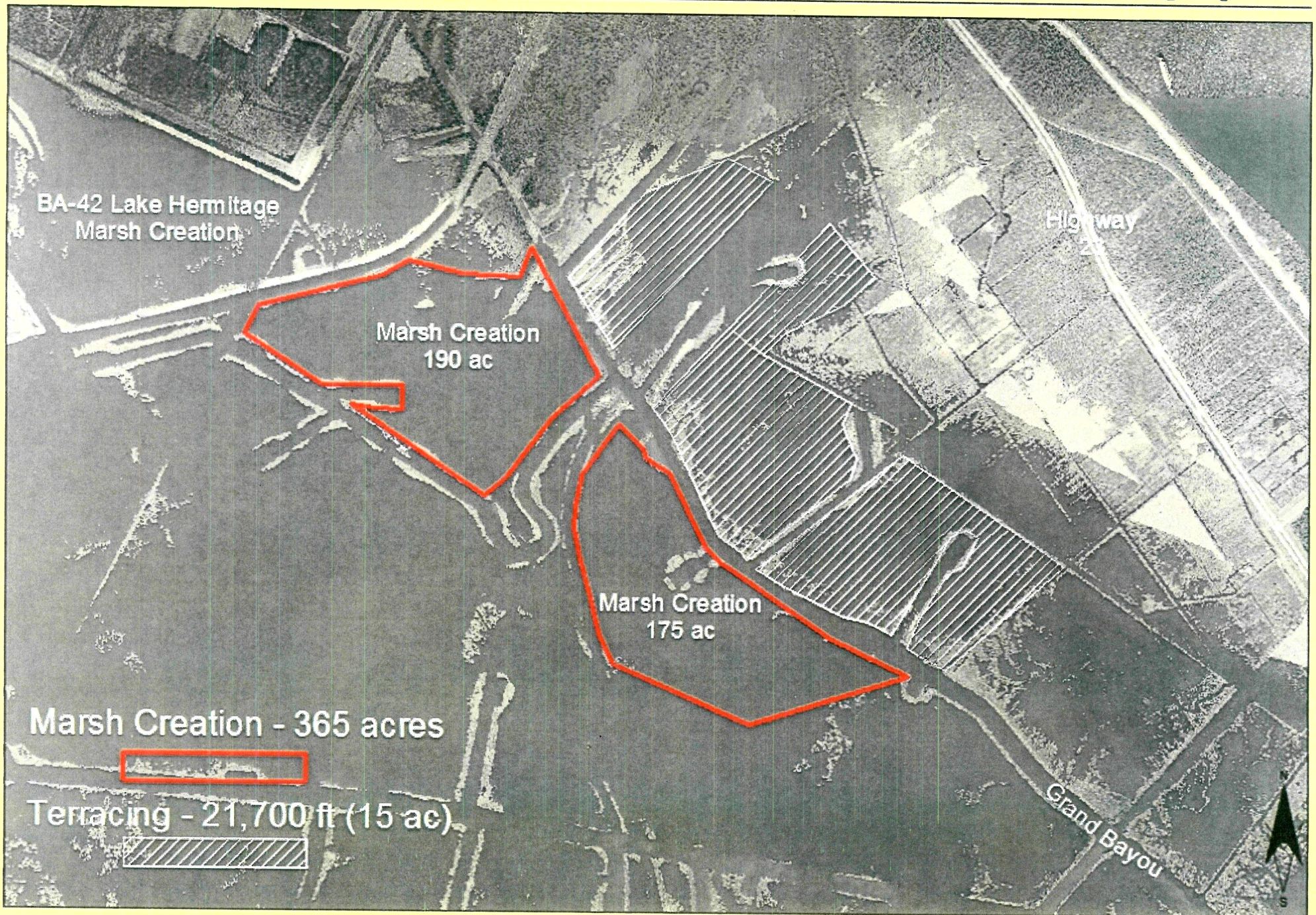
U.S. Fish & Wildlife Service

Louisiana Ecological Services Field Office

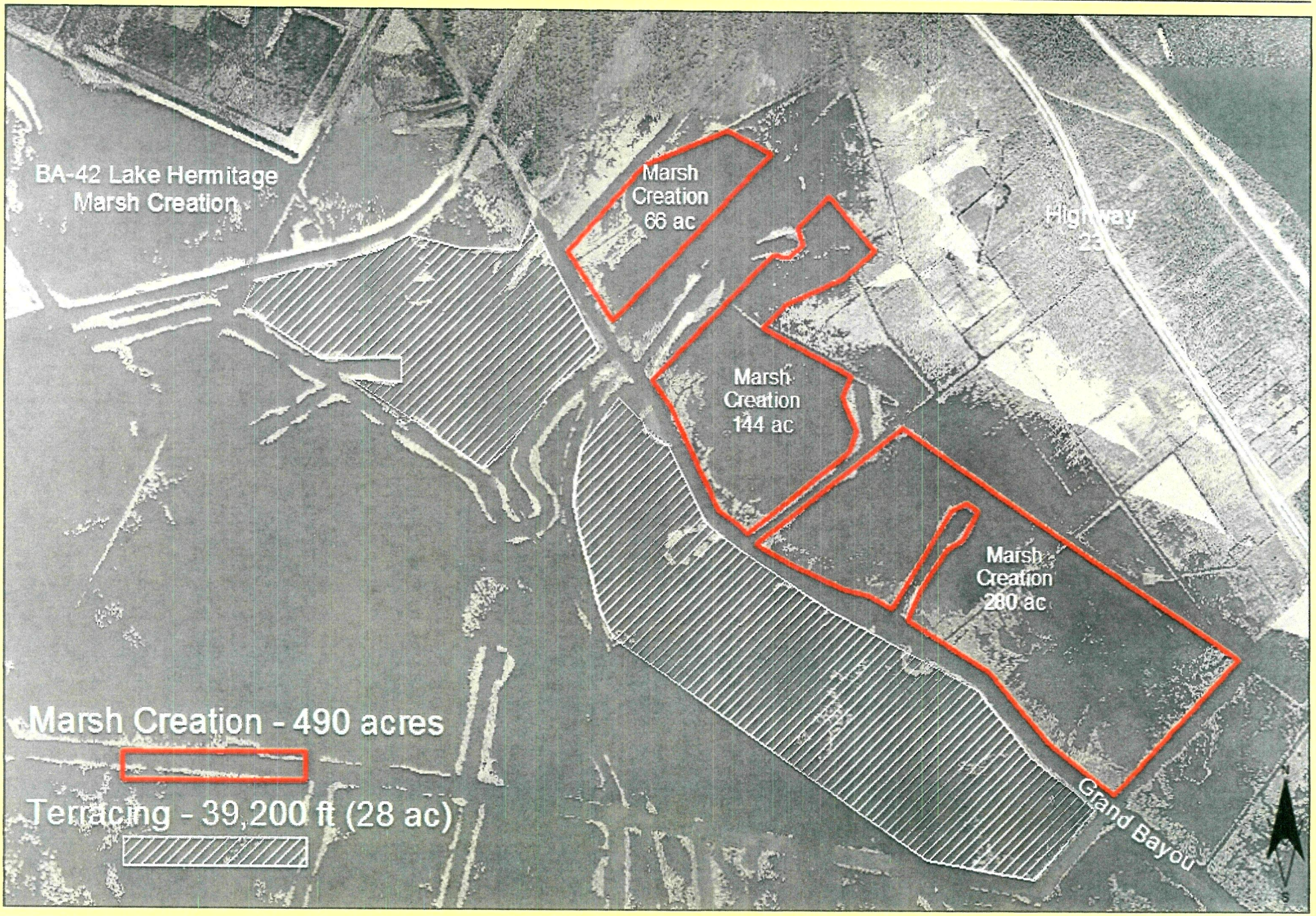
Grand Bayou Marsh Creation and Terracing - Option A

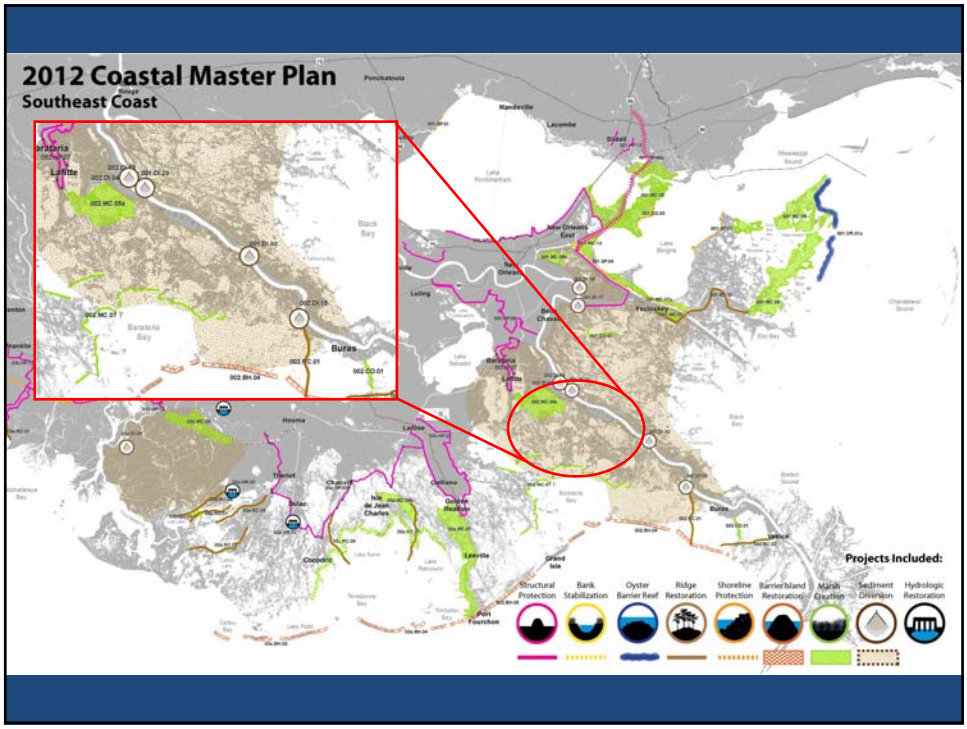


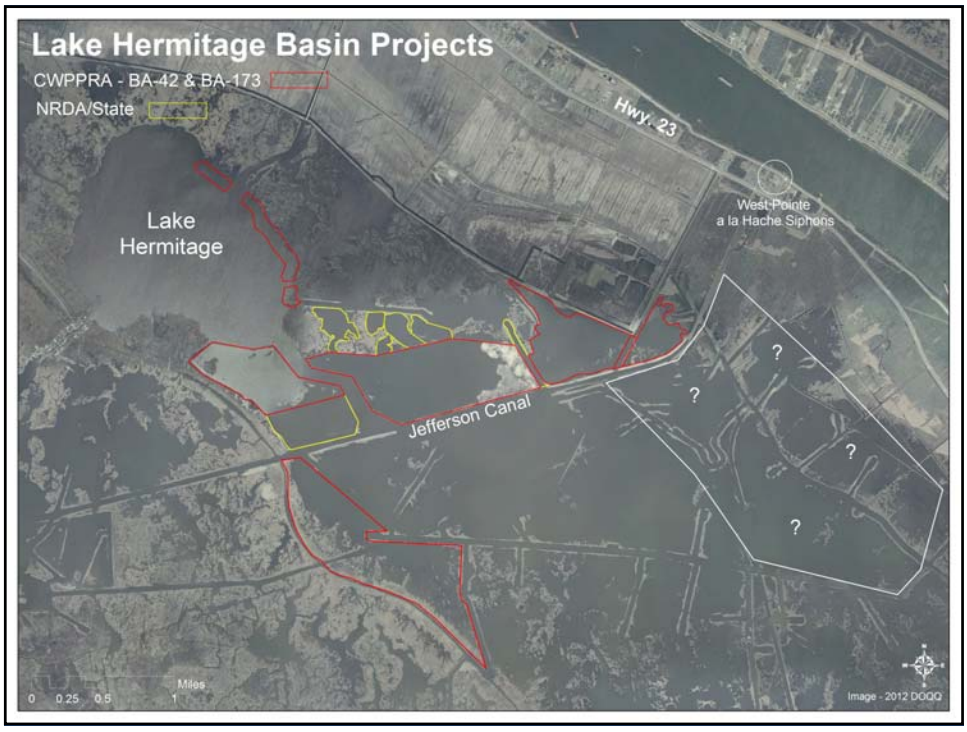
U.S. Fish & Wildlife Service

Louisiana Ecological Services Field Office

Grand Bayou Marsh Creation and Terracing - Option B




2012 Coastal Master Plan
Southeast Coast
Projects Included:
Structural Protection
Bank Stabilization
Oyster Barrier Reef
Ridge Restoration
Shoreline Protection
Barrier Island Restoration
Marsh Creation
Sediment Diversion
Hydrologic Restoration


Lake Hermitage Basin Projects
CWPPRA - BA-42 & BA-173
NRDA/State
Hwy. 23
Lake Hermitage
West Pointe a la Hache Siphons
Jefferson Canal
?
?
?
?
0 0.25 0.5 1
Miles
Image - 2012 DOQQ


U.S. Fish & Wildlife Service
Louisiana Ecological Services Field Office
Grand Bayou Marsh Creation and Terracing - Option A
BA-42 Lake Hermitage Marsh Creation
Highway 23
Marsh Creation 190 ac
Marsh Creation 175 ac
Marsh Creation - 365 acres
Terracing - 21,700 ft (15 ac)
Grand Bayou


U.S. Fish & Wildlife Service
Louisiana Ecological Services Field Office
Grand Bayou Marsh Creation and Terracing - Option B
BA-42 Lake Hermitage Marsh Creation
Marsh Creation 66 ac
Highway 23
Marsh Creation 144 ac
Marsh Creation 280 ac
Marsh Creation - 490 acres
Terracing - 39,200 ft (28 ac)
Grand Bayou

Grand Bayou Marsh Creation & Terracing

- Mississippi River borrow site
- 365/490 acres of marsh creation/nourishment
- 21,700/39,200 feet of terraces (15/28 acres)
- Net acres = 319/396
- Construction plus contingency = $27.5M/$28.4M

R2-BA-09

East Bayou Lafourche Marsh Creation & Terracing

R2-BA-09

PPL25 PROJECT NOMINEE FACT SHEET
January 29, 2015

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.

Service goals include restoration/protection of habitat for threatened and endangered species and other at-risk species. This project would restore habitat potentially utilized by the black rail and Louisiana eyed silkmoth which are both petitioned for listing as threatened/endangered species. The project could also benefit other at-risk species including the peregrine falcon, osprey, diamondback terrapin, and seaside sparrow.

Proposed Project Features
1. Sediments will be hydraulically dredged in Little Lake, west of Bayou Lafourche, and pumped via pipeline to create/nourish approximately 595 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 (42,200 linear ft-29 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 1,265 acres would be benefited directly and indirectly. Direct benefits include 595 acres of marsh creation/nourishment and 29 acres of terraces. Indirect benefits would occur to surrounding marshes and within the 670-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 524 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 $28.5M.

Preparer of Fact Sheet
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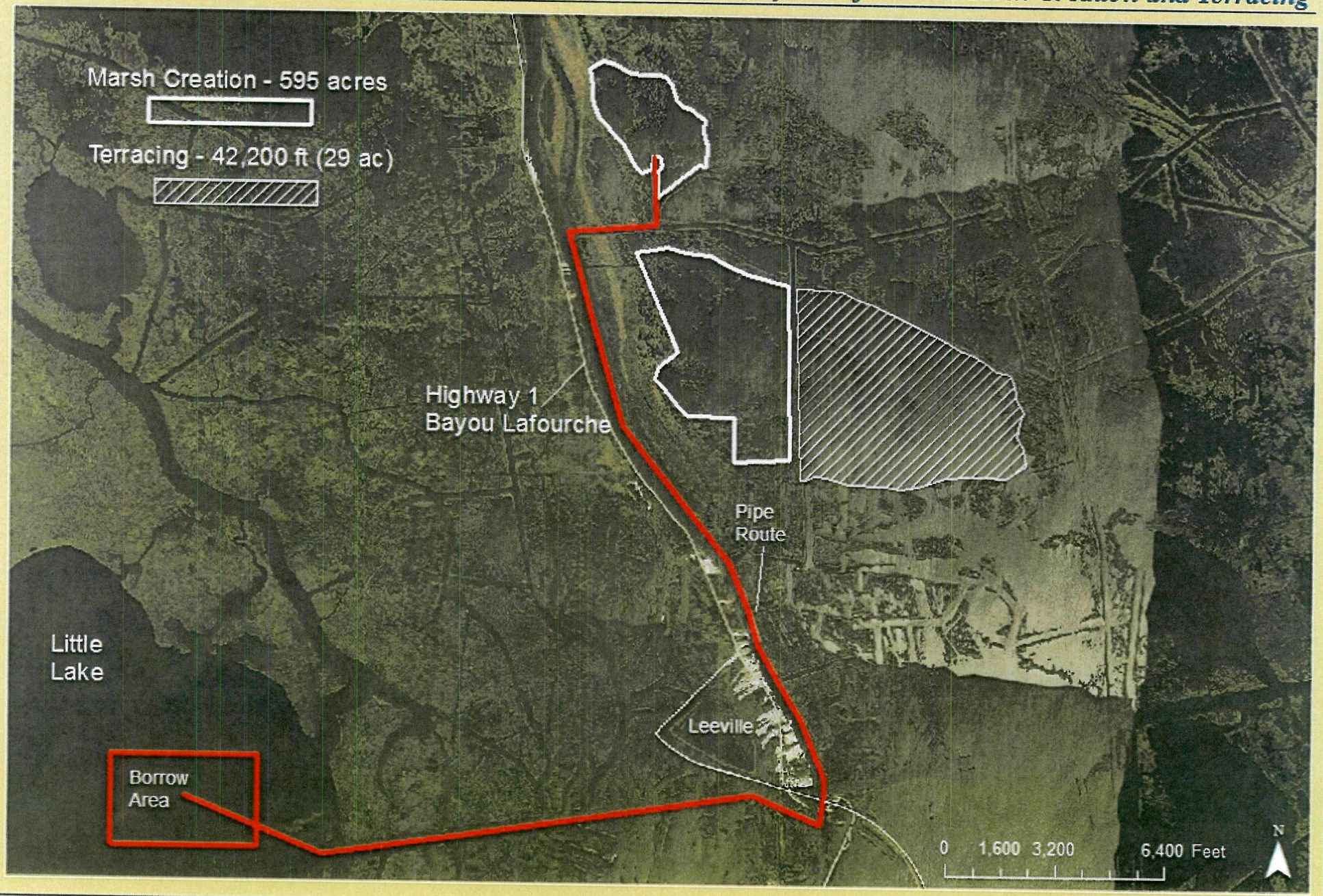
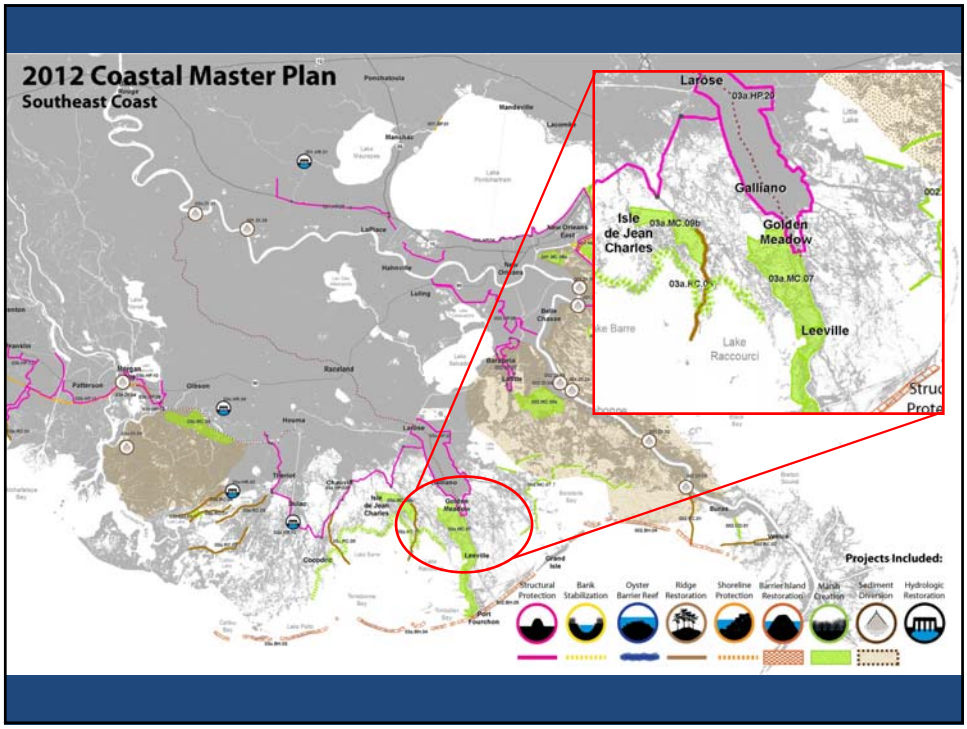
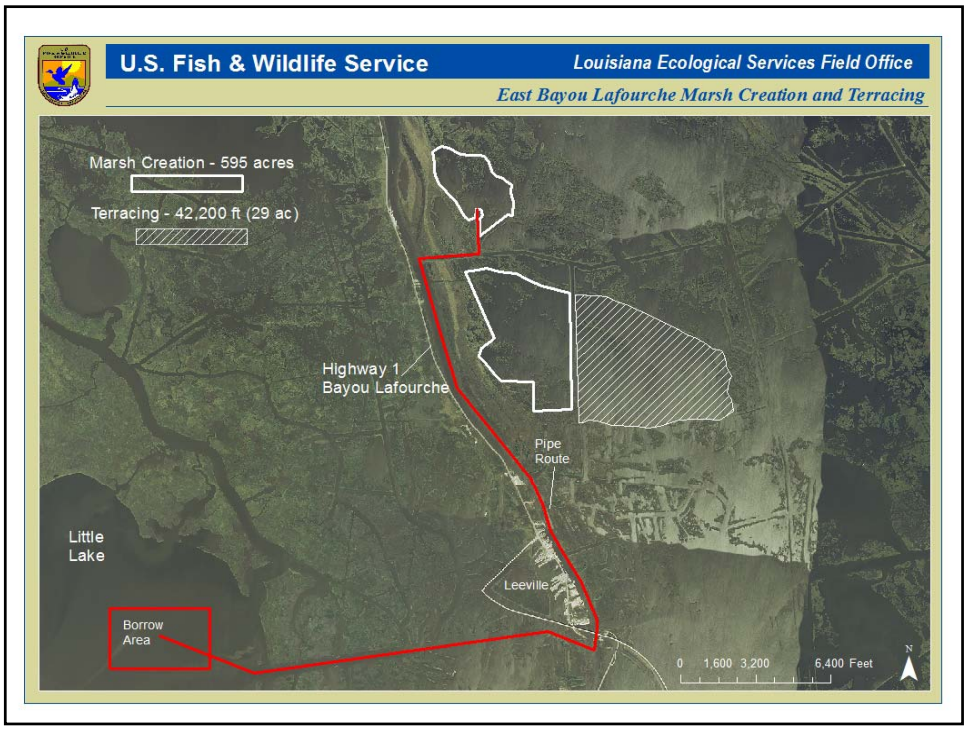
U.S. Fish & Wildlife Service

Louisiana Ecological Services Field Office

East Bayou Lafourche Marsh Creation and Terracing




2012 Coastal Master Plan
Southeast Coast
Larose
03a.HP.20
Galliano
Isle de Jean Charles
03a.MC.09b
Golden Meadow
03a.MC.07
Leeville
Lake Raccourci
Lake Barre
Projects Included:
Structural Protection
Bank Stabilization
Oyster Barrier Reef
Ridge Restoration
Shoreline Protection
Barrier Island Restoration
Marsh Creation
Sediment Diversion
Hydrologic Restoration


U.S. Fish & Wildlife Service
Louisiana Ecological Services Field Office
East Bayou Lafourche Marsh Creation and Terracing
Marsh Creation - 595 acres
Terracing - 42,200 ft (29 ac)
Highway 1
Bayou Lafourche
Pipe Route
Little Lake
Leeville
Borrow Area
0 1,600 3,200 6,400 Feet
N

East Bayou Lafourche Marsh Creation & Terracing

- Little Lake borrow site
- Maximum pump distance of feet
- 592 acres of marsh creation/nourishment
- 42,200 linear feet of terraces – 29 acres
- Net acres = 524
- Construction plus contingency = $28.5M

Questions?

R2-BA-10

Bay Coquette Ridge Restoration

PPL25 PROJECT NOMINEE FACT SHEET
January 29, 2015

Project Name:
Bay Coquette Ridge Restoration

Project Location:
Region 2, Barataria Basin, Plaquemines Parish, Bay Coquette

Louisiana's Comprehensive Master Plan for a Sustainable Coast
002.RC.02 – 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.

Problem:
Wave and storm surge energy have altered the hydrology and reduced habitat as the historic ridge features of the Spanish Pass near Venice have eroded over time.

Goals:
The goal of this project is to restore the ridge feature in order to provide wave and storm surge attenuation and to create marsh on either side of the ridge. This project will also provide additional sediment trapping for proposed diversions.

Proposed Solution:
This project continues the "first line of defense" strategy further east from the barrier island chain at the very end of the Spanish Pass Ridge. The Bay or other offshore sites would be used for borrow material to create the ridge and marsh features. Depending on the option chosen, a living shoreline feature could be used in Option B. Option A will use 2.7 MCY of fill to create 540 acres of marsh.

Project Benefits
- Option A would create 540 ac and 14,198 ft of ridge.
- Option B would create 586 ac, 13,814 ft of ridge, and 11,287 ft of living shoreline.

Preliminary Construction Costs
The preliminary project cost estimate for Option A with 25% contingency is $29 million with a fully funded range $30M -$35M; Option B is $30 million with a fully funded range $30M-$35M.

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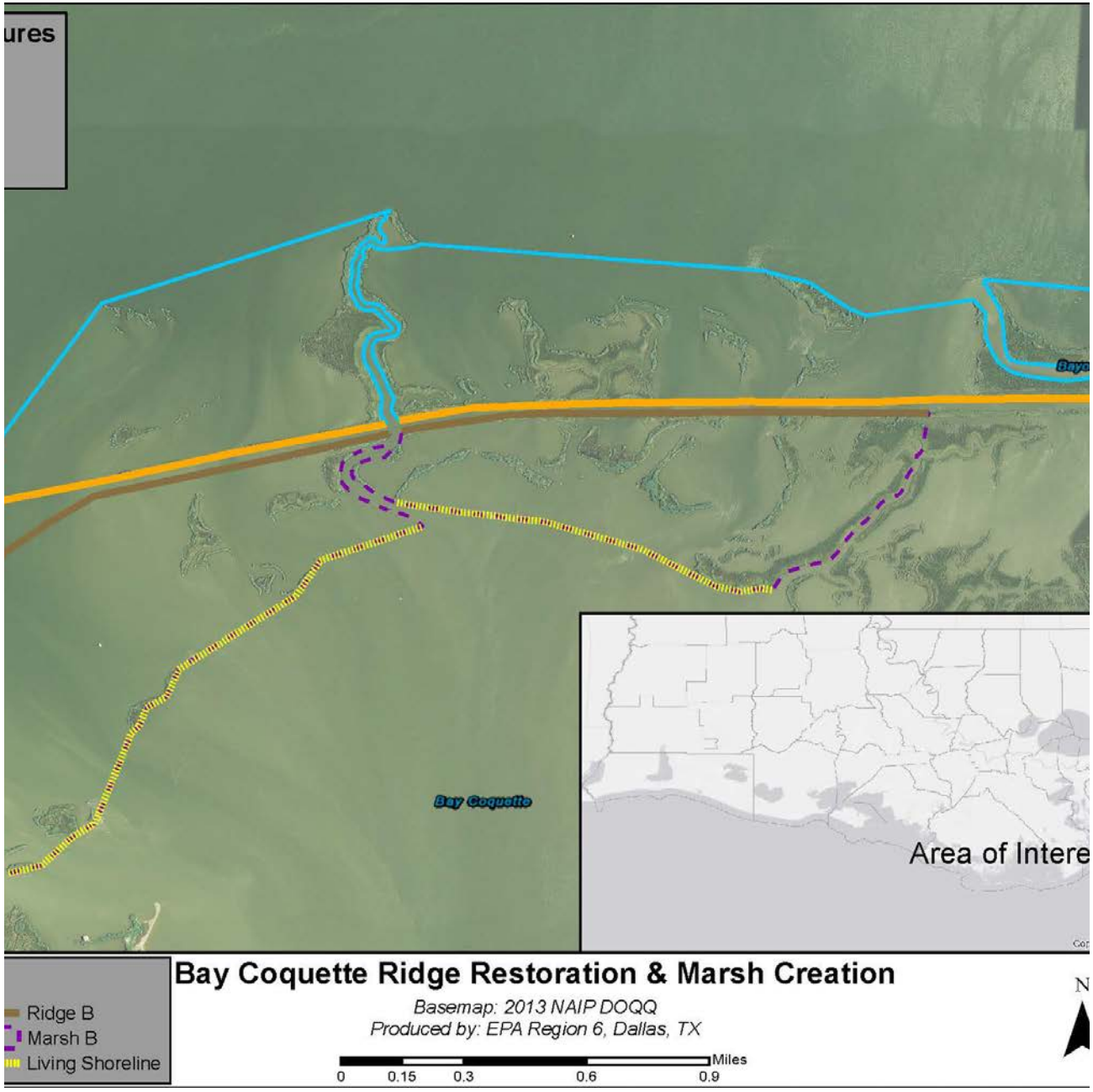
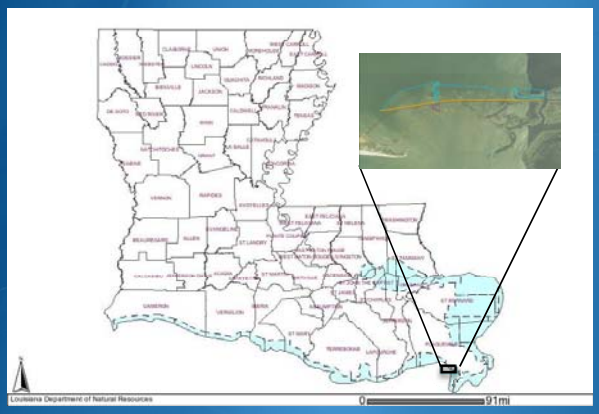
Barbara Aldridge; (214)665-2712; Aldridge.barbar@epa.gov


ures
Bay Coquette
Area of Intere
Ridge B
Marsh B
Living Shoreline
Bay Coquette Ridge Restoration & Marsh Creation
Basemap: 2013 NAIP DOQQ
Produced by: EPA Region 6, Dallas, TX
Miles
0
0.15
0.3
0.6
0.9
N

Bay Coquette Ridge Restoration & Marsh Creation



Coastal Wetlands Planning, Protection and Restoration Act

Bay Coquette Ridge Restoration

- Located in Barataria Bay, west of Venice and "The Wheel"
- Very end of Master Plan's Spanish Pass Ridge - 002.RC.02 component
- Continue "1st Line of Defense" strategy further east from barrier island chain
- Provide additional sediment trapping for proposed diversions
- Use Bay or further offshore for borrow

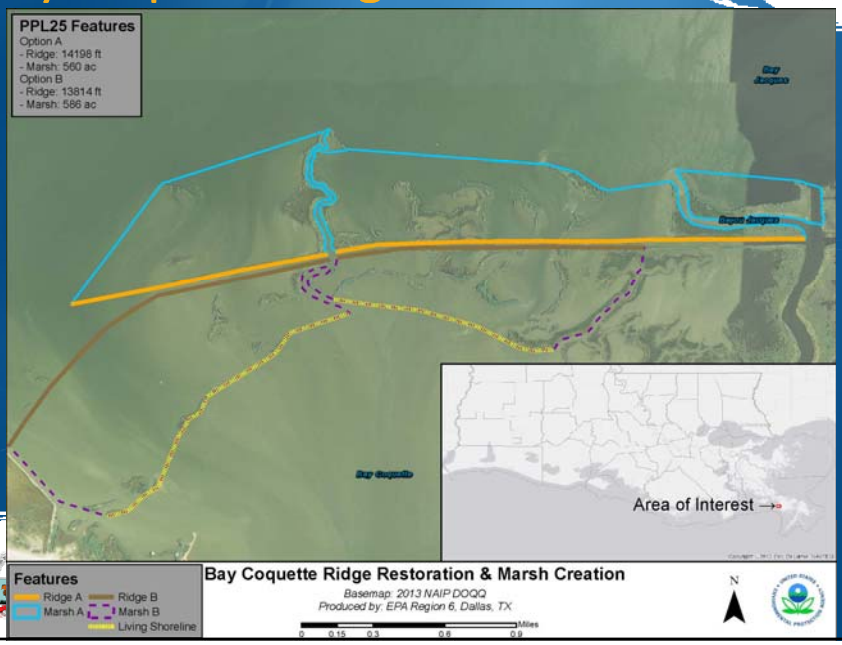
Coastal Wetlands Planning, Protection and Restoration Act

Solution

Master Plan 2012: 002.RC.02 – 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.

Coastal Wetlands Planning, Protection and Restoration Act

Bay Coquette Ridge Restoration



Project Features

- Option A would create 540 ac of marsh using approximately 2.7MCY of dredged material
- 14,198 ft ridge features would be restored
- Estimated cost + 25% contingency = $29 million

Coastal Wetlands Planning, Protection and Restoration Act

Project Features

- Option B would create 586 ac of marsh using approximately 2.9MCY of dredged material
- 13,814 ft ridge features would be restored and 11,287 ft of living shoreline created
- Estimated Construction Cost + 25% contingency = $30 million

Coastal Wetlands Planning, Protection and Restoration Act


Questions?
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Coastal Wetlands Planning, Protection and Restoration Act

R2-BA-11

Rattlesnake Bayou Marsh Creation

PPL25 PROJECT NOMINEE FACT SHEET
January 29, 2015

Project Name:
Rattlesnake Bayou Marsh Creation

Project Location:
Region 2, Barataria Basin, Plaquemines Parish, Barataria Bay

Louisiana's Comprehensive Master Plan for a Sustainable Coast
002.MC.07 – 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.

Problem:
Marsh along the Freeport/Sulphur Co. Canal has experienced severe land loss and habitat conversion. What was once a productive freshwater marsh has been converted to open water.

Goals:
The goal of this project is to create marsh along the Freeport/Sulphur Co. Canal to create new habitat, restore degraded marsh and reduce wave erosion.

Proposed Solution:
The project would place approximately 1.5 MCY of dredged material to create approximately 545 acres of emergent marsh in three separate cells.

Preliminary Project Benefits
- The project will create 545 acres of emergent marsh habitat
- Potential to use river sediment as fill since the project is approximately 7 miles away
- Indicated as a project on Conoco-Phillips Property, P-1 concept

Preliminary Construction Costs:
The preliminary project cost estimate with 25% contingency is $17 million

Preparer(s) of Fact Sheet:
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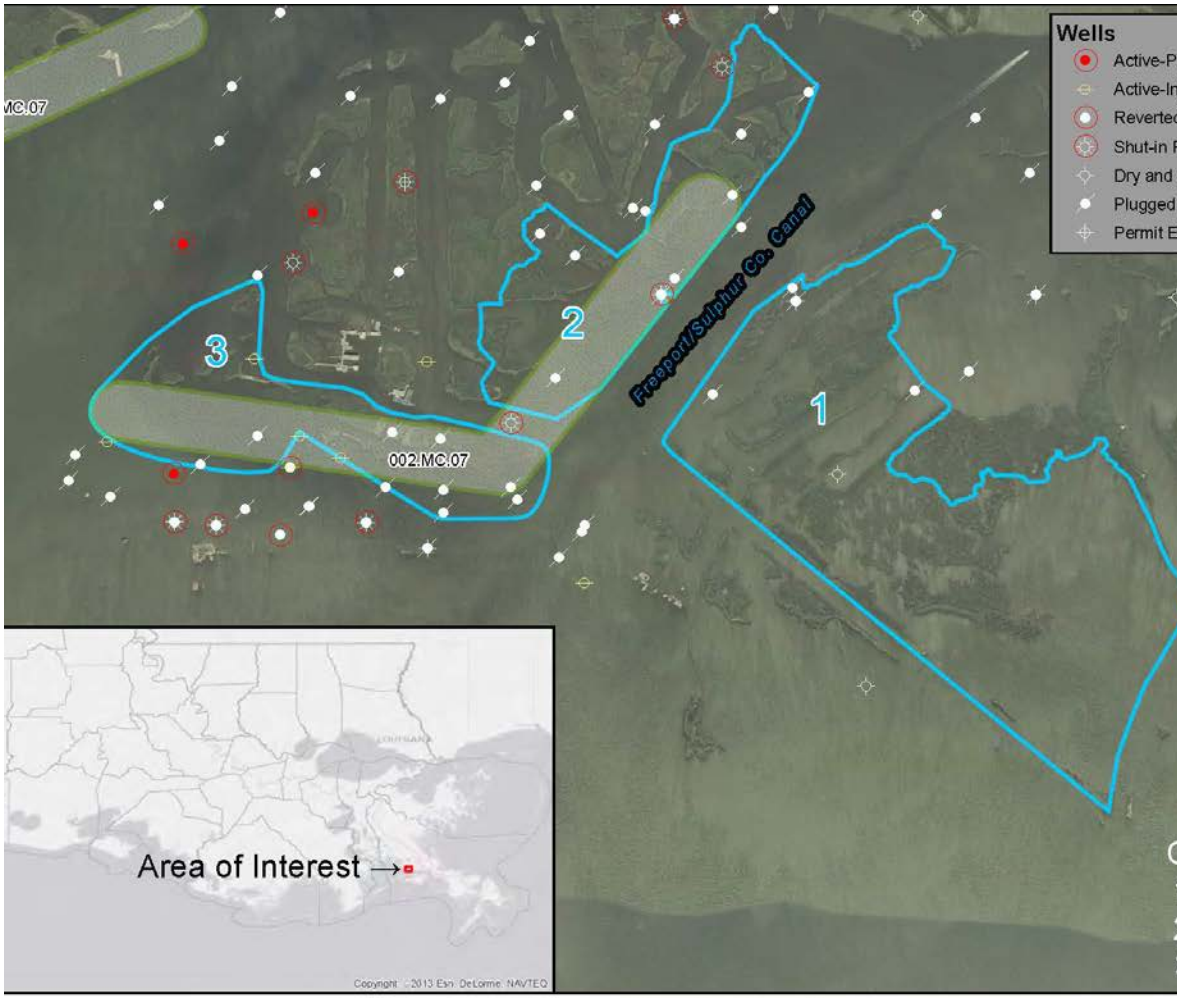


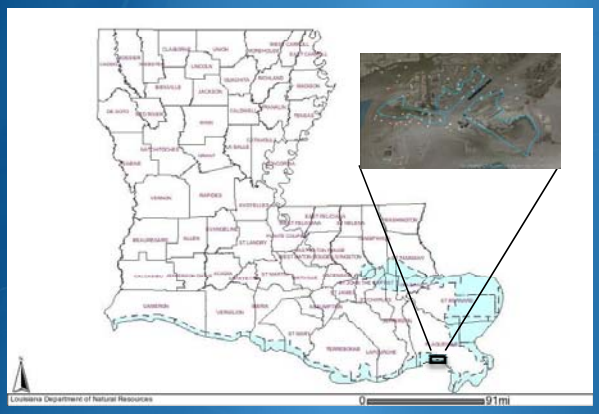
Rattlesnake Bayou Marsh Creation

Cells
on

Basemap: 2013 NAIP DOQQ
Well Data: LDNR Database (10/22/14)
Produced by: EPA Region 6, Dallas, TX

0 0.15 0.3 0.6 0.9 Miles

Rattlesnake Bayou Marsh Creation



Coastal Wetlands Planning, Protection and Restoration Act

Problem

- Marsh along the Freeport/Sulphur Co. Canal has experienced severe land loss and habitat conversion

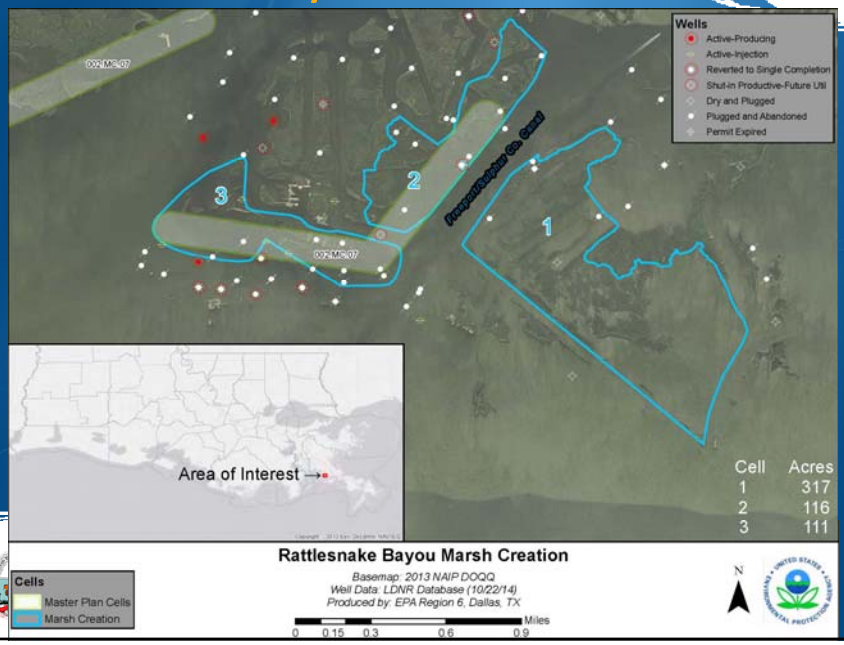
Coastal Wetlands Planning, Protection and Restoration Act

Solution

- **Master Plan 2012**: 002.MC.07 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

Coastal Wetlands Planning, Protection and Restoration Act

Rattlesnake Bayou Marsh Creation



Rattlesnake Bayou Marsh Creation

- Located in Barataria Bay at the end of Freeport/Sulphur Co. Canal
- Potential to use river sediment as fill
- On Apache and Conoco-Phillips property, P-1 Concept
- Will create 545 acres of marsh
- Preliminary project cost estimate with 25% contingency is $17 million

Coastal Wetlands Planning, Protection and Restoration Act

Questions?

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Coastal Wetlands Planning, Protection and Restoration Act

R2-BA-12

Spanish Pass Ridge & Marsh Creation

R2-BA-12

PPL25 PROJECT NOMINEE FACT SHEET
January 29, 2015

Project Name
Spanish Pass Ridge and Marsh Creation

Project Location
Region 2, Barataria Basin, Plaquemines Parish

Louisiana's Comprehensive Master Plan for a Sustainable Coast
Spanish Pass Ridge Restoration: 002.RC.02

Problem
Widespread land loss throughout the southeastern portion of Barataria Bay has led to an increasingly open and exposed area flanking the west bank of the lower Mississippi River between Empire and Venice. Structural features (continuous marsh landmasses, bayou banklines, and barrier shorelines) in this area are limited, and future degradation and fragmentation will increase the vulnerability to losses driven by water level setup/wind-driven waves and storm surges. The wetland loss rate for the Grand Laird subunit is -0.77%/year based on USGS data from 1985 to 2009.

Goals
Project goals include 1) creating/nourishing marsh and associated edge habitat for aquatic species through pipeline sediment delivery; and, 2) restoring a portion of the Spanish Pass ridge to reduce wave and tidal setup and provide fallout habitat for neo-tropical migrant birds and wildlife. Specific phase 0 goals include creating about 286 acres of emergent saline marsh, nourishing 84 acres of existing saline marsh and constructing about 10,250 linear feet (about 16 acres) of maritime ridge habitat.

Proposed Solution
The proposed project's primary features are to restore 370 acres of intertidal marsh (286 ac creation and 84 ac nourishment) and 10,250 linear foot of ridge north of Spanish Pass, west of Venice. An estimated 3.1 mcyd of material would be hydraulically dredged from Yellow Cotton Bay to create marsh at a target elevation of +1.4 foot NAVD 88 and about 25,000 feet of retention dikes will be required for containment. Approximately 10,250 linear foot of earthen ridge would be created north of historical Spanish Pass. The ridge feature will be constructed by building substantial retention dikes (i.e., 20-foot crown width up to a +5.0 feet NAVD 88 elevation). Containment dike gapping will be incorporated into the project design and cost estimate. Following consolidation of the marsh platform, vegetative plantings will be installed (including woody species on ridge), although at a reduced density due to project scale.

Preliminary Project Benefits

1) *What is the total acreage benefited both directly and indirectly?*
   The project is anticipated to benefit about 386 total acres. The project would directly benefit about 370 acres of saline marsh and 16 acres of restored ridge.

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

The project is estimated to provide net benefits to 282 acres of marsh/ridge habitat over the project life.

3) *What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (e.g., 50% reduction in the background loss rate)?*
The anticipated land loss rate reduction throughout the area of direct benefits will be 50-75% 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 would restore structural features associated with ridges and flanking marshes in the Spanish Pass area.

5) *What is the net impact of the project on critical and non-critical infrastructure?*
The proposed project would provide potential infrastructure benefits to the Venice area as well as west bank back levee. The project could also provide positive impacts to oil and gas facilities located adjacent to the project area.

6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?*
The project would be synergistic with the BA-68 Grand Laird Marsh and Ridge Project (currently under construction) in further re-establishing the structural framework of southeastern Barataria Bay.

Identification of Potential Issues
The proposed project has potential oysters and pipeline crossing issues.

Preliminary Construction Costs
The estimated construction cost including 25% contingency is $26,540,099. The fully funded cost range is $30M-$35M.

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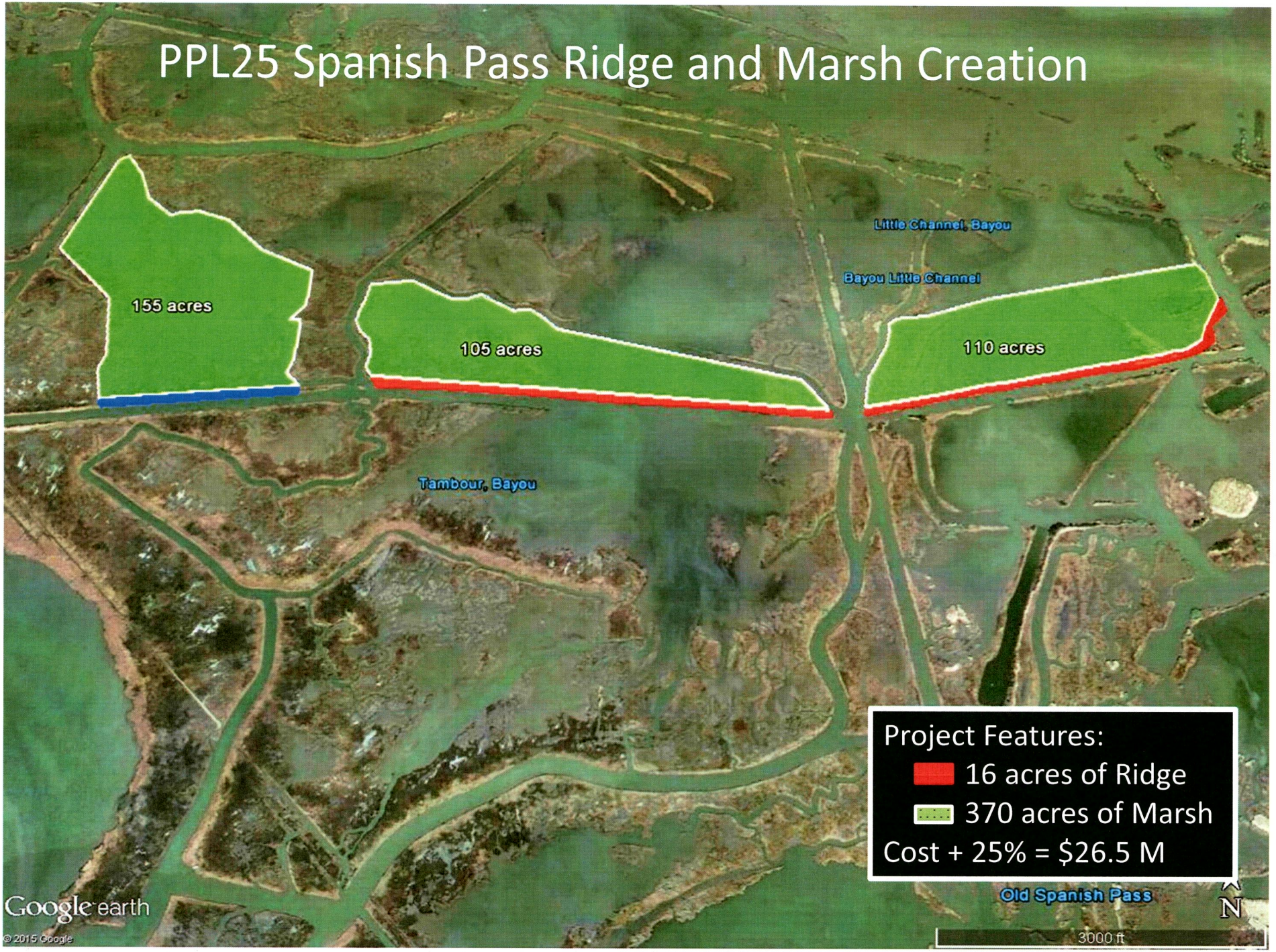
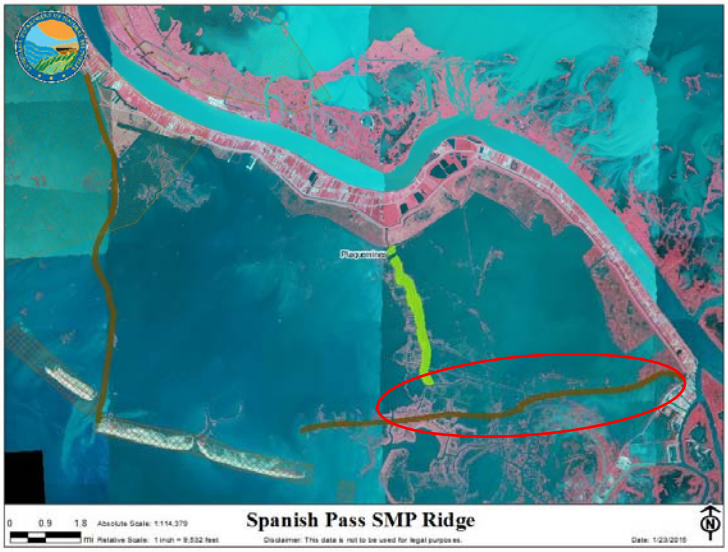
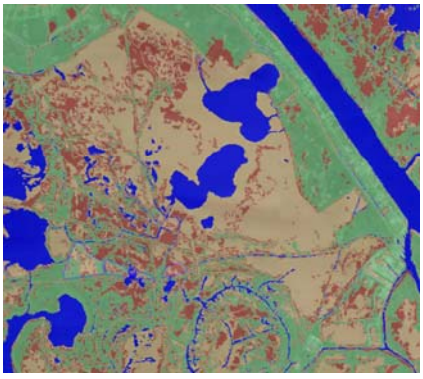
Lisa Abernathy, NOAA Fisheries, 225-389-0508, ext 209, Lisa.Abernathy@noaa.gov


PPL25 Spanish Pass Ridge and Marsh Creation
155 acres
105 acres
110 acres
Little Channel, Bayou
Bayou Little Channel
Tambour, Bayou
Old Spanish Pass
Project Features:
16 acres of Ridge
370 acres of Marsh
Cost + 25% = $26.5 M
Google earth
© 2015 Google
N
3000 ft

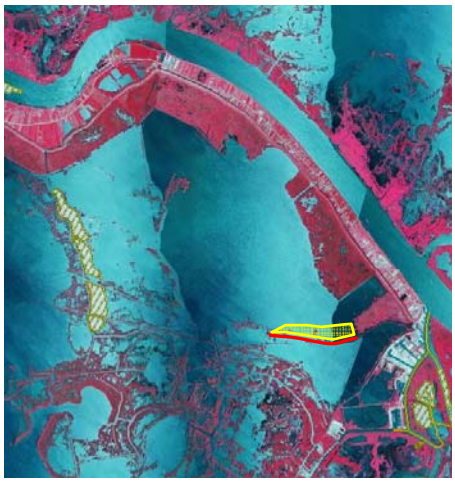


PPL25 Spanish Pass Ridge and Marsh Creation
PPL25 Region 2 RPT, January 29, 2015
Kimberly Clements
National Marine Fisheries Service

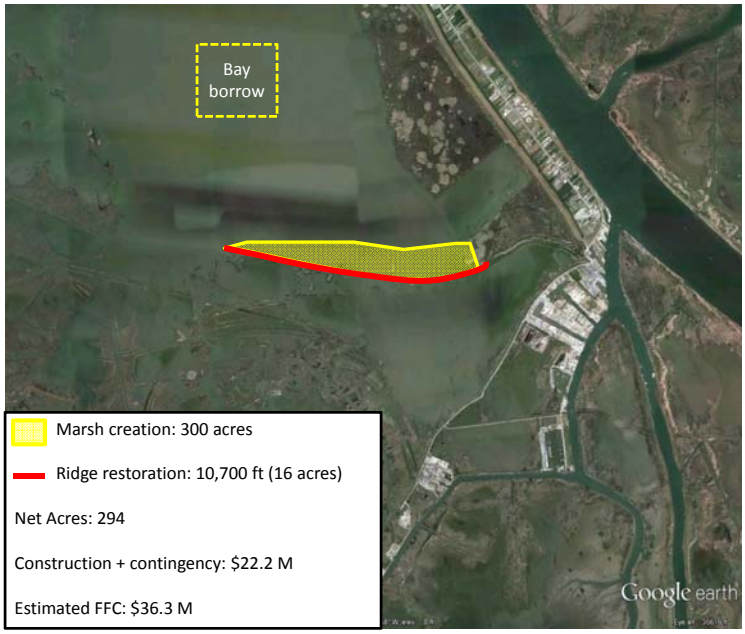
PPL23 Spanish Pass nominee

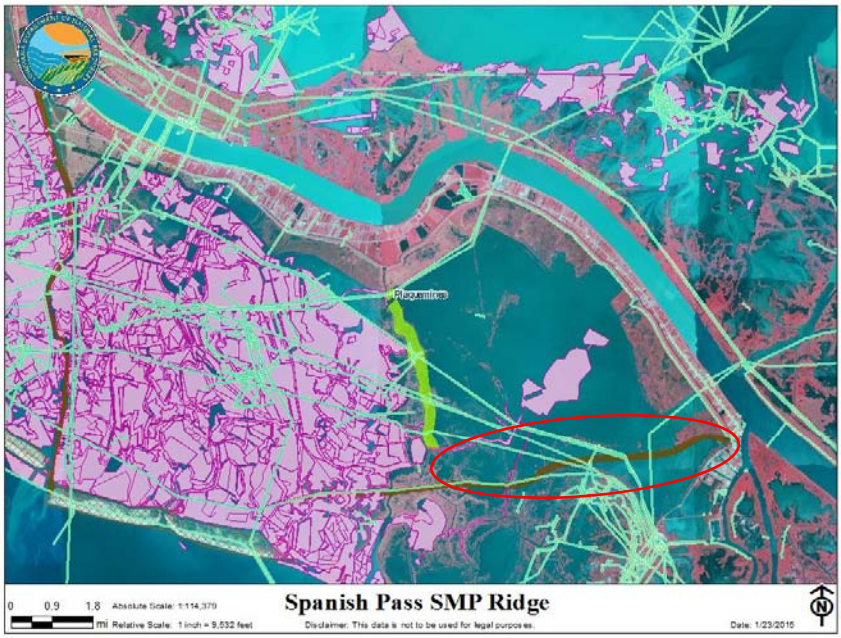


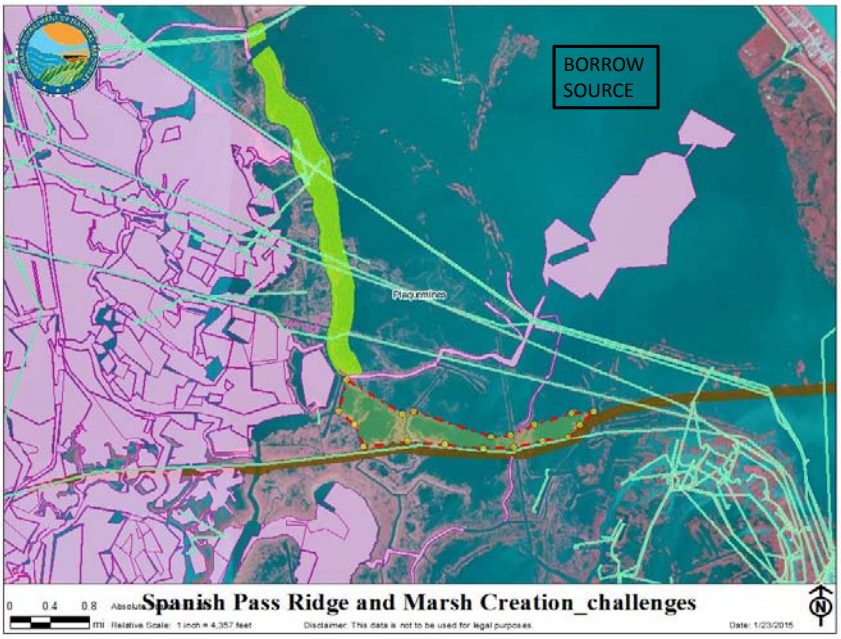
Blue: water: 1956 – present
Brown: Land converted to water 1956 – 1988
Red: Land converted to water 1988 - 2008
Green: 2008 land



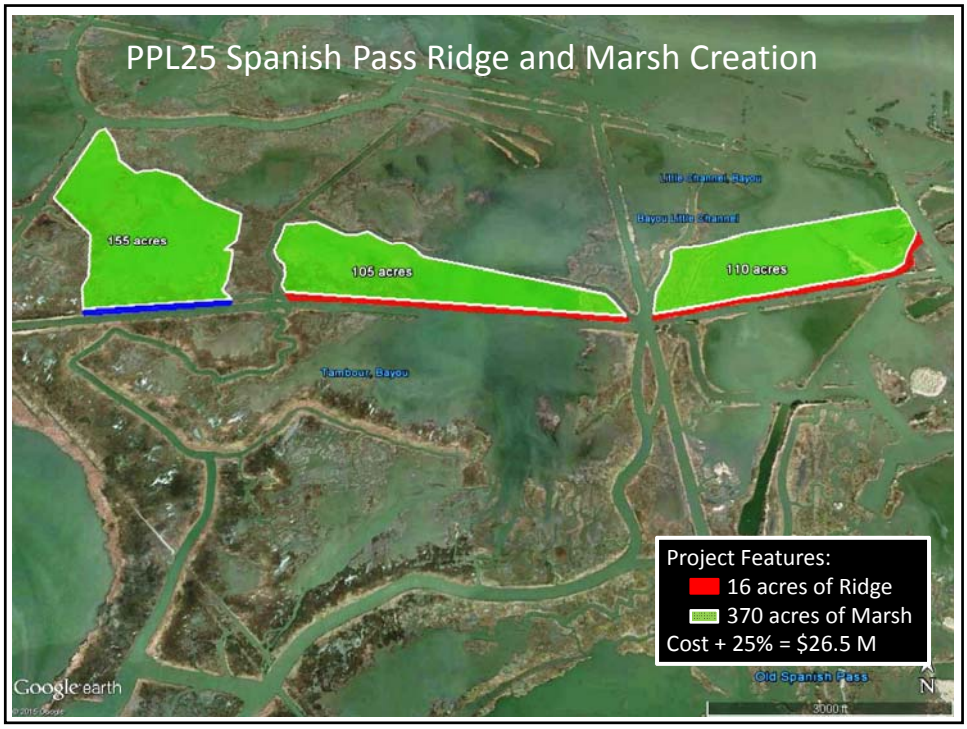
Spanish Pass Marsh and Ridge Creation






BORROW SOURCE
Plaquemines
Spanish Pass Ridge and Marsh Creation_challenges
0 0.4 0.8
Relative Scale: 1 inch = 4,357 feet
Disclaimer: This data is not to be used for legal purposes.
Date: 1/23/2015


BA-68 GRAND LIARD RIDGE AND MARSH CREATION UNDER CONSTRUCTION



PPL25 Spanish Pass Ridge and Marsh Creation

- 16 acres of ridge restoration
- 370 acres of marsh restoration
- $26.5 cost plus contingency
- Consistent with State Master Plan
- Synergistic with BA-68 Grand Liard Ridge and Marsh Creation currently under construction

R2-BA-13

Bayou Dupont Delivery – Marsh Creation 4

PPL24 PROJECT NOMINEE FACT SHEET
January 29, 2015

Project Name:
Bayou Dupont Sediment Delivery – Marsh Creation 4

Louisiana's Comprehensive Master Plan for a Sustainable Coast: 002.MC.05e: 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.

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. Fully funded range $25M-$30M.

Preparer of Fact Sheet:
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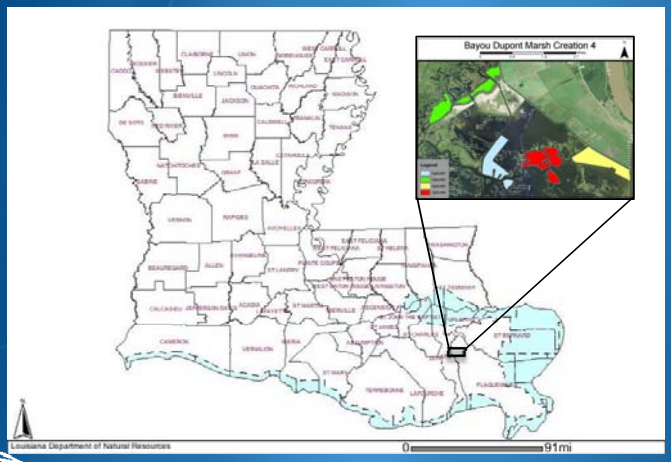
Barbara Aldridge, EPA, 214-665-2712; aldridge.barbara@epa.gov

Bayou Dupont Marsh Creation 4

Miles
0 0.8 1.6 2.4

N

Bayou Dupont Marsh Creation #4



Coastal Wetlands Planning, Protection and Restoration Act

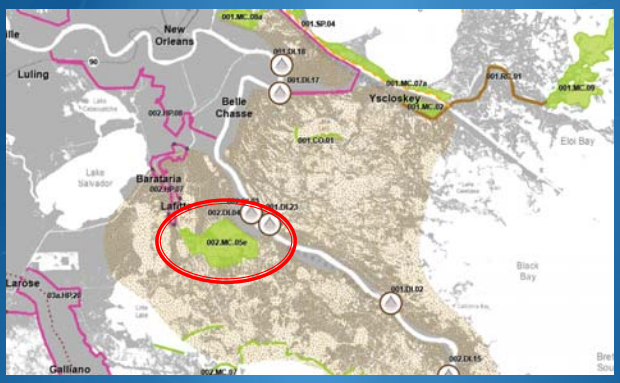
Problem

- Marshes disconnected from Mississippi River deltaic processes (sediment, freshwater, nutrients) because of Flood Control and navigation
- Oil and Gas activity
- Marsh loss
- Highest rate of coastal wetland loss (1978-1990)

Coastal Wetlands Planning, Protection and Restoration Act

Solution

State Master Plan: 002.MC.05e Large-Scale Barataria Marsh Creation-Component E (1st Period Increment): Creation of approximately 8,070 acres of marsh in the Barataria Basin



Coastal Wetlands Planning, Protection and Restoration Act

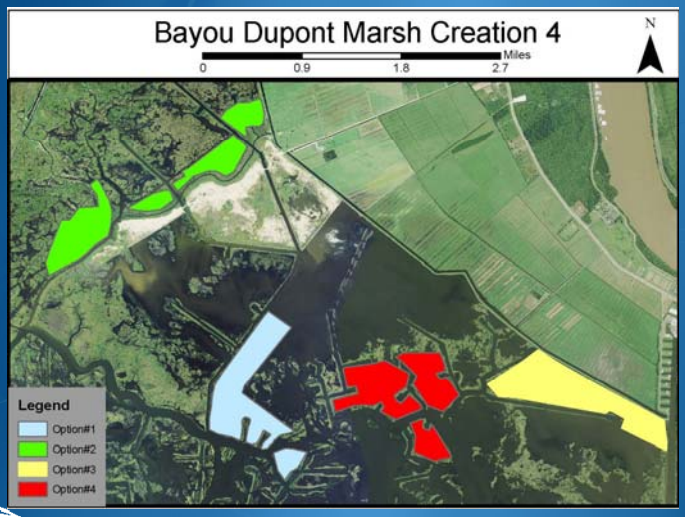
Solution

State Master Plan: 002.MC.05e Large-Scale Barataria Marsh Creation-Component E (1st Period Increment): Creation of approximately 8,070 acres of marsh in the Barataria Basin

- 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?

Brad Crawford
EPA Region 6
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Coastal Wetlands Planning, Protection and Restoration Act

R2-BA-14

Grand Pierre Island Restoration

R2-BA-14

PPL25 Grand Pierre Island Restoration

Louisiana's 2012 Coastal Master Plan:
Consistent

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 Chenier 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 approximately $19.2 million with a fully funded cost in the range of $21-$26 million.

Preparer(s) of Fact Sheet:
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patrick.williams@noaa.gov

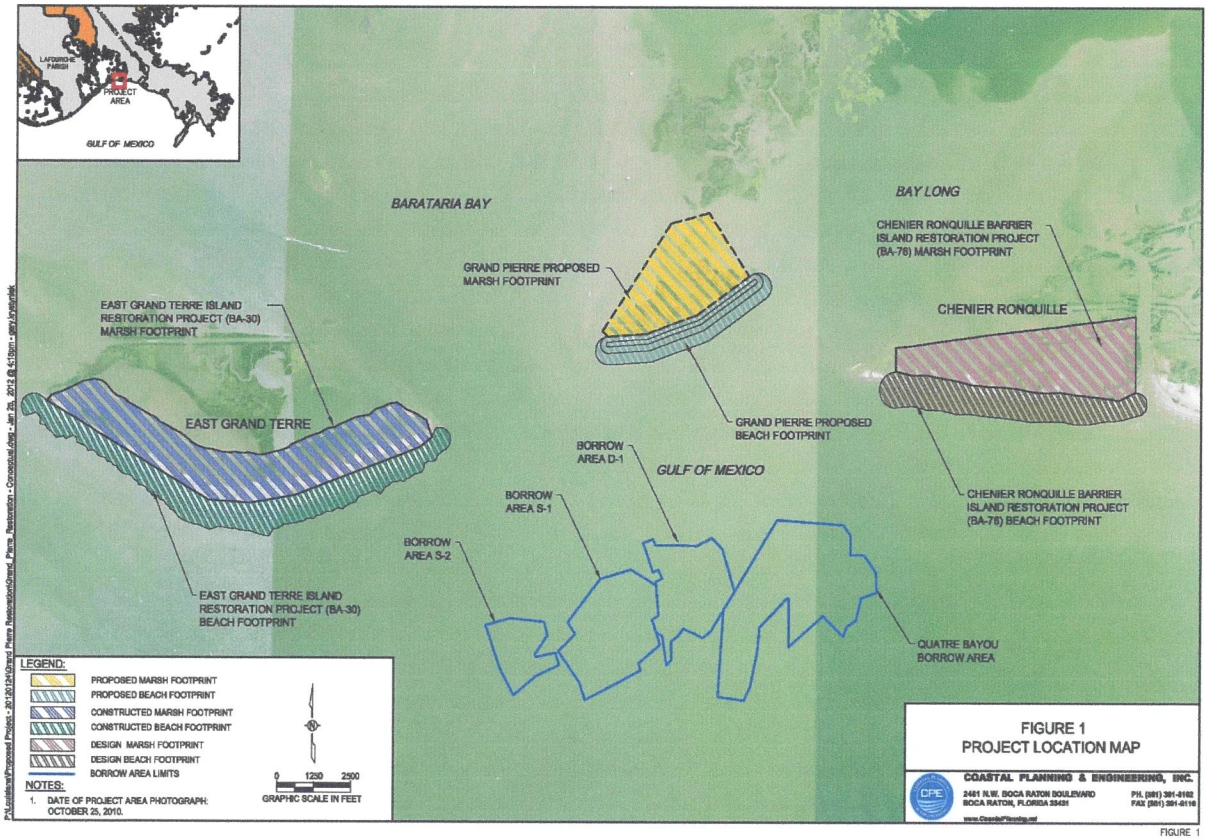


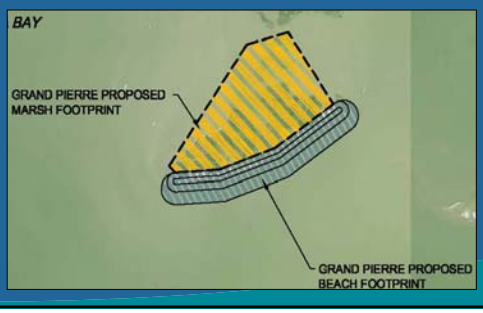
FIGURE 1

NOAA FISHERIES
Restoration Center

Grand Pierre Barrier Island Restoration

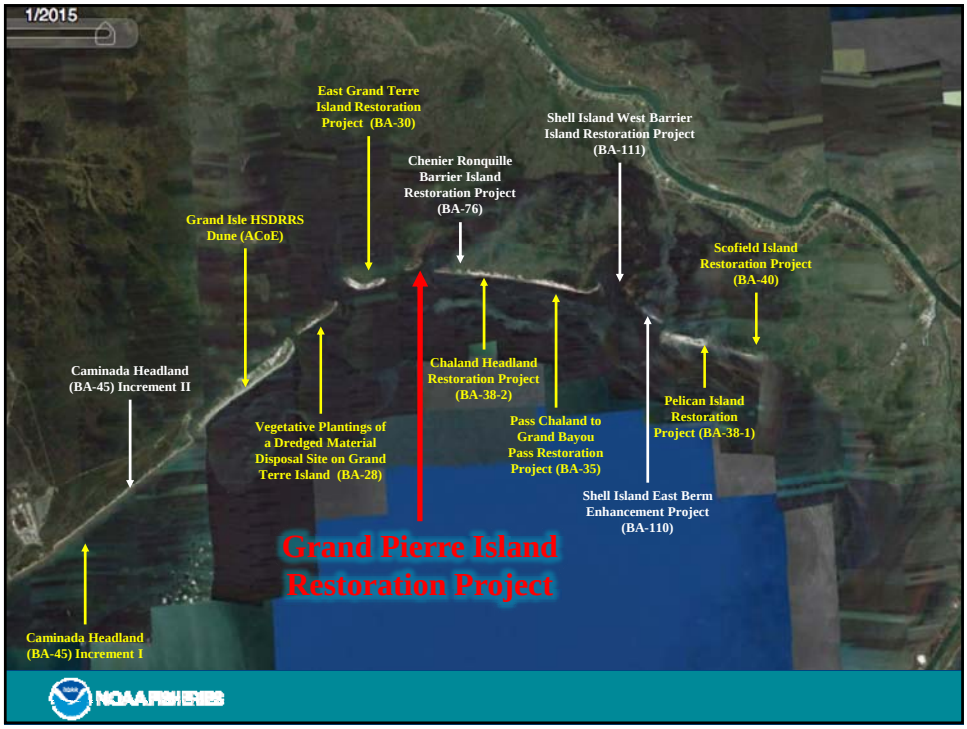
Region 2 – Barataria Basin
Plaquemines Parish

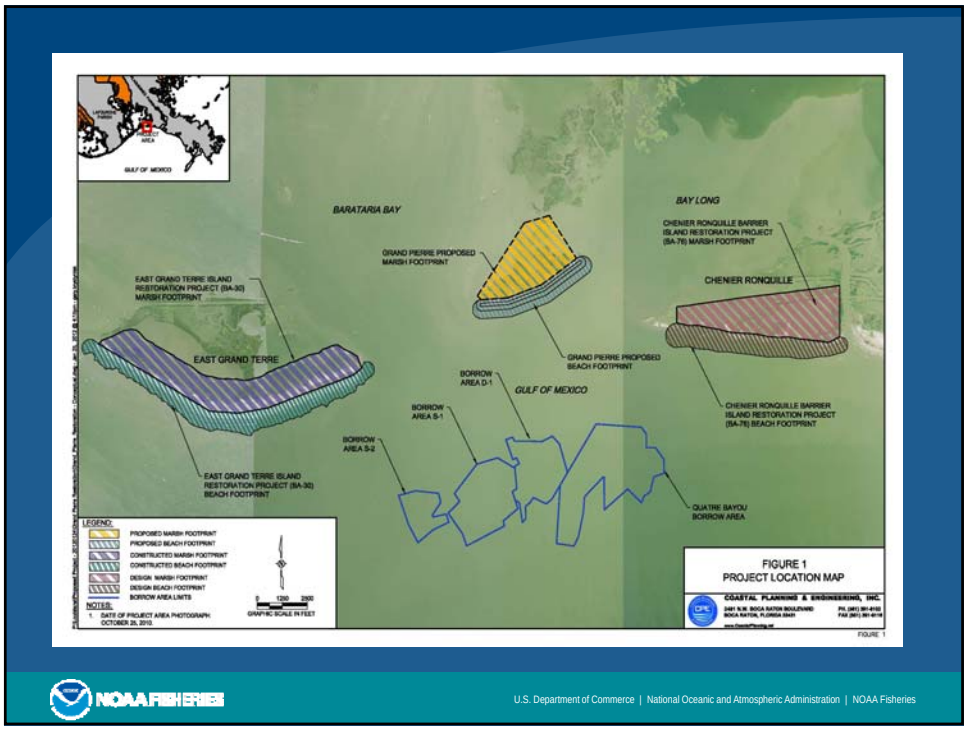
January 29, 2015



Why Do We Need Grand Pierre?

- The final jewel in the Gulf perimeter defense for W. Plaquemines, Jefferson, S. Orleans and E. Lafourche
- Missing link in 50 miles of barrier islands & headlands
- Island protects a critical piece of lower-basin marsh which forms the inland coastline of SE Barataria Bay
- Loss would create the widest tidal pass into the Barataria Basin
- Not identified by the state or feds as a priority for restoration under any DWH funding mechanism


1/2015
East Grand Terre Island Restoration Project (BA-30)
Chenier Ronquille Barrier Island Restoration Project (BA-76)
Shell Island West Barrier Island Restoration Project (BA-111)
Grand Isle HSDRRS Dune (ACoE)
Scofield Island Restoration Project (BA-40)
Caminada Headland (BA-45) Increment II
Chaland Headland Restoration Project (BA-38-2)
Vegetative Plantings of a Dredged Material Disposal Site on Grand Terre Island (BA-28)
Pass Chaland to Grand Bayou Pass Restoration Project (BA-35)
Pelican Island Restoration Project (BA-38-1)
Shell Island East Berm Enhancement Project (BA-110)
Grand Pierre Island Restoration Project
Caminada Headland (BA-45) Increment I
NOAA FISHERIES


BARATARIA BAY
BAY LONG
GULF OF MEXICO
EAST GRAND TERRE
CHENIER RONQUILLE
FIGURE 1
PROJECT LOCATION MAP
NOAA FISHERIES
U.S. Department of Commerce | National Oceanic and Atmospheric Administration | NOAA Fisheries

What is the Solution?

- Complete barrier island restoration
- Create 127 acres beach and dune
- Create/nourish 229 acres marsh
- Sufficient material calculated (1.45 mcy)
- Construction $15,400,000 (+ 25% contingency $19,200,000)

R2-BA-15

Wilkinson Canal Marsh Creation & Terracing

R2-BA-15

PPL25 Wilkinson Canal Marsh Creation and Terracing
January 29, 2015

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 (426 marsh creation and 39 marsh 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 (213 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. Elimination of terraces would get the estimated fully funded cost range within the $30 to $35 million.

Preliminary Project Benefits

1) *What is the total acreage benefited both directly and indirectly?*
   This total project area is approximately 815 acres (426 acres of marsh creation and 39 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 and the estimated fully funded cost range is $35 to $40 million.

Preparer(s) of Fact Sheet:
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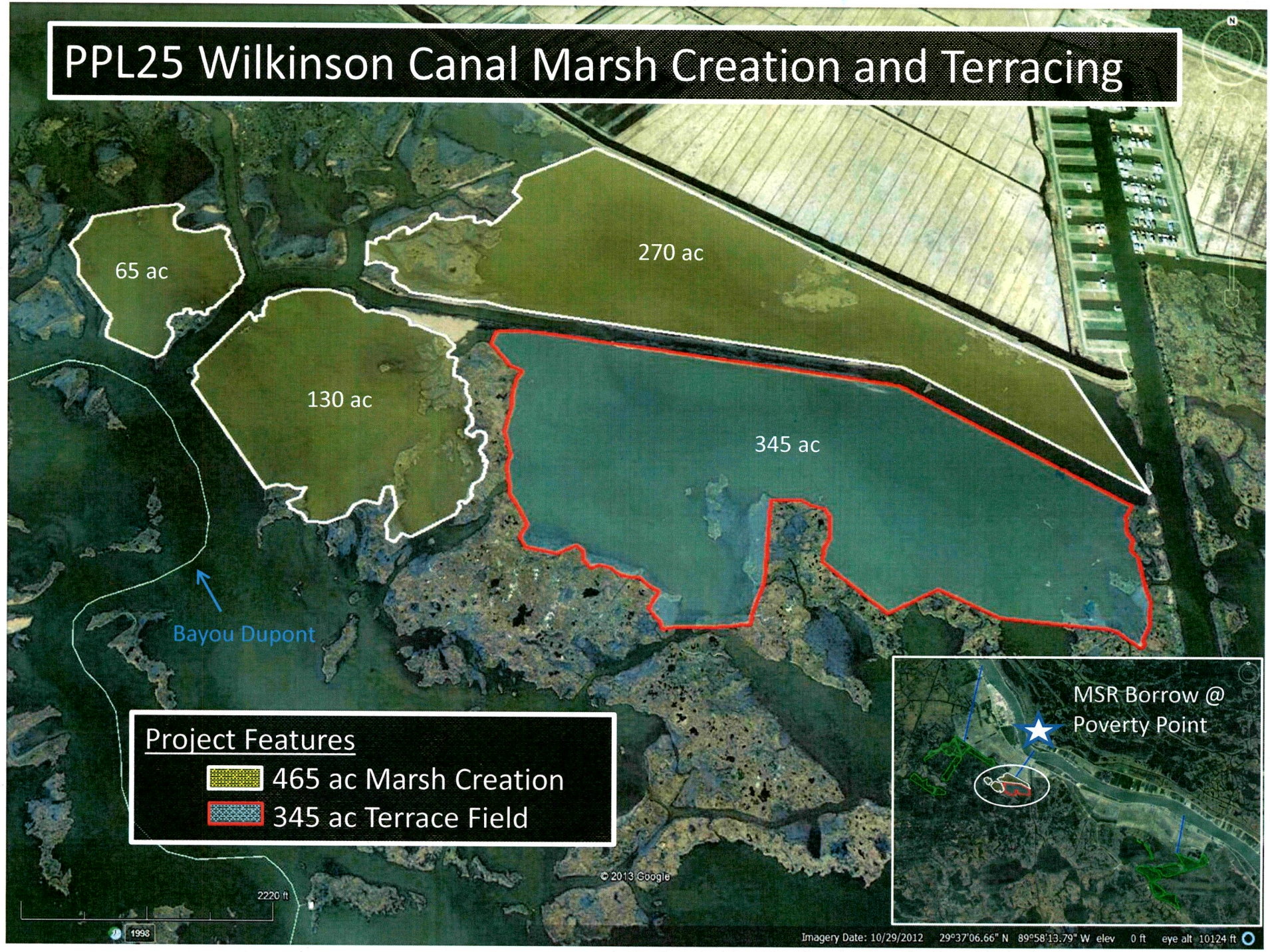
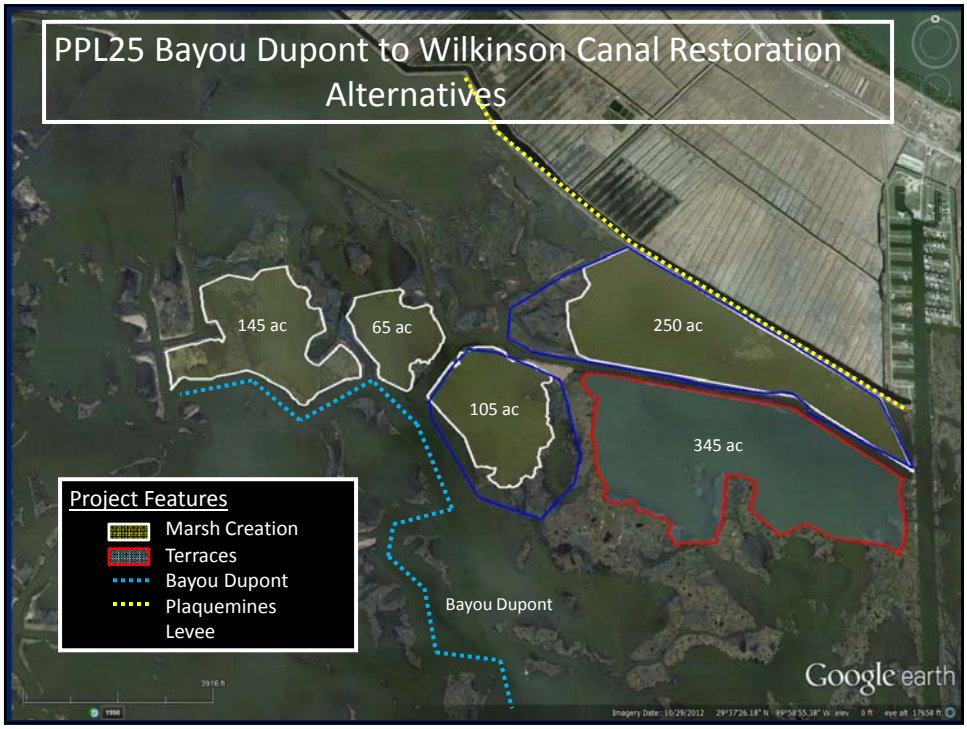
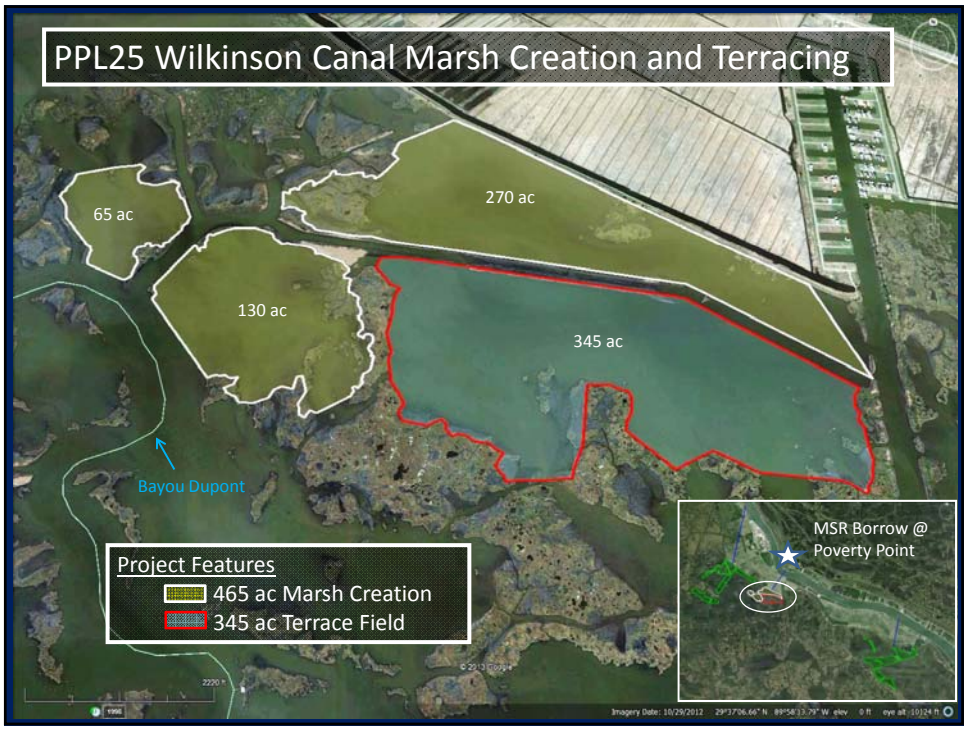
Patrick Williams, NOAA Fisheries, 225-389-0508, ext 208, patrick.williams@noaa.gov


PPL25 Wilkinson Canal Marsh Creation and Terracing
65 ac
270 ac
130 ac
345 ac
Bayou Dupont
Project Features
465 ac Marsh Creation
345 ac Terrace Field
MSR Borrow @ Poverty Point
© 2013 Google
2220 ft
1998
Imagery Date: 10/29/2012 29°37'06.66" N 89°58'13.79" W elev 0 ft eye alt 10124 ft

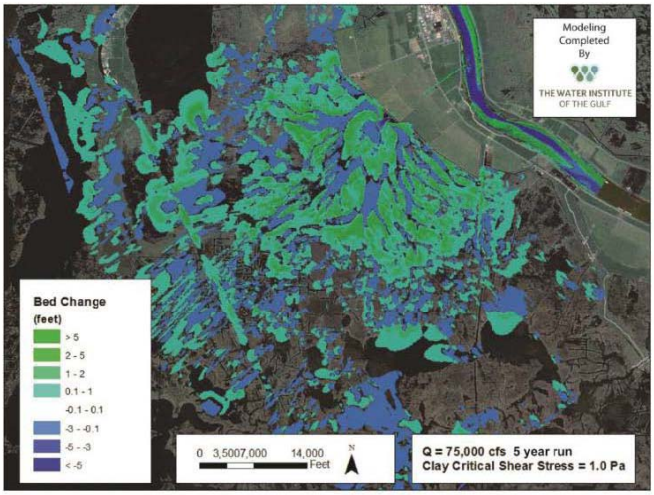

PPL25 Bayou Dupont to Wilkinson Canal Restoration Alternatives
145 ac
65 ac
250 ac
105 ac
345 ac
Project Features
Marsh Creation
Terraces
Bayou Dupont
Plaquemines Levee
Bayou Dupont
Google earth


PPL25 Wilkinson Canal Marsh Creation and Terracing
65 ac
270 ac
130 ac
345 ac
Bayou Dupont
MSR Borrow @ Poverty Point
Project Features
465 ac Marsh Creation
345 ac Terrace Field

Summary

- 426 ac Marsh Creation; 39 ac Marsh Nourishment
- 345 ac Terrace Field
- 399 net acres after 20-yrs
- Estimated construction + 25% contingency is $28.1 M

75,000 cfs 5 years, 1.0 Pa




270 ac
130 ac
345 ac
Bayou Dupont
Project Features
400 ac Marsh Creation
345 ac Terrace Field
Wilkinson Canal
Google earth

Region 2 – BRETON SOUND BASIN

~~R2-BS-01~~

~~40 Arpent Canal Diversion~~

Not consistent with 2012 State Master Plan

PPL25 PROJECT NOMINEE FACT SHEET
January 2015

Project Name
40 Arpent Canal Diversion

Project Location
Region 2, Breton Sound Basin, St. Bernard Parish, Caernarvon mapping unit, north of Lake Lery.

Master Plan:
Project No. 001.DI.17 – Sediment diversion into upper Breton Sound in the vicinity of Braithwaite to build and maintain land.

Problem
Wetlands surrounding Big Mar/Lake Lery were heavily damaged due to Hurricane Katrina in 2005. Most damaged areas resulted in large, shallow open water ponds as well as fragmented shorelines along the perimeter of Lake Lery. Since the storm, marshes east of Big Mar and north of Lake Lery have shown little to no recovery which could result in the expansion of Lake Lery and further loss of interior emergent vegetation. Only under certain limited conditions does water from the Caernarvon Diversion travel northward in the Caernarvon Canal and flow eastward into the 40 Arpent Canal and adjoining wetlands. After Katrina, the canals that transport limited amounts of freshwater eastward have been completely blocked with debris to a point where there is virtually no freshwater/sediment reaching those marshes. The Corps of Engineers had received congressional supplemental funding to address these problems however due to a lack of getting a State Partnership Agreement signed, planned measures were not implemented.

Goals
- Provide freshwater, sediment and nutrient benefits to approximately 7,000 acres of fresh/intermediate marsh and shallow open water areas.

Proposed Project Features
1) Construct a water conveyance system from the Caernavon Diversion Outfall Channel into the 40 Arpent Canal.
2) Clean out distributary channels and create diversion openings in strategic locations to allow maximum river water flow into targeted marshes south of the 40 Arpent Canal, east of Caernarvon Canal/Bayou Mandeville, north of Lake Lery, and west of the pipeline canal.
3) Create approx. 100 acres of emergent marsh along the north perimeter of Lake Lery in interior open water areas that have breached into the lake and restore the land buffer.
4) Construct a series of earthen terraces in large open water areas to trap sediment, reduce fetch, and prevent channelization of diverted river water.
5) Protect the northern bankline of Lake Lery utilizing “living-shoreline” technology.

Preliminary Construction Costs:
The anticipated construction cost, with 25% contingency, is $10 million.

Preparer of Fact Sheet
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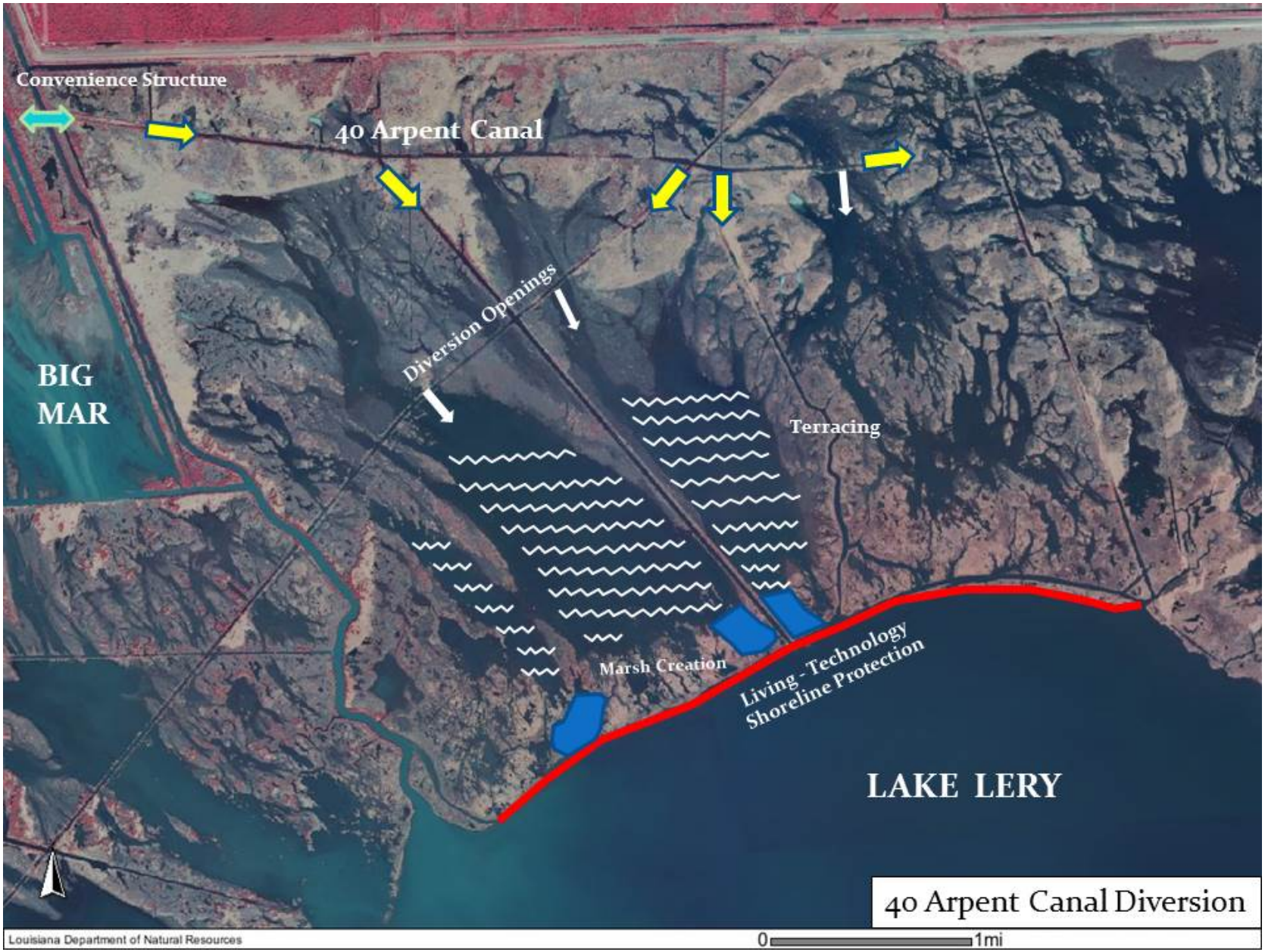

Convenience Structure
40 Arpent Canal
Diversion Openings
BIG
MAR
Terracing
Marsh Creation
Living - Technology
Shoreline Protection
LAKE LERY
40 Arpent Canal Diversion
Louisiana Department of Natural Resources
0
1mi

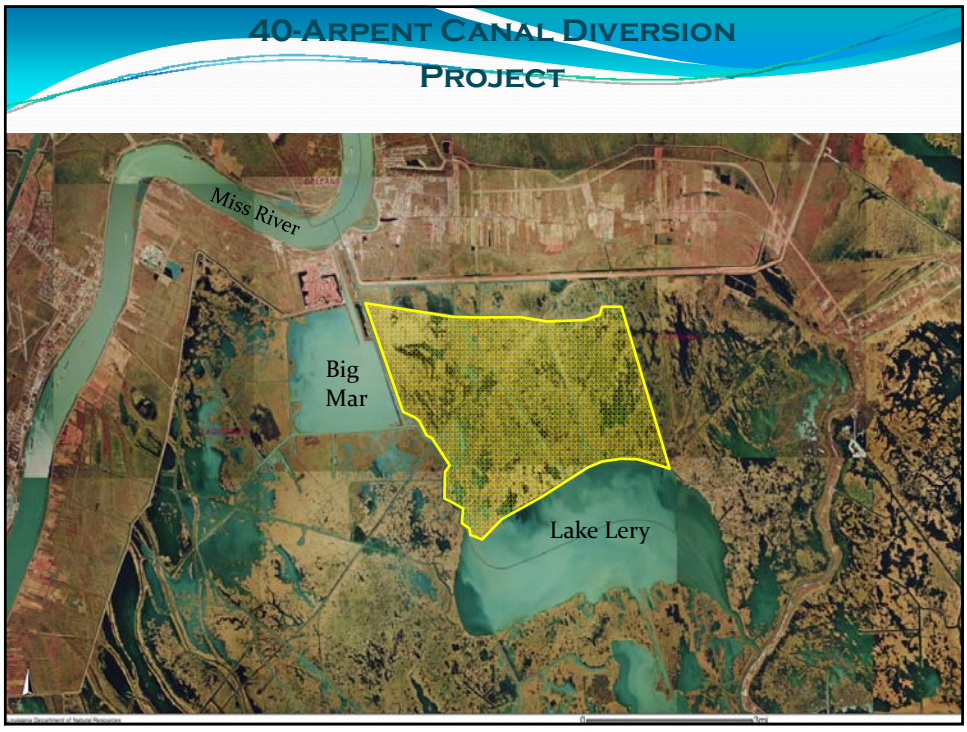
REGION II

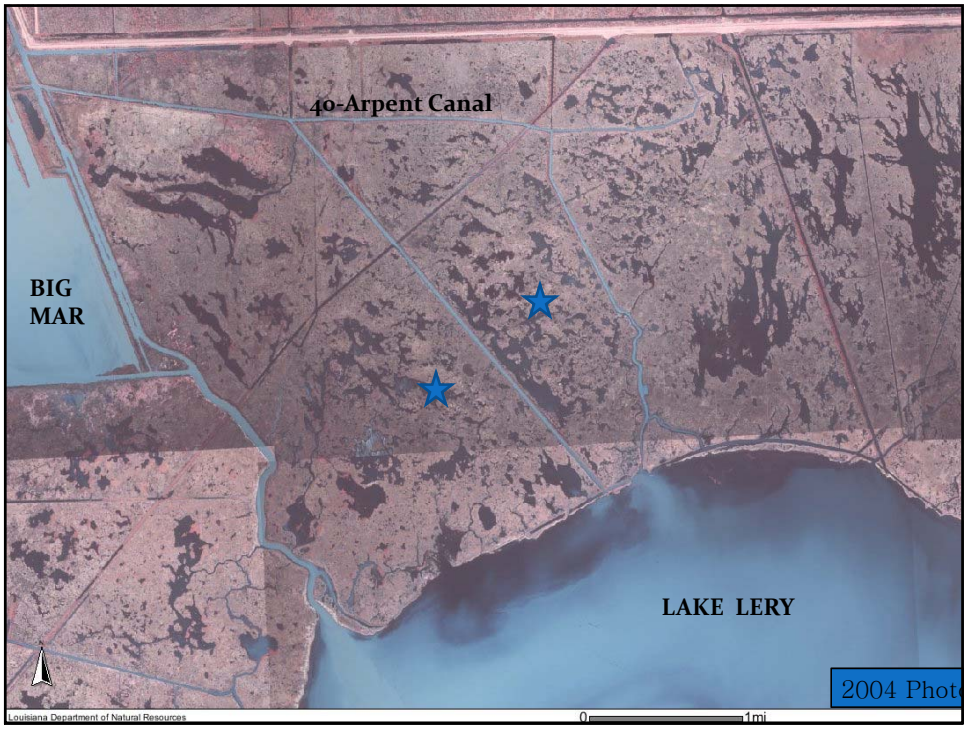
Breton Sound Basin

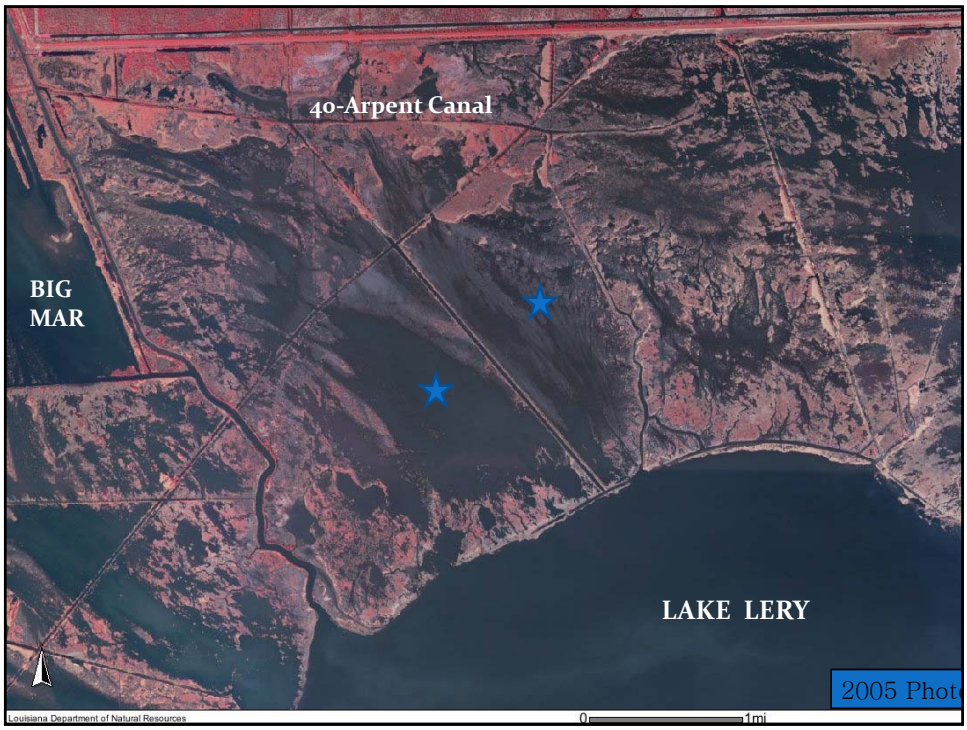
PPL25 RPT MEETING

January 29, 2015

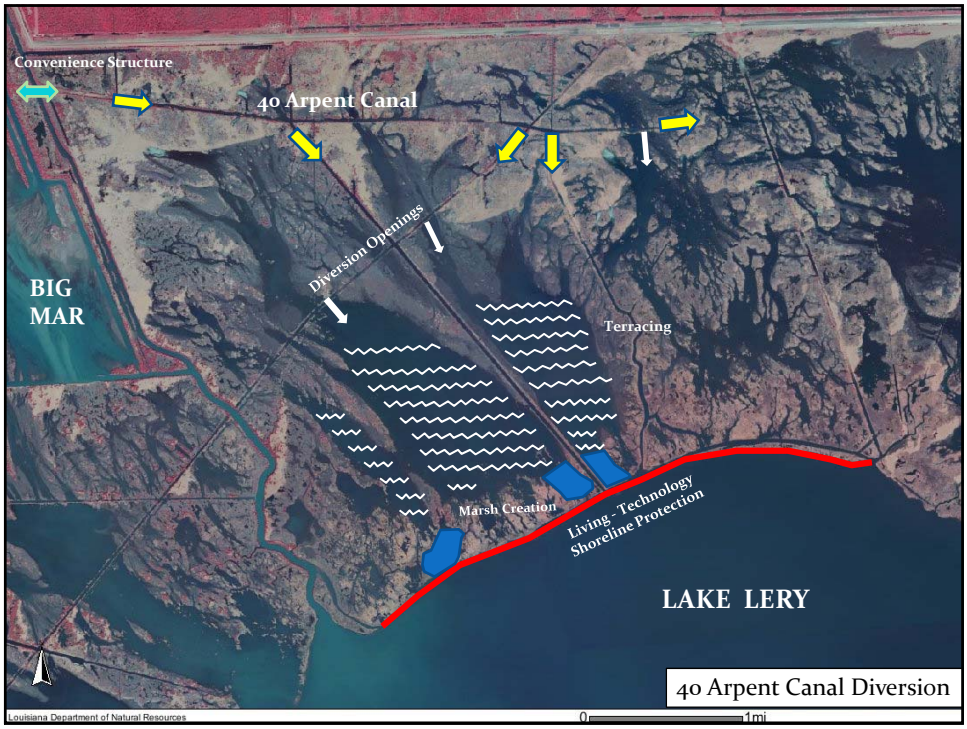
40 Arpent Canal Diversion Project




40-Arpent Canal
BIG
MAR
LAKE LERY
2004 Phot
Louisiana Department of Natural Resources
0
1mi


40-Arpent Canal
BIG
MAR
LAKE LERY
2005 Phot
Louisiana Department of Natural Resources
0
1mi

40 Arpent Canal Diversion Outfall Area **2013 Photo**


Convenience Structure
40 Arpent Canal
Diversion Openings
BIG
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Terracing
Marsh Creation
Living - Technology
Shoreline Protection
LAKE LERY
40 Arpent Canal Diversion
Louisiana Department of Natural Resources
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