CWPPRA

PPL 33 Regional Planning Team (RPT) Meetings

Region 2 - Final Proposal Package

Coastal Wetlands Planning Protection & Restoration Act

33rd Priority Project List

Region 2

Regional Planning Team Meeting

Lead:
Elizabeth Jarrell, USACE

February 9, 2023

Program Updates

- **Great News! -** 2022 budget reconciliation, return of funds, and annual Sport Fish Trust Fund accruals resulted in approximately **$212M** available for Phase 1 and 2 authorizations in December/January
  - CWPPRA Agencies worked collaboratively to identify the **most impactful projects** and reduce project backlog
- In January, the CWPPRA Task Force approved:
  - 4 projects for Phase 2
    - Bayou Cane Marsh Creation (PO-181)
    - East Delacroix Marsh Creation and Terracing (BS-37)
    - Grand Bayou Ridge and Marsh Restoration (BA-217)
    - Island Road Marsh Creation and Nourishment (TE-117)
  - 2 projects for Phase 1
    - Yscloskey Marsh Creation
    - Northwest Little Lake Marsh Creation
  - A portion of the total available funds were retained for future priority projects and consideration of potential bid overruns to construct Phase 2-approved projects

Program Updates

- Criteria Considered for Selecting Impactful Projects:
  - **Cost Effectiveness** - benefit/cost
  - **Synergy** - interaction with other restoration projects
  - **Critical Area of Need** - land loss (current, synoptic, historic)
  - **Landbridge Function or Structural Framework**
  - **Critical Infrastructure**
  - Geography - Basin, Political Boundary, Distribution
  - Borrow Area
  - Threatened or Endangered Species
  - Willing Landowners and Stakeholder Support
  - Partnerships
  - Other considerations - e.g., Oysters, Pipelines/Utilities, O&M, etc.

Announcements

- PPL 33 RPT meetings to accept project nominees:
  - Region IV - Feb. 7, 2023, 9:30 am
  - Region III - Feb. 8, 2023, 9:30 am
  - Regions II and I - Feb. 9, 2023, 9:30 am

Region 2 Parishes

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

RPT Meetings

- Project proposals should be consistent with the state's **2017 and/or 2023 (draft) Coastal Master Plan**.
- A project can only be nominated in one basin (except for coastwide projects)
  - Proposals that cross multiple basins shall be nominated in the basin with majority area of project influence.
- If similar projects are proposed within the same area, the RPT Lead will call for a break for RPT representatives to discuss and determine the best path forward.

RPT Meetings

- All proposals submitted in advance will go in the order indicated on the agenda.
- A request for other proposals will occur after presentations for proposals submitted in advance.
- Limit project proposal presentations to 5 minutes.
- Public comments on project proposals will be accepted verbally during the RPT meetings and in writing by **February 16, 2023**.
- Limit comments and questions today to PPL 33 proposals and process.

Coastwide Projects

- Proposes a proven technique applicable across the coast (e.g., vegetative planting)
- Can be nominated at any RPT meeting
- Engineering/Environmental Workgroups will validate that projects fit CWPPRA SOP criteria
- All coastal parishes & agencies will vote on selection of up to one coastwide nominee

Demonstration Projects

- Demonstrate a restoration technique or material that can be transferred to other areas of the coastal zone
- Engineering/Environmental Workgroups will validate that demos fit CWPPRA SOP criteria
- All coastal parishes & agencies will vote on selection of up to 6 demonstration projects
- Previous candidates must be ***re-nominated*** for PPL 33

Coastwide Vote

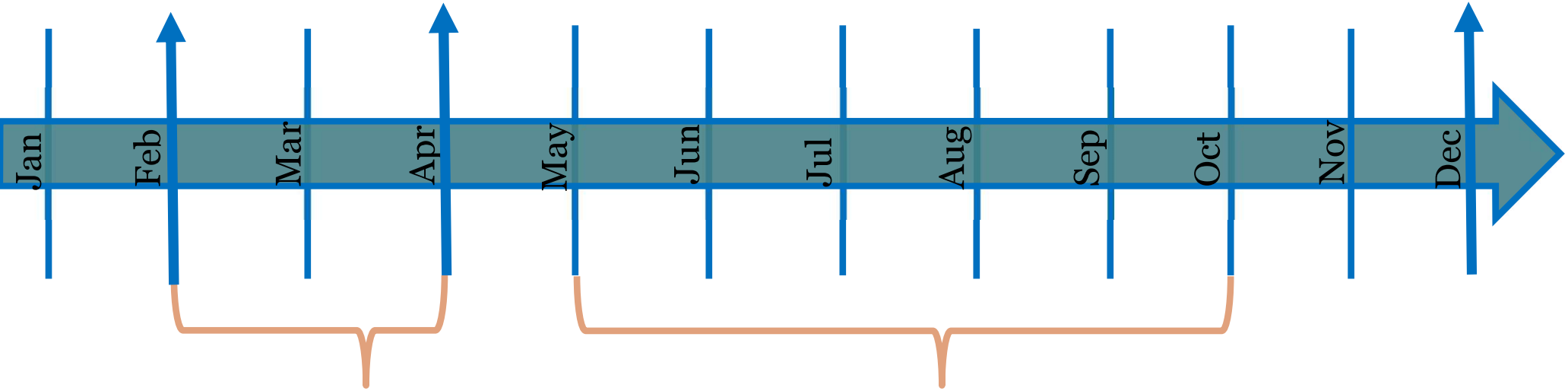
- An electronic vote will be held **23 February** to select projects, with the number of projects per basin determined by loss rate (i.e., basins with the highest loss have the most projects):
  - Barataria: 4
  - Terrebonne: 4
  - Breton Sound: 3
  - Pontchartrain: 3
  - Mermentau: 2
  - Calcasieu/Sabine: 2
  - Teche/Vermilion: 2
  - Atchafalaya: 1
  - Coastwide: 1
  - **22 total nominees** (plus up to 6 demo projects)

PPL Timeline

Coastwide Vote (Feb)
- 22 nominees, up to 6 demos

TC Mtg (April)
- 10 candidates
- up to 3 demos

TC Mtg (December)
- Recommend up to 4 projects for Phase 1 funding



March - April
- Agencies assigned to projects
- Fact sheets developed
- Workgroup review
- Workgroups may recommend no demos move forward

May - October
- Site visits
- Workgroup evaluations

Written Comments

Send written comments on proposals presented today to the CWPPRA program manager by **16 February 2023**

Kaitlyn Richard
U.S. Army Corps of Engineers
CEMVN-PM-R, RM 331
7400 Leake Avenue
New Orleans, LA 70118

Email: Kaitlyn.M.Carriere@usace.army.mil

(this information has been provided via CWPPRA Newsflash and posted on the USACE CWPPRA webpage)

For more info, please visit lacoast.gov or contact Elizabeth Jarrell at Elizabeth.Jarrell@usace.army.mil

Region 2

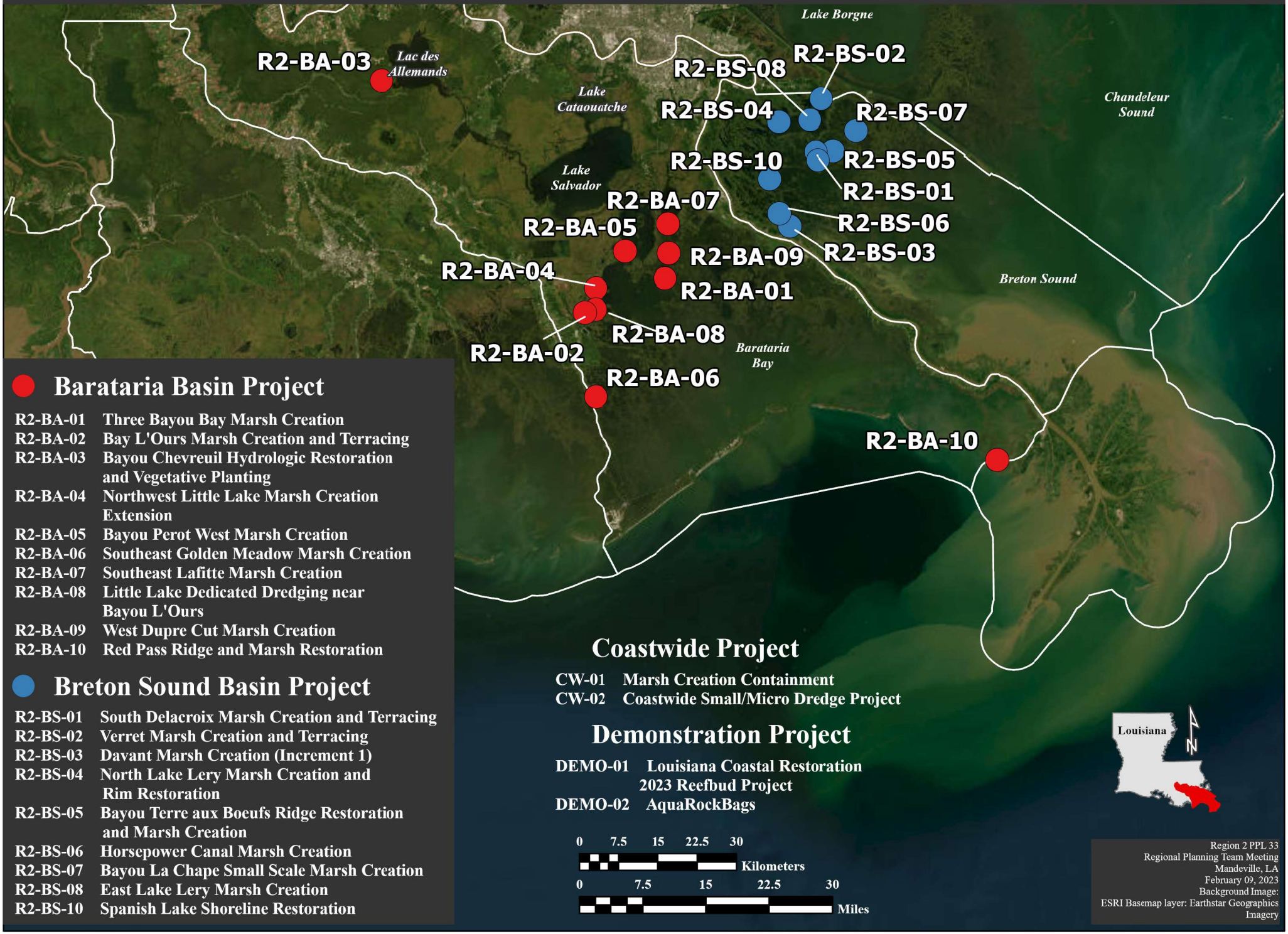
Barataria Basin

Project ID	Agency	Project Name
R2, BA-01	EPA	Three Bayou Bay Marsh Creation
R2, BA-02	EPA	Bayou L'Ours Marsh Creation and Terracing
R2, BA-03	EPA	Bayou Chevreuil Hydrologic Restoratoin and Vegetative Planting
R2, BA-04	FWS	Northwest Little Lake Marsh Creation Extension
R2, BA-05	FWS	Bayou Perot West Marsh Creation
R2, BA-06	FWS	Southeast Golden Meadow Marsh Creation
R2, BA-07	NMFS	Southeast Lafitte Marsh Creation
R2, BA-08	NMFS	Little Lake Dedicated Dredging near Bayou L'Ours
R2, BA-09	NRCS	West Dupre Cut Marsh Creation
R2, BA-10	USACE	Red Pass Ridge and Marsh Restoration

Breton Sound Basin

Project ID	Agency	Project Name
R2, BS-01	NOAA	South Delacroix Marsh Creation and Terracing
R2, BS-02	EPA	Verret Marsh Creation and Terracing
R2, BS-03	EPA	Davant Marsh Creation (Increment 1)
R2, BS-04	NMFS	North Lake Lery Marsh Creation and Rim Restoration
R2, BS-05	NRCS	Bayou Terre aux Boeufs Ridge Restoration and Marsh Creation
R2, BS-06	NRCS	Horsepower Canal Marsh Creation
R2, BS-07	NRCS	Bayou La Chape Small Scale Marsh Creation
R2, BS-08	FWS	East Lake Lery Marsh Creation
R2, BS-09	FWS	East Breton Marsh Creation (removed from consideration)
R2, BS-10	FWS	Spanish Lake Shoreline Protection and Restoration

PPL33 Region 2 Nominated Projects



Barataria Basin Project

R2-BA-01	Three Bayou Bay Marsh Creation
R2-BA-02	Bay L'Ours Marsh Creation and Terracing
R2-BA-03	Bayou Chevreuil Hydrologic Restoration and Vegetative Planting
R2-BA-04	Northwest Little Lake Marsh Creation Extension
R2-BA-05	Bayou Perot West Marsh Creation
R2-BA-06	Southeast Golden Meadow Marsh Creation
R2-BA-07	Southeast Lafitte Marsh Creation
R2-BA-08	Little Lake Dedicated Dredging near Bayou L'Ours
R2-BA-09	West Dupre Cut Marsh Creation
R2-BA-10	Red Pass Ridge and Marsh Restoration

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R2-BS-06	Horsepower Canal Marsh Creation
R2-BS-07	Bayou La Chape Small Scale Marsh Creation
R2-BS-08	East Lake Lery Marsh Creation
R2-BS-10	Spanish Lake Shoreline Restoration

Coastwide Project

CW-01	Marsh Creation Containment
CW-02	Coastwide Small/Micro Dredge Project

Demonstration Project

DEMO-01	Louisiana Coastal Restoration 2023 Reefbud Project
DEMO-02	AquaRockBags

0 7.5 15 22.5 30 Kilometers

0 7.5 15 22.5 30 Miles

Region 2 PPL 33
Regional Planning Team Meeting
Mandeville, LA
February 09, 2023
Background Image:
ESRI Basemap layer: Earthstar Geographics
Imagery

PPL33 PROJECT FACT SHEET
February 9, 2023

Project Name
Three Bayou Bay Marsh Creation

Master Plan Strategy
Lower Barataria Marsh Creation-Component A (2017 Master Plan 002.MC.04a): Creation of approximately 7,400 acres of marsh in Jefferson Parish on the east shore of Little Lake and Turtle Bay to create new wetland habitat and restore degraded marsh. Large Scale Barataria Marsh Creation (2023 Master Plan #090c): Creation of marsh within a footprint of approximately 15,000 acre in western portion of Large-Scale Barataria marsh Creation project to create new wetland habitat, restore degraded marsh, and reduce wave erosion.

Project Location
Region 2, Barataria Basin, Jefferson Parish

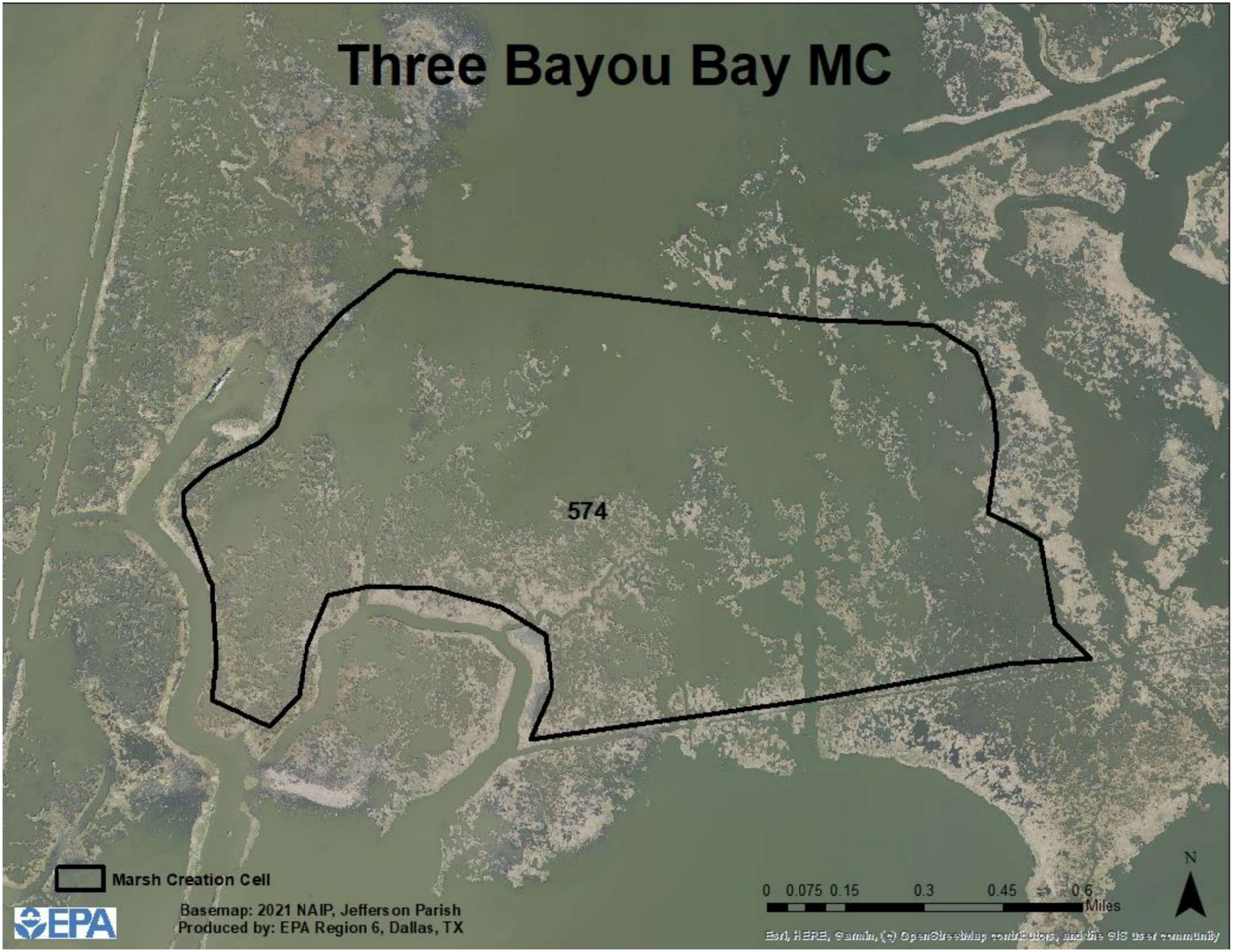
Problem
The project area is a semi-open water body near Three Bayou Bay. Wetland loss has occurred in the project area and are not able to maintain viable elevations due to ongoing subsidence. In addition, oil and gas canals disrupted hydrology and facilitated saltwater intrusion further degrading the marsh. The marsh creation cell is located near the NE Turtle Bay Extension MC project which shows a land loss rate of -0.64%/yr.

Proposed Solution
The proposed project would create/nourish approximately 574 acres (402 acres created, and 172 acres nourished) of marsh using sediment dredged from the Little Lake. The dredged material would be fully contained. Containment dikes would be degraded as necessary to reestablish hydrologic connectivity with adjacent wetlands.

Project Benefits
Create/nourish approximately 574 acres of marsh using sediment dredged from the Little Lake.

Project Costs
The estimated construction cost including 25% contingency is $20M - $25M.

Preparer(s) of Fact Sheet:
Jenny Byrd; EPA; (214) 665-7377; byrd.jennifer@epa.gov
Sharon L. Osowski, Ph.D.; EPA; (214) 665-7506; osowski.sharon@epa.gov
Patty Taylor, Ph.D., P.E.; EPA; (214) 665-6403; taylor.patricia-a@epa.gov


Three Bayou Bay MC
574
Marsh Creation Cell
Basemap: 2021 NAIP, Jefferson Parish
Produced by: EPA Region 6, Dallas, TX
EPA
0 0.075 0.15 0.3 0.45 0.6
Miles
N
Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

Three Bayou Bay Marsh Creation

Coastal Wetlands Planning, Protection and Restoration Act

1

Master Plan Solution

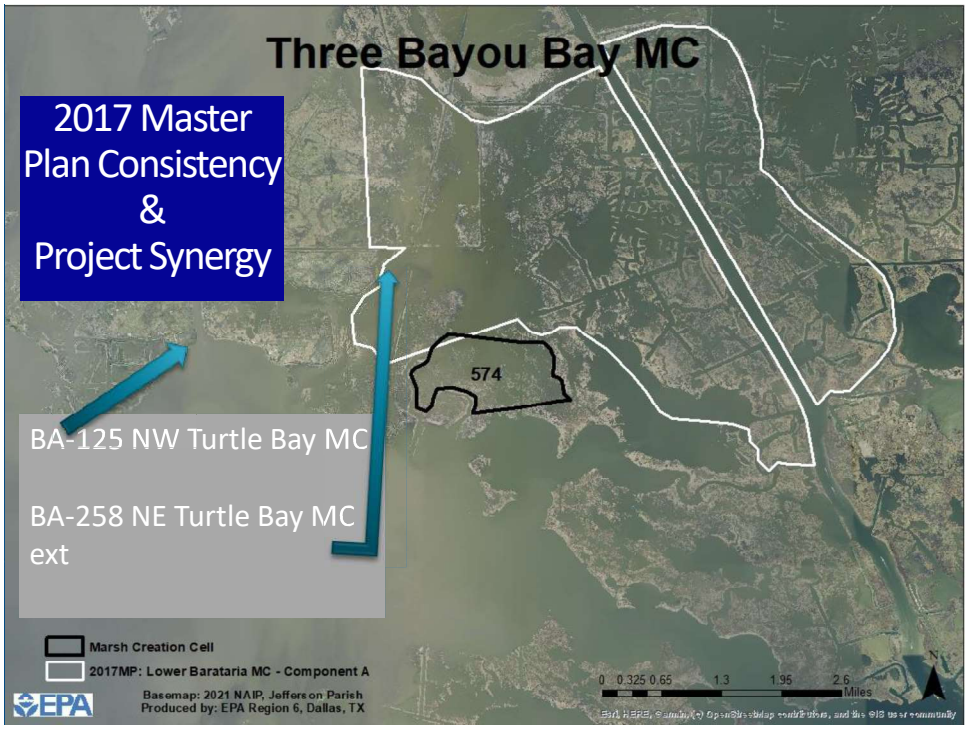
2017

002.MC.04a Lower Barataria Marsh Creation-Component A: Creation of approximately 7,400 acres of marsh in Jefferson Parish on the east shore of Little Lake and Turtle Bay to create new wetland habitat and restore degraded marsh.

2023

#090c Large Scale Barataria Marsh Creation (year 26): Creation of marsh within a footprint of approximately 15,000 acre in western portion of Large-Scale Barataria marsh Creation project to create new wetland habitat, restore degraded marsh, and reduce wave erosion.

2


Three Bayou Bay MC
2017 Master Plan Consistency & Project Synergy
574
BA-125 NW Turtle Bay MC
BA-258 NE Turtle Bay MC ext
Marsh Creation Cell
2017MP: Lower Barataria MC - Component A
Basemap: 2021 NAIP, Jefferson Parish
Produced by: EPA Region 6, Dallas, TX
EPA
0 0.325 0.65 1.3 1.95 2.6
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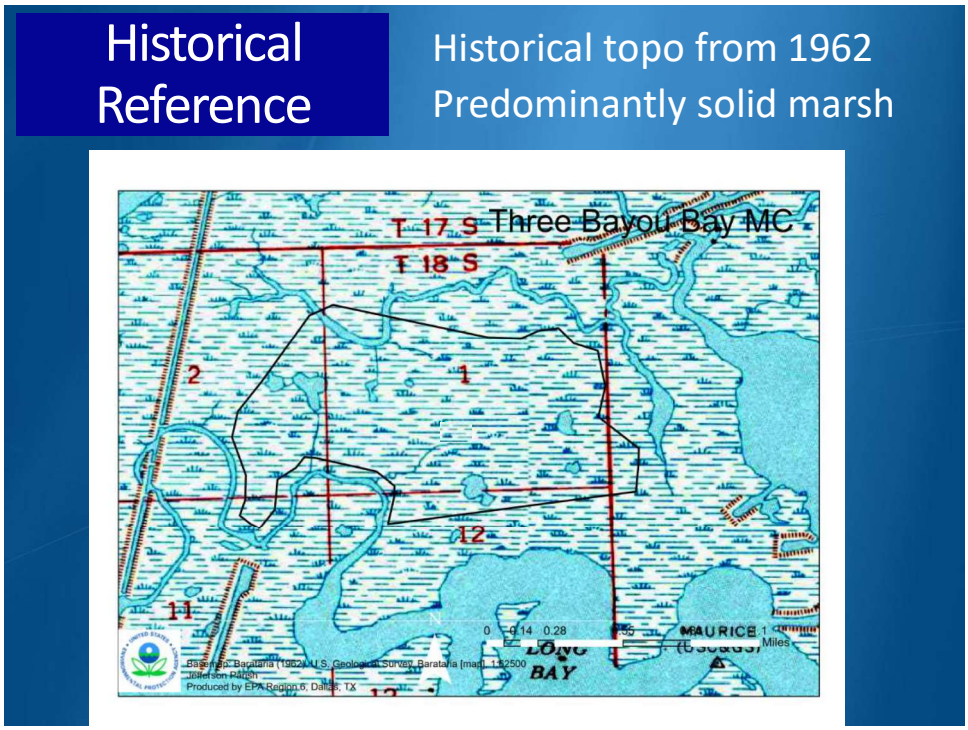
Historical Reference
Historical topo from 1962
Predominantly solid marsh
Three Bayou Bay MC
T 17 S
T 18 S
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2
11
12
LONG BAY
MAURICE
0 0.14 0.28 0.55 1
Miles
Produced by EPA Region 6, Dallas, TX

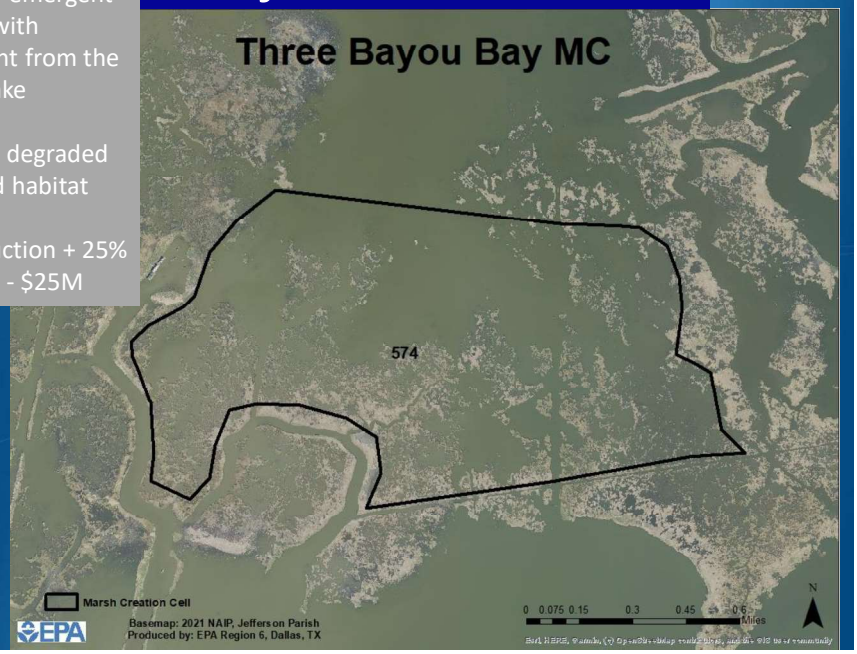
4

Project Features

Create/nourish 574 acres of emergent marsh with sediment from the Little Lake

Restore degraded wetland habitat

Construction + 25% = $20M - $25M



5

PPL33 PROJECT FACT SHEET
February 9, 2023

Project Name
Bay L'ours Marsh Creation and Terracing

Master Plan Strategy
Mid-Barataria Landbridge – West (2023 Draft Master Plan) - Creation of marsh within a footprint of approximately 3,800 acres including filling areas deeper than 2.5 feet, from Galliano to Bayou Perot. 63,000 feet of shoreline revetment to limit erosion in exposed areas and channel armoring to maintain channels at two canals in the Clovelly Oil Field to reduce the tidal prism and to create new wetland habitat, restore degraded marsh, and reduce wave erosion.

Project Location
Region 2, Barataria Basin, Lafourche Parish

Problem
The project area has been relatively stable until August 2021 when this portion of the Barataria Basin experienced enormous land loss due to Hurricane Ida, in particular, Northwest Little Lake, Bay L'ours and Brusle Lake. The land loss rate for the nearby NW Little Lake MC project is -0.84%/yr.

Proposed Solution
The proposed project would create/nourish up to approximately 574 acres of marsh using sediment dredged from Little Lake. Three polygons have been identified for marsh creation. Field data will determine which 2 out of 3 polygons will be selected should this concept move forward. Bank stabilization on the eastern edge of the marsh creation polygons will be included.

Project Benefits
Create/nourish up to approximately 574 acres (create 545 acres and nourish 29 acres) of emergent marsh using sediment dredged from Little Lake.

Project Costs
The estimated construction cost including 25% contingency is $30M - $35M.

Preparer(s) of Fact Sheet:
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Patty Taylor, Ph.D., P.E.; EPA; (214) 665-6403; taylor.patricia-a@epa.gov

Bay L'ours

Basemap: 2021 NAIP
Prepared by EPA Region 6, Dallas, TX

PPL33

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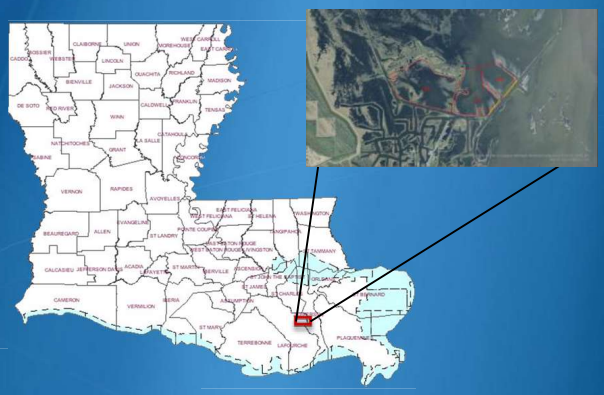
0 0.2 0.4 Mi

0 0.38 0.75 Km

Bay L'Ours Marsh Creation



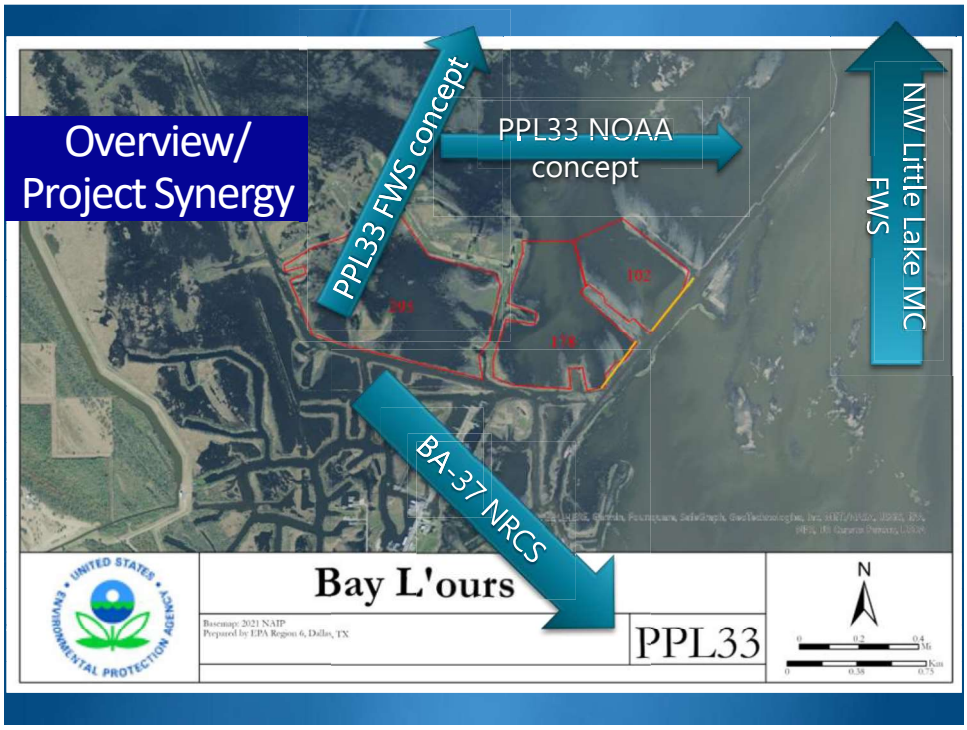
Coastal Wetlands Planning, Protection and Restoration Act

1

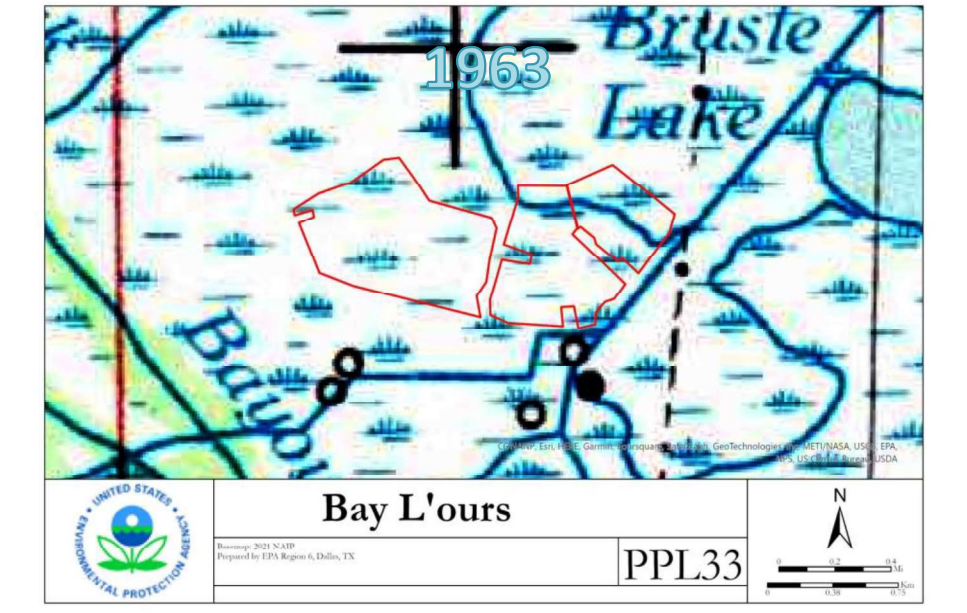
Master Plan Solution 2023

Mid-Barataria Landbridge – West (2023 Draft Master Plan) - Creation of marsh within a footprint of approximately 3,800 acres including filling areas deeper than 2.5 feet, from Galliano to Bayou Perot. 63,000 feet of shoreline revetment to limit erosion in exposed areas and channel armoring to maintain channels at two canals in the Clovelly Oil Field to reduce the tidal prism and to create new wetland habitat, restore degraded marsh, and reduce wave erosion.

2


Overview/
Project Synergy
PPL33 FWS concept
PPL33 NOAA
concept
NW Little Lake MC
FWS
BA-37 NRCS
Bay L'ours
PPL33
N

3


1963
Bruste
Lake
Bay L'ours
PPL33
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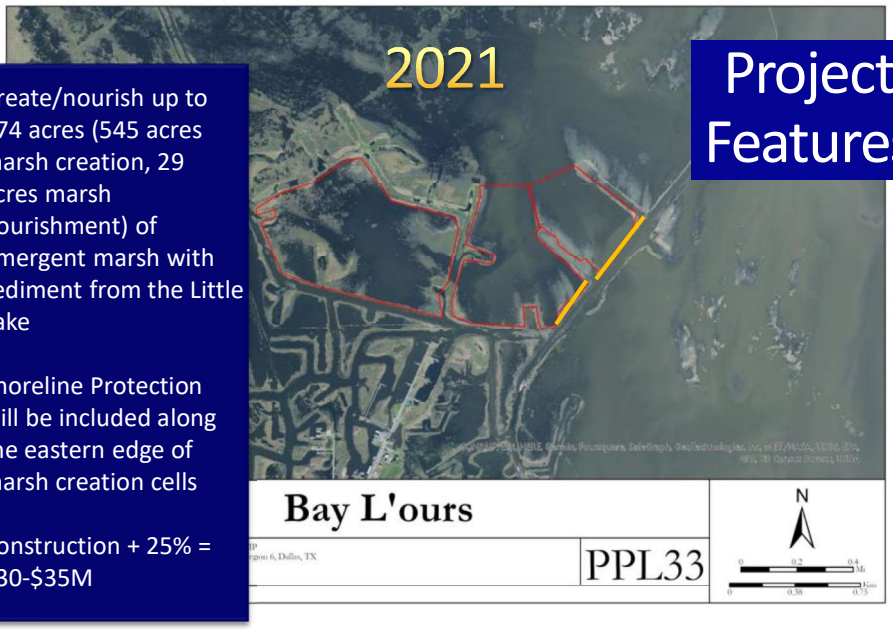
4

Project Features



Create/nourish up to 574 acres (545 acres marsh creation, 29 acres marsh nourishment) of emergent marsh with sediment from the Little Lake

Shoreline Protection will be included along the eastern edge of marsh creation cells

Construction + 25% = $30-$35M

5

PPL33 PROJECT FACT SHEET
February 9, 2023

Project Name:
Bayou Chevreuil Hydrologic Restoration and Vegetative Planting

Project Location:
Region 2, Barataria Basin, St. John the Baptist and St. James Parishes, Bayou Chevreuil, Lac Des Allemands Swamp

Problem:
The Lac Des Allemands River Basin has experienced drainage impairments, water quality impairments, impoundment, subsidence, and inadequate accretion of sediment and organic matter. These problems were largely caused by human activities that severed the area from the natural flow of water. The poor hydrology in the area is due to multiple manmade and natural levees. The Vacherie Canal to the north eliminated connectivity with bottomland hardwood swamps and uplands to the north. Bayou Chevreuil to the south was dredged in 1959 which impounded the area with spoil banks.

Goals:
The goals of this project are similar to those of BA-34-2 and include 1) restoring natural hydrology on Bayou Chevreuil 2) reducing impoundment 3) increasing swamp longevity and productivity, and 4) protecting neighboring developed areas from flooding hazards through hydrologic restoration.

Proposed Solution:
The proposed project includes: 1) construction of gaps on the northern bank of Bayou Chevreuil and elsewhere; 2) creation of conveyance channels that originate from the gaps and extend inward into the swamp; 3) improve/clean out historical drainage pathways to the gap locations; and, 4) vegetative plantings of cypress and tupelo saplings.

Project Benefits:
The proposed project will benefit approximately 2,864 acres with hydrologic improvements that would reverse the impoundment effects. Planting seedlings will help reestablish the swamp forest. Project benefits include storm buffering, increased swamp productivity and increased wildlife and fishery habitat.

Project Estimated Costs: $5 - $10M

Preparer of Fact Sheet:
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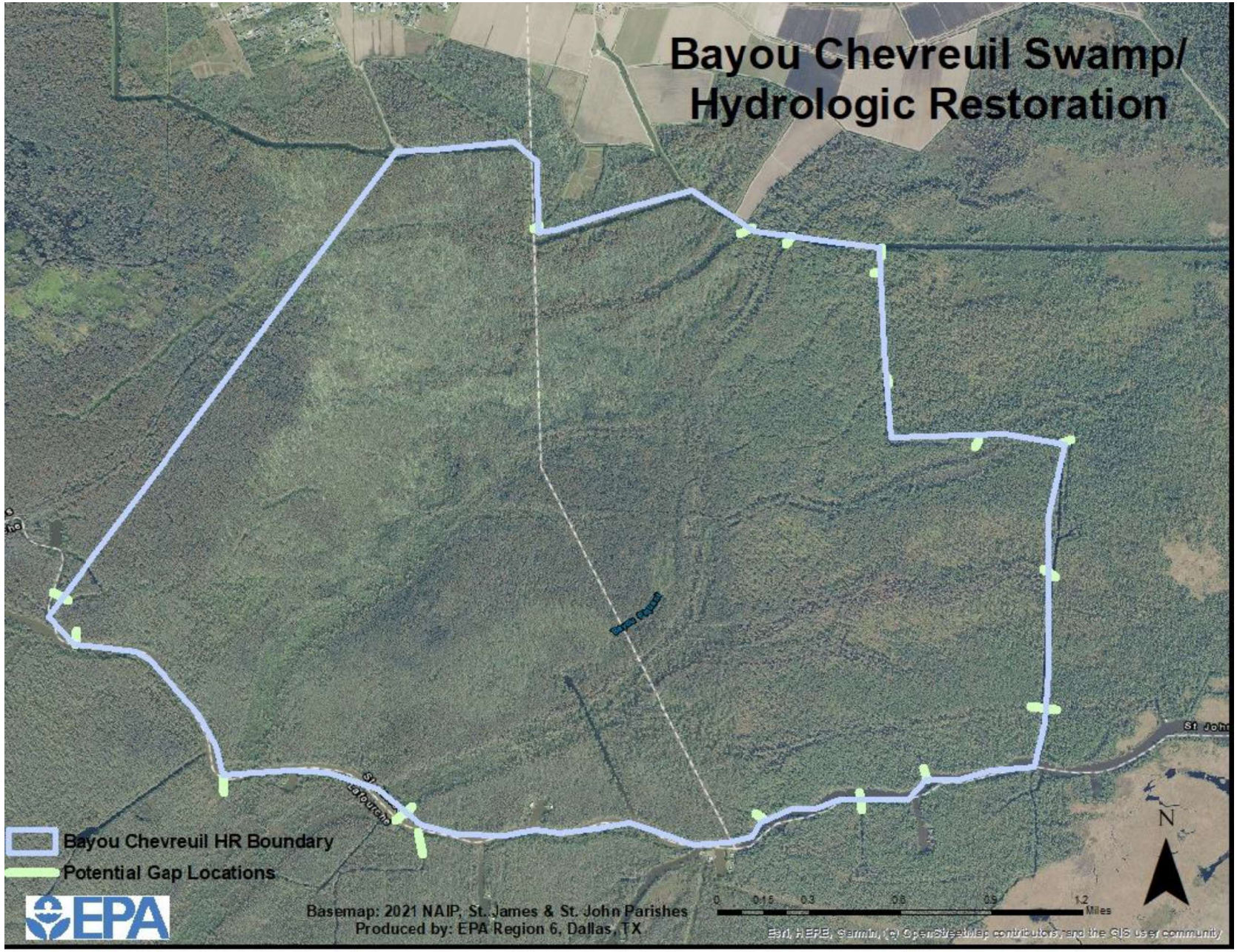
Patty Taylor, P.E., Ph.D.; EPA, (214) 665-6403, taylor.patricia-a@epa.gov
Jenny Byrd, EPA, (214) 665-7377, Byrd.Jennifer@epa.gov


Bayou Chevreuil Swamp/
Hydrologic Restoration
Bayou Chevreuil HR Boundary
Potential Gap Locations
EPA
Basemap: 2021 NAIP, St. James & St. John Parishes
Produced by: EPA Region 6, Dallas, TX
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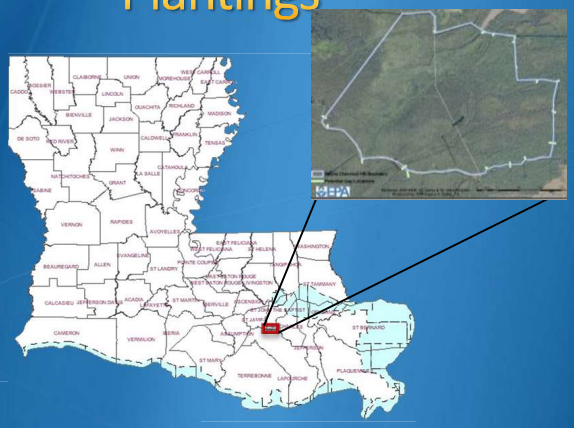
Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

Bayou Chevreuil Hydrologic Restoration & Vegetative Plantings

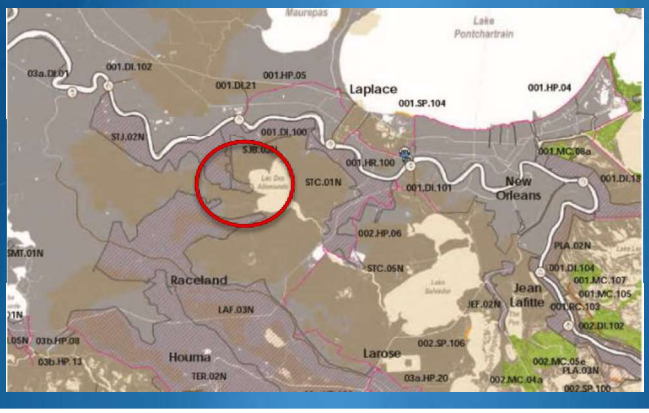


Coastal Wetlands Planning, Protection and Restoration Act

1

2017 Master Plan Solution

Programmatic Considerations: Small-Scale Hydrologic Restoration. Hydrologic restoration, as a technique for improving marsh health, seeks to restore natural hydrologic patterns either by conveying fresh water to areas that have been isolated by man-made features, relieving unnatural impoundments, or by preventing the intrusion of salt water. The state recognizes that there are many small-scale hydrologic improvements that could benefit existing wetlands and work synergistically with existing and planned restoration projects.



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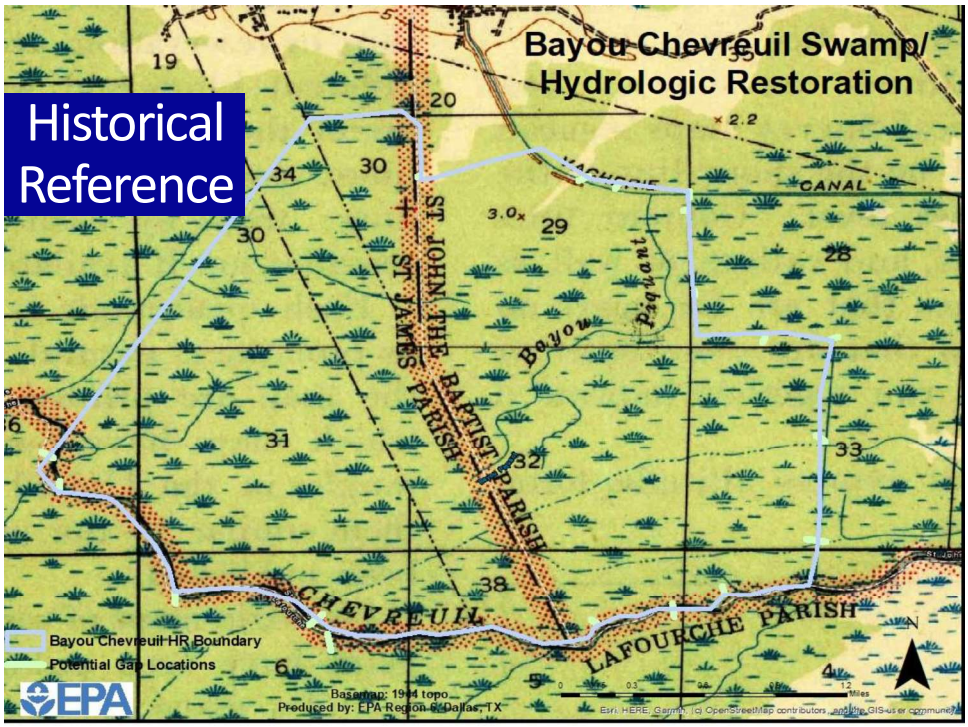
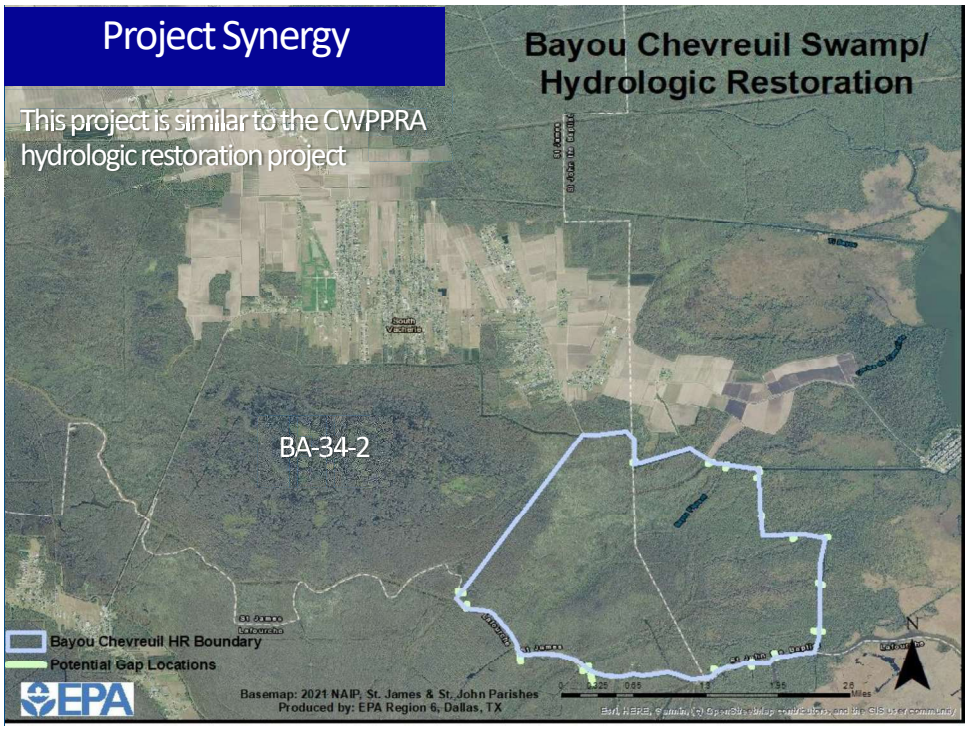

Historical Reference
Bayou Chevreuil Swamp/ Hydrologic Restoration
ST JOHN THE BAPTIST PARISH
ST JAMES PARISH
CHEVREUIL
LAFOURCHE PARISH
CANAL
Bayou Chevreuil HR Boundary
Potential Gap Locations
EPA
Basemap: 1944 topo
Produced by: EPA Region 6, Dallas, TX

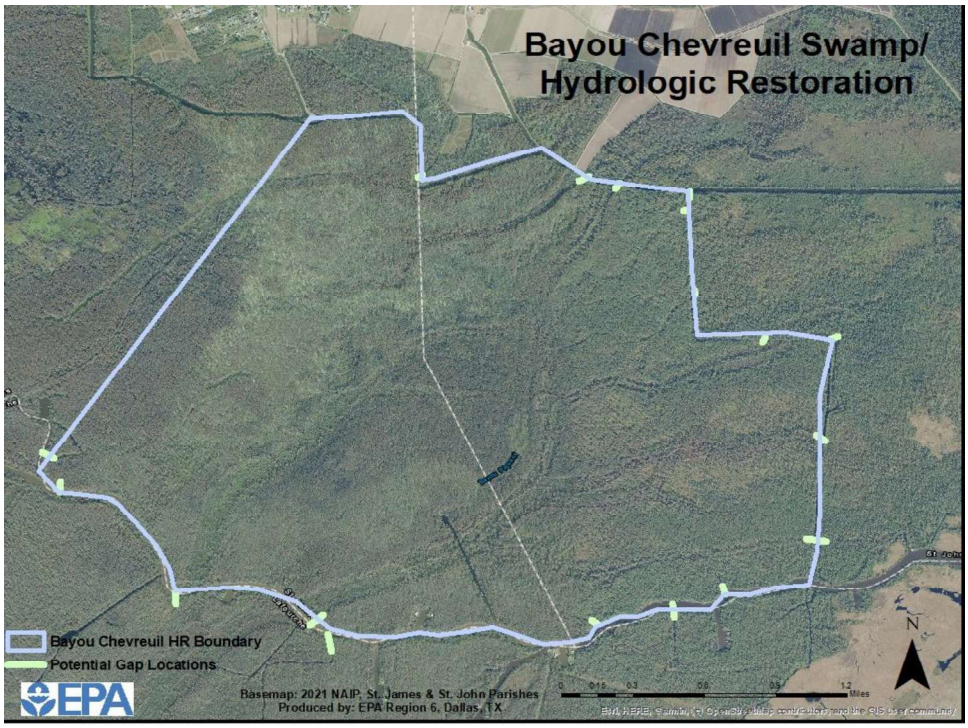
3


Project Synergy
This project is similar to the CWPPRA hydrologic restoration project
Bayou Chevreuil Swamp/ Hydrologic Restoration
BA-34-2
Bayou Chevreuil HR Boundary
Potential Gap Locations
EPA
Basemap: 2021 NAIP, St. James & St. John Parishes
Produced by: EPA Region 6, Dallas, TX

4


BA-34-2 One Year Post Construction
Before
After
CPRA

5


Bayou Chevreuil Swamp/ Hydrologic Restoration
Bayou Chevreuil HR Boundary
Potential Gap Locations
EPA
Basemap: 2021 NAIP, St. James & St. John Parishes
Produced by: EPA Region 6, Dallas, TX
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6

Problems

- Drainage and water quality impairments resulting in marsh loss and decline of cypress forest
- Impoundment, subsidence, inadequate accretion
- Roads, drainage canals, and spoil banks contribute to the problem

Solutions

- Construct gaps on the banks of Bayou Chevreuil & elsewhere
- Create conveyance channels that originate from the gaps and extend inward into the swamp
- Improve/clean out historical drainage pathways
- Plant cypress and tupelo saplings

- Project benefits approximately 2864 acres at low cost
- PPL 32 Candidate
- Construction cost + 25% contingency is $5M - $10M

7

PPL33 PROJECT NOMINEE FACT SHEET
January 26, 2023

Project Name
Northwest Little Lake Marsh Creation Extension

Project Location
Region 2, Barataria Basin, Lafourche Parish

Problem
Until 2021, the project area was relatively stable and experienced very little interior marsh loss. Shell deposits along the Little Lake shoreline provided for a stable shoreline feature with low erosion rates. A land change analysis conducted by USGS for 254 coastal subunits indicates a 1985-2020 land change rate of +0.09% per year for the Delta Farms Subunit, which encompasses the project site. However, in August 2021, the central and western Barataria Basin experienced thousands of acres of land loss with the passage of Hurricane Ida. One of the areas hardest hit by the storm was the northwestern shoreline of Little Lake. The extensive flotant marsh that previously carpeted the area was removed by the storm, converting the area to vast expanses of open water. Based on an analysis conducted by the USGS for the Northwest Little Lake Marsh Creation (BA-268), which includes Hurricane Ida marsh loss and shoreline erosion, loss rates in the area are estimated to be -0.84% per year (1984 to 2021).

Goals
The primary goals of the project are: 1) restore marsh habitat in an area significantly impacted by Hurricane Ida and 2) restore approximately 1.9 miles of the northwestern Little Lake shoreline. The specific project goals are: 1) create 329 acres of marsh, 2) nourish 113 acres of marsh, and 3) restore approximately 9,900 linear feet (LF) of Little Lake shoreline.

Service goals include restoration/protection of habitat for at-risk species. This project would restore habitat potentially utilized by the threatened black rail and other at-risk species such as the seaside sparrow and saltmarsh topminnow.

Proposed Solution
Sediments from Little Lake will be hydraulically dredged and pumped via pipeline to create/nourish approximately 442 acres of marsh. A full containment system will be utilized with containment dikes gapped at the end of construction or no later than three years post-construction. Vegetation will be planted on the exterior slopes of the northern and western containment dikes to reduce erosion from wave energy. Dewatering and compaction of dredged sediments should produce elevations conducive to the establishment of emergent marsh and within the intertidal range. Marine mattresses will be placed along 8,360 LF of the lakeshore containment dike.

Preliminary Project Benefits
1) *What is the total acreage benefited both directly and indirectly?*
   The total project area is approximately 442 acres.

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

The project would result in approximately 300-350 net 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)?*
A 50% loss rate reduction is assumed for the marsh creation and marsh nourishment.

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

5) *What is the net impact of the project on critical and non-critical infrastructure?*
This project will not protect any critical- or 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 synergistic effects with: 1) BA-268 Northwest Little Lake Marsh Creation, 2) BA-260 Northwest Little Lake Increment II, and 3) BA-02 GIWW (Gulf Intracoastal Waterway) to Clovelly Hydrologic Restoration.

Considerations
This project could have potential oyster, land rights, and utility considerations.

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

Preparer(s) of Fact Sheet:
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Eric Whitney, NRCS, (337) 291-3069, Eric.Whitney@usda.gov

U.S. Fish & Wildlife Service

Louisiana Ecological Services

Legend

- Shoreline Stabilization
- Marsh Creation

PPL33
Northwest Little Lake
Marsh Creation Extension
Lafourche Parish, Louisiana

109 ac

68 ac

265 ac

Little Lake

Bay L'Ours

0 0.225 0.45 0.9 Miles

N

PPL33

Northwest Little Lake Marsh Creation Extension

Region 2, Barataria Basin

Contacts:
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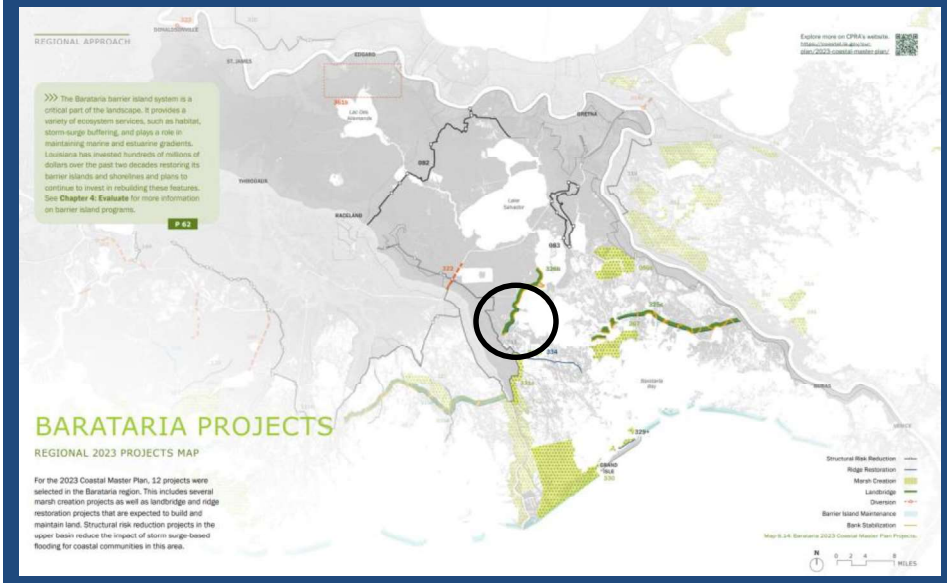
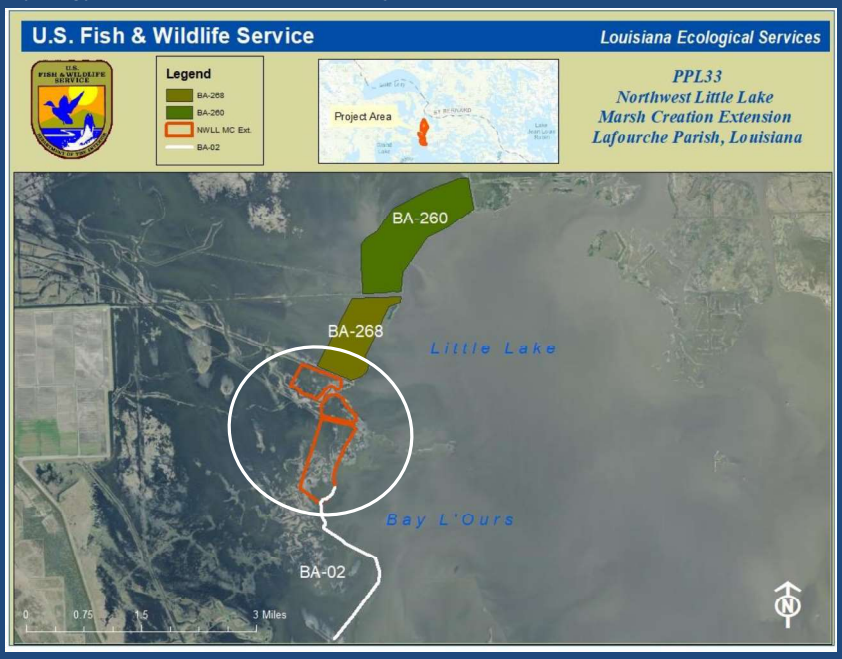
1

2023 State Master Plan - Mid-Barataria Landbridge - West (326b)



2

Synergy with Other Restoration Projects in the Western Barataria Basin



3

Little Lake & Bay L'Ours - 2020 to 2021

4

Northwest Little Lake Marsh Creation Extension

- 329 acres of marsh creation
- 113 acres of marsh nourishment
- Little Lake borrow
- Net acres = 300 - 350
- Construction plus contingency $30M - $35M
- Project synergy – BA-268 Northwest Little Lake Marsh Creation (BA-268), Northwest Little Lake Increment II (BA-260), and GIWW (Gulf Intracoastal Waterway) to Clovelly Hydrologic Restoration (BA-02).

5

PPL33 PROJECT NOMINEE FACT SHEET
January 30, 2023

Project Name
Bayou Perot West Marsh Creation

Project Location
Region 2, Barataria Basin, Lafourche Parish

Problem
The western Bayou Perot shoreline suffered extreme marsh loss in 2021 by Hurricane Ida. Prior to Hurricane Ida, the project area was relatively stable and experienced very little interior marsh loss. A land change analysis conducted by USGS for 254 coastal subunits indicates a 1985-2020 land change rate of -0.03%/yr for the Bayou Perot/ Bayou Rigolettes Subunit, which includes the project site. However, in August 2021, the central and western Barataria Basin experienced thousands of acres of land loss with the passage of Hurricane Ida. One of the areas hardest hit by the storm was the western shoreline of Bayou Perot. Prior to Hurricane Ida, the 451-acre project area was an extensive and robust flotant marsh. Post-Ida, the marsh was removed and the area has largely converted to open water. Based on an analysis conducted by the USGS for the Northwest Little Lake Marsh Creation (BA-268), which includes Hurricane Ida marsh loss and shoreline erosion, loss rates in the area are estimated to be -0.84% per year (1984 to 2021).

Goals
The primary goal of the project is to restore 3.1 miles Bayou Perot shoreline and adjacent marshes. The specific project goals are: 1) create 316 acres of marsh, 2) nourish 135 acres of marsh, and 3) restore approximately 16,400 LF of western Bayou Perot shoreline.

Service goals include restoration/protection of habitat for at-risk species. This project would restore habitat potentially utilized by the threatened black rail and other at-risk species such as the seaside sparrow and saltmarsh topminnow.

Proposed Solution
Sediments from Bayou Perot will be hydraulically dredged and pumped via pipeline to create/nourish approximately 451 acres of marsh. A full containment system will be utilized with containment dikes gapped at the end of construction or no later than three years post-construction. Dewatering and compaction of dredged sediments should produce elevations conducive to the establishment of emergent marsh and within the intertidal range. Bank restoration is also proposed. A large earthen berm will be constructed along 16,400 LF of the bayou-facing containment dike.

Preliminary Project Benefits
1) *What is the total acreage benefited both directly and indirectly?*
The total project area is approximately 451 acres.

2) *How many acres of wetlands will be protected/created over the project life?*
The project would result in approximately 300-350 net 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)?*
A 50% loss rate reduction is assumed for the marsh creation and marsh nourishment.

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

5) *What is the net impact of the project on critical and non-critical infrastructure?*
This project will not protect any critical- or 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 synergistic effects with: 1) BA-27 Barataria Basin Landbridge Shoreline Protection, Phases 1 and 2, 2) BA-27c Barataria Basin Landbridge Shoreline Protection, Phase 3, and 3) BA-260 Northwest Little Lake Increment II.

Considerations
This project could have potential land rights and utility considerations.

Preliminary Costs
The fully funded cost range is $35M-$40M.

Preparer(s) of Fact Sheet:
Kristen Ramsey, FWS, (337) 291-3137, Kristen_Ramsey@fws.gov

U.S. Fish & Wildlife Service

Louisiana Ecological Services

Legend

- Shoreline Stabilization
- Marsh Creation

PPL33
Bayou Perot West Marsh Creation
Lafourche Parish, Louisiana

PPL33

Bayou Perot West Marsh Creation

Region 2, Barataria Basin

Contacts:
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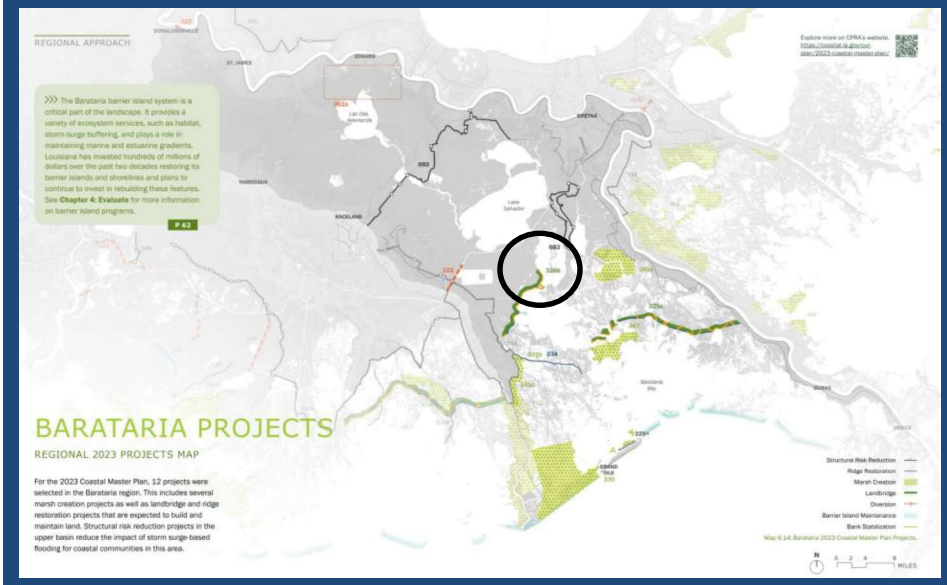
Fish and Wildlife Biologist
kristen.ramsey@fws.gov
(337) 291-3137

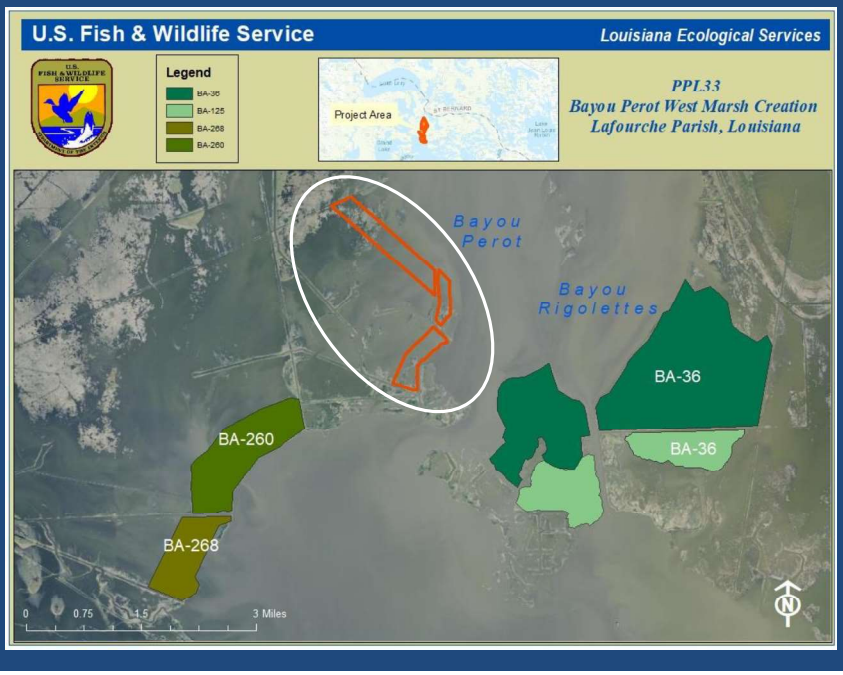
1

2023 State Master Plan - Mid-Barataria Landbridge - West (326b)



2

Synergy with Other Restoration Projects in the Western Barataria Basin



3

Bayou Perot - 2020 to 2022

4

Bayou Perot West Marsh Creation

- 316 acres of marsh creation
- 135 acres of marsh nourishment
- Bayou Perot borrow
- Net acres = 300 - 350
- Construction plus contingency: $35M - $40M
- Project synergy – Barataria Basin Landbridge
- Shoreline Protection, Phases 1 and 2 (BA-27), Barataria Basin Landbridge Shoreline Protection, Phase 3 (BA-27c), and Northwest Little Lake Increment II (BA-260).

5

PPL33 PROJECT NOMINEE FACT SHEET
February 1, 2023

Project Name
Southeast Golden Meadow Marsh Creation

Project Location
Region 2, Barataria Basin, Lafourche Parish, Southeast of Golden Meadow

Problem
The project area has experienced extensive loss of emergent wetlands from subsidence, storms, canal dredging, and altered hydrology. Wetland loss has increased the vulnerability of the South Lafourche Hurricane Protection Levee to damage from tropical storms and hurricanes. Hurricane Ida, in August 2021, was particularly devastating to the area. At present, very little marsh remains for several miles east of the protection levee. The remaining emergent land consists of canal spoil banks and isolated stands of fragmented marsh. Based on the land-water analysis conducted by USGS for the PPL32 candidate project evaluation, the land loss rate in the project area was -1.05% per year for the period 1984 to 2021.

Goals
The primary goal of this project is to restore marsh southeast of Golden Meadow along the alignment of the South Lafourche Hurricane Protection Levee. The specific goal of the project is to create approximately 333 acres (293 acres of marsh creation and 40 acres of marsh nourishment) of marsh with dredged material from Bayou Lafourche.

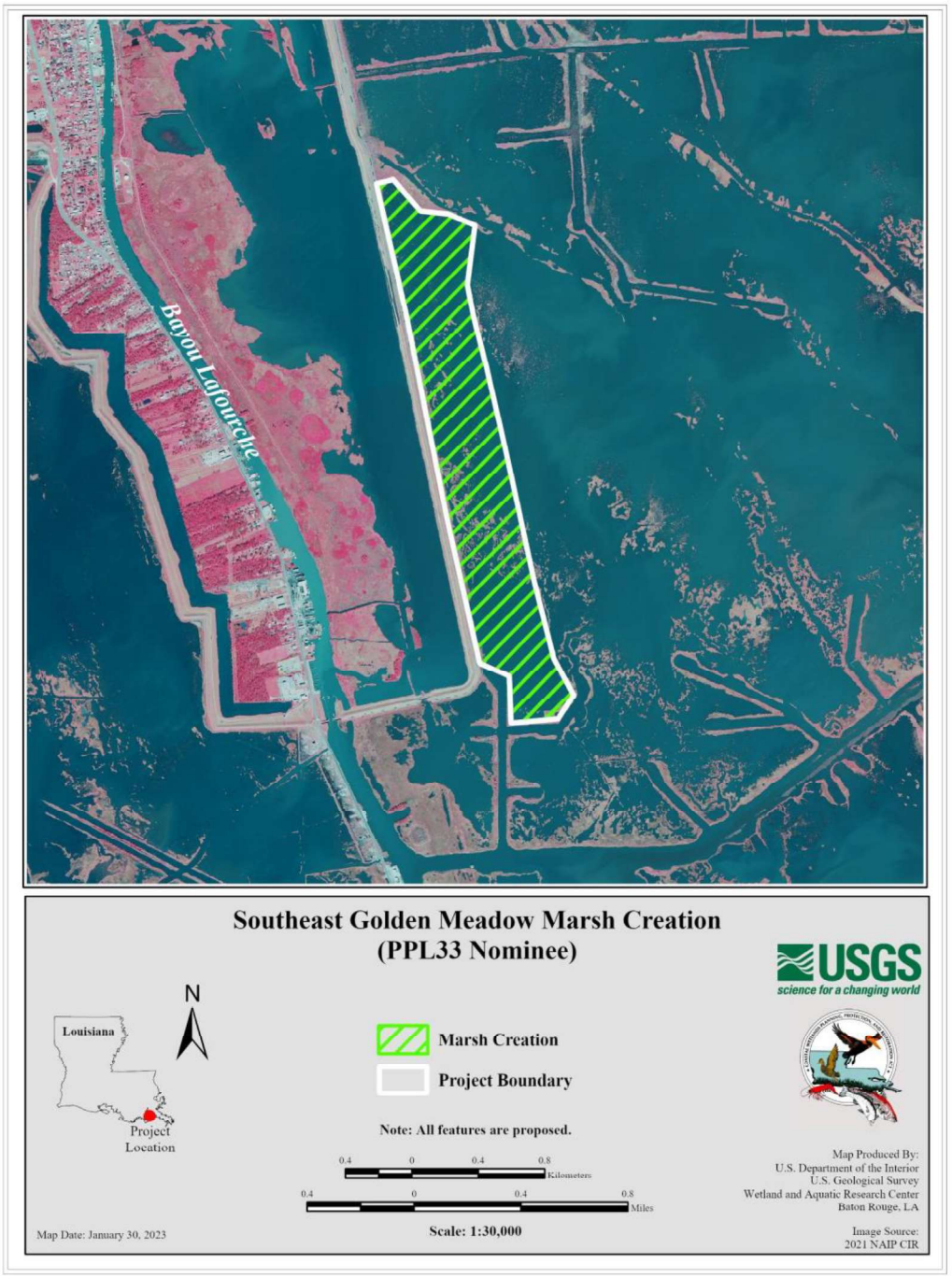
Service goals include restoration/protection of habitat for at-risk species. This project would restore habitat potentially utilized by the threatened black rail and other at-risk species such as the seaside sparrow and saltmarsh topminnow.

Proposed Solution
Sediments will be hydraulically dredged from a series of borrow sites in Bayou Lafourche and pumped via pipeline to create/nourish approximately 333 acres of marsh. Full containment would be utilized. Containment dikes will be gapped at the end of construction or no later than three years post construction. Vegetative plantings are proposed along the eastern containment dike which is exposed to wave energy. Dewatering and compaction of dredged sediments should produce elevations conducive to the establishment of emergent marsh and within the intertidal range.

Project Benefits
The project would result in 250-300 net acres over the 20-year project life.

Project Costs
The estimated construction cost plus 25% contingency is $25M - $30M.

Preparer of Fact Sheet
John Savell, USFWS, john_savell@fws.gov


Bayou Lafourche
Southeast Golden Meadow Marsh Creation
(PPL33 Nominee)
USGS
science for a changing world
N
Louisiana
Project
Location
Marsh Creation
Project Boundary
Note: All features are proposed.
0.4 0 0.4 0.8
Kilometers
0.4 0 0.4 0.8
Miles
Scale: 1:30,000
Map Produced By:
U.S. Department of the Interior
U.S. Geological Survey
Wetland and Aquatic Research Center
Baton Rouge, LA
Map Date: January 30, 2023
Image Source:
2021 NAIP CIR

PPL33

Southeast Golden Meadow Marsh Creation

Region 2, Barataria Basin, Lafourche Parish

Contacts:
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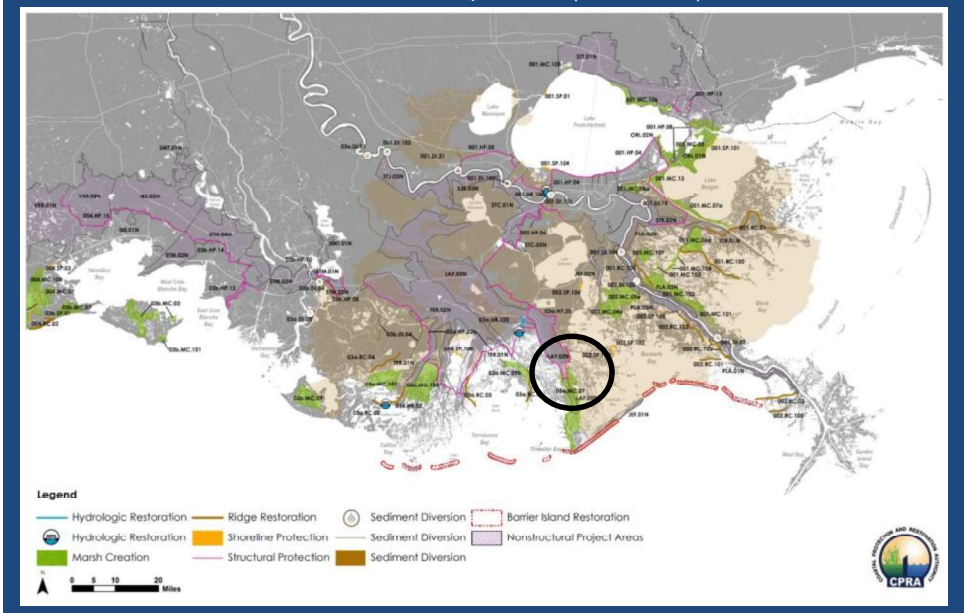
(337) 291-3144

1

2017 State Master Plan – Southeast Golden Meadow Marsh Creation - Component A (03a.MC.07)



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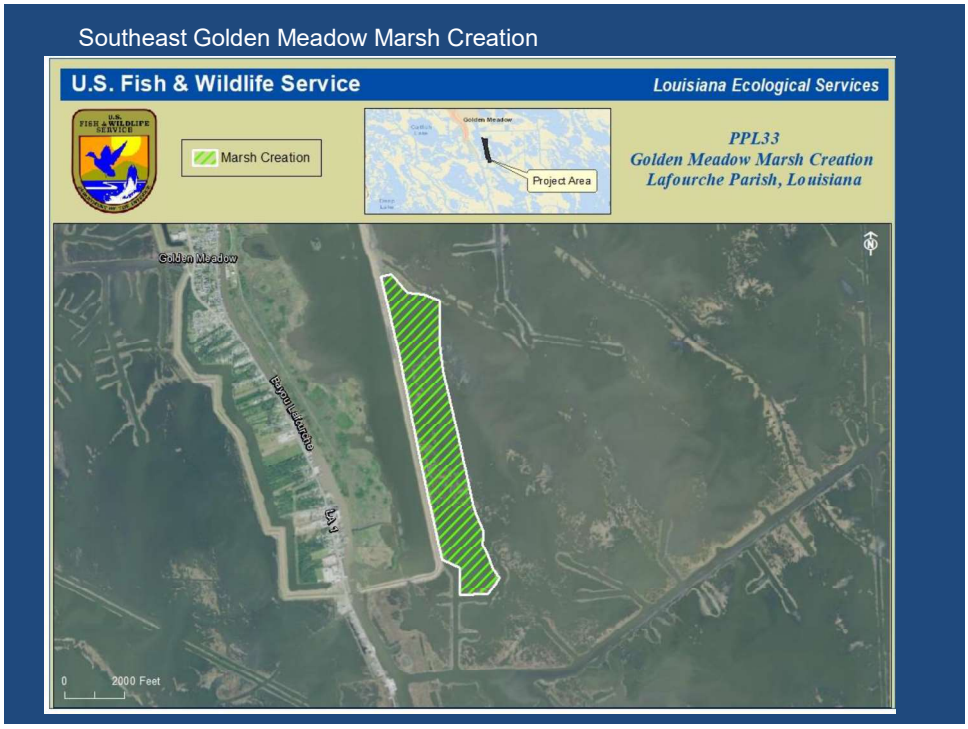
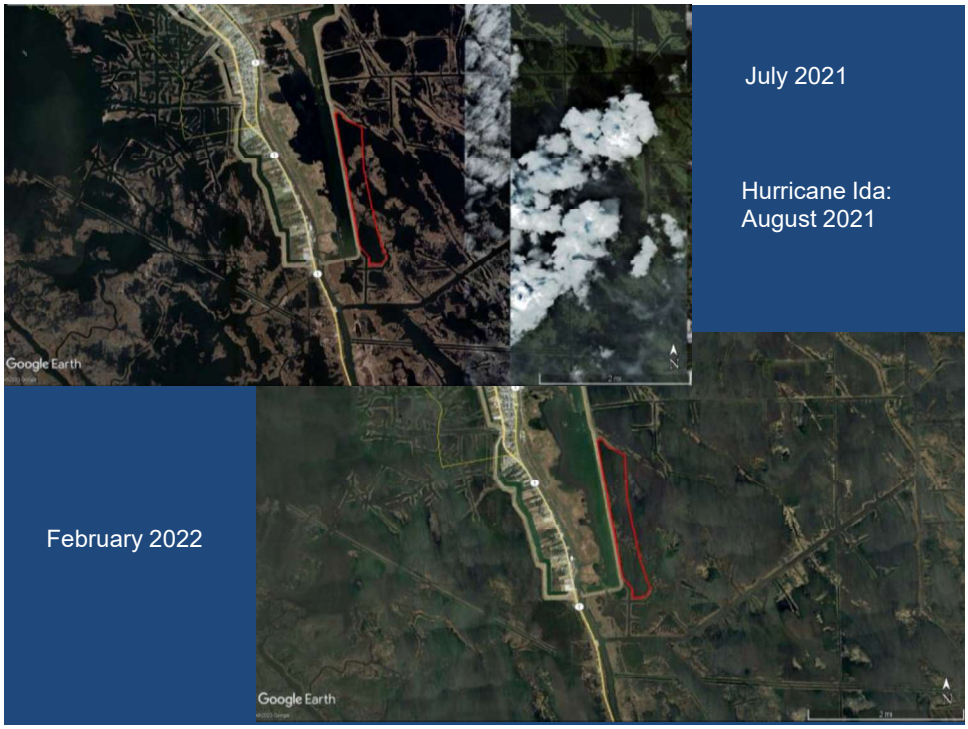
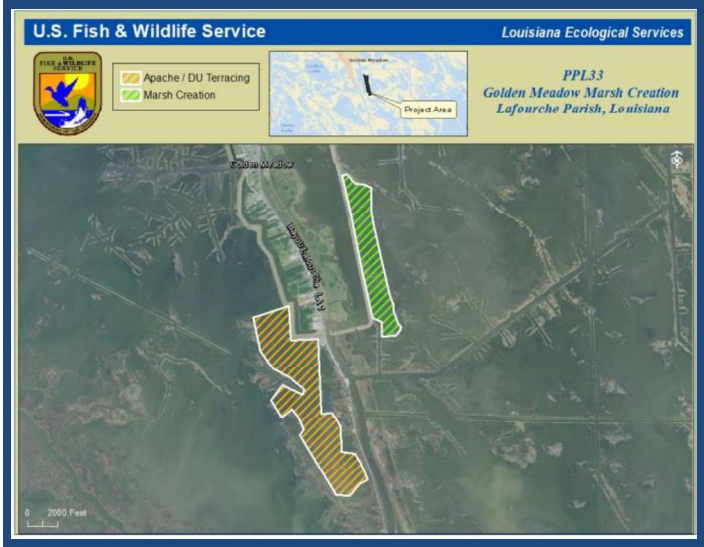

Southeast Golden Meadow Marsh Creation
U.S. Fish & Wildlife Service
Louisiana Ecological Services
Marsh Creation
Project Area
PPL33
Golden Meadow Marsh Creation
Lafourche Parish, Louisiana
Golden Meadow
0
2000 Feet

3


July 2021
Hurricane Ida:
August 2021
Google Earth
February 2022
Google Earth

4

Selection Criteria



- Critical Area of Need
  - High ≥ -0.91 %
  - -1.05%
- Critical Infrastructure Protection
  - Golden Meadow Community
  - Hurricane Protection Levee
- Synergy
  - ~740 acres of terracing < mile SW of project

5

Southeast Golden Meadow Marsh Creation

- 293 acres of marsh creation
- 40 acres of marsh nourishment
- Bayou Lafourche borrow
- Net acres = 250 – 300
- Construction plus contingency $25M - $30M

6

PPL33 PROJECT NOMINEE FACT SHEET
February 9, 2023

Project Name
Southeast Lafitte Marsh Creation

Project Location
Region 2, Barataria Basin, Jefferson Parish

Problem
The Barataria Land Bridge consists of 3000 acres of degraded marsh and open water in the Upper Barataria Basin. Historically, sea level rise, saltwater intrusion, and construction of oil and gas canals and pipelines, along with sediment deprivation from the construction of levees along the Mississippi River have contributed significantly to wetland losses. The Barataria Basin has the second highest land loss rate of the ten coastal basins in the state, having lost approximately 29% of its wetlands (Couvillion et al 2017). An additional impact to the wetlands occurred when Hurricane Ida struck Louisiana in 2021. It caused an estimated 160 km^2 of land loss in Barataria Basin (Couvillion 2021, CPRA Board Meeting, 11/17/21). The marshes along the southern shore of the Pen need to be restored as they serve as one of the lines of defense to help protect the town of Lafitte from future storm impacts. The Southeast Lafitte Marsh Creation Project would work synergistically with the other Large-Scale Barataria Marsh Creation – Component E (Coastal Master Plan 2016) projects.

Goals
The project goals are to create and/or nourish up to 375 acres of intertidal marsh and to design the project to build resilient wetlands that maximize wetland benefits for the twenty year project life.

Proposed Solution
The proposed project's primary feature is to create and/or nourish approximately 375 acres of emergent intermediate marsh (207 acres of marsh creation and 168 acres of marsh nourishment). Sediment will be hydraulically pumped from a borrow source in the Pen. Containment dikes will be constructed around the marsh creation area to retain sediment during pumping. The containment dikes will be degraded and/or gapped no later than three years post construction.

Preliminary Project Benefits

1) *What is the total acreage benefited both directly and indirectly?*
   This total project area is approximately 375 acres (approximately 207 acres of marsh creation and 168 acres of marsh nourishment).

2) *How many acres of wetlands will be protected/created over the project life?*
   The net acre benefit range is 200-250 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 and nourishment.

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

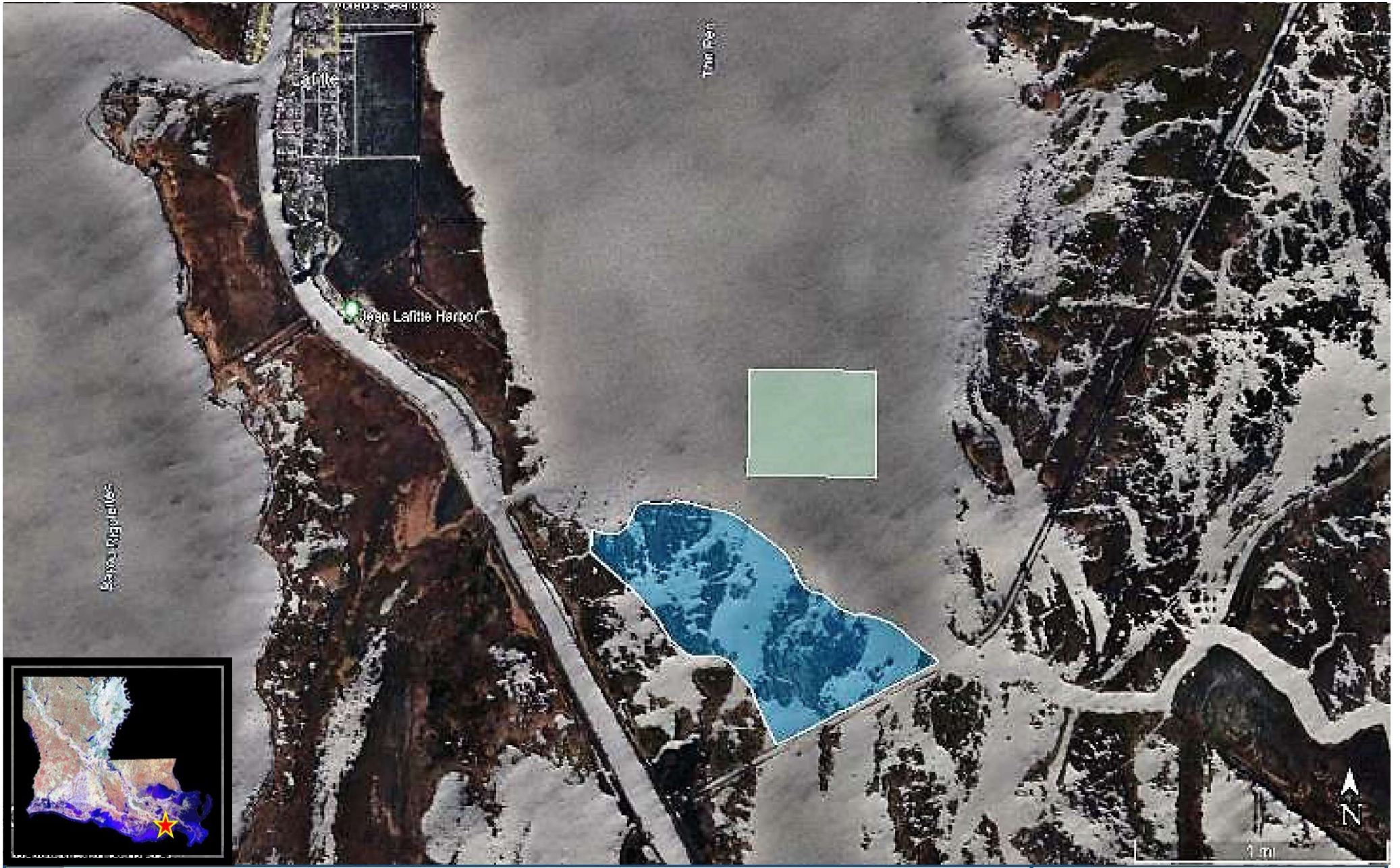
5) *What is the net impact of the project on critical and non-critical infrastructure?*
The project will provide additional protection to the town of Lafitte.

6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?*
This project works synergistically with Large Scale Barataria Marsh Creation: Upper Barataria Component (BA-207), South Shore of the Pen (BA-41), Bayou Dupont Marsh and Ridge Creation (BA-48) and Bayou Dupont Sediment Delivery - Marsh Creation #3 and Terracing (BA-164 in rebuilding the Barataria Land Bridge.

Considerations
The proposed project has potential pipeline issues.

Preliminary Construction Costs
The estimated construction cost plus 25% contingency is $15M - $20M.

Preparer(s) of Fact Sheet:
Dawn Davis, NOAA Fisheries, 225-380-0052, dawn.davis@noaa.gov



PPL33 Southeast Lafitte Marsh Creation

375 acres of Marsh Creation and Nourishment

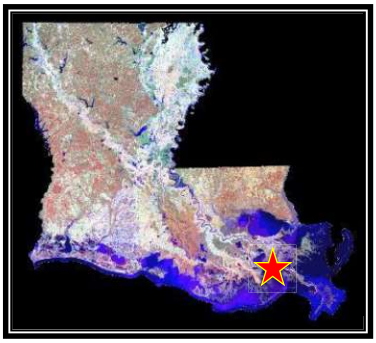
Federal Sponsor: NOAA Fisheries
2021 Aerial Imagery
Map Date 02-10-2022

Legend

- Marsh Creation
- Borrow

Southeast Lafitte Marsh Creation

NOAA FISHERIES



REGION 2 – Barataria Basin

Presenter: Dawn Davis, Fishery Biologist

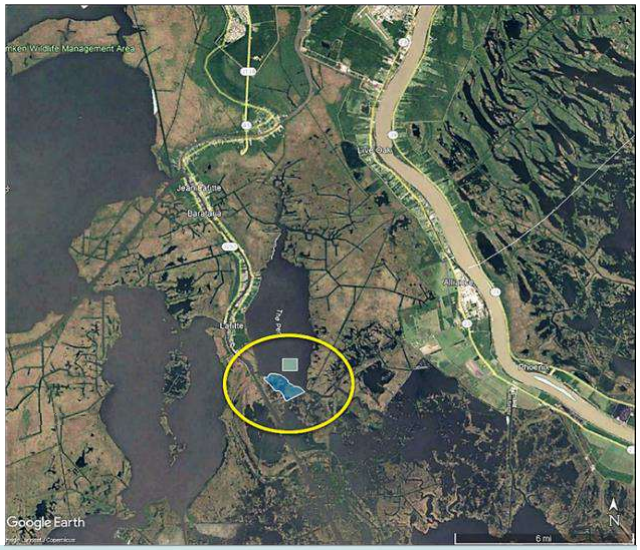
Special Thanks:
NRCS
USACE
Jefferson Parish

PPL33 CWPPRA Regional Planning Team
Virtual Meeting
February 9, 2023

1

Priority Project Planning

- Areas of Need within Barataria Basin
- Synergy with other Restoration Efforts
- Applicability within the CWPPRA Program
- Develop Solutions with Preferred Project Features

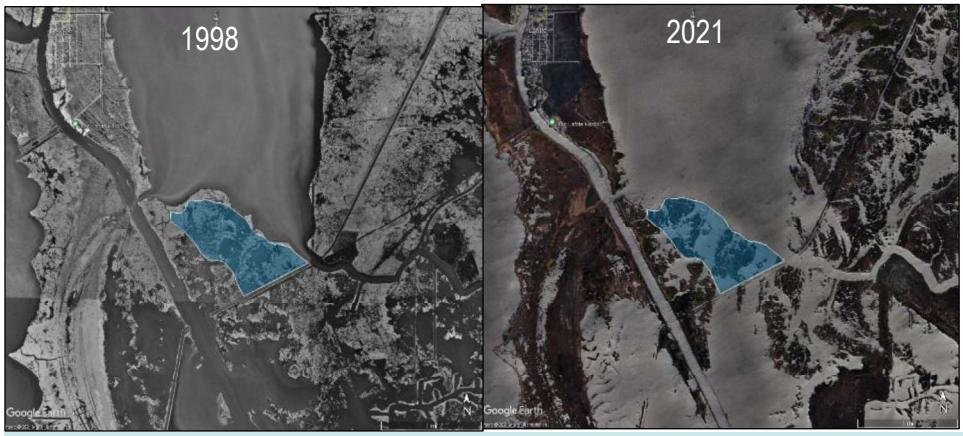


2

Southeast Lafitte Marsh Creation

Areas of Need Within Basin

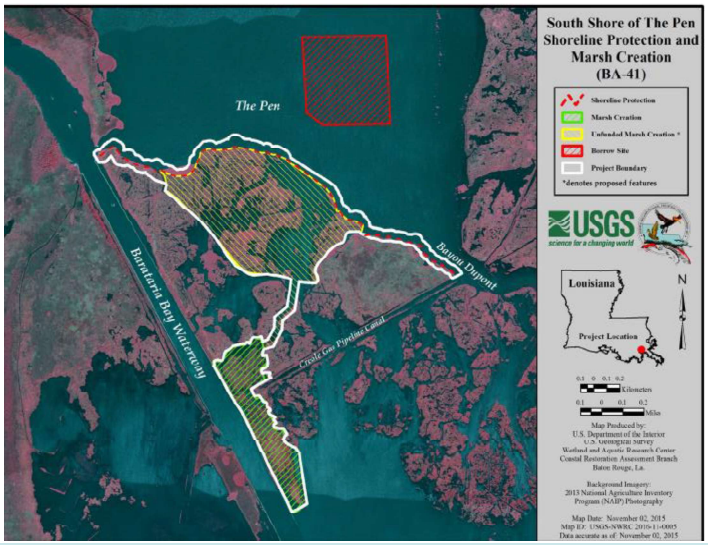
- Decide on top priorities in the Basin
- Focus on critical landscape features to restore and maintain



3

Southeast Lafitte Marsh Creation

Areas of Need Within Basin

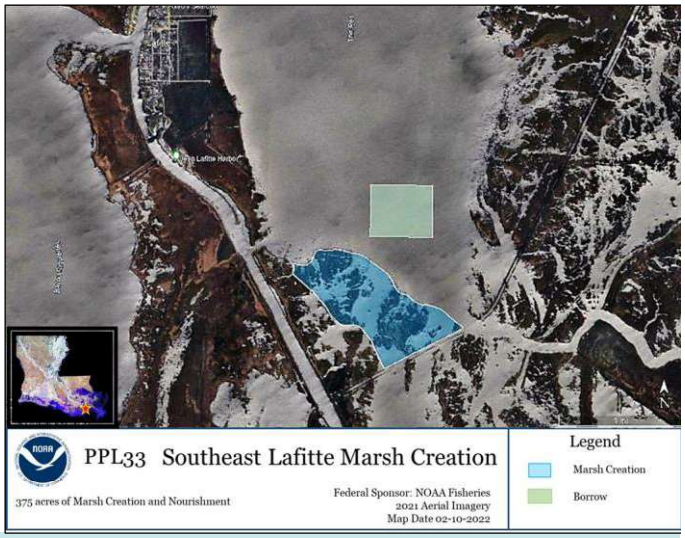


4

5

Priority Project Planning Summary

- Marsh Creation/ Nourishment: 375 Acres
  - 207 acres MC and 168 acres MN
  - Dredge material from the Pen
  - Full containment with dike gapping after construction
- Construction Cost + 25% Contingency: $15M - $20M
- Net Benefits: 200-250 acres



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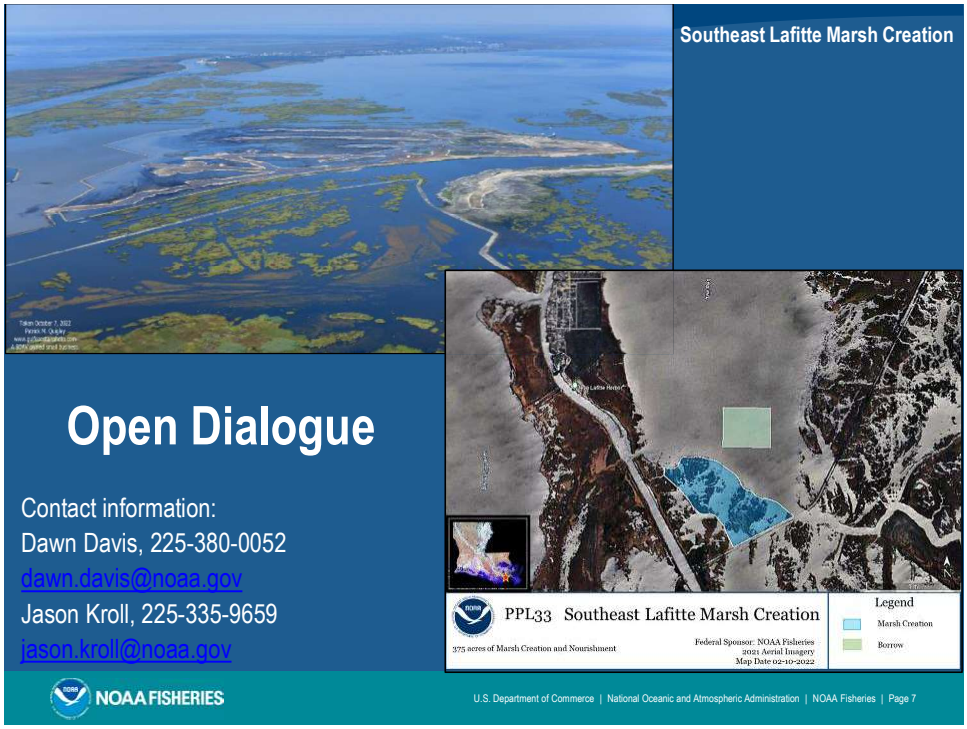

Southeast Lafitte Marsh Creation
Open Dialogue
Contact information:
Dawn Davis, 225-380-0052
dawn.davis@noaa.gov
Jason Kroll, 225-335-9659
jason.kroll@noaa.gov
PPL33 Southeast Lafitte Marsh Creation
375 acres of Marsh Creation and Nourishment
Federal Sponsor: NOAA Fisheries
2021 Aerial Imagery
Map Date 02-10-2022
Legend
Marsh Creation
Borrow
NOAA FISHERIES
U.S. Department of Commerce | National Oceanic and Atmospheric Administration | NOAA Fisheries | Page 7

7

PPL33 PROJECT NOMINEE FACT SHEET
February 9, 2023

Project Name
Little Lake Dedicated Dredging near Bay L'Ours

Project Location
Region 2, Barataria Basin, Lafourche Parish

Problem

The Little Lake mapping unit has high wetland loss caused by shoreline erosion, subsidence, and channel construction. The project is located in an area protecting approximately 3,000 acres of fragile interior marshes between the Little Lake shoreline and Bayou L'Ours Ridge. Project area wetlands are subject to high shoreline erosion rates (20 to 40 feet per year) and subsidence deteriorating interior marshes. An additional impact to the wetlands occurred when Hurricane Ida struck Louisiana in 2021. It caused an estimated 160 km^2 of land loss in Barataria Basin, particularly on its western side (Couvillion 2021, CPRA Board Meeting, 11/17/21).

Goals
The project goals are to create and/or nourish up to 417 acres of intertidal marsh and to design the project to build resilient wetlands that maximize wetland benefits for the twenty year project life. This project will restore approximately 2.0 miles of lake shoreline.

Proposed Solution
The proposed project's primary feature is to create and/or nourish approximately 417 acres of emergent marsh (359 acres of marsh creation and 58 acres of marsh nourishment). The marsh creation area will be protected by an existing shoreline protection feature along the western rim of Bay L'Ours. Sediment will be hydraulically pumped from a borrow source in Bay L'Ours. Containment dikes will be constructed around the marsh creation area to retain sediment during pumping. The containment dikes will be degraded and/or gapped no later than three years post construction to allow greater tidal exchange and fisheries access.

Preliminary Project Benefits

1) *What is the total acreage benefited both directly and indirectly?*
   This total project area is approximately 417 acres.

2) *How many acres of wetlands will be protected/created over the project life?*
   The net acre benefit range is 300-350 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 and nourishment.

4) *Do any project features maintain or restore structural components of the coastal ecosystem such as barrier islands, natural or artificial levee ridges, beach and lake rims, cheniers, etc.?*
   The project will help restore the southwestern rim of Little Lake near Bay L'Ours.

5) *What is the net impact of the project on critical and non-critical infrastructure?*
The project will provide some protection to the levee system near Galliano, LA.

6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?*
This project works synergistically with Little Lake Shoreline Protection/Dedicated Dredging Near Round Lake (BA-37), Northwest Little Lake March Creation (PPL32), and future Northwest Little Lake March Creation-Increment 2.

Considerations
The proposed project has potential pipeline and oyster issues.

Preliminary Construction Costs
The estimated construction cost plus 25% contingency is $20M - $25M.

Preparer(s) of Fact Sheet:
Dawn Davis, NOAA Fisheries, 225-380-0052, dawn.davis@noaa.gov

PPL33 Little Lake Dedicated Dredging near Bay L'Ours

417 Acres Marsh Creation and Marsh Nourishment

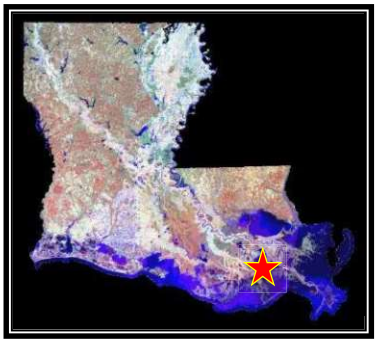
Federal Sponsor: NOAA Fisheries
2022 Aerial Imagery
Map Date 01-26-2023

Legend

- Marsh Creation
- Borrow

Little Lake Dedicated Dredging near Bay L'Ours

NOAA FISHERIES



REGION 2 – Barataria Basin

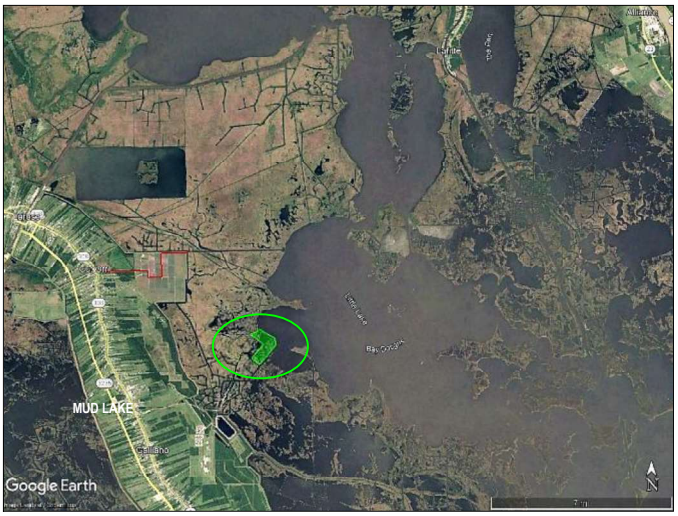
Presenter: Dawn Davis, Fishery Biologist

PPL33 CWPPRA Regional Planning Team
Virtual Meeting
February 9, 2023

1

Priority Project Planning

- Areas of Need within Barataria Basin
- Synergy with other Restoration Efforts
- Applicability within the CWPPRA Program
- Develop Solutions with Preferred Project Features



2

Areas of Need Within Basin

- Decide on top priorities in the Basin
- Focus on critical landscape features to restore and maintain

2020 2022

3

Synergy with Other Restoration Efforts

- Synergy with Little Lake projects:
  BA-37
  PPL32 NW Little Lake MC
  NW Little Lake MC Inc 2

Applicability within the CWPPRA Program

- Plan a project that fits within the program

4

Priority Project Planning Summary

- Marsh Creation/ Nourishment: 417 Acres
  - 359 acres MC and 58 acres MN
  - Dredge material from the Little Lake
  - Full containment with dike gapping after construction
- Construction Cost + 25% Contingency: $20M - 25M
- Net Benefits: 300-350 acres

5

Open Dialogue

Contact information:
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dawn.davis@noaa.gov
Jason Kroll, 225-335-9659
jason.kroll@noaa.gov

6

PPL33 RPT Meeting Project Fact Sheet

February 9, 2023

Project Name

West Dupre Cut Marsh Creation

Project Location

Region 2, Barataria Basin, Jefferson Parish, north of Three Bayou Bay and east of Bayou Rigolettes

Problem

Problems facing the basin include sea level rise, subsidence, and effects of channelization and construction of levees. Historical freshwater and sediment sources drastically decreased after building levees on the Mississippi River as well as closing Bayou Lafourche in Donaldsonville. Thus, rain is the most significant source of freshwater. Erosion of barrier islands at the south end of the basin increases and exacerbates tidal effects, high salinity levels, and leads to more rapid rates of land loss. Canals and pipelines altered the area's hydrology and contribute to habitat degradation. The limited freshwater and sediment from natural channels are the most critical problems coupled with the historical and more recent impacts associated with hurricanes. USGS estimated a loss rate of -0.64% per year (1984-2020) for the nearby Northeast Turtle Bay Marsh Creation Extension project.

Goals

The goal is to create and nourish 605 acres of brackish marsh in two cells.

Proposed Solution

The area was heavily impacted by Hurricane Ida, creating more open water area. Marsh will be created to reestablish habitat and continue the Barataria Landbridge. The cells will be fully contained and the containment dikes will be degraded as necessary to establish hydrologic connectivity with adjacent wetlands. If the area does not re-vegetate on its own, the plan is to plant 15% of the created marsh in Year 3.

Considerations

The project is adjacent to the Lafitte Oil and Gas Field and there are associated pipelines and well heads in the area. The project layout has been configured to avoid these features.

Preliminary Construction Cost + 25%

$30M - $35M

Preparer of Fact Sheet

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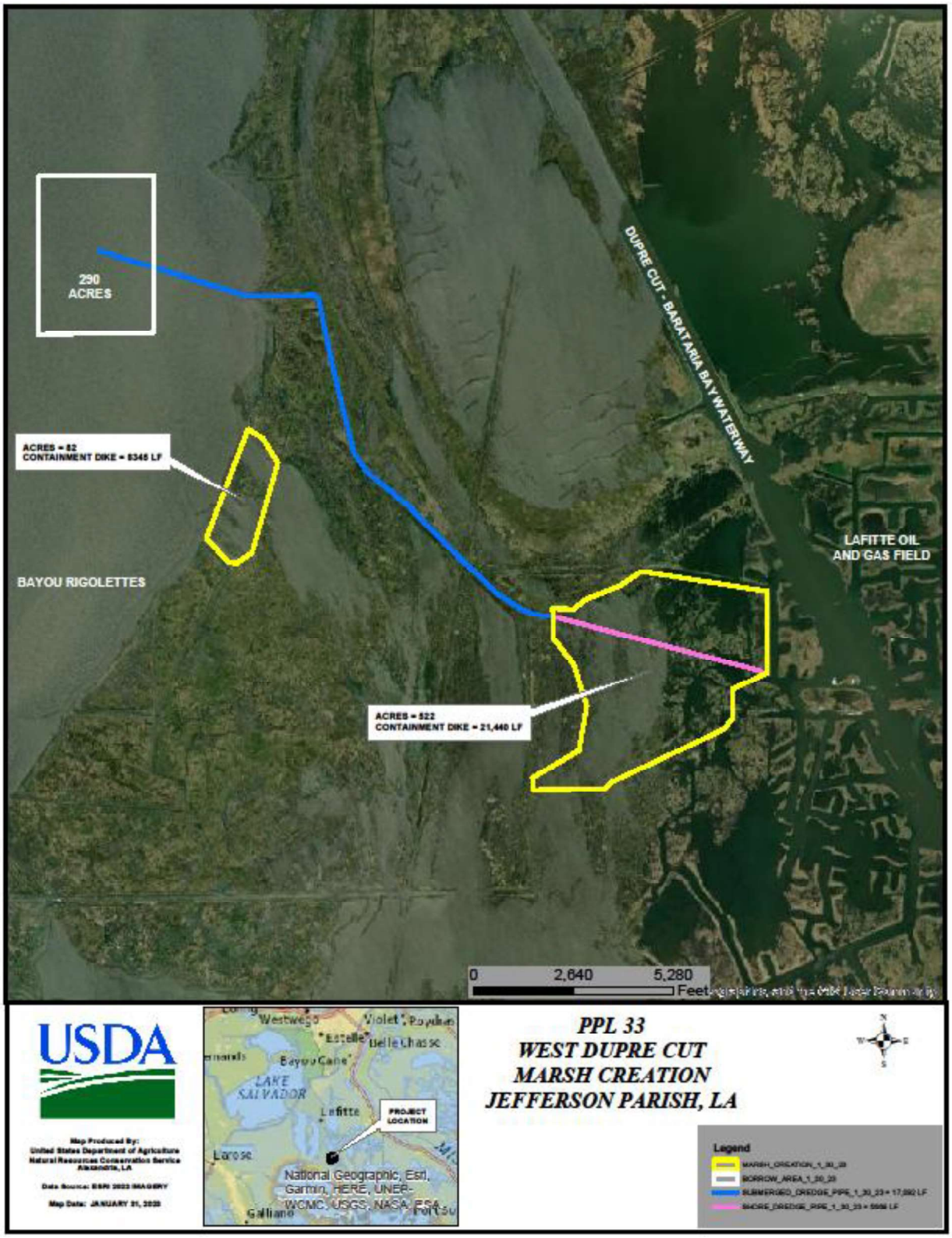
290
ACRES
ACRES = 82
CONTAINMENT DIKE = 8345 LF
ACRES = 522
CONTAINMENT DIKE = 21,440 LF
DUPRE CUT - BARATARIA BAY WATERWAY
LAFITTE OIL
AND GAS FIELD
BAYOU RIGOLETTES
0
2,640
5,280
Feet
USDA
Map Produced By:
United States Department of Agriculture
Natural Resources Conservation Service
Alexandria, LA
Data Source: ESRI 2023 IMAGERY
Map Date: JANUARY 31, 2023
Westwego
Violet
Estelle
Belle Chasse
Bayou Cane
LAKE
SALVADOR
Lafitte
PROJECT
LOCATION
Larose
National Geographic, Esri,
Garmin, HERE, UNEP-
WCMC, USGS, NASA, FSA
Galliano
PPL 33
WEST DUPRE CUT
MARSH CREATION
JEFFERSON PARISH, LA
N
W
E
S
Legend
MARSH_CREATION_1_30_23
BORROW_AREA_1_30_23
SUBMERGED_DREDGE_PIPE_1_30_23 = 17,092 LF
SHORE_DREDGE_PIPE_1_30_23 = 5556 LF

PPL33
West Dupre Cut Marsh Creation
Region II, Barataria Basin

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USDA
NRCS

1

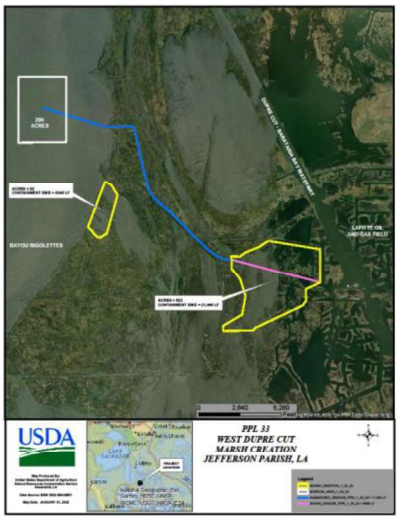
Current Conditions

- Reduction of freshwater, sediment input
- Increase tidal effects, salinity
- Lead to vegetation change, die-off of fresher marsh, increased tidal exchange resulting land loss
- 2021 hurricanes created more open water area
- MC targeted approach to restore specific areas

2

3

- Borrow Area: Bayou Rigolettes
- 605 acres marsh creation & nourishment
- Consistent w/ State Master Plan
- Jefferson Parish collecting survey data
- Benefits: Continues theme of land bridge in basin, create/restore marsh habitat, restoring hydrology
- Preliminary Construction + 25%: $30M - $35M



4

PPL33 PROJECT NOMINEE FACT SHEET
9 February 2023

Project Name
Red Pass Ridge and Marsh Restoration

Project Location
Region 2, Barataria Basin, Plaquemines Parish, southwest of Venice.

Problem
Red Pass ridge is an important structural framework component that serves as a continuation of the barrier island chain creating the first line of defense from storm surge damage to coastal wetlands and communities to the north. The coastal upland habitat of the ridge itself and the surrounding marshes have degraded over time due to factors such as historically high subsidence, lower sediment introduction, increasing frequency of tropical storms, and oil and gas activity in the area. Recently, the area saw storm surge impacts from Hurricane's Ida (2021) and Zeta (2020), including disruptions to vessel traffic located at the nearby port in Venice, LA.

Goals
Approximately 20,101 linear feet of historic ridge will be restored. In addition, approximately 425 acres of marsh will be created and nourished, which will help support the integrity of the ridge throughout the project life.

Proposed Solution
Utilizing Gulf of Mexico borrow, the Red Pass Ridge will be developed to a +4.5 feet NAVD88 crown height with a 25 feet width. According to the state's 2017 Coastal Master Plan, restoration of this ridge will "…provide coastal upland habitat, restore natural hydrology, and provide wave and storm surge attenuation". This proposal includes restoration of approximately 20,101 linear feet of the western portion of the ridge and 425 acres of marsh behind the ridge.

Preliminary Project Benefits

1) *What is the total acreage benefited both directly and indirectly?*
   The total project area is 425 acres. This includes 111 acres of marsh creation and 314 acres of marsh nourishment.

2) *How many acres of wetlands will be protected/created over the project life?*
   Approximately 100 - 150 net acres of marsh will be benefited from marsh creation and nourishment over the project life. This estimate does not include benefits from the ridge feature.

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 marsh creation and marsh nourishment with a loss rate of -0.45%/year based on USGS data from 1985 to 2020 (Grand Liard).

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 restore 20,101 linear feet of Red Pass Ridge. This ridge notably aligns with the natural barrier island chain that protects Terrebonne and Barataria basins as their first line of defense against storm damage.

5) *What is the net impact of the project on critical and non-critical infrastructure?*
The project may have a net positive impact to non-critical infrastructure comprised of pipelines and oil and gas wells and camps and has potential to provide protection to coastal communities to the north.

6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?*
The proposed project may help reduce storm surge for the nearby Spanish Pass Ridge and Marsh Restoration (BA-191), Barataria Basin Ridge and Marsh Creation – Spanish Pass Increment (BA-203); OPA Mosquito Bay (TE-109), and/or Grand Liard Marsh and Ridge Restoration (BA-68).

Considerations
Considerations in the area include private oyster leases and oil and gas pipelines. Endangered species documented in the area include the Hawksbill Sea Turtle, the Leatherback Sea Turtle, and the Kemp Ridley's Sea Turtle. Threatened species in the area include the West Indian Manatee and migratory birds like the Eastern Black Rail, Piping Plover and the Red Knot.

Preliminary Costs
The estimated construction cost including 25% contingency is $30 - 35 M

Preparer(s) of Fact Sheet:
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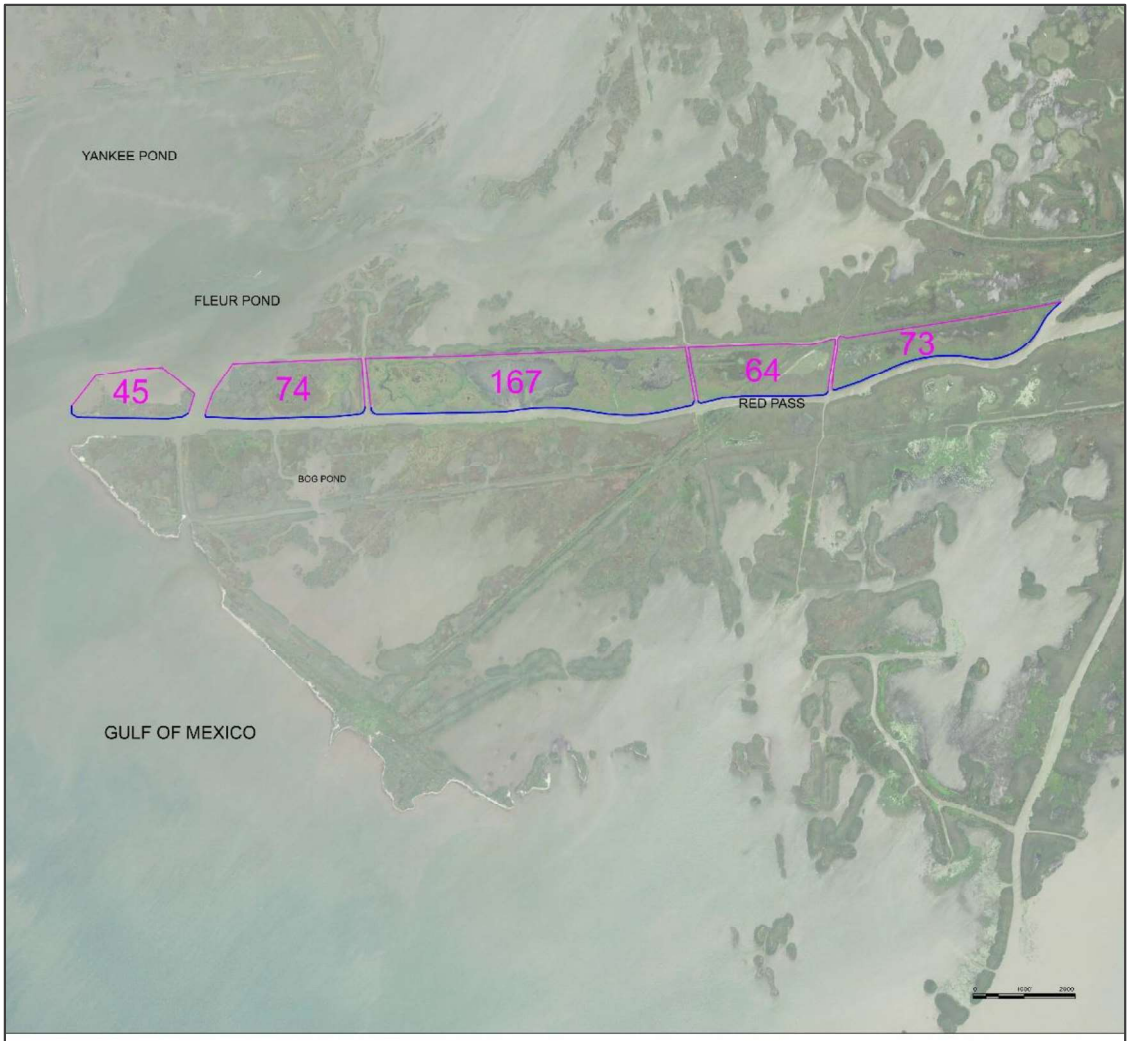


Red Pass Ridge and Marsh Restoration

Sheet Legend

- Proposed Marsh Creation/Nourishment Platform
- Proposed Ridge Restoration & Protection

Satellite Imagery: 2017 LA NAIP

US Army Corps of Engineers
NEW ORLEANS DISTRICT

RED PASS RIDGE RESTORATION

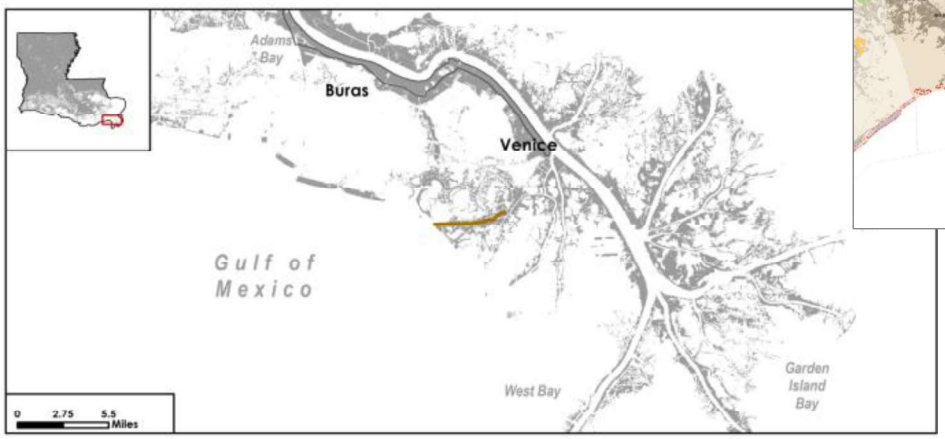
Elizabeth Jarrell
Project Manager

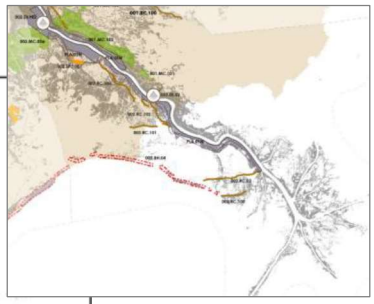
CWPPRA PPL33 RPT Meeting
Regions I & II
9 February 2023

US Army Corps of Engineers

1

2017 COASTAL MASTER PLAN – 002.RC.100





Restoration of historic ridge southwest of Venice to provide coastal upland habitat, restore natural hydrology, and provide wave and storm surge attenuation along the banks of Red Pass.

2

2

LAND LOSS

Land loss due to high subsidence, lack of sediment, increasing frequency of tropical storms, oil and gas activity, etc.

3

3

PROJECT PROPOSAL

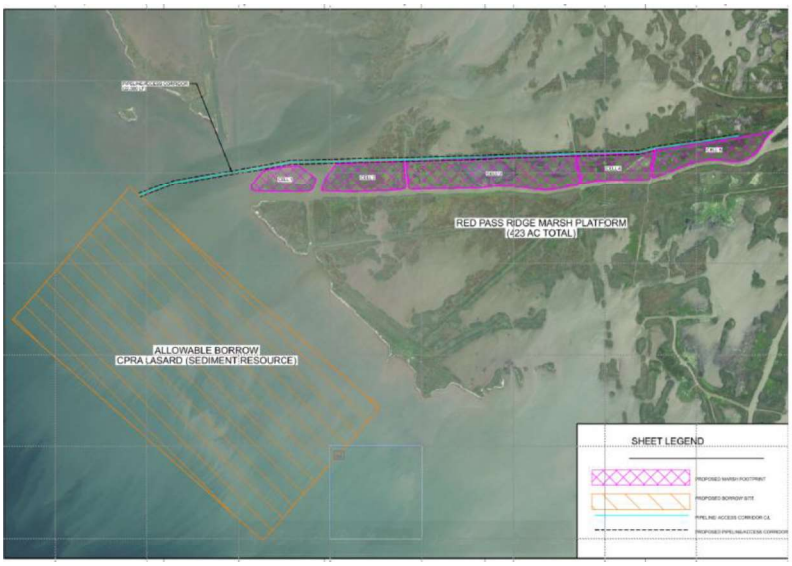
Ridge Restoration: 20,101 feet

Total Acres: 425
- 111 acres marsh creation
- 314 acres marsh nourishment

Net acres: 100-150
- not including ridge benefits

Estimated Cost: $30-35 M

Borrow Source: Gulf of Mexico
– Available borrow area identified with support from CPRA

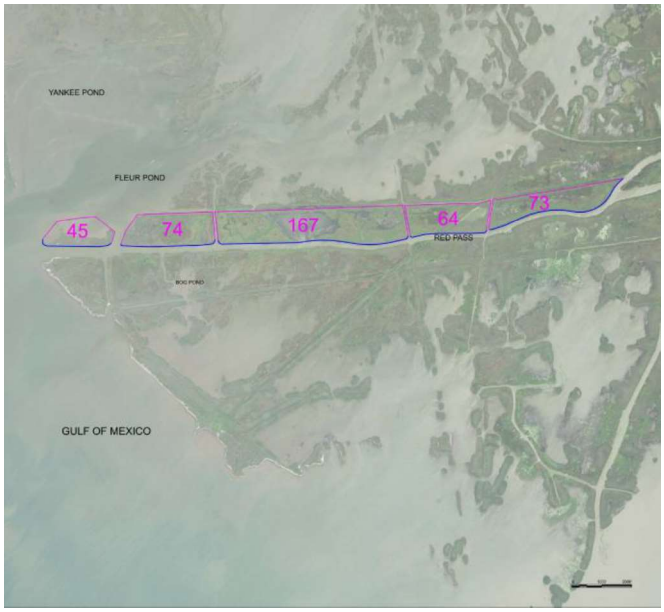


4

4

OPPORTUNITIES

- Address degradation of coastal upland habitat and surrounding marsh
- Support important structural framework feature serving as a continuation of the barrier island chain protecting inland areas from storm impacts
- Restore natural hydrology
- Work synergistically with other projects in the area (e.g., BA-191 and BA-203)



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5

PPL33 PROJECT NOMINEE FACT SHEET
February 9, 2023

Project Name
South Delacroix Marsh Creation and Terracing

Project Location
Region 2, Breton Basin, Plaquemines Parish

Problem
Hurricanes Katrina, Rita, and Ida caused the majority of wetland loss in the project area. Wind erosion and saltwater intrusion have resulted in loss of marsh vegetation and wetland soils. Marsh loss has increased exposure of Delacroix to flooding from the south. The USGS expanded project boundary loss rate from the adjacent (immediately across Bayou Gentilly) PPL27 Mid Breton Land Bridge Marsh Creation and Terracing (BS-32) project is -1.91%/year from 1984 to 2019 for the extended project boundary area.

Goals
The project goal is to create and nourish approximately 402 acres (ac) of tidal emergent marsh and 18,000 linear feet of terraces.

Proposed Solution
The project solution is to create and nourish approximately 402 ac of marsh (382 ac creation 20 ac nourishment) utilizing a layout to help protect the community of Delacroix and provide synergy with BS-37 East Delacroix Marsh Creation and Terracing, BS-41 North Delacroix Marsh Creation and Terracing, and BS-32 Mid Breton Land Bridge Marsh Creation and Terracing projects. BS-37 and BS-31 have received construction authorization and the remainder is in Phase I Engineering and Design. This project would be one of the final pieces in the overall Breton Land Bridge concept. Sediment would be mined from nearby Petit Lake and placed via pipeline. The borrow area would be designed to avoid adverse impacts to the existing shorelines. Containment dikes would be gapped post construction to allow fisheries access.

Preliminary Project Benefits

1) *What is the total acreage benefited both directly and indirectly?*
   This total project area is 576 ac. This includes 402 ac of marsh creation and nourishment, and a 174 ac terrace field.

2) *How many acres of wetlands will be protected/created over the project life?*
   Approximately 300 – 350 ac of marsh will be protected/created over the project life.

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

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

The project will complete the Breton Land Bridge near the vicinity of the community of Delacroix and be a crucial piece of the overall concept. The project would add protection to the adjacent Bayou Terre Aux Boeufs Ridge.

5) *What is the net impact of the project on critical and non-critical infrastructure?*
The project would have net positive impact to critical infrastructure which consists of Delacroix Highway, a hurricane evacuation route, and residences of Delacroix. Net positive impact would result from providing reduced impact from wind driven waves and help protect the highway.

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 other projects either being constructed or being engineered and designed (E&D) within the greater Breton Land Bridge. Nearby projects include BS-37 (construction funded), BS-41 (E&D), and BS-32 (construction funded).

Considerations
The proposed project has potential utility/pipeline considerations.

Preliminary Construction Costs
The estimated construction cost plus 25% contingency is $30M - $35M.

Preparer(s) of Fact Sheet:
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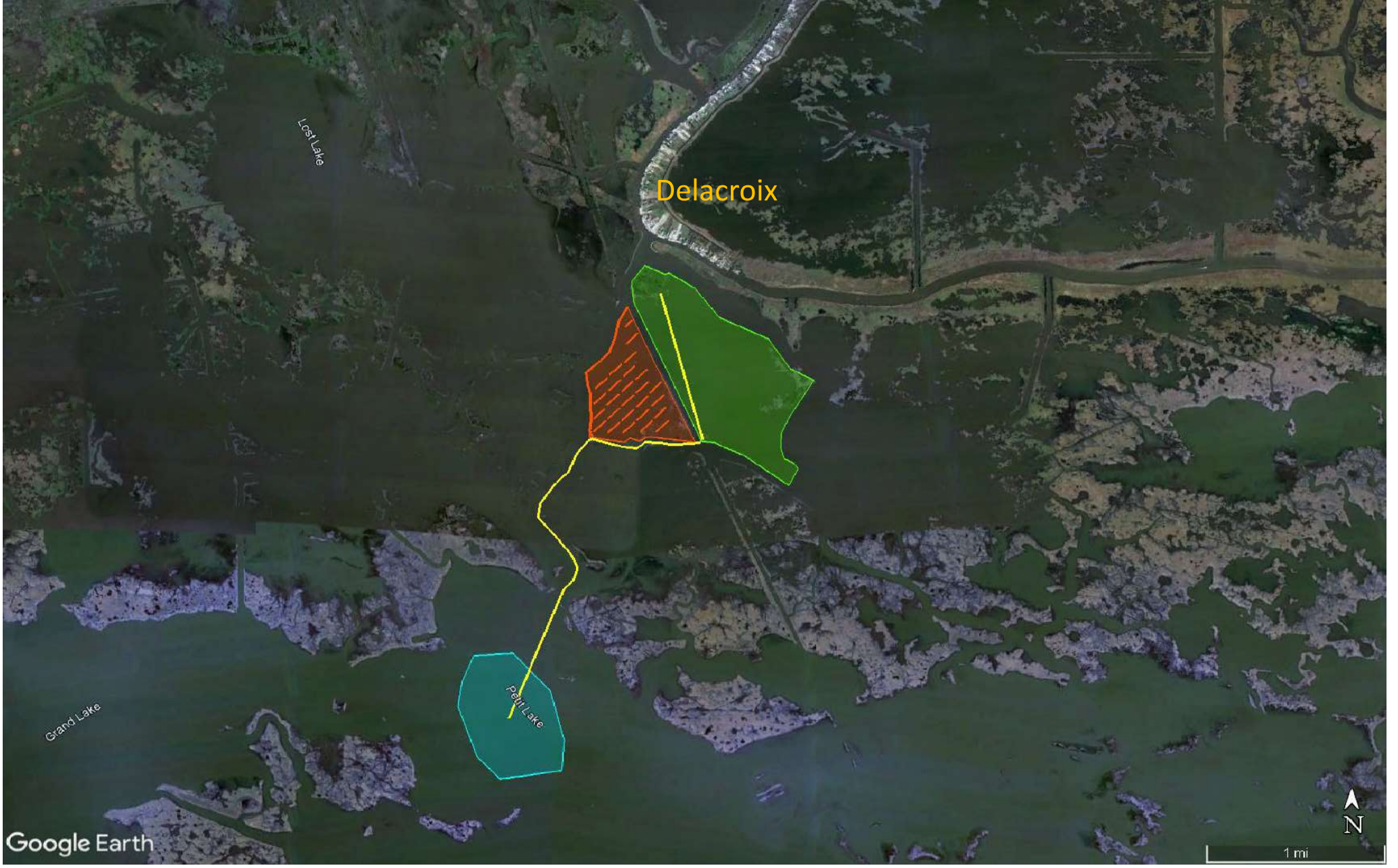
Jason Kroll, NOAA Restoration Center, 225-757-5411, jason.kroll@noaa.gov



PPL33 South Delacroix Marsh Creation and Terracing

382 Acres Marsh Creation
20 Acres Marsh Nourishment
18,000 Linear Feet of Terraces

Federal Sponsor: NOAA Fisheries
2021 Aerial Imagery
Map Date 1-28-2023

Legend

- Marsh Creation
- Terrace Field
- Borrow Area

South Delacroix Marsh Creation and Terracing Project

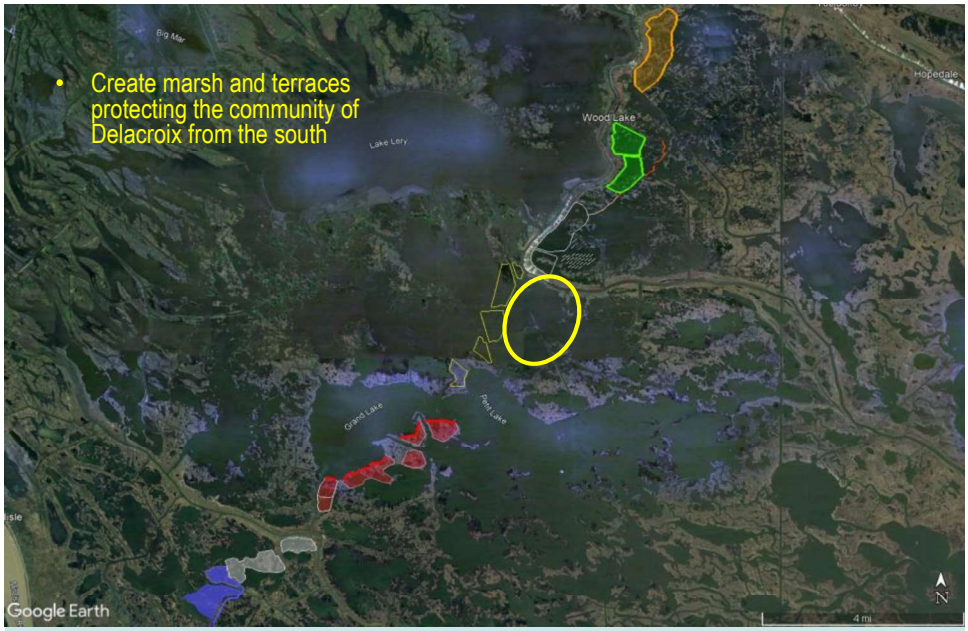
NOAA FISHERIES

REGION 2 – Breton Sound Basin

Presenter: Brandon Howard, Fishery Biologist, NOAA

PPL33 CWPPRA Regional Planning Team Meeting
February 9, 2023

1



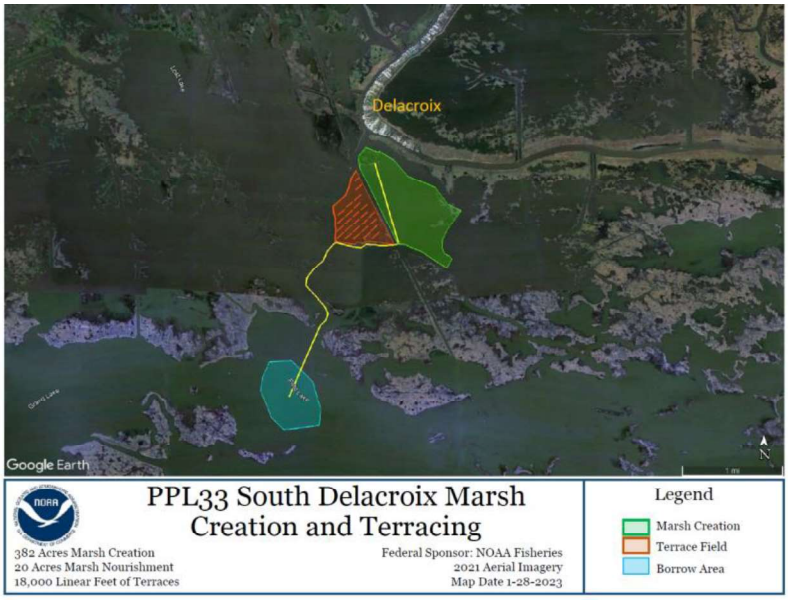
2

Restoration Solution

- 2023 State Master Plan - West Delacroix Marsh Creation - Project ID 313
- 402 Acres of Marsh Creation/Nourishment
  - 382 acres of marsh creation & 20 acres of marsh nourishment
  - Hydraulically dredge material from Petit Lake
  - Contained fill areas with dike gapping after construction

3

Project Map



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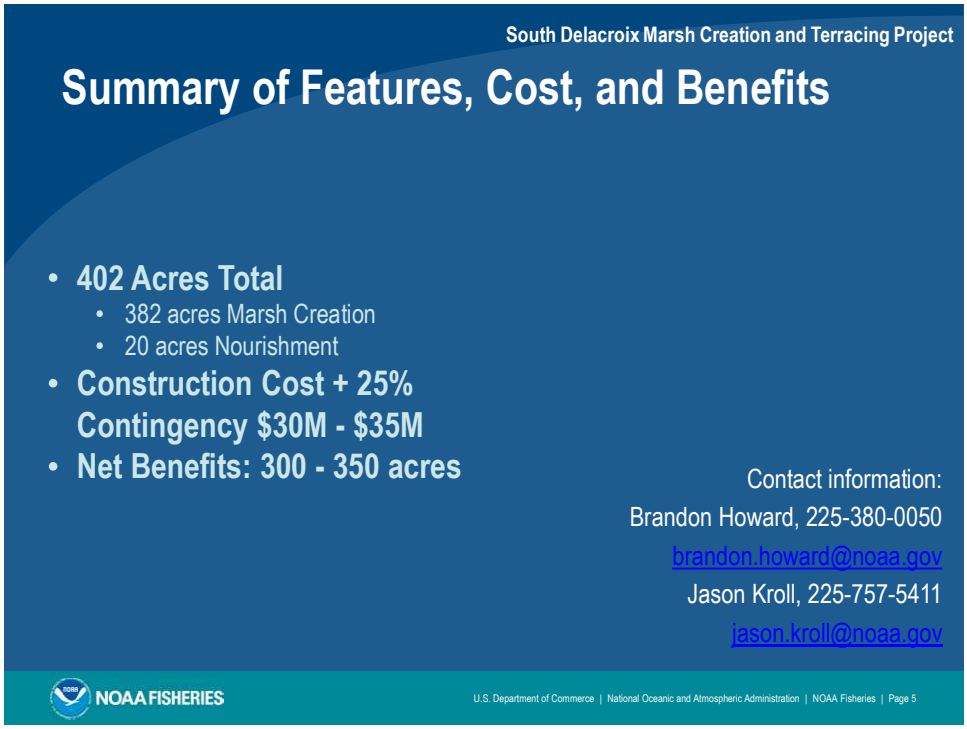
South Delacroix Marsh Creation and Terracing Project
Summary of Features, Cost, and Benefits
• 402 Acres Total
• 382 acres Marsh Creation
• 20 acres Nourishment
• Construction Cost + 25% Contingency $30M - $35M
• Net Benefits: 300 - 350 acres
Contact information:
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NOAA FISHERIES
U.S. Department of Commerce | National Oceanic and Atmospheric Administration | NOAA Fisheries | Page 5

5

PPL33 PROJECT FACT SHEET
February 9, 2023

Project Name
Verret Marsh Creation and Terracing

Master Plan Strategy
2017 MP Breton Marsh Creation-Component A (2017 Master Plan 001.MC.06a): Creation of approximately 12,000 acres of marsh in the Breton Marsh east of Delacroix Island to create new wetland habitat and restore degraded marsh. 2023 Draft MP North & East Lake Lery Marsh Creation: Creation of marsh within a footprint of approximately 14,000 acres in North and East Lake Lery to create new wetland habitat, restore degraded marsh, and reduce wave erosion.

Project Location
Region 2, Breton Sound Basin, St. Bernard Parish

Problem
This project area has experienced wetland loss due to a variety of factors including subsidence, saltwater intrusion, and storm damage. Hurricane Katrina devastated the area resulting in substantial marsh loss which has exposed infrastructure to open water conditions. Most recently, the area experienced impacts due to Hurricane Zeta in 2020 and Ida in 2021.

Proposed Solution
Create/nourish 376 acres of wetlands with sediment hydraulically dredged from a borrow source in Lake Borgne. This project would provide a buffer to 88 acres of mature Live Oak/Hackberry ridge ecosystems that are critical habitat for Trans-Gulf Migratory birds. It would also buffer the New Orleans HSDRRS levee system that protects the underserved community of Verret La. Another component of this project are terraces proposed at the intersection of the Reggio canal and the Eastern flank of Bayou Terre aux Boeufs ridge. Terraces would not exceed 10% of the project footprint. Restoration in this shallow water environment could reduce fetch lengths and edge erosion. Additionally, it would provide synergy between North Delacroix Marsh Creation and Terracing (BS-41) and Reggio Marsh Creation and Hydrologic Restoration (BS-43).

Project Benefits
Create/nourish 376 acres (create 323 acres and 53 nourish acres) of emergent marsh with sediment dredged from Lake Borgne and construct 146 acres of terraces to the E of the Bayou. An additional 68 acres could either be marsh creation or terraces, depending on site conditions.

Project Costs
The estimated construction cost including 25% contingency is $30M - $35M.

Preparer(s) of Fact Sheet:
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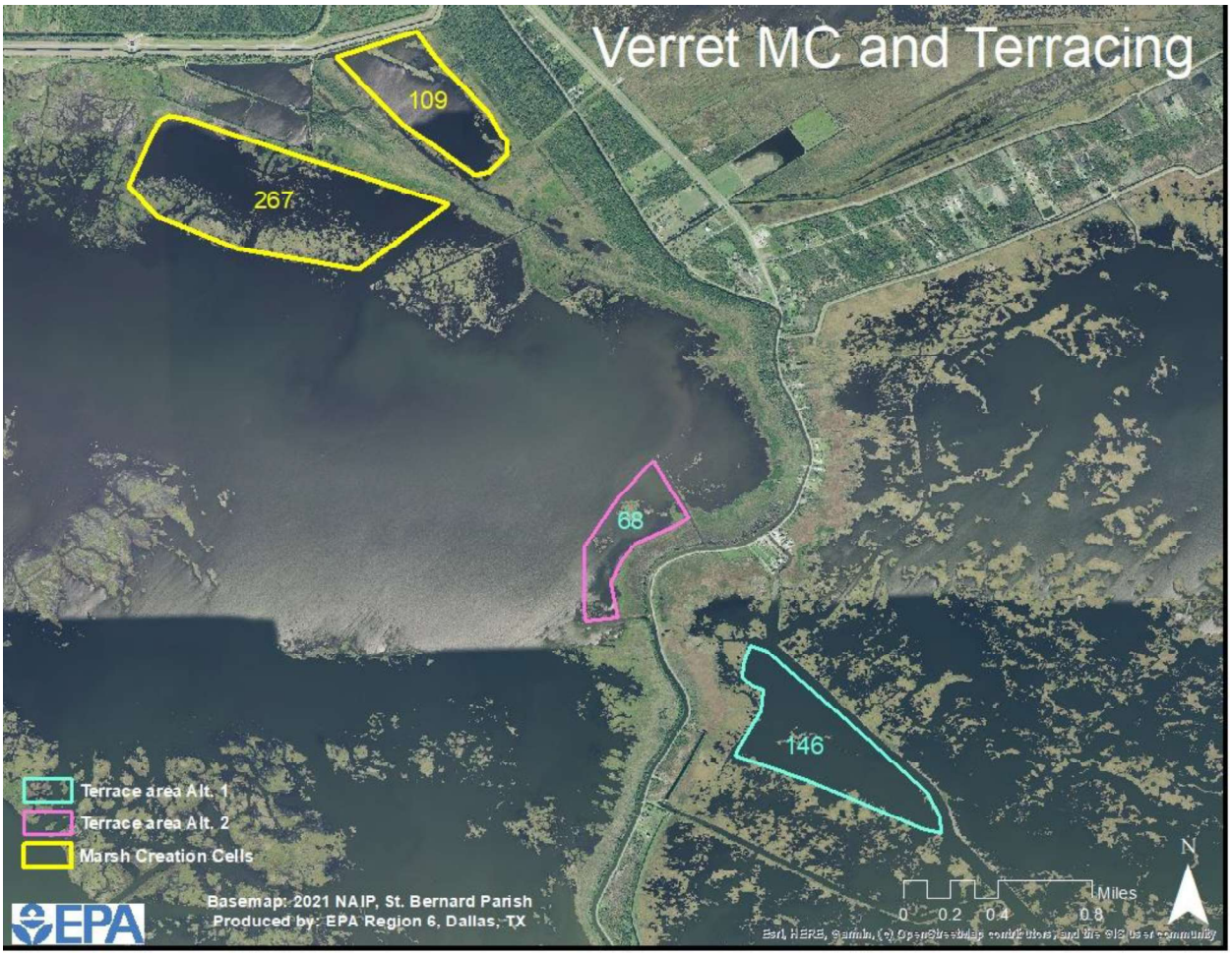
Sharon L. Osowski, Ph.D.; EPA; (214) 665-7506; osowski.sharon@epa.gov
Jenny Byrd, EPA, (214) 665-7377, Byrd.Jennifer@epa.gov

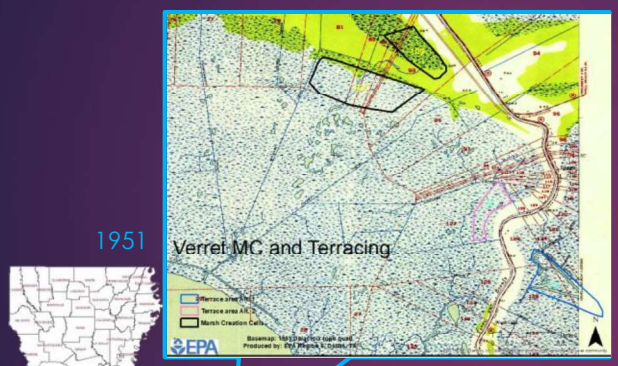

Verret MC and Terracing
109
267
68
146
Terrace area Alt. 1
Terrace area Alt. 2
Marsh Creation Cells
Basemap: 2021 NAIP, St. Bernard Parish
Produced by: EPA Region 6, Dallas, TX
EPA
N
0 0.2 0.4 0.8
Miles

Verret Marsh Creation and Terracing

EPA/MERAUX FOUNDATION

1

PROJECT BACKGROUND:



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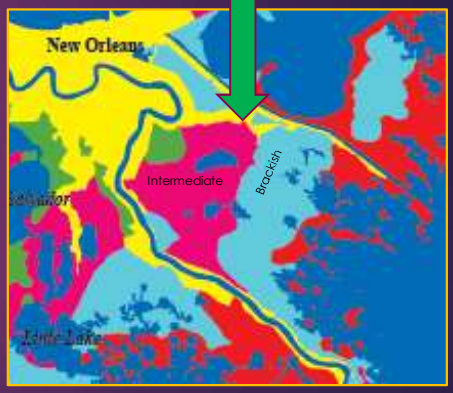
Verret



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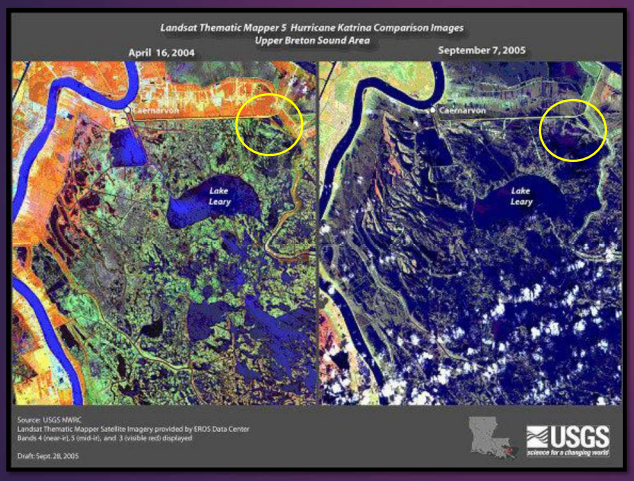
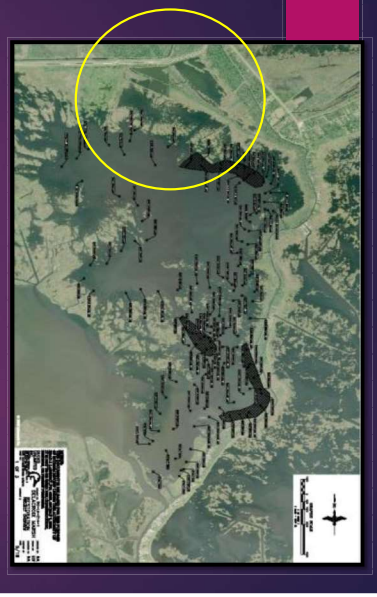
KATRINA MARSH LOSS:





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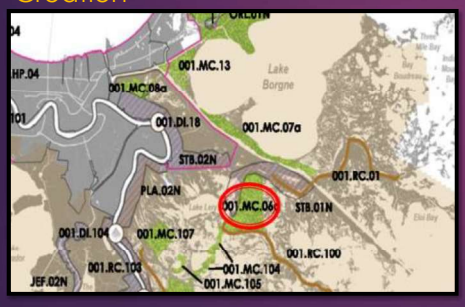
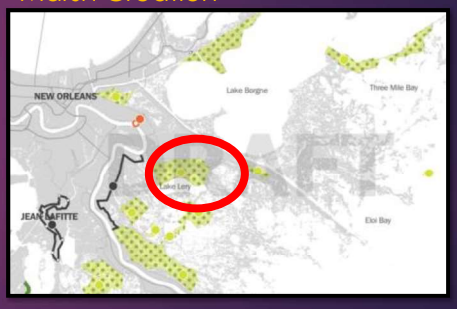
Master Plan Compliance:

2017: 001.MC.06a Breton Marsh Creation



2023: North & East Lake Lery Marsh Creation



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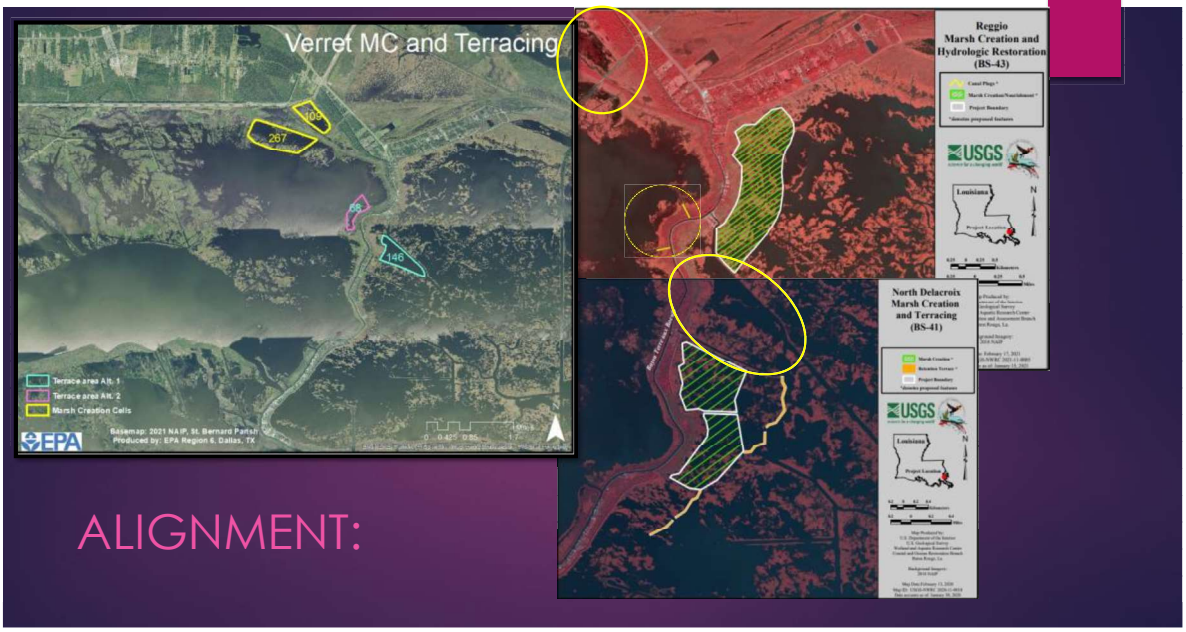
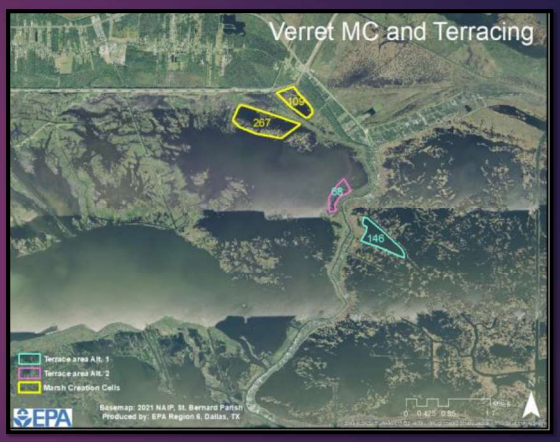


ALIGNMENT:

5

PROJECT FEATURES:

- 376 total acres, Create 323 and Nourish 53 acres of emergent marsh with sediment from Lake Borgne
- Create terraces in a 146 acres area on the E side of the Bayou (NTE 10%)
- Or 68 ac of Terraces depending on site data (NTE 10%)
- Reduce impacts of storm surge on Ridge ecosystems and surrounding communities
- 30-35 Million range



6

PPL33 PROJECT FACT SHEET
February 9, 2023

Project Name
Davant Marsh Creation (Increment 1)

Master Plan Strategy
Pointe a la Hache Marsh Creation (2017 Master Plan 001.MC.102): Creation of approximately 19,100 acres of marsh on the east bank of Plaquemines Parish near Pointe a la Hache to create new wetland habitat and restore degraded marsh. Pointe a la Hache and Carlisle Marsh Creation (2023 Master Plan #248c): Creation of marsh along the east side of the Mississippi River from White Ditch to Bohemia to create wetland habitat, restore degraded marsh, and reduce wave erosion.

Project Location
Region 2, Breton Sound Basin, Plaquemines Parish

Problem
The project area is an open water body immediately adjacent to the east bank of the Mississippi River levee. As a result of leveeing the Mississippi River for navigation and flood control, the Pointe a la Hache wetlands were cut off from the historic overbank flooding of the river. Without continued sediment input, marshes could not maintain viable elevations due to ongoing subsidence. In addition, oil and gas canals disrupted hydrology and facilitated saltwater intrusion further degrading the marsh. The land loss rate for the nearby BS-42 and BS-44 Phoenix CWPPRA projects is -1.17%/yr.

Proposed Solution
The proposed project would create/nourish approximately 419 acres of marsh using sediment dredged from the Mississippi River.

Project Benefits
Create/nourish approximately 419 acres (create 361 acres and nourish 58 acres) of emergent marsh using sediment dredged from the Mississippi River.

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

Preparer(s) of Fact Sheet:
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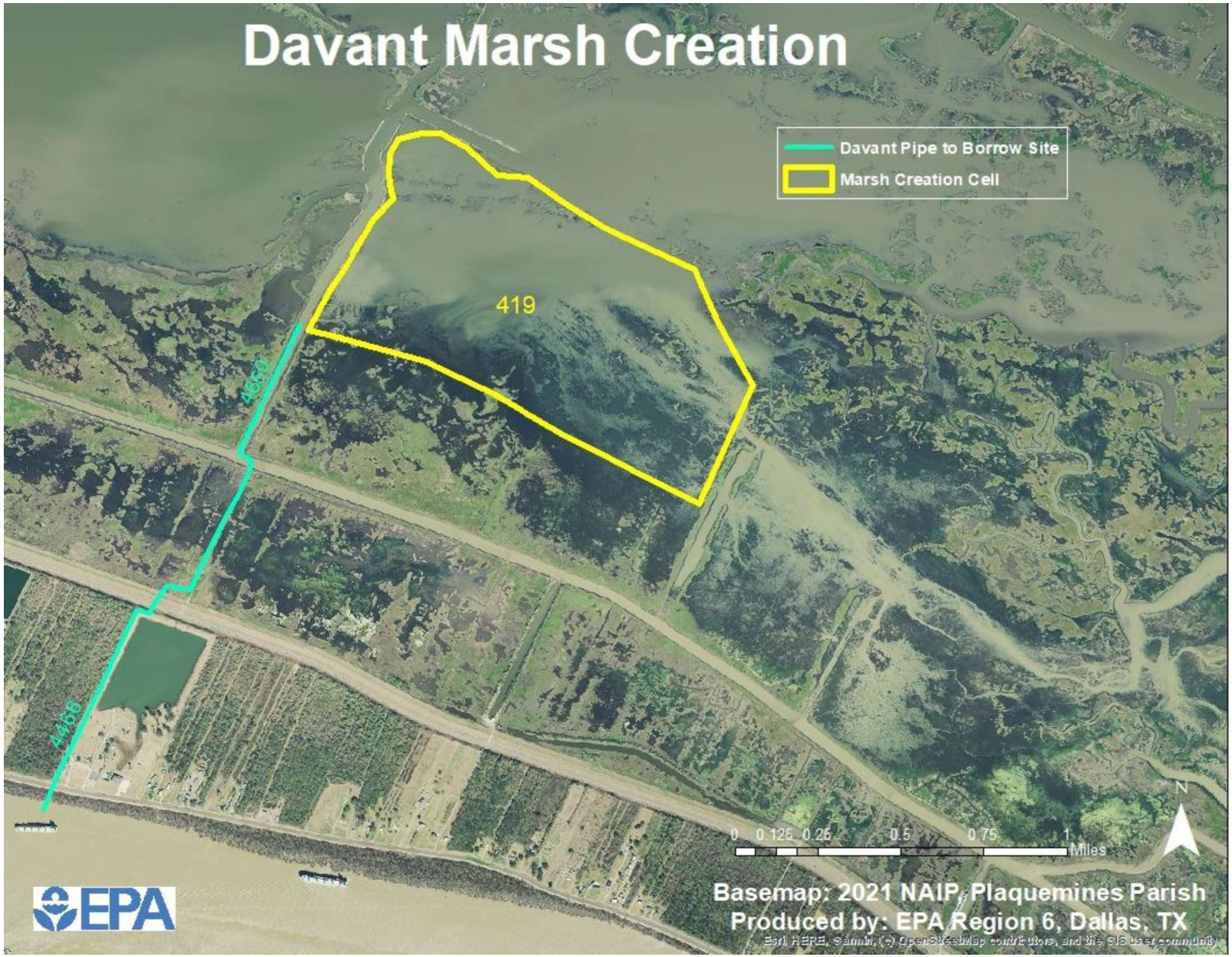
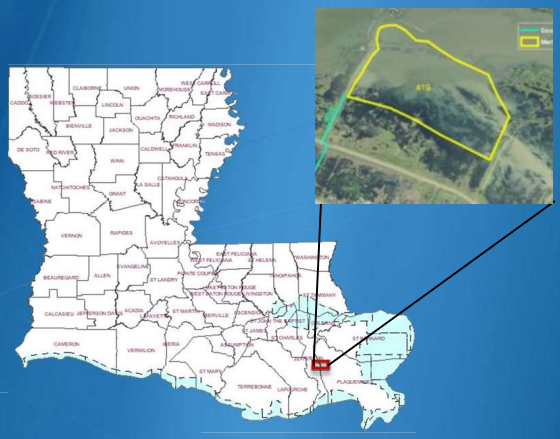
Sharon L. Osowski, Ph.D.; EPA; (214) 665-7506; osowski.sharon@epa.gov
Patty Taylor, P.E., Ph.D.; EPA, (214) 665-6403, taylor.patricia-a@epa.gov


Davant Marsh Creation
Davant Pipe to Borrow Site
Marsh Creation Cell
419
4650
4168
0 0.125 0.25 0.5 0.75 1
Miles
N
EPA
Basemap: 2021 NAIP, Plaquemines Parish
Produced by: EPA Region 6, Dallas, TX
Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS User Community

Davant Marsh Creation



Coastal Wetlands Planning, Protection and Restoration Act

1

Master Plan Solution

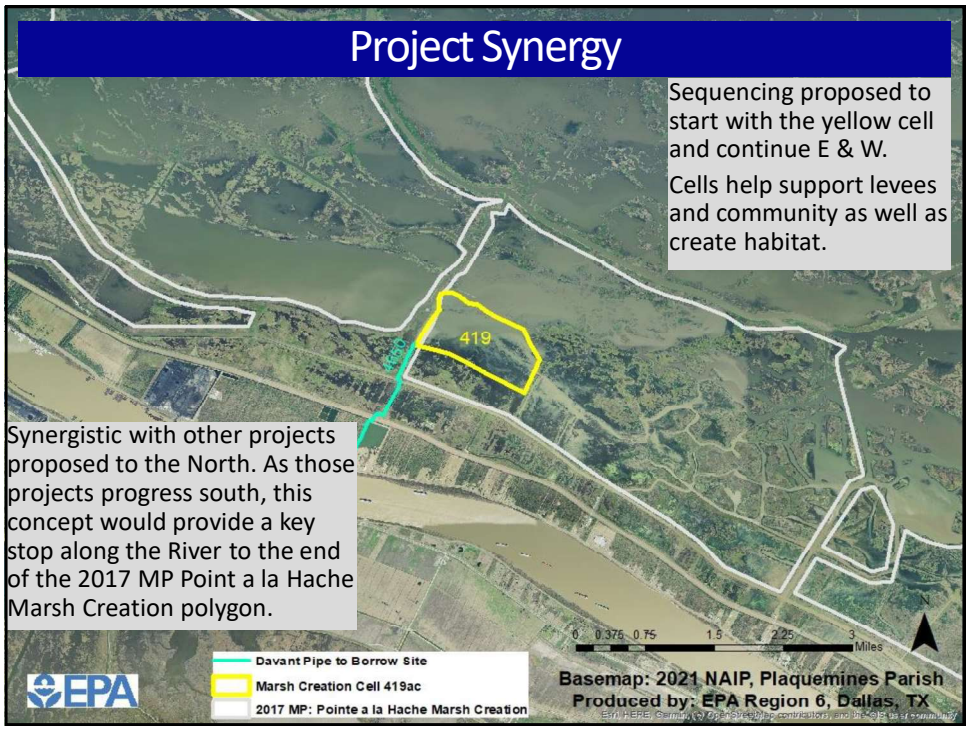
2017

001.MC.102 Pointe a la Hache Marsh Creation: Creation of approximately 19,100 acres of marsh on the east bank of Plaquemines Parish near Pointe a la Hache to create new wetland habitat and restore degraded marsh.

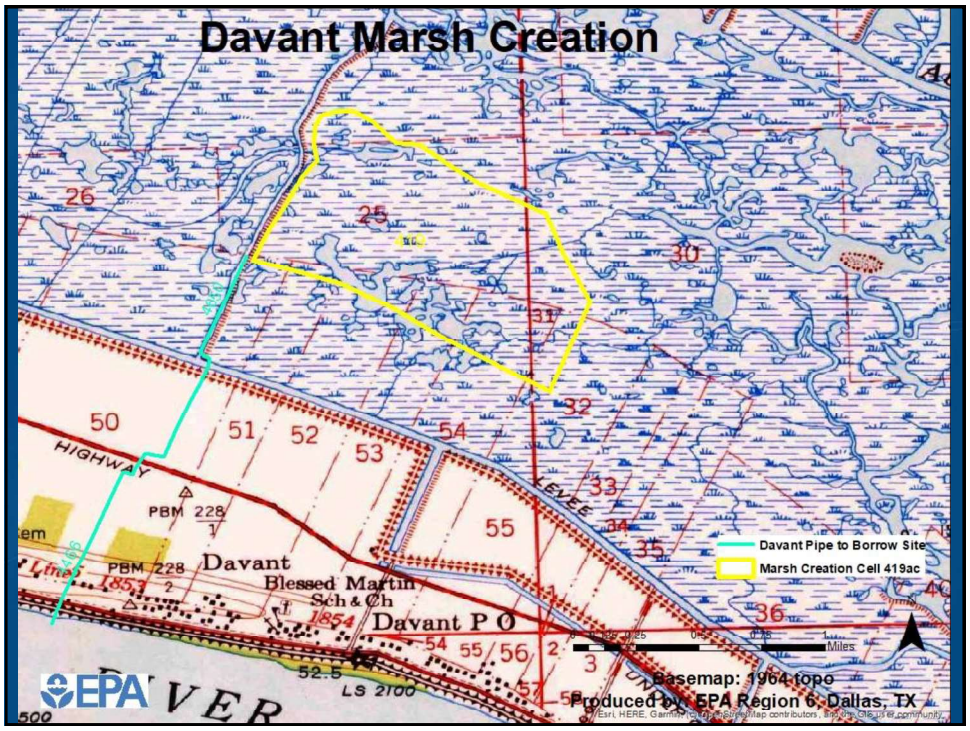
2023

Pointe a la Hache and Carlisle Marsh Creation (2023 Master Plan #248c): Creation of marsh along the east side of the Mississippi River from White Ditch to Bohemia to create wetland habitat, restore degraded marsh, and reduce wave erosion.

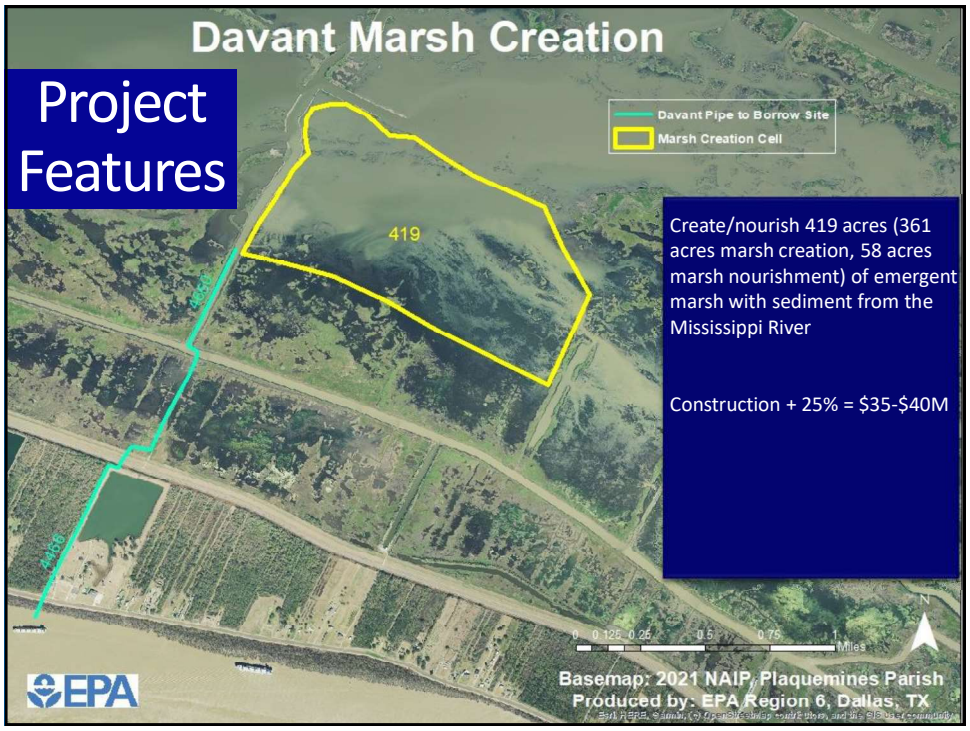
2


Project Synergy
Sequencing proposed to start with the yellow cell and continue E & W.
Cells help support levees and community as well as create habitat.
419
Synergistic with other projects proposed to the North. As those projects progress south, this concept would provide a key stop along the River to the end of the 2017 MP Point a la Hache Marsh Creation polygon.
0 0.375 0.75 1.5 2.25 3 Miles
Davant Pipe to Borrow Site
Marsh Creation Cell 419ac
2017 MP: Pointe a la Hache Marsh Creation
EPA
Basemap: 2021 NAIP, Plaquemines Parish
Produced by: EPA Region 6, Dallas, TX

3


Davant Marsh Creation
HIGHWAY
LEVEE
PBM 228
Davant
Blessed Martin
Sch & Ch
1854
Davant P O
LS 2100
Davant Pipe to Borrow Site
Marsh Creation Cell 419ac
Miles
EPA
Basemap: 1964 topo
Produced by: EPA Region 6, Dallas, TX

4


Davant Marsh Creation
Project Features
Davant Pipe to Borrow Site
Marsh Creation Cell
419
Create/nourish 419 acres (361 acres marsh creation, 58 acres marsh nourishment) of emergent marsh with sediment from the Mississippi River
Construction + 25% = $35-$40M
0 0.125 0.25 0.5 0.75 1 Miles
N
EPA
Basemap: 2021 NAIP, Plaquemines Parish
Produced by: EPA Region 6, Dallas, TX

5

PPL33 PROJECT NOMINEE FACT SHEET
February 9, 2023

Project Name
North Lake Lery Marsh Creation and Rim Restoration Project

Project Location
Region 2, Breton Basin, St. Bernard Parish

Problem
The marshes forming the shoreline of Lake Lery were severely damaged by Hurricane Katrina. Wind-induced waves within Lake Lery could further damage the shoreline and cause accelerated interior marsh loss. Without directly rebuilding these marshes, the lake will continue to grow and potentially coalesce with newly open waters north of the lake. The northwestern portion of the lake has the greatest rate of shoreline loss leading St. Bernard Parish Government (SBPG) to choose this as a high priority area for restoration (SBPG Coastal Strategy Document 2018). The estimated loss rate for the area is -0.95% per year (Terracing and Marsh Creation South of Big Mar project**,** BS-24, 1984 to 2021).

Goals
The primary goals of the project are to create/nourish 437 acres of intertidal marsh through dedicated dredging and to protect 2.4 miles (12,665 linear feet) of the Lake Lery shoreline with shoreline stabilization. The project will be designed to build resilient wetlands that maximize wetland benefits for the twenty year project life. The goal of the shoreline stabilization is to ensure constructability of the project and provide resilience to the newly created marsh shortly after construction to allow marsh to vegetate.

Proposed Solution
The project would create 217 acres and nourish 219 acres of marsh along the northern shore of Lake Lery using material dredged from Lake Lery. The shoreline stabilization will be placed along the southern shoreline of the marsh creation area. Temporary containment dikes will be constructed and gapped within three years of construction to allow greater tidal exchange and fishery access.

Preliminary Project Benefits

1) *What is the total acreage benefited both directly and indirectly?*
   This total project area is 437 acres.

2) *How many acres of wetlands will be protected/created over the project life?*
   Approximately 200-250 net acres of marsh will be protected/created over the twenty year project life.

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

5) *What is the net impact of the project on critical and non-critical infrastructure?*
The project would have moderate net positive impact to non-critical infrastructure comprised of pipelines.

6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?*
The project will have synergistic effects with: 1) BS-16 South Lake Lery Shoreline and Marsh Restoration, 2) BS-24 Terracing and Marsh Creation South of Big Mar, and 3) CIAP project constructed west of Delacroix.

Considerations
The proposed project has utility/pipeline considerations.

Preliminary Construction Costs
The construction cost plus 25% contingency is $30M-$35M.

Preparer(s) of Fact Sheet:
Dawn Davis, NOAA Fisheries, 225-380-0052, Dawn.Davis@noaa.gov

PPL33 North Lake Lery Marsh Creation and Rim Restoration

437 Acres Marsh Creation and Marsh Nourishment
12,665 LF Shoreline Stabilization

Federal Sponsor: NOAA Fisheries
2021 Aerial Imagery
Map Date 01-26-2023

Legend

- Marsh Creation
- Shoreline Stabilization
- Borrow

North Lake Lery Marsh Creation and Rim Restoration

NOAA FISHERIES

REGION 2 – Breton Basin

Presenter: Dawn Davis, Fishery Biologist

Special Thanks:

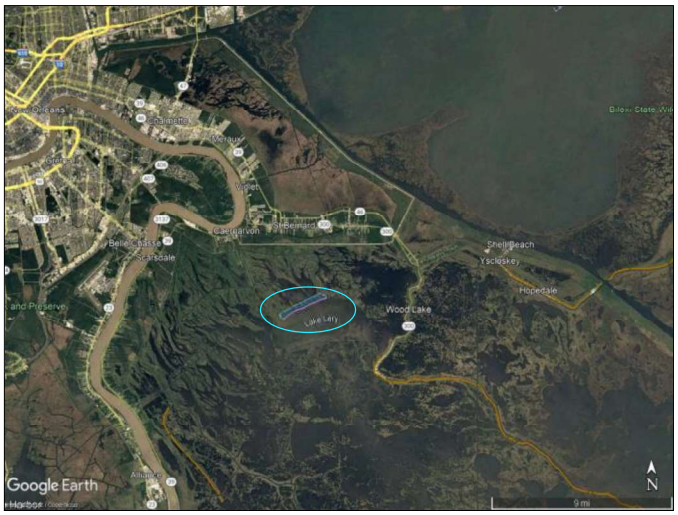
St. Bernard Parish

PPL33 CWPPRA Regional Planning Team
Virtual Meeting
February 9, 2023

1

Priority Project Planning

- Areas of Need within Breton Basin
- Synergy with other Restoration Efforts
- Applicability within the CWPPRA Program
- Develop Solutions with Preferred Project Features



2

Areas of Need Within Basin

- Decide on top priorities in the Basin
- Focus on critical landscape features to restore and maintain

2004 2022

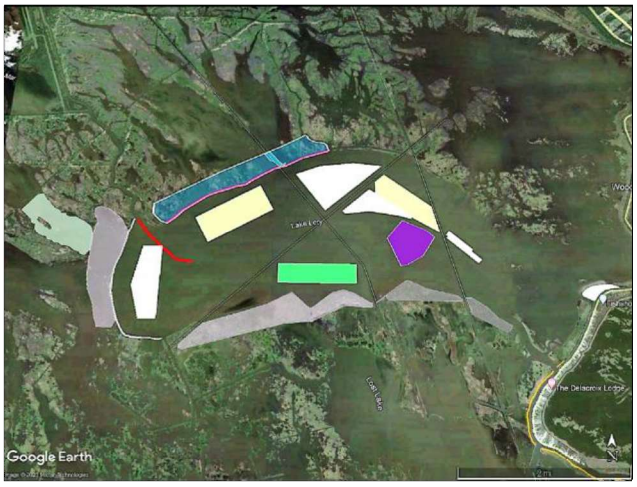
3

Synergy with Other Restoration Efforts

- Synergy with Lake Lery projects:
  BS-16, CIAP
  BS-24

Applicability within the CWPPRA Program

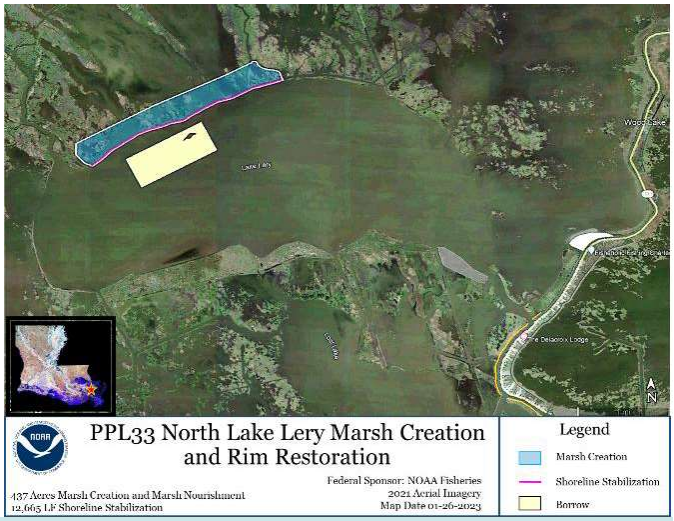
- Plan a project that fits within the program



4

Priority Project Planning Summary

- Marsh Creation/ Nourishment: 437 Acres
  - 217 acres MC and 219 acres MN
  - Dredge material from the Lake Lery
  - Full containment with dike gapping after construction
- Shoreline Stabilization: 12,665 LF
- Construction Cost + 25% Contingency: $30M - 35M
- Net Benefits: 200-250 acres



5

Open Dialogue

Contact information:
Dawn Davis, 225-380-0052
dawn.davis@noaa.gov
Jason Kroll, 225-335-9659
jason.kroll@noaa.gov

6

PPL33 PROJECT FACT SHEET
February 9, 2023

Project Name
Bayou Terre aux Boeufs Ridge Restoration and Marsh Creation

Master Plan Strategy
Bayou Terre aux Boeufs Ridge Restoration (2017 Master Plan 001.RC.100): Restoration of approximately 91,200 feet of historic ridge to an elevation of 5 feet NAVD88 to provide coastal upland habitat, restore natural hydrology, and provide wave and storm surge attenuation along Bayou Terre aux Boeufs.

Project Location
Region 2, Breton Sound Basin, Plaquemines Parish

Problem
As a result of storm events, subsidence, and sea level rise, among other factors, the ridge has degraded in this area. As the ridge continues to degrade the water bodies on each side merge creating a much larger open water area, bringing increased wave fetch, storm surge, and conversion of the remaining fragmented wetlands into open water areas. The area remains vulnerable to future hurricane damage and subsidence. The marsh creation cell is located within the Caernarvon Outfall Subunit which shows a land loss rate of -0.96%/yr.

Proposed Solution
Create 26,948 linear feet of ridge along Bayou Terre aux Boeufs to provide coastal upland habitat, restore natural hydrology, provide storm surge attenuation, and improve local community resilience. Create/nourish 384 acres emergent marsh with sediment pumped from the Petit Lake.

Project Benefits
Create 26,948 linear feet of ridge along Bayou Terre aux Boeufs and create/nourish 384 acres (create 230 acres and nourish 154 acres) emergent marsh.

Project Costs
The estimated construction cost including 25% contingency is $25-30M.

Preparer(s) of Fact Sheet:
Ron Boustany, USDA/NRCS, ron.boustany@la.usda.gov
Blaise Pezold, Meraux Foundation; (504) 264-8125; blaise@merauxfoundation.org
Sharon L. Osowski, Ph.D.; EPA; (214) 665-7506; osowski.sharon@epa.gov

Bayou Terre aux Boeufs Ridge Restoration & Marsh Creation (PPL32 Candidate)

Ridge

Marsh Creation

Project Boundary

Note: All features are proposed.

0.5 0 0.5 1 Kilometers

0.5 0 0.5 1 Miles

Scale: 1:50,000

USGS science for a changing world

Map Produced By:
U.S. Department of the Interior
U.S. Geological Survey
Wetland and Aquatic Research Center
Baton Rouge, LA

Image Source:
2021 NAIP CIR

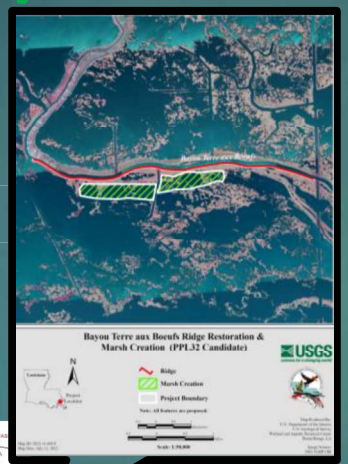
Map ID: 2022-11-0019
Map Date: July 12, 2022

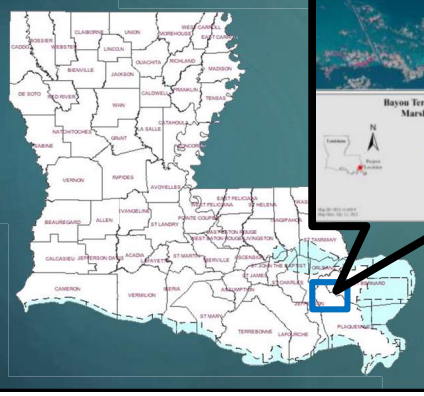
Bayou Terre aux Boeufs Ridge Restoration & Marsh Creation

EPA/NRCS/MERAUX FOUNDATION

1

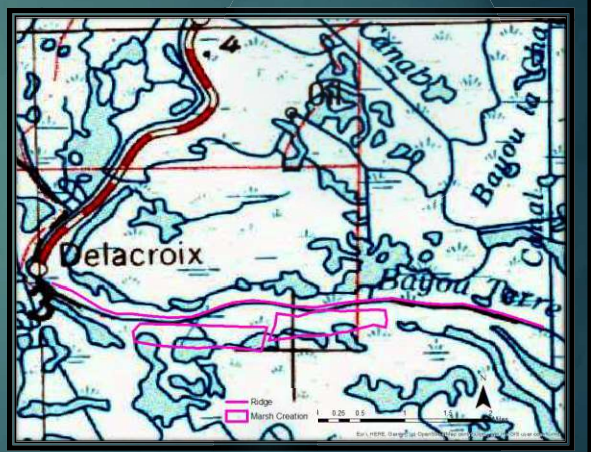
Project Background:





Breton Basin

1957 Topographical map



2

Impacts our community faces:

- Historic ridge is degrading between the water bodies on both sides which may cause them to merge creating additional impacts due to increased fetch lengths
- Subsidence
- Storm surge events
- Both Plaquemines (55%) and St. Bernard (72%) Parishes could lose extensive land area over the next 50 years and experience severe storm surge flood risk (2017 MP)

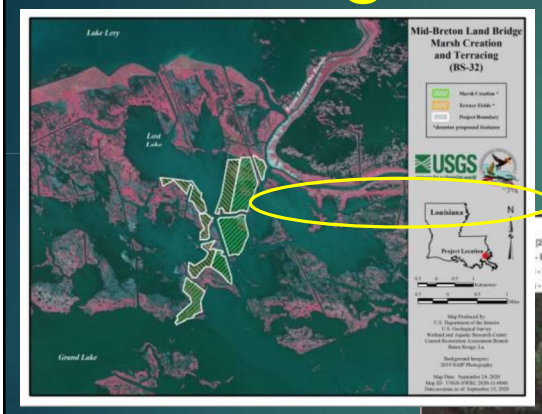
3

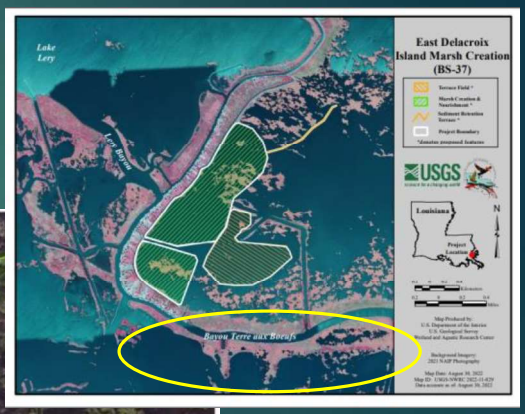
2023 Master Plan Compliant:

St. Bernard Parish Plan:
Priority Tier 1

4

Alignment:





5

Questions?

- Restore up to 26948 linear feet of historical ridge
- Create/Nourish 384 acres of emergent marsh
- Construction + Contingency = $25M - $30M
- Came in 3rd in final vote for PPL 32!!

6

PPL33 PROJECT FACT SHEET
February 9, 2023

Project Name
Horsepower Canal Marsh Creation

Project Location
Region 2, Breton Sound Basin, Plaquemines Parish, East of Phoenix, LA

Problem
Within the project vicinity, marsh loss has occurred as the result of oil/gas canals, subsidence, and a lack of sediment deposition. For the Phoenix Marsh Creation-West Increment Project, USGS calculated a land change rate of -1.17% per year for the period 1984 to 2021.

Goals
The primary goal of this project is to restore degraded marsh along the east bank of Plaquemines Parish near Pointe a la Hache and to continue the East Bank Land Bridge west of River aux Chenes. The specific goal of this project is to create 355 acres of marsh and nourish 150 acres of marsh with dredged material from the Mississippi River.

Proposed Solution
Sediment will be hydraulically dredged from the Mississippi River-Myrtle Grove Anchorage to create 355 of marsh and nourish an additional 150 acres. The dredged riverine sediments will be pumped via pipeline into two fully contained marsh creation cells. Containment dikes will be gapped no later than three years post construction.

Considerations
The proposed project has potential utility/pipeline and levee considerations.

Preliminary Costs
The construction cost plus 25% contingency is $35-40 million.

Preparer of Fact Sheet
Angela Trahan, Angela.Trahan@USDA.gov, 337/291-3142
Jackie Jones, Jacqueline.Jones@USDA.gov, 337/291-3055

USDA

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

Data Source: NAIP 2021

Map Date: JANUARY 23, 2023

PPL 33
HORSEPOWER CANAL
MARSH CREATION
PLAQUEMINES PARISH, LA

N
W E
S

0 1,000 2,000
Feet

Legend

MARSH_CREATION

PPL33

Horsepower Canal Marsh Creation

Region 2, Breton Sound Basin

Contacts:
Angela Trahan, Project Manager, Angela.Trahan@USDA.gov, 337/291-3142
Jackie Jones, Planning Engineer, Jacqueline.Jones@USDA.gov, 337/291-3055

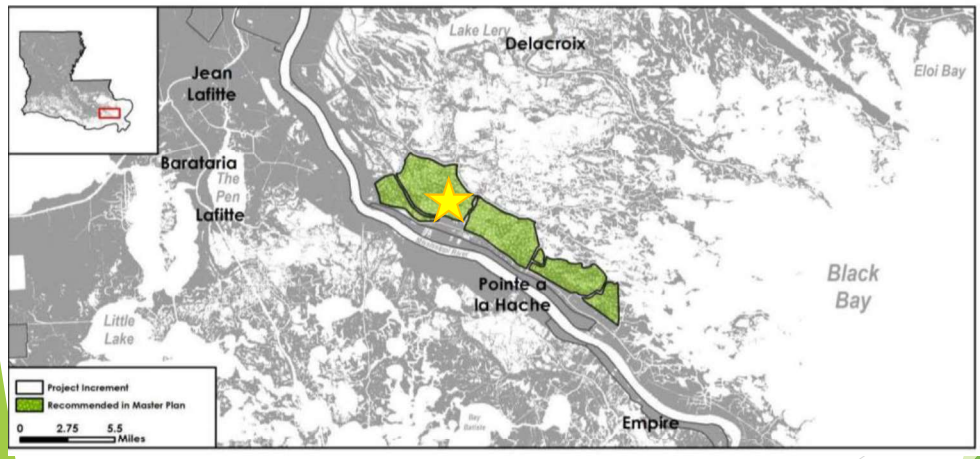
1

2017 SMP

Pointe a la Hache Marsh Creation

Marsh Creation

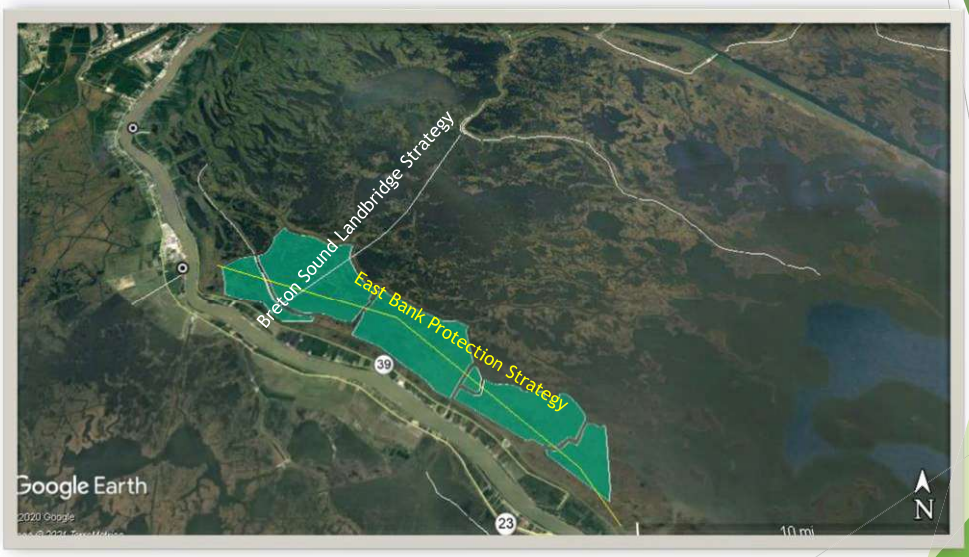
Project ID: 001.MC.102



2023 Draft SMP: PAL and Carlisle MC - Creation of marsh along the east side of the Mississippi River from White Ditch to Bohemia to create new wetland habitat, restore degraded marsh, and reduce wave erosion.

2

Breton Sound Basin Restoration Strategies



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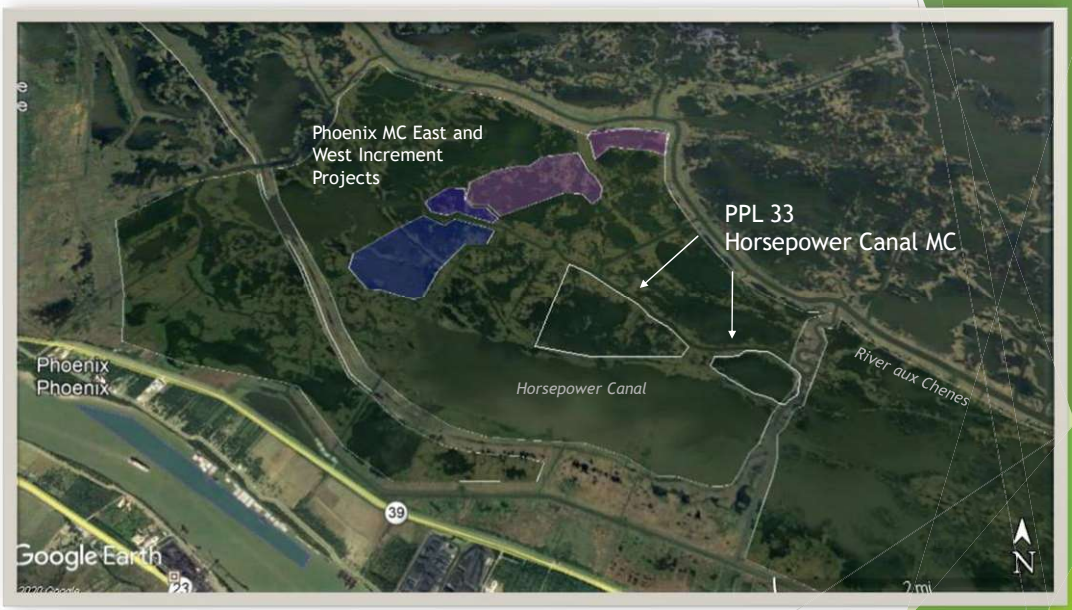


4

PPL33 – Horsepower Canal Marsh Creation

Mississippi River Borrow

355 acres Marsh Creation

150 acres Marsh Nourishment

505 acres Total

300-350 net acres

Construction Costs + 25% Continency

= **$35-40M**

Support critical infrastructure:

- LA Hwy 39 (Evacuation Route)
- Mississippi River
- Hurricane protection levees
- Communities along the river (Phoenix & Carlisle)

5

PPL33 PROJECT NOMINEE FACT SHEET
February 9, 2023

Project Name
Bayou La Chape Small Scale Marsh Creation

Project Location
Region 2, Breton Sound Basin, St. Bernard Parish

Problem
Pipeline canals and channelization have increased the tidal prism and allowed higher salinities waters to infiltrate fresher marshes further inland. As fresher marshes die off organic soils are lost during tidal exchange and their ability to withstand storm surges is weakened. Hurricane Betsy, and more recently Hurricane Katrina, caused much of the wetland loss in the project area. Due to this altered hydrology and saltwater intrusion, marsh loss has increased exposure of the communities of Delacroix and Reggio to flooding. The 1984 to 2021 USGS loss rate calculated for extended boundary of the Yscloskey MC project is - 0.86%/year.

Goals
The project goal is to restore approximately 211 acres of brackish marsh strategically located west of pipeline canal and restore the natural hydrology by reducing the number of outlets into the pipeline canal.

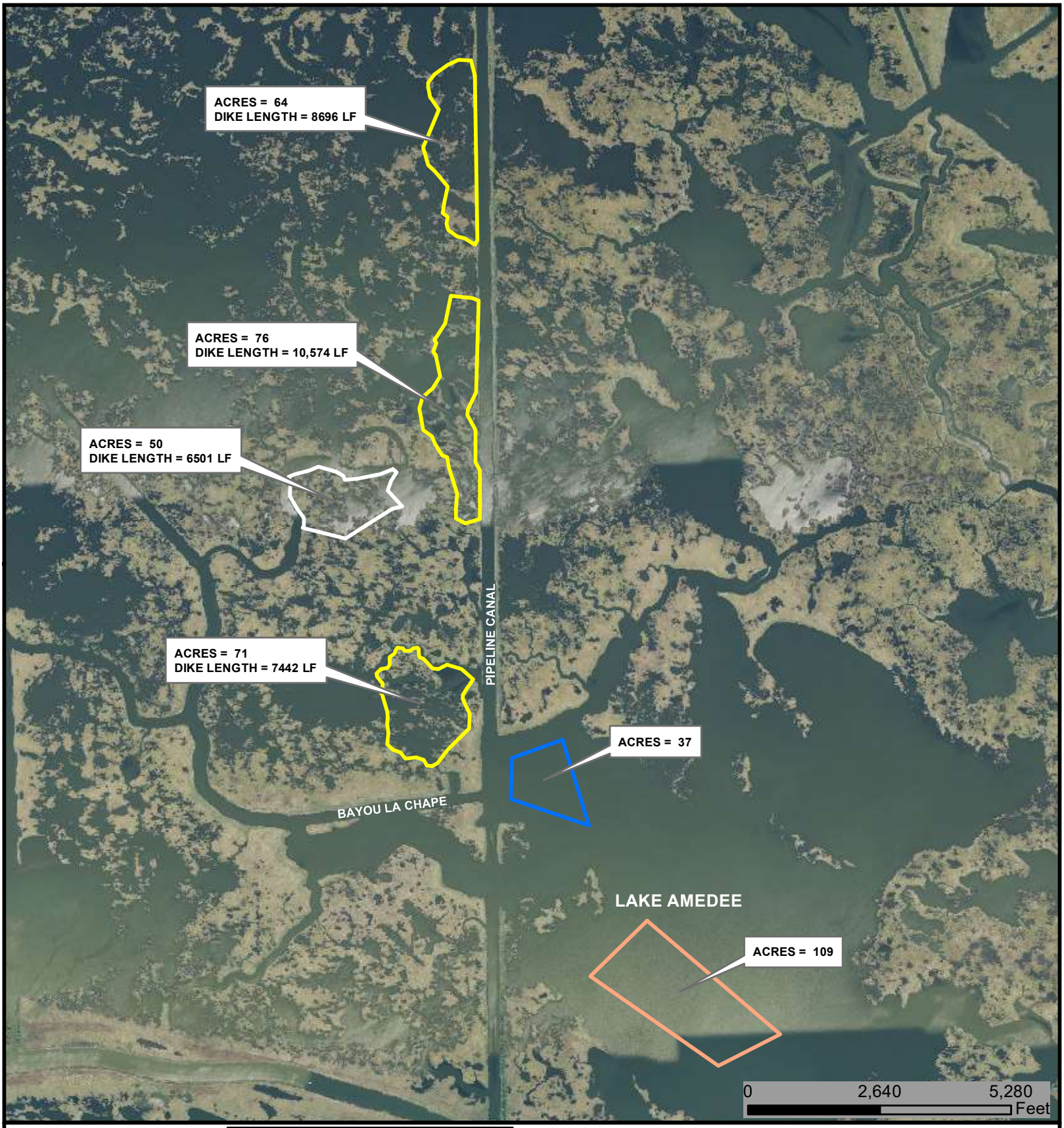
Proposed Solution
The proposed solution is to create and nourish approximately 211 acres (ac) of marsh (25% marsh nourishment and 75% marsh creation). The intent is to restore degraded marsh west of the TGP Twin Pipeline canal to reduce tidal movement further inland and restore the salinity gradient. Sediment is proposed to be dredged from Lake Amedee. The project will work synergistically with the marsh creation projects along Terre aux Boeufs Ridge.

The project is being planned as a small-scale marsh creation project to strategically target areas of marsh creation that will provide greater benefits through hydrologic restoration and will work with other projects as a lower cost alternative solution.

Considerations
The proposed project has potential utility/pipeline considerations.

Preliminary Cost
Construction cost plus 25% contingency is estimated to be $15-20M.

Preparer(s) of Fact Sheet:
Angela Trahan, Angela.Trahan@USDA.gov, 337/291-3142

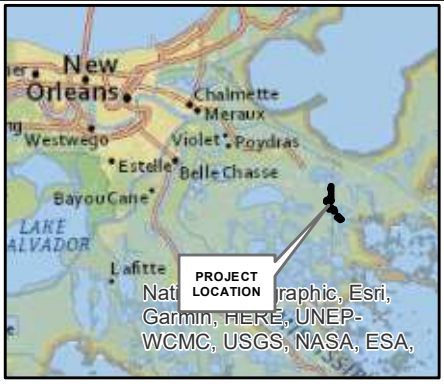


USDA

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

Data Source: NAIP 2021

Map Date: JANUARY 23, 2023



PPL 33
BAYOU LA CHAPE
MARSH CREATION
ST BERNARD PARISH, LA

N
W E
S

Legend

- MARSH_CREATION_AREA
- MCA_ADDITIVE_ALTERNATE
- NW_BORROW_AREA
- SE_BORROW_AREA

PPL33

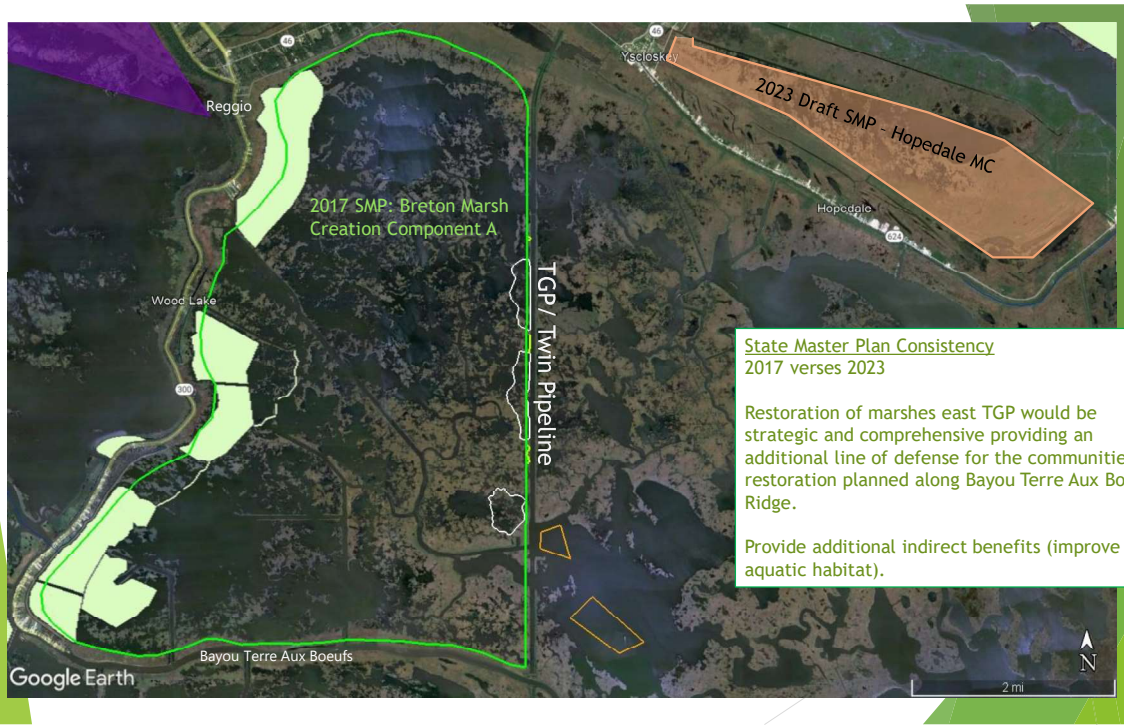
Bayou La Chape Small Scale Marsh Creation

Region 2, Breton Sound Basin

Special thanks to -
Blaise Pezold, Meraux Foundation

NRCS Project Staff
Angela Trahan, NRCS Biologist
Eric Whitney, NRCS Planning Engineer
Vincent Palumbo, NRCS Planning Engineer

1

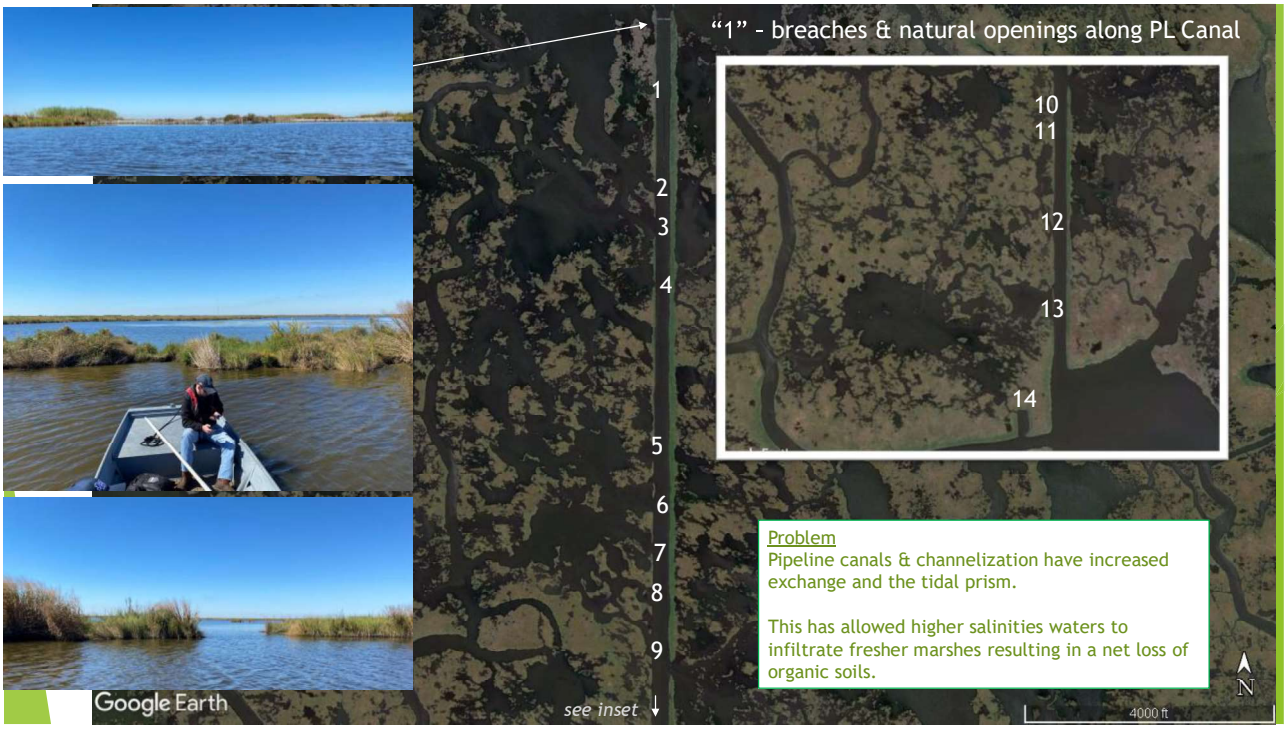


State Master Plan Consistency
2017 verses 2023

Restoration of marshes east TGP would be strategic and comprehensive providing an additional line of defense for the communities & restoration planned along Bayou Terre Aux Boeufs Ridge.

Provide additional indirect benefits (improve aquatic habitat).

2



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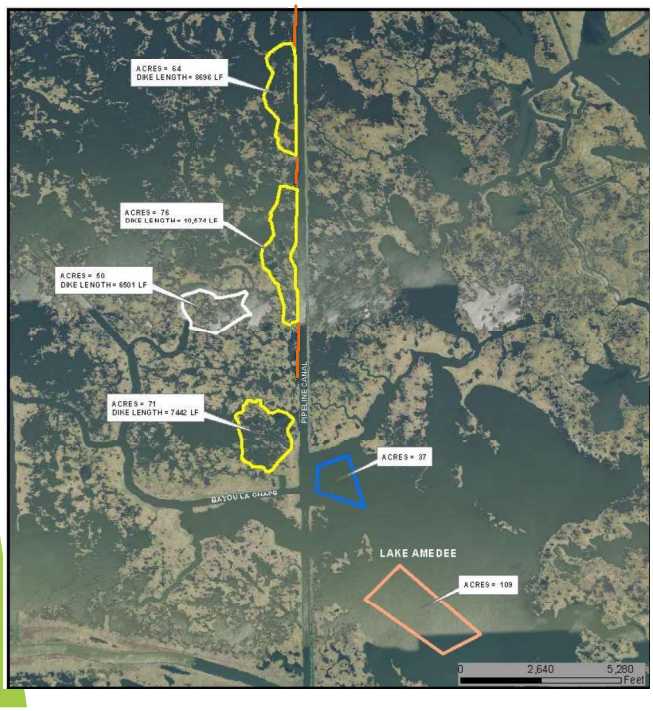
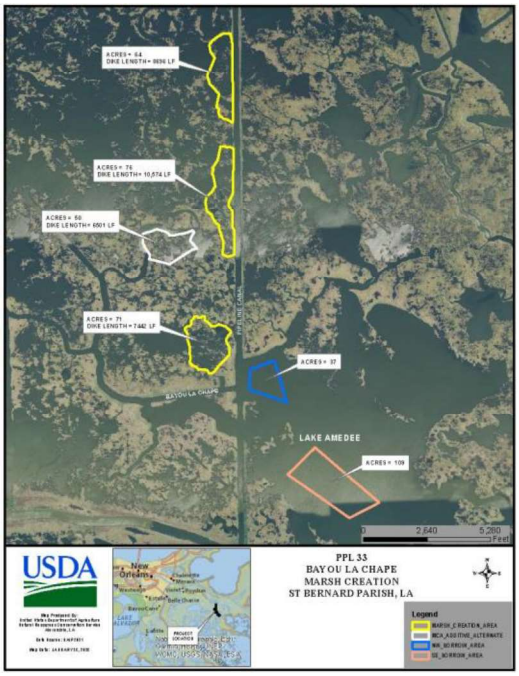


Goal

- Restore degraded marsh west of the TGP Twin Pipeline canal
- Reduce tidal exchange from the East further inland
- Restore the salinity gradient along the eastern edge of the marsh complex improving habitat quality to the west.

4



Solution:
Restore 211 acres of brackish marsh strategically located west of pipeline canal

restore the natural hydrology by reducing the number of outlets into the pipeline canal.

Borrow Area: Lake Amedee

Small-scale marsh creation project to strategically target areas of marsh creation that will provide greater benefits through hydrologic restoration.

Construction Costs + 25% Contingency = $15-20 M

5

PPL33 PROJECT NOMINEE FACT SHEET
January 30, 2023

Project Name
East Lake Lery Marsh Creation

Project Location
Region 2, Breton Sound Basin, St. Bernard Parish

Problem
The eastern Lake Lery shoreline and surrounding wetlands were severely damaged in 2005 by Hurricane Katrina. In the years following this storm, wind induced waves within the lake have begun to cause further damage to the lake's shoreline and interior marshes. Currently the shorelines have become so damaged that the interior emergent marshes that are still intact are being exposed to the damaging waves. This has caused an increased loss of emergent marsh habitat. A land change analysis conducted by USGS for 254 coastal subunits indicates a 1985-2020 land change rate of -0.81% per yearr for the North Lake Lery Subunit, which encompasses the project site.

Goals
The primary goals of the project are to restore approximately 3,800 linear feet (LF) of Lake Lery shoreline. The specific project goals are: 1) create 346 acres of marsh, 2) nourish 75 acres of marsh, and 3) restore approximately 3,800 LF of eastern Lake Lery shoreline.

Service goals include restoration/protection of habitat for at-risk species. This project would restore habitat potentially utilized by the threatened black rail and other at-risk species such as the seaside sparrow and saltmarsh topminnow.

Proposed Solution
Sediments from Lake Lery will be hydraulically dredged and pumped via pipeline to create/nourish approximately 421 acres of marsh. A full containment system will be utilized with containment dikes gapped at the end of construction or no later than three years post-construction. Dewatering and compaction of dredged sediments should produce elevations conducive to the establishment of emergent marsh and within the intertidal range. Bank restoration is also proposed. A large earthen berm will be constructed along 3,800 LF of the lakeshore containment dike.

Preliminary Project Benefits

1) *What is the total acreage benefited both directly and indirectly?*
   The total project area is approximately 421 acres.

2) *How many acres of wetlands will be protected/created over the project life?*
   The project would result in approximately 300-350 net 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)?*
   A 50% loss rate reduction is assumed for the marsh creation and marsh nourishment.

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

5) *What is the net impact of the project on critical and non-critical infrastructure?*
This project will not protect any critical- or 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 synergistic effects with: 1) BS-32 Mid Breton Land Bridge Marsh Creation and Terracing, 2) BS-41 North Delacroix Marsh Creation and Terracing, Marsh Creation, and 3) BS-16 South Lake Lery Shoreline and Marsh Restoration.

Considerations
This project could have potential land rights and utility considerations.

Preliminary Costs
The fully funded cost range is $20M-$25M.

Preparer(s) of Fact Sheet:
Kristen Ramsey, FWS, (337) 291-3137, Kristen_Ramsey@fws.gov

U.S. Fish & Wildlife Service

Louisiana Ecological Services

Legend

- Shoreline Stabilization
- Marsh Creation

PPL33
East Lake Lery Marsh Creation
St. Bernard Parish, Louisiana

PPL33

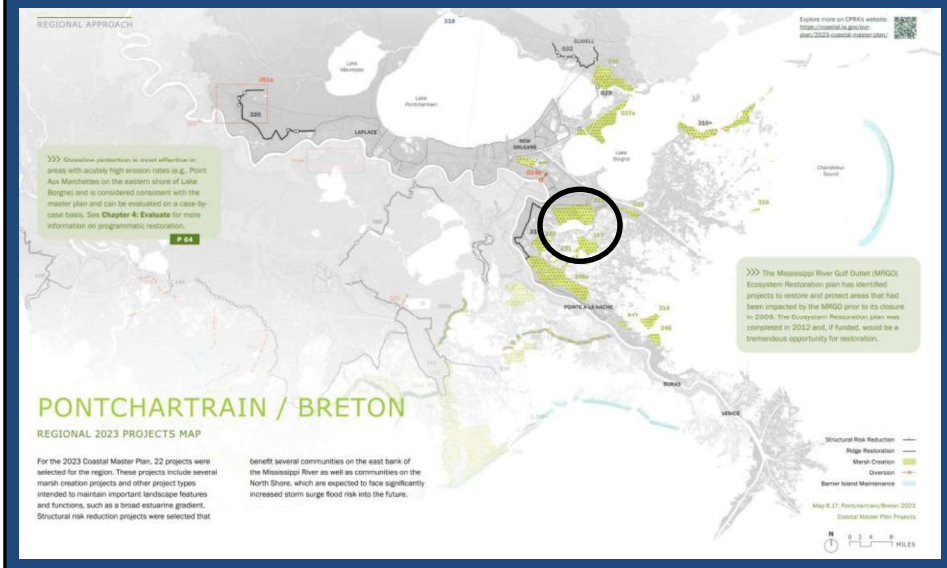
East Lake Lery Marsh Creation

Region 2, Breton Sound Basin

Contacts:
Kristen Ramsey
Fish and Wildlife Biologist
kristen.ramsey@fws.gov
(337) 291-3137

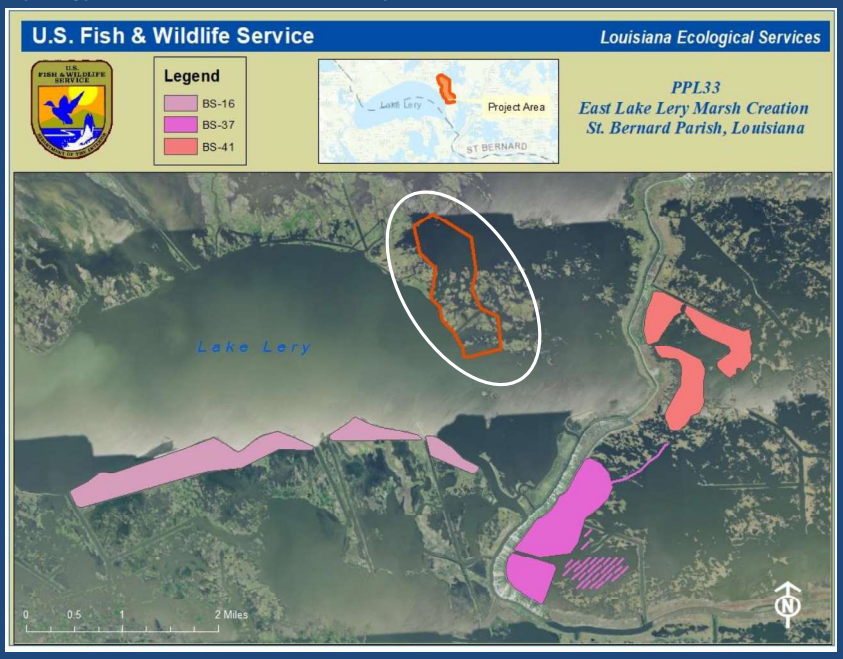
1

2023 State Master Plan – North and East Lake Lery Marsh Creation (315)



2

Synergy with Other Restoration Projects in the Upper Breton Sound Basin



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Eastern Lake Lery - 2004 to 2021

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East Lake Lery Marsh Creation

- 346 acres of marsh creation
- 75 acres of marsh nourishment
- Lake Lery borrow
- Net acres = 300 - 350
- Construction plus contingency: $20M - $25M
- Project synergy – Mid Breton Land Bridge Marsh Creation and Terracing (BS-32), North Delacroix Marsh Creation and Terracing (BS-41), and South Lake Lery Shoreline and Marsh Restoration (BS-16)

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PPL33 PROJECT NOMINEE FACT SHEET
February 9, 2023

Project Name
Spanish Lake Shoreline Restoration (Shoreline Berm/Marsh Creation)

Project Location
Region 2, Breton Basin, Plaquemines Parish, west of Grand Lake and east of Spanish Lake.

Problem
From 1932 to 1990, the Caernarvon Mapping Unit lost 14,240 acres of its marsh. Prior to Hurricane Katrina, the greatest lost documented occurred between 1956 and 1974 and coincided with Hurricane Betsy and extensive canal building. Hurricane Katrina in 2005 devastated the area resulting in substantial marsh loss. According to USGS Open File Report (2006-1274), approximately 39 square miles of marsh around the upper and central portions of Breton Sound were converted to open water by mechanical removal of the marsh or by marsh submergence. Based on the hyper-temporal analysis conducted by USGS for the extended project boundary, the loss rate in the project area is estimated to be –0.96 %/year for the period 1985 to 2020.

Goals
The goal of this project is to restore the eastern shoreline of Spanish Lake with a more robust marsh and create more typical intertidal marsh in the open water and fragmented marshes east of that restored shoreline.

Specific goals: 1) Create approximately 207 acres and nourish approximately 25 acres of intermediate to low salinity brackish marsh around the perimeter of Spanish Lake. 2) Restore approximately 18,000 linear feet of Spanish Lake's eastern shoreline.

Proposed Features
1. Hydraulically dredge material from the Mississippi River (Alliance or Alliance South Anchorage) to create/nourish 232 acres of marsh.
2. Approximately 18,000 linear feet of shoreline would be restored with material dredged from Mississippi River.
3. Material would be shaped from a higher elevation near the newly created Spanish Lake shoreline to a lower elevation east of that shoreline.
4. Because river material will be used, earthen containment would not be necessary.

Preliminary Project Benefits

1) What is the total acreage benefited both directly and indirectly?
This total project area is 232 ac.

2) How many acres of wetlands will be protected/created over the project life?
Approximately 190 net acres would result after the 20-year project life.

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

The anticipated land loss rate reduction throughout the area of direct benefits is approximately 50% to 74% 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?*
This project would restore the eastern shoreline of Spanish Lake.

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

6) *To what extent does the project provide a synergistic effect with other approved and/or constructed restoration projects?*
This project would work synergistically with BS-16, BS-24, BS-32, BS-38, BS-42, and BS-44.

Preliminary Cost
The construction cost plus 25% contingency is estimated to be between $35 and $40M.

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

Louisiana Ecological Services

Spanish Lake Shoreline Restoration
Dredge Pipeline

PPL33
Spanish Lake Shoreline Restoration and Marsh Creation
Plaquemines Parish, Louisiana

0 0.25 0.5 1 Miles

N

PPL33

Spanish Lake Shoreline Restoration and Marsh Creation

Region 2, Breton Basin

Contacts:
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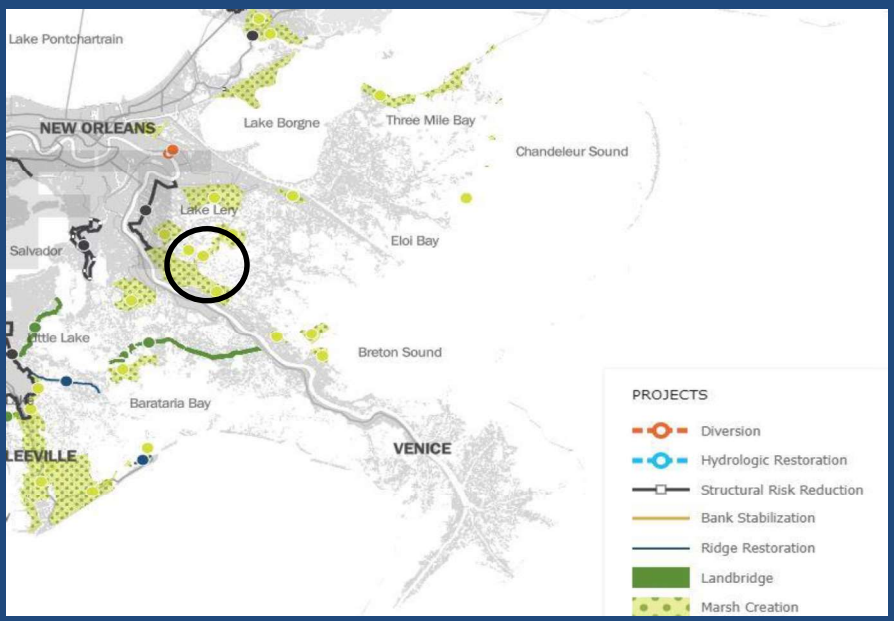
2023 State Master Plan - Breton Marsh Creation



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U.S. Fish & Wildlife Service
Louisiana Ecological Services
Spanish Lake Shoreline Restoration
Dredge Pipeline
New Orleans
Houma
Project Area
PPL33
Spanish Lake Shoreline Restoration
and Marsh Creation
Plaquemines Parish, Louisiana
0 0.25 0.5 1 Miles
N

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U.S. Fish & Wildlife Service
Louisiana Ecological Services
PPL33 Spanish Lake Shoreline Restoration and Marsh Creation
Plaquemines Parish, Louisiana
0 0.25 0.5 1 Miles
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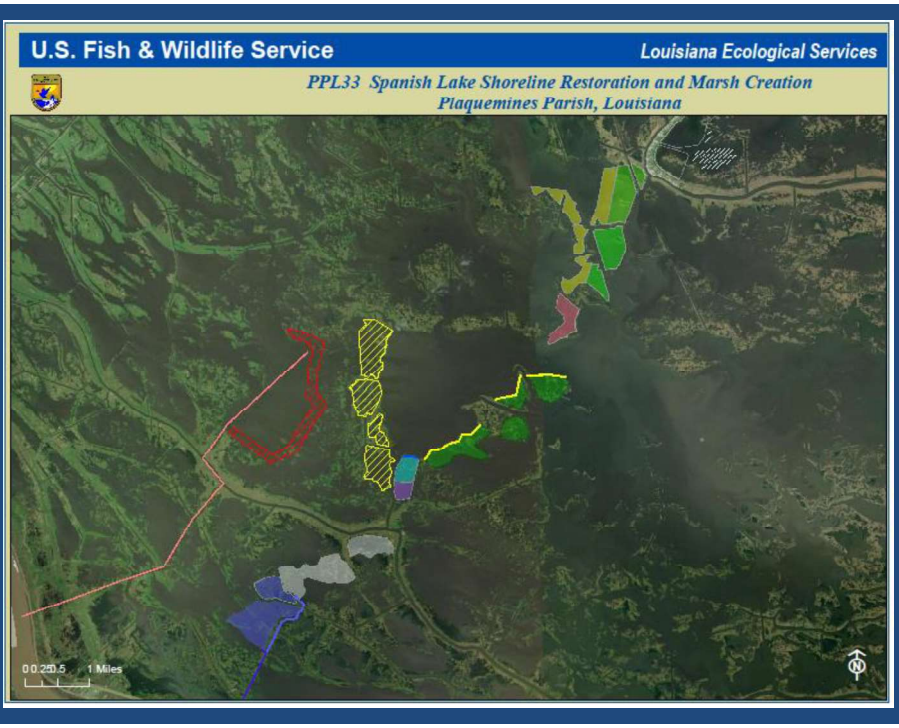

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Spanish Lake Shoreline Restoration and Marsh Creation

- 207 acres of marsh creation
- 25 acres of marsh nourishment
- 18,000 LF of Spanish Lake shoreline restored
- Mississippi River borrow (Alliance South)
- Net acres = 150 - 200
- Construction plus contingency $35M - $40M
- Project synergy – BS-43, BS-BS-32, BS-38, BS-42, BS-44)

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