REGION 2

Coastal Wetlands Planning Protection & Restoration Act

26th Priority Project List

Region 2

Regional Planning Team Meeting

January 28, 2016
Lacombe, LA

CWPPRA

1. Welcome and Introductions

- RPT Region 2 Leader: Brad Inman - USACE

CWPPRA

Announcements

- Copies of the PPL 26 Selection Process & Schedule available at the sign-in table.
- PPL 26 RPT meetings to accept project nominees:
  - Region IV, Estuarine Fisheries & Habitat Center, Jan. 26, 2016, 11:00 am
  - Region III, Terrebonne Parish North Branch Library, Jan. 27, 2016, 10:00 am
  - Region I, USFWS SE LA Refuges Complex (Big Branch), Jan. 28, 2016, 8:00 am
  - **Region II, USFWS SE LA Refuges Complex, Jan. 28, 2016, 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
- 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 26 Nomination Sign-Up Sheet for each project nominee (demo projects too).
- Presenters with factsheets, please give a factsheet each to Kaitlyn, Michelle & Kylie or Anne before 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 17, 2016.
- Limit comments/questions during meeting to PPL 26 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 23, 2016.
- The Technical Committee may or may not select a coastwide project in April 2016.

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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. 23 Coastwide Electronic Vote.
- The Technical Committee selects up to 3 demos in April 2016.
- Workgroups may recommend that no demos move forward to candidate stage
- Previous demo candidates must be ***re-nominated*** for PPL 26.

Coastwide Electronic Vote (Feb 23) 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 2/17/2016.

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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 must email their voting sheets to kaitlyn.m.carriere@usace.army.mil

All votes must be received by 10:30 am on February 23, 2016.

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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 26 criteria.

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PPL 26 Candidate Project Selection

- CWPPRA Technical Committee meeting, April 5, 2016 at 9:30 am, U.S. Army Corps of Engineers, 7400 Leake Avenue, New Orleans, LA.
- 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 March 22, 2016.
- Public comments also accepted orally during meeting.

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PPL 26 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 typically votes to select up to 4 candidate projects and up to 1 demo to recommend for Phase 1.
  - Dec. 7, 2016, Baton Rouge, 9:30 am
- Task Force final decision to select PPL 26 in January 2016

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PPL 26 Timeline

- **Coastwide Electronic Vote, Feb. 23, 2016**
  - 21 basin-project nominees, 1 coastwide nominee, and 6 demos selected
- **Technical Committee Mtg, Apr. 5, 2016, New Orleans**
  - Selection of 10 candidates and up to 3 demos
- **Technical Committee Mtg, Dec. 7, 2016, Baton Rouge**
  - Recommends up to 4 projects for Phase 1 funding
- **Task Force Mtg, Jan. 2017, 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 17, 2016**

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

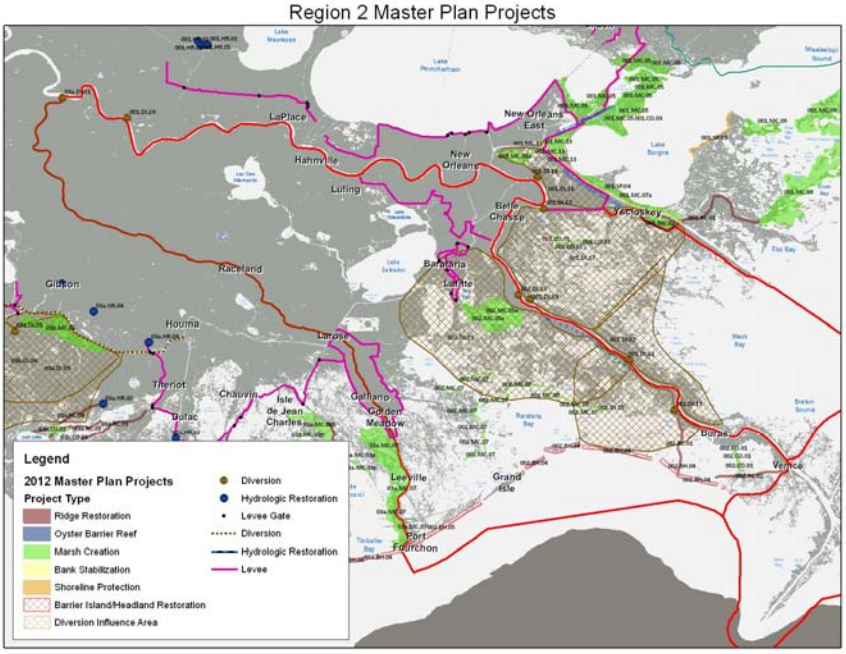
Email: Brad.L.Inman@usace.army.mil

(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

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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 28, 2016 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
Brad Crawford	US EPA	214 665 7255
Dave Watson	EPA	665 6653
KAREN McCORMICK	EPA	214-665-8365
Scott Roussel	PPG.	504-234-0074
BRANNGAR DRAPER	FORT PIKE VFD	504 450 4855
Rob Delaune	Digital Engineering	504-468-6129
Don Lynch	Lake Pontchartrain Basin Maritime Museum - Director	985-845-9200
Sharon Osowski	EPA	214-665-7506
David Brunet	St. Tammany Parish	985-898-2552
Janet Rhodus	Mandeville, Non profit volunteer	225 413-4414
ALTON James Y	USDA-NRCS	
Kent Ballfrass	CPRA	225.342.4733
Donna Rogers	NOAA	225-316-8958
Jason Knoll	NOAA	2257575411
Cody Colvin	NRCS	225-278-2732
Carol Giardina	LCCA	504 331 5326
Mike Lockwood	Jeff. Parish Env. Affairs	(504) 756-6440
Kim Clements	NOAA	225 389 0508
JOHN PETTIBON	USACE	504 8627732
Twyla Cheatwood	NOAA	225-389-0508
DAWN DAVIS	NOAA	225 389 0508
Patrick Williams	NOAA	225-389-0509

LMV FORM 583-R
JAN 88

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MEETING OF THE REGIONAL PLANNING TEAM REGION I & 2

PARTICIPANT REGISTER

NAME	JOB TITLE AND ORGANIZATION	PHONE NUMBER
Barry Herbert	Biologist - LDWF	225.765 0233
Quin Kinler	NRCS	
Robert Browne	homeowner	985 643 4565
Will McCartney	St. Bernard Govt	504 442-2426
John Lane	St. Bernard Govt	504 579 2173
Gary Shaffer	Southeastern	985-542-1632
John Boatman	NRCS	985-331-9084
Kat Hutchison	STLDCD	985-285-5825
SKYE DUMONT	Biloxi Marsh Land Corp	504-837-1337
Stephen Champagne	LPBMM Project	985 226 1593
Billy Enoe	LDWF	504-286-4175
Kim Gajour	PPI	337-654-5430
Henry Haller	Pizza. Madison Land Co	228 324-4490
Randy Moertle	Cloudy / Point Au Fer	(985) 856-3630
Charles Sasser	LSU	225 578 6375
Jerry Graves	St. Bernard Parish	
Blaise Pezold	LDAF - Coastal Re-veg program	504-264-8125
Ashton Strickland	LT-SWCD - Coastal Re-veg program	
Ron Boustany	NRCS	337 291-3067
Amanda Vosin	Lafourche Parish Gov't	985 493 6616
Tyler Thigpen	Ecologist - Shoreline	3375916110

LMV FORM 583-R
JAN 88

Region 2 – BRETON SOUND BASIN

~~R2-BS-01~~	~~Breton Land Bridge Marsh Creation (West), River aux Chenes to Grand Lake~~ *(not consistent with 2012 State Master Plan)*

Region 2 – BARATARIA BASIN

Project Number	**Project Proposals**
~~R2-BA-01~~	~~Bay Coquette Ridge Restoration Option A~~ *(dropped from voting list)*
R2-BA-02	Freeport Sulphur Marsh Creation
R2-BA-03	Barataria Bay Waterway East Marsh Creation
R2- BA-04	Bay Dos Gris Marsh Creation
~~R2- BA-05~~	~~Northeast Turtle Bay Marsh Creation and Critical Area Shoreline Protection~~ *(dropped from voting list)*
R2- BA-06	Elmer's Island Backbarrier Marsh Creation
R2- BA-07	Wilkinson Canal Marsh Creation and Terracing
R2- BA-08	Spanish Pass Ridge and Marsh Creation
R2- BA-09	Coffee Bay Marsh Creation and Shoreline Protection
R2-BA-10	Grand Bayou Marsh Creation and Terracing
R2-BA-11	East Bayou Lafourche Marsh Creation
R2-BA-12	Bayou Long Marsh Creation and Ridge Restoration – Increment 1
R2-BA-13	Grand Pierre Island Restoration

Region 2 – BRETON SOUND BASIN

~~R2-BS-01~~

~~Breton Land Bridge Marsh Creation (West), River aux Chenies to Grand Lake~~

Not consistent with 2012 State Master Plan

#BS-01

PPL26 PROJECT NOMINEE FACT SHEET
January 28, 2016

Project Name
Breton Land Bridge Marsh Creation (West), River aux Chenes to Grand Lake

Coast 2050 Strategy
Coastwide: Dedicated dredging for wetland creation; Maintenance of bay/lake shoreline integrity; 2017 Louisiana State Master Plan consideration

Project Location
Region 2, Breton Basin, Plaquemines Parish

Problem
The wetlands within this area have a unique history. Historically this area was nourished by the fresh water, sediment and nutrients delivered by the Mississippi River. Following the creation of levees along the lower river, these inputs ceased, with exception of levee breaches in 1923 and 1927. In 1991, the Caernarvon Freshwater Diversion Structure became operational with capabilities to divert up to 8,000 cubic feet/sec. As a result of these freshwater influences, the marshes in the area have fluctuated between fresh/intermediate and brackish/saline habitat types over time. The major cause of wetland loss for this area has been attributed to storm activity (i.e. Hurricanes Betsy and Katrina), causing both storm-induced scour and forcing salt water into the lower salinity marshes. Altered hydrology and oil/gas development have exacerbated storm-related loss. Subsidence, high in this area, ranges from 2.1-3.5 ft/century. A USGS regression analysis (1985-2009) indicates a -0.93 percent/yr land loss rate for this unit.

Proposed Solution
The proposed solution would be to create/nourish degrading marsh and restore portions of the Grand Lake shoreline, Orange Bayou, and Bayou Gentilly. The marsh and shoreline restoration would be constructed in a west-to-east configuration, across basin, creating more robust landmass between River aux Chenes and Bayou Terre aux Boeufs. It is envisioned that this restoration effort could be completed in two to four phases, approximately 500 acres each, and once restored would reduce the potential for coalescence of Lake Lery with Grand Lake and Lake Petit to its south. Sediment would be hydraulically pumped from a borrow source for marsh creation. Internal and external borrow sources have been identified; internal borrow from Grand Lake or Lake Lery is the most cost effective. Temporary containment dikes will be constructed and gapped within three years of construction to allow greater tidal exchange and estuarine organism access. Half of the constructed marsh will include vegetative plantings.

Goals
The overall, long-range, restoration goal would be to create/nourish approximately 1,000 to 2,000 acres of intermediate marsh across 7 miles of the Breton Basin from River aux Chenes to Bayou Terre Bouefs. Two conceptual alternative alignments are envisioned: 1) restore marshes and shorelines along western and northern Grand Lake and along Bayou Gentilly (individual options A, C and D below) or 2) restore marshes and bank lines along southern Grand Lake and along Bayou Gentilly (options B and D below).

Individual project options include:

- Option A: create/nourish approximately 500 acres of emergent intermediate marsh, restore one mile of Orange Bayou, west bank and restore one mile of Grand Lake western shoreline using internal or river borrow sources.

- Option B: create/nourish approximately 500 acres of emergent intermediate marsh, restore one mile of Orange Bayou, east bank and restore 2.7 miles of Grand Lake southern shoreline using internal or river borrow sources.
- Option C: create/nourish approximately 500 acres of emergent intermediate marsh and restore 1.8 miles of Grand Lake northern shoreline using internal borrow sources.
- Option D: create/nourish approximately 500 acres of emergent intermediate marsh and restore 1.9 miles of Bayou Gentilly, northwestern bank using internal borrow sources.

Preliminary Project Benefits

1) *What is the total acreage benefited both directly and indirectly?*
This total project area is about 500 acres (per phase).

2) *How many acres of wetlands will be protected/created over the project life?*
Approximately 373 acres of intermediate marsh would be protected/created over the project life (per phase).

3) *What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (<25%, 25-49%, 50-74%, and >75%)?*
The anticipated land loss rate reduction throughout the area of direct benefits will be 50-74% over the projects life.

4) *Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc?*
The project will help restore portions of Orange Bayou, Bayou Gentilly and Grand Lake shoreline.

5) *What is the net impact of the project on critical and non-critical infrastructure?*
The project may provide net positive benefits to non-critical infrastructure.

6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?*
The project will have a synergistic effect with the South Lake Lery Shoreline and Marsh Restoration (BS-16), Lake Lery CIAP project, and the Caernarvon Freshwater Diversion.

Identification of Potential Issues

The proposed project has potential land rights and utility/pipeline issues.

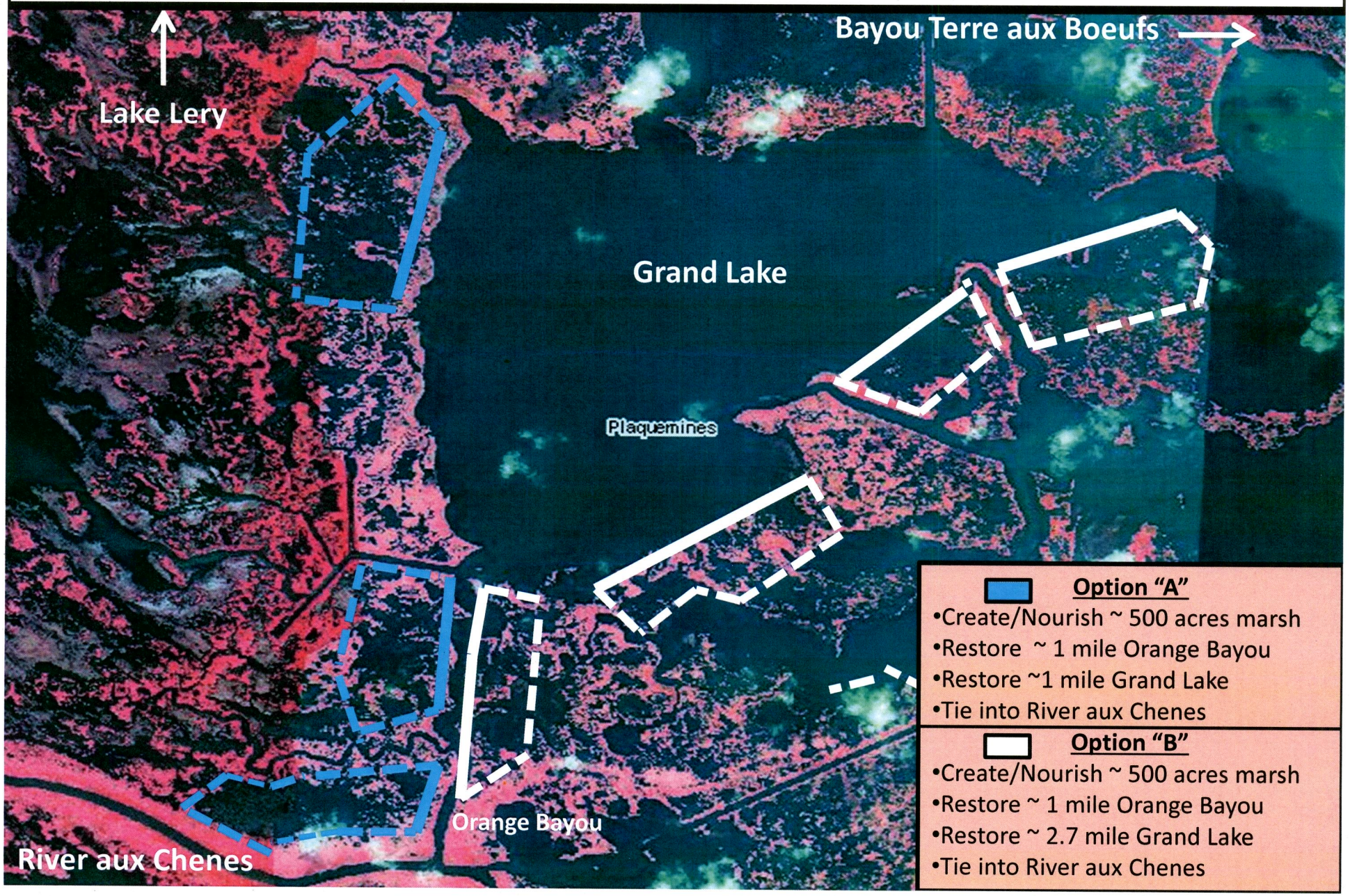
Preliminary Construction Costs

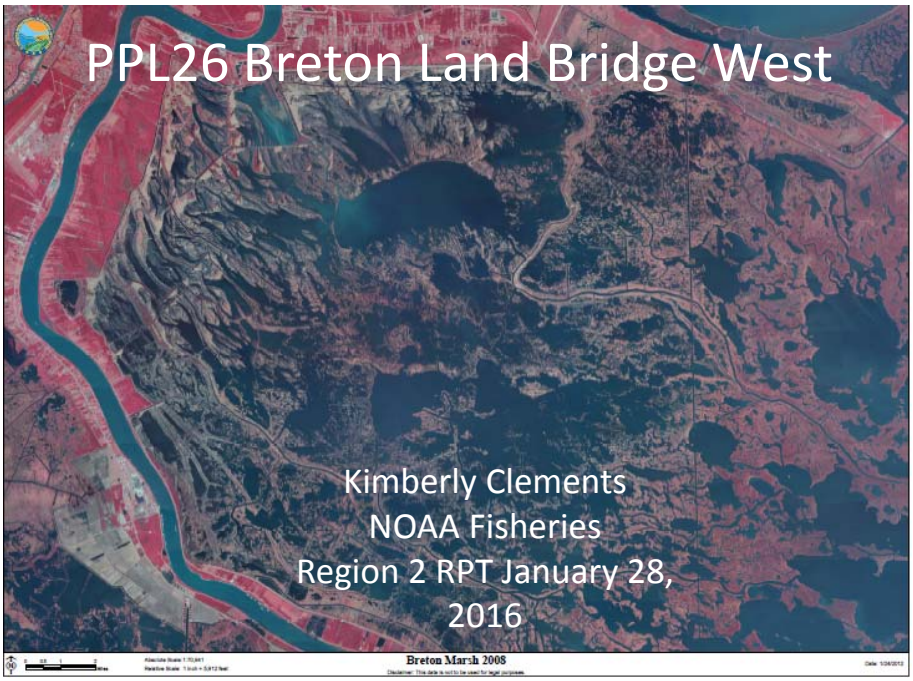
Depending on option and borrow source (river vs internal), the estimated construction costs (including 25% contingency) vary from approximately $22,400,000 to $37,200,000. The fully funded cost estimates range from $25 to $48 M.

Preparer(s) of Fact Sheet:

Kimberly Clements, NMFS, 225-389-0508 x204, Kimberly.Clements@noaa.gov
Twyla Cheatwood, NMFS, 225-389-0508 x209, Twyla.Cheatwood@noaa.gov
Patrick Williams, NMFS, 225-389-0508 x208, Patrick.williams@noaa.gov

PPL26 Breton Land Bridge Marsh Creation (West): River aux Chenes to Grand Lake





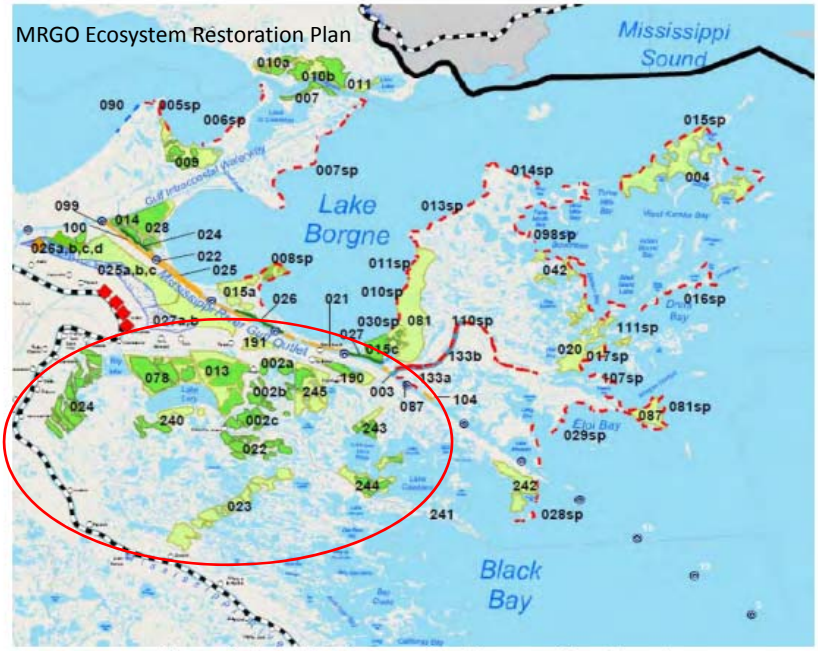
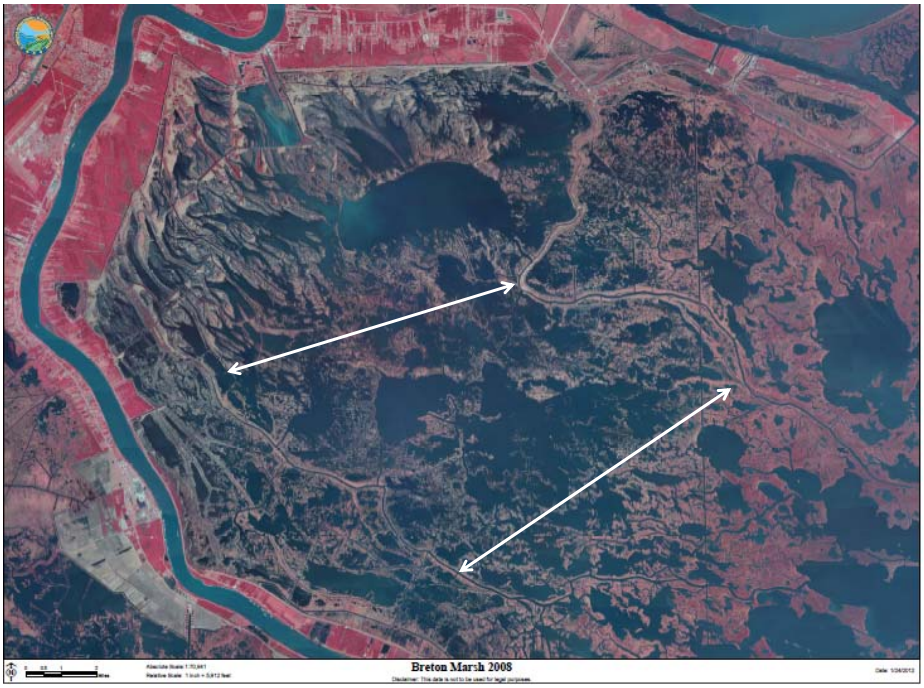
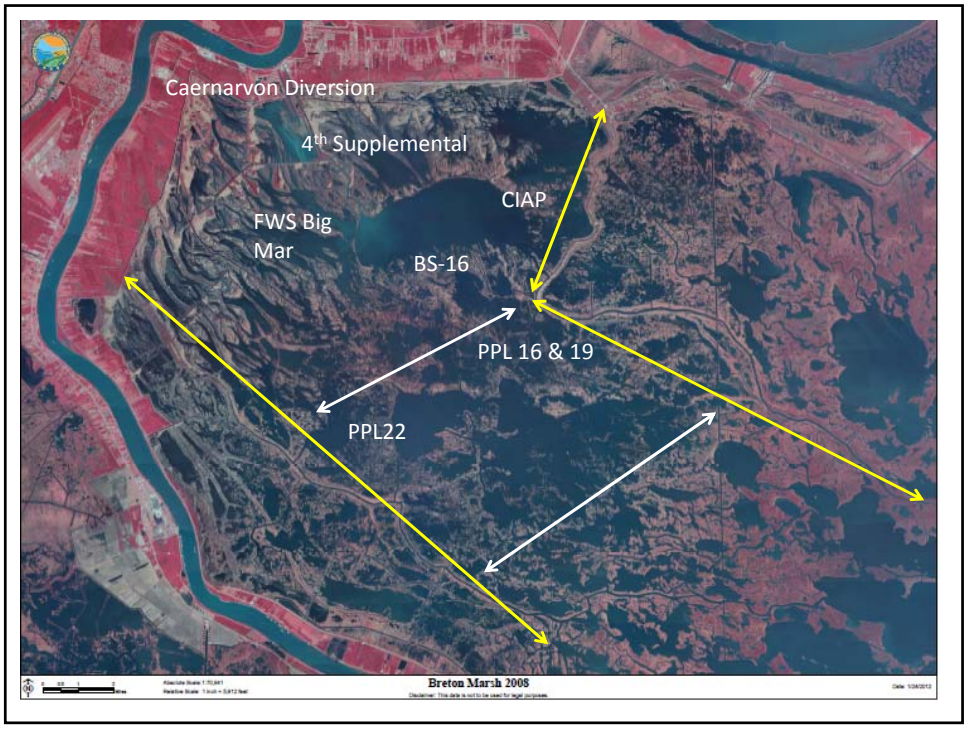
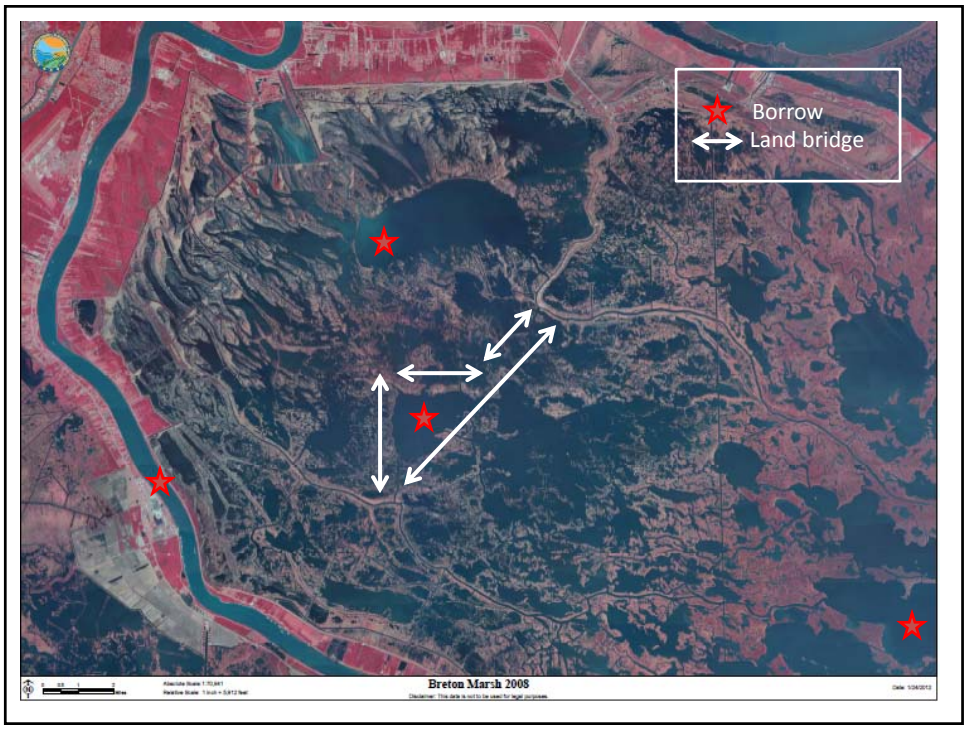


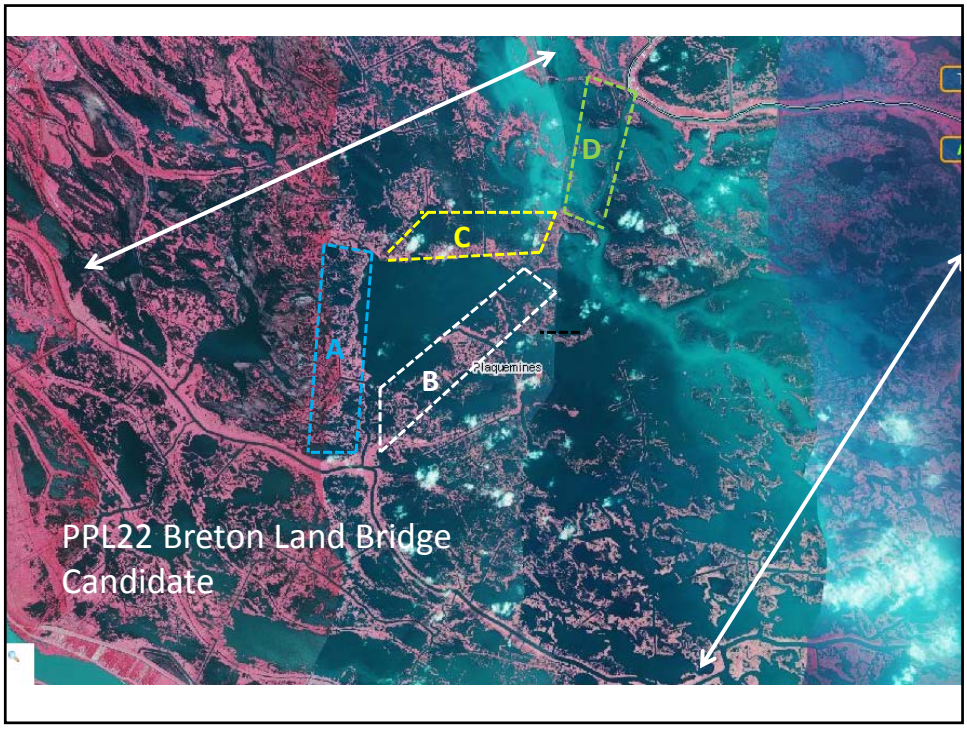
Figure 2-1: Initial Restoration Measures Considered


Breton Marsh 1998

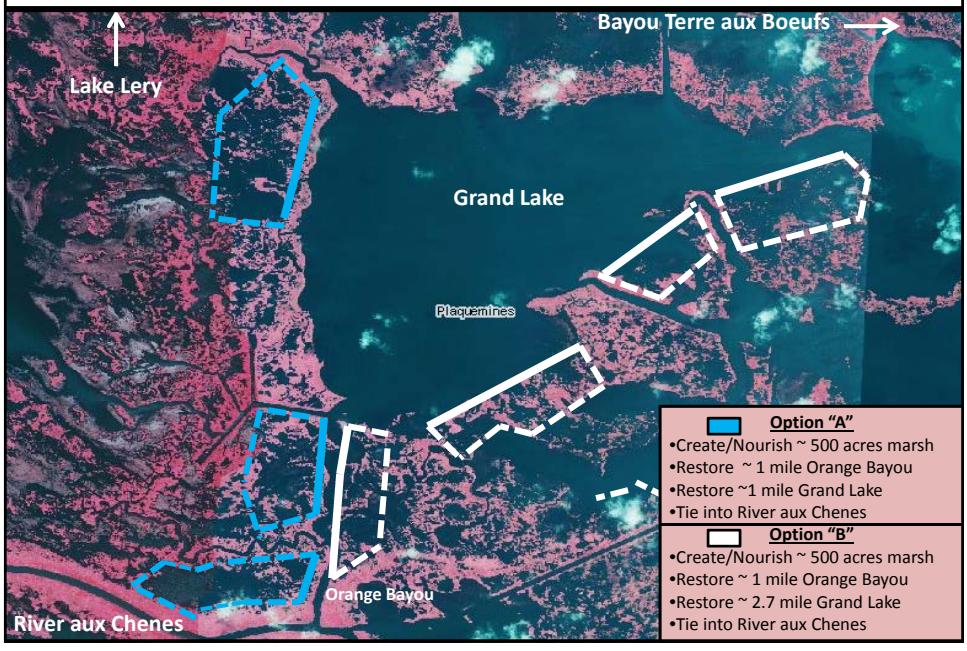

Breton Marsh 2008


Caernarvon Diversion
4th Supplemental
CIAP
FWS Big Mar
BS-16
PPL 16 & 19
PPL22
Breton Marsh 2008


Borrow
Land bridge
Breton Marsh 2008

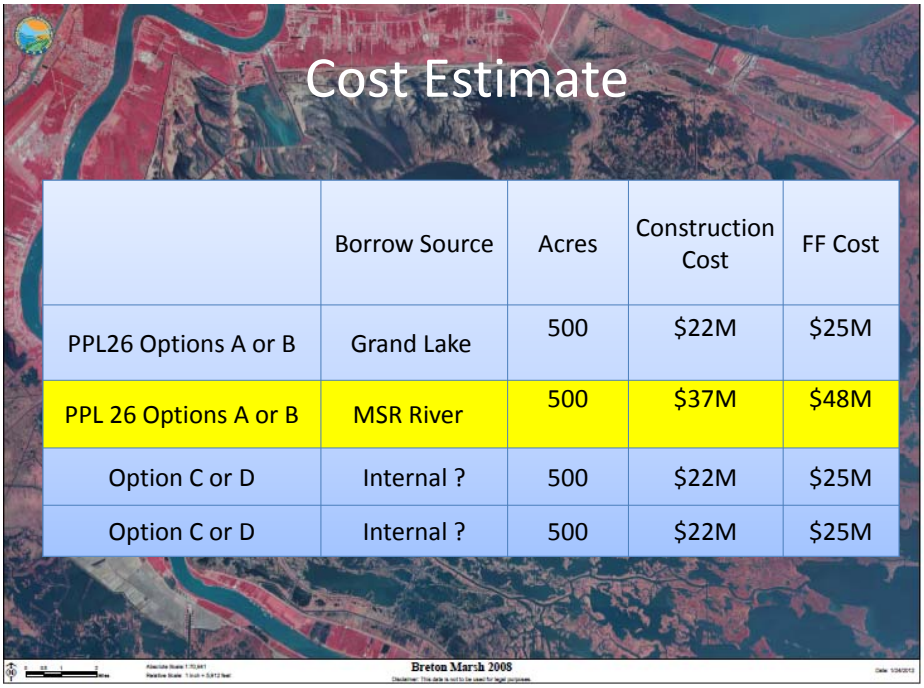


PPL26 Breton Land Bridge Marsh Creation (West): River aux Chenes to Grand Lake



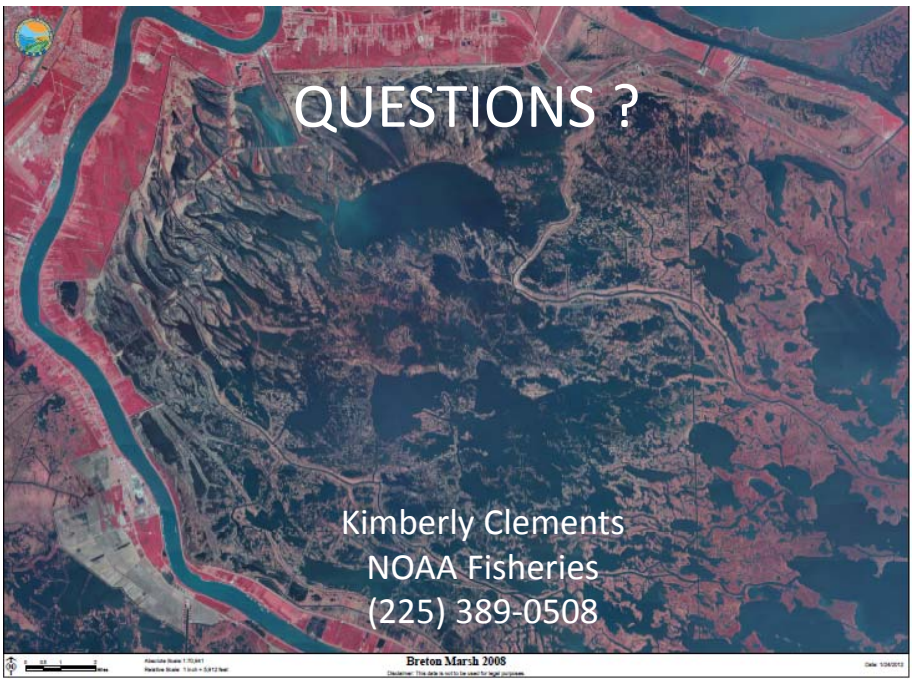
Cost Estimate

	Borrow Source	Acres	Construction Cost	FF Cost
PPL26 Options A or B	Grand Lake	500	$22M	$25M
PPL 26 Options A or B	MSR River	500	$37M	$48M
Option C or D	Internal ?	500	$22M	$25M
Option C or D	Internal ?	500	$22M	$25M

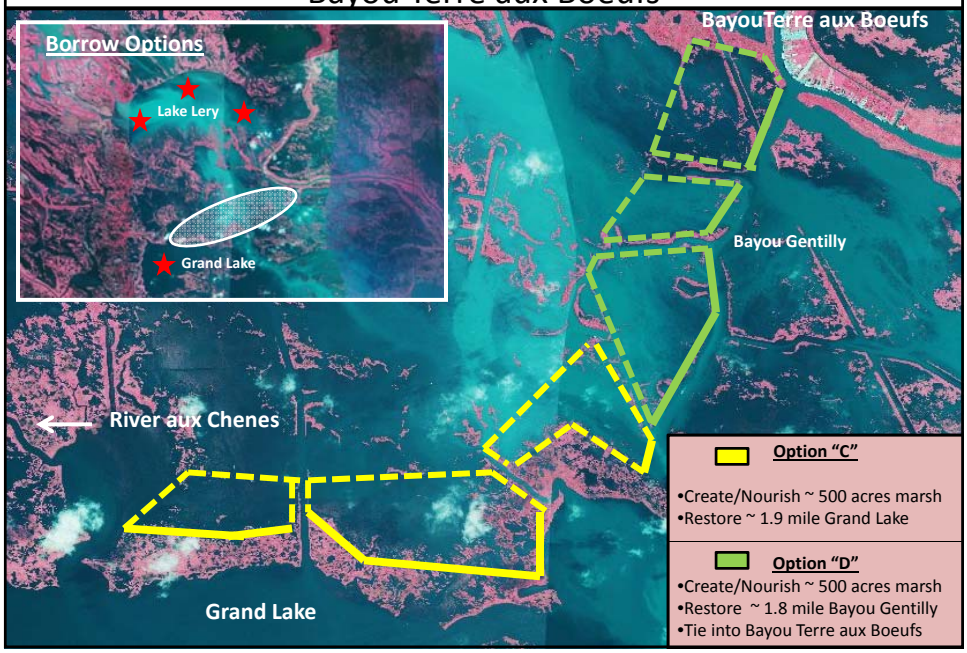


QUESTIONS ?

Kimberly Clements
NOAA Fisheries
(225) 389-0508



Breton Land Bridge Marsh Creation (East): Grand Lake to Bayou Terre aux Boeufs



Region 2 – BARATARIA BASIN

~~R2-BA-01~~

~~Bay Coquette Ridge Restoration Option A~~

(Dropped from voting list)

BA-01

PPL26 PROJECT FACT SHEET
January 28, 2016

Project Name
Bay Coquette Ridge Restoration Option A

Master Plan Strategy
Spanish Pass Ridge Restoration 002.RC.02. 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.

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

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 million cubic yards of fill to create 706 acres of marsh.

Project Benefits
- Option A would create 706 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 of $30M - $35M.; Option B is $30 million with a fully funded range of $35M - $40M.

Preparer(s) of Fact Sheet:
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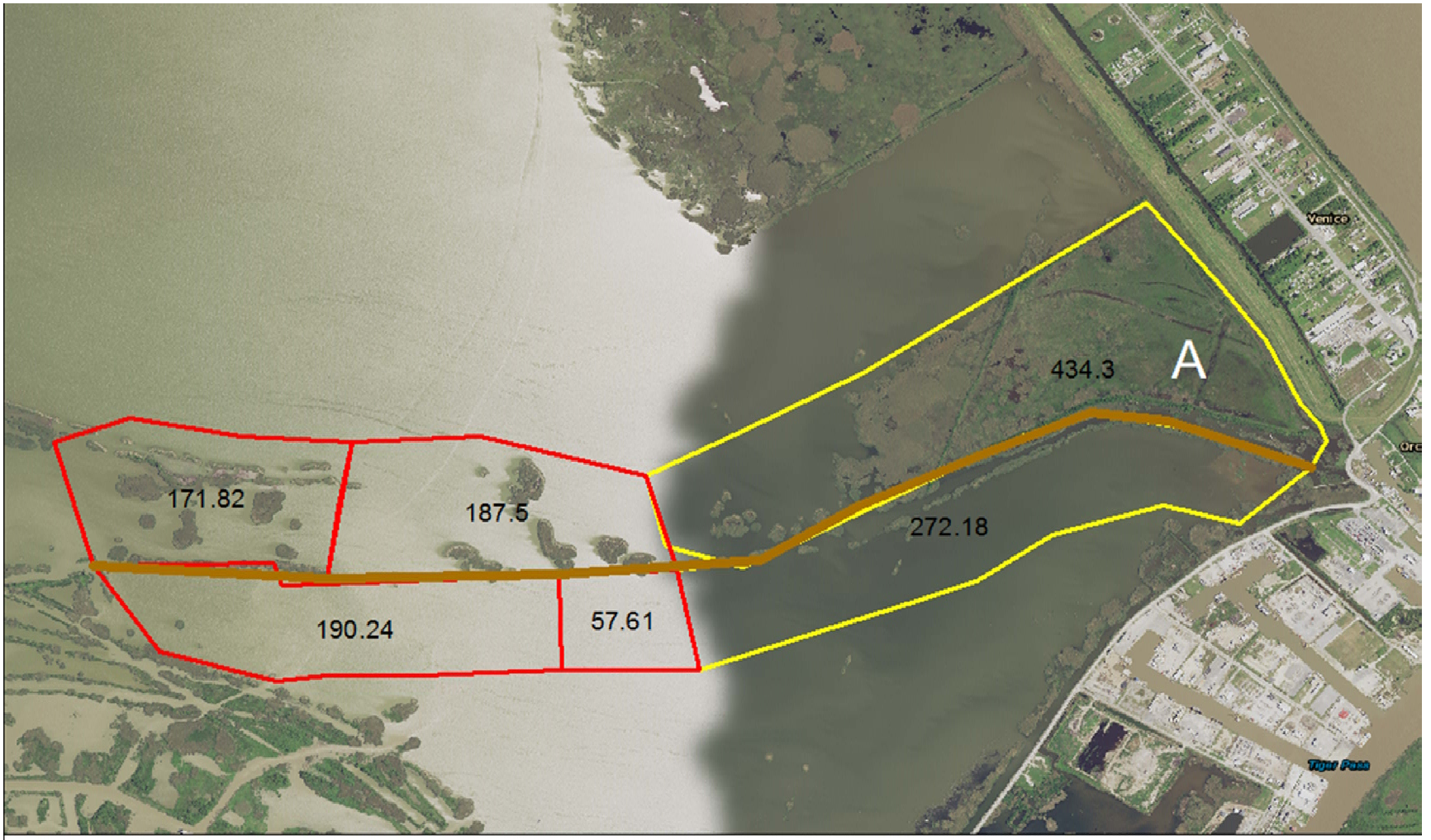


Bay Coquette Ridge Restoration & Marsh Creation (PPL26)

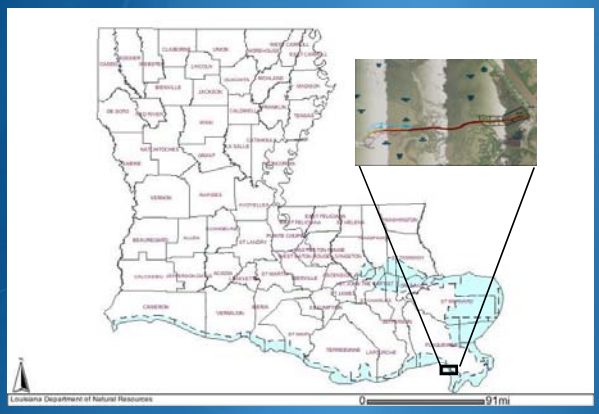
Ridge A 16780 ft
Marsh A
Marsh A additional cells

N

Basemap: 2015 NAIP DOQQ
Produced by: EPA Region 6, Dallas, TX

0 0.175 0.35 0.7 1.05 Miles

Bay Coquette Ridge Restoration & Marsh Creation Increments A-C



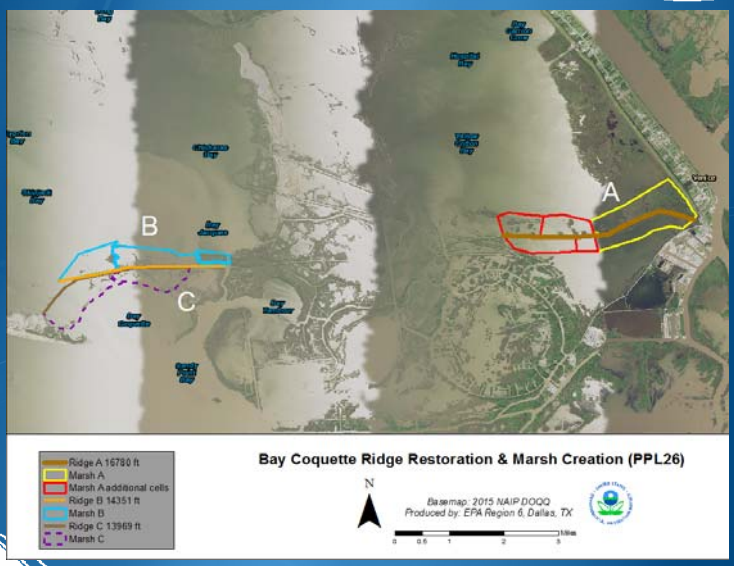
Coastal Wetlands Planning, Protection and Restoration Act

Master Plan Solution

002.RC.02 – Spanish Pass Ridge Restoration: Restoration of approximately 33,000 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.

Master Plan Consistency

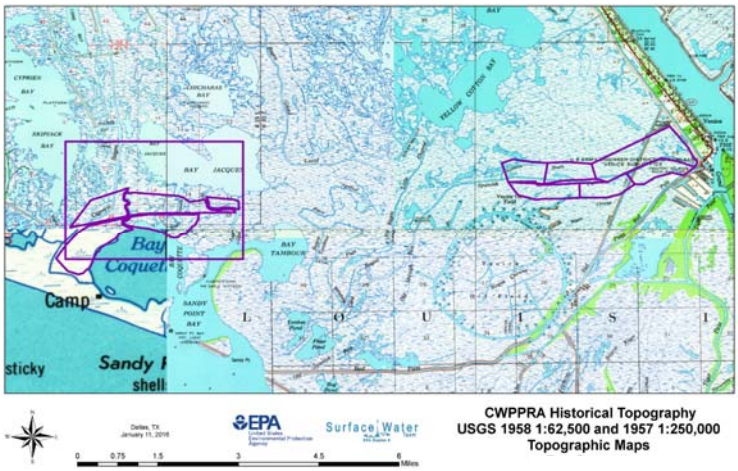
002.RC.02
Spanish Pass
Ridge
Restoration



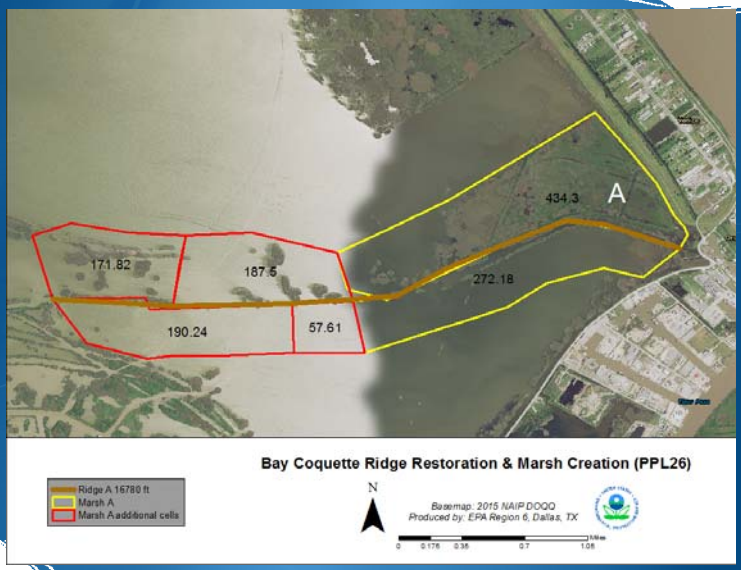
Problem

- Located in Barataria Bay, west of Venice and "The Wheel"
- 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

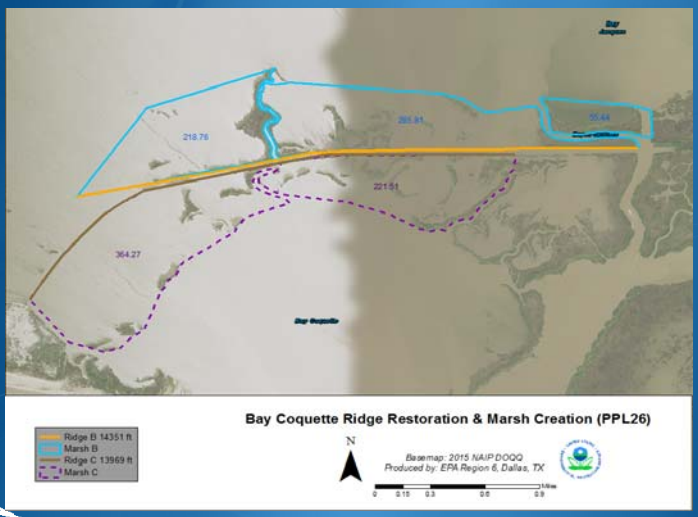
Historical Reference



Bay Coquette Ridge Restoration



Bay Coquette Ridge Restoration



Project Features – Option A

- Create 706 ac of marsh using approximately 2.7MCY of dredged material
- Restore 14,198 ft of ridge
- Estimated cost + 25% contingency = $29 million

Project Features – Option B

- Create 586 ac of marsh using approximately 2.9MCY of dredged material
- Restore 13,814 ft. of ridge features
- Create 11,287 ft of living shoreline
- Estimated Construction Cost + 25% contingency = $30 million

R2-BA-02

Freeport Sulphur Marsh Creation

BA-UC

PPL26 PROJECT FACT SHEET
January 28, 2016

Project Name
Freeport Sulphur Marsh Creation

Master Plan Strategy
Barataria Bay Rim Marsh Creation 002.MC.07. 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

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

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. 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 this project is to create/nourish marsh along the Freeport/Sulphur Co. Canal to create new habitat, restore degraded marsh and reduce wave erosion.

Proposed Solution
The project would place dredged material to create/nourish approximately 627 acres of emergent marsh in three separate cells.

Preliminary Project Benefits
- The project will create/nourish 627 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 $24 million. The fully funded range is $25M - $30M.

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

Freeport Sulphur Canal Marsh Creation (PPL26)

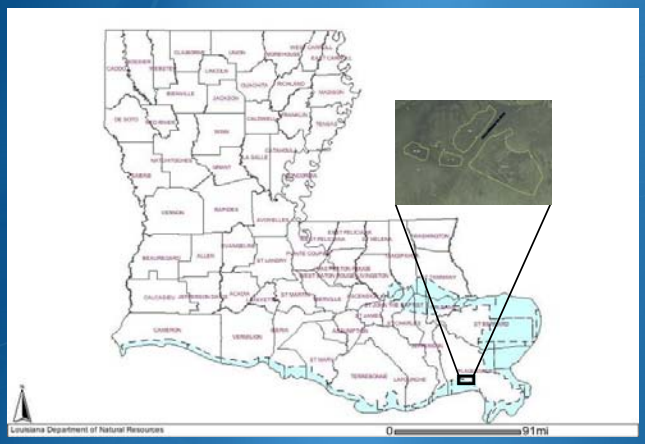
Marsh Creation Cells

N

Basemap: 2015 NAIP DOQQ
Produced by: EPA Region 6, Dallas, TX

0 0.125 0.25 0.5 0.75 Miles

Freeport Sulphur Marsh Creation



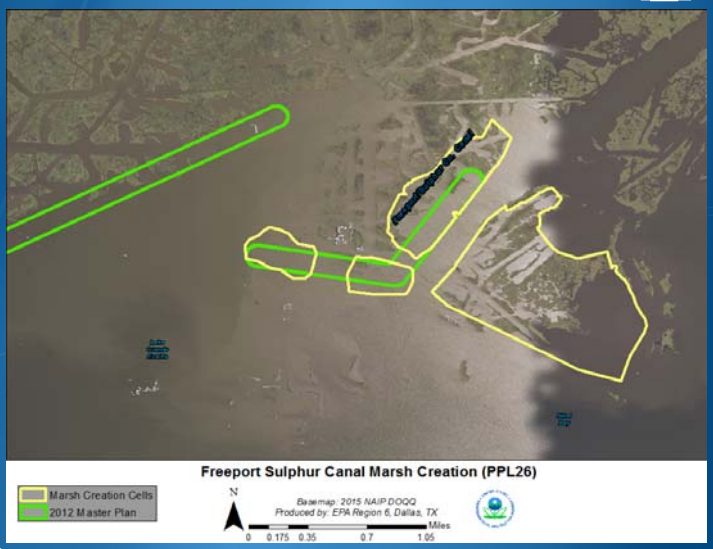
Coastal Wetlands Planning, Protection and Restoration Act

Master Plan Solution

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

Master Plan Consistency

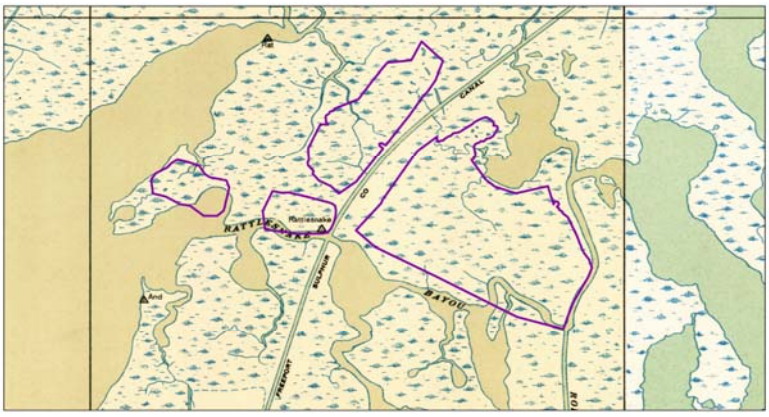
002.MC.07
Barataria Bay
Rim Marsh
Creation



Problem

- Marsh along the Freeport/Sulphur Co. Canal has experienced severe land loss and habitat conversion due to:
  - Natural erosion
  - Sea-level rise
  - Subsidence
  - Construction of access/pipeline canals
  - Levee construction
- Loss of wetlands have increased tidal amplitudes, salinities, land loss rates and change in vegetation

Historical Reference



CWPPRA Historical Topography
USGS 1935, 1949 1:31,680 Topographic Maps

Project Features

Freeport Sulphur Canal Marsh Creation (PPL26)

Freeport Sulphur 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
- Create/nourish 627 acres of marsh
- Preliminary project cost estimate with 25% contingency is $24 million with a fully funded range of $30M-$35M.

R2-BA-03

Barataria Bay Waterway East Marsh Creation

BA-03

PPL26 PROJECT NOMINEE FACT SHEET
January 25, 2016

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
$28.4 Million ($35.5 Million with 25% contingency)

Preparers of Fact Sheet:
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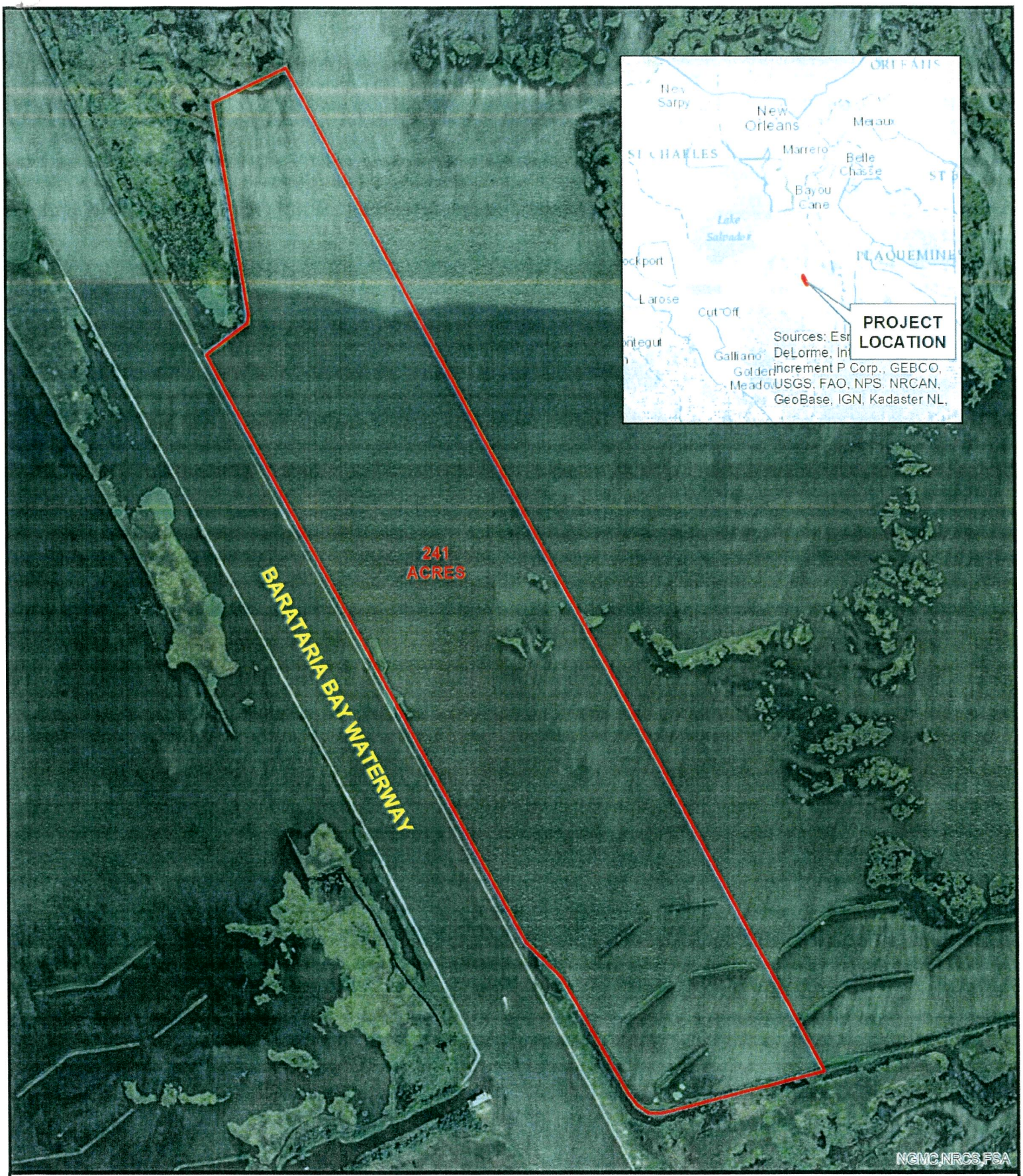
Cody Colvin, USDA-NRCS, 225-665-4253 ext 109, cody.colvin@la.usda.gov



USDA

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

Data Source: NAIP 2013

Map Date: JANUARY 14, 2016

N
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PPL-26 BARATARIA BAY WATERWAY
EAST MARSH CREATION
JEFFERSON PARISH, LA

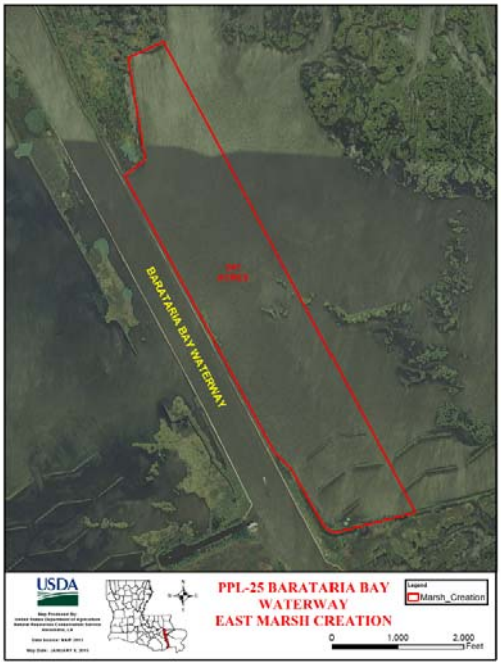
Legend
Marsh_Creation

0 500 1,000
Feet

PPL 26
Regional Planning Team
January 28, 2016

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 $28.4M ($35.5M w/ 25% contingency

R2-BA-04

Bay Dos Gris Marsh Creation

QK copy
BA-04

PPL26 PROJECT NOMINEE FACT SHEET
January 25, 2016

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
$16.3 million ($20.4 million with 25% contingency)

Preparers of Fact Sheet:
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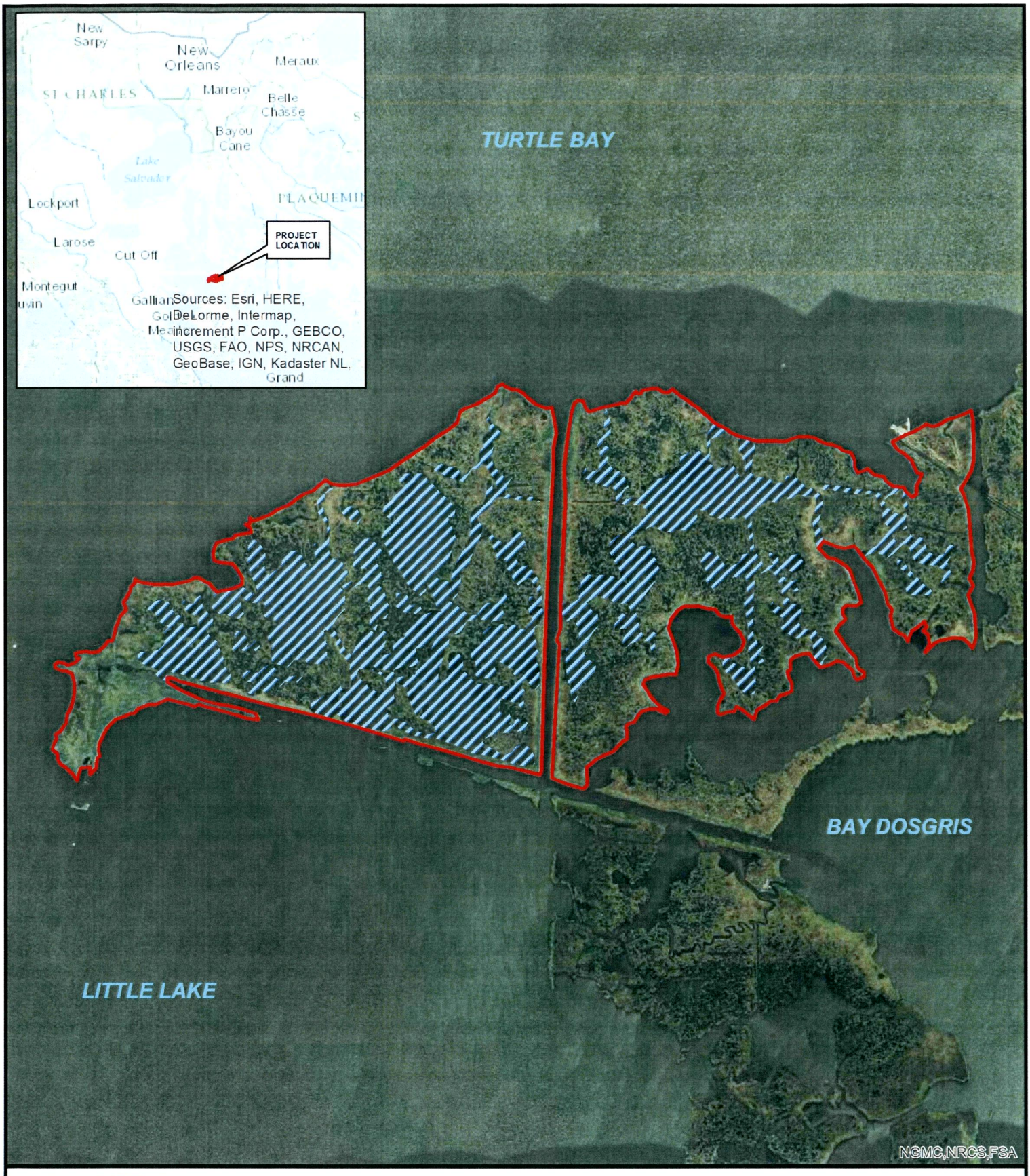


USDA

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

Data Source: NAIP 2013 IMAGERY

Map Date: JANUARY 14, 2016

N
W E
S

PPL 26
BAY DOSGRIS
MARSH CREATION
JEFFERSON PARISH, LA

Legend

- Marsh Creation_Nourishment
- Open_Water

0 1,000 2,000 Feet

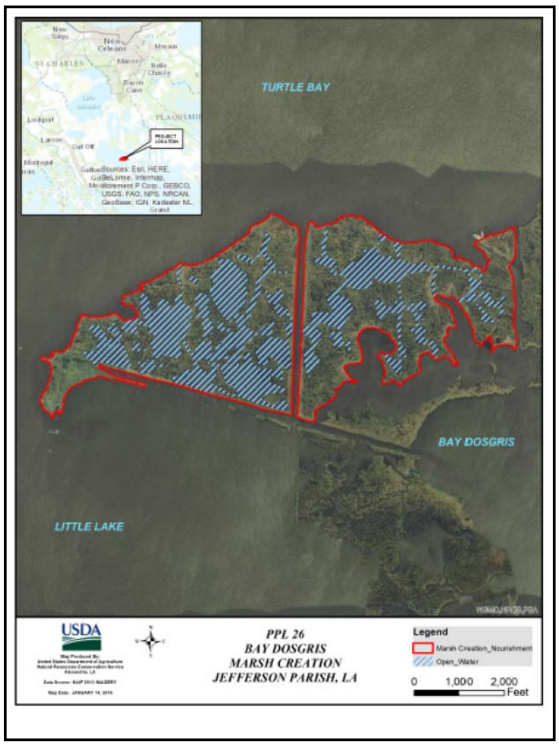
PPL 26
Regional Planning Team
January 28, 2016

Region 2
Barataria Basin

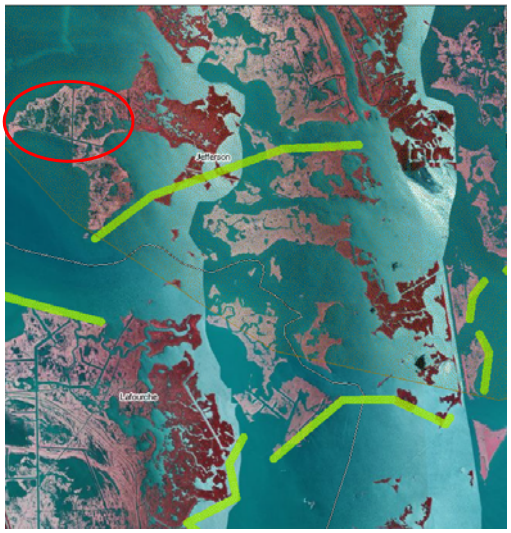
Bay Dos Gris
Marsh Creation

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 $16.3 M ($20.4 M w/ 25% contingency)

~~R2-BA-05~~

~~Northeast Turtle Bay Marsh Creation and Critical Area Shoreline Protection~~

(Dropped from voting list)

QK Copy
BA-05

PPL26 PROJECT NOMINEE FACT SHEET
January 25, 2016

Project Name
Northeast Turtle Bay Marsh Creation and Critical Area Shoreline Protection

Project Location
Region 2, Barataria Basin, Jefferson Parish, northeast of Turtle Bay

Problem
Historic wetland loss in the area occurs in the form of shoreline erosion along Turtle Bay and interior marsh loss. The interior loss is caused by subsidence, sediment deprivation, and construction of access and pipeline canals. Based on analysis conducted by USGS, loss rates in the area are estimated to be -0.615% per year for the period 1984 to 2011. Shoreline erosion along the northeast shore of Turtle Bay, in the area proposed to be addressed by this project, is approximately 3 to 4 feet per year. While this rate may not seem excessive, this reach of shoreline is very narrow and loss of this shoreline would connect Turtle Bay to a large lagoon, greatly altering the hydrology of the marsh.

Goals
The goals of the project are to 1) create approximately 505 acres of marsh and nourish approximately 254 acres of marsh (759 acres total) with dredged material from the Mississippi River, 2) protect approximately 2,335 feet of critical shoreline, and 3) prevent further enlargement of two primary water exchange points.

Proposed Solution
The proposed project would create approximately 505 acres and nourish approximately 254 acres of marsh using sediment dredged from the Mississippi River. Two types of containment will be utilized for this project: semi-contained and fully contained. For the semi-contained portion, there will be approximately 49 acres of marsh creation and 108 acres of marsh nourishment. For the fully contained portion, there will be approximately 456 acres of marsh creation and 146 acres of marsh nourishment. Containment dikes will be degraded as necessary to reestablish hydrologic connectivity with adjacent wetlands. Approximately 2,335 feet of critical shoreline would be protected and two channel liners would be installed to prevent further enlargement of two primary water exchange points. Maintenance of the shoreline protection feature and channel liners would be included. In case the area does not re-vegetate on its own, the maintenance cost estimate includes 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? 759 directly benefitted; indirect benefit not yet determined.

2) How many acres of wetlands will be protected/created over the project life? 492 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)?* 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 contribute to protection of the Central Barataria Basin Landbridge.

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 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: no issues presently identified.

Preliminary Construction Costs
$ 69 million ($86.5 million with 25% contingency).

Preparers of Fact Sheet:
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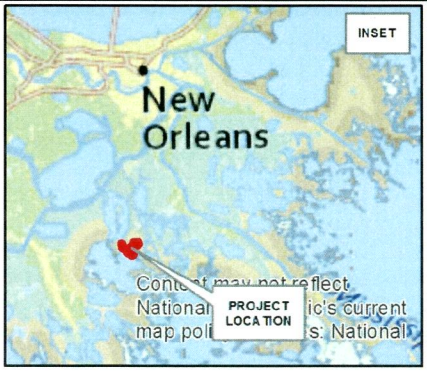
USDA

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

Data Source: NAIP 2013

Map Date: JANJUARY 25, 2016



PPL 26 NE TURTLE BAY MARSH CREATION AND CRITICAL SHORELINE PROTECTION JEFFERSON PARISH, LA

0 1,000 2,000 Feet

Legend

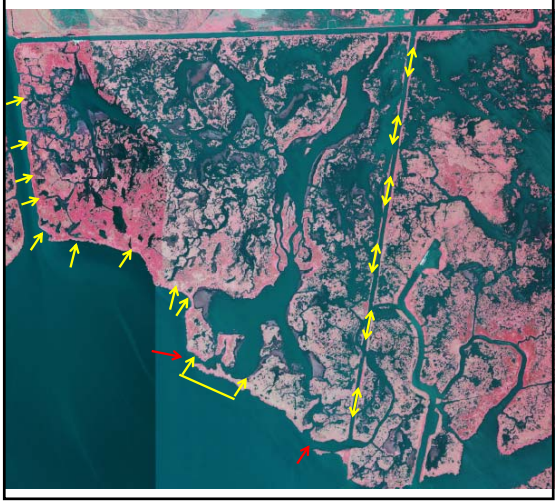
- CHANNEL LINER
- PROJECT BOUNDARY
- SHORELINE_PROTECTION
- MARSH CREATION
- MARSH NOURISHMENT

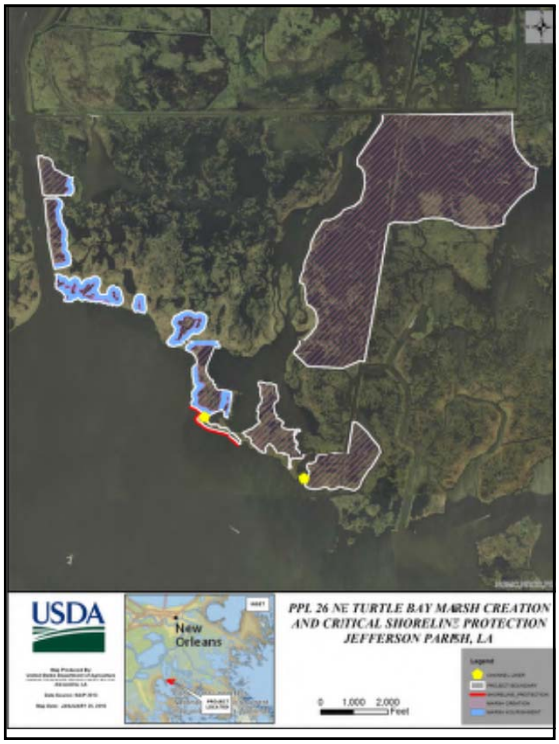
PPL 26
Regional Planning Team
January 28, 2016

Region 2
Barataria Basin

Northeast Turtle Bay
Marsh Creation and Critical Shoreline Protection

- Potential Shoreline Breaches
- Enlargement of Existing Channels
- Water Exchange through Pipeline Canal
- Widespread Loss of Emergent Marsh





Northeast Turtle Bay

- 505 acres of marsh creation
- 254 acres of marsh nourishment
- 2,335 feet of critical shoreline protection
- 2 channel liners at primary water exchange points.

- $ 69M ($86.5M w/25% contingency) with Mississippi River borrow site

R2-BA-06

Elmer’s Island Backbarrier Marsh Creation

BA-06

PPL26 Elmer's Island Backbarrier Marsh Creation
January 29, 2016

Louisiana's 2012 Coastal Master Plan
Barrier Island/Headland Restoration, Belle Pass to Caminada Pass

Project Location
Region 2, Barataria Basin, Jefferson Parish

Problem
As part of an erosional headland, Elmer's Island is dominated by marine processes including overwash. The island had narrowed and decreased in elevation escalating the rate of overwash and breaching near the confluence with the headland as well as along Caminada Pass. The spit along the pass is breached. Resiliency to overwash and breaching is related to both island height and width. Construction of beach and dune under CAM2 is addressing sand and dune height needs. Some residual vulnerability from breaching may remain due to island width. The 1984 to 2011 USGS interior loss rate for the extended boundary for the PPL22 Elmer's Island candidate project was -0.63% per year. The future without CAM2 shoreline erosion rate is -8.2 ft/yr from 1884 to 2005 and -6.4 ft/yr with the spot repairs proposed on PPL22 (Coast and Harbor 2012). The shoreline erosion rate may be lower with CAM2 in comparison to the proposed spot repairs with the PPL22 candidate due to greater sand introduced into the littoral transport.

Proposed Solution
The proposed project goals are: 1) habitat and 2) hydrology. The proposed features include approximately 265 of back barrier marsh creation and nourishment. Sediment for marsh creation would be mined offshore of the headland at a distance to avoid inducing shoreline erosion. The created marsh would be planted at 25% planting rate. Eight, 36-inch culverts would be installed under Elmer's Road to improve tidal exchange with the lagoon and the Bayou Thunder von Tranc and Moreau watershed.

Goals
The project goal is to create/nourish approximately 265 acres of backbarrier marsh and maintain or improve hydrology by connecting the lagoon to the Bayou Thunder and Moreau watershed west of Elmer's Road.

Preliminary Project Benefits

1) *What is the total acreage benefited both directly and indirectly?*
   This total project area is 265 ac.

2) *How many acres of wetlands will be protected/created over the project life?*
   Not yet determined. As a placeholder, 50% reduction of the background loss rate is applied to the created acres resulting in a net of 237. However, this would be reduced with burial from overwash.

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%)?*
   Not yet determined. The anticipated land loss rate reduction throughout the area of direct benefits will be 50-74% over the projects life.

4) *Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc?*
The project may help maintain barrier headland and Gulf beach rim.

5) *What is the net impact of the project on critical and non-critical infrastructure?*
The project would have marginal net positive impact to critical infrastructure which consists of LA1, a hurricane evacuation route, and residence of Chenier Caminada.

6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?*
The project would have synergy with the portions of the Caminada Headland Beach and Dune Projects currently being constructed (BA-45 and BA-143) with various funds and the Caminada Headland Back-barrier Projects currently under design.

Identification of Potential Issues
The proposed project has potential oyster, piping plover, and utility/pipeline issues.

Preliminary Construction Costs
The estimated construction cost including 25% contingency is $19,018,252. The fully funded cost estimate range is between $25M-$30M.

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

PPL26 Elmer's Island Backbarrier Marsh Creation

Science, Service, Stewardship

Elmer's Island Backbarrier Marsh Creation

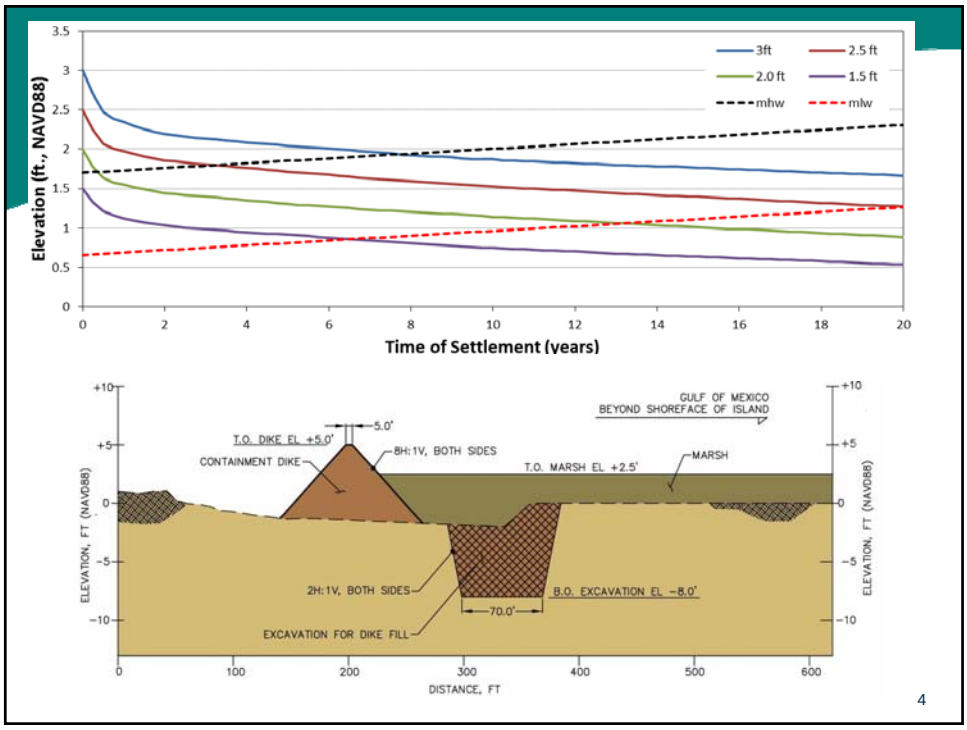
Region 2 – Barataria Basin

NOAA FISHERIES SERVICE

January 28, 2016

2


PPL26 Elmer's Island Backbarrier Marsh Creation
culvert installation
260 ac marsh
Elmers Island


Elevation (ft., NAVD88)
Time of Settlement (years)
3ft
2.5 ft
2.0 ft
1.5 ft
mhw
mlw
GULF OF MEXICO
BEYOND SHOREFACE OF ISLAND
T.O. DIKE EL +5.0'
5.0'
8H:1V, BOTH SIDES
CONTAINMENT DIKE
T.O. MARSH EL +2.5'
MARSH
2H:1V, BOTH SIDES
B.O. EXCAVATION EL -8.0'
70.0'
EXCAVATION FOR DIKE FILL
ELEVATION, FT (NAVD88)
DISTANCE, FT
4

NOAA FISHERIES SERVICE

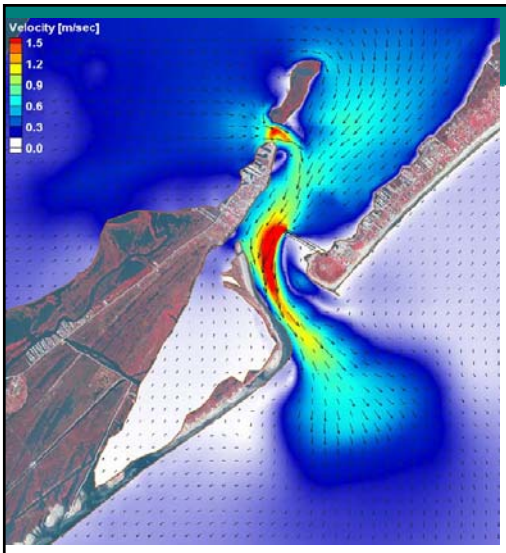
Project Summary

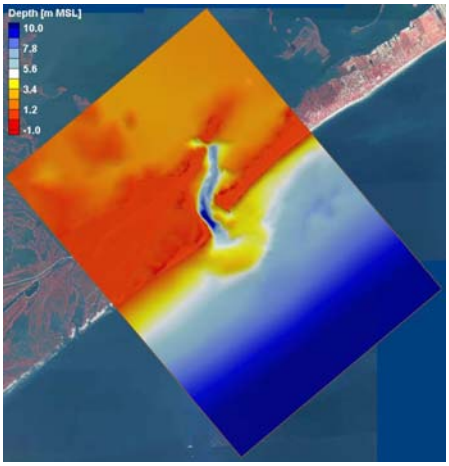
Backbarrier marsh creation (~2MCY) with 25% planting

- Marsh creation/nourishment = 265 acres
  - near-shore borrow area
- Install 8 culverts under Elmer's Road
- TY20 net = 237 *preliminarily; will be less with overwash*

- Construction Cost = $19M including 25% contingency
- Fully Funded Cost Range = $25M - $30M

5





R2-BA-07

Wilkinson Canal Marsh Creation and Terracing 1

BA-077

PPL26 Wilkinson Canal Marsh Creation and Terracing
January 28, 2016

Louisiana's 2012 Coastal Master Plan:
Consistent with Marsh Creation Subunit – 002.MC.05e

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

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

Goals:
The project goals are to:

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

Proposed Solutions:
The concept provides for the restoration of approximately 465 acres of emergent brackish marsh (425 marsh creation and 40 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 (212 acres) will be planted following construction to stabilize the platform and reduce time for full vegetation. The project will also construct 24,150 ft. (13 acres) of terraces in 345 acres of shallow open water just south of the marsh platform to help reduce wave fetch in the area. Terraces would be constructed to an elevation of +2.0 feet NAVD 88, with a 15-ft crown width, and would be planted.

Preliminary Project Benefits

1) *What is the total acreage benefited both directly and indirectly?*
   This total project area is approximately 815 acres (425 acres of marsh creation and 40 acres of marsh nourishment + 345 acre terrace field).

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

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

3) *What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (e.g., 50% reduction in the background loss rate)?*
A 50% loss rate reduction is assumed for the marsh creation, marsh nourishment, and terraces. (PPL23 Candidate Project Wilkinson Canal USGS Extended Boundary Loss Rate, -1.04%/year to -0.52%/year)

4) *Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc.?*
The project will help restore a portion of the natural eastern bankline of Bayou Dupont

5) *What is the net impact of the project on critical and non-critical infrastructure?*
The project will provide additional protection to Plaquemines Levee. The project would also provide positive impacts to non-critical (i.e., minor oil and gas facilities) infrastructure. Minor oil and gas facilities and pipelines in the area would benefit from an increase in marsh acreage.

6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?*
(BA-48) Bayou Dupont Marsh and Ridge Creation, (BA-39) Bayou Dupont Sediment Delivery System, and (BA-164) Bayou Dupont Sediment Delivery, Marsh Creation #3.

Identification of Potential Issues:
The proposed project has potential utility/pipeline issues along with oyster leases along the dredge pipeline path.

Preliminary Construction Costs
The estimated construction cost including 25% contingency is $28,091,798. The fully-funded cost range is $35M - $40M.

Preparer(s) of Fact Sheet:
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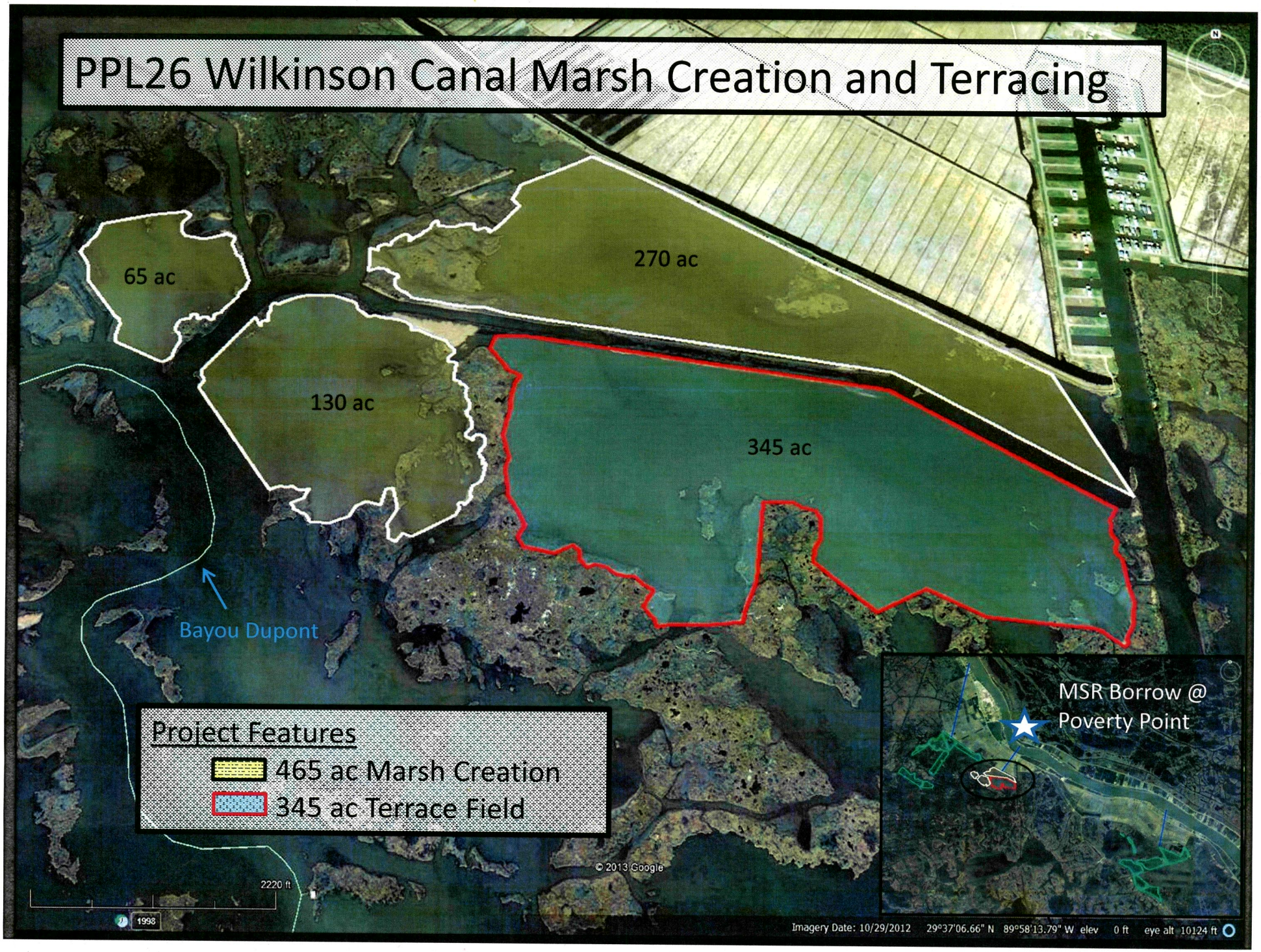
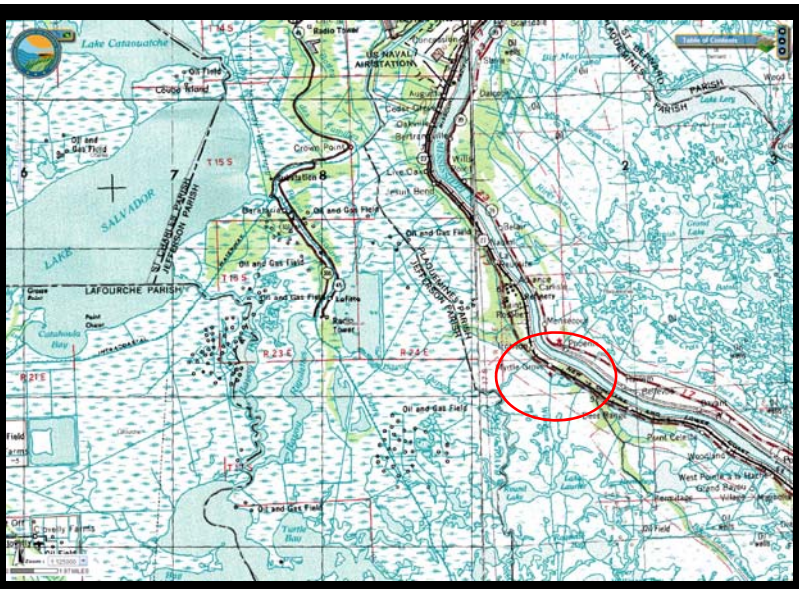
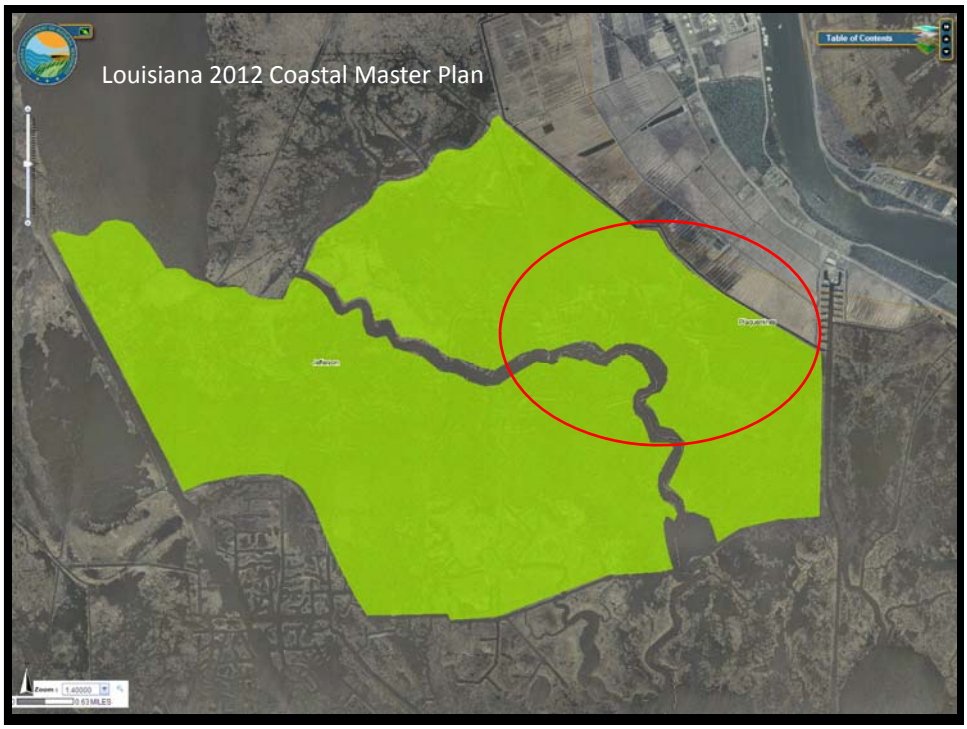
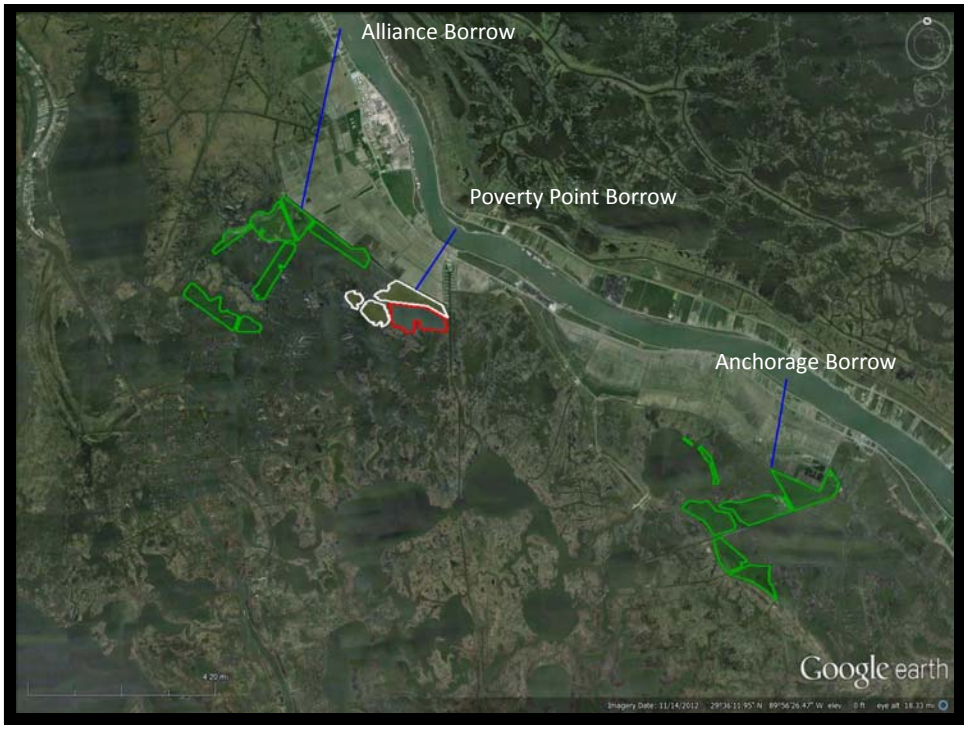

PPL26 Wilkinson Canal Marsh Creation and Terracing
65 ac
270 ac
130 ac
345 ac
Bayou Dupont
Project Features
465 ac Marsh Creation
345 ac Terrace Field
MSR Borrow @
Poverty Point
© 2013 Google
2220 ft
1998
Imagery Date: 10/29/2012 29°37'06.66" N 89°58'13.79" W elev 0 ft eye alt 10124 ft

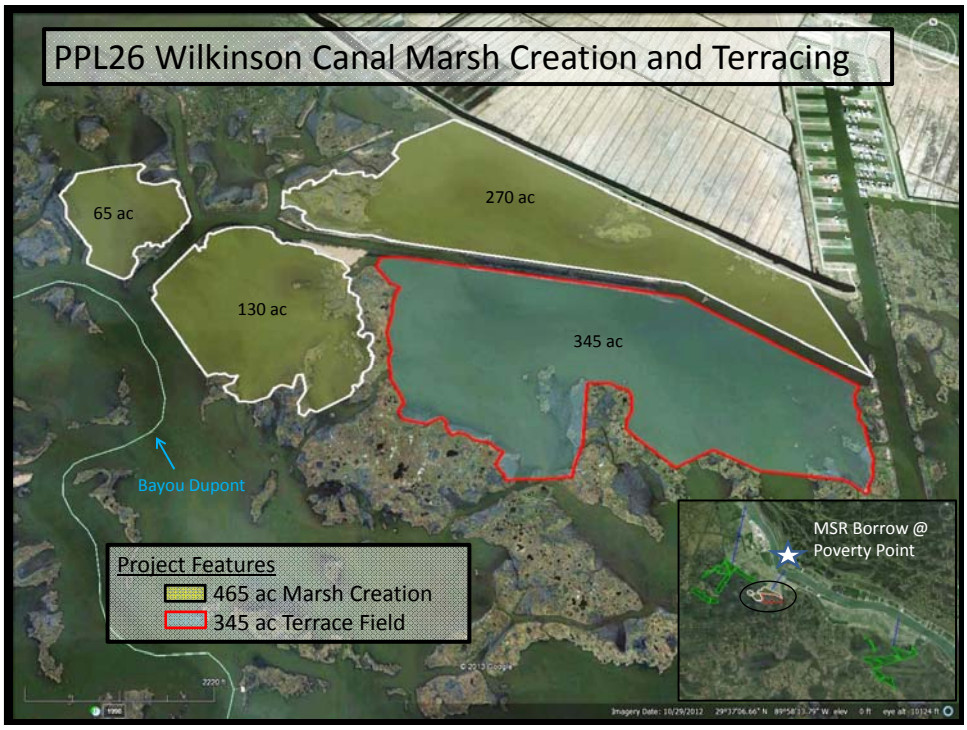


PPL26 WILKINSON CANAL MARSH CREATION AND TERRACING

Patrick Williams
National Marine Fisheries Service




Alliance Borrow
Poverty Point Borrow
Anchorage Borrow
Google earth


PPL26 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

Project Features and Benefits

- Total habitat restored is 478 acres, (465 acres of marsh and 13 acres of terraces)
- Net acres = 399 acres
- Construction + 25% Contingency = $28 M
- Fully Funded Cost Range = $35M - $40M

Problems near Bayou Dupont Area:

- High Land Loss rates in Barataria Basin, lost over 245,000 ac of marsh between 1932 and 1990; -1.04%/yr 1984 to 2011 USGS
- High Subsidence 2.1-3.5 ft/century, Coast 2050 Myrtle Grove Unit
- Reduced intermediate/brackish habitat for fish and wildlife in the area

R2-BA-08

Spanish Pass Ridge and Marsh Creation

BA-08

PPL26 PROJECT NOMINEE FACT SHEET
January 28, 2016

Project Name
Spanish Pass Ridge and Marsh Creation

Project Location
Region 2, Barataria Basin, Plaquemines Parish

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 the Spanish Pass ridge to reduce wave and tidal setup and provide fallout habitat for neo-tropical migrant birds. Specific phase 0 goals include creating about 286 acres saline marsh, nourishing 84 acres of saline marsh and constructing about 20,000 linear feet (about 16 acres) of maritime ridge habitat.

Proposed Solution
The proposed project's primary features are to restore 370 acres intertidal marsh (286 ac creation and 84 ac nourishment) and 20,000 ft of ridge north of Spanish Pass, west of Venice. An estimated 3.1 mcy of material would be dredges from Yellow Cotton Bay to create marsh at a target elevation of +1.4 ft and about 25,000 feet of retention dikes will be required for containment dikes. Approximately 20,000 ft of earthen ridge would be created north of Spanish Pass. The ridge feature will be constructed by building substantial retention dikes (i.e., 20-foot crown width at +5 feet NAVD). 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 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 the west bank back levees in areas where open bays directly abut levees. 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 both the BA-68 Grand Laird Marsh and Ridge Project (completed construction) and the BUDMAT Tiger Pass project (engineering and design) in further re-establishing he structural framework of southeastern Barataria Bay.

Identification of Potential Issues
Potential challenges include oysters and pipeline crossings

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

Preparer(s) of Fact Sheet:
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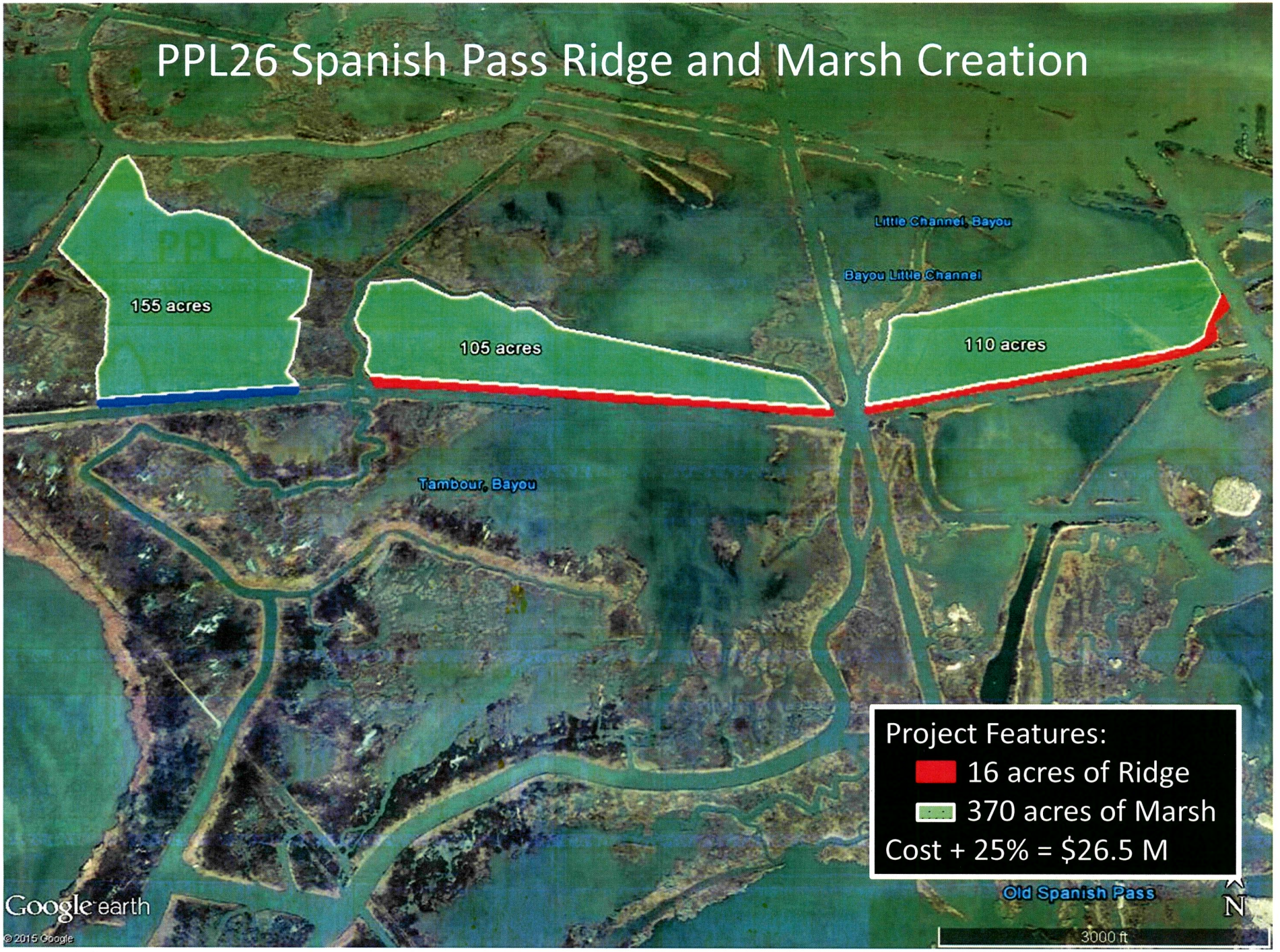
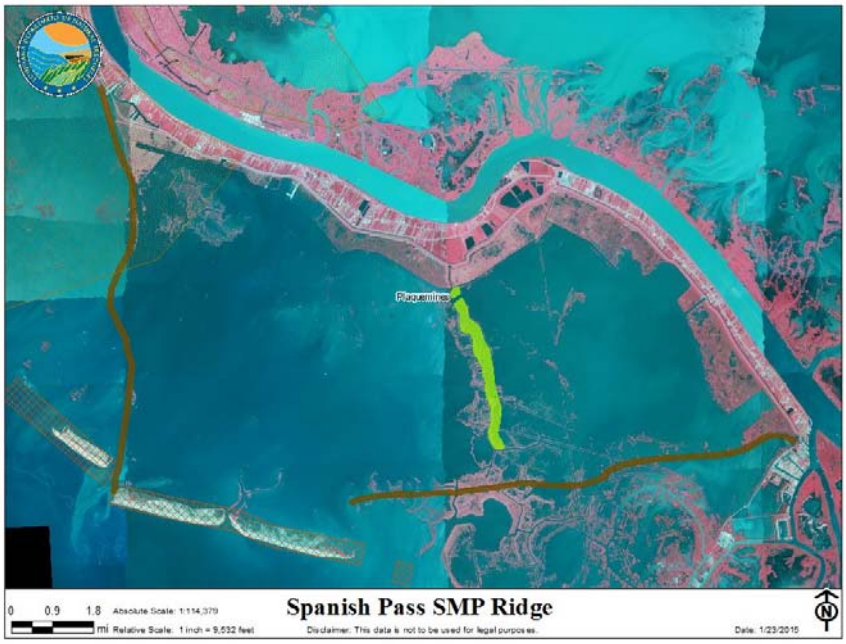
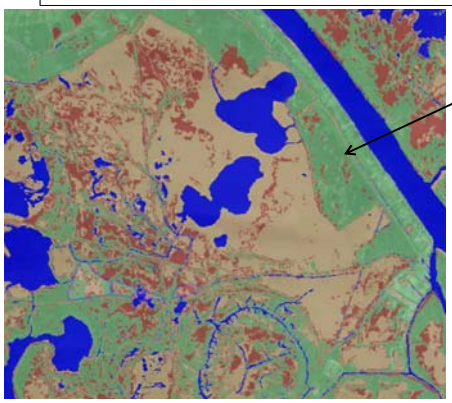

PPL26 Spanish Pass Ridge and Marsh Creation
155 acres
105 acres
110 acres
Little Channel, Bayou
Bayou Little Channel
Tambour, Bayou
Project Features:
16 acres of Ridge
370 acres of Marsh
Cost + 25% = $26.5 M
Old Spanish Pass
N
3000 ft
Google earth
© 2015 Google

PPL26 Spanish Pass Ridge and Marsh Creation

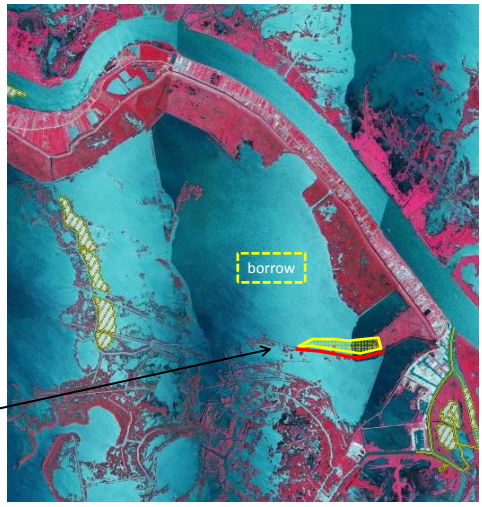
Kimberly Clements
NOAA Fisheries
January 28, 2016 Region 2 RPT



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



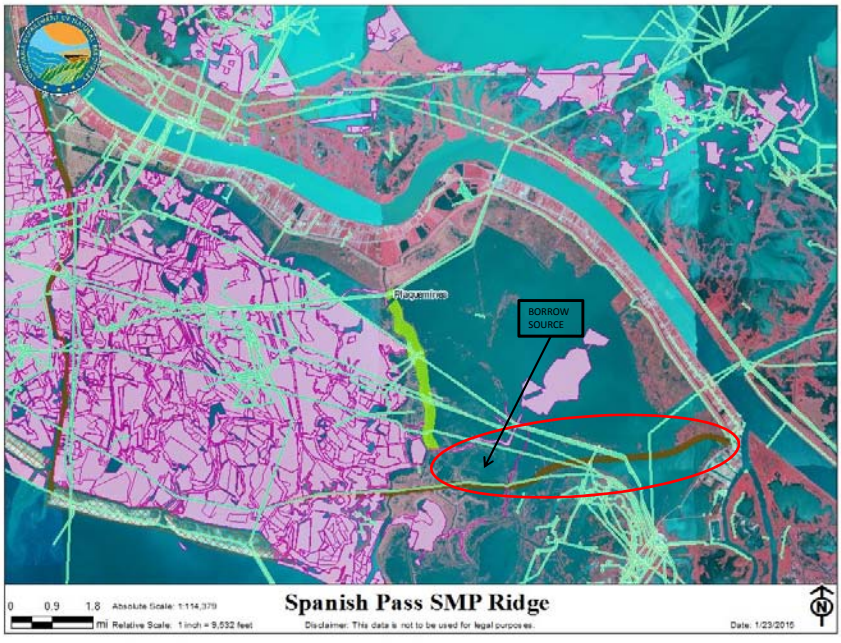
Marsh creation: 300 acres

Ridge restoration: 10,700 ft (16 acres)

Net Acres: 294

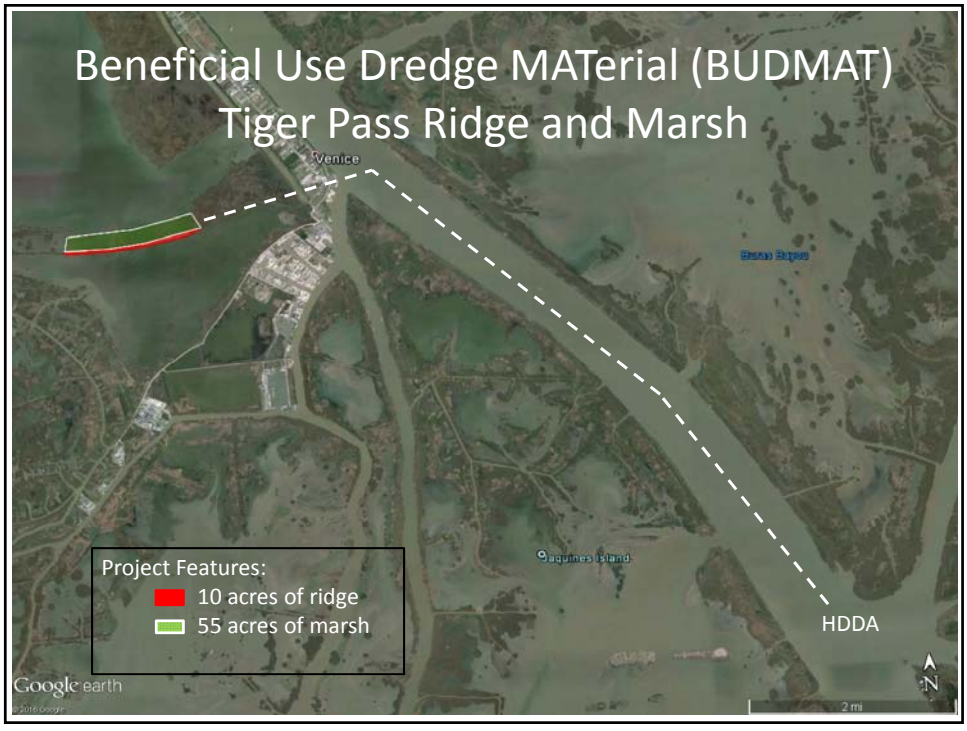
Construction + contingency: $22.2 M

Estimated FFC: $36.3 M

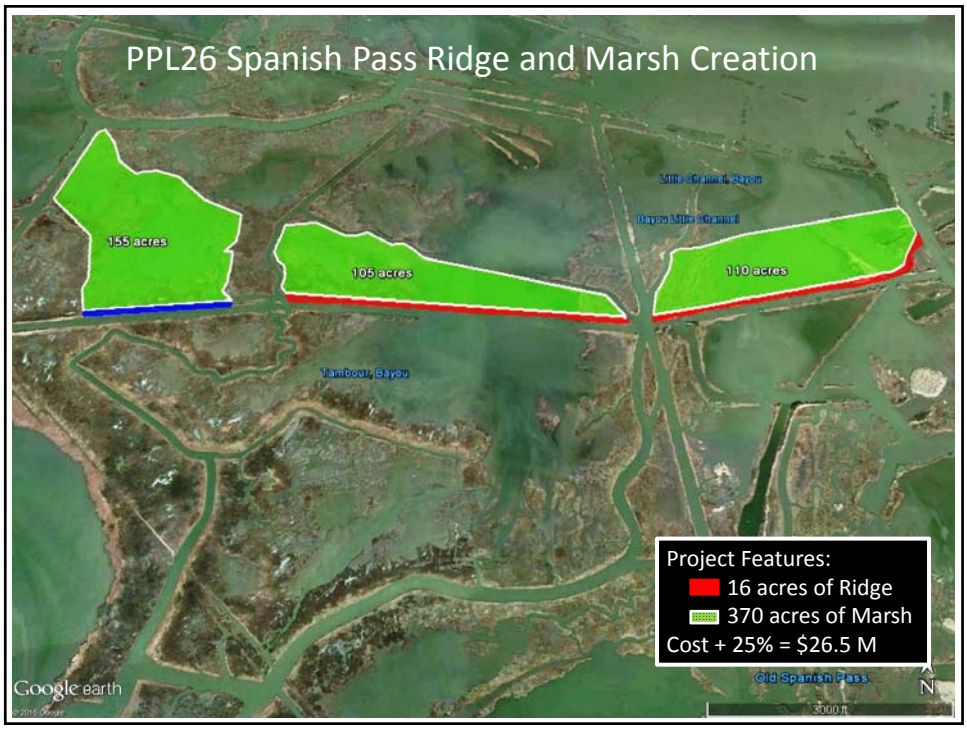



BA-68 Grand Liard Ridge and Marsh


BA-68 Grand Liard Ridge and Marsh


Beneficial Use Dredge MATerial (BUDMAT)
Tiger Pass Ridge and Marsh
Venice
Project Features:
10 acres of ridge
55 acres of marsh
HDDA
Google earth
2 mi
N


Lower MSR Westbank Coastal Restoration Synergy
BA-68 Grand Liard
Ridge and Marsh Creation
BUDMAT Tiger Pass
Ridge and Marsh Creation
Next phase ?
PPL26 Spanish Pass
Ridge and Marsh Creation
Google earth
N


PPL26 Spanish Pass Ridge and Marsh Creation
155 acres
105 acres
110 acres
Tambour, Bayou
Project Features:
16 acres of Ridge
370 acres of Marsh
Cost + 25% = $26.5 M
Google earth
N

PPL26 Spanish Pass Ridge and Marsh Creation

- 16 acres of ridge restoration
- 370 acres of marsh restoration
- Borrow from nearby bay source
- Construction + 25% contingency = $26.5 M
- Consistent with State Master Plan
- Synergistic with BA-68 Grand Liard Ridge recently completed construction
- Synergistic with BUDMAT Tiger Pass Ridge and Marsh Creation Project

R2-BA-09

Coffee Bay Marsh Creation and Shoreline Protection

BA-09

PPL26 PROJECT NOMINEE FACT SHEET
January 28, 2016

Project Name: Coffee Bay Marsh Creation and Shoreline Protection

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 2013, 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 28,616 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 28,6000 feet of critical shoreline, 2) protect approximately 219 acres of marsh habitat, and 3) create approximately 158 acres of marsh and nourish approximately 35 acres of marsh with dredged material from Little Lake and 4) create approximately 65 acres of terraces (43 acres of marsh). (446 total acres).

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.

Proposed Solutions:
With the currently proposed project, 21,714 ft. of foreshore rock dike would be constructed to protect approximately 28,600 feet of critical shoreline and preserve 219 acres of existing marsh. The rock dike would be constructed along the -2.0 foot contour.

The currently proposed project would also create approximately 158 acres of marsh and nourish an additional 35 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. The current proposal would also create approximately 65 acres of terraces fields (43 acres of marsh) in strategic areas. There are several alternative/additional sites for terraces, marsh creation, and/or marsh nourishment.

Preliminary Project Benefits:
1) What is the total acreage benefited both directly and indirectly? Approximately 446 acres would be directly benefited (193 MC/Nourishment +43 acres marsh terraces+ 210 Shoreline Protection).

2) How many acres of wetlands will be protected/created over the project life? The total net acres protected/created over the project life are approximately 377 acres (191 MC + 186 SP).

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 >75%.

4) Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc. 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. There is an nearby existing borrow site (BA-37) that is cleared for dredging.

Preliminary Construction Costs:
The estimated construction cost including 25% contingency is $25 M.

Preparer(s) of Fact Sheet:
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U.S. Fish & Wildlife Service

Louisiana Ecological Services Field Office

Coffee Bay Marsh Creation & Shoreline Protection

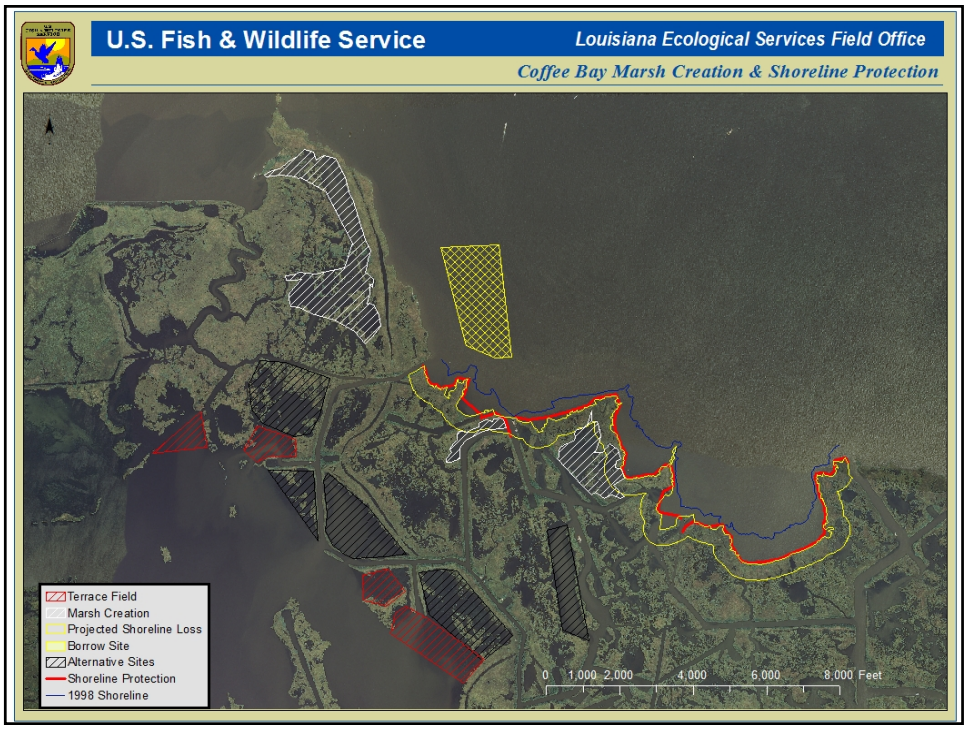
PPL 26
COFFEE BAY SHORELINE PROTECTION AND MARSH CREATION

COFFEE BAY SHORELINE PROTECTION AND MARSH CREATION

Problem:

- **Altered hydrology from construction of numerous canals and levees**
- **High shoreline erosion with rates ranging between 10 and 70 ft./yr.**
- **Used an average erosion rate of 22 ft./yr.**
- **Natural subsidence, interior loss rate 0.61%/yr. (Northwest Turtle Bay Project)**


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


U.S. Fish & Wildlife Service
Louisiana Ecological Services Field Office
Coffee Bay Marsh Creation & Shoreline Protection
Terrace Field
Marsh Creation
Projected Shoreline Loss
Borrow Site
Alternative Sites
Shoreline Protection
1998 Shoreline
0 1,000 2,000 4,000 6,000 8,000 Feet

COFFEE BAY SHORELINE PROTECTION AND MARSH CREATION

Solution:

- **Build 20,714 ft. of foreshore rock dike along the -2 ft. contour and built to a settled height of +2.5 ft.**
- **Hydraulically dredge material from Little Lake water bottom to create 158 acres and nourish 35 acres of marsh.**
- **Construct 65 acres of Terraces (43 acres of Marsh).**

COFFEE BAY SHORELINE PROTECTION AND MARSH CREATION

Goals:

- **Protect +28,000 feet of critical shoreline and 219 acres.**
- **Create 158 and nourish 35 acres of marsh (Total 193 acres).**
- **Create 65 acres of terraces (43 acres of marsh).**

Net Acres:

- **Total net acres = 377 acres (191 ac marsh MC/Terraces + 186 ac marsh SP)**

Potential Issues:

- **Pipelines within the project area and within Little Lake.**
- **Little Lake is designated as an oyster seed ground.**
- **There is an existing borrow site from BA-37 that could be utilized if needed.**

Preliminary Construction Costs

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

Species of Concern and Rare Species

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

R2-BA-10

Grand Bayou Marsh Creation and Terracing

PPL26 PROJECT NOMINEE FACT SHEET
January 28, 2016

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
Within the Lake Hermitage basin, between Bayou Grande Cheniere and the Mississippi River, significant marsh loss has occurred with the construction of oil/gas canals, subsidence, and sediment deprivation. From examination of aerial photography, it appears that the majority of this loss occurred during the 1960s and 1970s when numerous oil/gas canals were dredged in the area. Based on the hyper-temporal analysis conducted by USGS for the extended project boundary, loss rates in the project area are estimated to be -1.49% per year for the period 1984 to 2011.

Goals
The primary goals of this project are; 1) restore marsh habitat in the open water areas via marsh creation and terracing and 2) reduce fetch and wave energy in open water areas via the construction of terraces. Specific goals of the project are: 1) Create approximately 366 acres of marsh with dredged material from the Mississippi River; 2) create 52,650 linear feet (37 acres) of terraces.

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/nourish approximately 365 acres of marsh.
2. Approximately 21,700 linear feet (15 acres) of terraces 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 would be benefited directly and indirectly. Direct benefits include 365 acres of marsh creation and 15 acres of terraces. Indirect benefits would occur to surrounding marshes and within the 335-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 319 acres.

3) *What is the anticipated loss rate reduction throughout the area of direct benefits over the project life (<25%, 25-49%, 50-74% and >75%).* The anticipated loss rate reduction throughout the area of direct benefit is estimated to be 50%.

4) *Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc.* No.

5) *What is the net impact of the project on critical and non-critical infrastructure*? The project would afford some protection to flood protection levees east of the project area along Hwy. 23.

6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects*? The project would provide a synergistic effect with the 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 $28.7M.

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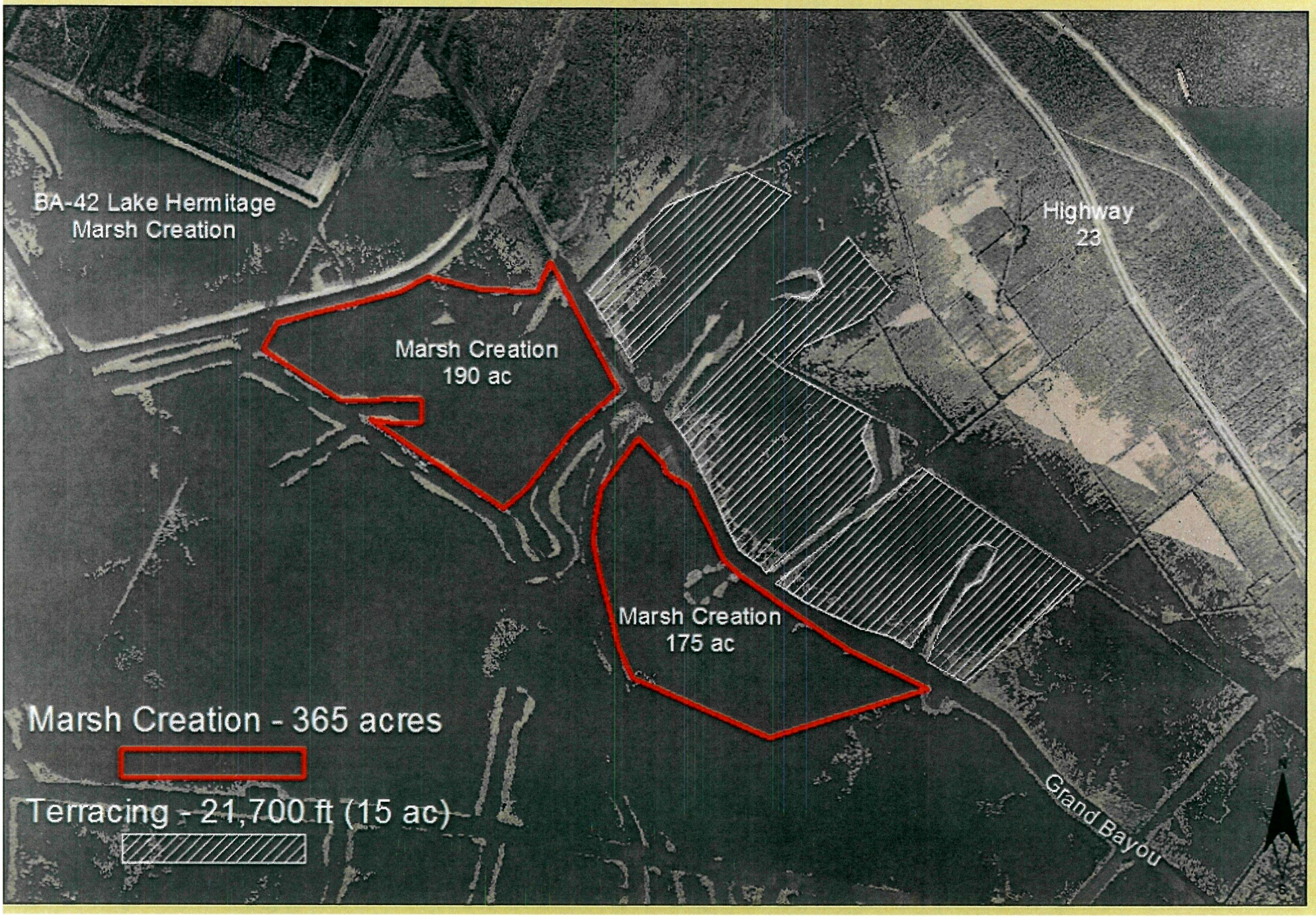
U.S. Fish & Wildlife Service

Louisiana Ecological Services Field Office

Grand Bayou Marsh Creation and Terracing



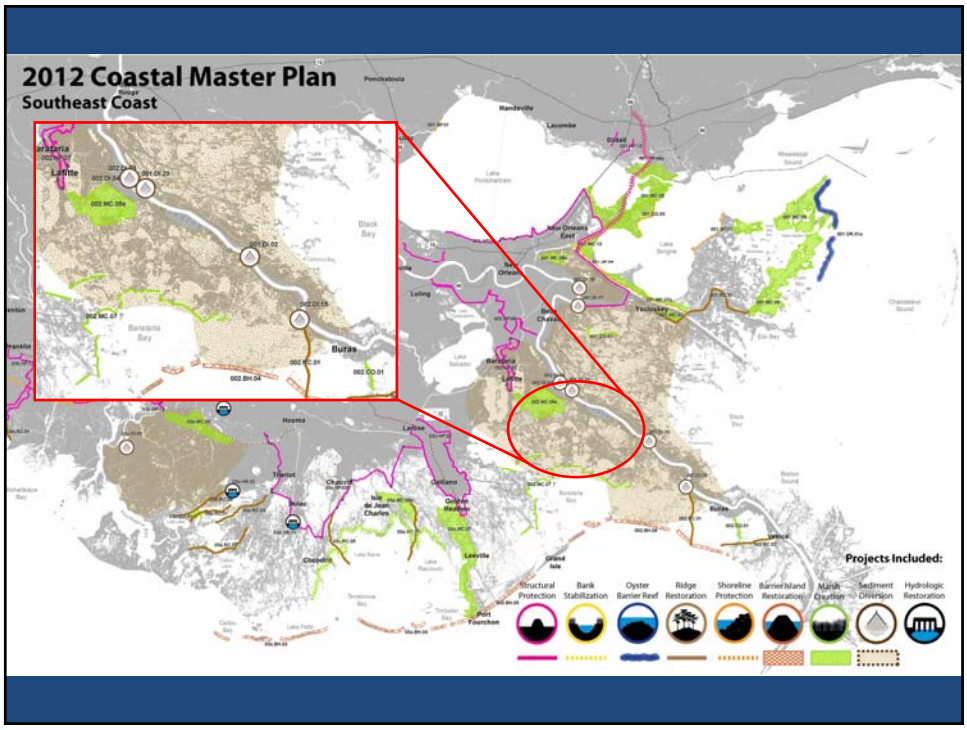
REGION II

REGIONAL PLANNING TEAM MEETING

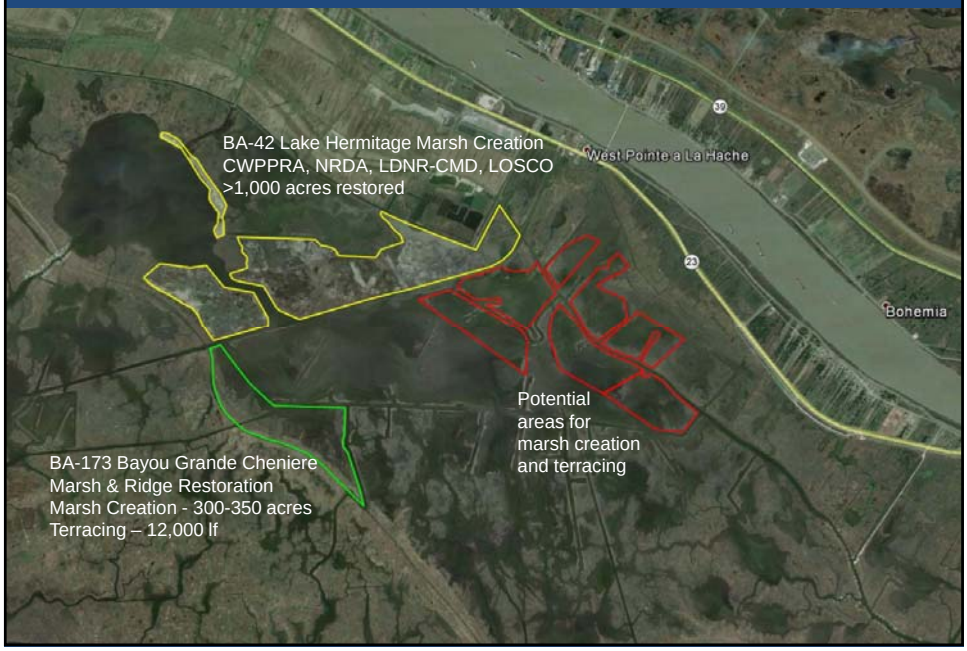
BARATARIA BASIN

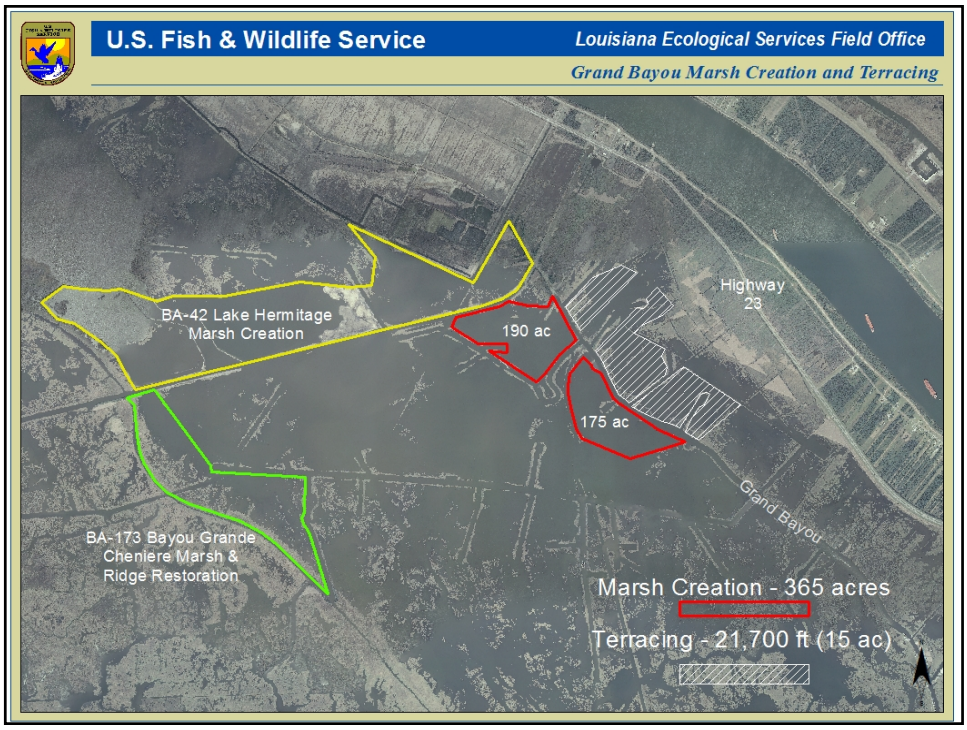
Lacombe, LA

January 28, 2016



Lake Hermitage Basin Restoration





Grand Bayou Marsh Creation & Terracing

- Mississippi River borrow site
- 365 acres of marsh creation/nourishment
- 21,700 feet of terraces (15 acres)
- Net acres = 319
- Construction plus contingency = $28.7M
- Complementary project to BA-42, BA-173
- Infrastructure nearby

R2-BA-11

East Bayou Lafourche Marsh Creation

BA-11

PPL26 PROJECT NOMINEE FACT SHEET
January 28, 2016

Project Name
East Bayou Lafourche Marsh Creation

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

Problem
The Leeville area has experienced extensive loss of emergent wetlands from subsidence, storms, canal dredging, and altered hydrology. Wetland loss has increased the vulnerability of Leeville and Louisiana Highway 1 to damage from tropical storms. Based on the hyper-temporal analysis conducted by USGS for the extended project boundary, loss rates in the project area are estimated to be -1.41% per year for the period 1984 to 2015.

Goals
The primary goal of this project is to restore marsh along the Highway 1-Bayou Lafourche corridor via marsh creation. The specific goal of the project is create approximately 417 acres (374 acres of marsh creation and 43 acres of marsh nourishment) of marsh with dredged material.

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 Solution
Sediments from a Little Lake borrow site will be hydraulically dredged and pumped via pipeline to create/nourish approximately 417 acres of marsh. Dewatering and compaction of dredged sediments should produce elevations conducive to the establishment of emergent marsh and within the intertidal range. Perimeter containment dikes will be constructed. Containment dikes exposed to open water will be planted with appropriate vegetation. Containment dikes will be gapped at the end of construction or by target year 3.

Preliminary Project Benefits

1) *What is the total acreage benefited both directly and indirectly?*
   Approximately 417 acres would be benefited directly. Direct benefits include 374 acres of marsh creation and 43 acres of marsh nourishment. Indirect benefits would occur to marsh surrounding the project area.

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 330 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)?*
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 at this time.

Identification of Potential Issues
Oil and gas infrastructure (i.e., pipelines) and oyster leases would have to be considered in the project design.

Preliminary Construction Costs
The estimated construction cost including 25% contingency is $25.5M.

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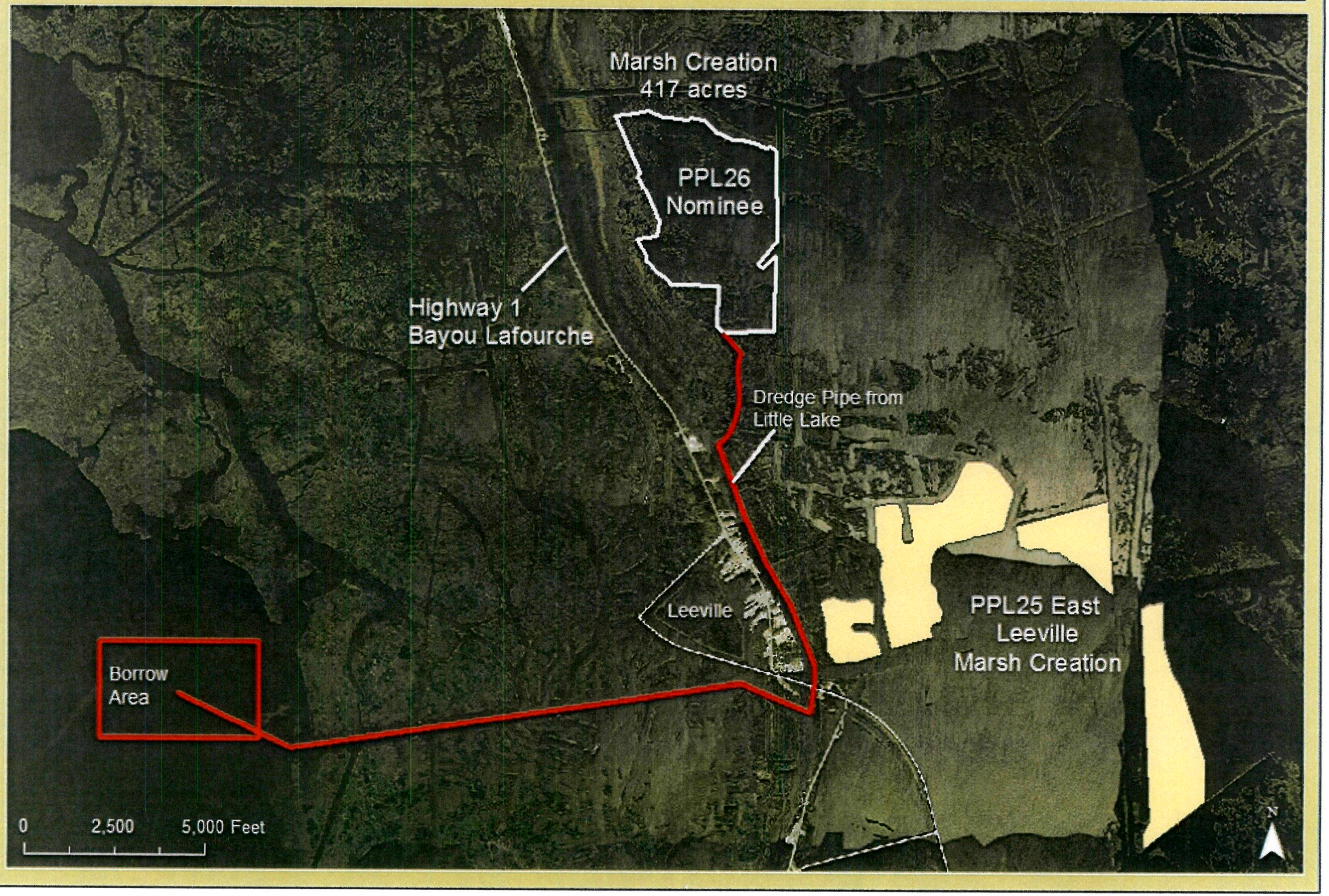
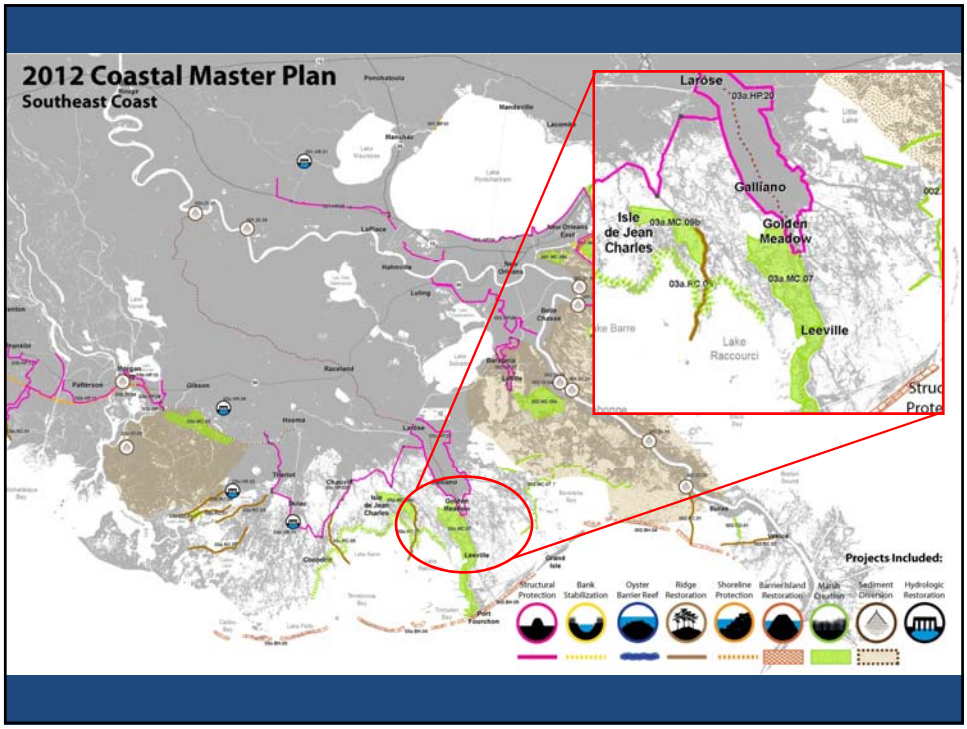
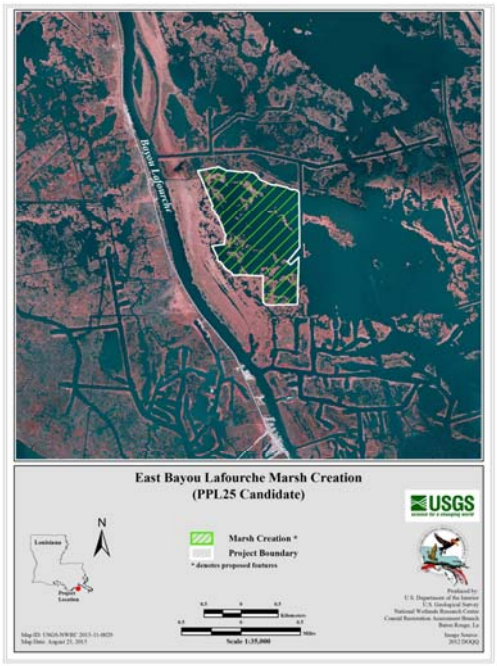
U.S. Fish & Wildlife Service

Louisiana Ecological Services Field Office

East Bayou Lafourche Marsh Creation




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 Barre
Lake Raccourci
Projects Included:
Structural Protection
Bank Stabilization
Oyster Barrier Reef
Ridge Restoration
Shoreline Protection
Barrier Island Restoration
Marsh Creation
Sediment Diversion
Hydrologic Restoration


Bayou Lafourche
East Bayou Lafourche Marsh Creation
(PPL25 Candidate)
USGS
Marsh Creation *
Project Boundary
* denotes proposed features
N
Louisiana
Project Location
Scale 1:35,000

East Bayou Lafourche Marsh Creation & Terracing

- Little Lake borrow site
- 417 acres of marsh creation/nourishment
- Net acres = 330
- Construction plus contingency = $25.5M
- Complementary to the PPL25 East Leeville Marsh Creation Project

Questions?

R2-BA-12

Bayou Long Marsh Creation and Ridge Restoration – Increment 1

BA-12

PPL26 PROJECT NOMINEE FACT SHEET
January 28, 2016

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.

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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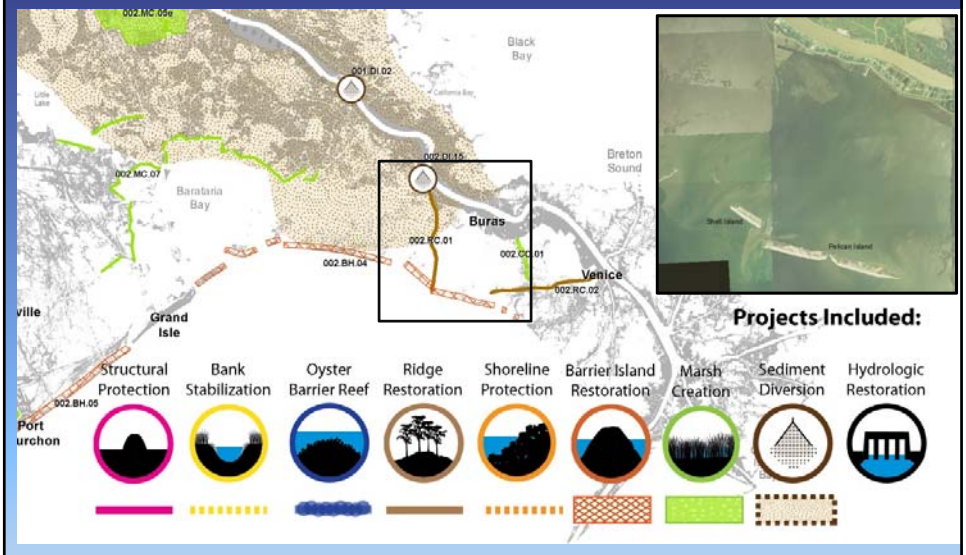
U.S. Fish & Wildlife Service
Louisiana Ecological Services
Bayou Long Ridge Restoration & Marsh Creation
N
Adams Bay
Bayou Long / Empire Waterway
Legend
DepositBorrowArea
Line Type
Marsh Area 1
Marsh Area 2
Ridge 1
Ridge 2
0 0.125 0.25 0.5 0.75 1
Miles
20150123/2012 DOQQ/ACT

Bayou Long Ridge Restoration and Marsh Creation Project

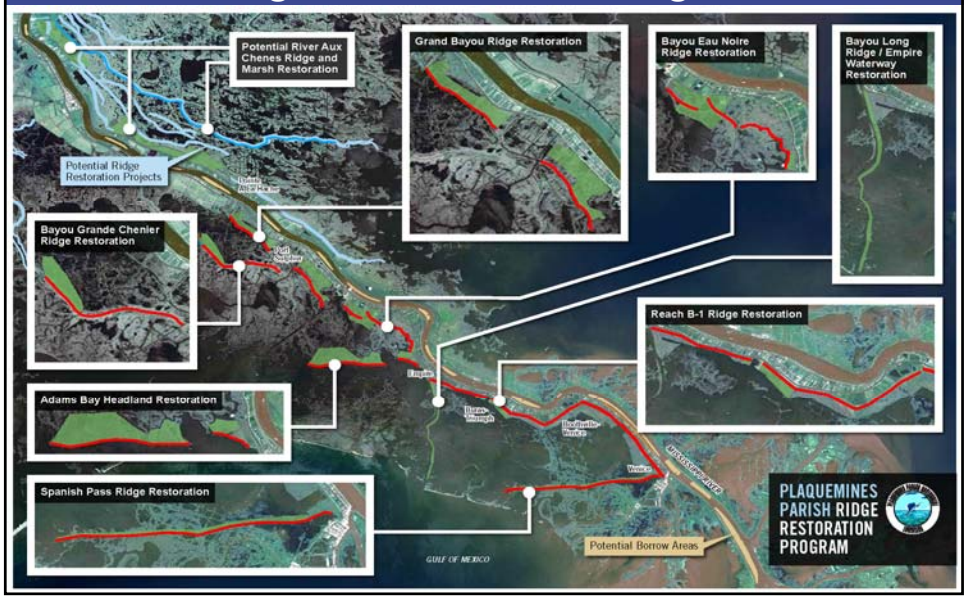
PPL 26

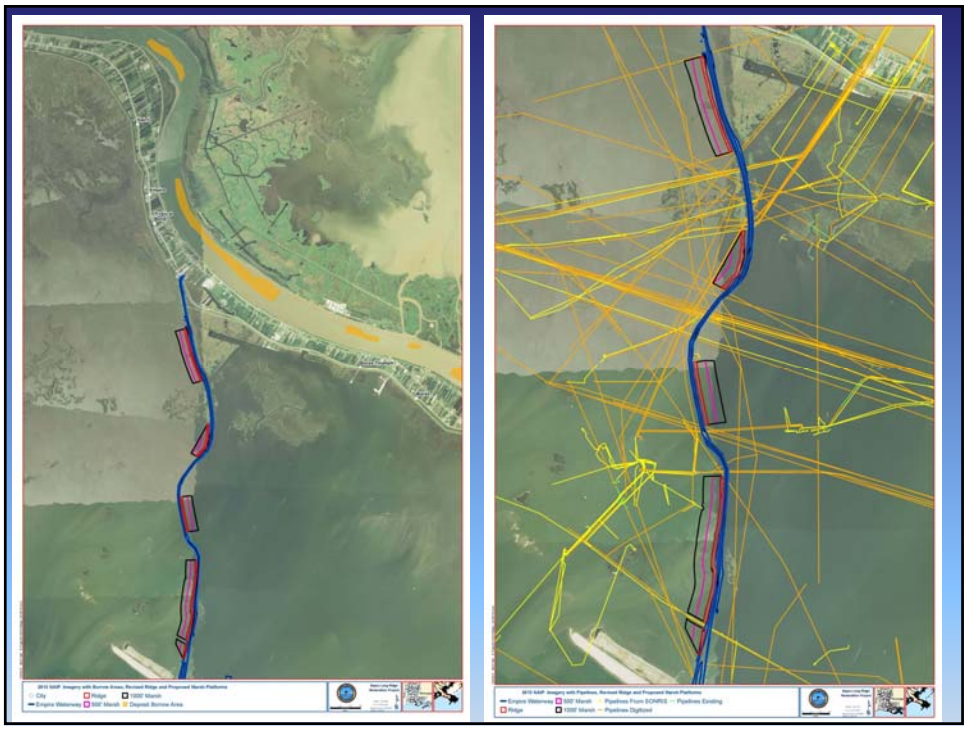
Region 2, Barataria Basin

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-13

Grand Pierre Island Restoration

BA-13

PPL26 PROJECT NOMINEE FACT SHEET
January 28, 2016

Project Name:
Grand Pierre Island Restoration

Louisiana's 2012 Coastal Master Plan:
Barrier Island/Headland Restoration – 002.BH.04

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 would 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 enhance 229 acres (93 acres creation and 136 acres nourishment) of back-barrier marsh. As much as 2.2 million cubic yards of sediment would be mined from previously surveyed and cleared nearshore borrow sites in the Gulf of Mexico (located 3.1 miles away). 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 acres. 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 acres 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 (BA-30) and the Chenier Ronquille Restoration Project (BA-76) being constructed in 2016.

Identification of Potential Issues
Land rights have yet to be determined.

Preliminary Construction Costs
The estimated construction cost including 25% contingency is approximately $19.2 million.

Preparer(s) of Fact Sheet:
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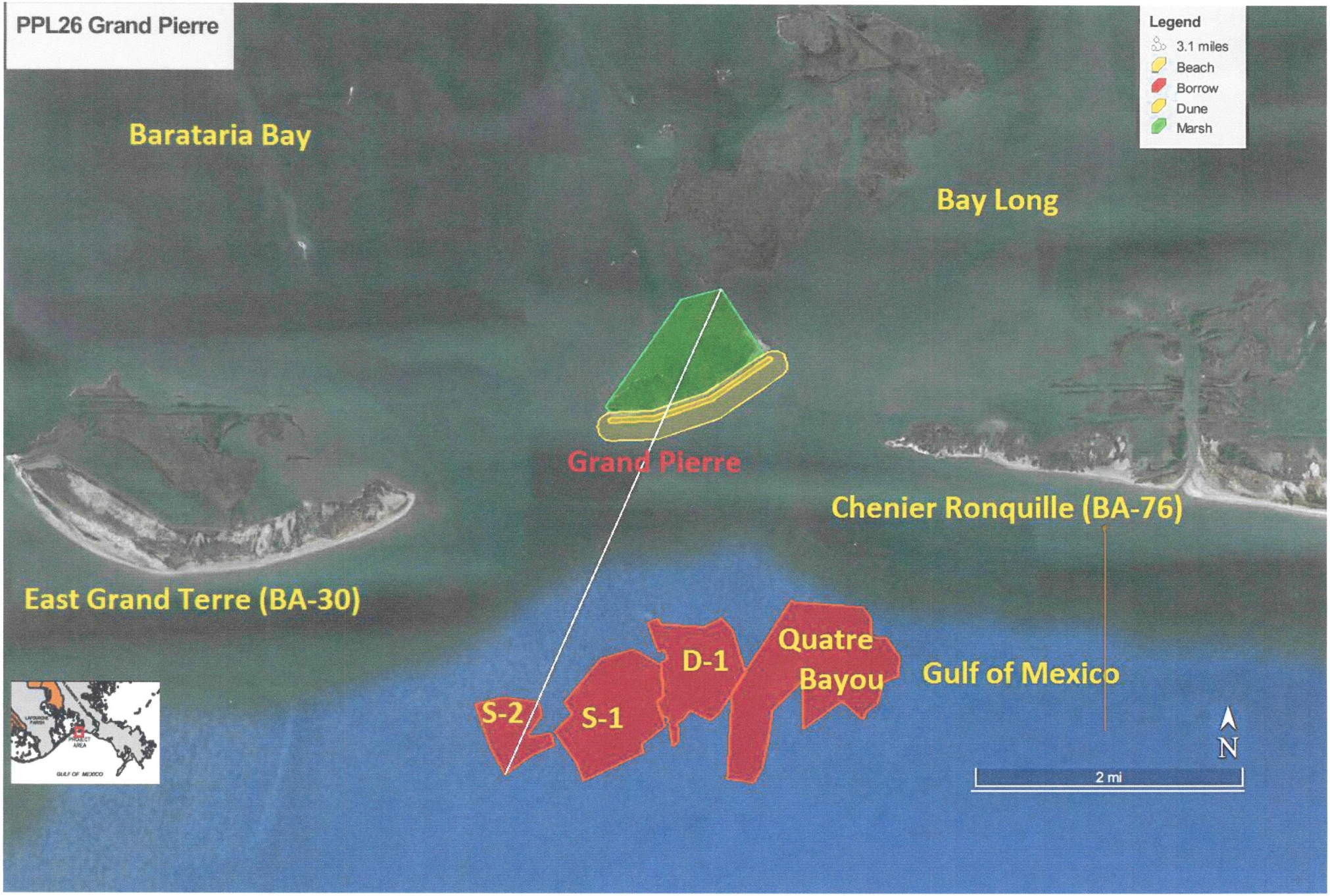
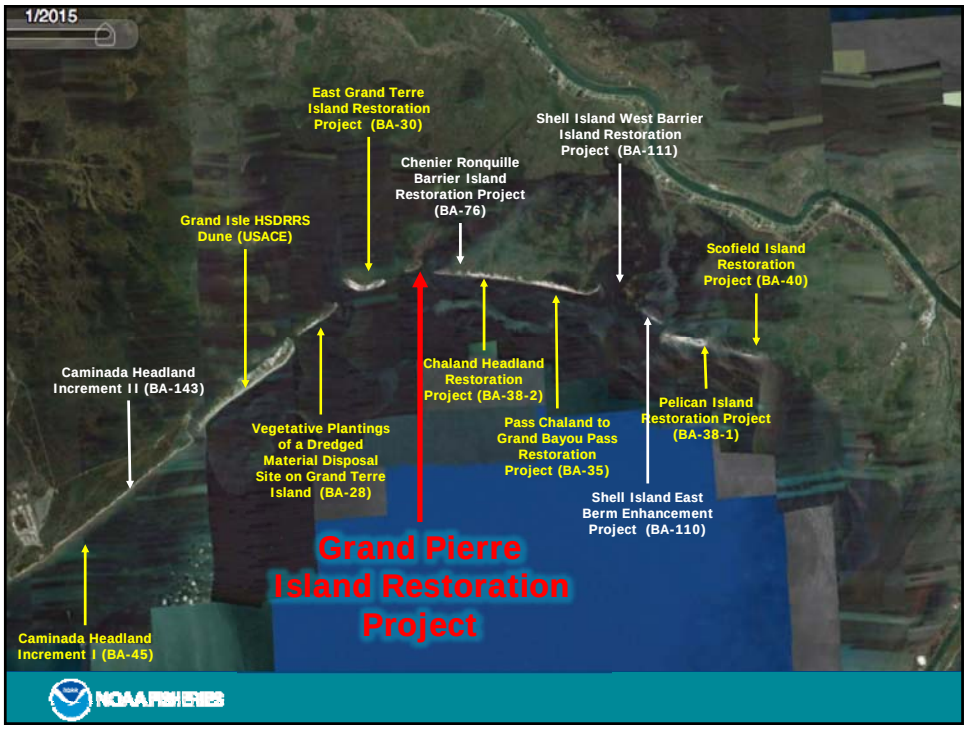

PPL26 Grand Pierre
Legend
3.1 miles
Beach
Borrow
Dune
Marsh
Barataria Bay
Bay Long
Grand Pierre
Chenier Ronquille (BA-76)
East Grand Terre (BA-30)
S-2
S-1
D-1
Quatre Bayou
Gulf of Mexico
N
2 mi
GULF OF MEXICO

NOAA FISHERIES
Restoration Center

Grand Pierre Barrier Island Restoration

Region 2 – Barataria Basin
Plaquemines Parish

January 28, 2016



Why is Grand Pierre Important?

- 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 (2.8 miles)
- Not identified by the state or feds as a priority for restoration under any DWH funding mechanism

NOAA FISHERIES U.S. Department of Commerce | National Oceanic and Atmospheric Administration | NOAA Fisheries

What is the Solution?

- Complete barrier island restoration (356 acres)
- Create 127 acres beach and dune
- Create 93 acres & nourish 136 acres marsh (229 acres)
- 2.2 mcy available Ronquille nearshore borrow areas (3.1 miles)
- Construction cost with 25% contingency $19.2 million